T R A N S C R I P T

LEGISLATIVE COUNCIL ECONOMY AND INFRASTRUCTURE COMMITTEE

Inquiry into the Industrial Hemp Industry in Victoria

Melbourne - Monday 11 September 2023

MEMBERS

Georgie Purcell – Chair David Davis – Deputy Chair John Berger Katherine Copsey Jacinta Ermacora David Limbrick Bev McArthur Tom McIntosh Evan Mulholland

PARTICIPATING MEMBERS

Gaelle Broad Georgie Crozier David Ettershank Renee Heath Sarah Mansfield Rachel Payne

WITNESSES

Dr Saniyat Islam, Chairman, Textile Institute; and

Charles Kovess, Chief Executive Officer, Textile and Composite Industries.

The CHAIR: I declare open the Legislative Council Economy and Infrastructure Committee's public hearing for the Inquiry into the Industrial Hemp Industry in Victoria. Please ensure that mobile phones have been switched to silent and that background noise is minimised.

I would like to begin this hearing by respectfully acknowledging the Aboriginal peoples, the traditional custodians of the various lands we are gathered on today, and pay my respects to their ancestors, elders and families. I particularly welcome any elders or community members who are here today to impart their knowledge of this issue to the committee or who are watching the broadcast of these proceedings. I also welcome any other members of the public watching via the live broadcast.

We will begin by introducing committee members. We do have some in the room and some on the screen, but we will start down here with Dr Heath.

Renee HEATH: My name is Renee Heath, and I am a Member for Eastern Victoria Region.

Bev McARTHUR: Bev McArthur, Western Victoria Region.

The CHAIR: Georgie Purcell, Northern Victoria Region.

Rachel PAYNE: I am Rachel Payne from South-Eastern Metropolitan Region.

Jacinta ERMACORA: I am Jacinta Ermacora, and I am from the Western Victoria Region.

Sarah MANSFIELD: Sarah Mansfield from the Western Victoria Region.

The CHAIR: Beautiful. All evidence taken today is protected by parliamentary privilege as provided by the *Constitution Act 1975* and further subject to the provisions of the Legislative Council standing orders. Therefore the information you provide during this hearing is protected by law. You are protected against any action for what you say during this 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 Parliament.

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

For the Hansard record, can you both please state your full names and any organisation you are appearing on behalf of.

Charles KOVESS: Charles Kovess. I am CEO of Textile and Composite Industries, I am secretary of the Australian Industrial Hemp Alliance, which is the peak national body for industrial hemp, and I am on the executive board of the Federation of International Hemp Organizations, FIHO, so I am a member of the nine-person board – I represent all three of them.

The CHAIR: Beautiful.

Saniyat ISLAM: Dr Saniyat Islam. I am the Chairman of the Textile Institute, Australia section, and also a textile researcher.

The CHAIR: Beautiful. Thank you. We now welcome your opening comments, but as discussed, keep them to around 5 minutes each just so we have plenty of time for questions.

Charles KOVESS: I love questions. I am here representing Textile & Composite Industries particularly. That is how I got involved with hemp 11 years ago. This company was started 29 years ago in 1994 by Adrian Clarke and Anthony Clarke. Anthony Clarke is still the executive chairman of Textile & Composite, and his brother Adrian, who started this mad caper into hemp, died on 15 October 2015. So it has been a long 29-year journey. It came with a vision of what is possible for hemp. That vision has not changed. Textile & Composite started with the vision of solving the problem of processing hemp. I have not listened to all the submissions, but I know that processing is the crucial logjam in the growth of this industry. This company, we have invented what we say is the world's best decorticator because it requires no retting. I urge you all to understand the problem of retting, particularly in Australia, which is a rotting process. That was the vision – because if you solve the problem of decortication, then it unlocks the real economic benefits of hemp. So that has been a 29-year journey.

AIHA was founded in 2015 – that is, the Australian Industrial Hemp Alliance. I have been involved with this for 11 years, and TCI has been making submissions to the Victorian government and Australian government for all that time. Jeff Kennett in the 1990s supported planting of trial crops, which is how this industry has come to make some progress.

The greatest blockage for this industry right now, after the 29 years that my company has been involved in this and the industry bodies, is simply investment funds. This industry is now poised to explode, and explode globally. Now, in my submission the question is, 'What blockages can government remove?' That is the essence of my submission, that what this inquiry should find is 'Let us get rid of unnecessary blockages.'

I am wearing a hemp T-shirt. I just want all of you to understand that my hemp T-shirt I can wear for four weeks in a row with no wash, no smell – naturally antimicrobial, antibacterial. So hemp clothing is far, far superior to any synthetic textiles. Hemp can assist in reducing greenhouse gas emissions. It can clean up the environment. I really want everyone to understand that hemp already has 27,800 registered patents. This is an 8000-year crop. I have heard some people say this is a new industry. This is not a new industry. This is an 8000- to 10,000-year industry. But there are 27,800 patents already. And so as an inquiry we go, 'Gosh, how do we capitalise on the benefits of what has been done so far?'

I have brought samples of hemp products here to excite you all about what is possible. In my view, this industry is poised, and if we remove the unnecessary blockages and then, as I urge, government thinks about how it can use hemp products, this industry will explode. I heard Fiona Patten say 1 million hectares for Australia. That is the vision of AIHA. Here I am proudly wearing my AIHA badge, the Australian Industrial Hemp Alliance. Our vision is 1 million hectares of hemp in Australia over the course of the next 10 years. And I lastly submit that it is not possible to grow too much hemp, because there are such a broad range of products that can be made from it. You can always make something different out of it. I hope that is 5 minutes.

The CHAIR: Beautiful. Right on time, thank you. Dr Islam.

Saniyat ISLAM: Thank you very much for the opportunity. I will start by saying I wholeheartedly support what Charles already mentioned in terms of the capability of hemp as a fibre. The Textile Institute of Australia Section strongly supports this inquiry into the industrial hemp industry in Victoria. We all know that the cotton industry in Victoria is not that strong, like almost non-existent, whereas this fibre actually gives Victoria an opportunity to embark on this unique proposition of growing hemp as a fibre. Also, as Charles mentioned – I will go back to that point – hemp is not a new industry. It was an established industry already, before the cannabis debacle came into the problem. Before 1928 we had hemp products and stuff like that.

Also in our submission, we have seen that there is a knowledge gap. There are established standardisation methods of fibre length, its linear density and all that, which are non-existent for hemp fibre. So I think there is a need for standardising the fibre specification where it will give that opportunity, already established – if we look into the wool and the cotton industry, they have a specific classification and standardisation system of the fibre length and how it is sold and its capability and all that, so that I think is an opportunity for us to go into. We already have product-testing facilities in Victoria; I can mention an Australian wool testing authority and also the product-testing facilities in Kensington. They can be involved in this standardisation or developing the standardisation process. Obviously there is the primary and the secondary fibre production process that probably can be taken into account, how we deal with that.

In terms of product diversification, I think there is a unique proposition for Victoria to be involved in the manufacturing of hemp-based products, specifically non-woven products. I would like to champion non-woven – it is neither knitted nor woven, it is in-between, so the yarn manufacturing process is completely omitted so

we can get directly fibre to fabric. In that aspect it opens up some of the work that we are currently involved in in terms of research, like probably replacing some of the bioplastic material that can be developed using hemp. Also, there is a principal component that is an environmental threat already using synthetic supplements; I would say synthetic alternatives to feminine hygiene products and baby diapers and that kind of stuff, so hemp can replace some of the elements and obviously reduce landfill. We do not have any other avenues to get rid of those kinds of wastes, so that is one option that we can look at. Obviously in terms of its production, the reason why we think it is a very good place to start is that cotton is an annual fibre, an annual crop. Hemp can be grown two to three times, and it does not deplete the soil quality and all that. Therefore there is an interesting proposition for hemp growth in Victoria.

Also, we would like to talk about medical textiles, because I think Charles already mentioned the antibacterial property. With medical textiles which now are being used, like viscose, like polyester, those kinds of blends, we could actually look into biodegradable options such as hemp. That could be a really good opportunity for us to invest in.

I would like to also acknowledge the key work that came out from Stuart Gordon and the *Australian Industrial Hemp Best Practice Gap Analysis*, which we have referenced in our submission. I think that would pave some way in what gaps exist in terms of getting this fibre up and running for the Victorian context. Thank you.

The CHAIR: Beautiful. Thank you very, very much. We will start on the screen this time with questions. Dr Mansfield.

Sarah MANSFIELD: Thank you. And thank you for your submissions and for your presentations. I am curious to know a bit more about, from your perspective, where you see hemp fitting in in terms of our emission reduction and carbon sequestration from a textiles point of view. We heard a bit from different parts of the industry last week, but I am curious to hear a bit more about that side of it from you and how you see we could capitalise on that potential.

Charles KOVESS: I have no doubt that using hemp for textiles rather than cotton and rather than synthetics is a significant greenhouse gas reduction opportunity for Victoria. The sequestration number that is accepted for a fibre crop – and it is important to have this distinction between a seed crop and a fibre crop – with a fibre crop the number that you can safely bank on is 22 tonnes of CO_2 per hectare of crop. That is in the growing of the plant. By the way, I heard other conversations earlier today of how much chemical pesticide and herbicide is needed. You can literally grow hemp without any non-natural chemical input. It is very exciting. So the rejuvenation of soil, the sequestration of soil, and then with the fibre the use of natural – and the degumming process. If I gave you an example – Saniyat can also do that – I have samples here of raw fibre, and Ben, if we can pass those raw fibre samples around. These fibres come from a mechanical breaking down of the plant and the chemical usage is reduced, the water usage is reduced and then the non-synthetic chemicals are eliminated totally. We can happily craft those numbers for you. I referred to some of those, and I think, Saniyat, you probably refer to those in your submission as well.

Saniyat ISLAM: Yes. I would like to also agree with what Charles said, and add too, the thing that we probably need to understand here, when compared to cotton, cotton is an annual crop - I will harp on this over and over again – whereas we can safely grow hemp two to three times a year. So on the same piece of land we are getting three crops for which the sequestering option, if you look at that, and the utilisation later on, is completely unlike anything else. Cotton actually deteriorates the soil quality. In the end if we look at the end-of-life option, hemp basically provides the natural composting option for use in textiles or any other product, whereas if we are looking at synthetic alternatives they will have to be managed in terms of landfill and all that. Therefore that is a unique proposition that hemp has in comparison to the other fibres.

Charles KOVESS: Then the other comment to make – and Ben, we might have the hempcrete – Sarah, the use of hempcrete rather than concrete, and Fiona Patten talked about that as well, is another massive greenhouse gas emission reduction, because concrete is a major emitter, and there is a shortage. This material is simply extraordinary, what it is capable of. Not only does it do buildings, so the hemp textiles that we are providing can be made into hempcrete buildings as well as housing, but this material and buildings made of this material are considered by Kevin McCloud to be the world's best building material. It significantly reduces the need for heating, cooling and ventilation, so there are those added ongoing greenhouse gas reductions. So there you are.

Rachel PAYNE: It is pretty light too.

Charles KOVESS: It is pretty light.

Sarah MANSFIELD: Thank you. From what we are hearing from multiple witnesses, there is a lot of potential to meet in particular emerging demand for low-carbon, environmentally friendly, sustainable products. Where you think about the whole-of-life cycle as well, from your perspective what are the key barriers to the industry in Victoria that you feel the government needs to address?

Charles KOVESS: The one-word answer to that is 'procurement'. I want the government, I urge the government and I encourage the government – it reminds me of a film clip here. I am excited about the government giving priority to low-carbon products, so that would mean hempcrete. Fiona Patten again talked about sound barriers on all our freeways; they do not have to be concrete. If government says, 'We will give preference not just to hemp but to low-carbon, and we're not going to do it solely on the basis of price' – because that is what happens. In our submission – the TCI and AIHA – our vision is that government orders hemp hurd. Ben, have we handed the hurd around? The hurd is the building material out of which the hempcrete is made. Hemp hurd is the most magnificent mulch. Just imagine if all government property was mulched with hemp hurd. And then this material here, which is a fibre, becomes weed matting. So instead of the plastic used by all local municipalities and government, government says, 'We will procure and we will give preference to low-carbon, low-polluting products.' That will solve all the problems. Why? The reason why Australia only has 5000 hectares of hemp growing is because people do not know where they are going to sell it. All government has to do is stand in the market. We will calculate for you the precise reduction on the textile side and on the building side, and then you can go, 'Yes, we will give preference to that.' And then investors will come into this industry.

Sarah MANSFIELD: Thank you.

The CHAIR: Thanks, Dr Mansfield. We might need to move on. Ms Ermacora.

Jacinta ERMACORA: I am enjoying listening to this, but I do not have any specific questions. Thank you.

The CHAIR: Thank you. Do we have Mr McIntosh on the screen? No, he is not there. All good. Ms Payne.

Rachel PAYNE: Thank you. I might direct my question to Dr Islam, please. You mentioned the knowledge gap and the fact that standardised classification systems for hemp do not currently exist. Can I just understand a little bit more – and for the committee to understand a little bit more – what the current process is? And why do you think that there is not that standardisation as there is for cotton and as there is for wool?

Saniyat ISLAM: Interesting question. I mean, in terms of hemp, it is all about the processing. Charles mentioned the decortication process. We get different lengths if we go through the traditional retting process – that is a different length and strength. Obviously we are using microbes to flesh out the fibres from the stem, therefore the lengths and the strength that we get are different. The fineness and the length greatly impact the material that it is going to be made into. I am talking about textile fibre here. We need a standardised process of how the processing happens, and then we can basically look into making it in a standard way. For cotton, the highest length that we get naturally is 4 to 6 centimetres, whereas for hemp it would be somewhere like half a meter. We just need to understand what length we are getting and what sort of processing criteria there is, and that needs to be definitely standardised. Otherwise how are we selling that – on the basis of what? It is just that.

For wool, I think the wool testing authorities are well established and they have their own way to deal with it, because wool comes with almost 40 per cent of waste – definitely the suint and the vegetable matter. Literally the testing procedures have established how much we are going to get out of the fibre bale. If it is 125 kilos, then basically, if you reduce it by 40 per cent, you are getting 90 kilos. So that is not paid for. But then again, that waste material also has other applications, such as lanolin and those kinds of other industries. The same thing will happen to hemp. We have not just the fibre complement of it. Charles has actually shown you a lot of other opportunities that are going to come out from there.

CBD oil – that is another can of worms we can open here. There is a bit of terminological confusion about CBD oil and THC, so that probably needs to be addressed. People think CBD oil is a problem, but it is not. Therefore that opens up a huge industry gap that exists in Victoria. We have worked with our cosmetic brand

partners, because in my other hat I actually teach students at RMIT University. We have industry partners, and they come to the class and say, 'We have to do CBD products overseas', which, again, we can –

Rachel PAYNE: We can have that here. Yes. I appreciate that.

Saniyat ISLAM: A local -

Rachel PAYNE: You can both probably answer this. Dr Islam, you did bring up hygiene products and nappies, and I think, Charles, you sort of mentioned the health benefits, but also that the nature of hemp is that it is biodegradable. With medical biodegradable products and things like that, are you saying then that there is an opportunity there with the right technology for hemp to be a switch out of a lot of products, such as babies' nappies and sanitary products, for example, that would be then considered biodegradable if made from hemp?

Saniyat ISLAM: Yes, I would like to think that way. Obviously the full capability still needs a lot of research. However, I think there is a possibility. Not only that, I would also add – I have probably spoken about this – bioplastics could actually solve our food waste problem. Coverings and wraps is another industry we could look at. So it is just adding on.

Charles KOVESS: And certainly sanitary products – we have got RMIT. You did not mention RMIT, Saniyat, but RMIT did some research for Textile and Composite, partly funded by the Victorian government, so thank you, government. This material that was tested for its antibacterial, antimicrobial properties is much healthier for women's sanitary products and babies' bottoms. We think that cotton is a natural product, which it is, but it is not grown naturally unless it is organic cotton. So there is a massive difference in what we put on our skin, and many people are finding that. So I would be more bullish than Saniyat. You are being very conservative; that is very proper for an academic.

Rachel PAYNE: Excellent. Thank you. Have I got time for one more?

The CHAIR: Yes.

Rachel PAYNE: Charles, I just wanted to expand on: you mentioned the health of the plant and the future around health. Do you want to talk us through a little bit more about your vision around that? There is an opportunity here for a re-emerging of this industry.

Charles KOVESS: Yes. I am very excited by the possibilities for Victoria and Australia. I have even got a mantra: 'HP x 4'. That is not HP Sauce but HP x 4: healthy products give us healthy people; we have a healthy planet and we have healthy profits. I want to paint this picture of the healthy profits. The reason why Adrian Clarke and Anthony Clarke started on this journey was to enable our farmers in Australia and farmers around the world to do well. In terms of pressure on cities versus successful businesses right around Victoria and right around Australia, we are excited by the healthy profits available from hemp. Now, there are healthy products from this material – food, the seed and the seed oil. I have hemp seed and hemp seed oil on every salad that I have. I cook with hemp seed oil. There is the cloth that we put babies into. Then we have healthier people. That reduces the burden on government of unhealthy people. And you can grow regenerative agriculture. The AIHA has a regenerative agriculture subcommittee, and we are firmly of the view that you can grow hemp without chemicals. So we are rejuvenating the soil, because in my submission I talk about how we have got a soil emergency in this country. Peter Andrews OAM - I recommend his work to you. There are amazing rejuvenation opportunities, and hemp will do that as well as any other crop. It puts 4 tonnes of root matter into every hectare for each crop. So you cut down this magnificent plant and the soil is regenerating and there are healthy profits. That is what a sustainable model is, and the farmers can then reinvest. And guess what else happens with healthy profits? We can create jobs because we can afford to employ people. So 'HP x 4' is my mantra.

Rachel PAYNE: Thank you.

The CHAIR: Beautiful. Thank you. I use hemp seed oil on my salads as well -

Charles KOVESS: Well done.

The CHAIR: and hemp seeds in my smoothies. Something that has come through consistently from almost everyone that has appeared is that there is this stigma around hemp products. Obviously you two are experts on

hemp. How do you think that stigma can be overcome? Is it just legislating and regulation, or do we need to do more to promote hemp as a product?

Charles KOVESS: Saniyat, I have a view.

Saniyat ISLAM: You carry on; I will add.

Charles KOVESS: So in my view, 11 years ago -29 years ago when the Clarke brothers started in this – when Jeff Kennett took that leap, it was bad news. Now very few people, in my opinion – only the innocently ignorant or perhaps the deliberately ignorant – confuse hemp with anything other than good. So I think that stigma – I am not worried about that stigma.

What I am interested in is, from this committee's perception: where is the opposition coming from? That is what I am really interested in, and I think that is an area well worth investigation. We are not aware of it as an industry body. There are people who want to protect their existing business interests, but I do not get a stigma. I get only excitement around hemp, and we need to identify whether there are any invisible restrictions or opposition being put for this beautiful plant.

Saniyat ISLAM: If we look at our history in Victoria, in the last 25 years we have gone through significant restructuring of the textile, clothing and footwear sector. Therefore we have lost some of the, I would say, technical knowledge of the fibres and what can be done. As with Charles, hemp also excites me in terms of how we can bring it back, because one thing that we do not consider in terms of its life cycle or environmental impact is that amount of travel that every product component needs to do. Therefore if we have got production 100 or 150 kilometres away, there can be a zone of production and product diversification or whatever we want to develop in Victoria. That immediately put us into that carbon-neutral process of local production. If we are talking about just a shirt, the shirt comes with the buttons, hemp; the sewing threads, hemp – the fibre is hemp. You know, we can actually have the most efficient way of making things here.

However, there is that issue of the stigma that you mentioned. It is about educating people as well. I think citizenship behaviour change is a larger piece than we think, because obviously it takes a lot of time to build trust in people's heads rather than breaking that trust. It takes one small greenwashing with the product that would probably delay the goal and the vision that we have. However, hemp-related greenwashing I have not seen because it is non-existent. All the things that we know about greenwashing is possible through hemp, so there are no grey areas there.

But in terms of one thing that we probably did not touch on, the fibre production and it being from here, there are a lot of people who are asking for ethical choices. Even the vegan movement and all that are looking for ethical choices. One part of the hemp is it is not animal-based like wool, so that probably can be an option given to them. Synthetic fibres are non-renewable, so I again go back to that.

Obviously the government can work with universities to do some educational programs, and in terms of the textile industry, we would like to do industry panels and stuff like that where we can propagate the knowledge around what can be possible and the stigma around that. Yes, that is probably it.

The CHAIR: Beautiful. Thanks very much for that. I will hand over to Mrs McArthur.

Bev McARTHUR: Thank you very much. You mentioned the need for a standardisation system. Should government be responsible for that, or why cannot the industry –

Charles KOVESS: No, there is the ASTM, the international body -

Saniyat ISLAM: There is ISO and the Australia New Zealand standard as well. I think we could probably start a conversation around Standards Australia and how we deal with this, because I think –

Bev McARTHUR: It could be industry-driven.

Charles KOVESS: Yes, industry-driven.

Saniyat ISLAM: It could be industry-driven.

Bev McARTHUR: I always want to get governments out of your lives, not get them in it, because they will bugger it up.

Saniyat ISLAM: We need the funding to do so.

Bev McARTHUR: They will mess it up; they will cause you problems. Keep them out of it.

Charles KOVESS: But FIHO – that is the reason why FIHO was established, the Federation of International Hemp Organizations, to continue this work of ASTM. There has been quite a lot of standardisation done, but more needs to be done. We need it done internationally, because trading internationally, which all of us want to do, is then enabled by getting clarity around standards. So yes, there is work being done. If the industry grows, then those standards will be developed, like the wool. Saniyat mentioned wool. Because there was money, it was able to be applied to that issue.

Bev McARTHUR: Certainly I think I might have overheard a conversation before about farmers being innovative. If they see a market that is available, then they can adapt. There is going to be a lag time and a lead time in changing over some acreage to a new product, but they are capable of doing it if there is a market out there.

Charles KOVESS: That is very good. Absolutely, and because of your background, Bev, I know where you come from – you understand markets. If there is a market, if we can drive the market, the farmers will grow it, guaranteed. The number that I submit to the inquiry is that – and I think I put the numbers, maybe I did not, in the submission. We can do this – a farmer can earn between \$3000 and \$6000 profit before tax per hectare with a fibre crop. Three thousand dollars to \$6000 per hectare – now, that is very attractive. The farmers, their number one question is, 'Where are we going to sell it?' That is why procurement policy by government is the answer to that question. Then a farmer with a thousand hectares will happily devote 100 hectares this year, and then we will have thousands of farmers doing all sorts of the different seeds in Victoria and Australia, and the market will drive that.

Saniyat ISLAM: Therefore I say our proposition is a standards system simultaneously being adopted or developed in Victoria for Victorian crops.

Bev McARTHUR: I would like to think that the industry can lead the way, because we will stuff it up. You mentioned microbes being involved in the process.

Saniyat ISLAM: That is the retting process.

Bev McARTHUR: It is with live -

Charles KOVESS: We eliminate that.

Bev McARTHUR: You eliminate it?

Saniyat ISLAM: It is mechanical. That is the traditional way, the same way jute, flax and other fibres are -

Bev McARTHUR: So it used to be done with microbes, but now it is done mechanically, or vice versa?

Charles KOVESS: That is the beneficial advancement of the machine – that we make in Geelong, by the way, generating jobs for global markets, these machines.

Bev McARTHUR: We will go down and have a look at that, too.

Charles KOVESS: That is correct. You should come down and have a look at the machines. So yes, that retting process is how it has been done for 8000 years. What Saniyat was talking about was the microbes when the plant is rotting, the naturally appearing microbes. The Chinese do it by putting it into huge warm swimming pools.

Saniyat ISLAM: And you also can do it via an enzymatic process.

Bev McARTHUR: Okay, so the main issues that we are detecting are: there are roadblocks to entry to the market. That is caused by government. There is a lack of innovative thought by the government that this should be an industry in the agricultural space, not the -

Charles KOVESS: Poisonous space.

Bev McARTHUR: poisonous space. And that we need, and I think Fiona talked about, a hemp Act. You subscribe to that. Then we have got to get the processing happening. Now the problem seems to be that you have got to move the product quickly into processing.

Charles KOVESS: It is quite easy to handle all of those. If the farmers have got end markets, it is going to be so exciting, and one thing that I learned from RMIT – and I give credit to Mac Fergusson here; he told me this 10 years ago. This is why you can rejuvenate textile manufacturing in this state and in this country. He said – you remember this quote – 'Textile production is no longer labour intensive but capital intensive,' because the technology, you just need the money for the machines. So our labour costs are no longer going to block the re-establishment of textiles. Are you comfortable with that as a proposition?

Saniyat ISLAM: Yes, I think so.

Bev McARTHUR: Yes. So all the protection in the world did not actually protect a market.

Charles KOVESS: Correct.

Bev McARTHUR: I am all for getting rid of public protection of a market.

Saniyat ISLAM: I have already mentioned that point about the logistics, about moving things to one place. You know, a single T-shirt can be made with components from 18 different countries. I mean, why are we doing that, knowing that we can do it here better?

Bev McARTHUR: Where is the most productive country, producing hemp material?

Saniyat ISLAM: China, I would say.

Charles KOVESS: China, Canada, France.

Saniyat ISLAM: France is, probably in terms of its research and application, the most advanced, and China being the manufacturing hub, as usual.

Bev McARTHUR: Not India?

Saniyat ISLAM: India is -

Charles KOVESS: Maybe a little.

Saniyat ISLAM: I think, a little. But you know, we can always look at the opportunity, because hemp, it can grow in any –

Renee HEATH: We heard North Korea.

Charles KOVESS: Well, Korea has been –

The CHAIR: We might hand over to Dr Heath. We just have another witness in 4 minutes, so it might get very tight here.

Renee HEATH: No worries.

Charles KOVESS: We will be quick.

Renee HEATH: Okay. Well, I have got two questions. So you said if there is a market, farmers will grow it: so is there a need for government investment, or is it more that there is a need to take our hands off?

Charles KOVESS: Hands off. Hands off is the answer. Hands off and a desire to procure – and the procurement is consistent with the government's desire to head to net zero. So that is why it makes sense, and then there has got to –

Bev McARTHUR: They should be on the bandwagon. What is the matter with them?

Charles KOVESS: They should be on the bandwagon. If government stood in the market to say, 'We want hemp products,' all of the logiam would disappear. And secondly, unnecessary regulation: you have had submissions on that, so I do not need to make any further submissions. I am very comfortable.

Renee HEATH: Then my last question is, and I know we have probably got 2 minutes left, but I heard you saying before that you have a vision that every first responder would be – their uniforms would be made out of hemp. Could you explain that?

Charles KOVESS: Yes. My vision is that every ambo, firey, police officer -

Renee HEATH: Just tell us why.

Charles KOVESS: is fitted out in hemp textiles, and then they could also wear their outfits for days and weeks in the hottest weather, and they would not smell. Why? Because hemp – natural antibacterial, antimicrobial – our perspiration does not smell, it is the bacteria that grows on the perspiration. So that is my vision: that Victorian firies are happily wearing – and ambulance workers et cetera – are loving hemp clothing and not synthetic clothing.

Bev McARTHUR: Is it a fire retardant?

Charles KOVESS: No.

Saniyat ISLAM: Temperature –

Charles KOVESS: It is the comfort level.

Rachel PAYNE: It is when it is like this, though.

Renee HEATH: Yes.

Charles KOVESS: That is right, all future. In fact there is a fire station being built at Tooradin, I believe. It should be made out of hempcrete.

The CHAIR: Beautiful. Is that all, Dr Heath?

Renee HEATH: Yes, thank you.

The CHAIR: Beautiful, thank you. Well, we are at about time, so we might wrap it up. Thank you very much for coming along today and your valuable contribution – and for bringing along those products – it was very interesting and useful.

Charles KOVESS: Can I show you one more thing?

Bev McARTHUR: What is that?

Renee HEATH: I cannot believe that is hemp.

Charles KOVESS: This is when you buy caesar salad bowls, okay – everyone see that? One farm in Tasmania fills 120 million of these a year, made of plastic. These can all be made out of hemp. Bowls made by one of our colleagues, beautiful hemp bowls – biodegradable, compostable, crush this up, put it in the garden. Plastic to hemp bowls, look at this.

Rachel PAYNE: What is the cost difference, sorry?

Charles KOVESS: The price difference? Twenty cents.

Rachel PAYNE: Oh, there you go.

Charles KOVESS: Twenty cents, and the consumer will happily pay 20 cents extra.

Rachel PAYNE: Yes, I would happily pay that.

Charles KOVESS: And then the covering of this would just be like Glad wrap, but it would be a biodegradable hemp plastic. And hemp is made of cellulose. All bioplastics can be made out of cellulose, because cellulose is carbon, hydrogen, oxygen. That is what this plant is made of.

Bev McARTHUR: What is the other little bowl?

Charles KOVESS: This bowl here? It is very exciting. This is so incredibly strong. This is made out of hemp fibre and water. It is micronised fibre, turned into a powder. You can stand on that. You make the powder, mix it with water, like toothpaste, dry it, and that is entirely biodegradable, compostable. This tabletop could be made out of that. Hemp powder and water – how about that.

Renee HEATH: It looks very nice. Thank you so much.

Bev McARTHUR: Fabulous.

The CHAIR: Yes, we really appreciate seeing these products. We will leave it there, and all broadcast and Hansard equipment can now be turned off.

Witnesses withdrew.