

# TRANSCRIPT

## ENVIRONMENT, NATURAL RESOURCES AND REGIONAL DEVELOPMENT COMMITTEE

### Inquiry into the CFA training college at Fiskville

Melbourne — 27 July 2015

#### Members

Ms Bronwyn Halfpenny — Chair

Mr Tim McCurdy — Deputy Chair

Mr Simon Ramsay

Mr Tim Richardson

Mr Bill Tilley

Ms Vicki Ward

Mr Daniel Young

#### Staff

Executive officer: Dr Greg Gardiner

Research officer: Dr Kelly Butler

#### Witnesses

Mr Chris Bigham, acting operations manager, and

Mr Paul Roughead, operations officer, on behalf of Fiskville training college staff members.

**Necessary corrections to be notified to  
executive officer of committee**

**The CHAIR** — On behalf of the committee, I would like to welcome Mr Chris Bigham and Mr Paul Roughead from the Fiskville training college. Before we get you to introduce yourselves and start your presentation we will just introduce ourselves, although I think you probably know most of us — we have been to Fiskville a few times.

All the evidence taken at this hearing is protected by parliamentary privilege, as provided by the Constitution Act 1975 and the provisions of the Parliamentary Committees Act 2003, and is protected from judicial review. Any comments made outside the precincts of the hearings are not protected by parliamentary privilege. All evidence given today is being recorded, and you can be provided with a copy of the transcript to look over before it gets distributed.

Following your presentation to us this afternoon, committee members will ask you questions both about the submission and also the presentation that you give today. Thank you very much for coming in and for the submission that you provided earlier to the inquiry. Over to you, and perhaps if you could give a little bit of an explanation of your role and position in terms of the CFA, that would be really helpful.

**Mr BIGHAM** — Thanks very much for the welcome today. My name is Chris Bigham. Normally I am the operations officer for recruit programs for CFA. My reason for being here today is I have been acting into the training manager role for training delivery, which represents the staff at Fiskville, so hence the representation today.

**Mr ROUGHEAD** — My name is Paul Roughead. I am the operations officer, training delivery. I was based at Fiskville, and my primary role was scheduling coordination of practical hot fire training on the training PADs.

**The CHAIR** — Both management positions, would you say, or not really?

**Mr BIGHAM** — Management of the activities in our portfolios at Fiskville. I would not consider myself senior management in CFA, no.

**The CHAIR** — Yes. That was just to clarify. Thank you.

**Mr BIGHAM** — Like the previous speakers you have seen here today, we are actually sitting in this position today because we all have an intrinsic love of Fiskville. I think it has been evidently clear of the speakers today about the love of the place, the hospitality shown there and very much the feeling of welcome that people feel there. I myself have worked at Fiskville for seven years over a couple of different stints, and my family resided there for three years. I have spent just under a quarter of my operational career delivering training at the facility. I have an intrinsic love for the facility.

Further to our submission from Fiskville staff members provided to parliamentary inquiry on 27 March 2015, we are grateful for this opportunity to address the members of this inquiry. Paul and I represent the diverse cohort of current staff, who have been provided no voice and afforded no fairness in a matter that significantly affects them and their families. This opportunity today has been our only vehicle to attempt to bring some balance to the myriad of opinion, innuendo and thought that has demonised a community, a facility and a group of everyday, hardworking people who have worked at Fiskville.

### **Visual presentation.**

**Mr BIGHAM** — As evidenced by the slide, we are very much impacted by the community.

**Ms WARD** — When was that photo taken?

**Mr BIGHAM** — That was taken last year after the information started coming out in the print media.

**Ms WARD** — So this is a result of the *Herald Sun* stories?

**Mr BIGHAM** — Correct. Yes, that is right. I was the duty officer on the day. Some of our staff may not have seen this. This happened early one morning. I called the local police out obviously because of the vandalism, and the local police officer said that he considered it was from a local person, and, in his opinion, probably a farmer or someone like, because that marking is actually animal dye that they use to mark animals

with — not paint. Of course being what it is, we had it painted over straightaway, not to upset our staff, of which, you all know, there are a certain amount of local community members who work at our facility.

**The CHAIR** — Sorry to interrupt, but has that died down a bit now in terms of the staff and the feeling in the town, I suppose?

**Mr BIGHAM** — Not at all. It is continuing to be a hot topic and is still dividing the community today. The more and more it gets discussed about the issues and as we keep progressing along the journey that the inquiry is taking there is constant comment. You will see some more slides in a moment that resemble this. There is still constant discussion within the local community in Ballan about which side of the Fiskville saga you sort of believe or want to take.

**Ms HALFPENNY** — Yes, we have heard some not very nice stories on both sides of the argument.

**Mr BIGHAM** — To put it in a little bit of context, can we start by saying that Fiskville has been a remote roadhouse in outback Australia where all passable roads meet and all travellers congregate to feed and fuel. That is a really unusual statement to say, but what we actually mean by that is that until March this year Fiskville was a place of unilateral training and congregation. It was a place where our senior operational leaders interacted with frontline personnel, our volunteers undertook high-level skills acquisition and skills maintenance to ensure their effectiveness in operations, and the CFA conducted specific and specialist training that could not be conducted at any other training location. This included training for CFA, other emergency services and commercial entities. Finally, it was where we honoured our members who had made the ultimate sacrifice in the line of duty and whose names are inscribed on our memorial wall. Fiskville is very proud of hosting that particular memorial to people who have died in our industry.

It was our home and we were the current custodians. We have heard from previous speakers today. They were the custodians in those days, and that responsibility has been now transferred to us. We were proud of our workplace and proud of the work we did there, work which has been critical to the wellbeing of communities all around the country, as lessons learnt at Fiskville have been applied to save countless lives and properties across Victoria and interstate. We have undertaken the task of providing the best fire and emergency management training we possibly could, and we always did our best to get it right.

While for others in the CFA things have changed only in the last few months, the changes for us began in December 2011, following a story in the *Herald Sun* newspaper which linked Fiskville to illnesses suffered by former Fiskville employees. Newspapers and other media have carried numerous stories making claims about Fiskville since December 2011, placing us and our workplace under continual scrutiny and attack. Fiskville staff have not been provided opportunity to respond to the claims, and we were required to comply with CFA's communication strategy, a strategy that was non-responsive and which we did not believe has represented us along the journey.

As a result, much of what has been claimed has been unsubstantiated and lacks balance. The claims have been hurtful, with one article even linking Fiskville to a royal commission into institutional abuse at a time when the hearing was occurring locally in Ballarat, which related to events that victimised some of our friends, our children and even some of us. To have that link made at that time is inexcusable in our minds. Over time the angst in our workplace has grown and there has been a significant impact on all of our staff.

For more than three years our credibility and our professionalism has been questioned. Our workplace has been subject to vandalism and graffiti attacks, and they still continue. We have been stopped outside our work environment while going about our normal business, and we have been treated with hostility from people seeking answers to questions relating to news reports and to this inquiry. Our family members have been subjected to criticism and innuendo because of where we work, and our wider network of family and friends have been similarly questioned.

As a result of this, personal and workplace relationships have been strained, and surrounding communities are now divided. We continually feel isolated and victimised and unsupported by our employer, which has continually made decisions about consultation while failing to keep us informed about matters which significantly affect us.

Government also seems to be little interested, as we have seen very little of our local government member. Even one of the industrial bodies which represents staff at Fiskville holds the view that our workplace should be closed. Continuing messages of, 'We're here to support the staff at Fiskville' from numerous quarters are hollow. A world-class training facility is closed today and more than half of the staff who work there will be offered targeted separation packages as of 30 September 2015, leaving them unsure of their ability to support their families. Throughout this time we have held together, we have remained professional and continue to provide a fire and emergency training service of the highest standard. This service is critical to the state of Victoria in terms of its emergency management capacity. Our wish is that we will be able to continue to provide this service to a level that we have in the past and that we will not ultimately be viewed as victims of Fiskville.

We have followed this inquiry closely by way of reviewing submissions and attending public hearings, and we would like to use this opportunity to express some concerns relating to matters which impact us and to respond to them. We took the time to make our submission to the inquiry, and we would like to revisit our written submission and the vision we have for Fiskville. This future appears bleak at present, but nonetheless must be considered by members — by you — in meeting their responsibility to make an assessment of the feasibility of decontamination and rectification of the training site in accordance with the inquiry's terms of reference.

**Mr ROUGHEAD** — In relation to our concerns, it is apparent to us that there are several prejudices towards Fiskville which might be impacting on this inquiry and its findings. We repeatedly hear that the inquiry will get to the truth in relation to what has occurred at Fiskville, but based on what we have seen to date that might be difficult. It appears the inquiry is being used by some to achieve agendas which are not related to the terms of reference, and that is a real concern to us. We will today, though, focus on ensuring our presentation is relevant to the impacts on current staff at Fiskville, which we believe should also be a consideration of the inquiry.

In relation to the terms of reference, one of them, term of reference (3), calls for an examination of the role of past and current executive management at Fiskville. That might be fair enough, but we believe that is alarmingly narrow, and we wonder why. We perhaps suggest the inquiry should also examine the role of others involved in making decisions in relation to operations at Fiskville, which would include CFA management, regulatory authorities, other organisations which have trained at Fiskville and the management of petrochemical companies, which provided materials to Fiskville and about which there has been a lot of conjecture and there are a lot of unknowns. In saying that, we sympathise with you because you need to make some recommendations when much of the evidence presented is not subject to challenge from judicial process, any rigorous questioning and a lot of it is not actually relevant to the terms of reference that have been set for you. We have some sympathy.

Despite our concerns, however, we believe that a review of historic and current practices at Fiskville is warranted, and we accept that there is much factual content in the submissions made and the evidence presented to date, and that has been challenging for us, believe me. It is also evident that there has been evidence presented that relates to circumstances and events that we know nothing or very little about, and that has also been very challenging. However, given that, we acknowledge the value of much of the evidence and its contribution to the examination of Fiskville and to its value in helping this inquiry make its recommendations. We fully support the recommendations of your interim report and on that basis are looking forward to the final report and your final recommendations. However, there are claims in some submissions and evidence that contain significant errors, oversights or omissions and we believe it is appropriate to respond to some of these claims at this time.

**Mr BIGHAM** — With regard to these claims, we have heard tell of the installation of the security systems at Fiskville and the perception of this being done to hide something. The next slide shows the gates at Fiskville. They are exactly the same as the gates at the current new training facility at Craigieburn, no different. In line with custom and practice in both public and private sectors, security systems at Fiskville have been installed to enhance the safety and security of all staff, visitors and equipment on site, and no-one has been denied access to the site during normal hours of operation. That is normal, everyday in government department buildings.

We have heard tell that the employment of local people at Fiskville is to reduce complaints about operations at Fiskville. We heard a speaker before saying how wonderful it is that Fiskville has employed local people because it brought that salt of the earth to the facility. We still maintain that tradition today. Working locally suits a lot of people who live in the local community. However, vacant positions are advertised in both local and

non-local media and filled using merit-based processes and in accordance with our recruitment and selection policies.

Another one is the exposure of visitors to contaminated water supplies in the domestic areas. I was in here the day that that was said. To the best of our knowledge, these water services have been supplied with water from local town supply systems since Fiskville was acquired by the CFA, and I think previous speakers today talked about the poor quality of the town's water supplies. The quality of this water was poor and until recent years consistent with what was provided to all properties in the local areas. There was nothing different that came into Fiskville.

Another one was the use of waste substances at Fiskville in the early days of its operation compared with the use of known fuels at other training sites. We have heard that said as well. The use of unknown substances in fire training was widespread at these times that the substances were used at Fiskville. That does not make it right but it was custom. That was what was done.

The systematic bullying and intimidation at Fiskville. Fiskville is fully aware of its responsibilities to meet CFA's requirements in relation to equity and diversity and bullying and intimidation. Visitors are inducted accordingly, and all CFA staff receive training in relation to meeting these requirements. Seven thousand people go through Fiskville each year. With many being on site for several days or weeks at a time — and in the case of recruits, for 16 weeks at a time — claims of bullying can be made confidentially and independent of any Fiskville management and are subject to immediate investigation and action in accordance with CFA policy. To the best of our knowledge, transgressions in this area are very rare.

Finally, the lack of care and aggression towards others in managing Fiskville's day-to-day role as a training facility. Fiskville staff are professional in meeting their duties and provide a high level of service. Onsite operations are managed in accordance with comprehensive guidelines and procedures to help ensure fairness and consistency, and these are subject to continual review and improvement. These guidelines place restrictions on our training operations and there is no requirement to do so, where an exemption for an activity has been provided. We welcome open communication and feedback, which we use to enhance the way we operate. Continual self-improvement is how we operate and have done so for years. Just a couple of examples of that would be the induction and supervision of trainees and visitors, and I believe you guys undertook an induction package when you attended the site earlier in the year. That is the type of enhancement and progression we make in those sorts of arenas.

The use of PPC to manage OHS issues with new structural PPC. We heard speakers say that back in the days when we were investigating the incidents that used to occur there was very little PPC, or protective clothing, there. Fiskville has come a long way in the years and we make sure that everyone uses PPC.

Preparation of different training scenarios et cetera, and the list can go on. We can provide them and give you further comment at a later time if you wish.

One thing we would like to clear up at this time though for you. The committee might have become aware that we discourage the use of BA. That is actually not the case. Fiskville is used as a training facility for all of CFA. CFA can be a remote tin shed in the back of nowhere that has three fire calls a year and actually does not have BA, to Dandenong and Geelong, which are the CFA's largest stations and go to 2500 fire calls a year. So our training at Fiskville has to be representative from the tin shed to Dandenong and Geelong and everything in between. So our training scenarios that we do are deliberately set up to cater for — the people who can wear BA will wear BA, and those who cannot, do not.

I will show you another slide. Here is a classic picture of a different fire service attacking a fire prop without breathing apparatus on, and that is nothing to do with CFA. So do not get the perception that just because you are firefighting you have to have BA on. I think that is something that some people might have said to you in the past.

**Mr ROUGHEAD** — Chris has been talking about probably some general comments and claims and some that are based on perhaps hearsay or perception. There have been some things said, though, that are quite specific and we really want to pay attention to those more deliberately. This includes claims from a neighbour of Fiskville who has stated that Fiskville shows lack of consideration for him as a neighbour and a lack of duty of care towards him and his property, that Fiskville has failed to honour agreements made with him, that

Fiskville has failed to act on complaints relating to smoke emissions, and that his property has been impacted by acid rain caused at Fiskville or caused by Fiskville activities and explosives training conducted there. He has also said he was bullied by staff from Fiskville.

As far as we are aware, those claims are not correct. We believe Fiskville are professional in their dealings with all neighbours and in attempting to resolve issues which impact on the neighbours. In relation to the claims, Fiskville has made significant and continual adjustment to its training procedures to reduce impacts on neighbours as they are raised. We have maintained an open line of communication in an attempt to develop a cooperative working relationship with all our neighbours. Our efforts to work cooperatively with some neighbours have not been reciprocated, and we are more than happy to answer further questions on this if you would like some detail.

In relation to the claim of bullying, we are not aware of any occasion where a member of Fiskville staff attended a neighbouring property and, as was stated, was involved in a heated conversation during which the neighbour was bullied or where there was any confrontation that almost came to blows. We do know that on Sunday, 14 August — which is about the time that this accusation was made — Fiskville reception received an abusive and threatening phone call from a neighbour who called to complain about the impact of smoke from training activities at Fiskville. That complaint was referred to our rostered duty officer at approximately 1120 hours. The duty officer was off duty and located in Ballarat and made immediate contact with the neighbour by phone. The ensuing conversation was not heated. In fact the neighbour apologised to the duty officer when it was made known to him that the phone call to Fiskville had left the young woman at reception terrified due to the threatening nature of the call.

Further discussion focused on what had happened and what the impacts were, after which the duty officer contacted Fiskville PAD and arranged for the training activities to be adjusted to eliminate smoke emissions while the neighbour was onsite. Several phone calls were exchanged between the duty officer and the neighbour and the PAD in coordinating this and concluded with the neighbour actually thanking the duty officer for his assistance when the neighbour contacted the duty officer at 12.30 to advise that he was leaving the property for the day. The events and phone calls were logged by the duty officer at the time, they were documented and referred to Fiskville management, and a letter confirming the events and the discussions that day was subsequently sent to the neighbour. Copies of these and other corroborating documents can be provided to the inquiry if required.

We have also heard specific claims from members of MFB who attended training at Fiskville. While we do not believe that we are in a position to provide comment on claims that relate to corporate practices and decisions, we will limit our responses here to claims which relate to Fiskville and to its staff.

The quality of training water at Fiskville, water-testing procedures and the exposure of MFB members to contaminated water were central themes in evidence presented to the inquiry by those MFB members. This evidence infers that MFB staff who trained at Fiskville were misled into understanding that the water used for training at Fiskville was class A water and that as a consequence of this not being the case MFB members were exposed to potential health risks while training at Fiskville. The evidence makes reference to both verbal conversation and to a range of CFA reports on water testing. In response to those claims, while the reports relate to Fiskville's training water, we are generally unaware of the content of the reports, who commissioned the reports or why they were commissioned, so we really cannot comment on them.

We are also unaware of any advice being provided by any staff at Fiskville to anyone from the MFB stating that the water at Fiskville was class A water. We know of one discussion relating to the standard of training water at Fiskville, and that discussion occurred during the MFB recruit course conducted at Fiskville in June 2012, during which the MFB course coordinator asked the Fiskville PAD coordinator for confirmation that the water had been tested. The MFB officer was shown a copy of the latest water test results to confirm this and there was no mention in that discussion relating to the standard of class A water. Can I say that if there had been, they would have been told no, because at the time we would have thought class A water was top-of-the-tree potable drinking water.

To confirm what we do know, we know that there are historic issues with water quality at Fiskville and that this, amongst other issues, had resulted in the closure of the old flammable liquids PAD in the mid-1990s. Our understanding of the issues relating to water quality is that sediment in dam 1 was reportedly contaminated but that this did not present a health risk unless the sediment was disturbed. We also know that at this time Fiskville

management advised CFA that a water treatment plant was required at Fiskville. However, no approval of funding was provided for that purpose.

Dam 1 remained online as a source of training water following the opening of the new flammable liquids PAD in the late 1990s. However, more thorough risk assessment processes resulted in that dam being taken offline in the mid-2000s. As far as we are aware, regular testing of water was first commenced at Fiskville in the late 1990s, at about the same time that the new flammable liquids PAD was opened. We were not aware what standard the water was tested to but we trusted that it was to a safe standard, and we had no reason at all to doubt that. That trust was based on the fact that the water was being tested by the local water authority, Central Highlands Water. It was based on improvement in the visual appearance of the dams used to store the water and by the increasing presence of aquatic life and water birds.

It was also based on personnel training at Fiskville over many years reporting very few health issues that might have been related to water while they were training or immediately following them being at training, and on the knowledge that the instructors and the PAD staff who worked on the PAD and were exposed to the water on a very regular basis actually reported or had no health issues that could have been associated with water quality. As far as we are aware, there have been very few or a negligible number of health and safety incident reports lodged with CFA or with MFB during or following training. There has been a raft of them well after training has been completed, when it became evident there were water quality issues, but the timing of the lodging of those reports is critical in that they were not generally lodged at the time that people were training at Fiskville.

Irrespective of our level of knowledge, it is apparent, though, that there were potential health risks associated with the training water, particularly with exposure to the bacteria *pseudomonas aeruginosa* and to perfluorinated chemicals. While we do not have any knowledge of the extent of the exposure, it appears that some people have had knowledge of this. However, no information has been shared with us, and this has prevented us from making or enacting reasonable decisions for ourselves and our families or for personnel undertaking training at Fiskville. I think, as was demonstrated earlier, when we become aware of problems, as we did when the old flammable liquids PAD was in operation, we take action to correct it. We had no opportunity to do that in this instance because no-one shared information with us, and that is deeply disturbing.

**The CHAIR** — Is that just in the last few years, in terms of the sharing of knowledge? Sorry to interrupt, but it is an important point.

**Mr ROUGHEAD** — No, at no time has anyone shared any information with us to say there was a problem with the water quality. As far as we were aware, the water was safe to use, and we were out there with it all the time.

**The CHAIR** — Is that at Fiskville level or you mean at head office level?

**Mr ROUGHEAD** — At Fiskville.

**The CHAIR** — At Fiskville.

**Mr ROUGHEAD** — I am talking people at Fiskville. If there was knowledge that there were problems with the water, as far as we were aware — and I am talking for myself and other people — we knew nothing.

**The CHAIR** — Okay. Sorry. Thank you. That makes it clear.

**Mr ROUGHEAD** — That is disturbing, and we are grateful that it has been identified, but we question why when that knowledge became available it was not shared with us immediately. People have known about that for a period of time. Had they shared it with us, we might have helped mitigate the extent of the exposure and helped manage potential health risks that were associated with the exposure. We have had no opportunity to do that.

Moving off water, evidence from the MFB members also looks to discredit the training undertaken at Fiskville, but we have again no understanding for the motivation for doing this. The members who have presented this evidence have attended Fiskville as both members and/or facilitators on various training courses for the MFB; there is no doubt of that. However, they have significantly overstated their role and experience at Fiskville, and there are significant inaccuracies and exaggerations in their submission or in their evidence as evidenced by their lack of familiarity to Fiskville staff and by various references to training props and training drills at

Fiskville which are inconsistent with actual custom and practice. While they have been identified at times as Fiskville instructors, the reality is that they have not been appointed to Fiskville as instructors and may have operated on site for as little as 5 to 15 days a year dependent on the involvement in the course they were working with.

Their evidence included photos of training undertaken by MFB personnel at Fiskville, and the commentary associated with the photos was critical of aspects of the training that was being undertaken. However, there was no acknowledgement in the commentary that the activities conducted in the photos were determined by the MFB members, that MFB members selected the outcomes for the drills and supervised the drills and that the drills were repeated multiple times as syndicates rotated through the training.

Further, there is no acknowledgement that the instructors asked for fires to be made as hot and black as possible or that fuel usage during those courses was amongst the highest recorded at Fiskville each year or — and there is a photo coming to identify what I am talking about here — that students and instructors who attended the training were unanimous in praising the training they had completed and in showing their appreciation to the Fiskville staff. This is a photo that has been lifted off the submission made earlier by the MFB, which is a team photo, if you like, which includes PAD operators, PAD instructors and PAD coordinators from Fiskville standing alongside MFB members. That is not the sort of photo that you get if you have had a bad experience.

**Mr BIGHAM** — See the photo with the foam on the ground? It has been presented to this committee about how disappointed the MFB were that they were exposed to foam.

**Ms WARD** — Foam or PFOS foam?

**Mr BIGHAM** — That is not what they said in their talk.

**Ms WARD** — Sorry. The question I asked was were they talking about foam or PFOS foam? I understood it was foam with PFOS and other substances in it.

**Mr BIGHAM** — The picture that they put up was the same foam that we are looking at there.

**Mr ROUGHEAD** — It is evident, though, that there has been a significant breakdown in the relationship between MFB members who attended training at Fiskville and Fiskville staff they worked with. That is really regrettable, because we had a very, very good relationship with them and we achieved some fantastic outcomes. Given that there has been the breakdown, it does not provide cause for evidence to include malicious claims about Fiskville or its staff, such as claims which infer Fiskville staff used water from dams to supplement training water supplies after bulk storage tanks were installed on the PAD and town water only has been used for training. We have no understanding of the motive for that claim.

We also question the claim in the same evidence that alleged an MFB member was subjected to death threats and verbal abuse and was also assaulted by a member of Fiskville staff. We do not condone behaviour of this nature, but we question the veracity of the claim given that we have no prior knowledge of these allegations and it is hardly the sort of thing that would have been kept quiet or could have been kept quiet. But as far as we are aware, nothing has been referred to the police or any other organisation for investigation, and the allegation has been made by someone who has actively been campaigning for the closure of Fiskville.

If I can too just talk briefly on claims from CFA members. It has not only been MFB members who have made claims against Fiskville; several CFA members have also made critical statements to media. They have verbally attacked Fiskville staff and provided submissions or evidence to this committee. We would like to note, however, that the members making these claims have continued to return to Fiskville across months and even years to deliver training or to undertake training or assess training in their field and they have been more than happy to do this, but they have not always acknowledged this in their claims. It is particularly disillusioning to our staff. Again, we are unsure of their motives for doing this, and we are disappointed that they are happy to make claims against Fiskville while looking to reap benefit from the facility.

**Mr BIGHAM** — In saying all that, we still do have a vision. Being, as I said, its custodians and having belief in the facility, we have a vision. Despite the decision being made earlier this year to close the site, the staff at Fiskville believe that Fiskville remains viable and vital as a training site and should continue to fill a key



role in training with the emergency management sector in Victoria if the inquiry finds the site can be rectified and remediated. That is the proviso.

We believe the decision to close Fiskville was made prematurely and without due diligence. There was no consultation with the staff prior to the decision being made and no consultation that we are aware of with Victoria University, the State Emergency Service, RMIT University, all of which hold pecuniary interest in terms of infrastructure at Fiskville. Neither does there appear to have been any consideration of looking at alternatives to closing Fiskville, relocating the staff, relocating and rescheduling training or catering for the needs of clients where training could not be reallocated or rescheduled. In essence, Fiskville was just shut down. The staff found temporary lodgings in the meeting room of the local fire brigade, so 76 staff moved into their little — —

**The CHAIR** — That was before the council office?

**Mr BIGHAM** — Correct. Yes. Then we struggled to re-establish critical training functions for the state at the current Darley site, which you know as the council office, all under the utterings of, ‘We are here to support you’. While we have been told the decision to close the site was made on the basis of health and safety, we still remain confused. And apology if we keep remaining confused, but there is a lot to be confused about.

In January this year the Premier of Victoria visited Fiskville to release the findings of Monash University’s *Fiskville Firefighters’ Health Study*. In releasing the findings the Premier declared that Fiskville was a safe work site. In March the CFA suspended operations at Fiskville and ultimately announced that the site was being closed after environmental testing revealed that levels of perfluorinated chemicals — PFOS — were present on the PAD and in one other location at Fiskville. Have you got awareness or visibility on what that one other location is?

**The CHAIR** — Sorry. What was that?

**Mr BIGHAM** — The one other location that helped close the site was located on the PAD — that we know — and then testing said it was over at the hangar.

**The CHAIR** — We understand there were numerous places that the PFOS was tested, which was new to previous tests.

**Mr BIGHAM** — Yes. It is unusual, and we are a little bit concerned that the testing that was found on the hangar comes off one water pipe. The water pipe supplies three outlets. It supplies the outlet to the mill cock, where the PFOS was found. It also supplies water to the wash basin inside the hangar that the air pilots wash their hands in, and it also supplies water for the toilet. All three of those sites were tested — coming off the same pipe — but the only place PFOS was found was in the mill cock outside.

In relation to this, however, PFOS was already known to be present on the site. However, we had been assured there were no associated health risks with it. In fact we were told it was safer to swim across dam 2 than the Yarra River.

**Ms WARD** — Who told you that?

**Mr BIGHAM** — I will leave the names out of it, but that was the advice we were getting from the scientific evidence and from doctors.

**Ms WARD** — That were employed by the CFA?

**Mr BIGHAM** — As part of the testing procedure. Yes, that is correct. But of course we were not swimming across dam 2, let me say that. It did not give us the okay to go and swim across there. PFOS was predominantly found inside the PAD compound in the water supplies and water outlets and could have been isolated to these areas — in fact it actually is fenced off — and there does not appear to have been good reason to close the entire property given that the hospitality, administration and classroom facilities were all cleared of contamination and could have remained in use.

We are still confused as to who is actually responsible for closing the site, as at different times both the CFA board and the state government have claimed to have made this decision. We remain in the dark in relation to

what information and processes were used as the basis for the decision and have been criticised for legitimately trying to rationalise the decision logically as people employed on the site. We understand that CFA has undertaken significant planning to decommission and transition from the site and are confused by the haste in the process given that this inquiry must recommend on the feasibility of decontaminating and rectifying the site and that it is CFA's stated preference to establish a new training facility in the same local area.

So far as we are aware there has been no risk assessment conducted, no analysis of any test results and no consultation with any of the range of subject matter experts to confirm the site is untenable in terms of exposure to health, safety or the environment.

In contrast, we have been advised that the level of contamination is within safe parameters, and blood test results from the staff at Fiskville are also well within safe parameters with regard to PFOS levels. It is our understanding that the reported levels are representative of the general population of Australia, Europe, Asia and the USA. We have been shown reports of a European community with contaminated drinking water 600 times greater than the level at Fiskville, yet no action is being taken, as it poses no harm.

**The CHAIR** — Whereabouts is that? Which European community?

**Mr BIGHAM** — Forgive me, it is Sweden, I think, and they are contaminated because they are beside a military base, where they use firefighting foam. It has contaminated their drinking water supply.

**Ms WARD** — And they are trying to remediate that site?

**Mr BIGHAM** — No, they are not doing anything, because it poses no harm.

**Ms WARD** — That is not the information I have read. This is the airfield, yes?

**Mr BIGHAM** — Yes, that is correct. The information we were shown is that they are not remediating anything there.

**The CHAIR** — Is that from the CFA head office?

**Mr BIGHAM** — No. It is from an independent professor, a scientist.

**Ms WARD** — Australian?

**Mr BIGHAM** — Yes.

**The CHAIR** — But how was it presented — through the CFA head office or the professor?

**Mr BIGHAM** — So it was presented by the professor to our staff to help us understand where we are in the scale of contamination.

**The CHAIR** — And was that recently?

**Mr BIGHAM** — Yes, it was, about three weeks ago.

**Ms WARD** — So this is someone that the CFA invited to come and talk to you?

**Mr BIGHAM** — That is correct, yes.

**The CHAIR** — You do not mind us — —

**Mr BIGHAM** — No.

**The CHAIR** — Because they are just small questions of fact.

**Mr BIGHAM** — Yes.

**The CHAIR** — Thank you.

**Mr BIGHAM** — We have not seen any report that identifies Fiskville as a toxic wasteland. It is our understanding that it is not contaminated to the point that other sites in Victoria have been contaminated or that it cannot be remediated — for example, the site of the munitions factory in Maribyrnong, which is now the site of a housing estate, and the sites of Point Henry and Anglesea, where until recently heavy industry was located, but they are not the focus of any discussion so far as being beyond remediation. In relation to Fiskville, at the time the site was closed, significant remediation works had already been completed, and I think you are aware of them — you have seen the remediation works.

**The CHAIR** — Yes.

**Mr BIGHAM** — These works involve removing and/or isolating contaminants. They are subject to an environmental audit process to ensure that they are completed. Several million dollars have already been spent on this, and further remediation works were subjected to tender processes at the time Fiskville was closed; we were already in the process of tendering for the next change. If these works are not completed, it is difficult to understand how the site can be used for any other purpose. If on the other hand the works are completed, then the site remaining should be viable for use as a training facility, and this will remove the time and the cost associated with finding and constructing a new site in the local area. Our understanding is that that is what the CFA is planning to do at this time.

We believe the advantages in doing this are immeasurable to both the local community and the wider emergency management sector. We believe the committee should strongly recommend the decontamination, rectification and recommissioning of the site if this is at all feasible, based on our previous rider that it can be done. We make this statement based on the economic costs and the loss of opportunity associated with an alternative decision. The latest training complex reflective of the intrinsic value of Fiskville is reported to have cost the Victorian community \$110 million, yet it cannot cater for the training numbers that Fiskville accommodated regularly. As we said, 7000 people a year would go through Fiskville.

Closing the site had an enormous impact on the costs associated with CFA training, as evidenced by the cost of running a CFA recruit course at Craigieburn, as opposed to a Fiskville recruit course. It is our understanding that the projected figures are to be double. In addition it has resulted in the loss of the only hot fire training site in Victoria that offers the residential services which have proven to enhance learning, development and camaraderie and build effective teams — such is the residential nature of it — and which provide opportunities to conduct fire investigation training, which is critical to understanding how fires start and therefore how they can be avoided, and which is also essential in detecting and helping to prevent crime such as arson. This is the only training facility in the state that can provide that training.

Fiskville has also provided the major hot fire training site in Victoria for training which involves large intense fires involving carbonaceous fuels and flammable liquids. I think you understand what I mean by carbonaceous fuels.

**The CHAIR** — Yes.

**Mr BIGHAM** — We have the area and ability to run multiple drills. That particular drill can cater for up to eight pumpers at a time and an aerial appliance on the flammable liquids PAD. Training of this nature is critical in preparing firefighters to face the hazards that they face in their workplace. This is far superior to using less intense natural gas-fired simulations that provide less realistic training scenarios. While there has been an international trend in recent decades to use this technology to reduce the risks associated with firefighter training, we understand there is now focus on returning to the more intense training that Fiskville is expert in delivering as it best prepares firefighters to deal with the hazards they face in their workplace.

I have heard it said in the committee that you need to have an environment to train firefighters that has all hazards removed. The CFA is a decentralised fire service, and as I said to you, from the little tin shed that does four fire calls a year to the place that does 2500 fire calls a year, our training needs to be able to provide and cater for all of that with a level of understood safety built into it and hazards removed from it, but there is still a need to conduct this sort of training.

The closure of Fiskville has also removed the opportunity for security and law enforcement agencies to conduct training which requires access to a secure and controlled environment to deliver training which involve sensitivities that make it difficult to undertake in prominent locations. The training often relates to civic, state

and national security, such as the army's Black Hawk training — with our streetscapes they can land and not impact close neighbourhoods et cetera — and it is important given the global and political tensions and the heightened security levels in force around the world.

**Mr ROUGHEAD** — Chris has spoken about our vision, I guess, and I want to talk now about some of the unique advantages that Fiskville provides as a training site, as were detailed in our earlier submission, but we think they are worth revisiting here. Those advantages include its existing infrastructure, which has unique characteristics and potential when compared with other venues, and these include Fiskville's residential capacity and its hospitality centre. On site we can accommodate 100 people living and working together, and as we said before, that is what really helps develop effective learning, camaraderie and teams in an industry that relies on teamwork and cooperation to get the job done.

We have a fantastic teaching centre and classroom facilities, which include a unique rotating TEWT table — you can see it on the slide there on the left-hand side. It is a topographic model of an area in Victoria which you can spin around to change the orientation. We can seat something like 60 people around that table and talk about strategies and tactics for managing fires and incidents. We can put a lid on the topographic model and replace it with an urban model. It is a facility that other places do not have. We have hot fire training areas, which include flammable liquids, LPG and structural fire training PADs. That is an example of some of those PADs in operation. We have spoken about the need to provide as realistic training as we possibly can.

**The CHAIR** — Paul, do you have a lot more in your presentation?

**Mr ROUGHEAD** — No.

**The CHAIR** — No worries. Keep going. We were going to finish at 4, but we can go a bit over. That is no problem.

**Mr ROUGHEAD** — Thank you. So there are hot fire training areas. Critically the structural fire training PAD includes a fire investigation training facility. That is it there. Again that is unique; there is no other training site in Victoria that provides the capacity to provide fire investigation training since Fiskville has been closed. We cannot train our own fire investigators. The arson squad also used to use that, and they cannot train their people.

**Ms WARD** — Just to clarify that, Paul, so that I am clear, we have seen a couple of the facilities that the MFB and CFA have. What is the difference between that structure, for example, and the structures that are available at Craigieburn? I am not saying that they are there to replace them; I am just asking what is the difference.

**Mr ROUGHEAD** — This facility was purposely constructed, and is lined with plaster, carpet and such, to light fires inside. They are not operated by simulators; they are genuine fires. We set up rooms: an office environment, a bedroom environment, whatever you like — a basic environment.

**Ms WARD** — We saw a fire at Craigieburn that was simulated, that went up the wall and up to the ceiling. It emanated from a computer. It was a real-time simulation, if you like. What is the difference between doing something like that and creating a fire here that is — —

**Mr ROUGHEAD** — This is a real fire.

**Ms WARD** — What is the difference?

**Mr BIGHAM** — Can you see the couch in through the doorway?

**Ms WARD** — Yes.

**Mr BIGHAM** — That is a real couch burning. That will have a thermal layer that will hit the roof. It will spread out, and the thermal layer will then start to come down.

**Ms WARD** — But would you not be able to simulate that?

**Mr BIGHAM** — No. In the simulation, the training smoke they use is cold and it hits the ground. The smoke is actually upside down. We are training people the wrong way.

**Mr ROUGHEAD** — The other thing is that to set that fire — —

**Ms WARD** — Sorry; I do not want to spend too much time on this. How is the fire upside down?

**Mr BIGHAM** — The smoke and heat are at the roof. In the simulation, the smoke is cold, so it hits the ground. So the smoke is on the ground; it is actually at ground level.

**Ms WARD** — Everything was above our heads, and the heat was coming from above us.

**Mr ROUGHEAD** — This facility here is not about that. This is about setting real fires — lighting real fires so that people can be trained to look for fire indicators, to see where a fire started. With a fire simulator in a room, the fire starts in the same spot all the time. In that centre room there where we have some furnishings, we could set fire to the curtain. That would be the point of origin, and fire investigators would have to go in there and find that to determine that. We could set the fire in the couch, and there would be different — —

**Ms WARD** — Do you always use breathing apparatus in this particular fire situation?

**Mr ROUGHEAD** — Yes.

**Ms WARD** — For all of your fire trainees? Going back to your comment earlier, you said in some brigades you do not have BAs and in some brigades you do. In a fire like this, would all your trainees be using BAs?

**Mr BIGHAM** — If they were going inside it, yes. If they were going to use a defensive strategy and stay outside, no, they would not. They would just apply water from the outside. It is just like a normal house fire if you do not have BA.

**Ms WARD** — Sorry, I just wanted to get that clear.

**The CHAIR** — Do you think that if you do not do it this way, you are not as well trained?

**Mr BIGHAM** — Correct. That is exactly right.

**The CHAIR** — So are the CFA trained better than the MFB in terms of Craigieburn versus this situation?

**Mr ROUGHEAD** — It is not about that. Craigieburn cannot do this. They have not got a facility that allows this to happen. We have, just around the corner from this, a building that has simulated fires in it like the ones you have seen. We use that to teach people how to enter buildings safely, how to apply hose streams to fires inside the building and so on. We can do that with or without breathing apparatus. This facility here has a completely different purpose. It can be used to teach people to fight structural fires, but the primary purpose of this building is to teach people to identify the cause of a fire. So we light a fire in there, we put it out and fire investigators have to go in and determine how and where the fire started.

**The CHAIR** — Because Fiskville was closed down we could not see that, whereas we went to other facilities and saw — I guess we probably got only part of the knowledge. We did not get a chance — —

**Mr BIGHAM** — The other thing is that fire simulators might generate a heat capacity of, say, 70 to 80 degrees. This will output a heat capacity of 1200 degrees.

**Ms WARD** — They were pretty bloody hot, and that was with the gear on.

**Mr BIGHAM** — Yes.

**Mr ROUGHEAD** — This is a lot hotter.

**Ms WARD** — When you are practising in these kinds of situations, how does that comply with OHS laws?

**Mr BIGHAM** — We do not actually combat that fire. As you can see, it is a cell. It is a 3-metre by 3-metre cell. What we do is stay outside. You can see the window. It is also glass. It is set up to resemble a room.

**Ms WARD** — So nobody is inside fighting the fire?

**Mr BIGHAM** — No, no.

**Mr ROUGHEAD** — The fire is extinguished from the doorway. We let the fire burn and develop. It will flash over, and everything in the room will get involved. The fire is extinguished. Then the fire investigators come in a day or a week later, and their task is to find out where the fire started.

**Ms WARD** — So that all complies with OHS laws?

**Mr ROUGHEAD** — Absolutely; yes.

**Mr BIGHAM** — Even with the glass on the window there you can tell the type of fire by whether the glass has shattered and blown out, or if it has been a slow developing fire the glass will melt and just sag down in the sash. That is exactly why it is like that.

**Mr ROUGHEAD** — We will move on. In addition to hot fire training areas, we have some practical training areas that are unique. There are examples of some of them here. We have a rail line; we have railway rolling stock. We have a crush block, which is depicted in the bottom right-hand corner. It is something that we designed and we built. It is the only one in the state. It allows us to bend and twist and crush cars to make the most realistic motor vehicle accident scenes possible. Immediately above it is a car wedged in under the railway stock that has been smashed around that crush block. We do not have photos here — —

**The CHAIR** — Paul, I have just been told that we have been going for an hour. If we could move along — because we do want to ask a few questions as well. So maybe if there are a few crucial points — I am sorry.

**Ms WARD** — We are only allowed to have Hansard staff for a limited amount of time. We do need to be able to ask some questions as well.

**Mr ROUGHEAD** — Skipping through that, ignoring all the advantages — and Chris can flash the slides as I am talking — there are driver training areas that we have on site and that are totally controlled; we have an airstrip, which we can use for operational firefighting during a fire summer; we have an extensive network of plantations on site, which we can use for helping to train people in bushfire fighting techniques; and we can use the place as a staging area through fire operations.

I will talk quickly about the Victoria University fire test facility, which you will have seen on site. It is a structure that was built by Victoria University. It is a fire research centre. It is something that could continue to be used for fire research to everyone's advantage.

To ignore the advantages of Fiskville is illogical, and we believe that failing to take advantage of them is ethically and financially irresponsible given the increasing training needs of emergency services agencies, the unique opportunities that Fiskville provides as a training facility and the cost of replacing it with a like-for-like facility. We recognise that there are problems or that the problems of the past create some obstacles to achieve that, but we do not believe the obstacles are insurmountable. Other hot fire training colleges suffer problems. We are not putting this up here for any other reason than to demonstrate that that is a photo taken at VEMTC Craigieburn. It is showing some foam bubbling up in an administrative area. The foam is coming from the hot fire training PAD. No-one would suggest that that training facility should be closed because we have a problem like that. Let us take a practical approach — —

**Ms WARD** — Would that foam contain PFOS or other hazardous chemicals?

**Mr ROUGHEAD** — No.

**Mr BIGHAM** — No.

**Mr ROUGHEAD** — There is no PFOS in foam that is used in firefighting operations today.

**Ms WARD** — So across Victoria, across all CFAs, there is no PFOS or other chemical contaminant in the foams that are used in firefighting?

**Mr ROUGHEAD** — My understanding is that the use of PFOS in firefighting foam was discontinued in 2007. It does not happen. What we are saying here, though, is that problems occur. We fix them. No-one would suggest that Craigieburn should be closed because of a problem like that.

**Mr BIGHAM** — We will just wrap it up for you. Finally, there are a number of questions from us that we would like the assistance of the inquiry to attempt to have answered. One is: what is the level of contamination at Fiskville according to the Cardno Lane Piper report, which we understand to be the only report which indicates the level of contamination on the site? Who is responsible for the contamination at Fiskville? We still do not know that yet. And what knowledge existed, and who held the knowledge of any contamination, water quality issues and potential health impacts on everyone who attended Fiskville over the years of operation?

Finally, if we could, we would like to offer the following recommendations for consideration of the inquiry, subject to the confirmation that the site can be decontaminated: the full remediation of the site to remove residual pollutants to enable practical hot fire training; the provision of a closed and self-contained water supply that allows water to be captured and stored on site and then treated; enhancement of the current training infrastructure to allow all emergency services agencies to train together in an all-agency, all-hazards approach; enhancement of Victoria's university fire test facility; expansion and enhancement of the current plantation and wetland areas on site to provide carbon trading opportunities and which allow hot fire training to be conducted with a managed and minimal carbon emission footprint — we have the room to be able to do that. We thank you for your time listening to our submission.

**The CHAIR** — Thank you for coming in. I am sorry that we had to hurry; it is late in the day. Just one question in terms of the information that you have received from the CFA: do you then believe there is a connection between people being ill and exposure to whatever at Fiskville? Do you believe there is a connection or not?

**Mr BIGHAM** — Me, personally — this is only my view, Chris Bigham's view — I think there is starting to be evidence that there is something going on. My issue as a family man, as a father — my children and my wife lived there as well as me for three years — is what is to happen in the future for us? But the testing that the CFA has provided leads me to believe there are no issues for us at the moment. But of course I am in a different generation to our previous speakers. The fuels are different, our facility is different, we have a new training PAD et cetera, so I am in a little bit of a different boat. That is my personal belief.

**The CHAIR** — You have got confidence. Alan Bennett's evidence is that people were not told about things. Do you think that that culture has changed, then? We have the documents, and he was asking, 'Are you going to tell people about the chemicals that are burnt there?' et cetera, and no-one was told. Do you think now there is a more open exchange of information?

**Mr ROUGHEAD** — I would like to think so. Certainly there is evidence that people knew things back in 1978. I think I heard someone say there was a question asked in 1978 that does not seem to have been passed on to anyone.

**The CHAIR** — In the 90s.

**Mr ROUGHEAD** — Alan has been through a whole series of things. I would like to think that it has not happened, but here we are today. There have been people saying, 'We have had access to information on water tests results for the last two or three years', and they have not told us about it.

**The CHAIR** — We have seen documentation that has gone to the CFA querying this. That has actually reminded me of another question, so even though that information has gone to the CFA, that was not then discussed with staff at Fiskville?

**Mr ROUGHEAD** — No, it has not been, and from the evidence that has been presented here the evidence is being held by people outside of CFA too, and they have not shared the information with us. What is the difference?

**Mr YOUNG** — I only have one quick question. This submission from the Fiskville staff members; is this all of the staff members?

**Mr BIGHAM** — This is all of the staff members who are employed when we were encapsulated in the current situation, yes.

**Mr YOUNG** — And all of them put their names to this submission?

**Mr BIGHAM** — With representation from hospitality, catering, the PAD operators, the maintenance guys and the instructors, so all of the different groups who make up the staff at Fiskville.

**Mr YOUNG** — Including non-uniform staff?

**Mr BIGHAM** — Absolutely, yes.

**Mr YOUNG** — Are any of those going to be presenting to us? Have any of those expressed any indication they want to?

**Mr BIGHAM** — They have asked us to present today on their behalf.

**Mr ROUGHEAD** — But the offer was certainly made. They were certainly invited to be here today.

**Mr RICHARDSON** — Thanks, Paul and Chris. Just a few questions: have any of you been tested for levels of PFOS in your bodies to the present day?

**Mr BIGHAM** — Yes.

**Mr ROUGHEAD** — I have.

**Mr RICHARDSON** — Have those details been released to you?

**Mr BIGHAM** — Yes.

**Mr ROUGHEAD** — Yes.

**Mr RICHARDSON** — Are they of a safe level?

**Mr BIGHAM** — Yes.

**Mr ROUGHEAD** — Yes.

**Mr RICHARDSON** — Determined by the CFA?

**Mr BIGHAM** — Determined by, I understand, not the CFA. It is a doctor. The CFA do not know or hold the records of anyone's tests. They organise the testing by the CFA's doctor and the doctors hold the testing results.

**Mr RICHARDSON** — What was the process for you to gain access to your PFOS information?

**Mr ROUGHEAD** — We had the blood tests, we had an appointment with the doctor and he told us.

**Mr RICHARDSON** — And that information was given to you?

**Mr ROUGHEAD** — Absolutely.

**Mr RICHARDSON** — A question going to the recommendation about water storage and treatment: if there is a recommendation of a treatment water facility, is it of the view of Fiskville staff and yourselves that the water is unsafe and that the requirement to bring it up to the standard of, say, Bangholme or of Craigieburn, that the practices and procedures to that point have not been safe?

**Mr BIGHAM** — It is hard for us to answer that because we do not know what the levels of contamination in the water are. If the test results say the water is contaminated, then it has been unsafe, but without that knowledge we have been operating on the genuine belief that the water we have been using has been safe to use. In my personal experience I have trained over 400 firefighters at that facility. I would not have trained 400 firefighters if I had thought the water was unsafe to use, and remember I said that we are a decentralised fire



service. For instance, as an officer at Ballarat city who regularly went down to Lake Wendouree and conducted the same training out at Lake Wendouree, which uses reclaimed sewer water, the exposure to Lake Wendouree may be more than the water that was at Fiskville.

As an officer at Boronia, our regular drill was to go to the retarding basin and then draft out of untested run-off water. What was in that? It is common practice for CFA. This is what I get back to: we are a decentralised fire service from country areas. It is regular for us to train and utilise water that does not come out of a tap. Some little small communities, if you went and did CFA training in these little small communities through the drought, you would exhaust their water supplies.

**Mr RICHARDSON** — Getting to 2007 and particular foams not being used anymore, I have a couple of questions to that. Was there any information or briefings provided by CFA to that point on PFOS to Fiskville staff or any exposure or any briefings at all on PFOS and its effects on fauna, flora and humans?

**Mr BIGHAM** — I was not at Fiskville in 2007 — I was on a sabbatical — but no, not that I can recall.

**Mr RICHARDSON** — Okay. There is just one final point, and I will hand over to my colleagues. There is one contention on page 6 of the submission that makes a statement that many of the claims regarding exposure are ‘exaggerated, mischievous, misleading, or false’. What periods are you referring to in that statement?

**Mr ROUGHEAD** — The period since 2011.

**Mr RICHARDSON** — Okay, so that is not the broad statement about — —

**Mr ROUGHEAD** — No, it is what we have read in the newspapers and what has been reported.

**Ms WARD** — I think it is becoming apparent that there is an issue with communication, especially in terms of the CFA letting people know exactly what is going on and the kind of testing that has been made. You had this professor, or was he a doctor?

**Mr BIGHAM** — We have the CFA’s doctor, Dr Sargent, who is the person that works for both organisations — the CFA and MFB — and he does the testing and talks to us about our health monitoring.

**Ms WARD** — He does your blood testing?

**Mr BIGHAM** — Yes, he has to organise the blood testing and gives us the results, but we also have discussion from the associate professor, and we can provide his name to you at a later date. Our understanding is he is a toxicologist.

**Ms WARD** — And he is associated with an institution, with a university?

**Mr BIGHAM** — We believe so. His work has been peer reviewed and audited by WorkSafe?

**Mr ROUGHEAD** — I am not sure.

**Mr BIGHAM** — But it has been peer reviewed — that the information he is providing to us is true and accurate.

**Ms WARD** — When he came to talk to you about the Arlanda — I suspect it was — Swedish Airport, did he also talk to you about the extensive remediation work that is going on at Oslo Airport, as well as the island of Jersey?

**Mr BIGHAM** — No.

**Ms WARD** — There are a number of airports where there has been PFOS pollution. One of them is on the island of Jersey where they have undertaken a lot of remediation, and the concern they have is that PFOS cannot break down. It is a material that does not just disappear; it just stays there, and it sticks to things. That is how it gets to move around sites, which is why we are finding it in bizarre places at Fiskville. Did he talk you through that process?

**Mr BIGHAM** — We are fully aware that it does not break down and it can be transferable. In the example he used he was specifically referring to the fact that it was in their drinking water, so they were ingesting the water, but the levels that they were tested — as we said, it was explained to us that the contamination was 600 times greater than what Fiskville is experiencing. But even though the people are drinking that water, it is still not harmful to their wellbeing.

**Ms WARD** — Did he explain to you recognised standards of what an unsafe PFOS level would be within the human system?

**Mr BIGHAM** — Yes.

**Ms WARD** — What did he say that was?

**Mr BIGHAM** — That was a level of 2.

**Ms WARD** — So a reading of 2 microlitres?

**Mr BIGHAM** — There is a misunderstanding between readings in blood serum, so reading in the blood. That is different to obviously readings in the ground. You have to multiply it 100 times. Forgive me — I have not got it directly in front of me to refer to — but what was explained to us is that our readings are well within safe limits. If your reading was 2, it was considered a safe level. Most people are down at 0.1.

**Ms WARD** — Did he talk to you about the Lloyds' readings?

**Mr BIGHAM** — No.

**Mr ROUGHEAD** — There is some confusion in terms of the base that you read off. There are nano levels and micro levels, and I think sometimes the two get confused and people are not sure whether they have a nano level or a micro level. We are laypeople — —

**Ms WARD** — As we all are.

**Mr ROUGHEAD** — If you want answers to these questions, I would be suggesting you talk to someone who can explain them properly.

**Ms WARD** — I am just interested in the information he gave you, and I am surprised that he did not talk about these other airfields and the remediation work that has been done to try and remove PFOS from those places and the challenges they have had at Jersey in trying to remove it, which they have not been able to do.

**Mr BIGHAM** — I think that is the challenge. The chemical as it is is very hard to remove, and it does not break down, as you know.

**The CHAIR** — Sorry, we are running late as well. Maybe not now, but one of the things is about providing justice and mitigating adverse effects. I know you were going through what the Fiskville facility does as compared to what people are talking about if it cannot be remediated, and that is one of the areas that we are looking at. That is part of the inquiry and the terms of reference, whether it can be decontaminated and remediated. As I understand it, no-one is talking about accommodation at any alternative site. Maybe a little bit about what you have said in terms of why there should be, if that is the case. Perhaps some sort of suggestions in terms of staff. If it can be remediated, I guess the idea is that everyone should be re-employed or offered work, even if it is after September. If it is not able to be remediated and decontaminated, what staff would like to see in terms of their own situation and future. Is that possible to maybe do a bit of — —

**Mr BIGHAM** — Absolutely.

**The CHAIR** — I just think we probably have not got as much time now to go through some of those things, but we would be interested to get that information from you.

**Mr BIGHAM** — Definitely.

**The CHAIR** — All right. Thank you very much. We really appreciate you coming in and spending all this time and all the work that you have put in.

**Mr BIGHAM** — Thank you.

**Mr ROUGHEAD** — Thank you.

**The CHAIR** — That concludes the hearings for today, have a good trip home.

**Committee adjourned.**