

**Public Voice
8 December 2009**

Laman Street Trees

Speakers: Ian McKenzie and Adrian Swain

I am here representing myself tonight. You'll remember a few weeks ago I received, thank you very much, a service award for my contribution to environmental sustainability and that's what I'd like to think I'm representing tonight, a case for environmental sustainability. A note too that recently Council engaged four arborists of arboriculture businesses to do work for them. I just want to declare that I didn't apply or intend to do any of that work for Council so there's no conflict of interest there and there's no sour grapes. Next Tuesday you will consider the future of the fig trees in Laman Street. I am here to ask that Council confirm that it will not remove those trees before there is a broad public participation process. I think everybody's aware of the two parts of the resolution and the certain misunderstanding about whether it means that the trees will be removed prior to that consultative process or whether the design process will go ahead and see what happens to the trees later. The other part of me is that I'm an arborist, I've got 20 years experience, I'm a consulting arborist, I work in Newcastle and the Central Coast. I have original expert reports and appeared as an expert witness in the Land & Environment Court as an expert arborist and a licensed QTRA user and QTRA is the risk assessment methodology that one of the reports is based upon. I was one of the first QTRA licensed users in Australia and I've used it for the last seven years. I also chaired the Local Government Association Urban Forest Working Group from 2003 to last year. I'm not here to pull apart and to criticise the arborists' reports. Arboriculture and the science of trees is a very complex business and a lot of the assessment as you would have understood from what Mr Hewett was saying this afternoon is subjective, there is a lot that is not known so expert opinions will differ. What we're talking about tonight is my opinion and for the most part it's not in disagreement with the reports and from what Mr Hewett said this afternoon. What I'm here to say is other perspectives that need to be looked at and I don't believe they have been looked at. Just to go to the first arborist report, Mr Marsden concludes that the removal and replacement of the trees as a group will secure the best long term outcome in terms of growth, form, crown architecture and balance of the replacement trees. I have no issue with that statement but that statement is a purely tree management statement. It's about the trees. It's an arborist looking at the issues of the trees and nothing else and that is what the report going to Council was based upon, a tree management recommendation. Heritage, the figs sit in the Newcastle city centre heritage area. They are between the Library which is listed in Council's LEP as having State significance and Civic Park which is listed in the LEP as a heritage place. So there is no question that they fit into the curtilage of heritage items and they should be assessed on a heritage basis and if not, technically or legally, at least morally I believe Council should be asking for a heritage assessment and report as a part of this process.

Climate Change

It was a very interesting Local Government Tree Resources Association presentation last Friday and we heard that the impact of urban trees for climate change which is the source of a lot of the carbon generation is and a lot of the heat generation is happening in the cities. And whilst they are only 14 trees, they are large trees and they are part of the whole. They help curb the heat island affect. They provide shade. They vapour transpire, that is they take water from the ground and they transpire it through into the atmosphere, cool the air and they are large air conditioners working all the time throughout the hot weather. On a hot day, a day like today, when those trees are gone they would make between 5 and 10° difference in the temperature along that street. They also sequestra several tonnes each of carbon, holding it there keeping it out of the atmosphere. When they are cut down, they would be chipped and that would go back into the atmosphere contributing to the problem. Newcastle has a problem and has had for some time about what happens out on the streets on Wednesday, Thursday, Friday, and Saturday nights. It's about violence and aggression and anti-social behaviour. There is research and if Councillors are interested, I can provide copies of this research about any of these things later on. There is research that shows that the contribution that the greenery and trees make to reducing violence and aggression on our streets. Once that shade's gone you're going to have to start resurfacing the road surface more often. The effect of sun on the asphalt surface means that that needs to be resurfaced 50% more often than that it would be otherwise and as a cost, that hasn't been considered by Council, it's another economic cost. The sense of well being and relaxing is hard to quantify, but there's no doubt and there's a major international conference in Victoria next year where they'll be talking about the importance of parks and trees and greenery with regard to sense of well being and relaxation.

What the Community wants

That's an important part of it because at the moment, there hasn't been a process of community consultation and yet, as an icon we saw it sitting in front of the fountain which is the icon on the logo of Newcastle City Council. Unless those trees go, it's going to change the whole ambience up there and yet, the community has not been consulted about those trees. The value as an asset is in the millions of dollars. The contribution, we quantify their contribution for climate change, for stormwater, for pollution, amelioration and a number of other factors can also be factored as a contribution of several hundred thousand dollars per year and the reports looks at risk mitigation and they looked at some other options but I think they were a bit scant about it because there are options and I'm going to have a look at some of those as we go through but I just want to talk a bit about risk and I just put a list of some of the risks that we'll talk about, some of the risks and I think these are British figures, some of them such as road accidents will change from NSW to Australia to Britain but it's just an indication that we accept risks and we live with risks on a daily basis. Where trees or death of a public person by a tree would fit in there is about 1 in 20 million. Now I can't put that down there

because I don't know anywhere where that figure's been written but I've been involved with trees as a trade for over 20 years and there's a fairly good network and we know when somebody is killed because it goes to Court, there are reports about it and we show a lot of interest in it as part of our professional development. There are 20 million people in Australia and approximately one person per year is killed by a tree. The chance of somebody being killed while those trees are being removed is far higher than a member of the public being removed by a tree and this is just talking pure statistics, we're not specifically saying those trees because there is a risk in relation to those trees. When you look at risk there are two ways of being able to mitigate the risk. We can remove the target, the target is the people, the cars, the buildings, whatever is at risk of being injured, damaged or killed or we can make a technical fix and modify the actual hazard or remove the hazard or fix the hazard. If the trees are removed that's eliminating the hazard altogether but there are other ways that we can address this. Some of this is just going over what Mr Hewett said this afternoon but if you look at the way the trees on the northern side of the street are lying, particularly or bias particularly in that eastern end, none of them are going to fall into the road. They will not fall into the road. They are going to go that way into the park so you can manage that risk by excluding the use of the area of the park if that's what Council decided. That's one way of dealing with that risk.

Stopping car parking in the street

It may not be politically acceptable but it's an option that should be considered and that is to remove as many stationary objects as you can. The risk of people walking through is far less than people who are sitting there for a long time. Here's just another slide showing the bias of the trees to the path on that side. That's one of the trees that you saw this afternoon, you saw where it was and this is Google street views and if you walk across the other side of the street there is another stump on Google street views and these are the trees that failed, that were wind thrown. They started to fail and I don't disagree that they needed to be removed, I don't have a problem with that decision but there was not a catastrophic failure. There was warning, there were signs for people to see before that happened so these are other ways of address risk is monitoring. One of the options that was put in Mr Marsden's report, he talked about cabling and you can't cable a tree from itself, you cable to itself mostly to stop branches failing but I believe that, and I'm not an expert in this area but it should be investigated that those trees, any trees that were retained for the medium term could be cabled to one another and that, in addition to the other issue to possibly root anchoring or some exclusion etc. There's a combination of options for risk mitigation that you could put together and be successful while you went through a process. It may be a 5, 10, 15 or 20 year process where some of those trees were retained while other trees grew up and I'll come to the issue of suppression in a minute.

Lord Mayor: Mr McKenzie can I just point out you've been going for 12 minutes 45. We need to give Mr Swain equal time and I'm sure there'll be a lot of questions and we're due to finish at 7 so I might ask you to start winding up.

Ian McKenzie

I'll be quite quick. Mr Hewett actually had an hour up there this afternoon so I have to actually respond to a few of the issues he's raised as well.

Lord Mayor

I understand that but this is programmed, we're due to start another meeting at 7 to be fair to the Councillors.

Ian McKenzie

Thanks Lord Mayor.

What tree is going to be removed to make way for an underground railway line in Hong Kong. The community didn't want it to be removed and they made it known that they didn't want it removed and that is what's happened to retain that tree. There are arboricultural techniques and engineering techniques that can achieve outcomes if that's what the community wants. I'm not going to tell you how much that costs. It was very expensive, it's worth a lot more than what the tree's worth but that's not the point. What I'm trying to indicate here is that there are technical and engineering options that can provide.

Suppression

Yes there is an issue of suppression but you can also manage it. Those at Council planted figs in Little Birdwood Park grown under old figs that will eventually be replaced and they've been there for some years and I raised some concern about that a number of years ago and I was told, no, it's not a problem. I've watched them and it's not a problem. You need to manage it, you need to remove branches to make way but you can grow trees under other canopies successfully as long as it's done properly and you manage it well.

Up to Summary Lord Mayor

Quickly, there is an issue of risk that needs to be addressed that is not in contention, I'm not challenging that. That only one option has been considered is an issue that needs to be challenged. It's a bigger issue than just an arboriculture issue or tree management issue. It's an urban forestry issue, there is state heritage significance involved and I think Council has a moral duty at the least to consider the heritage perspective and the owning of figs in Laman Street is a community asset and the community needs to have some involvement and participation. I'm asking that Council reconsider its decision of 17 November to remove the 14 trees in Laman Street. It may be that Council needs to confirm that it will undertake the community consultation participation design process prior to those being removed. To do that you need to implement a risk mitigation strategy that in the first instance establishes permanent and emergency exclusion zones and I note that that

has occurred or is occurring. Commence collaborative design process for Laman Street ensuring broad community participation as per the community focus section of the Newcastle Urban Forest Policy. I encourage Councillors to go to that Policy and to read that section because it's quite relevant to this issue. In the received report recommending if and what additional risk mitigation measures may be implemented during the design phase because I think that will open up options for you. You may decide to remove all the trees but let's at least look at all the options as a community and commission a heritage report with regard to the 14 fig trees and their potential removal. I think that's encumbered upon the Council to at least to take that step because there is a significant heritage issue there.

Thank you Lord Mayor, Councillors.

Oh, if I could just add very quickly one of the issues Mr Hewett raised this afternoon was about the trust that the community had. This was Tyrrell Street before the figs were removed from there and Council was told that it would get trees put back that would actually put a new canopy there. There it is today, there are trees there. They are Tuckeroos, they are not going to recreate the canopy that was there many years ago so that's the concern the community often has. They are told one thing and in that case it hasn't occurred.

Lord Mayor: OK Thank you. Mr Swain, you've got 16 minutes, 47 seconds.

Adrian Swain

Councillors, Lord Mayor, General Manager Good afternoon, evening. I've been asked to speak on behalf of Newcastle City Council with regard to the peer review that we are undertaking of Dennis Marsden's assessment of the trees in Laman Street. Firstly may I say with regards to Ian's comments, I am almost in complete agreeance with what he's put forward this afternoon. I think he's made some very good points and I think possibly from the point of view of Council, my understanding is that that's a similar point of view that Council also makes. I understand there is an issue with the order in which things are to progress with regards to community consultation and the ongoing planned removal or whatever is decided and I think that's probably worth noting at the beginning. My understanding of what your report that Dennis Marsden has put forward is a bit of a red flag. It's bringing to the forefront of everyone's mind an awareness of the issue that there are issues with the trees and it's illustrated by the recent failures up to 10 in the local area but I think 3 or 4 in that street alone. It's primary to do with the management of risk and I think Ian mentioned that also. It is a tree management issue. So, the one thing which I possibly didn't agree with Ian in what he's discussed with regards to cabling, I think Dennis was able to demonstrate quite clearly in the report through case history that there is an issue with the root plates of the trees. I don't think cabling would provide a suitable solution to that. Possibly bracing with some sort of engineering steel girders, your heavy structure that needs to be designed by an engineer, something that you'd see propping up a heritage stone wall or something to that affect that is big and bulky and you may or may not decide that would be

in the keeping of that Civic place. What I think is a large issue to do with the trees and the management of them is that in the last 10 to 20 years there have been significant increases in the understanding of how trees are to be managed.

Trees and it's in a stark conflict to historical tree management methodologies and so what has already been done is no longer the done thing. So what seems to be the case is that we're left with a legacy of trees that are compromised in a way that they haven't been planted in an optimum environment in which to grow and similarly they've been impaired further by trenching, infrastructure maintenance, changing infrastructure, I understand the road was gravel prior to asphalt, under that asphalt there's 300mm of compacted road base, coal ash and waste from the steel mills and that sort of thing and there's no roots in there. So there is a very big shift in the way trees are managed in the last 10 to 20 years and so the trees have suffered from our lack of knowledge back 80 years ago and so now they're in a state that is not optimum. I think that's possibly what the report is trying to convey in terms of the change in practices. Also in the change of knowledge of horticultural practices there is the largest of the work is dominated in the northern hemisphere, northern America, northern Europe, places that have had urban areas for thousands of years. In Australia we have a different set of climatic conditions, growing environments and different trees and different species that react differently. There is not a lot of research that's associated with these trees that we're dealing with and so Council and Arborists are left to rely on examples of similar trees in adjacent locations so I think at the moment, with the 3 in this location and the 10 overall in the locality there's been a recent surge of failures and so, with lack of prior or other research we're left to do the best we can with the research we have but also, with what's happening around us, so I think it's reflective of that. Something that I do like to impress on my clients generally is that trees, this is probably my personal view rather than substantiated from research or anything like that but there is basis in research for trees as they mature in age and they're a lot like humans when we're young, we're able to withstand a lot of operations, surgical procedures, bangs, falls, tripping over and that sort of thing. As we get older we get a little bit more precious, a little more fragile and surgical procedures take a lot more of a toll, our energy stores wind down. Trees are a lot like that also, so the older they get the more prone they are to this sort of damage in management as it is. It's often likened to a death by a thousand cuts, so the more you chop them, cut them, trim them and that sort of thing the more it depletes its overall energy reserves. So in terms of managing the trees in that way of chopping and cutting, it's probably not a good way to honour such a long lived tree in terms of being there for 80 years and so I suggest that that method of risk management by removing limbs is probably not the best way to go. That's probably all I need to say. I'm happy to answer questions if anyone's go them.

Lord Mayor: Thank you very much. Stay there, we'll ask Mr McKenzie to come back and we'll take questions.

Councillor King

Thanks Lord Mayor. Just a question for Mr McKenzie. I'm interested in knowing more about the trees in Little Birdwood Park, the ones that you mentioned were planted below the older trees there. Do you know when that happened and do you see that as a viable option for Laman Street?

Ian McKenzie

It happened a number of years ago. It must be I guess 6 years ago that they've been there, maybe longer. I think it's an option that needs to be considered. What I guess I'm saying is that the options haven't been explored and I guess what I'm raising is that there are options that need to be looked at and commented upon and I haven't gone in and assessed those trees or inspected them but I do think there's options for certain designs that may come out of the consultative process that would allow some of those trees to be retained while the new trees developed. I guess my vision for Laman Street is not to change particularly. I'm guessing that in 20 years time none of those trees will be there but I think there are different ways of achieving that. One way is to remove them all now and in 5 years time plant new fig trees once they're ready to go in if that's what the community and Council decided and then in 15 years after that you'd have a nice canopy developing again and it would be even aged etc. That would involve a certain amount of early pain and there may be other ways that you can do that and stagger that over a period by leaving some of the trees, removing others and growing them on and as they become a certain size, removing other trees. I haven't gone in and done a full assessment and worked out all the things, that is a community process requiring arboriculture input as to what's possible and what's not possible and financial input to say how much it's going to cost. That's what I'm asking or suggesting needs to occur.

Lord Mayor: Thank you, Councillor Buman

Councillor Buman

I just wanted to follow on with that Ian cause my concern is that if we take the approach of plant one here and there, we would never end up with that canopy again because you'd end up with a spot here and there and if I looked at, as an example at Dangar Park how we've taken the first 7 trees out, the palm trees there, it looks very empty and it needs to have the trees replaced but how would you go about that because you go and plant 7 palm trees there now, the others are going to have to come down at some point and then the next lot and you never ever get back that beauty that was there for that bit of pain. For example, with Dangar Park how would you?

Ian McKenzie

Right, Dangar Park you see you're talking about palms and the visual part of palms is their trunks and they were different heights actually, some of the ones that came out but that's what's common and that's what you see and yes, it's like a gap in your mouth when a tooth comes out, it sticks out like a sore thumb. I guess I put a rhetoric question is how similar in size do you believe all the trees that run along Islington Park along Maitland Road are? I've asked a few people that and people believe they are roughly the same size. If you go along, there is immense difference in size along there but they appear as an avenue, as a row of trees and I suggest that you can well manage and that's not what's happened in the past. We can look for examples and say look, it doesn't work there but that's what's happened in the past. We've actually got the expertise, we got people like Phil Hewett, Adrian and others that have got the expertise to bring to Councils to ensure that that management occurs. I feel quite confident that you can do it and they won't be all of even age but you will retain the essence of what you've got up there, that vista, that ambience of a canopy of trees more so than if you do it the other way. Even if you plant them all together you will get discrepancies in the rate of growth naturally anyway, you'll get some growing faster than others.

Lord Mayor: Thank You. Councillor Osborne

Councillor Osborne

Thanks Lord Mayor, thanks for the presentation. It does seem funny having you on that side I might say. I think it's good when there's two speakers who agree on 99% of the points, that's important as well. I had a question about the QTRA, could I ask Mr Swain?

Mr Swain

Yes, I am licensed to use QTRA also.

Councillor Osborne

Have you had a chance to have a look at the report that was attached to Mr Marsden's report?

Mr Swain

Not specifically the QTRA, no.

Councillor Osborne

Could I ask Mr McKenzie if you'd comment on that because I had a few concerns looking at the risk assessment in that report, particularly I guess coming up with a probability based on a very limited number of examples.

Mr McKenzie

QTRA is a relatively new methodology international but used in Australia and I think has been for 4 or 5 years now. I've had a good look at the QTRA report and it's been modified from the basic methodology that we're taught and some of that's good, in fact I think the way that's been developed has been quite good and I've done similar type of things myself in order to try and improve it. I guess I have some concern about the probability of failure which is referred to in the report, it's one of the three criteria that is used to come up with an index of 1 in 19.8, 1 in 20 when 1 in 10,000 is the benchmark and that is that the author uses the 2 trees that failed in one year, 2 trees out of 15 trees and comes up with a probability of a failure in a year and I think he says a year where there's severe storms of 1 in 7½ and that's the probability that he uses but when you're using QTRA you're looking at the probability in any year because when we don't have June 2007's every year, we could have one again next year, we may not have one for another 10 or 20 or 50 years but it's not designed, it's recognised that if you get severe enough storms trees will fall over and a lot of the trees that fell over in the June 2007 storms were not defective trees. I went around and had a look at a lot of them, some were defective, others weren't. Yes, you need to mitigate for that kind of risk but to take the worst case scenario and I believe that's occurred in each of the two of the three criteria and the worst case scenario and then it's been provided for the whole 14 trees rather than individual risk assessments of each tree so I've got some concerns about how that's been worked. However, having said that whilst I think 1 in 20 is an overstated level of risk I acknowledge fully that there is an issue of risk in those trees and I doubt whether it would come out and I've actually done a QTRA on a couple of them and it doesn't come out as an acceptable level of risk. Mitigation is required though I don't think it's as serious as what that report may suggest.

Councillor Osborne

Yeah, I don't think anyone's suggesting do nothing.

Lord Mayor: Thank you Councillor Nelmes

Councillor Nelmes

Thank you Lord Mayor. I just have a question for probably both of you. A lot of the debate has entered around the trees either having cut roots or the inability to have roots growing in all directions. Not being an arborist, is it impossible for these trees to ever regrow roots in the direction they need to provide future stability? That's my first question.

Mr McKenzie

Roots will grow. In fact each year over drought and flood, roots will die back and regrow and die back and regrow constantly. The issues that are presented by the root severance that has likely occurred is that it exposes heartwood to the ingress of pathogens, so disease into the heartwood.

Trees have an active response to disease in the outer cambium but the inner heartwood doesn't actually have an active response to disease because it's not in fact living so whilst if you had your arm chopped off, it would re-heal over, the tissue inside is still living whereas if you chop a root off the internal is not and so it gives the opportunity for decay fungus to colonise that and then start rot into the base of the tree so that's one issue. Structural, woody roots which are the ones that we're concerned about being cut, they will regrow but in my experience they won't regrow to the extent that they once were, you will get reaction growth similar to when you cut the end of a branch off and all sprouts come out again so it's similar, smaller branching, it's a longer process. There's a few issues associated, one is stability and when those roots are gone the stability is lost.

Councillor Nelmes

In light of that response, I might reframe a second part of the question in that if the road base, the area was removed and there was significant improvement around the base of the trees and maybe some trimming of the top canopy would that not provide a more optimal and longer life span while we were regrowing replacement trees?

Mr McKenzie

In terms of remediation of the root zone, I think there is possibly a couple of issues in that, in that the tree has grown accustomed to the living environment that it is in and so it may actually be gaining some strength and support from the mass that's sitting on top of it. I think if you started playing around with that you may, it's like a retaining wall where it has a foundation and that way the weight of it, the soil holds the wall up. If you take the weight away it may fall over.

Councillor Nelmes

So you're saying the road base is providing a weight to the roots?

Mr McKenzie

Potentially, in my experience road base is not conducive to good root growth. Roots generally follow the path of least resistance and compacted road base such as in Laman Street is probably the path of most resistance. The root investigations have shown that there are no roots in that area so, I think the mass, there is evidence from other trees in other streets where infrastructure and the like have been used by the trees for support.

Councillor Nelmes

So in this case are they using infrastructure for support?

Mr McKenzie

Look from my understanding of the root zones of the trees that have already failed there has got to be something holding them up and it's generally not roots at the moment. From the evidence that's been shown to me in terms of failures the trees that have fallen over vary from 20 plus metre tree, there is very little in the way of roots that has been holding them up. It's left me guessing, it's got to be the mass of the tree and the general infrastructure around there.

Adrian Swain

I understand that Council has undertaken a process called ground penetrating radar and I think that was just done last week and hasn't got results back yet. When it receives those results we'll have a lot better idea about where those roots are. I think Mr Hewett this afternoon indicated that he felt that the trees on at least the southern side of the street may be using the kerb as something to help stabilise them but you'd need to look that on a tree by tree basis as to where the roots were. Having said that, I think yes, technically you could introduce an improved root growing medium that would permit root development. I think it would probably be slower than one would like and I guess it would come down to an economic question as to how much it costs to do that but yes, technically that could be done. It may be that you need to somehow guide the tree because of the loss of strength if the road was removed and the kerb or something else, existing infrastructure was holding it there. You could root anchor it, you could anchor the roots to the ground so it's a below ground system that would help hold the trees in place so there are different things that could be explored and I'm not suggesting that anybody could give you the answers right now except to highlight that yes, there are options that you could explore if that was the want of Council to look at keeping some of those trees as part of the design process. It's not impossible to do it but you'd have to look at the costs and the technology that would allow that.

Councillor Nelmes

Well if I might indulge myself in a comment. It seems that the debate to me, summed up from previous analogy is almost a euthanasia debate about trees so we'll leave that moral one for everyone's thought.

Lord Mayor: Councillor Boyd

Councillor Boyd

Thank you Lord Mayor. Like Councillor Nelmes and I'm sure a few other of my colleagues and I'm very much a lay person in the area of trees, my understanding is that these trees are over 70 years old and that 70 years is about when they start to fail. We have to do something about them in the next few years.

One of the points that I gathered from this afternoon's site inspection was to replace the trees as they begin to fail and leave gaps in the tree scape will cause stress to the trees that remain on either side. Could either of you or both of you like to comment on that?

Mr McKenzie

That's true. I think when you're talking about stress, you're talking about maybe when the trees on the southern side are removed they expose trees on the northern side to the south of westerly winds, that's probably the greatest stress that would occur when trees are protecting other trees are removed. Yes, that's an issue that needs to be looked at and should be looked at on a tree by tree basis and yes, there would be some increase and likelihood of failure. However, not necessarily to an extent that would automatically require that those trees be removed. If you look at the trees that have failed on the eastern end of Laman Street, there was two opposite one another, neither of them, from my understanding of the ones opposite each other failed directly, they started to lift, so it wasn't the one on the northern side didn't fail because the one on the southern side of the street had fallen over but it could have been the third one that did fall over altogether and it may have been something that could have contributed to it but we don't know and we don't know what contribution could be made but we do know that trees get used to the wind dynamics that are there and if, for example, the Art Gallery was removed there is no question that the trees that are protected by the Art Gallery would be significantly exposed. They would not have the strength; they would not have developed the strength that they need to stand upright. Possibly they could still stand there for 100 years but the probability would be that they don't have the strength to do that so removing trees can have that type of impact but to what extent is impossible to say. I would suggest that given that some trees have fallen out or been taken out and other trees are still there that that level of risk has still been acceptable in that regard only, not in regard to the other side.

Adrian Swain

To add to that if I may, the trees self optimise and while they are given the opportunity to not have to strengthen themselves against stress they won't and so once that protection, other trees provide strengthen from each other from wind by absorbing stress. Once that tree is removed that tree is then exposed to a stress that is not optimised for, so it hasn't actually strengthened itself to accommodate that stress so I think that's the issue that is created by the removal of a single tree and leaving the remaining trees behind.

Lord Mayor

I'd like to ask a question from Councillor Luke and then we might wrap up.

Councillor Luke

Just a quick question Mr Swain. You were asked to do a peer review of Mr Marsden's report?

Adrian Swan

Yes

Councillor Luke

Did you find any errors with his report?

Adrian Swain

There was a single error which I did, I think it's the third paragraph of section 7.4. It's error I believe but I stand corrected, where it references, it makes a statement that there's no roots on the southern side of the southern trees and there's no basis for that statement in the report. There may be as I know it, Dennis has a long history with the figs in this street and he may be privy to information that I'm not but in that report there's no substantiation for that statement.

Councillor Luke

As making a peer review of it, did you find that significant in the conclusions of the report?

Adrian Swain

Look I did look at that and possibly where it could impact is in the next, or it may have been the previous section where it talks about the soil rating and I did look at that and I thought, well if he's assumed that those trees don't have roots on that side, is that going to affect his useful life expectancy rating of those trees and in my opinion I don't think that's the case, I think the basis, the trees on the southern side are the three most, with the shortest safe useful life expectancy. Those three trees I believe are given that rating largely due to the crown architecture and I think he substantiates it there in that because it's an east-west facing street, the northern trees get the largest of the sun during the day, especially during winter so they're going to have the best opportunity to grow the fastest so the trees on the southern side are in effects suppressed just by their location. Some of them actually do have substantial crowns but a lot of them actually tend back towards the Library and the Art Gallery and the structure of those branches when faced with a southerly wind I believe is the substantiation for the short safe useful life expectancy and possibly not. Well he may have taken into account in his statement that there are no roots on that side but looking at the structure of the trees, they're lesser trees than other trees given a higher rating.

Councillor Luke

So just to summarise that Mr Marsden's independent report has been peer reviewed by yourself independently and you've come up with basically that its findings are correct.

Adrian Swain

Yeah, look in essence I agree largely with the crux of Dennis's report in that the history of failures in the street and the history of failures in the surrounding areas and the subsequent root investigations demonstrate that there is a tendency to a linear root plate and Dennis's report postulates that in effect makes the trees more likely to fail. I know the works that have been undertaken in the street in terms of trenching, the changing of roadways, the 60/70 years prior damage that has occurred.

Lord Mayor: I've got a question for each of you

The question is if you put aside all issues except public safety and have a notion that you keep as many trees there for as long as possible can you tell us in a clear simple statement what you would do to address the public safety issue? I wanted to get a comment from each of you.

Ian McKenzie

I'll just clarify the question Lord Mayor. That is, from a tree management risk perspective only what would I recommend with regard to risk mitigation.

Lord Mayor

Well if you put aside all issues except public safety.

Ian McKenzie

I haven't done the assessment of the trees, I have walked around and had a look at them so I would need to actually do a detailed professional assessment but from what I know at the moment I would provide exclusion zones in Civic Park probably from 15 metres out from the wall, to the north of the wall. I would probably stop parking and I would close the street during expected storm events or when high winds were coming. I would not allow any seats there, you couldn't stop people from sitting but I would basically make it a space where people would move through to go to the Library or go to the Art Gallery but they wouldn't be congregating in large masses or staying there for long periods of times. I would minimise the use as much as possible whilst more detailed information came about and my longer term view of where it's possible to keep that in place for 5 to 10 years possibly and I'll just point out to Councillors, and you've probably all seen it at Tighes Hill TAFE had a row of large figs fenced off for 10 years to exclude public from walking through and those fences have now been taken away. You'd think you

couldn't do that but it can be done, I know it's probably a more difficult space to do it but it is possible, so that's my answer Lord Mayor.

Lord Mayor: Thank you

Adrian Swain

I believe Ian is correct in what he's saying also, I think there is definitely seating within Civic Park below the embankment which is a direct target for the northern trees to fail onto. The removal or exclusion of people sitting in that area, possibly the extension of garden beds further out into Civic Park along that boundary there would discourage people from sitting in that area. The exclusion of parking in the main street would also be high on the list of things to do, possibly like a 5 minute drop off zone or a drop off zone only to allow cars to pass through but also signage to discourage people to enter in wind events, that would also probably have to be accompanied by a public notification or education whereby people would be advised as to what a high wind event is or how to recognise one and when not to enter that area where the trees are most at risk of failure. Really discouraging the use of the area for long periods of time I think, that's parking, sitting and congregating and also even just using the area as a through passage during high wind events should be discouraged also so I think that's probably the most that you could do in terms of managing the risk while retaining the trees.

Lord Mayor

OK thank you for those answers. This is a question that Council's grappling with and your information tonight's been very helpful. Thank you for your presentation. I'll conclude the meeting and where to from here is a matter for Council to decide. Thanks for your input.