

**THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS MET IN  
COMMITTEE ROOM 1, PARLIAMENT HOUSE, HOBART ON MONDAY  
2 JULY 2007.**

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**SOUTH ARM HIGHWAY, SHORELINE DRIVE TO OCEANA DRIVE – HIGHWAY  
DUPLICATION**

**Mr GEOFF MULCAHY**, PROJECT SERVICES, PROGRAMMING AND DELIVERY  
BRANCH, DEPARTMENT OF INFRASTRUCTURE, ENERGY AND RESOURCES,  
**Mr BRIAN WILLIAMS**, DESIGN MANAGER, PITT & SHERRY, AND **Mr DION  
LESTER**, PLANNER, PITT & SHERRY, WERE CALLED, MADE THE STATUTORY  
DECLARATION AND WERE EXAMINED.

**CHAIR** (Mr Harriss) - I welcome you all to this part of the proceedings. We have three witnesses other than the departmental and consulting engineering witnesses. We have Mr Freeman, Mrs Prendergast and Mr Howells who will be making representations to the committee later as we proceed.

Just to quickly recap on the site visit, it was an invaluable opportunity for us to familiarise ourselves with what is being proposed in terms of location and some social matters which are exercising the minds of residents. We were able to take account of that on-site familiarisation from the department and the consulting engineers and residents. Thank you for facilitating that. We will now hand over to the three of you to make your presentation, as you have planned, and from that the questions will flow.

**Mr MULCAHY** - I am the project manager with the Department of Infrastructure, Energy and Resources. I will make a quick introduction to the project for a bit of background. The department organises their projects such that we have a project sponsor - in this case, Russ Bauer. The sponsor is concerned with the outcomes of the project. Delivery of the project is then given to a project manager - in this case, Gunadasa. Unfortunately, at the last moment Gunadasa could not make today, so I am stepping in for him.

As an introduction, during the 2006 State election the Labor Government announced the Building Better Infrastructure plan. This plan included - and if I may quote:

'\$10 million to upgrade the South Arm Road from the Shoreline Roundabout to the Police Academy. This includes the connection of Droughty Point, Oceana Drive to the highway network. It also includes traffic management and major upgrades at Pass Road, Burtonia Street and Hawthorn Place to improve access to the new residential developments.'

However, the latter is part of stage 2 and is not part of the present works we are looking at.

Justification for the project: high traffic volumes at peak hours south of the Shoreline roundabout. Completion of the previously constructed Bellerive bypass - and of course the earthworks for that duplication were substantially completed some years ago. There

is the Droughty Point study recommendation to connect Oceana Drive onto the South Arm Highway. That was a joint study between the developer and the department.

Clarence Council's interest: the Oceana Drive connection is a high priority for the council. The strong growth of residential subdivision in the locale at Tranmere, Glebe Hill and a bit further south along the highway from this location and further south again down at, say, Oakwood.

Objectives of the project: to provide a four-lane dual carriageway to Oceana Drive, Merindah Street from the Shoreline roundabout; to provide a signalised intersection arrangement at Merindah Street junction, including the joining of Oceana Drive; and to provide a smooth transition to a two-lane carriageway south of Oceana Drive. The details of the engineering commitment will be picked up by our consultants, Brian and Dion respectively, after I give this introduction. Also to provide transport access for non-vehicular and public transport.

Funding for the works: in the financial year just finished we had \$320 000 for the design and documentation of the project, which is substantially complete. The remaining money for 2007-08 is for construction, being \$4.68 million, a total of \$5 million.

Some of the issues and constraints - and we saw a number of these out on site earlier today - underground services and storm run-off from the creek adjacent to Oceana Drive; traffic management issues at Oceana Drive and Merindah Street intersections during construction - any construction project has its traffic management issues; the budget allocation; the noise-attenuation walls - and we saw some of the sites where they would be going in; and pedestrian/cyclist issues.

Progress to date. Our consultants, Pitt & Sherry, were commissioned in September 2006 for planning and design. As I mentioned earlier, this is substantially complete. Public consultation work is almost completed. This included a public display at the Shoreline - I think that must have been in about May this year.

Detailed design works have reached an advanced stage. Development application and other environmental approvals are currently being sought. We expect to advertise for tender in August, subject to receiving our various approvals, with construction to be completed later in the financial year.

The next stage, and again not part of this current works, is what happens south of Oceana Drive and Merindah Street, or south of the extent of this project. We currently have a planning study being conducted to finalise the project scope for this stage. Survey and concept design for the next stage is expected to commence in September 2007.

That completes the short introduction. I will hand over to Brian Williams to have a look at some of the design issues.

**Mr WILLIAMS** - I thought we would start with a view of what the road will look like when it is finished. This is the existing road, the quarry on the right-hand side heading towards Hobart from the Rokeby end. On the left-hand side is a green field. It comes towards

the proposed intersection. The sound wall is on the right-hand side of the road in the picture, giving actual heights. There is new bus stop on the left-hand side.

**Mr STURGES** - Is that Merindah we are going across now?

**Mr WILLIAMS** - Yes, just past that. We are just coming around past quite a tight curve and on the left-hand side there no work needs to be done on the existing carriage way there. We were parked in the cul-de-sac at the end.

**CHAIR** - Any work to the pavement there, Brian?

**Mr WILLIAMS** - Not on the left-hand side. The north-west wall comes in on the left-hand side, and Norma Street is on the right-hand side. Then the car park for the shopping centre is on the left-hand side with the access into the shopping centre. At the end of the job we come to the roundabout from the other way under the pedestrian overpass. There are more extensions on the top left-hand side there including cut batters to provide noise protection.

**Mr STURGES** - That is the 1.5 metre wall?

**Mr WILLIAMS** - That one is five.

**Mr STURGES** - I was going the other way, sorry. It is four.

**Mr WILLIAMS** - So there is a four-metre high wall there.

**Mr BEST** - Is that Oceania Drive there?

**Mr WILLIAMS** - Hang on a minute, we are just coming up towards the intersection.

**Mr BEST** - Come back a bit. I thought I saw a turn on the right. I was just trying to work out what it was.

**Mr WILLIAMS** - No, there is no gap in the median.

**Mr BEST** - No, keep going. Just there to the right, past that light pole. What is that?

**Mr WILLIAMS** - This one here?

**CHAIR** - That just shows the differentiation between the new works and existing roadway.

**Mr WILLIAMS** - Over here? That is where this pavement needs to be reconstructed.

**Mr BEST** - Is that for the bus lay-by?

**Mr WILLIAMS** - No, the pavement is actually parted in that area.

**Mr BEST** - So that centre turning lane is coming up to Oceania Drive, is it?

**Mr WILLIAMS** - Yes, there is sign here, 'Oceania Drive'. That sign would be about 400 metres from the junction. Here is the turning lane, so it is quite a long turning lane.

**Mr BEST** - That is where you have shifted that bus stop to and away from the other side of Oceania Drive?

**Mr WILLIAMS** - Yes. And the bus shelter will move to there as well.

**Mr BEST** - Right. Yes, of course.

**Mr HALL** - Do you want to have a look at Oceania Drive?

**Mr WILLIAMS** - Down through the intersection we are coming up towards the lane dropping off back to a single lane.

**Mr BEST** - Can you stop there for a second? Where does that centre piece median strip drain to?

**Mr WILLIAMS** - That drains back down towards the junction, into a big pit just before you get to the junction.

**Mr BEST** - Does that then go into the creek that is adjacent, that runs parallel?

**Mr WILLIAMS** - Yes.

**Mr BEST** - Okay. What about the other side, where does that drain to?

**Mr WILLIAMS** - That finishes up in that culvert as well.

**Mr BEST** - So it all comes across to that same -

**Mr WILLIAMS** - Yes.

**Mr BEST** - Okay.

**Mr STURGES** - As you go from the four lanes into two each way, what is the distance of the merging lane?

**Mr WILLIAMS** - I would have to check that, but most probably 170 metres.

**Mr STURGES** - I know you are talking about safe transition but I tell you I have a major issue with those lanes at any time. I would be curious to find out what you are providing there to allow for the traffic to merge.

**Mr WILLIAMS** - It is 170 metres.

**Mr STURGES** - That is the standard, is it?

**Mr WILLIAMS** - This is pretty much the view that a driver would get. The footage is taken slightly higher than a vehicle -

**Mr FREEMAN** - Can I stop you there? Are you now showing the sound barrier on the left-hand side?

**Mr WILLIAMS** - That little?

**Mr FREEMAN** - Yes.

**Mr WILLIAMS** - Yes, that is exactly my concern, I think. My guess is that originally there was no sound barrier there.

**Mr STURGES** - Just at the end of Clarence Street?

**Mr WILLIAMS** - Yes.

**Ms PRENDERGAST** - Can you go back and show us, sorry -

**CHAIR** - Can I intervene? The process really needs to be that we go through the submission from the department. We can then ask them questions. Thereafter each of you can come to the table so that you can put your position to us. The departmental people and engineers will still be here. We have not sworn you as witnesses either yet, so in terms of proceeding with order can we just stick to that for the moment. We will have plenty of opportunity to cross-examine the whole process.

**Mr BEST** - What is the speed zoning you are looking at?

**Mr WILLIAMS** - No change in the speed zone from the current 80 kph. It will remain that.

**Mr BEST** - That is even up to that intersection of Oceana Drive.

**Mr WILLIAMS** - Yes.

**Mr BEST** - Right.

**Mr WILLIAMS** - Unless we have changed that.

**Mr. BEST** - Obviously that intersection is governed by normal traffic rules, so you cannot go over 40 kilometres an hour through the intersection?

**Mr WILLIAMS** - Yes. No changes to the road rules.

**Mr BEST** - So do you come down the road at 80 kilometres an hour and then where do you slow down?

**Mr WILLIAMS** - Same operation as the signals on the Brooker Highway. They are in an overall 80 kilometre an hour zone.

**Mrs NAPIER** - Those lights, are they only triggered when there are cars on that section of road?

**Mr WILLIAMS** - Yes, so the vehicle activates the lights.

**Mrs NAPIER** - You have pedestrian crossings on both sides of that intersection?

**Mr WILLIAMS** - All the way round - both crossing the highway and crossing Oceania and Merindah . That is it, unless you want to look at that again or do that later.

**Mrs NAPIER** - We need to do that later.

**Mr WILLIAMS** - Just on the things that probably need -

**Mrs NAPIER** - It is pretty snazzy though, isn't it, as a way to look at it.

**Mr WILLIAMS** - There are about 18 000 vehicles a day on the road, a considerable number on a two-lane road. That is predicted to grow by natural organic growth and also by further subdivision in the South Arm area and locally. There have been a number of crashes including three head-on crashes in about six years, probably not applicable. So on the provision of the median, it is pretty important to separate the oncoming traffic streams and the project includes a continuous wire-rope safety barrier in the centre. That will preclude the current pedestrian crossing of the highway that occurs where we parked at the cul de sac at the end of Clarence Street. There is a pedestrian crossing there and that noise wall you can see down the right-hand side will also effectively stop that unsafe pedestrian crossing on the road.

The issues on the side of the road I will leave to Dion and Ian. With regard to the budget costs, as Geoff has already said, it is a \$5 million project. The majority of the money, or the biggest single item is the sound walls, around \$600 000 worth of walls. That also has some associated costs in the servicing. We will also need \$600 000 to put an opening layer of asphalt right across the road and that is an additional cost, but that is required to meet the guidelines for noise abatement. None of the other items are particularly out of kilter for this sort of project. There was quite a bit of cost in drainage and, even though there is a lot of drainage infrastructure there to pick it all up again, it is quite a substantial item.

The roads, generally, will have 3.5 metre lanes, which is what the current pavement is and what they were designed to be about 20 years ago when it was built. The effect of that is that in the area there on the screen, which is the area for signals where the lanes are narrowed, they are narrowed at the signals for two reasons. The traffic speeds are slower at the signals so that you can cope with the narrower lanes, it is straight through the signals so big vehicles do not have problems with the narrower lanes and the narrower lanes give a shorter walking distance across the signals so that reduces the time it takes for pedestrians to cross the signals and therefore makes the signal operation more efficient by allowing more green time for vehicles and minimises the time it takes to safely get pedestrians through the system.

**Mr STURGES** - What about the shoulder of the road? What distance are you providing over the shoulder? I know there was an issue about the shoulder of the road on the West Tamar Highway project. There is a standard. Are you aware of what I am talking about?

**Mr WILLIAMS** - Yes, I am quite familiar with that. Actually it is not a standard. There are some guidelines for shoulders on roads and they are generally related to traffic volumes

and those sorts of issues. This road has not got any shoulders between Shoreline and Oceania Drive. It is two 3.5 metre lanes plus a gutter plus a curb. Where the pavement is sloping away from the gutter side, the high side, we do not put the gutter in. So there is 450 millimetres there. But apart from that there are no shoulders on the road. The project does include provision for upgrading of the bicycle facilities that are there at the moment between Oceania and Clarence Street. The path is about 2 metres wide. There are shoulders on the road designed between Oceania and towards Rokeby.

**Mr STURGES** - Yes, because it is a single lane.

**Mr LESTER** - I will give you a rundown of the road site. I think we all got a good indication that it is a highly disturbed site today. Earthworks have been certainly started for the section from Shoreline Drive to Merindah Street when they put the original section through. It is only really the section of vegetation on the bottom side, the ovata, that we discussed from Merindah Street or Oceania Drive up past the Church of Christ entrance.

A flora and fauna study was undertaken by North Barker and they found exactly that, an isolated remnant of *Eucalyptus ovata* on that bottom section. There are five other plant species of conservation significance, two of which will be impacted by the roadworks, six plants of a *Juncus* that is in the drainage line and one single plant of another State-listed. A permit to take has been forwarded to the conservation assessment section so we are waiting to hear back regarding that.

Due to the level of disturbance of the site and its urban context, an Aboriginal survey was not undertaken but consultation with the Aboriginal Heritage Office was and they have confirmed that there is no necessity for a survey. We are meeting all the requirements of the Aboriginal Relics Act at this stage. Likewise, because of the level of disturbance, no historic heritage survey was undertaken but again it is fairly obvious that there are certainly no heritage items, European heritage items in close proximity. I think the closest listed house is on Pass Road over the top of the hill. Otherwise there is nothing particularly remarkable about the site.

The *Eucalyptus ovata* provides swift parrot foraging habitat so that is a significant environmental issue and the majority of that forest community there will be cleared. The community itself does not offer a lot of value because it is heavily infested with weeds but it does offer foraging resource for the swift parrot. Consequently a referral to the Department of Environment and Water Resources under the EPBC act has been made so we are awaiting a response from Canberra as to whether that will be a controlled action or not.

There are approximately 50 mature trees that will be removed and another 30 saplings, all *Eucalyptus ovata*. The saplings are not old enough or large enough to provide foraging habitat so that is not a significant issue. Once confirmation from Canberra is received then we will know what is the appropriate offset strategy for those *ovata*. Typically it will be in the range of five to one so we can expect to have to provide five times the volume of individual trees that are being cleared as an offset.

Other approvals - we are about to submit a development application to Clarence City Council. The works that are occurring within the existing road reserve do not require a

development application but it does require some land acquisition from two properties and it steps outside their zoning of a future road into their residential D zone. That is more a legacy of the up-to-dateness of these zoning controls because there are significant portions of the road reserve that are still zoned residential D.

That will require a discretionary application so that will be advertised for two weeks and we should know within 42 days when we have a response from Clarence. That is pretty much it for the environmental issues. We took the liberty of inviting Dr Ian Woodward down. He is responsible for doing the noise modelling. Given that there were quite a few questions regarding some of the noise walls and things that like when we were on the site we thought it would be prudent for Ian to come and give you some direction regarding that.

**CHAIR** - Before we head off in that direction, I think Ian has been in front of our committee before?

**Dr WOODWARD** - West Tamar, I think I remember.

**CHAIR** - I will get you to make the official declaration please, Ian, and then we can proceed to hear from you.



**Dr IAN WOODWARD** WAS CALLED, MADE THE STATUTORY DECLARATION AND WAS EXAMINED.

**Dr WOODWARD** - I am not aware of what you know, what was discussed on the visit. Do you want me to start from the beginning?

**CHAIR** - It is either that or we can launch into questions because committee members do have questions about matters relating to the sound barriers.

**Dr WOODWARD** - I could give you a very quick run through the modelling process itself.

**CHAIR** - That would be fine, thank you.

**Dr WOODWARD** - The modelling was computer noise software that we use commonly. It has been used on probably 10 projects over the last seven or eight years. It is called SoundPLAN and the modelling algorithms we use are consistent with CORTN which is the calculation of road traffic noise which was developed in the UK in the mid-1980s and it has been adopted in Australia as the accepted method of calculating road noise.

The targets are DIER's code of practice for road traffic noise, which has been around for probably seven or eight years I think from memory. In very simple terms, the objective is to meet a noise level of 63 decibels measured over an 18-hour period. It is called the L 10 (18 hour) - L 10 means the noise is exceeded for 10 per cent of the time and it is measured over an 18-hour period so although there may be individual truck noises which go over 63 it is like a statistical figure.

**Mr STURGES** - Where do you actually take these noise measurements in relation to the residences?

**Mr WOODWARD** - The CORTN standard is that the noise objective needs to be met 1 metre from the most exposed façade of a residential building, in effect the facing wall of the house, if you like. If you were measuring it with a noise meter you would set up the meter 1 metre in front of that. In the modelling situation you set up a virtual noise meter 1 metre in front of the façade.

We set up the model by putting in the survey data, creating a digital terrain model, digitising where the houses are within that model. We set the road up, we set the traffic lines where the vehicles can go and put in the traffic volumes over the 18-hour period. We modelled the existing situation and the situation in 2017. In the existing situation we also did a calibration by doing some spot measurements and we ran the model for one-hour periods which matched up with the measurements that we did. We calibrated the model to test the model. Once we were satisfied with that we then ran it over the 18-hour period.

The modelling for the current situation shows that the 63 decibel target is exceeded for quite a number of houses over the road. Because there are projects that will be implemented, in accordance with DIER's code of practice we now look at the contemporary situation and aim to meet the 63 decibel objective for all affected houses.

We ran the model with that for the current situation, we ran it without noise walls for the 2017 situation and then we ran it again to calculate what walls were required to meet 63 decibels for all the affected houses.

The noise walls we are talking about now and that are shown here are effectively the outcome of that. They have been adjusted somewhat to make it pragmatic to join up gaps where the model suggested there could be gaps and the noise walls come in certain dimensions so we had to step it up to those dimensions. Essentially the noise walls that are shown here reflect the outcomes of the model. There are restrictions on where the walls can go from a safety point of view so that alignment has to be set. That is about it, I think, regarding how we did it.

**CHAIR** - Thanks, Ian. We will now proceed to questions across the whole range of issues.

**Mr BEST** - In your report you mentioned six sites that were selected. I have the map in front of me, I am not sure which one we should work from. Are you able to identify those six properties?

**Dr WOODWARD** - I do not know if I can pinpoint them exactly. We picked the sites to distribute them as best we could over the length of the project.

**Mr BEST** - Just as a rough estimate, then.

**Dr WOODWARD** - As a rough estimate there were two sites in Holland Court, so down this end.

**Mr BEST** - You had two here. If you were going to put them there roughly where would you have tested?

**Dr WOODWARD** - It does not really matter where. You pick a location that is convenient without disturbing people by going onto private property. We do not need to actually measure the 1 metre from the wall of the houses themselves because the model predicts noise wherever. We picked a number of locations and then in the model we put the actual locations where the measurements were done and that calculates the noise that is predicted there.

**Mr BEST** - Did you in fact put the measuring device 1 metre from the exposed -

**Dr WOODWARD** - No. We do not need to for the calibration of the model. We were not going to measure what is the actual 1 metre from the façade noise now. The purpose of the measurements was to scatter the measurements along the site and then to predict the noise which predicts contour maps and at any point you can work out what the noise should be and then we match that with the measured noise at that particular point. There were a couple of sites down there and there were others, I think, and some across the other side too.

**Mr BEST** - I understood that that is the methodology you use, that in fact you set the recorder machine, or whatever, 1 metre in front of the most exposed facade of each house along all the projected route.

**Dr WOODWARD** - That is what you do if you want to measure the actual noise at a particular house but that was not the purpose of the measurements.

**Mr BEST** - So we may not know, for example, what the noise is outside of these properties.

**Dr WOODWARD** - We have a modelled noise but not an actual measured noise at the house. The measurements were to calibrate the model for the existing situation so we can refer to the model and there are contour maps in the report which show the modelled noise for the current situation anywhere along the project area.

**Mr BEST** - I do not want to hog the floor too much on this because other members probably have questions on this as well. Why would you then have the noise attenuation fence starting here at, say, the 4 kilometre 100 mark, when there is no house there?

**Dr WOODWARD** - Because noise just does not travel perpendicular to the vehicle. I can show you on the map that even coming down from the top of the left-hand corner of the plan there is noise coming to other areas. If you were travelling this way then that noise would be coming down at that angle, it just does not go out like that.

**Mr BEST** - But you never measured here, did you?

**Dr WOODWARD** - We measured in this vicinity here but we did not need to measure there because, as I said, that was not the purpose of the measurement. The purpose was to calibrate the model for modelling the existing situation. Once we were satisfied with the model, and confident that it could predict noise, then we added in the volumes for the 10-year situation and predicted noise there. The noise walls started with an alignment which allowed noise walls to be anywhere along the length of the project. We did not just decide they would start at that 400 metre mark. The potential location for the walls extended from the roundabout right up to the end of the project and the actual walls that we determined are required are those that the model predicted need to be at particular places along that wall.

**Mr BEST** - How do you know then that the noise would finish here and not finish there?

**Dr WOODWARD** - Sorry, the noise will finish -

**Mr BEST** - As I understand it, the noise attenuation fence finishes here based on the calculations that you have done so it must be assumed then that no noise will pass that point. That house is not going to get -

**Dr WOODWARD** - No, it is not based on that assumption. The noise will reach those houses but it will not be over the 63 limit.

**Mr BEST** - We do not know that because you have not measured 1 metre from the facade of the -

**Dr WOODWARD** - No, the -

**Mr BEST** - I am not trying to be difficult here, I am just trying to work out how you could possibly reach that conclusion. Residents have told us they do not understand why it would stop there and I do not understand either, to be honest.

**Dr WOODWARD** - I can go the other way, if you like. If we shortened that noise wall more noise would come from traffic travelling down that road than would be the case if we put that wall there and the noise level at these houses would therefore be higher.

**Mr BEST** - Well, then it is going to start here. So you are saying the noise is going to travel to there?

**Dr WOODWARD** - The noise will go to there from all directions to those houses from traffic coming down here -

**Mr BEST** - So you would be better off to live here than there, would you not?

**Dr WOODWARD** - No, because the 63 decibel objective is met at both those houses.

**Mr BEST** - How do we know that because you cannot tell me where you measured that?

**Dr WOODWARD** - The purpose of the measurement was to calibrate the model but that is the only purpose of the measurement. It is not to say what is the measured noise at those houses. The 63 decibel objective will be met at all those houses. There is no need to extend that wall further because the noise objective of those other houses is already met.

**Mr BEST** - My final comment on this, Mr Chairman, is we had a similar situation with a bypass at Penguin on the north-west coast and there were a lot of issues about where the sound walls were placed. I do not know if you used the same software or -

**Dr WOODWARD** - No, that dates back a long way.

**Mr BEST** - what happened there but that was a major issue that took some time to resolve after the construction.

**Dr WOODWARD** - Penguin was a pre-sound plan model. The calculations were manual calculations, nothing like as sophisticated as this. They were done by hand. The software model probably did several tens of thousands of calculations whereas for Penguin there might have been a handful.

**Mr STURGES** - Just to follow on, being the devil's advocate, at the moment there is no noise attenuation fencing. Why has the decision been taken that we need noise-attenuation fencing now?

**Dr WOODWARD** - Geoff is probably the appropriate person for this. I am not a member of DIER, so I cannot be speaking on behalf of them. The DIER code of practice is that where there are upgrades of roads, the current standard applies. This road would have been constructed pre the code of practice so people live with the situation, but when there is a project where works are required and there is an upgrade of a road, then that policy comes into it then.

**Mr STURGES** - Would it be reasonable to assume, given the fact that there is no existing noise-attenuation fencing, that by erecting fencing, whether it is 4 metres on one side and 1.5 metres on the other, it has to improve the situation with noise? Is that a reasonable assumption, given that?

**Dr WOODWARD** - Yes, it will ensure that the 63 decibels target is met for all houses where it is practical. With the modelling that we did, which is the best that can be done because you are trying predict a future situation, that success of the 63 decibels -

**Mr STURGES** - So it should improve it? That is the bottom line. When I walked that track I saw a few trees and blackberries and a bit a scrub. That obviously would not deaden the noise to the extent of the noise-attenuation,

**Dr WOODWARD** - It would hardly have any effect at all. Legislation does not -

**Mr STURGES** - I have no expertise in this area and that is why I asked you question.

**Dr WOODWARD** - Walls basically need to be solid. Anything more than 5 per cent gap in the wall will allow noise through and would be ineffective and there needs to be a dense material.

**CHAIR** - Can I get you to give us an indication of what 63 decibels is, in terms of say, a domestic lawnmower? Where does it sit -

**Mr STURGES** - Just raise your voice.

*Laughter.*

**Mr WILLIAMS** - Lawnmowers have warnings on them and that is only 7.

**Dr WOODWARD** - Occupational standards is 85 decibels. So it is much less than that. The noise scale is logarithmic too. The actual noise goes up very quickly with increases of noise. The best example of the 63 decibels is traffic noise, but that is a circular argument. For example, the noise on Davey Street here would be well above 63 decibels in peak hour. The noise on South Arm Highway at the moment at some houses is 70 decibels. So that is well above 63 decibels again. When I say 'well above, most people cannot perceive an increase of less than 2 decibels but an increase of 5 or more above, would be very noticeable.

**Mrs NAPIER** - That was one question I was going to ask. Following on from what Mr Best was saying, we have had some representations from some people who live in Holland Court and they particularly asked whether the 1.4 or 1.6 sound buffer that is going to be built along here, if it backs onto their houses, should not be extended closer to the intersection of Oceana Drive and the highway. The argument put to us when we were out there having a look at the area, was that it might impede sight because of the intersection of Oceana Drive. Although I note, there is a very similar set-up with the intersection with Merindah Street, that the noise-attenuation fences continue almost to the intersection. If we go back to the Holland Court one, there certainly seem to be a number of houses that might be impacted by the noise.

**Dr WOODWARD** - Getting back to the question that Mr Best asked as well, it is important to understand that noise just does not come out perpendicular to a car. The total noise that a house experiences is the noise that it receives from the vehicles travelling all the way along, so from when they are approaching a sharp angle, when it is at 90 degrees and when it goes in the other direction. The purpose of noise walls is not just to block it off at the 90° angle, it is a total reduction. By blocking noise along this path, for these houses that reduces it sufficiently to achieve the 63 dB target. There will be noise of course and noise will go over the wall - it does not mean it is silent - it just reduces the noise. Where there is no wall there will be more noise passing directly to the houses, but the 63 dB target is achieved. The walls do reduce the noise sufficiently to achieve the 63 dB target. If the wall was to be extended beyond what is shown here, we would be going beyond the 63 dB target; it might take it down to 62, 61 or 60, which is below DIER's objective.

**Mrs NAPIER** - Given that it is an intersection and you have trucks and cars coming through, presumably as you slow down if you see the lights are about to change, you have the use of pressure brakes on trucks that are fairly noisy and presumably when cars or trucks begin to accelerate, having stopped at the intersection, you would expect that there would be more sound. I would have thought that those houses on the bottom side - the Holland Court houses - that are close to that intersection with Oceana Drive would have a reasonable argument to say that they would be more impacted by noise than the houses further towards Rokeby.

**Dr WOODWARD** - Intersections do change the noise because it slows vehicles down. If they are going in a downhill direction, it makes it better. If they are going in an uphill direction, it makes it noisier. There will be the noise from trucks when they are taking off from a standing position. Again, it comes down to what the policy is. The policy is an 18-hour measure and not a measure that deals with individual truck noises, for example. As I said at the start, there will be noises from individual vehicles that will be higher than the 63 dB, but the policy - and this is consistent with policies across the nation - is a statistic that is measured - in New South Wales it is measured over 15 hours, in most other States it is measured over 18 hours - it is an average noise over the time.

**Mr STURGES** - Can I follow on from that line of questioning because I think it is very interesting? How can you measure something that is not there at the moment? I think Mrs Napier's point is a very valid one to the extent that trucks slowing down and starting again are certainly going to be a lot noisier. At the moment the residents in that area do not have the intersection that is proposed, so I think there is an argument there to at least consider extending the noise-attenuation fence.

**Dr WOODWARD** - The modelling did include the change in speed. There are limitations from a safety point of view, a sight-distance point of view, how you deal with intersections with noise walls because you cannot -

**Mr STURGES** - So the model did take into account the intersection?

**Dr WOODWARD** - It took into account a change in speed as an average change in speed.

**Mr STURGES** - Did it take into account the intersection?

**Dr WOODWARD** - Yes, through a change in speed.

**Mr STURGES** - Stopping and starting?

**Dr WOODWARD** - No, because the 18-hour statistic does not deal with that.

**Mr STURGES** - But trucks and cars will stop and start in 18 hours at an intersection controlled by traffic lights, won't they? That is a reasonable assumption?

**Dr WOODWARD** - Yes, over an 18-hour period though. It is an average noise over 18 hours, taking into account the average speed change from vehicles going both downhill and uphill, with a mix of vehicles. So the model does deal with the intersection. What I am saying is that there will be individual truck noises where that level goes over.

**Mr STURGES** - Yes, I understand that.

**Dr WOODWARD** - There are obviously practical limitations about how you deal with intersections in terms of noise walls.

**Mrs NAPIER** - Following on the same issue as Graeme, if there is a fairly high usage of Oceana Drive, which we anticipate will be the case in order to remove some of the pressure from Shoreline Drive, it is reasonable to assume then that those lights are going to be working reasonably often, certainly at certain periods of the day. One would have thought it would be pretty active first thing in the morning for a couple of hours and then pretty active around 3 p.m. until 6 p.m. when people are picking up kids and coming home from work. I am interested in what you were saying about the model and how it takes into account where you have an intersection, or in fact a roundabout. Even if you took that roundabout near the Shoreline Hotel, if you were doing it on the model, would that take into account the sound that would emerge as a consequence of having a major intersection there?

**Dr WOODWARD** - Through the speed change it would, yes. In the guidance notes for the sound plan it makes the point that there is not a great deal of difference between a signalised intersection and the roundabout section. The way to deal with intersections is through the vehicle speed change.

**Mrs NAPIER** - To have a limit of 60 kph in the vicinity?

**Dr WOODWARD** - For example, the model traffic speed in this area is 80 kph and when it comes through the intersection for a period of 200 metres either side the speed in the model is reduced to 40 kph to take account of the intersection. That takes account of the vehicles slowing down and speeding up.

**Mr HALL** - I have a question for the department. In some residential areas the use of exhaust brakes is prohibited. Is that an option here to help mitigate the noise?

**Mr MULCAHY** - I guess that is an option and one we can look at. I am not sure if that has been included in the modelling at all.

**Mr HALL** - Given that we have this intersection here now and trucks slowing down when they are coming down the hill -

**Mr MULCAHY** - Trucks are definitely a problem with their exhaust stacks being high. Most of the noise comes from tyre noise on the pavement. We deal with that by the open-graded asphalt. That is the best seal for minimising tyre noise. The wall works on the assumption of a typical engine noise height but where you have trucks with a vertical stack that might be 2.4 metres off the ground that is a very difficult thing to control through the use of walls. You would find that the walls would have to be so high that there would be structural and shading problems.

**Mr HALL** - I understand that with a big, heavy vehicle under acceleration that will be an issue, but you could still mitigate it by having - exhaust brakes do make a lot of noise, as you would be aware, and this would help.

**CHAIR** - Geoff, do we have laws which can be applied to prohibit the use of exhaust noise or is it just a recommendation through signage on the road to say, 'Please be considerate of residential -

**Mr MULCAHY** - My understanding is the latter, but I would have to check the actual situation in law.

**Mr BEST** - It is interesting because I have had constituent issues with the department on that issue of noise. There was one on Don Hill and my understanding is that they simply would not put a sign up there, for whatever reason I don't know. It has caused a lot of distress for one family living in the Don area.

I know that when we were out there today during the inspection a lady dropped in - I think she said she lived just up from the Shoreline roundabout, which is the large one on the map. She said that the biggest problem that she was experiencing - and she is not part of this project, but she must have heard something and come down - was the actual gear changes and acceleration by trucks, and I think she said motorbikes as well. I understood there was some comment made that gear changes and acceleration and so forth do not fit the noise-attenuation policy? Is that true?

**Mr MULCAHY** - I imagine that would come into the statistical analysis where it is over an 18-hour period but the spikes would be such that they most likely would not come into the model. As far as the law goes with air brakes, it is a matter that we would have to check to see what the actual law situation is. That would be how I would understand the model too, on a statistical basis the infrequency of such happenings would not disrupt the model. Ian might be able to comment further on that.

**Dr WOODWARD** - The model parameters that Portman use are based on empirical measurements so they are not theoretical measurements of noise from vehicles as they are based on actual measurements. They have been done very comprehensively and are continually updated and studies in Australia have made sure that the Australian situations are still pertinent. All those individual noises over an 18-hour period are picked up as an 18-hour average. As I said, the individual noises might be spikes.



**Mr BEST** - I refer to this map again. At the three-and-a-half kilometre mark on the river side, there is a small noise attenuation fencing that is proposed. I am assuming that is to take in that section just above Clarence Street, Wandi Court, and deflect from there.

So then, I suppose in my thinking, when the residents, and a number from the Holland Court area have signed the letter, are saying, why could not that noise attenuation fence come down one more strip, whatever that might be, I am not sure what the distance is there. But why have a dog leg? I am not a sound attenuation engineer, you are. Why could that not be there?

**Dr WOODWARD** - In principle, there is no why it could not be extended, but if it were it would be doing more than the policy requires. So the walls meet the 63 decibel target and if you make them longer they would achieve 62 or 61 or some other number, which goes beyond the policy requirement. So that comes down to a policy decision.

**Mr BEST** - But you are 100 per cent sure these houses here will not exceed?

**Dr WOODWARD** - I cannot say I am 100 per cent sure.

**Mr BEST** - Based on the modelling that you have done.

**Dr WOODWARD** - The best modelling that we have available using the accepted standards show that those houses there will be below the 63.

**Mr BEST** - Because these are protected to a degree and I understand it is only to a degree and you have explained with the size of the exhaust on trucks but those here are somewhat exposed in the sense that the fence finishes there.

**Dr WOODWARD** - Every house along the entire project, all the closest houses had, in the model, a virtual microphone 1 metre in front of its façade and the walls were built until every one of those got to 63 or below.

**Mr BEST** - Sorry, you have lost me. I am just finding it hard to follow because in your report you said six and now you are telling me you put it in front of every house.

**Dr WOODWARD** - No, in the model.

**Mr BEST** - Oh, in the model, sorry. In the model, okay.

**Dr WOODWARD** - In the model every house had a virtual microphone 1 metre in front of the façade and the model built the walls inside the model until every one of those positions achieved 63 or below. That is when the wall building stopped. The walls we have here are the result of that.

**Mr BEST** - Right.

**Dr WOODWARD** - So, if you had a lower target, the walls would need to be bigger. If you had a higher target, the walls would be of a lesser size. But the walls achieved the 63 decibel target. So if you extended the walls you would be going beyond that 63.

**Mr BEST** - Thank you. That is all I have.

**Mrs NAPIER** - What you are indicating is that there is no reason that you could not bring that fence down further as it impacted on the Holland Court people.

**Dr WOODWARD** - I cannot talk from a safety point of view but there is no noise reason to do so.

**Mrs NAPIER** - But in order to preserve the amenity for those people who, up until now, have not had that major intersection at their back door, it could be considered, at least, from the sound point of view.

**Dr WOODWARD** - I think the residents would benefit anyway from the walls compared to the current situation. I think the modelling shows, and I would have to refer back to them, that those houses are already affected by significant noise and this may make it better for them.

**Mrs NAPIER** - My next question, Mr Chairman, is on a different issue. It has to do with water run-off in that vicinity.

**CHAIR** - I want to stick with the sound issue for the moment, if I can.

**Mrs NAPIER** - Sure.

**CHAIR** - Why is it that you would not take actual measurements of noise at a range of locations because, if I heard you correctly in answer to Mr Best earlier, there were no measurements of actual noise - you needed to build those calibrations into your model. Why is it you would not take actual noise measurements at the closest houses to the highway as they currently are - and following on from that, I find it difficult to understand how on the northern side of the highway at the intersection of Merindah Street the noise barrier comes right to that corner and yet the closest house is a long distance back across Myoora Street, whereas when we come across to chainage 3900 for the Holland Court houses they are very close to the highway I just cannot understand how that sound barrier on the northern side has to come so far towards the intersection.

**Dr WOODWARD** - The only relevance of measuring noise now is to calibrate the model. If someone was interested in what the noise is now for over an 18-hour period we would need to set up a microphone at their house 1 metre in front and leave it there for 18 hours, probably over a week. That could be done but that adds no value to the design of the future noise walls that are required because we are not measuring the future traffic volumes, we are measuring the existing traffic volumes.

Also, the traffic volumes are an annualised volume so you might measure it in a particular week and that will be different from the average over a year. It is important to recognise why the measurements were done. They were not done to measure what the current noise is, that was not the question we were answering. The question we were answering was what walls are necessary to achieve 63 in 10 years' time. The only way you can do that is to make predictions. We use the model. The purpose of the measurements was to calibrate the model against the existing situation so that we could be satisfied that the model was predicting accurately, and that is what we did.

The measurements we took were one-hour measurements and we had a traffic counter down at the same time so we knew the actual number of vehicles that passed the point and we had the measurement of noise. We ran the model with those one-hour traffic volumes and predicted the one-hour noise and compared that with what we measured and we were within about 2 decibels which, as I said earlier, is something that people cannot really perceive - a 2 decibel difference.

We were confident that the model, the situation, the terrain we have set up accurately predicts the noise from the traffic. Once we had that confidence we can then move forward 10 years in time and use the 10-year traffic volumes. The difference in the walls - it really comes down to topography. The houses on the northern side are uphill and noise will travel, if you like, into them, hit into the hill whereas houses on the downhill side are downhill and a lot of the traffic noise will pass over the top of them. So the wall requirements on the southern side are not as severe as on the northern side.

**CHAIR** - Just pursuing that - to the western side of Oceana Drive at chainage 3800, this led to the western side of that chainage, there are a few houses and they are very close to the highway and probably every bit as close as the ones we were talking about at chainage 3900 and I do not see any noise barrier there, and they are, again, on the downward side.

**Dr WOODWARD** - To achieve 63 the walls are not required there.

**Mr WILLIAMS** - One of the reasons for that will be at that point the whole highway is elevated so the westbound carriageway heading towards Hobart is actually protecting those houses from noise that is emanating from the east end carriageway because it is like this and the car is lower here than the top edge of the highway. So the highway itself is producing a noise barrier for part of the noise whereas beyond Oceana Drive on the Rokeby side the carriageways are level and you do not get that protection.

**CHAIR** - Yes, but surely there would be some exposure to those houses around chainage 3800 from westbound traffic itself?

**Dr WOODWARD** - There is exposure, but it is not taking them over 63.

**CHAIR** - Any other questions on the noise issue at this stage, and of course we can always come back to it. We could go on and have a look at all sorts of other chainages. There is a very very small noise barrier that Mr Best identified at chainage 3500 and then nothing to the west of that, and yet all of those houses are also very very close to the highway.

**Dr WOODWARD** - A lot of those are protected by the cut - the highway - which effectively acts as a noise barrier.

**Mrs NAPIER** - The question that I raised when we were out at the site was in relation to the water run-off, and I just looked at the record that we needed to look at that issue.

We saw the creek that currently goes through nearer where Oceana Drive is, and there was a record of the fact that there had been some flooding there - not regularly as I understand it, but it had occurred. If we get an increase in the area of the road that then eventually drains into that same creek, I wonder if you could give us some indication of

what assessments have been made as to the capacity of that pipe that goes underneath Oceana Drive. Is actually going to be sufficient in size?

**Mr WILLIAMS** - We have looked at that in quite a bit of detail. There have been two significant floods in that creek that went down through the houses on the downstream side of Oceana Drive and one flooded inside a house and caused substantial damage to the property.

According to information we received from council, they were mainly caused by a trash rack being blocked up with rubbish on the inlet to the pipe. There was vertical pressuring on the inlet to the pipe, and that blocked and so the water went over the top and went down through the property. Since then the council has altered that trash rack to make it an angled one and also put a second one upstream to try to stop the trash heading for the inlets.

Our analysis indicates that our system with the extended pipeline running back to the Rokeby side of Oceana Drive will satisfy the need in terms of capacity, and council have also said that the design is adequate. The road is bigger and the run-off will be slightly quicker and it can all get into that system.

**Mrs NAPIER** - I think you also pick up the run-off from where the intersection comes in from the Merindah Street, so I understand that feeds across to that creek as well?

**Mr WILLIAMS** - Yes.

**Mrs NAPIER** - You are bringing the road pavement closer to those houses, or south, and presumably there will be a higher abutment to the road. It will be more angled than it currently is, and one would think as part of the construction - I think you said you were going to move the creek, basically, closer towards where the path is. Presumably there would be better definition of the creek, because at the moment I would have thought that because of the trees and the brush and whatever is there, it would slow the water down a little bit. I would think if you got a pretty big dump of water, with increased road pavement and where the water is drained from, then you would be likely to be dealing with a lot of water in a short period of time.

Looking at the size of that pipe, it does not look all that big to me to be dealing with the kind of water run-off that you would expect from the hills and from that road area. But you are the engineer, and I am not, I have to say.

**Mr WILLIAMS** - All I can say is that we once again had a model - a digital model of the system - of all the pipes need to go in it, and all attachments, and all the design plates that will go into there in one plug.

**Ms NAPIER** - Okay.

**Mr WILLIAMS** - If you get an extreme storm it's just like anything else.

**Mrs NAPIER** - When you do that modelling, is the modelling picking up the change that we are currently going through that gives us a bigger dump of water? We are starting to get storms that are a bit more like a tropical storm, that dump a lot of water on you but they

do not last very long. Is that part of that modelling or is it what you would regard as being your usual rain storm in Tassie that goes for ever? You don't get a huge dump all that often.

**Mr WILLIAMS** - Well, the intensity of rainfall that you use depends on the frequency of the storm. A hundred-year storm is going to be different in intensity to a storm that only lasts five minutes. That's taken into account, so that's the design storm that you use in terms of intensity.

**Mrs NAPIER** - That is my main concern, the pipe and the redirection of the creek and the water catchment that it seems to serve; it's a pretty big hill up the back as well. My concern was that the pipe looked a bit small. I've got a bit of experience in subdivisions and I know that councils are tending to err towards larger pipes rather than small ones to avoid damage. It just looked like a pretty small pipe to be dealing with that kind of catchment area.

**Mr WILLIAMS** - We have done a fair bit of work. We were concerned about the fact that it had flooded before and tried to understand what caused the flood.

**Mrs NAPIER** - You're going to put quite a bit of fill at the end of Oceana Drive to provide a better connection, if you like, with the highway. If you are going to be doing that you don't want to have to come along later and take you pipe out and put another one in.

**Mr WILLIAMS** - If we have to come along later and put another one in, it's nearly a kilometre-long pipeline to replace. It's a big job - through backyards and under swimming pools and a few other things.

**Mrs NAPIER** - I suppose you can't just do it for that section.

**Mr WILLIAMS** - Well, there's almost no point doing it for 20 metres on the inlet.

**Mr HALL** - I think the rationale for removing some of that ovata was to clear out the creek line. Is that the case? Could you leave some of those trees in there or not?

**Mr WILLIAMS** - It may be possible to save one or two, but we really need to reinstate the drain.

**Mr HALL** - What sort of width? You were going to get an excavator in there; what would you do?

**Mr WILLIAMS** - It's only going to be one metre width across the bottom; it's not very wide. It's down deep with fairly flat batters so that it is not a hazard in itself. You're not going to trip and fall in the drain. Also, it's slopped into the landscape coming into it on the path side. On the highway side it'll slope up as a fairly normal road batter but it will be landscaped.

**Mr HALL** - I ask the question because Mrs Napier said that the existing vegetation would certainly slow down the water coming down there. I realise you have to clean out the whole water course anyway; that's got to happen.

**Mr WILLIAMS** - Yes, we did actually look at options to put in retention bases in there, but hydraulic modelling didn't indicate that we needed to do that to slow the flow. So we didn't do it.

**Mr BEST** - I think Mrs Napier has made a valid point about the drainage. What correspondence do you have, then, with the Clarence Council regarding the drainage?

**Mr WILLIAMS** - We have written to Clarence and explained to them what we are proposing to incorporate. They've written back and have accepted that what we're proposing is an appropriate approach. It is an issue for Clarence, at the end of the day. Clarence are responsible for the maintenance of the road and reserve outside the edges of the pavement, because it's in a town and has footpaths.

**Mr BEST** - So the engineering department of the Clarence Council have indicated to the department that the existing infrastructure is able to accommodate the design features that you are putting in this project to direct water into that main?

**Mr WILLIAMS** - Indicated to Pitt and Sherry, yes.

**Mr BEST** - Pitt and Sherry are the same as you in this case, is it not?

**Mr WILLIAMS** - Yes, I am with Pitt and Sherry.

**Mr BEST** - Will their maintenance costs be increased through any of this?

**Mr WILLIAMS** - No, their main maintenance cost on that drainage system would be maintenance to trash racks. That would have to be done fairly regularly. We will reinstate those. As we have already discussed, a lot of the trees on the upper side are to be removed. Those eucalypts are probably the prime source of the debris that blocks the drain.

**Mrs NAPIER** - That is right.

**Mrs NAPIER** - Including the tree just behind Mr Baker's fence.

**Mr BEST** - So you or the Department have writing that Clarence Council has said to you that the current infrastructure will accommodate this and that there will be no flooding with the project?

**Mr WILLIAMS** - For the designed storm. If you get a storm that exceeds the designed storm then it will probably flood like any drain.

**Mr BEST** - Yes, but you cannot be held responsible for that.

Moving on then, Mr Baker of 5 Holland Court, who was there today, said that he had some difficulties recently and on a couple of other occasions with some larger gum trees that are on the government side of his fence. The roots of those gum trees had entered his sewerage pipe. I think he said the last plumbing account was \$400.

**Mrs NAPIER** - Yes.

**Mr BEST** - Is there any chance that that could be addressed? I noticed further on, on the corner of Oceana Drive and the highway, you mentioned that one of those units there had been purchased by the department. There was a tree right over the top of what appeared to be the sewerage main, if that is the sewerage main that ran through. Has there been any investigations as to problems with the sewerage with any of the trees that are on the strip there?

**Mr WILLIAMS** - No, there has not. We have not looked at the integrity of the sewerage system. There are two manholes near the unit that the department owns. They need to be raised - just the tops. The maintenance of the sewerage system and those trees are responsibilities of Clarence Council because of the maintenance arrangement that exists under the Roads and Jetties Act. If the owner wants those trees removed it would not be a particularly onerous thing to put it in the contract and have them removed.

**Mr BEST** - That would be good.

**Mr HALL** - A couple of people remarked that for 1.2 kilometres it is a bit over \$5 million capex. The top item - project specific - is \$1.149 million, which is almost a quarter of the total cost. Could we have that broken down as to what that actually is? We have had this issue a couple of times now with projects and we get just a generic heading like that - but what is it? It does not mean anything to me, to be quite frank.

**Mr WILLIAMS** - The project-specific items are generally items that are non-standard items in DIER's contract documents. In this instance there are about \$600 000 worth of noise walls.

**Mr HALL** - I thought they were down there somewhere else.

**Mr WILLIAMS** - The wire-wrap safety barrier is in there, I am pretty sure.

**Mr HALL** - Could the committee be provided with that breakdown? Is that possible?

**CHAIR** - Mr Hall has raised a very valid point. The committee has been critical of DIER's submissions to us in the past where we have had that heading - 'project specific'. Geoff, can you please take that on board and communicate back to the department that this committee does require detail in the future of what project-specific matters are, because \$1.1 million, as Mr Hall has identified, is significant.

We had a similar issue on the Sisters Hills, Bass Highway project. We asked for that project-specific breakdown and received it - in correspondence after the committee hearing. Please take that on board for the future because it is an important consideration for the committee when we are considering any expenditure.

**Mr MULCAHY** - I can understand that and I will take that on board.

**Mr HALL** - The contingency is roughly about 10 per cent, and the others would appear to be roughly in order. With the surfacing, that gentleman talked about noise attenuation. Could you describe what that is, the surfacing which helps with that noise mitigation?

**Dr WOODWARD** - It is an open asphalt and the purpose of it is to reduce tyre noise.

**Mr HALL** - Is that a smoother surface?

**Dr WOODWARD** - It is actually an open surface. This open-graded asphalt reduces tyre noise by about two decibels over dense-graded asphalt and is probably about four decibels quieter than chip seal.

**Mr HALL** - Is that more expensive?

**Dr WOODWARD** - It is more expensive. It has some maintenance problems too because it is more susceptible, particularly at intersections.

**Mrs NAPIER** - I was thinking about water getting into it.

**Mr WILLIAMS** - Yes, there are a number of issues. It is designed so that so the air can go down when a tyre rolls on it, so you do not get a clapping sound out of the tyre roll. To generate that you have holes in the asphalt and the water also goes down, so it does improve skid resistance as well because the surface is dry. You have to have somewhere for the water to go so it has got to be up. There is waterproof layer underneath it to stop the water going into the pavement, so it does add to the cost a little. You have to have seal on the road and you put this on top. It is not structurally as strong so under heavy traffic loads it can tend to crush, so its life is not as long and it needs replacing more often. You should get 15 to 20 years out of a dense-graded asphalt. You will get about 10 years out of an open-graded asphalt before you have got to replace it.

Through the intersection it is not strong enough to deal with the skewing movement caused by turning vehicles, particularly large vehicles. There is not a lot of them here but there are going to be enough large buses with dual axles and that sort of thing turning through the intersection, so the intersection will have to be dense-graded asphalt to cope with that.

**Mr HALL** - So about two decibels was the difference?

**Dr WOODWARD** - Two decibels between the open-graded and dense-graded.

**Mr HALL** - So you have a shorter life cycle and other maintenance issues for a saving of two decibels. Is that the best outcome or would it be better to do something more with the noise barriers?

**Dr WOODWARD** - If you replaced open-graded with dense-graded the noise goes up two decibels everywhere, so the noise walls would have to be higher to achieve the 63 decibels. We have not modelled that but you then have structural problems. You have a lot of wind on the high walls and of course shading on the southern side, and possibly more problems with sight distance. It is a compromise. Using open-graded means that the noise-wall task is easier. Noise walls are very imposing things; the highest here is 3.6 metres. You could end up with a corridor effect, and if the walls have to get up to four or five metres then it is quite imposing, visually.



**Mr HALL** - Some of the existing pavement is obviously broken up, and I think somebody mentioned there was going to be a reconstruction job?

**Mr WILLIAMS** - Yes.

**Mr HALL** - On all or just part - around that curve?

**Mr WILLIAMS** - From the new intersection to half way around the curve. That has failed and needs to be replaced

**Mrs NAPIER** - So the bump that was referred to, that creates a lot of noise for the people there in Holland Court, can be removed?

**Mr WILLIAMS** - Yes.

**Mrs NAPIER** - Wonderful.

**Mr HALL** - I don't want to get too precious about the ovata because I know you can go down and buy it from the nursery. You mentioned offsets; where will that happen?

**Mr LESTER** - There has been communication with Clarence City Council and two local Landcare groups about opportunities. That has not progressed to detailed offset measures as yet because we are waiting on one of the Landcare groups to complete vegetation management plans, and also some guidance. A factor of five is the general rule of thumb, however what is appropriate in this instance will be guided by the Department of Environment and Water Resources

**Mrs NAPIER** - Do you have to pay for that?

**Mr LESTER** - DIER will have to contribute to the improvement, maintenance and, potentially, buying the trees, which is obviously the second choice. The first is if you can put a conservation covenant on an already existing stand of ovata; that is the simplest and cheapest. However, you have to find someone who wants to have a covenant on their land with that ovata. So it is tricky but we are working through the issue with the two Landcare groups and council, and there are good opportunities within the vicinity.

**Mr BEST** - There is no real significant change in drainage infrastructure, is that right?

**Mr WILLIAMS** - We are not changing how the overall catchments work.

**Mr BEST** - Right. The \$418,000, then, how would that be spent?

**Mr WILLIAMS** - There are a lot of pits to go into the carriageways themselves, extension of pipelines and building of special pits and so on.

**Mr BEST** - Could we have a detailed breakdown?

**CHAIR** - Yes.

**Mr BEST** - About landscaping, the bottom of 8 says that land acquisition is kept to a minimum practical level required by the proposed road works, and I read something in here about landscaping also being kept to a minimum, but \$373 000 is quite an amount for landscaping.

**Mr WILLIAMS** - No, the landscaping includes the hard landscaping as well as the soft - the medians, traffic islands, footpaths and all that sort of thing.

**Mr BEST** - What about your fencing? Is that in project specific?

**Mr WILLIAMS** - No, the fencing around the footpaths and those sorts of things come in under miscellaneous.

**Mr BEST** - I would be interested to see some of these costing that you have. You have project specific and then miscellaneous. What's the difference there?

**Mr WILLIAMS** - Miscellaneous are things that happen all the time but aren't earth works, pavement et cetera. They are things like accesses.

**Mr BEST** - It's really difficult to follow because I don't understand your costings at all. You've got miscellaneous and then you've got contingency. I would have thought that contingency would be something to do with miscellaneous, or have I got that wrong?

**Mr WILLIAMS** - Contingencies are for things that we haven't yet thought of but are going to go in eventually.

**Mr BEST** - Isn't that miscellaneous, then?

**Mr MULCAHY** - No, miscellaneous are things we know about. There are three accesses we've got to deal with, for instance.

**Mr BEST** - How come they aren't project specific, then?

**Mr WILLIAMS** - Because the road works contracts always deal with accesses so they're listed down under the things that we normally deal with. Project specific are abnormal items that you know about. Contingency is an allowance for things that will happen between when you put the estimate together and when you get the road open to traffic. So they include things that come up between when this estimate was put together and when we go to tender, and also things that are discovered on site when we start excavation. You might find that it's wetter than we anticipated or there's another plot there that nobody knew about that we have to deal with. So contingency caters for the unknowns.

**Mr BEST** - We've got it on *Hansard* now, but maybe we need to work on this issue a bit further as to these cost estimate tables. Obviously it's building terminology or road construction terminology, but it's a bit -

**CHAIR** - Mr Best is making a valid point between miscellaneous and project specific. I hear what you've said in response to those questions, but, as Mr Best has said, if there are issues related to project specific such as those that you mentioned - a couple of property

accesses - then they're project specific. They belong to this project. However, on another project you might not have property accesses. I share Mr Best's concern if we need to we'll ask for a break-up of that miscellaneous as well. I don't know whether Mr Best wants to proceed down that path to satisfy himself and the committee in general that \$131 000 is well costed out.

It might seem insignificant in a proposal to spend \$5 million, but in terms of this committee being thorough and properly scrutinising any project, then I add my support to what Mr Best has said in terms of this committee doing what it's tasked with doing. Brenton, do you want a breakdown?

**Mr BEST** - Yes, I would like a breakdown. I suppose people are going to say it's very difficult to get qualified designers and that sort of thing, but professional fees of \$639 000 for 1.5 kilometres of road seem quite enormous to me. Again, I might be totally wrong on this and made to look a bit silly in saying that, but I don't understand why it's so much.

**CHAIR** - It's a perfectly legitimate point to make and if you want some justification of that then a question can flow rather than just an observation.

**Mr BEST** - I would like to have a breakdown of those figures.

**CHAIR** - Is that something which can be provided to the committee now?

**Mr MULCAHY** - I would have to take that on notice.

**Mr BEST** - I heard an announcement during the last election about this project. It terminates at the top of the hill here if I look at this plan. Is there another stage to this project that is being considered to the east of South Arm Road?

**Mr MULCAHY** - The next stage of the project takes us east, or south if you like, of where this one finishes, which is just beyond the Oceana Drive. In concept that work could take us, in various projects, down to the Police Academy. That work at the moment is in planning and is progressing. Towards the end of this calendar year we will be getting some surveys together to progress that planning.

**Mr BEST** - From the end of this project to the east, how many more kilometres would there be roughly to the Rokeby Police Academy?

**Mr MULCAHY** - It is in planning at this stage so it is by isolated projects, but the distance to the Police Academy, and I have not the figure at hand, is probably up to 10 kilometres.

**Mr BEST** - It is going to be very expensive, the next 10 kilometres, if this is just to do 1.5 kilometres?

**Mr MULCAHY** - We are looking into planning now to see what can be done for that next 10 kilometres. Most likely it will be isolated sections addressing accesses or intersections perhaps.

**Mr BEST** - You mentioned the issue about accesses. What is your policy, then, about accesses for the South Arm Road in this area?

**Mr MULCAHY** - Are you talking about residential accesses?

**Mr BEST** - Residential or rural-residential.

**Mr MULCAHY** - That is something I might have to take on notice and refer to our planning people.

**Mr BEST** - When we were visiting the site, a Mr Innes spoke a little bit about his concerns. I do not want to verbal Mr Innes but he did say he felt his options were limited in regards to his access. He felt he was put in a position where he had to make agreement on his access. His property is a few acres to the east of the church on the end of Holland Court - that little square in behind the church. There is an access road there but apparently he has lost access. He mentioned that the department had entered into an agreement with a resident on the other side of the road, the northern side, to access South Arm Road. His concern was the lack of conformity with policy. I realise that is probably not the project we are dealing with. I am just interested in the policy about access for people.

**Mr MULCAHY** - It is the next stage of the works which are currently being planned. I am not familiar with the specifics of that situation and that will be the subject of what we are looking at in the next stage.

**Mr BEST** - What was the policy regarding the closure of the church and access to South Arm Road? Now they are going to use Holland Drive.

**Mr MULCAHY** - I think it is fair to say in general that we like to limit access onto the highway. I would have to get back to you about our specific policy there. It would be in that general light - to limit the access that is there at the moment, which takes you directly onto the highway. The alternative is taking it back through Holland Court and then through the intersection. It gets rid of one access.

**Mr BEST** - So there is a method that you use?

**Mr MULCAHY** - There will be method, yes, in line with our policy.

**Mr BEST** - Can we find out what that is?

**Mr MULCAHY** - Yes, I can take that on notice.

**Mr BEST** - Thank you.

**Mr WILLIAMS** - There was an agreement between the church and the department, when the church was built, that they can have an access onto South Arm Highway temporarily. That is actually being used to access Tranmere Point by emergency services if Howrah Road gets closed for any particular reason. That agreement had in it that when Oceana Drive was open to the highway then the church's access to the highway would be closed. That agreement is being implemented in that particular case.

**Mr BEST** - What about, though, a situation where there was no agreement yet somebody is put in the position where they are told that they have to do certain things or they will have no access whatsoever?

**Mr WILLIAMS** - That's a really difficult hypothetical question.

**Mr BEST** - I guess I am talking about Mr Innes.

**Mr WILLIAMS** - I cannot add any more. I do not know anything about Mr Innes' case.

**Mr BEST** - Okay, thank you.

**Mr JOHN FREEMAN**, RESIDENT, AND **Mr GREGORY HOWELLS**, RESIDENT WERE CALLED, MADE THE STATUTORY DECLARATION AND WERE EXAMINED.

**Mr CHAIRMAN** - Mr Freeman, if you would like to speak first and then we will have some questions for you. Can I just point out to you both that you have listened to the evidence of the other witnesses before the committee. The procedure for the committee is that it is not appropriate for you to now ask questions of those other witnesses. We need to hear your submission about your concerns or support for the project. We will then have some questions for you and if there are matters that you raise with us that we want to further clarification on from the other witnesses, then we will go back to them.

**Mr FREEMAN** - Thank you very much. As I told Mr Harriss, I was unaware of this committee being on this morning until I heard it on the radio so quickly I put together a submission, which I will pass to you, and I will go through that briefly.

I live at 374 Clarence Street, in the last house at the end of Clarence Street, at which I believe, you might have stopped today. I am in the pink brick house on the top side of the road. I have already had some land resumed from me at the back of my property when the original highway was put through, so you can understand that my house is very close to the existing highway and proposed extension to it.

The existing amenity has already been affected by the traffic on the highway, particularly at night as all three bedrooms are at the same height as the road going past there.

**Mr CHAIRMAN** - Just for the record, the house is between chainages 3 400 and 3 500, close to the highway.

**Mr FREEMAN** - Yes. When I originally saw this plan there was no sound wall there but there is now a small one. Traffic speeds away towards Rokeby and comes zooming in towards us, particularly of a night time. When I saw the proposed plan to the highway extension I was surprised to see no sound wall. There is now a small one. My request is that an additional sound wall or an extension to it now be provided so that it would go up to where the walkway joins the highway.

**Mrs NAPIER** - You want it to go east?

**Mr FREEMAN** - Yes, because my floor level is virtually the same height as the highway and coming up around that bend they are virtually facing straight into the room. You get lights, but it is the noise which we cop quite strongly there. There is a small sound wall there but it really needs to come back to where that walkway comes up and joins the armourguard rail there. That is my opinion.

A further comment in relation to the lights. When the lights are starting to change to yellow, knowing the type of traffic that heads down that way, they gun the cars to try to get through on the yellow light. The model assumed that all traffic would stick to existing speed limit of 80 kilometres an hour but they certainly do not.

**Mrs NAPIER** - A couple of fixed speed cameras might be the way to go.

**Mr FREEMAN** - Yes. I have never seen a speed camera out there yet.

**Mrs NAPIER** - They are all on the Midland Highway.

**Mr FREEMAN** - Yes, or the Kingston Highway. So that is my requirement there. I would hate to see that removed because of budget cuts. In fact, I would like to see it extended a bit.

**Mr BEST** - Mr Freeman, we also had some other correspondence from Holland Drive. Comment was made that on several occasions they had contacted representatives but had no response. I am assuming that no response has been given to the points raised by those eight people in Holland Court. Are you in the same camp, then?

**Mr FREEMAN** - Effectively, yes.

**Mr BEST** - From correspondence here you feel you have had your phone diverted and your mail monitored. Are you saying that you are pretty comfortable that you have been able to be contacted?

**Mr FREEMAN** - Yes, definitely.

**Mr BEST** - When would you say, roughly, that you made your contact regarding your concern about sound attenuation?

**Mr FREEMAN** - Shortly after that was dropped in the letterbox.

**Mr BEST** - Any ideas on what the date would be, Mr Freeman?

**Mr FREEMAN** - It was before the display at Shoreline. That was in May.

**Mr BEST** - In May of this year?

**Mr FREEMAN** - Yes; unfortunately when the display was on at the Shoreline I had to be in Melbourne because my daughter-in-law was having a baby. When I came back I went to the Clarence Council and saw the display there.

**Mr BEST** - Do you know who this Mr Ginneliya is?

**Mr FREEMAN** - That is the project manager.

**Mrs NAPIER** - Who was not able to be here today?

**Mr FREEMAN** - Yes.

**Mr BEST** - His contacts are on this form, are they?

**Mr FREEMAN** - No, I received his name from the Clarence Council.

**Mr BEST** - You have been away, so you probably never saw any of the sound recording that went on?

**Mr FREEMAN** - That would have been done before then and it was only at 6 points, apparently.

**Mr BEST** - Do you feel that there has been much input from residents on the project?

**Mr FREEMAN** - That is the only correspondence I had about it. Certainly not from my point of view.

**Mr BEST** - Do you know of any others there in similar situation?

**Mr FREEMAN** - No I do not.

**Mr BEST** - Anybody you have discussed this project with?

**Mr FREEMAN** - No. I only really come back last week.

**Mr BEST** - Okay. So this is short notice. I do appreciate your coming. So thank you for that.

**Mr FREEMAN** - Thank you hearing me.

**Mrs NAPIER** - In relation to Mr Freeman's property and the suggestion that there is an argument for a sound barrier fence that would go through to that little walkway that came up off Clarence Street, what is the current height of that sound barrier fence and what would it cost to put it up to the walkway?

**Mr WILLIAMS** - That barrier's design height from the noise modelling is 1.2 metres. It will probably be 1.6 metres because the panels do not come in that size. It will stop the noise coming from that back side.

**Mrs NAPIER** - It looks like you would need to put in two additional sections equivalent to that which is already budgeted for, so what would that cost?

**CHAIR** - About 50 metres.

**Mr WILLIAMS** - Probably around about another \$20 000.

**Mrs NAPIER** - That could fit in miscellaneous or contingency?

**Mr WILLIAMS** - I would have to go into contingency?

**CHAIR** - Mr Freeman, you mentioned the barrier which is shown there on the plan but you also said, as I recall, your main concern was the intrusion of lights with traffic at night time.

**Mr FREEMAN** - We do get lights but the main concern is noise when you are trying to sleep.



**CHAIR** - You heard what Dr Woodward said about the modelling which they have done and that your house will not be impacted above the 63 decibels over that standard which has been applied.

**Mr FREEMAN** - Yes, I heard that. I reckon I am way over that now so that short wall will certainly help. When they are going up that path there, you here them zooming away.

**Mr HOWELLS** - I live at 1 Holland Court, which has three roads bordering it: the new highway, the new Oceana Drive and Holland Court. We put up with the noise now, which is not too bad at the moment. With Oceana Drive opening up, I have a row of trees on that side which, I was told, are going to have to go. There are no trees at the back at the moment. I do not know if they have checked the decibels from the Oceana Drive side as well but if it is the same then I am going to cop 63 from two sides.

With the new pavements they were talking about, they said they were going to reduce the noise by two decibels, which is not audible at all to the human ear. I and the other residents who have signed the paper would like the noise reduction wall brought down to at least the footpath, if not past the footpath that connects up to the new highway.

**Mr HALL** - Roughly what length is that, Mr Howells? Have you measured that?

**Mr HOWELLS** - It is four house blocks in width, which would be about 200 metres.

**CHAIR** - We are talking about the South Arm Highway?

**Mr HOWELLS** - Yes.

**CHAIR** - Where the sound barrier finishes at the moment?

**Mr HOWELLS** - Yes.

**CHAIR** - It is just past chainage 3 900. If we come down to the intersection on the scale that shows me it about 60 metres. Going back to the point Mrs Napier made a few moments ago, 50 metres is about \$20 000. We will need to consider that somewhat further in terms of sight distances and safety issues.

**Mr HALL** - You were also concerned that Oceana Drive will become a highway.

**Mr HOWELLS** - Yes.

**Mr HALL** - You are saying that a row of vegetation has to come out?

**Mr HOWELLS** - Yes, right along my fence on the Oceana Drive side.

Our house is actually level with the highway at the back; it is not below it. We have a sloping block and we have it built up at the back and then the whole living area is on top of that so we are actually level with the highway. That is why 1.6 metres is not very high because we are actually level with the road.

**Mr HALL** - Is there more concern with noise from the highway itself or from Ocean Drive?

**Mr HOWELLS** - The two combined would be a bit of a nightmare. I could probably put up with that Oceana Drive by itself. We bought the house knowing that it would one day be opened so we can't be too angry about it. We knew it was going to happen one day, but to have two roads is a problem. We assumed when we bought it that it would be noise down along behind us and we thought we could put up with Oceana Drive, which will have a lot more traffic past us. Also there is truck noise through that intersection. They're stopping, then starting, which I don't think was in the model. That is going to be a horrific noise - trucks stopping at the intersection and going from it when the traffic lights turn from green to red.

**Mrs NAPIER** - Those trees that are going to go on Oceana Drive, are they on your property?

**Mr HOWELLS** - No, they are just outside my fence. They were planted by the original owners.

**Mr HALL** - Would you prefer to see some noise attenuation there as well?

**Mr HOWELLS** - I think once they've finished I'll plant trees back there, but my main concern is from behind.

**Mrs NAPIER** - To the beginning of the walkway?

**Mr HOWELLS** - Well, as far as possible. If I could get it right around the corner a little bit behind us on the Oceana side then I'd be happy with that. We suggested the following at the Shoreline Shopping Centre. They said that going across the footpath would leave a gap. My suggestion, about which he never got back to me, was for the footpath to come out onto Oceana Drive, then people could walk up to the traffic lights or back along Oceana Drive. It did not have to go up that hill for the fence to be broken between it.

**Mrs NAPIER** - We have had some discussions about this noise buffer. There is an argument to change the angle that the footpath connects to. To whom do we direct this?

**Mr WILLIAMS** - The alignment of the footpath is chosen there to provide two things. One is to provide a good alignment because it's a bike path as well and cyclists like to travel quickly along the path; you don't want tight curves. There are some limitations on curves on paths for cyclists. Also, we need to create a point as low as we can in the terrain and we are doing that where the footpath joins Oceana Drive where the batters come down. That's to cater for the scour valve, which is the valve running out of Hobart Water's trunk main through here, a 900 millimetre diameter water main. That is if they need to empty it to do some maintenance work on it, and as happened on Good Friday. Mains can spring a leak, and the main was shut down and emptied so that they could repair the main. So we have to get it as low as we can, so if we bring the footpath down and bring the share path down along its existing route and up to Oceana there are some issues about how we manage all that.

**Mrs NAPIER** - But there does not seem to be any impediment. I have certainly heard the recommendations of the doctor about sound. Presumably that buffer fence could be brought along to at least connect to where that path goes down.

**Mr WILLIAMS** - You could bring it closer to the intersection if you wanted to.

**Mrs NAPIER** - At least it would provide some kind of protection.

**Mr WILLIAMS** - Exactly how much closer is a problem because there is quite a problem of levels in there and getting everything to fit together.

**CHAIR** - With regard to noise, Brian, can I get you to explain what you did on the site regarding the proximity of a noise barrier to the actual road and its maximum efficiency.

**Mr WILLIAMS** - The noise barrier on the back part of Holland Court is placed almost right on the edge of the road. There is only a safety barrier in front and when you look at the photo you can see it is like that. The wall is a hazard to vehicles. That wall has the maximum efficiency in terms of stopping the noise escaping from the road horizontally, forcing it up and therefore missing the houses. The other alternative is to put the noise as close to houses as possible. Now, that often has problems because you cannot get very close to the houses because the houses are not built close to their boundaries or there are driveways or other things. So that is normally the most efficient system, to have it right against the road.

Some of our other noise walls cannot be in that location for reasons like sight distance, the need to see around curves and that sort of thing. Those further toward Shoreline cannot be in those positions because of having to build foundations for underground services. A 900 millimetre water main is where you would like to build a wall from an efficiency point of view. So it best to get the wall right close to receiver or right close to the source of the noise. Anywhere in between is less efficient.

**CHAIR** - On that matter, then, would it be in any way practical, or of any value or feasible, to place a noise barrier on the fence line of the houses rather than up at the road level? I recognise that there are issues there in terms of elevations and separation between the highway and the houses. The suggestion then overcomes any issue with regard sight distance at the road level.

**Mr WILLIAMS** - If you are putting a noise wall on the property boundary at the back of Holland Court, as Mr Howells said his house and some others are elevated and so it will make wall much bigger. A big wall on the property boundary creates a lot of shadow if it is on the northern side of the property, so we create a new problem. Shading of properties is an issue because things do not grow.

**CHAIR** - It is a major issue on that side of the property.

**Mrs NAPIER** - How high would the fence need to be?

**Dr WOODWARD** - The rule of thumb is that we need to block vision. If you can have a wall high enough so that you cannot see the cars then you are doing a reasonable job of blocking noise. If you had fences on the property boundary in that area then your wall would have to be extremely high to cut the line of sight to the road. Without doing any calculations I could not say but my guess is that it might be three or four metres high and that would be right on the boundary of those houses.

**Mr HALL** - If that sound barrier was as it is described on the plan, is it possible then to angle it down towards Oceana Drive from the end of where we have it now? Is it possible to angle something down there towards Oceana Drive behind Mr Howell's house for some sound mitigation?

**Dr WOODWARD** - I guess it would need to be an engineer to decide whether it is structurally possible? Whether it is going to achieve anything is another question because as you move further away from the road you are reducing the effectiveness of the wall. The terrain is dipping down away from the road there so you are chasing yourself because as the terrain goes down the wall has to get higher and higher to maintain an effective screen.

**Mr HALL** - I am trying to work out some sort of a solution which might give some mitigation to noise but at the same time leave that sight distance.

**Mrs NAPIER** - The only thing you can do is move that access to the pathway, I would say. However, if you make it too inconvenient then cyclists are going to go on the road.

**Dr WOODWARD** - I have a comment about Mr Howells' point about the traffic on Oceana Drive. I think the figure is about 2 000 vehicles a day going down Oceana Drive. It is about one-tenth of what there is on the highway. If you are adding two identical noise sources together then you get a three decibel increase. So for the noise level to go up by three decibels you would need 20 000 vehicles on Oceana Drive but it is only about 2 000.

My expectation is that the increase in combined noise of South Arm Highway and Oceana Drive is probably only in the order of one or less decibels. It will obviously be a new noise source because it is a source that is not there at the moment. So, again, it comes down to policies to achieve 63 decibels, recognising that people will experience different noise environments with the new road.

**Mr CHAIRMAN** - And that is Mr Howells' contention: he would live with Oceana Drive knowing that was to be an issue when he bought his house but if some mitigation could be provided on South Arm Highway then that would be desirable. We go back to your earlier evidence, Dr Woodward, that the 63 decibel standard is being complied with in the construction of the sound barrier ending where it does, just east of chainage 3900.

**Dr WOODWARD** - If the fence is longer or higher then it is going better than that 63. It is three more than the policy requires.

**Mr BEST** - A bit of criticism here folks. I am concerned about the way the consultation has occurred. I just note in the report, page 12, that DIER has written to all owners of land abutting the project. The leaflet that has been provided by Mr Freeman does not really talk at any length about noise attenuation, so I am not sure what consultation has happened in that area.

The other thing that does concern me on page 13. It says here that 'a report will be prepared incorporating all comments received and included as an annexure to this report'. Obviously we cannot, as a committee, view any of that consultation. I do note that the report was signed off by Mr Peter Douglas on 8 June. Looking at the consultation period

with the public, in fact that would not have been completed, being from 24 May to 15 June. We have heard now in two letters and from one witness that at least nine people may not have been consulted or had their questions resolved. We do not have the report so we do not know how many people made representations or even, in fact, what those issues might be that were garnished at the Clarence Council Chambers and the Shoreline Shopping Centre. We are in the process of negotiating these issues of noise attenuation and the complications of that, but we do not know what the community's position is on the plan that we have in front of us. I feel a little bit compromised by that, Chair.

**CHAIR** - I was going to come to this too under the public consultation matter. The report which we have clearly says that DIER has written to all landowners. Was that written form the pamphlet that was dropped in letterboxes?

**Mr MULCAHY** - I am not sure of the details of what was written. I can find that out. This report is not complete and that can be supplied to the committee.

**Mr BEST** - We are spending \$639 000 on professional fees for design, contract and administration, so it is a bit strange that we do not have all the time lines here - given the amount of money we are spending on administration. The committee itself is now trying to negotiate issues on behalf of people living in the area.

**CHAIR** - Geoff, you heard what Mr Best said regarding the annexure to this report. Is that the annexure you are now talking about, that further process is being developed and produced and will be provided to the committee?

**Mr MULCAHY** - That is correct.

**CHAIR** - Would that have been your intention, to provide that to the committee after this hearing?

**Mr MULCAHY** - To be quite honest I was unaware that it was not part of the documents and I am quite happy that it be provided.

**CHAIR** - I think Mr Best has raised a very valid point again. In your own report it indicates that the committee will be provided with further information. We are expected to sit here and assess the project properly without even having in front of us the documents which your own report has identified will be before us. We do need to know, please, the nature of the written communication to all the abutting property owners. As Mr Best has said, the pamphlet which Mr Freeman has brought along to the committee hearing does not address noise attenuation in much detail whereas the report says that in particular the proposed construction will address it.

**Mr MULCAHY** - We will provide that report.

**CHAIR** - For the purposes of clarity I will advise both Mr Freeman and Mr Howells of the following. The committee, by the legislative measure under which we operate, can only approve a project or reject a project. We cannot require of the proponent, in this case the department, further attention to design. Our report can comment very strongly, as we have in the past, about deficiencies as we see them. We are at liberty to reject the

project. If we are of a mind then we can do that. If we feel there are sufficient deficiencies in the design presented to us that certainly is our prerogative.

If, on the other side, we are of a mind to approve the project but comment very strongly that there are matters which ought to be taken account of, we cannot however require them to be taken account of. In the past those comments have had the effect of focussing the sponsoring department's attention, whether it be a building through the Education department or a road project through DIER, such that matters are taken account of. So please do not leave here in the belief that we can force upon the department extra changes, other than rejecting the project.

**Mr FREEMAN**- Should we still write to the department with our concerns?

**CHAIR** - Certainly. I think you would be well advised to do that.

**THE WITNESSES WITHDREW.**