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**HOUSE OF
REPRESENTATIVES**

STANDING COMMITTEE ON ENVIRONMENT AND
HERITAGE

Reference: Catchment management

TUESDAY, 16 NOVEMBER 1999

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HOUSE OF REPRESENTATIVES
STANDING COMMITTEE ON ENVIRONMENT AND HERITAGE
Tuesday, 16 November 1999

Members: Mr Causley (*Chair*), Mr Barresi, Mr Bartlett, Mr Billson, Mrs Gallus, Ms Gerick, Mrs Irwin, Mr Jenkins, Dr Lawrence and Mrs Vale

Members in attendance: Mr Causley, Mr Jenkins and Mrs Vale

Terms of reference for the inquiry:

To inquire into catchment management, with particular attention to the following matters:

- the development of catchment management in Australia;
- the value of a catchment approach to the management of the environment;
- best practice methods of preventing, halting and reversing environmental degradation in catchments, and achieving environmental sustainability;
- the role of different levels of government, the private sector and the community in the management of catchment areas;
- planning, resourcing, implementation, coordination and cooperation in catchment management; and
- mechanisms for monitoring, evaluating and reporting on catchment management programs, including the use of these reports for state of the environment reporting, and opportunities for review and improvement.

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Committee met at 10.35 a.m.

CHAIR—I declare open this public hearing of the House of Representatives Standing Committee on Environment and Heritage into catchment management. This is the fourth hearing of the inquiry. The committee yesterday visited the Mary River catchment surrounding Gympie and met with the Mary River Catchment Coordinating Committee and local Landcare groups. The committee intends to conduct similar inspections and public hearings in other states and territories during the course of its inquiry. At today's public hearing of the committee we will hear from the Queensland government, two local governments, the Fertilizer Industry Federation of Australia, the Queensland Murray Darling Association and Dr Bruce Hooper.

Before proceeding, I advise the witnesses that committee public hearings are recognised as proceedings of the parliament and warrant the same respect that proceedings of the House of Representatives demand. Witnesses are protected by parliamentary privilege in respect of evidence they give before the committee. Witnesses will not be asked to take an oath or to make an affirmation. However, they are reminded that false evidence given to a parliamentary committee may be regarded as a contempt of the parliament. The committee prefers that all evidence be given in public, but should witnesses at any stage wish to give evidence in private, they may ask to do so and the committee will give consideration to the request.

I made some brief remarks yesterday which I will repeat. Really, the committee is about looking at catchment management across Australia; looking at funding that comes from different areas from local, state and federal government; and looking at the coordination of that funding to see if we are getting the best results for the dollars that are involved. We are not about pointing fingers at anyone; we are just looking at the operations of different systems or different areas across Australia. We hope that we can come back with a recommendation that is of value to the government and can make some recommendations about best practice from what we have seen around Australia. That is where we are coming from. They are probably the questions we will be asking.

[10.36 a.m.]

**BEGBIE, Mr Donald Keith, Acting Director, Resource Condition and Trend,
Department of Natural Resources**

**BERENYI, Ms Margaret Theresa, General Manager, Community Program
Development, Department of Natural Resources**

**MEECHAM, Ms Joan, Senior Natural Resource Management Planner, Western and
Central Queensland Planning, Department of Natural Resources**

**MILLS, Mr Paul Trevor, Manager, Water Management, Department of Natural
Resources**

**FEWINGS, Mr James Harold, Acting Manager, Brisbane River Management Group,
Environmental Protection Agency**

**MARTIN, Ms Jacqueline, Principal Policy Officer, Intergovernmental Relations,
Department of the Premier and Cabinet**

CHAIR—Welcome and thank you very much for the Queensland government being represented. We did not get representations from the New South Wales government. We are very grateful that the Queensland government has come forward with a submission.

I apologise for the fact that there are only three members of the committee here today. As you would probably realise, leading up to Christmas things are fairly frantic at the present time. If we do not get on with this inquiry, we are never going to get it finished. We have a quorum, and we decided to go ahead with these hearings. We have received your submission, but would anyone like to make some opening remarks before we ask some questions?

Ms Berenyi—Thank you very much. I would like to read a statement, because it does actually summarise and put into context what is happening in Queensland. Queensland has a long history of community involvement in the management of water and natural resources. There is now a high level of recognition by national, state and local governments, as well as community stakeholders, of the importance of taking a strategic and integrated approach to natural resource planning and management. Resources are required to link both planning and action for land, water and vegetation resources across the various levels.

At the national level, Queensland is participating in the development of the national policy statement for natural resources. This will assist in strengthening the partnerships between governments, regional communities and individuals. Other national priorities, such as water quality objectives, are used to inform the states' regional and catchment scale planning processes.

Within Queensland, state-level natural resource planning occurs at the regional scale within the frameworks for growth management. These planning processes are occurring primarily on the coastal regions and encompass a strategic focus on social and economic

infrastructure and natural resources. The state is divided into 13 regions, with each developing a regional strategy for natural resource management and biodiversity to inform planning, action and investment priorities.

At the catchment level, the government has supported the community based approach known as integrated catchment management, or ICM, since 1991. This approach reflects the state government's philosophy that community participation is fundamental in achieving sustainable catchment management outcomes. The Queensland experience is that the ICM approach facilitates ownership of issues, promotes sharing of information, helps build consensus and allows an integrated approach to the range of natural resource issues within catchments.

The state government is seeking ways to enhance the community's capacity for involvement in natural resource management. Community capacity is reflected, for example, by the presence of networks and infrastructure that support information exchange and the ability to engage with local, state and national governments in planning, seeking funding and on-ground implementation. Queensland is the most decentralised state in Australia, with many factors such as geography, location, population and land use all influencing the way that communities respond to natural resource management.

The state government has recognised the importance of integrating catchment management into local government planning processes. Local governments in Queensland have responsibility for the delivery of a range of natural resource related services to the community, such as water services and sewerage and waste management services. Guidelines are being developed to assist local authorities to include catchment management objectives in local planning mechanisms.

The provision of the Integrated Planning Act 1997 provides a valuable opportunity to develop planning frameworks which address ecological sustainability, including provisions for integrated catchment management. Management of natural resources at local and property level is also critical to sustainable catchment management. Local action occurs through the Landcare movement, supported by government funding, extension and education programs. The Queensland government also supports property-level planning and management through a range of voluntary incentive based and statutory based mechanisms. The government is examining ways to enhance and streamline property-level planning to encourage greater levels of adoption by land-holders.

These various levels of catchment planning and management depend on a high quality of information and the effective linking of science and community based planning. For example, in south-east Queensland extensive scientific studies are being undertaken to determine the causes and effects of water quality problems in the region, particularly in the Brisbane River and Moreton Bay catchments. These scientific studies are integrally linked with the planning and community awareness raising processes which are building a cooperative management framework involving community groups, industries, indigenous groups and governments. The approach is unified under the healthy waterways framework for south-east Queensland.

The future of catchment management within Queensland will be shaped in part by the water reform process currently under way. This includes the development of new water resource management legislation to provide a statutory basis for basin-wide transparent consultative water resource planning. The legislation will accommodate the water management planning provisions contained within the Queensland Water Resources Act. These plans provide the policy and principles for dealing with water licence applications in sensitive areas of the state. The legislation will also provide a statutory base for water allocation and management plans, known as WAMPS, which are being developed in key catchments throughout the state. WAMPS involve detailed environmental and hydrological analysis to inform decision making on the balance between present and future water uses and environmental flow requirements. The planning processes provide for community involvement in setting the strategic direction for the allocation and management of water.

The Queensland government recognises that the context for catchment management is rapidly changing and has initiated a review led by the Department of Natural Resources, which seeks to establish flexible institutional and support arrangements for community based natural resource management reflecting local requirements and capacity. Any resultant recommendations will need to recognise differences in community characteristics and aspirations across the state. Public reporting of progress is an important part of this new framework. Queensland's first state of the environment report, issued recently, provides a publicly transparent mechanism for reporting on progress and implementation.

In conclusion, the Queensland government welcomes the inquiry into catchment management and looks forward to future involvement in the development of a nationally consistent, well-integrated and efficient approach to community based catchment management across Australia.

CHAIR—As I said, we do have your submission and we have been through it. I want to tie it in with some of the evidence we took yesterday. I was involved in this in the New South Wales government, so I have some background in catchment management. I agree that there is only one sensible way it can be addressed; that is, community wise and land-holder wise, to try and modify some management criteria to try and address the problems. It seems to me that at the present time we have an ad hoc process. There is funding coming from all different areas and there does not seem to be any coordination. I put to the group yesterday that in a catchment there should be a management plan and then some coordination of that management plan to tie in all the funding possibilities and to address the areas that are probably most important in that particular catchment. It seemed to me from some of the comments on that proposition that there was a bit of turf fighting between different groups. I note also that the government in Queensland is looking at a review. Is it being thought of at the present time to try and get some coordination in this area?

Ms Berenyi—The review process involves talking to communities about the whole range of issues that they believe impact upon their effective operation as a community in managing and stewarding local natural resources. So, yes, there is a whole range of issues. We are commencing that dialogue process, so I am not aware of the expanse of issues that will come forward. We will certainly be encouraging all of those issues to come forward.

CHAIR—There seems to be a resistance at departmental, and probably ministerial, level in Canberra to funding of coordinators. Probably some of that is because every little group seems to want a coordinator. I also put to the group that maybe that could be rationalised to an extent. I have thought about it overnight. Maybe it is possible that through local government there could be some coordination of this and funding of some coordinators—not a plethora of coordinators, because most of the money is going to go there and not to the work that needs to be done. Is it a possibility that it could be done through that way?

Ms Berenyi—I am just being advised that, really, you are asking me to comment on Commonwealth policy. Within our review process we will be looking at a range of options. I am not aware of what those options will be.

CHAIR—I am not worried about criticism of Commonwealth policy. We have to make a recommendation. I do come from the government parties but I am not frightened to make recommendations either. It seems that to get maximum benefit for the limited money that is available—it is limited—we have a huge problem..

Ms Berenyi—Perhaps I can give a bit of an overview of the way we are utilising—certainly Joan and Don can add to this—our regional strategy development process to try and identify the issues of natural resource management at the regional level. Those strategies are being informed by the catchment strategies that have been compiled in a large number of catchments now. Those strategic issues are starting to be clarified. Priorities are starting to be established between those issues. Those issues will actually then be used, and those priorities, to inform us on investment decisions.

CHAIR—In your submission there was some background as to the hierarchy.

Ms Berenyi—That is exactly right.

CHAIR—In Queensland, do a lot of the planning issues go through local government, the same as in New South Wales?

Ms Berenyi—Yes.

CHAIR—So they deal with the planning issues?

Ms Meecham—That is absolutely correct. The point to note is that we are in the new phase of a new Integrated Planning Act 1997, which is currently being implemented. We actually have a very new opportunity. The planning legislation has moved on significantly, to the extent that it is now able to recognise catchment management issues and apply them through statutory planning mechanisms as well as non-statutory planning mechanisms.

There is an obligation on councils to have new planning schemes in place by March 2003. It is fair to say that a lot of the councils are still coming to grips with the implications of the new planning mechanisms. It is also fair to say that, from a government agency perspective, we are working very hard to try to inform that process. It is a paradigm shift in many respects as to what the new planning legislation offers in terms of integrated planning at a local government level.

CHAIR—So through local government you could get local environment plans and regional environment plans, through that process?

Ms Meecham—Indeed. The framework for the planning legislation recognises, however, that it is more than local government which is involved. A fundamental aspect of the planning legislation is that they are now planning schemes for local government areas and should reflect legitimate state and regional interests as well as adequately reflect local interests across the spectrum of interests.

CHAIR—I am aware of the sensitivities as far as property owners are concerned. That does not differ between states, I can assure you. I think the attitude always was, where I came from anyway, that it was a matter of getting people together and talking about the issues, because what happened in one section of the catchment affected another section of the catchment and sometimes people were not aware of that. A lot of it is a talkfest—getting people together. It does help, because they start to understand the problems. It is not a matter of trying to force them; it is just getting to talk to them.

Is the federal funding which comes through the Natural Heritage Trust, Greening Australia, and sometimes Work for the Dole projects, coordinated or is it just that someone might have a pet project? Is it coordinated to get some effectiveness in the overall catchment management?

Ms Berenyi—As you would be aware, in Queensland there is a requirement that projects that are put forward to NHT actually draw an alignment between how this project relates to the regional strategy at the local level. So there is a requirement for the project proponent to actually draw that alignment. The regional assessment panels take care and consideration to look at the degree of alignment as well as, obviously, the project outcomes and the issue in terms of the value for money that particular project gives. From that perspective there is coordination—to start to look at the alignment between local activity and the strategic issues and making sure that those issues are being addressed at the local and regional level.

CHAIR—So there is some coordination there?

Ms Berenyi—Certainly there are the frameworks that we are putting in place, where we have the local action plans of the Landcare groups, et cetera. We are seeking to have those aligned to the catchment level strategies, which identify these catchment issues. They are aligned to the regional strategies where the significant issues are addressed. They are aligned to the local government and regional planning frameworks as well. So there is a significant attempt at alignment across these issues, which clearly is seeking to support coordination.

Mr Begbie—As part of the process of calling for applications, each of the regions prepares basically a little statement that goes in the kit of information that goes out to project applicants that indicates priority directions that people might think about and start to target. It is not quite commissioning projects, but it is trying to give some guidance about areas they might try and focus in on, consistent with the regional and catchment strategic directions. Margaret referred to part of the assessment program. In fact, one of the weighted criteria used as part of the assessment program is to make some value based judgments on

how well these stack up against the regional and catchment priorities. I think there is quite a strong link there.

CHAIR—There is NHT, Greening Australia and some Work for the Dole projects. So there is a coordination?

Mr Begbie—That is right. There might be 17 different programs, but we are looking at the totality of the dollars that may be available, including state dollars, and how we can best target bids that meet the totality of the funding that is available.

CHAIR—So local government would be probably in-kind? Some of their officers might do some work. Is local government involved as well?

Mr Begbie—Yes. Of course, local government are actually a significant applicant for funding, but they put an enormous amount of in-kind contribution to quite a few projects. That is quite a fair statement.

CHAIR—Some people have made a comment about the application form, and one section of the application form in particular. They think it is extremely bureaucratic. Have you heard that comment?

Ms Berenyi—We have heard that comment, yes. That is definitely a fact.

CHAIR—And it is a fair comment?

Ms Berenyi—We have at times worked with the Commonwealth to try and streamline the application form, taking into account the views of the applicant but also the requirements of accountability and assessment in that application form. So, yes, we are certainly understanding some of those concerns and we have got our local people actually helping participants by explaining the forms and helping them, where possible and appropriate, in giving advice as to how they might construct their projects to make sure that those projects conform to the selection criteria that are there.

CHAIR—Do you get people to draw up strategies across the state for different areas? How is that tied in?

Ms Berenyi—There are currently 13 regional strategy groups. Membership of those groups is endorsed by the Minister for Natural Resources. The critical priority of those groups is to develop their regional strategy. Those strategies are certainly being used to inform the assessment process.

Mr Begbie—They are broader, though. Rather than just targeting NHT funding, they are to guide natural resource management decision making in the regions.

CHAIR—Across all areas?

Mr Begbie—That is right, and biodiversity conservation as well. So NHT just happens to be one bucket of funding that they might target some of their priorities towards.

CHAIR—The other criticism we get quite clearly from most areas is that it is a three-year program and they do not have much time to plan. Again, I suggested yesterday the possibility of a type of a 10-year plan that governments could commit themselves to, especially if you have these strategies and plans in place. I do not know whether the government will, but do you think that is a better proposition than the present three-year funding, where people do not know where they are going from there?

Ms Berenyi—I think it is fair to say that Queensland is participating in the development of, as we have said, the national statement on natural resources. My understanding and appreciation is that it is through that process that they will start then to look at the future funding options.

Mrs VALE—Perhaps we are being a little bit presumptuous to expect even a 10-year funding plan. When it comes to funding, would it be more helpful if the objectives of a particular application were met? Would it be better when you put in a particular project or a request for funding to say that you want to see a particular outcome and that funding will run until that outcome is achieved? That will probably bamboozle government departments no end, because I understand that things are often done on time lines. But when we are desperately seeking objectives and the funding runs out before the objective is even half met, it is very frustrating for people on the ground. And you do not want to lose your volunteers.

Ms Berenyi—That is very true. That is why we have attempted to certainly scope the projects in accord with the deliverables, so that we can in fact have reasonable performance measures. We do actually do a fair bit in actually going out and reviewing projects to look at the progress they are making. That is part of the assessment process as well.

Mrs VALE—I am thinking more about NHT type funding that comes out. It seems very disheartening for volunteers when they get halfway through a project and the funding is not there for the second round to complete it. I do not know how one would get bureaucracies to work their way around to having—

CHAIR—If it were part of the overall strategy or plan I think it could work.

Mr JENKINS—How do the 13 regions relate to the catchment groups that exist?

Mr Begbie—We have some 30-odd major catchments in Queensland that are covered with catchment coordinating committees at the moment—an integrated catchment management program. If you are looking at the major river basins, I suppose there are probably in the order of 40 that we think of as major groups of catchments. A good part of Queensland is covered with a catchment management program, with strategies currently being developed by community groups across the board.

At the regional level, we have looked at the combination of the major river basins and the biogeographic regions, from a biodiversity conservation point of view. We have tried to bring those sorts of boundaries together to make sensible units that we can look at across resource management and biodiversity conservation, but also taking into account the sort of social boundaries that exist within areas—where people normally communicate and where they get services and support from. So with a combination of those factors we have

suggested 13 broad regions. For example, Cape York is one of those regions, which is then consistent with the Cape York planning that is done through the Natural Heritage Trust, for example. There are other major basins like the Murray-Darling, the Fitzroy catchment basin system and that type of thing. So it is a combination of major catchments and the biogeographic regions to try to get the best that we can across those two areas.

Mr JENKINS—So by whatever way you define the regions, one of the things you probably look for is that there be a consistency in the regions between, say, the Commonwealth and the state for the purposes of planning, dishing out the resources and so on?

Mr Begbie—Yes. We would recognise that, within Lake Eyre for example, there are obviously interstate heads of agreement involving the Commonwealth as well about management of the whole of Lake Eyre, as a whole basin, which incorporates bits of New South Wales, a big chunk of South Australia and bits of the Territory. So we have to recognise that as part of our planning base. One thing we have done is try to stress that we see the boundaries as being reasonably flexible, so people can move the boundaries around to suit the planning needs. I guess the main concern was not having gaps there. If overlaps occur, that is maybe not so much of a big issue for us, as long as the areas are covered.

CHAIR—Are you satisfied that through the ministerial councils or through COAG that the interstate boundary issues between the states are being addressed? Management does not end at a state boundary; it obviously goes across a state boundary, as you have said, in different areas. Are we addressing that well enough through the ministerial council or through COAG?

Mr Begbie—I do not know that I can reply on the COAG arrangements.

CHAIR—COAG is basically set up to address those issues between the states, so if we have a problem between the states I dare say that is where it should be addressed.

Mr Begbie—The issue of planning across boundaries is a real one. That is something that I hope we would get some insights from the community, with the review program that Margaret referred to earlier on—as to how we might effectively do that. It is an issue for Lake Eyre basin, for example, but, as I say, there are agreements there that enable that to happen. For example, just in the next fortnight the communities are meeting out there at Birdsville to look at the initial stages of their catchment plans. That is the whole of the catchment, which incorporates right across the state boundaries. So it only has to be a problem if we see it as a problem. If we work out ways of moving around that with our relationships within the community and how we handle it, those problems can be overcome. It is happening.

CHAIR—Sorry, I interrupted you.

Mr Begbie—Queensland has obviously assisted in the Murray-Darling Basin council and with commission fees. We are quite aware of that. So there are mechanisms across basins like that that are put in place to try to encourage a whole-of-basin perspective. While Queensland has been a member of that for the last four or five years—

CHAIR—It was a Labor government that became involved, because I could not convince my colleagues to become involved.

Mr Begbie—There are significant benefits for Queensland being involved at a whole-of-basin level in coordinating activities and planning on a basin-wide level.

Mr JENKINS—Margaret, when we were talking about the strategies at the different levels, you used the word ‘aligned’. I am not sure what that actually means. I hate to sound like an instant expert, but just based on what we heard yesterday, there was what I would characterise as a certain degree of turf wars: people had their priorities and they acknowledged that they should be operating in an overall thing as we went up the hierarchy but still, because of the basis of the community input, they held very strongly to their priorities and really wanted to see ways of fulfilling those. How do we go about trying to make sure that there is a closer alignment of what people are trying to do at different levels of hierarchy?

Ms Berenyi—Alignment is synonymous then with linking. It is linkages between the various levels of strategy that we are really trying to foster. We must also recognise the membership of the groups themselves. Those members participate at catchment level and at regional level. So there is some commonality of membership across groups as well. That is helping to ensure that that linkage and that association is there. It is certainly true to say that the local priorities of a Landcare group may not be the same priorities as a regional strategy group but, providing the linkage is there and that the understanding of how this supports the addressing of the issues across the region, then that is a legitimate priority that is put at the local level.

So we certainly are trying to foster increased communication across groups so that those groups are better informed about what the issues are and what other groups are doing. Indeed, part of our review process is about engaging the community in looking at what groups exist within their catchment and their regional areas so that there is an increased awareness of the number and the existence of groups.

Mr JENKINS—Both your opening remarks and submission talk about community capacity.

Ms Berenyi—Yes.

Mr JENKINS—I would like you to comment on what measures you are taking for capacity building but also to comment on the effect that—no matter what the level of community group is—actually having a coordinator has on the group’s capacity, a resource coordinator.

Ms Berenyi—I would have to say that from the discussions that I have had with groups, it is clear that a coordinator does facilitate the group’s capacity to be better involved in natural resource management at the local level. That is by nature of the coordinator’s role in linking across a range of stakeholders within the area to that particular group and helping to progress either at a project level or strategy development level the activities of the group. So it is true to say that a coordinator does add value in terms of that. In terms of community

capacity, there are clearly a range of capacity-building options that are available within our government. Certainly, we have a range of leadership development programs, but I would like to take that question on notice, because that is not in my area of responsibility and I would like to consult with the relevant people so that we can present information to you on that.

Mrs VALE—Margaret, I would like to take Harry's question a little further down to the grassroots, because it seems that the effectiveness of catchment strategy is ultimately going to depend on the level of volunteers in the community groups. Speaking to the people yesterday, it seemed to me that there was a considerable amount of burnout with some of the volunteers. There was also a suggestion from one area that perhaps volunteers should be remunerated in some way. One of the volunteers that I spoke to actually felt that she did not require remuneration, because there was a dedication and a commitment and a sense of making a contribution to the whole community and to the future. These people were very admirable in the sentiments that actually drove them to be part of the group. But it is just the cost to them. One lady actually said that even getting from one end of the catchment to the other was 100 kilometres. When you are retired, paying for petrol to just be there to be part of doing the job is quite a consideration for retired people. Would you have any comments on whether or not there could be any way that perhaps volunteers could be compensated rather than remunerated?

Ms Berenyi—Can I say that, as we have said in our statement, we have initiated a review process.

Mrs VALE—Yes, I think that is interesting.

Ms Berenyi—One of the aspects of the review is to look at what is the level of recognition and support that might be required. So that will be part of that review process.

Mrs VALE—I think that would be very good.

Ms Berenyi—We will be encouraging, and we are encouraging, groups to come forward with their issues and suggested options.

Mrs VALE—Margaret, we met a couple of farmers but there was one particular gentleman who was very committed and involved in especially the erosion of the creeks and the rivers within his property. He also had a very personal commitment. The fact was that he could see how it was also going to benefit him financially by saving his land from actually becoming just creek bed in the future. So that was very real for him. For some of the other community volunteers who are not riparian owners, their particular contribution really did appear to be costing them at a financial level. That was really interesting. Thank you very much for that.

Mr Begbie—If I could add a little bit to that, we are sensitive to the fact that, in planning the review that Margaret has spoken about around the state, we have had quite disparate views about people's feelings about whether they should have remuneration, for example, as one of the support mechanisms. Some people are saying that maybe that is a good idea. Others are saying, as you might have heard yesterday, that maybe they are not

really looking for that; they just want some better way to handle it. So that is fairly specifically one of the things that we will look at and why Margaret said in her opening remarks here and in our submission that we do not think that there is going to be a blueprint put across Queensland; it will differ in different areas of the state because of the different climates.

CHAIR—I think all governments would naturally be cautious about that. How do these committees and the overall strategies help with water quality? Are you doing some testing on water quality not just within the rivers but on ground water to see just what is happening with the water qualities?

Mr Fewings—Obviously, our prime focus is on water quality and the strategy coming from the national schemes, and clearly that is a key part of catchment management plans. So that is really our focus and involvement. We are really just part of this whole process. It is a pretty important part of it. Margaret has referred to some of the work that is being done locally on water quality, which we believe is structured in a way that is getting some pretty good results locally in combining, if you like, the community, industry, local government and government in getting a real focus on the issues and progressing to outcomes. So I think that it is sufficient to say that we are just part of the process. Water quality management obviously is a key part, but it is just one part. On the ground water side, I would pass on that. I think that we need to come back on notice. Ground water is really a DNR issue.

CHAIR—Have you got a program like that in New South Wales—I think that it is called Riverwatch—where they have the high schools involved in testing water quality so that they know what the water quality is and so that they can have some involvement? Do you have that in Queensland?

Mr Begbie—We have a Waterwatch program here, which we would see as being very consistent with those applied in most other states although, as you say, New South Wales has a Riverwatch program. We participate at the national level in the Waterwatch program, which also gets support funding through the Natural Heritage Trust, of course. We have probably two ranges of groups: one that is very much into looking at the water quality and the aspects that come from that and incorporate that into planning, and another group that is probably, it might be fair to say, more interested in the experience and learning that you get from school kids being involved in the program. So it is quite a different set of outcomes that people might have in mind. While they are dealing with water and water quality, in some cases they are primarily after an educational outcome as a learning experience for children.

We do have a number of groups which are very much involved in detailed water quality monitoring as part of a program and, in fact, they are producing quality information that is incorporated in the planning studies that people like Jim are utilising.

CHAIR—I have a couple of fairly difficult questions, I suppose, and you can answer them whichever way you want. In recent times, we have had a briefing from the salinity people, particularly in relation to the Murray-Darling situation which, you would have to say, is fairly concerning. It would seem to me that it is possible that there is going to have to be changes in land management in certain areas to alleviate the problems with salinity. Has

there been any discussion in Queensland about the fact that some property owners might have to be compensated or paid for growing trees in certain areas that is going to help the overall management of a catchment?

Ms Berenyi—I am not aware, but in Queensland we are developing a vegetation management strategy. I am not in a position to provide information on that as it is in its developmental stages. Certainly, a number of questions are being posed through that process. So vegetation management is on the Queensland government agenda and that will be resolved at some future time.

CHAIR—I do not know whether you are aware, but in some areas of Europe there are private people who are paid, if you like, by the rest of the community to look after certain areas of conservation value. It just seems to me that maybe we have to start to think about that in Australia in certain areas. It is private property and unless the state buys the land or whatever it is their land; we just cannot confiscate it and destroy their economic viability. I think that is something we all have to think about. I just wondered whether there had been any discussion, that is all.

Mr Begbie—One in that area would be the consideration that we are currently looking at for proposals that have been floated for—I think it is called catchment bond, which is probably the best way to describe it. It is still open for consideration. It is probably a similar sort of concept. It is nothing more than a proposal or a concept for people to think about at this stage. Equally, in the south-east corner here and probably more widely across the state there is the concept of the land trust. I guess the concept of both of those is for land to be still in the ownership of the community out there but to have a sort of management arrangement to keep it as open space and vegetation conservation diversity, et cetera.

CHAIR—It is probably a new concept to us in Australia.

Mr Begbie—So there are ideas out there that are currently being looked at. For the salinity issues, I might add that, from the current information that we have in Queensland, if you are looking at the current situation and the current trends, you do not pick up the big issues that we are looking at for salinity in the future. I guess that it is the predictive modelling of the potential ground water rises that might occur in the future that might paint that negative picture for us. So we are not actually currently seeing that at the moment, but obviously it is something that we are very aware of into the future and for diversification of some sort of advanced planning.

I think that it is a slightly different situation here in terms of the reality of what we might be needing to do as compared to some areas down in New South Wales with the here and now problem. I think that this is something ahead of us and something that we can probably take a lot of learning from what is happening in the other states as part of our future planning.

CHAIR—We are out of time. I want to ask one last question to do with accountability. I know that we have to have accountability, but there seems to be a general criticism that we go over the top with accountability—that the paperwork is just horrendous that people have to fill in to be accountable. Is there any simpler way of doing it?

Ms Berenyi—We are operating certainly within the framework that has been negotiated and agreed.

CHAIR—I know that it is a Canberra problem.

Ms Berenyi—It is an issue that it is public moneys and we do need to be accountable for the actual expenditure and outcomes delivered of public moneys, and that is the process. We do attempt to assist groups in understanding their obligations and streamlining processes where we can, but accountability is a significant responsibility that we need to ensure that people are aware of.

CHAIR—I know. It is just that people seem to get absolutely tied down in the paperwork involved and find it very frustrating.

Mr JENKINS—Your submission talks about devolving responsibility for auditing and that using accredited processes could be explored. To help me explore it, what do you envisage by that?

Ms Berenyi—What we are saying is that we are looking at a range of potential options. We do not know what the future model is. We are not in a position to say that, because we have only just started our process. We are engaging the community in the definition of what that model is. Certainly, we need to be open minded in terms of what responsibilities and what accountabilities might relate in a future model sense to the various stakeholders involved.

Mr JENKINS—So you might see that, if we were to develop something along the lines of this catchment report card—that people understood what that actually was and it achieved that level so that it had some use to the stakeholders—that could be taken as part of this accountability-auditing process?

Ms Berenyi—What we need to have are methodologies and tools that are rigorous and are accepted. That is the whole concept of trying to promote best practice. I think that monitoring and evaluation is a best practice that we have to start putting in place. In Queensland, we certainly are looking at monitoring/evaluation at the local level. Our assessment panels and our strategy groups are actively involved in promoting, monitoring and evaluation activities.

CHAIR—Thank you very much for your evidence. It is always very valuable to get input from state government departments because you are at the coalface. If you have any thoughts about some of these things that we have discussed at any time let us know—we probably will not be bringing this report down until some time late next year, I would think, by the time we get around Australia. So if you have any ideas of where we can streamline our processes and get more value for the dollar on the ground, we would be very pleased to have that sort of input.

[11.25 a.m.]

McDONALD, Mr Robert Alan, Asset and Drainage Engineer, Department of Works and Services, Pine Rivers Shire Council

CHAIR—Welcome. We have received your submission, which we have been through. Is there any opening statement that you would like to make?

Mr McDonald—I would like to say one thing. My own focus in the department where I work is stormwater drainage, so the submission was based around the stormwater drainage issues of catchment management. I did not acknowledge in that submission that the Pine Rivers Shire Council is, in fact, doing a lot of other things to do with catchment management. Of particular note is the strategy to improve the sewage treatment plant effluent quality—the council is spending a significant amount of money, with the assistance of government, to upgrade our sewage treatment plants at Murrumba Downs and Brendale. We are also working towards an effluent reuse strategy. I would like to point out that the focus of the submission that we made was stormwater drainage, but the Pine Rivers Shire Council does do other things in the catchment management area other than just the stormwater issues.

CHAIR—Your domain is basically south of Brisbane? The south-east corner?

Mr McDonald—No, the Pine Rivers Shire Council is immediately north of Brisbane.

CHAIR—I am sorry.

Mr McDonald—We border Brisbane and are between the Brisbane City Council area and the Caboolture area.

CHAIR—I thought that you were in the southern area.

Mr McDonald—No.

CHAIR—How many Landcare groups and catchment management committees would you have in your particular area?

Mr McDonald—We have only one catchment management group. The Pine Rivers shire has, in fact, by its name one major river system but it is actually two rivers: the North and South Pine rivers. They are the predominant rivers in our shire. Our shire includes totally those catchments of the North and South Pine rivers, and we have one catchment group, the Pine Rivers Catchment Group, that deals with that river system. We have a couple of small areas on our fringes that do not fall within the Pine Rivers catchment. Saltwater Creek is one and Cabbage Tree Creek is the other. They represent quite a small area of our shire, but predominantly the Pine rivers are the catchment of our shire.

CHAIR—So that is a rapidly developing area, is it?

Mr McDonald—Yes. I know that it has been rapidly developing for some time. I was at a meeting with Lend Lease, a major developer in our area, and it has been reported that, in fact, the south-east corner and particularly our area is one of the most rapidly developing areas in Australia.

CHAIR—So how do the catchment management strategies and probably also the funding that might come from governments help you in that particular area—in managing this whole land use and water quality issue?

Mr McDonald—The council itself is developing a management strategy. We are actually producing management plans of the catchments, but we have not progressed that far at this point. The catchment group that works in the area has developed a strategy for the Pine rivers. The council works with them towards trying to implement some of that strategy. Most of the funding that we have at this time has been related to sewerage-type infrastructure. We did get some funding for our Coast and Clean Seas project at Cabbage Tree Creek where we are doing a waterway enhancement project. Certainly, NHT funding is used to fund the catchment care group—one of the catchment association groups and their coordinator and some of the work that they do.

CHAIR—So councils are actually involved with these groups and in kind support the groups to try to coordinate them?

Mr McDonald—Council has assisted the group on occasions. I would not say that we have provided a lot of funding at this point. One particular example is in the education area where we assisted them with the purchasing of stencils. That allows them to identify catchments—catchpits—as a source, as flowing to the creek. I think that the identification process is happening around Australia in different ways with things like yellow fishes. We use a green platypus, actually.

Mrs VALE—On the gutters where the waterways are to indicate what creek they connect up to?

Mr McDonald—So that is the sort of assistance that the council provided to the catchment care group at this point. I attend their meetings and we have communications with them and, depending on what their requirements are, I believe that we would be offering other assistance as the request comes in. We provide the coordinator with accommodation—a place to operate from—and that sort of thing as well.

CHAIR—I do not know whether you were listening earlier to some of the other questions that we put to the government departments. Do you think it is a feasible option that if funding for coordinators were available through NHT or other areas that the overall strategies and plans could be done through council and then maybe coordinators based with council? I know that you cannot speak on behalf of the council, but is it an option?

Mr McDonald—My experience—can I talk as myself?

CHAIR—Yes.

Mr McDonald—My experience with the catchment care group is that there is a certain amount of cynicism in what councils do and offer and—

CHAIR—And governments.

Mr McDonald—And governments of any shape or following. The coordinator that we have for our catchment care group I find particularly good in his ability to keep council informed and liaise between council and the catchment care group, which is a community based group. I believe that if council tried to take too much of a role in the catchment care group, they would see it as a form of hijacking of the group and taking over the interests of the community. The people who are on those groups provide a fair bit of free time and effort in doing some of the things that they do, like fighting weeds. Council obviously does those sorts of activities as well. I would be just a bit concerned that if the funding was directed through a council, they may see that their role—

CHAIR—You would lose the volunteerism, do you think?

Mr McDonald—I think so, to some degree. That is what I am suggesting.

Mrs VALE—How many people do you have in your community care catchment group?

Mr McDonald—I have not been to that many meetings. I do not really know how many. Most times about 12 people turn up to the meetings that I have been to.

CHAIR—Land-holders?

Mr McDonald—Yes, a number of land-holders and one developer and—

CHAIR—Any environmentalists?

Mr McDonald—We have some Department of Natural Resources people who are that way inclined. We have also some representatives from Australian Paper Mills. They are called Amcor now, I believe. They come along to our meeting now as well.

Mrs VALE—Sometimes, Robert, we have found that a number of people in the core group come to the meeting, but on a field day they can actually call in quite a few. One of them actually called in about 50 people on a field day that we had, but they had only about three or four people at meetings. They have the ability to have a wider spread when there is hands-on work to be done.

Mr McDonald—I have no knowledge of how many people they get at those sorts of activities. I do know they have them. I myself have not attended any. I do not know how many people turn up to those.

Mr JENKINS—The detail of your submission has confused me just a little bit because it talks about three urban catchment plans and the need for six others. So are they creeks or subsets of the overall Pine rivers catchment?

Mr McDonald—Yes. The three that we have done to date are Saltwater Creek, which I mentioned to you, and which actually flows separately into Moreton Bay and is not part of the Pine rivers system; Cabbage Tree Creek, which is also in the same vein and flows separately into Moreton Bay; and Freshwater Creek. All three of those are in that same category. The reason they were chosen was that they were within areas that were experiencing a lot of development. In the case of Cabbage Tree Creek, we tapped into the fact that Brisbane City were also doing a catchment management plan for their section of Cabbage Tree Creek, which was downstream of our section. So by having them involved in that, they were looking at the whole of the catchment or had knowledge of the whole of the catchment when they were dealing with the area within our shire.

What is left is the way that I divided it up. The South Pine River and the North Pine River basically are the rest of the shire. There is a little bit of the Caboolture River in the northern extremities which goes in there. So I looked at the South Pine River and the North Pine River in a number of areas and not as one entity. So that is why there are six. Lake Samsonvale, for example, is like a dividing line. I felt that upstream of Lake Samsonvale on the North Pine River would be dealt with differently from downstream of Lake Samsonvale on the North Pine River. Similarly, we have Lake Kurwongbah on a tributary of the North Pine River called Sideling Creek. Again, I saw that upstream of that would be dealt with differently from downstream.

Mr JENKINS—You talk about the three catchment areas that you have already commenced and the rest of them. Your submission goes to the cost of the works, which includes retrofitting. Has any costing been done on the cost to the environment if these works are not done or to the end points, for instance, the Ramsar wetlands and the marine environment—

Mr McDonald—No specific attempt has been made to actually cost the impacts. There are a number of reports around by people other than ourselves that talk about the condition of Bramble Bay—for example, the Moreton Bay Catchment Water Quality Strategy Group, I think it is called. Healthy Waterways is the other group mentioned. They have certainly given Bramble Bay a pretty poor report in terms of the current status of it. Pine Rivers discharges into Bramble Bay. So I suppose we have taken on board that as one of our indicators that we have a problem and not tried to cost the impacts so much.

Mr JENKINS—Who funds the monitoring points?

Mr McDonald—Council does that themselves. We have established a program and have been monitoring it on a six- monthly basis basically for a bit over three years I think it is now. That is our own funding from council.

CHAIR—Improvement or deterioration?

Mr McDonald—It is my understanding that most areas are not too bad. We had a number of problem locations, one of which was Cabbage Tree Creek and the other was Freshwater Creek. We have developed some creek enhancement plans for those and got some funding from Coast and Clean Seas to do the creek enhancement process on Cabbage Tree Creek and we are looking for further funding to assist with the work we are proposing

on Freshwater Creek. The sort of sampling we are doing is grab sampling on a six-monthly basis. It does not really lend itself towards predicting change in the short term; it is more just an indicator of if we have a problem. We are now embarking on a joint project with a major developer, Lend Lease, who are developing a very large property in our shire. We have a seven-year project to do water quality monitoring in a dynamic sense with automatic samplers and biological monitoring. That program has just started.

CHAIR—It is part of the development, is it?

Mr McDonald—It is part of a major development called North Lakes. There the developer is working with us on an equal basis towards funding that project and monitoring the effects of the development as it progresses for seven years. So the area that we are looking at would be developed fully before the seven years. We would be looking at—during the development and the short amount of post development—impacts of development on water quality. So that is a major project that we are doing jointly with Lend Lease.

Mrs VALE—In regard to large developments of that size, is there any requirement on the developer to put in their own sewage treatment works or to handle the particular site in such a way that the quality of water that does come off the site reaches a certain standard?

Mr McDonald—The Lend Lease development has an infrastructure agreement which covers all aspects of community infrastructure, sewerage and water effluent reuses in the strategy. They are not providing their own sewage treatment works; they are going to utilise the council's existing sewage treatment works, but they are providing funding for upgrades and those sorts of things. They are proposing to do effluent reuse on the site, and part of the agreement is that they will install a certain amount of infrastructure to allow that to happen. They are required, through the infrastructure agreement and the catchment management plan that we have prepared for the catchment, to install quite a bit of stormwater quality infrastructure. SQIDS is one of the things that they do. They have constructed a lake. They have wetlands that they are to build. That is incorporated in the activities as they build it, as they progress the project.

Mrs VALE—Part of that wetland would be for the assistance and purification of water?

Mr McDonald—That is the primary purpose.

Mrs VALE—And the recreational and aesthetic value is—

Mr McDonald—The lakes that they are putting in have the dual purpose of providing an aesthetic area and a community facility and also improving the water quality. We are hoping to get some information from the research that is being done on how that works.

Mrs VALE—Council will closely monitor the whole progress?

Mr McDonald—The current monitoring that we are doing is more about inflow and outflow and not the performance of the individual infrastructure items within the area. However, we are also looking at doing some work with CSIRO as an add-on to the project which will look at the performance of some of the facilities within the development and see

if we can identify which of those facilities is, in fact, providing the best methods of the treatment, but the primary focus is inflow and outflow.

Mrs VALE—Is this unusual for large-scale developments in Queensland, or is it something that is now happening with developers? Once upon a time, developers never ever provided kerb and guttering and now it is almost part of the conditions of development consent that that be included as part of the development. Do you think the consideration of water quality and exactly what happens to the water—water treatment—is part of a development consensus now in Queensland or is it just something peculiar to your shire?

Mr McDonald—I do not believe it is peculiar to our shire. Of course, our council established a policy and requires the developers to meet water quality objectives and water quantity objectives. So they are required to install silt traps, wetlands and gross pollutant traps under our development conditions. However, I have to say that my experience is that a number of developers see the benefits of being able to offer their development as environmentally sensitive development and, in fact, see an opportunity to improve—

Mrs VALE—It is a good marketing strategy.

Mr JENKINS—This is just really a technical question. In 1975 you had a requirement which is basically about the quantity of stormwater going into the streams. That was changed in 1996 to deal with the quality matters. In the technology that you use, what are the great differences between the approaches to which you have to go to not only minimise the quantity but the quality?

Mr McDonald—To control water quantity, the primary facility would be a detention basin. A detention basin will, if it is constructed correctly, impact on sediments and perhaps trap some of the sediments. But that is not its primary purpose. Its primary purpose is to slow down the flow and control the peak flow. Some of the other infrastructure we are putting in, such as trash racks, gross pollutant traps and silt traps, are specifically designed to trap silts and to trap other debris and litter. In 1995 you were required to put in a detention basin but you would not trap any litter. It would still go down, but it might take longer to get there. The silt that was trapped by the detention basin would be just a consequence of the detention itself, whereas a silt trap has a size specifically designed to give a retention period that allows settling to occur. It may, in fact, be bigger than the detention basin. Certainly they are similar. The other thing I should mention is that we also now include vegetative wetlands which are also designed to uptake nutrients from the water as well.

Mr JENKINS—In relation to the wetland works, what other environmental advantages do they have? Do they, for instance, contribute to protection of biodiversity? Are there other advantages alongside the water quality issues?

Mr McDonald—I see it as degrees of treatment. The silt traps and trash racks are for coarse materials. The wetland type things are finer materials and for things that are soluble. Certainly, a certain amount of nutrients attach themselves to solid particles. So when you trap silts, you trap nutrients, but a lot of nutrients go past those first two coarser systems and it is the wetlands that are taking up the nutrients and removing the nitrogen and the phosphorus from the water. That is one of the bigger problems that, say, Moreton Bay faces.

It is getting too much nitrogen and phosphorus and promoting the growth of algae and vegetation that is undesirable and choking out the stuff that we really want. The wetlands are there to trap some of those nutrients and take it up into the vegetative matter and, hopefully, prevent it from flowing down into the receiving waters.

Mr JENKINS—Your position is directly involved in the very precise engineering aspects. How do you then get involved in the wider aspects of what is actually going on about management of the catchment, management of the coast, management of the marine environment?

Mr McDonald—The catchment management plans are supposed to look at the whole of the catchment. We are looking at what is happening with the land in the total sense. I suppose our focus in the council is, as you say, on the engineering and the technical issues. I participate in the catchment care groups. So I get involved in that. I suppose that is the extent of all I can say.

Mr JENKINS—Down the track, when you go to the wider catchments and you are going to go to a lot of issues of retrofitting works that are already there, how will council feel if there is another body like a catchment coordinating committee that might, sometime down the track in the state of Queensland, have a legislative base which might have conflicting priorities? How do you think that, at some future date, council will be able to handle those sorts of pressures?

Mr McDonald—I feel to some degree council is meeting the objectives of the wider community through having to meet EPA legislation now and the infrastructure and things we are doing. While council is interested in them because we see that as a benefit to our community itself, we see it also as a legislative obligation already to have to meet certain EPA requirements. Councils always like to have certain control—

CHAIR—You do not have to meet those, do you, unless you can get these catchment coordinating committees to help with the catchment itself?

Mr McDonald—I believe education and community involvement is going to be the best way to, in the long term, have effective management of water quality. The infrastructure we put in place is an end-of-line type infrastructure. It would be great if we could stop the community from littering. Then we would not need to have those pollutant litter traps. Certainly I see a role of government—our local government and the other levels of government—in trying to educate the community about source control, about having practices that minimise the impacts right from the word go.

CHAIR—Is that part of the catchment management strategy?

Mr McDonald—We do include community awareness programs and education in our catchment management strategies and put funding towards providing brochures. Council has produced quite a large document called *Living in the Environment in the Pine Rivers*, which is a layman's type book on the impacts of bad practices on the environment, what things are good for the environment and how people can help. It has things such as what good native

vegetation people can plant and encourage to grow. It certainly has a section on what weeds are and what they look like. That is a community education initiative.

Along with the *Living in the Environment* textbook—a rather large book—we also publish smaller brochures specifically focusing on a particular catchment area such as Cabbage Tree Creek, trying to educate people and make them aware that what they do in their little area actually has an impact on something that is away from where they live. One of the realities is that a lot of people in urban areas do not even realise that what they do impacts on a creek because of flow. Council does those things and certainly that is part of the strategy: community awareness and education.

Mr JENKINS—You received \$350,000 from the Commonwealth Coast and Clean Seas program. Can you make a comment on the monitoring and accountability aspects of that grant or any other issues to do with—you interface with the Commonwealth bureaucracy over that program?

Mr McDonald—I believe it was great to get the support of Coast and Clean Seas to promote that project because it was a project that council would have taken a lot longer to fund if they had to fund it themselves. I also understand it took a little bit more time than we had hoped to actually get the Coast and Clean Seas to confirm that the money was available. There was a certain amount of time taken between when they said it would be available and when we were generally assured that it was available and we could commit to a contract. That impacted a bit on the way that we operate and what we can achieve in terms of time. We would get the project done and it was great we got the money.

For example, that project will miss this summer. It will be through this summer, in fact. We will be building it when, had we got the funding a little bit earlier, we might have had it in place this summer. One summer in the grand scheme of things is not very much, but it is just one summer we are going to miss. It was great that they gave us the funds. I hope they continue to give us funds. For whatever reasons—I cannot quote what the reasons were—it would have been helpful to us if it could have been a little faster, but it still came about reasonably okay.

Mr JENKINS—It did not have to go through the regional assessment process?

Mr McDonald—I cannot tell you what the process was in terms of regions because I myself did not work on getting those funds. That is as much as I know about it—it was a little bit delayed.

CHAIR—It came to council; it did not come to a coast care group or something like that?

Mr McDonald—This was a project that we applied for for funding. We approached Coast and Clean Seas ourselves.

Mrs VALE—I just want to go back to that large Lend Lease development again. Part of the problem with water velocity and the amount of water that does enter the creeks has to do with the amount of hard surfaces on some of the newer properties. Could you answer on

behalf of your council—I know you are not a planner—are there any planning controls that dictate how much hard surface can be in residential areas or incorporated in houses? Are there any other alternatives to having big areas of concrete or big areas of paving that a lot of the modern houses do include now? Do you understand what I am saying? The water comes down and, if you increase the velocity, there is no ground absorption; it just heads straight down to the creeks.

Mr McDonald—Certainly we have development conditions and we have building conditions. Building conditions restrict how far from a property boundary you can build and those sorts of things, and that limits to some degree the roof area, for example. To my knowledge we do not have a limit on the amount of hard stand within a domestic property.

Mrs VALE—Because with this increase in paving, there seems to be an increasing amount of hard surface area. People are even paving what were once traditional lawns. They are now actually having terraces.

Mr McDonald—Everybody acknowledges that the increase in the area of hard surface means that a greater amount of run-off occurs. I do not believe that anybody would deny that. As I said, to my knowledge we have not gone to the specifics of defining how much of an urban house block could be paved. In the extreme case, I suppose it is possible for somebody—and I have heard of people who have done this but not in our shire—to concrete their yard and paint it green. But to my knowledge we do not have anything to prevent somebody doing that on a house block. I do point out that the education process that we go through and the fact that we are trying to get people aware of all of these impacts—certainly we point out the impact of having paved areas and we encourage people to think about how they live.

Mrs VALE—In some parts of Sutherland shire where I come from they actually have requirements for driveways. Instead of having just slabs of driveway, they have little bits of grass that can actually grow through the driveway.

Mr McDonald—BG slabs is an example of those. As I said, to my knowledge we do not have a—

Mrs VALE—Conscious regulation that prevents that.

Mr McDonald—regulation on that matter that prevents that. We are trying to educate people on the benefits of not having massive areas of hard stand and, to some degree, relying on that. I have to say that we have reasonably sized blocks in Queensland so people tend to like to have grassed areas—anyway at this point.

CHAIR—Could I just go back to one question? It was raised yesterday with us that people have been encouraged, particularly in the catchment management committees, to come up with strategies as to how to address their management priorities, I suppose. It is a little bit like the dog that caught the car. When they come up with the management strategy, where do they go from there? There is some frustration there about probable funding, I suppose, as to what they do after that strategy has been developed. Have you had any involvement in that?

Mr McDonald—I would have to say that I have seen that same sort of conflict expressed in the catchment care group that I have been to. It is partly to do with the fact that a lot of the strategies do require funding. As an example, weeds have already got to a point where they need specific attention; it is not just a matter of saying, 'Let's have a strategy to minimise weeds.' The strategy has to be, 'Let's have a strategy to minimise weeds and let's have a strategy to address the weeds we already have.' When they get to that part of addressing weeds they already have, that is when they say, 'How are we going to do it? How are we going to fund it? How are we going to get the money?' I hope that, by my being involved in our catchment care group, there will be a better relationship between council and the care group and that council can assist with that side of the process.

One of the things that I was trying to put through in council's submission was that all of this stuff costs a lot of money and that all levels of government need to be involved in trying to support the process and provide funding in whatever way they can. If funding can be made available to catchment care groups so they can realise some of their strategies, that they may not necessarily feel that, even if they do not get all of the strategies that they have in place achieved, I am sure that little gains through a certain amount of funding will keep those groups vibrant and sort of wanting to be involved. I just hope that somehow in all of that process we can remove some of the cynicism towards government on all levels and get even greater cooperation.

CHAIR—Do you see any duplication of effort between local, federal and state? Do you see any withdrawal of funds by any tier of government because another tier happens to make some money available?

Mr McDonald—I do not see the withdrawal of funds, but I am sure there is a certain amount of duplication of effort. It is also a situation where we have one focus, and local government is closer to the hands-on part of it and sometimes we move towards the more strategic part of it. Similarly, as state governments and federal governments have a more strategic overview of it, they still also sometimes get in the hands-on part of it. There will always be that overlapping of responsibilities and duplication of work in some places. I still think that all levels of government have to be involved and, provided we can cooperate, we will have a common focus in the end.

CHAIR—Thank you very much, Robert, for your interest.

[12.05 p.m.]

McGUFFOG, Mr Douglas Robert, Executive Director and Secretary, Fertilizer Industry Federation of Australia Inc.

CLAGUE, Mr Ian, Manager Corporate Affairs, WMC Fertilizers Pty Ltd

CHAIR—I welcome the representatives from the Fertilizer Industry Federation of Australia. We have received your submission and we have had a close look at it. Would either of you like to make an opening comment before we ask questions?

Mr McGuffog—Yes, I would. We are appreciative of the opportunity to appear before your committee and to clarify any points and clear up any questions that you might have. We are a national organisation with members in all of the states. What we have sought to do in our submission is identify two key factors relating to the use of fertilisers and catchment management. The first of those major points is that the application of fertilisers is essential to the maintenance of crop and pasture productivity. We also make the point that the maintenance of a proper balance of nutrients in the soil has many beneficial effects in retaining ground cover, improving the utilisation of moisture and rainfall, reducing soil loss through erosion, and improving organic matter and soil structure. Secondly, any losses of nutrient from crop or pasture land has the potential to contribute to adverse environmental consequences, such as the eutrophication of rivers or lakes.

Nutrient loss is an economic issue for the farm enterprise. Losses of nutrients can be caused by a variety of factors and they are going to vary from area to area and depend on the topography of the soil, soil type, climatic factors, land use and farm management practices. To develop appropriate nutrient management practices we need to have a very good understanding of how nutrient losses off farms occur and what can be done to avoid those losses or at the very least minimise them to an acceptable level. Research has a pivotal and important role to play in that.

In our submission, we stated that we believe the most cost-effective way of achieving the necessary level of nutrient management is through the development of codes of practice and implementing those through education and training programs. Industry has actively supported research into these mechanisms of nutrient losses, and we give some instances of those. We are active in contributing to the development of codes of practice, accreditation programs, in promoting best management practices through industry training programs and the publication of reference and training material. We talked about the publication of the *Australian Soil Fertility Manual*. I think there are many good examples of progress being made along those lines in a number of industry sectors. I think Queensland and northern New South Wales are good examples. We think the model developed by the Queensland Farmers Federation with an environmental code, with the individual farm sectors developing their own codes of practice under that umbrella, is a pretty good example of the effectiveness of that approach to nutrient management. Of course, the sugar industry is probably more advanced than most agricultural industries in having an industry code of practice and also in having developed training and education models to support that code of practice.

CHAIR—Is that because of its involvement with the Great Barrier Reef Marine Park Authority?

Mr McGuffog—The sugarcane industry is a high user of nutrients. Yes, of course, it has sensitive areas that it needs to be concerned about. But the horticultural industry and the dairy industry in Queensland are also developing their individual codes.

CHAIR—Just as a bit of background, what companies and organisations does the Fertilizer Industry Federation of Australia represent?

Mr McGuffog—We represent all of the manufacturing companies in Australia—Incitec, based here in Brisbane; WMC Fertilisers, which has a project at Phosphate Hill; Pivot Ltd, which is a farmers cooperative fertiliser company based in Victoria; Impact Fertilisers, which is a manufacturer in Tasmania; Wesfarmers CSBP, which is based in Western Australia; major importing companies, such as Hi-Fert, which is based in Adelaide; Summit Fertilisers, which is based in Queensland and Western Australia; and we have a range of smaller companies that are involved in the specialty end of the market or in providing services to the major companies. We represent, on our estimation, over 95 per cent of the mineral fertilisers sold in Australia.

CHAIR—In relation to the industry codes that you mentioned, I happened to be the minister in the hot seat when the blue-green algae bloom occurred in New South Wales. A minor part of it was attributed to agriculture and probably to the application of superphosphate in particular. What codes have been drawn up to try to improve the application of those types of fertilisers so that they do not get into the environment?

Mr McGuffog—The major code that is in operation now is the one developed by the Australian Fertiliser Services Association. That is not our organisation; it is an organisation that we are closely associated with and have been actively assisting in the development of its code, and we have made financial contributions to it. It represents the ground-spreading contractors. It is active in all states. It now has in place a code of practice and an accreditation and training program for its members that is seeking to address issues of application. It applies very significant quantities of top-dressed material.

CHAIR—What about the aerial spreaders?

Mr McGuffog—To my knowledge, the aerial spreaders do not have a specific fertiliser code of practice. Aerial spreading is important in the hill areas and, of course, for application of top-dress nitrogen on grain crops.

CHAIR—Do the farming organisations get involved in and embrace these codes of conduct? For instance, do they recommend to their members that they use people who are accredited?

Mr McGuffog—The Fertiliser Services Association accreditation program is only really in its infancy. It has moved to put a full-time officer in place to encourage that code. The code is getting a lot of support from our members, who have given indications that they will

seek to ensure that their products are spread through companies that are accredited under that code of practice.

CHAIR—I understand what you said about the cost of fertiliser and the need to get the maximum benefit from it. Is any assessment done by the companies or anyone else as to what is escaping into the ground water or into rivers—for example, any nutrients that might not be totally taken up by the crop that get back into the water systems in particular?

Mr McGuffog—Most of those assessments are being made by some of the research programs.

CHAIR—The government research programs?

Mr McGuffog—The ones driven, for example, by the Land and Water Resources R&D Corporation. There are major programs, for example, the National Eutrophication Management Program. For example, the phosphorus issue varies from region to region. A lot of the work that has come out of research in the Murray-Darling Basin indicates that a lot of the phosphorus in that river system has come from subsoil erosion through gully erosion rather than—

CHAIR—Fifty per cent?

Mr McGuffog—agricultural practices. Whereas in other areas, say, in the very sandy soils in Western Australia, the soil does not have a capability of holding much phosphorus, so you do get leakage in that system.

CHAIR—I know that the departments of agriculture in each state used to do fertiliser trials and so on to try to optimise their usage. Is anyone doing that now? A lot of agriculture departments have opted out of these areas.

Mr McGuffog—Most of that sort of work—the demonstration trial work and the strip trial work—is being undertaken by a combination of the fertiliser companies. The major companies have active field demonstration programs. The majority of the basic research is being funded through the various R&D corporations, such as the Grain R&D Corporation, the Horticultural R&D Corporation and the Sugar R&D Corporation. They are focused at an industry level.

CHAIR—You would be well aware that from time to time the finger is often pointed at farmers and companies that are symbiotic with farmers in some of these areas. Have the companies ever considered that, with respect to these community catchment management groups that are trying to address some of the catchment problems, they could get involved with helping to fund some of those groups and, for example, show their logo and say, 'We are involved in helping these areas'?

Mr McGuffog—Member companies have at times become involved at the local level, mainly through Landcare groups. The Fertilizer Industry Federation, for a number of years, supported the publication of a journal that was distributed through the Landcare groups. But that has varied from state to state and according to the individual organisations. What we

have decided we should focus on in terms of our contribution to this is this question of the provision of information and training material and resources in that area. We think that can contribute to making permanent changes in farm management. We have been focusing our efforts over the past two or three years in that area. Our member companies undertake their own training of their individual dealers and agents and accredit them so that those people who are making recommendations to farmers will have completed training courses. Our focus, as an industry organisation, has been at that infrastructure level rather than at the individual catchment level.

CHAIR—What about effluent reuse? For example, have you thought about the use of sludge or some of the other organic fertilisers?

Mr McGuffog—Some of our members are involved in processing animal manures. We do not seek to represent the organic fertiliser industry, although some of our members are involved in using those materials as components in blends of fertiliser or in marketing along with their range of mineral fertilisers. But we have not had an active involvement in that. The focus of the industry has been on major projects such as the one Ian's company is involved with in north Queensland.

CHAIR—That is the phosphate one, is it?

Mr McGuffog—Yes.

Mr JENKINS—The submission mentions the codes of good agricultural practice in the United Kingdom and that the code in relation to water is a statutory code. Should these sorts of codes be based in statute? I noticed also that the QFF's environmental code of practice has some approval as a code of practice under the Queensland Environmental Protection Act. How do they operate? What penalties are there? Alternatively, what other measures can be taken, given that they have a statutory basis?

Mr McGuffog—Under the Queensland legislation, as I understand it—and it is a similar situation to the one in New Zealand—provided farmers are following the code of practice that has been agreed in relation to environmental issues, they will be complying with regulations under the state legislation. It is really about having in place an incentive for people to ensure that the practices that they are undertaking enable them to comply with the regulations.

Mr JENKINS—As an industry group, are you comfortable with that relationship—that they do have a statutory base?

Mr McGuffog—Yes. What you then have in place is a capacity for the industries to develop their own individual codes. It is very difficult to mandate something. Given the diversity of Australian agriculture and soils, you really have to get down to crop-specific areas, because what is appropriate in horticultural industries may not be appropriate in others.

Mr JENKINS—That is what you said from the outset. It is a sectorial approach?

Mr McGuffog—We strongly support that approach.

Mr JENKINS—Mr Chairman, it might surprise you, but a couple of your earlier questions were questions that I intended to ask.

Mrs VALE—I understand that you see your body as having an educative role—that is, creating awareness within industry groups?

Mr McGuffog—Yes.

Mrs VALE—Do you see that there could be a role for your industry body, say, to employ a consultant who could work with community groups and assist in advising from the point of view of your industry? In other words, it would involve a more hands-on, proactive role, rather than only providing education material?

Mr McGuffog—No, we have not contemplated that.

Mrs VALE—I note that you have a symbiotic relationship with the farming community. It probably would be unusual, but I was wondering whether you thought there might be a role for your body to play in that regard?

Mr McGuffog—We have tried to work in with farmer organisations and with government in a supportive role in the development of strategies. Although this is not relevant to this inquiry, we have supported funding into the cadmium management issue. We have agreed to jointly fund with two of the R&D corporations the employment of a national coordinator to implement that sort of strategy.

Mrs VALE—That is proactive.

Mr McGuffog—We see ourselves more at the strategic level, because we are a small, lean industry organisation and there is a limit to what we can do at that local level, although obviously our members and their dealers and agents are very much involved at the community level.

Mrs VALE—From your point of view as an industry body, do you see that the integrated catchment management plans are working very well?

Mr McGuffog—To be honest, we have not had a lot of direct involvement in the infrastructure for those catchment management plans. We have really come to this inquiry and made our submission on the basis of nutrients, what we were doing and how we saw the role that we could play.

CHAIR—Your very existence suggests that you do see this as being a sensitive area?

Mr McGuffog—Very much so. Nutrients are vital to Australian agriculture. I do not think anybody really disputes or questions that. The issue is to ensure that they are used properly, that people know and understand how to use them properly and that there is a mechanism to put in place the findings of research on best practices.

Mrs VALE—That is where you can interface with communities that have specific cropping. You can explain that at an intensive level?

Mr McGuffog—The delivery of that really gets down to information to individual farm managers.

Mrs VALE—Is your strategy to do that using a support marketing technique?

Mr McGuffog—Yes, with our member companies it certainly is. You made the point that, increasingly, departments of agriculture are tending to withdraw from a lot of areas. The delivery of extension and education information is increasingly being picked up by people such as private consultants and fertiliser dealers. We see a major opportunity in making sure that those people are well aware of proper uses of nutrient and making sure that those products, which are so important, are used correctly.

CHAIR—That is very important. They do not like paying big money to you people if I am going to laugh at you.

Mr McGuffog—That is right.

CHAIR—Are there different fertilisers that tend not to leach as quickly as others? Alternatively, can slow release methods be developed to ensure that you do not lose as much into the environment?

Mr McGuffog—Slow release and controlled release fertilisers have been developed. The latest figures I have seen indicate that they represent about 0.15 per cent of the value sold in the world.

CHAIR—They are expensive, too?

Mr McGuffog—They are expensive and they tend to be used in specialty areas, such as golf clubs, bowling clubs and home garden usage. They tend not to be used in mainstream agriculture at this stage. There are examples where techniques are being trialled and developed. We make mention in our submission of work in Western Australia. That involves the use of that red bauxite mud from the alumina refinery as a means of slowing down or tying up phosphorous fertiliser used on those very sandy soils.

CHAIR—So you are using ionisation?

Mr McGuffog—Yes. You are using the alumina as a means of grabbing hold of the soluble phosphorus and holding it there.

CHAIR—Is that expensive?

Mr McGuffog—I do not know what the economics of it are, but it is a promising development. It may be one of the solutions to reducing phosphorous leakage in that area. There are other means of slowing down release through urease inhibitor. Urease is an enzyme that breaks down urea. By having an inhibitor you can slow that down. They are

being trialled, but they are not in commercial use. There are other nitrification inhibitors that impact on the breakdown of ammonia into nitrates. But they are not widely used in Australia. There is research going on in all of those areas.

CHAIR—This is not a problem that is endemic to Australia; obviously a lot of other countries are doing a lot of work on it as well?

Mr McGuffog—That is right.

CHAIR—Thank you very much for your evidence.

Proceedings suspended from 12.30 p.m. to 1.30 p.m.

HILLARD, Mr Clarrie, Member, Queensland Murray Darling Committee Inc.

WOODS, Mrs Mary, Member, Queensland Murray Darling Committee Inc.

CHAIR—Welcome. Before we start, the committee has received a replacement submission from the Queensland Murray Darling Committee.

Resolved (on motion by **Mrs Vale**, seconded by **Mr Jenkins**):

That the submission from the Queensland Murray Darling Association be accepted as a replacement for submission No 37.

CHAIR—Do you have any comments to add to the capacity in which you appear?

Mrs Woods—I am a member of the Border Rivers Catchment Committee. I am also a representative to the Queensland Murray Darling Committee Inc. Another part of my CV would be that I have just retired after five years of chairing the regional assessment panel in the south-west region.

Mr Hillard—I am an inaugural member of the Border Rivers Catchment Management Coordinating Committee. I have also been on the Queensland regional body since its inception. I have only just stood down as chairman of the Border Rivers Catchment Management Association and I have been deputy COC representative. I am now the Border Rivers Community Advisory Council member.

CHAIR—We do have a new submission, so someone might like to speak to that before we ask any questions.

Mrs Woods—In relation to the original document that was submitted to you a number of months ago, it came to our notice that we had an opportunity to obtain wider community consultation, I guess you could say. So we have made an endeavour to do that. The time constraints were a bit tight for the first one, so we actually called together a group of people again and we have been able to obtain wider community input to that document. The amended document is the one that we have submitted to you. It simply reflects a wider consultation process. Clarrie and I deal at the regional and local catchment level and obtaining community consultation in a short time frame is sometimes not easy, so it just was easier for us to have another go at it.

CHAIR—You are a bit different in many ways in that you belong to the Murray Darling Basin Advisory Group.

Mr Hillard—Yes.

CHAIR—Yet you are still within the Queensland situation as well. How does that actually work? Do you have local catchment community groups that then go towards the Murray-Darling? Are there separate and different areas? How does it work?

Mrs Woods—That is right. Could I make a couple of opening comments, because part of that will put you in the picture. Just by way of explanation for you, the Murray-Darling Basin in Queensland is about 800 kilometres by about 500 kilometres and extends west to Tambo and south to the border. Within the Murray-Darling Basin there are four catchment management associations and one regional strategy group. We are representing that strategy group, although we are members of one of the catchment associations. The Murray-Darling in Queensland represents 15 per cent of Queensland's land mass. It is 25 per cent of the Murray-Darling Basin. Its population of about 187,000 is smaller than that of Canberra. So we have some issues with demographics and geography that make life a little interesting at times.

In 1994, I believe it was, we produced the first endorsed resource management strategy document, which I have brought up. I am sure you do not really want to delve into that, but you can see that it is, by virtue of its size and the effort that was put into it by the community, fairly comprehensive. It was launched in 1994 by Robert Hill, and it was endorsed by Robert Hill as well as by our own state minister. Our initiative is to try and work towards the implementation of this strategy document.

ICM is, as a concept, new to Queensland and therefore to the Murray-Darling. It is still an evolving concept. There are many evolving issues that have come out in the years that we have been going. One of the issues, for example, is the issue of cross-border representation that I heard you talking about this morning with the Lake Eyre Basin. Our region of the Murray-Darling has a cross-border issue with regard to the Macintyre River valley, which of course is where we are from. We have been trying for four or five years to actually obtain a cross-border viewpoint of the Macintyre Valley. It has been an ongoing attempt, which has just recently met with quite a deal of success by the agencies on both sides of the border. They have been very supportive and I think we will be able to move on with that process. So that is really good.

I guess I would have to say that the awareness of ICM in our region of Queensland is adequate. People know about it, but they do not have ownership of it yet. So I would say that the ownership is low. We are working on universal credibility, both on our credibility as community members and also credibility with and from other bodies—from industry, from local government and from other players and stakeholders. We are also working on trying to improve our linkages with all those other stakeholders to try and marry the relevance of what we see and what they see as important for catchment management. Some of the linkages that are there at the moment may not be the appropriate ones. Our committee is actually working on a new look at our roles and responsibilities. We are not sure that we have got it right just yet and we are looking to turn that around and change it if it warrants changing.

The theme that is underlying our submission is basically institutional arrangements and partnerships. Are they the right partnerships? Are they good ones? Are they working? Catchment management in our basin, in our area of Queensland, we regard holistically. We have approached our submission on that basis. Catchment management in our region is not necessarily just a water issue. So we have tried to present the other concerns in our submission.

This morning there were comments about volunteerism, community burnout and community input. That is a huge issue for us, of course. I think it is everywhere. We want to make sure that the levels of authority that our committee has are recognised. There is a concern of ours that there is no underpinning of what we try to do in Queensland. We are just there as volunteers and doing a good job, but legislatively or statutorily, or however you want to call it, there is no underpinning of that. I think that is part of the problem with our identity crisis with the larger community and broader stakeholders.

I guess the last thing I would say is that catchment management is new and not particularly well understood by some areas of the community and certain stakeholders. It is evolving. It is changing. We support its change. If we can get it better, we want to do that as community people. But we recognise that we have a long way to go before we get there. Natural resources management is a vital issue and we feel that it only has long-term results. Those are just a few of the underlying things that I guess our submission tries to deal with.

CHAIR—That raises a few issues. I come back to the question I asked initially. You did say that there is no legislative base in Queensland, which is really nothing to do with us—that is the Queensland government—unless we have some conflict with the federal government. If there are areas that conflict between the two governments we would be interested in those to try to resolve any duplication or conflict in those particular areas. Do the same people who represent, say, a catchment management committee in Queensland go to the Murray Darling Association? Are they separate groups?

Mr Hillard—They are representatives taken out of each of the catchments. The Queensland Murray Darling is split up into four catchments—the four major river catchments. There are three representatives from each of those catchments that go to the Queensland Murray Darling Committee.

CHAIR—So there is similarity?

Mr Hillard—Yes.

Mrs Woods—It is a hierarchical representation structure. There are also agency representatives on both levels. At the local catchment committee level we have our local agency people—EPA, DNR and DPI and local government—and then accordingly at the regional level there are also representatives from agency.

CHAIR—I get criticism in my local area from farmers who say, ‘Government want to engage us all the time in all different committees and we spend a lot of our time going to these meetings, trying to put forward our view and at the end of the day we wonder whether we are listened to.’ Do you have the same feeling?

Mr Hillard—Probably the biggest change I have noticed in the time I have been involved with it is that now, especially with DNR, we have a pretty good partnership going with them. If they see a problem, they come to us. If we see a problem, we go to them. We get a good hearing and we work pretty well together.

CHAIR—So the consultation process is good?

Mr Hillard—Yes.

CHAIR—And you have input?

Mr Hillard—Yes.

Mrs Woods—DNR is an outstanding example in the state in the sense of the relationship we have with the Department of Natural Resources in our region. It is not necessarily the case in other places, and with other agencies it is not necessarily as fulsome. DNR will come to us regionally and at a local level and say, ‘This is our operational plan as regards natural resource management issues. Where can we fit your strategy into what we are doing?’ And you cannot get much better than that. It is very positive, and it is almost unique in Queensland. So we are really lucky.

CHAIR—You sit within a big framework. There is no doubt that the Murray-Darling Basin is a huge area of Australia. You said that you are 25 per cent of it—at the top end of it. How do we manage a basin as big as that? Do you need to split it up into small river catchments and then coordinate that within the whole basin at the community advisory council?

Mr Hillard—I think that is basically the way it works. The community advisory council has representatives from each of the catchment management associations that are within the basin. We meet only three times a year, but that is where the working groups come from. It seems to be working quite well in that respect.

It is a huge area. We have not got the common thread that they have in the south, which is salt. That has drawn a lot of people together and I think they are working pretty well with it, but we have our own problems. We get, say, weeds and pests. Some of our introduced species are a problem in our area. We look at it from a different point of view. It has to be global. If we can have input in there, we endeavour to do that.

CHAIR—The Murray-Darling Basin Commission has probably been out there ahead of most others and probably in many ways leads Australia in this particular area. We can probably learn something from the way it is set up and some of the other areas. Basically, you are happy with the way it is working at the present time?

Mr Hillard—Yes. I would say that it is working quite well.

Mrs Woods—I think the institutional set-up is probably all right, but the ability of the commission to recognise that Queensland is different has been a problem all the way along.

CHAIR—Different in what way?

Mrs Woods—Salinity is their driving point. We try to get them to acknowledge that our land use and land management issues are different in Queensland than they are in the Murrumbidgee, and that has been difficult. They are constantly telling us that we do not send them enough water, but they do not seem to be prepared to take on board—

CHAIR—When you say ‘they’, is it the southern delegates or the commission, or—

Mrs Woods—The commission.

Mr Hillard—The southern delegates, especially the ones from Adelaide. They do not get enough fresh water. We represent a very small portion of the water. Only four per cent of the water that gets below Menindee Lakes comes from Queensland. It is not a very big proportion if you look at what New South Wales takes out of the system. Past Bourke, for instance, they expect 36 per cent of the water to come out of the border rivers, yet the Gwydir is submitting 8 per cent and the Namoi about 12 and the Macquarie about 14. The Paroo does not give anything at all. The Warrego occasionally does—when it floods. They look for about 20 per cent of the water past Bourke to come out of the Condamine and the Culgoa system.

CHAIR—These are historical problems, where each state tried to manage separately and New South Wales let out too many licences. I have been through those issues. Are they being resolved? Do you think you are managing to resolve some of those?

Mr Hillard—We have not finished with the WAMP as yet. It has been a slow process. Hopefully it will come into place before too long. They are clawing back a bit out of New South Wales. It is a pretty slow process.

CHAIR—The reason I am asking is that this is a classic example of a very big catchment system, where you have delegates from all over the catchment trying to work together to resolve a problem. It is a very good example for other catchments, which are much smaller in many ways but need to talk to one another.

Mr Hillard—New South Wales has set up river management committees now, so every major river system has a river management committee, which is at odds, I would say, in a lot of cases with the catchment management committees, but that is their problem. That is a bit different. I do not say that we are on top of it, but we are certainly working towards it. Until we get the results of the WAMP out to know where we are heading, it is just a bit hard to speak on it.

Mrs Woods—It is just difficult enough trying to go to speak to people at the commission and to speak to the Commonwealth about issues that affect Queensland that are different from southern issues. It is just difficult to get an acceptance of the fact that Queensland’s issues are not the same as those of the rest of the southern states.

It will be interesting to see how the salinity audit sorts itself out up here. We have been telling them for a long time that we do not have salt, that salt is not our major hook issue up here. Probably weeds is our major hook issue and there is no NHT money for weed projects. That has caused us huge problems in the last 18 months prior to this last round. In the last round there were no single-issue weeds projects, but in the year before all central Queensland and western Queensland put in were projects on parthenium and single-issue weeds projects. They all got knocked out and it really disfranchised that part of the community. They did not want to know anything about catchment management or landcare or anything else.

CHAIR—So you think the criteria for NHT funding is too narrow?

Mrs Woods—It is that way for a reason—I realise that—but it does not recognise differences in different areas. Queensland is a bit unique. Once you cross over the border into New South Wales, all of the issues are a lot more the same, whereas the higher up you go in Queensland the more diverse they become. That becomes a real problem. We have done some work with the Commonwealth. We have discussed funding with the Commonwealth and there is some money going into the central desert uplands area for weed management. It is happening, but it has just been difficult. The fallout from losing valued community players is very noticeable.

CHAIR—You mentioned community ownership. Is the criteria flexible enough to allow for education in those areas—to get to the community and to tell them what catchment management is all about, to involve them?

Mrs Woods—Do you mean in the NHT?

CHAIR—Yes.

Mrs Woods—No. The NHT only wants to see on-ground wants, and that is fine. If that is what Senator Hill wants, that is fine.

CHAIR—But if you are going to get people who are going to get out there and give voluntary support, is education not important?

Mr Hillard—Education is an enormous component. We have endeavoured to push our coordinators into assisting with that. You will educate the younger kids but it is very difficult to educate you and me at our age.

CHAIR—You mean about some of the management changes and things like that?

Mr Hillard—Yes. What worked for us has been working for us. Some will change, but there are some who do not want to change. So it is difficult.

Mrs Woods—And the idea of education and awareness that used to be under the old decade of Landcare—we used to be able to do that and get Commonwealth money to spread the word to people—is no longer available in that form. If you want to do education and awareness, you have to do it very carefully as far as NHT funding goes.

CHAIR—What about extensions through either your community groups or government departments and state government departments? Is that going on as an example of what can be done to alleviate a problem?

Mrs Woods—Yes, there has been good extension work. There is a lot of good research going on, but we found that, as a regional resource management committee—and I mentioned that to Margaret this morning—with the coordination of all that is happening for example, with funding, there is the NHT and there are all the complexities with that with dealing with on-ground works and community groups. But then aside from that, there are

huge issues with finding out what LWRRDC is doing, what CSIRO is doing and what whoever else is doing. There are all of these other pots and pockets of work that is going on and they are very protective. I do not know whether they feel threatened by community people finding out, but we need more coordination. As you say, we need a coordination of the knowledge of the outputs. As players, we need to know better among ourselves—between CSIRO, LWRRDC and NHT and all of those sorts of things—what is happening out there. That is very difficult. Dealing with some of those Commonwealth funding bodies, other than the NHT, is hard.

CHAIR—So there are two things there. The main thing is that you are getting duplication and the other thing is that there could be information that is valuable to you and you do not know what it is.

Mrs Woods—Absolutely. Everything is different. For example, the criteria for funding for LWRRDC is different from the NHT. The structure of how you obtain it, how long the cycle runs for, when you apply, what the forms look like—all of those sorts of things—are just a real complexity. You nearly need a PhD in funding to be able to drive them at a community level. The community just does not worry about it. As you probably know, the community is walking away fairly strongly from the NHT. Those other ones, they hardly even register because it is just too difficult.

CHAIR—So the NHT funding has failed to engage the community?

Mrs Woods—I do not think that it is that simple. No, it has not failed to engage the community; it has failed to continue to engage the less dedicated community. There are only those there who are hanging on with both hands thinking, ‘Yes, I can fill out these forms again. I will have another go. We need more money to finish this project. We will have a go.’ The paperwork with the NHT is really difficult. Anyone who is outside that devoted loop is walking away from it. They are not going to have a go. It is almost too late for the NHT—the NHT per se is almost finished. I believe that the Commonwealth needs to think of other ways of engaging the community, as you say, with education and awareness. To my mind as a community land-holder, it is as important as on-ground works. It is like on-ground works. It is an actual doing thing. We need to actually increase the awareness of the community both by getting them to do actual on-ground works and by working in the mines. We need to help educate them.

Mrs VALE—There is also that problem, too, that some coordinators do not feel as if they are being funded in the future to actually act as coordinators. I note in your report that you actually have a comment about the importance of coordinators. Do you want to expand on that at all?

Mrs Woods—As far as community groups go, they simply do not have the legs any more to do the jobs that are required of them. Coordinators provide us with those legs and arms. In most cases, they provide us with technical ability. Most of them are qualified at university and have done study in certain areas of resource management. They certainly provide an incentive for the community to keep going.

The Queensland Murray-Darling Basin does not have a plethora of coordinators. We actually have four that cover this huge area. There are other Landcare project officer type people, but the actual catchment coordination of the four catchments is handled by four people. I noted your comment this morning about having to travel 100 kilometres to a meeting. It seems that we are very different. I travel 220 kilometres one way to go to my regional meeting if it is in Toowoomba, which is the closest that it could possibly be. Sometimes we charter planes and fly to Charleville, because we just cannot take the three days: it takes a day to drive out and a day to drive back and a day to be there. The tyranny of distance is a very real thing.

Mrs VALE—You get no compensation for that?

Mrs Woods—Our travel and our accommodation we get. The issue of remuneration that we have dealt with in this paper is one that we have yet to really reach a position on. It is a very complex issue. Some people will attend these meetings and will fly all over Queensland and be paid nothing as far as a sitting fee goes. Some people will not come unless they are paid a sitting fee. Some people cannot afford to come without one. So you have the whole spectrum of people. Even in our own regional community we have that whole spectrum.

Mrs VALE—It was the cost of being a member, actually, that was put to me by one of the community groups as being one of the reasons that some people from her community group had actually dropped out. They just could not keep affording it. This is at a real community hands-on level.

Mrs Woods—That is right.

Mr Hillard—It is very time consuming, as you realise, and it is a paper war in a lot of cases. The amount of paper that comes over the desk is astronomical. Apart from the time involved, being chair of one of the committees is a huge job. Mary as chair has found it the same. We are finding trouble with people being able to afford the time as much as anything else, but it is working and there are a lot of dedicated people.

Mrs VALE—It is just keeping them.

CHAIR—Both of you mentioned that you formerly held certain positions. Is that one of the reasons why you got out: that it was too time consuming, or were there other reasons?

Mr Hillard—It is very time consuming, but apart from that, I have changed from the chair of the catchment to the COC representative, so I could not put the amount of time in for both. For three years out of the six that I have been involved I have had three years as chair and I thought that it was time for a change, because change brings change. Even though I have stayed on the executive and the COC—I am still involved—I just stepped down one rung.

Mrs VALE—You spoke about community program development areas. Three pilot dialogue programs were being undertaken. Would you be able to explain exactly what they are and when they would be reviewed?

Mrs Woods—These dialogue sessions is what Margaret was referring to this morning. The Queensland Murray-Darling is one of three in Queensland. The other one is in north Queensland and the Mary-Burnett is the third one. So you would have spoken to some of them. The forum discussions that are being held are being held in each of our four catchments. We are asking all the stakeholders that we can get around the table to be at the table. The CPD unit, DNR—Margaret's team—are working with the catchment management associations to, I guess, ascertain what the best partnership arrangements are now, given that they may not be appropriate to the ones that we had back in 1994 and 1991. I guess it is a review of the partnership arrangements. We are hoping that we will have really good stakeholder involvement in that. Because there is not any underpinning of what we do, we have some issues with other stakeholders such as local government and industry. It is difficult to keep them happy at times. The processes by which people sit at the table and by which you have membership on these committees and memberships up to the regional association just need to be flagged again with perhaps a different group of stakeholders. Perhaps the people change, and we need to be reviewing that. That is what Margaret's department is trying to do—it is trying to work out the remuneration issue.

Mrs VALE—That is the review process that she was speaking of initially?

Mrs Woods—Yes, and we are part of that.

Mr Hillard—I was just going to go a little bit further on the coordinators. As we have only four and it is a huge area that they cover, without those four coordinators I am quite sure that the system and the thing would fall over. I cannot stress that enough.

CHAIR—Are you funded through the Murray-Darling?

Mr Hillard—Through NHT at the moment.

Mrs Woods—Murray-Darling 2001. They are spread across Bushcare and the national Landcare program, but mostly out of the Murray-Darling 2001.

Mr JENKINS—You say that the local governments are uncertain about where they fit into the picture. Where do you think that they should fit in?

Mr Hillard—Local government have legislation on their side so that they can make things happen. I think that they should take a much bigger role in assisting and getting better dialogue with the community panels. I do not think that we get enough with them at this stage and I think that they will have to take a bigger part in proceedings further down the track.

Mr JENKINS—Are their resources stretched to devote—

Mr Hillard—They are very stretched, especially with huge areas and not a very big population base.

Mrs Woods—A declining population base.

Mr Hillard—And a declining population base also.

Mrs Woods—Clarrie and I did not attend the southern trip that is referred to in the submission but, as I understand it, the householder levy in Victoria was implemented to help to assist catchment management. It is a lot easier down there where you have a lot more people. Here in western Queensland, there are people who are struggling to pay the rates they have. So the issue is how we progress involvement in all of these things. If you mention levy, local government do not want to levy the ratepayers for this; they have their own hassles to worry about. We need to talk. As Clarrie said, we need to have more dialogue. We need to actually sit around the table and talk about the Integrated Planning Act with them as the agenda—just that; nothing else—and try to get those issues thrashed out with local government so that they do not perceive catchment management as a threat. Perhaps ‘threat’ is too strong a word. They need to feel comfortable. We all need to feel comfortable. Local government and us need to feel comfortable with each other. I think that we have had that more comfortable relationship, but with the Integrated Planning Act coming in over the past few years I think that we need to review our comfortableness, if you get my drift, and just revisit it.

Mrs VALE—I can imagine that if a regional strategy committee actually recommended a particular project for funding and that did not really suit the priorities of the local council, there could be some friction that could be generated there.

Mrs Woods—Theoretically, that project before it was written should have approached—

Mrs VALE—Should have been—

Mrs Woods—And they do. In many cases, they do. In many cases in the Queensland Murray-Darling we have excellent support from local government. Do not get me wrong.

Mrs VALE—No, I understand that.

Mrs Woods—But I think that there is room to improve it.

Mr Hillard—We have a situation where the new chairman in our catchment is the local shire senior engineer. So we have a very distinct link there. We also have had on the committee shire councillors for the term that we have had it.

Mrs Woods—And we have three local government representations on our regional committee that we sit on. So the linkages are there, but I think that they can be improved.

Mr JENKINS—Two or three weeks ago when we were in Gunnedah this question about the Macintyre was raised. There, my very sketchy notes prompt me that the suggestion was that they were saying that there was a need for compatible state legislation. I would have to make the observation that they are so far apart at the moment that that might be hard. What do you think the types of solutions are?

Mr Hillard—If we go into what we have been doing over a period of five years and with two changes of government on both sides—we thought that we had it bedded down

reasonably well and then you get a change of government so we had to start again. That went on and that has gone on for some time. In the last few months we have got an interim committee. We have got support from the agencies and we have support from both ministers, as I understand it. Agencies on both sides of the border are talking and they are fully supportive of it. So hopefully we have been aiming at having a common committee for resource management in the valley, because it just does not stop at the river. What happens on one side affects both sides.

CHAIR—New South Wales has a Native Vegetation Act. Do you want that?

Mr Hillard—Not the same, no thank you.

Mrs Woods—We are just trying to thrash through our own Vegetation Act at the moment.

CHAIR—I dare say that that is what Harry is getting at. They would still be different, would they not?

Mr Hillard—There will be differences. There is no doubt about that and we will have to live with the differences, but if we can get a much better combined effort and we can live together—

Mrs Woods—It is the effort of strategic planning that we are on about. In our border rivers cross-border committee, New South Wales is actually going through a NHT project to provide a catchment planner who was originally to do the New South Wales side of the catchment and stop at the river. Now that catchment plan will incorporate our border rivers catchment plan—not as it is; it may need to change, but whatever happens it will be a whole-of-catchment plan. Conversely, Queensland's catchment coordinator, who used to stop at the border, is now going to be looking after the Macintyre Valley on the New South Wales side. Just that in itself is a huge achievement. It is solely dependent upon NHT funding which is a bit of a worry. The will is there and so is the money at the moment, but you wonder what will happen five years down the track.

Mr JENKINS—In the revised submission and in your opening remarks, you have emphasised that catchment management went just beyond water. We mentioned vegetation management. As I understand it, here in Queensland there is a radical sort of dynamic going on, although I thought the Queensland government this morning did not really say where they had gone to. Anyway, how do we get a more constant approach, given that you have those problems of governments changing their direction?

Mr Hillard—With respect to the water, our belief in catchment management is that the water is only the result of what happens in the catchment. So the catchment starts right at the top. Our belief is that it is spread all over the catchment. The natural resource management has got to cover the whole area, not just the rivers. When you talk of catchment management, it disfranchises a lot of people, because they believe that if they do not live on the river, they are not part of the catchment. Getting that message through has not been easy. Even though they might live up on the top of the ridge, they are still part of the catchment

but, because they do not live on the river, they feel that they do not have anything to do with the catchment, which is totally wrong.

Mrs Woods—That is an education and awareness issue. Without having access to a program of public education in Queensland at a regional level, at the Queensland Murray-Darling level, it has been difficult to deal with it. Land use planning and land management—

CHAIR—Is there a subconscious fear that somehow they will be drawn into some part of the cost? Is that part of the problem?

Mrs Woods—I do not think that people in the upper areas see that it is relevant. To a certain extent there is wonderment as to what these catchment management associations are and why they are there. These are some of the things that we need to revisit. What was suitable for 1993 is not necessarily suitable for 1999. There are different players out there. Some of the older players have been sold up and moved on and we have corporates out there looking over the fence and saying, ‘Who are these people?’ We need to address all of those things as part of a continuous revision of where we are at and where we are going to try to enlist broader stakeholder support for what we are doing. Land-holders generally would support our principle. They do not necessarily see directly how it relates to them.

Mr JENKINS—Are you saying that the top of the ridge people have never had that—

Mr Hillard—No, I did not say ‘never’, but they do not feel as involved as the people on the river. They feel that the people close to the river—irrigators and other users of water—are more inclined to be reliant on catchment management than they are. It is, as Mary said, an education problem.

Mrs Woods—It is an ownership problem.

Mr JENKINS—Can I explore the issue of vegetation? I understand in Queensland there was some hope that the vegetation policy might replace tree planting and not include it?

Mrs Woods—Tree planting away from the coast is a difficult issue. There are plenty of land-holders who are still planting trees, but the salinity audit highlighted the importance of the fact that, with respect to land use in the more arid western areas of Queensland, the causes of salinity can be many and varied. Clearing the country, despite what some people might think, is not the only contributor to salinity. There are contributors to salinity in Queensland other than just clearing country. One of the major benefits of this whole vegetation management issue will be how the government sees fit to include the community in addressing it. That is the issue. They are trying to get right the balance between what we need to keep, how we encourage people to keep it and how we compensate them if they are losing viable land. That balance between the government and the community with the whole vegetation management issue is the tough one that they are trying to nut through, and it is not an easy issue at all. But the community needs to feel respected. That is happening a little better at the moment than it has in Queensland.

Mr Hillard—There is another aspect of tree clearing that a lot of people do not realise. Just because you pull the timber does not mean that you have cleared the timber. Regrowth

will come back thicker than the original stand. In quite a lot of the country that has been pulled the regrowth is thicker than the original timber. Even though they knock it down this year, in five or 10 years' time they find it is just as thick as it was before.

CHAIR—That can sometimes add to erosion, can it not, because you do not have grass cover?

Mr Hillard—When you pull the timber initially, you increase grass cover. When the timber comes back, if it comes back thicker, the grass cover falls away. But you have timber and roots and what have you.

Mrs Woods—That is why regrowth is such a huge issue in Queensland. The other issue for vegetation management and the Queensland government is how they are going to deal regionally with community groups and whether they are going to allow it to be regional. We would like to see the guidelines for timber retention and management done on a catchment basis. They are still working through that.

Mr JENKINS—The questions about community capacity and capacity building go not only to management and administrative issues but also, as you have illustrated today, to that education and training aspect. I am assuming that in the four catchments that make up your committee there is fairly advanced capacity for the nuts and bolts issues to be addressed. I might be jumping to a conclusion there. Perhaps if we were looking at capacity building in your area, it would focus more on community education?

Mr Hillard—You are preaching to the converted with the Queensland Murray Darling Committee, because they are the top people out of each catchment. Then they have to take it back to their catchment and push it from there. That comes back to a catchment problem. Even though there is certainly a place in the regional strategy for education, a lot falls back on the community members of the catchment committees themselves to assist in the education.

One point that I would like to pick up on from this morning was that a lot of the natural resource projects are aligned to a political timetable and, unfortunately, not a timetable in which there can be practical results. A lot of changes may take 20 years or longer to make any large difference. If you are trying to get a short-term result on short-term funding, that is not the best way to go.

CHAIR—Politics is a strange animal.

Mr Hillard—Yes, I realise that. If you are in for a three-year term, you want a result in three years.

CHAIR—I agree with you. In natural resource management, you cannot do that. Thank you very much.

[2.15 p.m.]

HOOPER, Dr Bruce Peter, Director, Integrated Resource Management Research Pty Ltd

CHAIR—Welcome, Dr Hooper. I understand that you have not been able to give a written submission, but you are willing to make a statement to the committee.

Dr Hooper—I have a written submission that I think you will need to look at as I talk.

CHAIR—Thank you, and the committee resolves that the statement is accepted as a submission.

Dr Hooper—I thought I should provide some critique of catchment management in Australia with respect to the terms of reference of this inquiry and suggest to you a way forward for catchment management in Australia. I will run through this paper very quickly to highlight its contents. I appreciate that it is difficult to read 15 pages briefly. As you can see, it is written in seven sections. The first section of this paper introduces who I am and my previous experience in catchment management. You will note that I have done work throughout Australia and overseas looking at the issue of implementing catchment management. The second section talks about catchment management. I have given a very brief historical perspective on that. Secondly, I have talked about how catchment management has been thought of in Australia—and I think there are primarily two different perspectives. One is looking at a catchment as an integrated ecological system which is a product producing system for human consumption and conservation. A second visualisation, if we want to use that term, of catchment management is to look at it as a collaborative consensual decision-making exercise in terms of collaborative planning in natural resources.

In 2.3 I have defined ‘catchment management’ definitions, and I have given my definition of what catchment management is. I am focusing primarily on this as being a form of strategic decision making in natural resources. As I mentioned elsewhere in this paper, I see that this is not about coordinating Landcare activity primarily; it is very much looking at the big picture issue of large-scale river basin management. In 2.4 I mention that in Australia we have moved towards the acceptance of a collaborative approach to do that.

In section 3 I highlight some five years of research and consultancy work in catchment management and, through the bullet points, I have tried to summarise some quite larger documents regarding some of the critical elements of catchment management not being implemented. There is not really the opportunity here to elaborate on all of those. I refer you to the AACM and the Centre for Water Policy Research document produced for DPIE in 1995-96. AACM is now Dames and Moore Natural Resource Management. In the second article there, which is in a paper that I have written with Geoff McDonald and Bruce Mitchell, of which I have a copy—and I think I have sent that to you; I have a separate one if you need it—we have identified what we think are the 10 key hindrances to implementing this coordinated approach to resource management. We go on in that paper to identify some real opportunities to increase its implementation.

You may think that the presentation so far is primarily talking about some of the theoretical dimensions of catchment management. Our work has been based very much on understanding current activity and trying to find real solutions at the national level to implement catchment management in the future. To that end, in sections 4, 5 and 6 I identified what I think are three of the most important problems to be addressed in catchment management, and I would like briefly to go through those. The first one deals with governance—who is in control and who manages natural resource management at the strategic level. In this section, I have given you a detailed description of the preferences of 81 catchment managers whom I interviewed in 1998 in the Dawson and Liverpool Plains catchments in terms of the type of catchment management organisation they would like. In summary, we found from this research that there was great concern, as is noted at the bottom of page 4, that the current organisational structure for catchment management is questionable; that the institutions we have created are weak and uncertain; and, thirdly, that a stronger funding base and a more rigorous approach is needed for the planning of natural resources. At the top of page 5 there are another seven bullet points which explore those ideas a little further. I suggest they could form some of the key issues regarding catchment management, at least in those two valleys. The interviewees in this particular project preferred, as you will see in table 1, to have a form of tribunal as a system to manage catchment management, with a strong preference for the current system as well, which we called a decentralised open system. There is a great concern that there is a need for a stronger management of natural resources in an authority type of institution. In the next set of data on table 2 we deleted scores of neutrality and looked at arguments for and against based on those statements that you can see there. The net result of that is shown in table 3 on page 7. We see that, at least for these particular catchment managers—the sample mentions who they are—there is a preference to have a tribunal and a decentralised open system with some authority functions—in other words, to strengthen the current system but not give it too much power.

The second issue regards catchment management leadership, which is in section 5. I cite on page 8 a number of different case studies where we have examined leadership in catchment management across Australia. At the bottom of page 8—what appears to be critical to catchment management in terms of leadership are those seven bullet points. On page 9—the last key issue in regard to improving the implementation of catchment management is the issue of information management, that is, how to get research in biophysical areas and economic and social research integrated in a way that it assists decision making. This work is the result of a LWRRDC funded project from 1996 to 1999 that I was involved in. The thrust of it is to develop a catchment information system. I will speak briefly about that in a minute.

Lastly, in section 7 I talk about a way forward. Through my experience and that of others, I have put together what I believe is an option for the future of catchment management in Australia. That is built primarily on the formation of a new form of regional organisation which has more power than current catchment management organisations, primarily to harness and bring about improved cooperation between state and local government. On page 10, in the first lot of bullet points, I speak about what that type of organisation needs to recognise. Secondly, I speak about what it should be based on, namely, the first point, which I think is relevant to this inquiry—an enduring national policy, which is required in catchment management.

In the next set of bullet points I raise the possibility of undertaking catchment management primarily through instituting what are called covenants of mutual obligation. In the six bullet points under that, I have defined the critical elements of what these covenants should involve. There are several critical factors to implementing these covenants, and I have outlined those. I will not pursue them now. On the next page, page 11, I have put some work into identifying the components of a catchment management organisation and what it should undertake. These seven components are the critical elements of what these organisations should do. They should have an external independent and transparent auditing process, which is mentioned at the bottom. Lastly, on page 12, I sum up by saying in the second last paragraph that the 'research that I have summarised in this submission suggests that the jurisdiction of this new catchment management organisation should be similar to a tribunal or authority but still have and maintain enthusiasm for grassroots involvement'. I have then outlined three activities, which I think are important for the Commonwealth to be engaged in to form these new regional entities. I am not advocating regional government at this inquiry; I am suggesting that at the substate level a stronger form of regional governance can be achieved, but it will need Commonwealth leadership to do that, although it may appear unacceptable to do that task.

The rest of the material is an extract from the Catchment Information System. The first page—the coloured one—is a copy of my web page, where this material is housed. The second one is two print-outs of detail of the Catchment Information System which I have produced for your reading. The last one is called 'Land types and best management options database demonstration'. What we developed in this project was a web based system of allowing catchment managers in their various forms, as we have defined in the project, to access a commonly and easily accessible web site where they can search for information about the best way to manage land and water in a subcatchment which is congruent to a catchment management organisation's objectives. It suggests a top-down approach, but the best management options identified in this database have been worked through a long and arduous process of discussion with local people. The web site allows criticism of that through a joint discussions facility and those comments can be incorporated back into a database and built back into this same system. It really democratises information and allows ease of access, particularly in rural areas where there is the problem of substantial distance which precludes a lot of face-to-face action. On that point I wish to conclude my presentation on what this submission says.

CHAIR—Thank you. You have certainly given us a lot of information. How do you see your model fitting in with the present financial arrangements that we have and the limited money available for catchment management? Do you think that could work? The funds available are fairly limited.

Dr Hooper—There are two things. You have probably heard before today that the Commonwealth's commitment to catchment management has been very meagre and continues to be meagre. Until that commitment is increased, I think we will find it very difficult to achieve a substantial national approach to this. Secondly, assuming one produces no result, what I suggested here is that even with current funding arrangements the future will have to be, as a study has proved effectively in Victoria, a cost shared basis for catchment management. Particularly with the private sector, it is going to produce a more substantial result. That can only take place when the private sector can clearly see that their

investment produces a dollar benefit. That can only take place when there is more economic research on the impacts of land and water degradation in this country. That has been so poorly missed that it is one of the reasons why the process has not taken place.

CHAIR—You are saying that in the Victorian situation the money is coming from private sources, are you?

Dr Hooper—I am saying it is coming from several sources.

CHAIR—The Victorian government has just reversed the levy down there.

Dr Hooper—I am saying that the model that was in place at least last year and prior to that with the catchment management authorities has a lot of opportunity for it in an Australian context, because they are really trying to shift part of the rehabilitation test if we want a core catchment management at that into the private sector. You cannot, I do not think, achieve any form of substantial win with these people unless you can demonstrate to them the environmental benefits of their investment.

CHAIR—When you say ‘the private sector’, do you mean the landowners, particularly the farmers?

Dr Hooper—I have tended in my work to suggest that the landowners are primarily powerless people in catchment management. The real people you need to work with are the bigger operators in agriculture—the minority who produce most of the product and industry organisations: grower organisations and the like.

CHAIR—You are really saying that, I dare say, the community based process that we have at the present time is flawed; you do not believe it has a chance of success. So we really need to change direction?

Dr Hooper—I think that the current community based approach is very limited in what it can achieve, and I think we have seen plenty of evidence of that. I would be looking at state of the nation environmental indicators to see some beginnings of change after the investment the government has already put in. There appears to be very limited evidence that that statement applies.

CHAIR—The present system is based upon the premise, I suppose—rightly or wrongly—that the only way that you are going to get any results, even if they might be limited, is to try to change attitudes of management with landowners. Otherwise huge amounts of taxpayer money would be needed if you were not going to try to change some attitudes and some land management.

Dr Hooper—I think we do not really need to worry too much more about that. I have done plenty of attitudinal research in my own doctorate and I have reviewed a lot of attitudinal research in Australia and the adoption of sustainable land and water management. I think we can clearly say that the majority—it is over 50 per cent now—of Australian farmers, of which there are only a few left—about 130,000 or so—support a conservation ethic. I do not think it is the attitudinal problem we are dealing with. I think what we are

primarily dealing with, if we think catchment management is all about individual adoption—which it is not; it is part of it—is that we have to look at better entry points for those individuals to partake in a bigger picture of valley-wide catchment management plan.

CHAIR—Say I am a farmer on the slopes of northern New South Wales: I can embrace that motherhood statement of saying, ‘Yes, I support catchment management. I am very concerned about natural resources. I want to do something about it,’ but when I am told that I am contributing to the salinity somewhere else, I say, ‘That is not my problem; I am not involved in that.’

Dr Hooper—That could be a very accurate assessment, too. I think it has to be demonstrated what the individual contribution is. That property right which that person has through crown law or another process has indicated that that person may have a right to use the land in a certain way. If it cannot be shown by good science that that individual has a contribution, then it is inappropriate for that individual to be partaking in a program where they have to provide their own finance to do it.

CHAIR—That is a brave new world for a government.

Dr Hooper—I think it is a matter of what I talk about here—covenants and mutual obligation. I am saying that, if a person has an obligation to participate in a broader catchment management plan, they need to know on what basis that contribution has to be. I think the experience of the Liverpool Plains that both you and I have been involved in has shown that, until that research clearly shows the hot spots, so to speak, of contribution to the problem, it is very difficult to have a blanket-wide approach across a valley to say that we have to have equal contribution.

CHAIR—So is there some possibility of a property rights system whereby someone can be seen to be contributing towards the alleviation of a problem and therefore those who are going to take advantage of that should make some payment towards it? Isn't that a better approach of trying to, I suppose, use the natural greed of the human being—that they are going to get some benefit out of it?

Dr Hooper—This is true, but our discussion is sort of ending up very much into ethics. I am not too sure—

CHAIR—As a politician, I can say to you that, if you try to come down and say to people, ‘Thou must do this,’ or whatever, you will get absolutely nowhere—people just get their backs up and go the other way. You have to use a bit of psychology to try to get around these problems.

Dr Hooper—I am not advocating that approach, though.

CHAIR—Maybe I have missed the point. It seemed to me that you were saying that in some way people's attention must be brought to the fact that they are contributing to the problem, but how do we get around that?

Dr Hooper—Let us take the example of a local government entity which produces sewage outflow into the Darling River. When it can be clearly shown what their contribution is, I think you are in a better position to identify what their contribution is to the clean-up. When you have a diffuse source of pollution, which you have in a lot of grazing and dry land—agricultural land—it is far more difficult to do that. A property rights system is very difficult to define in that context. In that case I think you would have to rely on a different ethic and talk about a broader public benefit and rely to a certain degree on an individual's willingness to participate. But it is still a flawed system.

Mrs VALE—You do not think that perhaps there could be some persuasion from legislation or from statute from state governments?

Dr Hooper—There are groups, such as Greenpeace, that have advocated a far more regulatory approach than I would endorse in that regard. I have done some very specific work in the Goran catchment of the Liverpool Plains. The farmers whom I interviewed in that particular small case study actually advocated a regulatory approach to flood plain management. Why did they do that? It may well be because the issue was so complex they wanted an external arbiter.

Environmental problems almost go in waves. When you are on the rising limb of a severe environmental problem, what we may be actually seeing there is that, because the complexity becomes more and more known and is so hard to understand, what people want to resort to is a simple solution where they want an external regulator—a bit like a tribunal, in a sense—such as this: we would take evidence and then we would make a decision.

CHAIR—Who would be the people on the tribunal? How would that work? Would they be land-holders like a land board or something like that? How would that work?

Dr Hooper—There are many different models that one could pursue. One could go very much into nearly a quasi-judicial system to do it. QCs could be those people on the tribunal—like a land tribunal in that sense—or you could broaden it and have a lot of different representation. I would want to see in any catchment management organisation, whether it is a catchment authority, a tribunal, a commission or another form, that people be appointed to that on a skills basis as opposed to a representative model, and I make that point in the paper. You really need people who understand what the resource management problem is. You need to understand, particularly in rural areas, what the context is to find those solutions. Sometimes if you resort to a purely judicial system of external legal people coming in, it is a flawed system from the start because they have to spend so much time being educated.

CHAIR—You would have to have some statutory base for a tribunal, wouldn't you?

Dr Hooper—That is what I would suggest. It is important to have that, yes.

Mrs VALE—It is a little bit like the Land and Environment Court in New South Wales. It actually does have particular assessors who have an expertise in planning or architecture.

Dr Hooper—That is one option in that state. When you are looking at the Commonwealth, you really have to review environmental and natural resources legislation nationwide—state by state—to identify what the opportunities are for the type of approach that I have suggested here, because it is not going to be a blanket approach that is going to suit every state's jurisdiction. It will be difficult for the Commonwealth to do that, too, because it will be seen as intervening in state affairs.

CHAIR—I took you as meaning that you wanted to fund either local government groups or local groups. I took it to mean you were wanting the federal government to do that. We would have some problems with the Constitution there, wouldn't we?

Dr Hooper—I am not talking about the federal government directly intervening in local government affairs, no. I am talking about some partnership between the three levels of government to institute these organisations—these regional catchment management organisations. Our county councils are one option you could talk about, but you would have to look for an external funding source.

CHAIR—If you wanted to do it Australiawide, you would have to go through COAG to get agreement from the states.

Dr Hooper—Precisely. It would have to come from the top, obviously.

Mr JENKINS—The type of science and research that you think is required—where is that best done? Where is that best controlled? Where is that science controlled or instigated from? Who should have lead ownership of that?

Dr Hooper—For what purpose?

Mr JENKINS—For the assembling of the basic facts, as you say, so that people then can understand their role—where they fit in, what their responsibilities are, what their efforts should be.

Dr Hooper—Just to make sure I understand this question, are you talking about the type of research needed, who should do the research or where it should be based?

Mr JENKINS—Probably who should coordinate it, who should organise it, who should have the responsibility that it is done.

Dr Hooper—That is a very good question because one would immediately think of the Land and Water R&D Corporation. It seems to me that perhaps there needs to be a pretty substantial change in the framework of LWRRDC if it was to fund catchment management research, particularly in this whole area of institutional analysis, which is the thrust of my submission. Sure, they have just started the new program in that. What I am suggesting here, especially in that second last bullet point in the submission, is that what we really need is a national institute which is involved both in research and in training and in the whole process of management of catchments—in other words, there is a Commonwealth initiative in that area.

Mr JENKINS—Would that aim to train up coordinator positions or technicians?

Dr Hooper—I would be targeting professional people at the sort of mid-level in state government. I would be looking at the lower part of the SES in terms of the natural resource management agencies. I would be looking at CEOs in local government, both in rural and peri-urban areas. I would be looking at people who are catchment management chairs in the current system of catchment management in Australia. I think they are the people who you need to bring together and equip in a whole range of new skills that are required in terms of coordinated approaches to catchment management.

This, of course, does not assume that the current approach to catchment management—what I call the voluntary approach—is really the most effective. An example is the work I did in the Hawkesbury-Nepean Trust. When I reviewed the trust with Bob Junor and John Burton several years ago in 1996, I think one of the things that really stood out was that the model that they had there had a lot going for it because they were targeting their influence on local government—20 or so local government entities in the Hawkesbury-Nepean Valley. Their structure was flawed because they were reporting to themselves, which was a problem.

It was quite apparent to me that that organisation had very little external support to do this work. I am not talking about financial support; I am talking about intellectual support—training support. Where does a catchment manager in an organisation like the Hawkesbury-Nepean Trust go to get training to improve his or her skills in coordination of local government CEOs from a natural resources management point of view? I am suggesting this work needs to be done here in Australia. It has to be built with a number of other things, such as information systems that I have suggested here, and leadership training is a critical thing.

Mr JENKINS—For the types of information systems that you are talking about, would it really need not only the system but to go back a step to make sure that the baseline information is there?

Dr Hooper—Yes, it does. The system that you see there before you was developed dependent on the material in the Liverpool Plains, and in the Dawson Valley it was already there in terms of catchment management resource. It is also dependent on the players in catchment management undergoing some form of analysis of what their information needs are so that this particular approach can be tailored to meet their need. Thirdly, as I have suggested here, it is a catchment information exchange program. It is not just you giving people some software to play with; it is a whole program of teaching people how to use the web basically to exchange information.

Research has shown that in catchment management, the way people exchange information about research and managing land and water resources is through word of mouth. Even at the highest levels of government it is done on the phone, it is done in the pub, it is done on field days, it is done at conferences—and it is an extremely powerful mechanism. We are not trying to replace that; we are saying that you have to have a central point where that information exchange can take place. It can be filtered so that you remove problems of terrible stuff going on the web and also slander and the like. But it also then becomes an information repository which has some stability about it; it just does not

disappear every time the government changes. As we found in our information management, we are using a lot of the research and the management capability in catchment management because of change of staff. We need a central information bank of that stuff.

CHAIR—Is some of this experience available through the Tennessee Valley Authority? They have been involved for quite some time in this sort of management, haven't they?

Dr Hooper—Yes, they have. I have worked with them briefly. This has not been a lot of work. They were actually looking for Australian input into their programs, which is interesting. Their experience has been very much out of an engineering mind-set—a multi-objective form of rational planning. Only recently have they gone into what I call a community engagement form of approach. Having said that, they are now moving right out of this work and they are primarily seeing themselves as an international consultancy organisation and a producer of electricity.

CHAIR—Have they been successful, do you think, in managing their resource base over there?

Dr Hooper—In my opinion—and it is only my opinion that I give here, and it is limited in its observation—in terms of command and control methods, they appear to have certainly rejuvenated parts of some of the more economically repressed areas of southern-central USA. In terms of soil conservation, they have certainly changed the nature of soil erosion in some of their watersheds. So if you want to take those as indicators, yes, they have been successful in that regard. But the question is: is that model still relevant?

CHAIR—It was funded by a levy, was it not? I understand there was a fair bureaucracy involved. Is that correct?

Dr Hooper—I think so. I think they are funding themselves primarily now through the sale of electricity, because they are primarily a privatised organisation. They are actually disposing of their natural resource management programs. They are kicking them right out of TVA, so in the future we will not see that sort of work at all.

I think another model that is appropriate to Australia is in relation to the Fraser Basin in British Columbia. That model has developed high-level strategic agreement with foresters, city authorities and farmers, primarily through roundtables. I think that model is more appropriate for us to talk about in Australia.

CHAIR—What is the win-win in that? Obviously the land-holders get something out of that particular arrangement, do they?

Dr Hooper—They got the benefit of federal and state government funding for soil conservation works on a microscale.

CHAIR—Do you have any questions, Harry?

Mr JENKINS—All I can say is that I think there are a lot of questions. It is very challenging.

CHAIR—I think you have taken us off on a tangent. It is totally different from what we have been dealing with. Obviously there is a lot of food for thought.

Dr Hooper—What I am suggesting is that I think the current system is primarily flawed. All I am trying to do is take you to a next step, where we can see the great motherhood stuff can actually become a reality. I have just finished a vision for Australian water resources. That was a job for UNESCO. I had input from Dennis Ayliffe and others at AFFA. What they are trying to do there is really get a strategic vision statement. That has an action plan to implement that as well. In that particular vision statement, what is seen as really the critical process to implementing improved water resources management in Australia is to use integrated catchment management to do it. The problem is: how do you get the process right? That is what I have tried to focus on here in terms of process improvement.

CHAIR—I suppose when we digest some of this we may come back to you. I come from the position of being in government for a number of years. Politics is the art of the possible. I suppose there is a lot of getting people on side to make sure they understand exactly where you are trying to go and getting them going down the same track. There is a fair bit of work involved in that, I suppose.

Dr Hooper—I agree. I think what I put forward here is a challenge, really, to this commission of inquiry. What I would like to do is, if it is suitable and appropriate to be engaged further in some way by you to do this. I think this is done incrementally. It is not done by just a massive change. We have to test what I have suggested here in terms of its authenticity. I think there are a number of elements of this approach here, particularly what I call the 'smell of regionalism', which will be seen as being very dangerous by some people and warmly accepted by others, particularly some rural people in northern Queensland.

CHAIR—Dangerous because you think of politics—

Dr Hooper—Perhaps because it challenges some of the fundamental arrangements between the Commonwealth and the states. I am saying that it can be got around. As I said before, I am not trying to advocate a new form of regional government. What I am really looking at here is to identify how you can get collaborative entities of local government, the private sector and state government working together. It has been done in other places with limited success. I think we have to work it out here as purely an Australian thing.

I also just briefly mention—I have not gone into any detail here—that in the province of Ontario in Canada some very interesting work has been done on stormwater management, from the site up to the watershed scale. It is primarily coordinating local government initiative on a watershed basis. There is another model there which has a lot of benefit that we could draw on, too. If you feel like you want to engage me further in this, I would be very happy to do it.

Mrs VALE—What agency in Canada is doing that?

Dr Hooper—It was the Ministry of Environment. I think it has changed its name.

Mr JENKINS—So the regions you are talking about would be conglomerates of catchments? Do they have to have a physical boundary? Do communities of interest still play a part in the way that you envisage it?

Dr Hooper—It has always been a really tricky thing to define a region in natural resource management, even when it comes to water. While you think that in the more humid areas it is more appropriate to talk about water basins at the scale of the Namoi or the Fitzroy or the Loddin-Campaspe sort of scale, when you get into the subhumid areas I think it is more appropriate to talk about integrated resource management, because it is quite inappropriate hydrologically to talk about water flow as the locus of control. As a social scientist, I would then say, ‘Hang on. Where are the real economic drivers of that region and how does that spatial entity that you have defined—say it is a river basin like the Fitzroy—operate, or how does the economy of that river basin actually operate? What are the social structures there? How do they interact?’ Let’s define those, understand those and then overlay them with the water catchment or the bioregion you are talking about, and then start to get the mix worked out on that basis. Once you have that, you have a far better ownership of the area of management.

Mr JENKINS—I notice that one of your dot points is the lack of integration of economic development with the ecosystem management.

Dr Hooper—That is a bit of a snapshot in three words type of thing. But we found a fundamental problem in that study in 1995. Let’s take the Fitzroy basin. We did not study the Fitzroy then but, thinking about it now, you could develop a catchment management strategy which would be quite separate from a water allocation and management planning process going on in Brisbane. Then you could have some other private sector investments such as building a new Dawson dam, and the whole thing just does not come together substantially. So they are the economic drivers but that is not linked into catchment management. I was always of the opinion, from a very early stage, that catchment management was about the management of water resources on a valley-wide scale. A lot of that seems to have disappeared.

CHAIR—We started off talking about money, which is usually the root of all evil. Have you ever done any work on quantum? What sort of money would we be looking at here? We obviously have to do it over an extended period of time, but what sort of budgetary allocation would you be looking at?

Dr Hooper—For a catchment management organisation?

CHAIR—Obviously Australia is a big place, but the federal government is involved with Australia. There would be jealousy amongst the states. They would all be wanting their share of it.

Dr Hooper—Let us look at some examples. The Hawkesbury- Nepean Trust can operate on about \$2.5 million to \$3 million, but it is a direct Treasury swap across. That, to me, is pretty substantial money. They have a staff of some 20 or so. If you were to multiply that nationwide—if you are talking about that scale—you would look at how many catchments have been identified in New South Wales and then start building through the nation and try

to do those calculations—we are going to get up to \$500 million pretty quickly. But then one would have to, I think in terms of cabinet, justify the spending of that money compared to financing a new set of hospitals and set out the tangible benefits. I think we have to demonstrate that financially—that is where the demonstration has to be undertaken. Unless the economic analysis has been done nationally and the remediation works in the future costed into the current price of catchment management, I do not think there is an argument yet. Do you know what I am saying there?

CHAIR—Yes. I just wonder how you convince Sydney to spend \$500 million on isolated Australia, in most instances.

Dr Hooper—I think that is the critical issue. In Brisbane it is not a problem, because they spend all their catchment management money in this area and we are all taxed to do it through our local council levy. If you start moving into a rural area, I think you have to make quite a substantial case for—

CHAIR—Take the Murray-Darling. The population base of the Murray-Darling is fairly small, really, yet that is where a lot of our environmental problems are. I dare say it would have to be a very good selling job by a politician to convince the public that we should be spending these vast amounts of money out there when they would probably see Royal Brisbane Hospital or Prince Henry Hospital being a more important issue to them.

Dr Hooper—You have been working on a model, though, that the government would be funding all of this. I am not suggesting that government would necessarily even have to be the prime funder. A lot of this could be funded even through private sector investment, particularly through getting greenhouse carbon trading emissions built into the program. That is a real option there.

CHAIR—It is initial. If we go ahead with carbon trading there is certainly an initial advantage, but it is limited.

Dr Hooper—That is yet to be seen.

CHAIR—If the Americans decide that there is going to be a market, there will be a market, I suppose. Thank you, Dr Hooper. As I said, after I think about this for a while I might be interested in coming back and just talking about implementation, how it is possible, et cetera. Thank you very much.

Proceedings suspended from 3.00 p.m. to 3.20 p.m.

KERR, Ms Ursula, Principal Program Officer, Catchments, Brisbane City Council

BARLEY, Ms Rachel Jeanne, Senior Waterways Program Officer, Brisbane City Council

CHAIR—We have received a submission and we have been through it. Would you like to make an opening statement before we ask questions?

Ms Kerr—Rachel Barley is the author of the submission. Rachel works in my team—the catchment planning team. The Brisbane City Council, as you are aware, is the largest local government authority in Australia. We have up to 900,000 people in our municipal area, administered by one local authority. In physical terms, we are at what's called the bottom end of the Brisbane River catchment. We have within the city 33 local catchments. I have a map here to outline local creek catchments that are contained within the Brisbane City Council area.

CHAIR—We were at the head of the river yesterday.

Ms Kerr—That was quite a contrast, I imagine. The Brisbane City Council underwent a major restructure about two years ago to meet up with new requirements and general government reform. As part of that restructure, it formed a purchaser program called the waterways program, which was put together out of previous employees in the works department, that is, the people to do with drainage, the engineering component of the works; people to do with planning, from the planning department; and also people interested in the natural environment. So the council formed a multidisciplinary team, which is now administering the waterways of the city—as a purchaser as against the provider roles that are in the balance of the council, and other people provide the services. We advise council on policy issues, on budget matters and so on to do with waterways.

CHAIR—So you are not actually within council? You advise council?

Ms Kerr—We are part of the administration of the council, but we advise our political masters on matters to do with waterways policy.

CHAIR—It is a different catchment from what we have been dealing with, because it is such an urban catchment. We did have a look at the Parramatta River and the Georges River. That is something similar down in Sydney. Where we were yesterday, of course, is very much rural—at the head of the river. How do you coordinate the catchment management committees at the head of the river with the vast population down here? How do you get dialogue between those groups?

Ms Kerr—There is a group within state government which calls itself the Brisbane River Management Group, which is basically a voluntary association of interested government departments and local governments, as well as community groups within the Brisbane River catchment.

CHAIR—That is within state government?

Ms Kerr—Within state government. Brisbane City is a contributor to that group in terms of sending personnel and staff to committees. It also contributes financially to the running of the group. I would say it is probably one of the leading local governments within that Brisbane River Management Group.

CHAIR—So you take your water from the top end of the catchment? Is it just the Brisbane River or do you get it from other rivers as well?

Ms Kerr—Brisbane takes its water from the middle ranges, if you like, of the catchment—just below Wivenhoe Dam, at Mount Crosby Weir. That is the main source of water for Brisbane.

CHAIR—So that is critical for Brisbane city?

Ms Kerr—Absolutely vital.

CHAIR—That particular dam, of course, would have a management program in the catchment area. The catchment area of the dam would be protected, would it?

Ms Kerr—Yes. That is through the South-East Queensland Water Board. That runs, basically, regulation of catchment land use within the dam catchment. In fact, it runs the dam itself in terms of the releases of water from the dam.

CHAIR—Are there any agricultural practices in the headwaters of the river that affect the quality of the water in the Brisbane River or affect the city itself? Are there any problems in those areas that you need to address?

Ms Barley—There are no problems that we can tackle directly, because there is only a very small and trivial amount of agricultural activity within the Brisbane City Council boundary.

CHAIR—But not within the catchment?

Ms Barley—Yes, within the catchment as a whole, I think the treated water quality in Brisbane is very good. So the problems that we receive, if any, are manageable. We are well within WHO guidelines.

CHAIR—So that is tested?

Ms Barley—Yes, I would say.

CHAIR—Who does that? The Brisbane City Council?

Ms Kerr—For the water supply, yes. To respond to the question of the quality of the water in the river, there are certainly agricultural practices that impact on the quality, particularly in the Lockyer Valley, which is a highly intensive agricultural area. The subject of the influence of agricultural practices on water quality is currently being studied in a very sophisticated regional water quality strategy which is, I think, a 10-year project which is

funded through NHT and contributions from local governments and state agencies. This study has just commenced its third phase of work, which is looking at the upper catchments of the Brisbane River, in particular the question of agricultural contribution to the sediment loads in the river downstream.

At the moment, we are not sure about the proportion and the sources of the sediment from the various sources in the catchment, because the debate is: is it mainly urban building activity and clearing for urban purposes or is it agricultural? The jury is still out on that. That work has just started.

CHAIR—What about waste water management in the city itself as far as the quality of the water that is going into the river?

Ms Kerr—The city, of course—

CHAIR—Doggie do, et cetera.

Ms Kerr—Do you want to talk about sewage treatment?

CHAIR—Sewage treatment as well.

Ms Kerr—The sewage treatment plants are currently undergoing upgrading, particularly Luggage Point, which is the major sewage treatment plant for the city.

CHAIR—Up to tertiary?

Ms Kerr—No, it is not entirely tertiary; it is an upgrade to remove more nitrogen, which was found to be a key influence on water quality rather than phosphorous, which was the initial suspect. I think that the first phases of the Moreton Bay Waste Water Study showed that it was nitrogen that was the main problem. The council is investing \$17.4 million this year to upgrade their sewage treatment plant.

In the other areas of community behaviour and dog issues, the council is very active in raising community awareness. We have an intense program, which we call Backyard to Bay, of advising schools, community groups, the general public and river and creek festivals and so on, on the dos and don'ts of stormwater. I have brought you some examples of our education kit, which is popular with the ratepayers. Certainly, it is an attempt to make people aware of the fact that what they do in their backyard will affect life in Moreton Bay and in the river.

CHAIR—My two colleagues are city people. They might want to ask some questions. Do you want to follow up on any questions?

Mrs VALE—No, not at the moment. I will probably think of something.

Mr JENKINS—When you describe your team as a multidisciplinary team, what disciplines have you brought together?

Ms Barley—Civil engineering, physical sciences for water quality aspects, town planning, environmental studies and ecology. I myself began life as a zoologist and I have moved several steps to where I am. What else? Marketing.

Ms Kerr—That is about it on the professional side.

Ms Barley—I think that covers it.

Mr JENKINS—So when it is described as waterways, is it about the wider sort of environmental thing more than just the water?

Ms Barley—That is right. I guess that it is trying to look at every aspect of the streams and creeks within the city for the issues that the urban community associates with them. So that would focus on the recreational and cultural use of the waterway itself and the corridor along it—flooding and flood control, stormwater drainage, and water quality as well. I think before the restructuring, those aspects were tackled by separate sections within the council. It might have an environmental group that was trying to promote riparian vegetation, for example, and an engineering group that is visiting, trying to clear vegetation so as to improve flood drainage. The philosophy of cutting the cake a different way to bring those to work directly was through a very much increased need to resolve those issues between us and to act in an integrated fashion. I think that it is proving its worth.

Mr JENKINS—Are there urban development issues, like new urban developments?

Ms Barley—Certainly, yes, there are; and affecting waterways, yes. The issue of new development on almost all of those issues is, I think, very much part of the town planning concerns.

Mr JENKINS—How do you have input into the town planning process? Have you set guidelines and policies?

Ms Barley—Yes, it operates on two layers. Firstly, the role of our group is in developing the policy and those components. Currently, the town plan will be a new city plan within a year and that will guide decisions on development applications. Then as a second layer, while the routine applications are handled by development officers who then use those codes and guidelines themselves, in more complicated cases or where a policy call must be made, they can refer those applications back to the group and then we can make an interpretation on that specific case. I think that a third layer will be management's involvement in a development assessment committee.

Ms Kerr—And also the local plan preparation. The council has prepared a new city plan under the Integrated Planning Act, which for the first time has a planning scheme map called Waterways and Wetlands where for the first time it acknowledged that physical feature in the city called waterways. We mapped the corridors, which were derived from various planning studies, as a criterion on the landscape which attracted a certain level of assessment, which was higher than that on a block that did not have a waterway on it. So we have actually managed to introduce waterways management issues into the planning scheme

as a whole. The force of that waterways map is the same as what is called now area designation, which used to be designing maps in our system.

Mr JENKINS—So you are trying to address the future. What about remedial works on past urban developments? For instance, Pine Rivers indicated in their submission the types of things that they would have to do to go back and remediate and do retrofits and things like that. What sorts of strategies does Brisbane have for that?

Ms Barley—On water quality first, as part of our urban stormwater management strategy, yes, we are examining the suitability of sites for installing what we call SQIDS—stormwater quality improvement devices. We tried to find a U, but we could not. We have constructed 25 devices to date with a rolling program—there will be more coming on line—and in various forms, mainly to remove litter and gross pollutants from the stormwater entering the creeks. Also on water quality, the community education program that Ursula referred to—Backyard to Bay—forms an aspect of that as well as trying to solve the problems at source.

There is also the issue of public access to the waterways. Unlike some states, Queensland does not have public ownership of all river frontages. That does not occur automatically here. So while there is some very valuable public land along the river and the major creeks, there are also large areas which are totally privately owned, right down to the waterline. But that is also a matter where we are buying back land when we can. Sometimes as part of a development approval it becomes a condition of approval and sometimes through straight-out acquisition. So we have a goal, particularly along the Brisbane River, of increasing public access to the waterway.

Mr JENKINS—You mentioned things like revegetation. What sort of funding other than council funding do you attract and from where?

Ms Kerr—There has been NHT funding to the 10 or 12 community groups that call themselves catchment care groups within the city. That funding went particularly towards funding coordinators for those groups. The moment you have a coordinator in a volunteer group, things really happen. These people are then able to get support from council for the supply of material as sort of in-kind support—plant, machinery and sometimes a bit of labour from the works depots. So that has been the main source. The council also has a bushland levy where each ratepayer pays \$30 a year extra to protect the bushland within the city. That amount of money is largely used for bushland acquisition, and we also focus on waterways when we can. But a portion of that, about half a million dollars a year, goes to a group called Habitat Brisbane, which is a set of about 70 groups of volunteers who are very keen to rehabilitate creeks, weed bushland and so on. So there is that support directly from council to Habitat Brisbane groups.

Mr JENKINS—The bushland levy is on all properties?

Ms Kerr—Yes.

Mr JENKINS—Commercial? Residential? The whole kit and caboodle? That is a flat \$30?

Ms Kerr—Yes, that is right. It is willingly paid, I understand, by the people of Brisbane who value their bushlands.

Mr JENKINS—The catchment care groups: who actually auspices those?

Ms Kerr—The waterways program. The catchment care group started through an initiative of preparing catchment management plans as we define them for the city's purposes on a rolling program, which is defined under our urban stormwater management strategy. Just to take one step back perhaps, under the Environmental Protection Act councils are required to prepare management strategies for urban stormwater. The BCC has chosen to do that in the form of a hierarchy of plans—catchment plans, stormwater plans and then local stormwater plans—and committed itself to undertaking a rolling program of the catchments in various levels of need.

As part of the catchment plan preparation, we call for volunteers to assist in preparing the plans from the local catchment, and people become involved in undertaking reviews of work or initiating work on the plans. Once the plans are finalised, we then encourage groups to stay with us, if you like, and participate in the implementation program for the plans, which in some cases means that they themselves can initiate work by putting it to our manager and then through the budget process or they themselves do physical work which we support or they can influence other actions, for example, capital works that might be brought forward to suit the time frame that the community has identified. So people feel quite involved in doing this work. We meet with them as council officers once every two months to discuss priorities and activities and events.

Mr JENKINS—Are they part of the priority setting process?

Ms Kerr—Yes.

Mr JENKINS—The council does not have a set of priorities and these catchment care groups have a set of priorities; they become the one set of priorities?

Ms Kerr—We try to.

Mr JENKINS—Are they aligned?

Ms Kerr—Over time we have found that, as people in the community understand the budget process better, they increase their understanding of what is possible and what is not. That has been the feeling.

Mr JENKINS—You said that there are 33 local catchments and there are only 12 catchment care groups. That makes 21. Have I got it right? It started with 33?

Ms Kerr—Yes, that is right. We started only three years ago.

Mr JENKINS—That leads me to my next question. I accept the time frame aspect of it. What about the capacity of local people within these catchments? Are you confident that you can keep rolling on and over time be able to put together the same sorts of catchment care

groups right throughout the municipality, or will it require some special effort to bring people up to speed to be able to be involved?

Ms Kerr—I think it requires a special effort. It certainly requires an effort from senior management in council to be seen to be listening to those groups. We have the support from our manager. He chairs the citywide community group, which engenders a lot of confidence, because he is also the person who overviews the budget and makes budget submissions to council. I personally feel that we need to look at diversifying the groups, which at the moment have a very strong environmental and green focus. In two of the catchments we have strong representation from industry—local businesses—which is a completely different flavour of group, but it certainly adds to the diversity and credibility in the council's eyes. I personally feel that we as officers need to do a lot more thinking about how we ensure the longevity and renewal of those groups.

Ms Barley—There is certainly no difficulty in generating community interest and motivation. I think the groups function best when they do have support. The roles of the coordinators, be they NHT or Habitat Brisbane funded, are very important to enable those groups to reach their potential. But, yes, the problem for council is more one of being able to service the demand rather than being able to locate it when you want it.

Mr JENKINS—In relation to the urban groups and the rural groups that we have seen on our inspections, do any of the priorities of these catchment plans require action on private land or are they all about works that are public?

Ms Kerr—A number of them require action on private land. However, we would tackle those through our planning provisions; in other words, only when there is a development application forthcoming that requires a change of use would we require a change in action. For the rest of it we rely on the community education initiatives to change behaviours. I do not think there is any other way in which we can do it.

Mr JENKINS—Whilst in rural areas we might be asking people to do something on their land that we hope we are able to demonstrate would have a positive effect for the landholder themselves, more than likely it has not only that positive effect but also a public good effect. Are we adopting a different approach in these situations when we are doing it only as an opportunity arises through planning legislation?

Ms Kerr—Unless someone is in breach of a particular local law—for example, if someone does not erect a sediment fence when reconstructing their house extension—the council will issue an order and fine those people. If it is not detected by normal inspection but if a community group points that out, the council will use its regulatory powers to achieve the requirements of the local law. We found the great difference between urban and rural catchment planning to be the fact that the properties are so small in urban areas. In the city there is a commitment to go to medium density housing. We now get blocks, even in new suburbs, of 400 square metres in area. It is very difficult to convince an owner who might have one-millionth of the area of the catchment under his control to do things for catchment purposes. We have to take a much more direct strategy—for example, damage to the environment that they can see, such as soil running off their building site or telling them not to pump out their pool water into the drain. It is those sorts of things that are basically

anchored in the Environmental Protection Act that we would use to change behaviour in a regulatory sense.

Mrs VALE—Interestingly, you were talking about buying back land along the river. I am just wondering about another way of doing that. I come from the Sutherland Shire in Sydney. We have the Georges River, the Woronora River and the Port Hacking rivers. For some time, if a development consent or application comes in to the council for, as you say, rebuilding on a property, council does not buy it but it requires that the land be surrendered. Quite a considerable amount, probably about six metres from the foreshore back, is surrendered. It is not fenced, but it is like a right of way for public access. To all intents and purposes to the original land-holder, there is no fence or alignment. The land-holder still has the use of that, but it means that they cannot build anything that will obstruct the public from walking along that way. With respect to all of those properties, the council intends to have that walkway available right along the foreshore. It does not buy it back; it is just a part of development consent.

CHAIR—It is in breach of the Constitution.

Mrs VALE—It is not buying it; it is just preventing people from actually building on it. It is available for public access. They have been doing that for some time.

CHAIR—Under the Constitution you cannot resume public property without compensation.

Mrs VALE—It is asking for a right of way. That is interesting. I do not know how it is getting around that, but it must be legal or it would have been challenged by now. I turn to the issue of building and development and control plans and water run-off on properties. A major contribution to the water run-off from properties is hard surface areas. Do your development control plans limit how much hard surface area can be put on some of your new subdivisions or, indeed, some of your existing areas? In Sydney there has been an increase in paving. Even lawns are being quarry tiled or paved. It does look nice, and sometimes a certain amount of garden is—

CHAIR—They are doing that so they do not have to mow the lawn. Come on, be honest.

Mrs VALE—Yes, that is true—they do not, but it also provides a nice area. However, it does contribute to the amount of run-off, because that block of land cannot absorb the amount of water that it once did. That eventually ends up in the bay. Is there any Brisbane City Council control plan that aims to minimise the hard surface areas on residential allotments?

Ms Kerr—To the best of my knowledge, that has not as yet been codified. However, there are guidelines for development called ‘Water sensitive urban design’, which are advisory only and promote the idea of minimising paving or having the sort of paving that water can still get through. But the fact that there is more and more paving is certainly pertinent here. The city is growing rapidly both at the fringes and in the middle suburbs, where there used to be many quarter-acre blocks with one house. With council permission,

two or more houses can be put on one block—dual occupancy-type thinking. The amount of paving and hard surfaces in the middle suburbs is of great concern, because we have ancient infrastructure there.

CHAIR—For drainage?

Ms Kerr—Yes, for drainage. The city is flood prone in many places. There is a problem for the future.

Mrs VALE—Do you think that might be one way that the council could approach it?

Ms Kerr—Yes.

Mrs VALE—I know it is just one little problem.

Ms Kerr—But it certainly helps if the regulations are clear on that.

Mrs VALE—It is like the work you are doing on the Backyard to Bay strategy and the requirements now on builders and developers. That is very comprehensive.

CHAIR—You mentioned the fact that the Brisbane City boundaries do not cover the whole catchment. Are there any problems with the other local government areas? Would it be easier if you had control of the total catchment? Do you work well with the other local areas with regard to catchment management?

Ms Kerr—I think council does so through two mechanisms, one being the Brisbane River Management Group, which I mentioned before. Also there is the Regional Waste Water Strategy. Through a volunteer association of nearly 20 councils in south-east Queensland, it has raised funds to supplement the NHT funding to undertake the work. There are consultative mechanisms going on between councils to do this. Also, the individual catchment management plans that might go across the municipal boundary are done in consultation with other councils. We have done work with Pine Rivers, for example, on the Kedron Brook plan and Cabbage Tree Creek. There is also another plan at Oxley Creek which involves Logan City and Beaudesert. So there is a friendly working relationship. But in our submission we made the point that, when it comes to implementing those plans that rely on more than one council to be implemented, there needs to be a further strengthening of the system to enable that to happen and to sort out responsibilities. At the moment, being good friends, councils do not want to tell each other what to do, particularly when the matters concern a rapidly growing upper catchment where there is urbanisation and the lower catchment is experiencing flooding problems. If there is 50 kilometres between the lower end, council would not want to prescribe to the upper catchment council how to develop its own plan.

CHAIR—Would that not cause some problems if you decided that there was a need to spend some money on the upper catchment for your benefit? In respect of your \$30 levy, it would be difficult to spend that money in another council's area?

Ms Kerr—At the moment that is not possible.

Ms Barley—I do not think that has been contemplated at the moment.

CHAIR—Why not?

Ms Barley—We have enough urgent problems within our boundaries that have not as yet gotten onto the agenda.

Mrs VALE—Is the Brisbane City Council the only council that has this \$30 environmental levy?

CHAIR—Melbourne used to have it, I think.

Ms Kerr—I think there are others.

Mrs VALE—I meant other councils within Queensland in proximity to your area.

Ms Kerr—I think Redland Shire would have a similar arrangement. The population agreed to this levy in the early nineties, when even the lay person could see that bushland was being cleared for development and was disappearing at a phenomenal rate. It was a specific purpose type levy—a bushland levy—because it was recognised that we could reduce the rate of clearing only if we had a fund to buy back bushland.

Mrs VALE—Has it helped?

Ms Kerr—Yes.

Mrs VALE—Has it really served the purpose? Is there feedback to ratepayers as to what is being achieved?

Ms Kerr—Yes.

Mrs VALE—This levy is imposed every year, is it?

Ms Kerr—Yes, there is regular feedback.

Ms Barley—A newsletter goes out with each rates notice that reports on, amongst many other council initiatives, bushland acquisition and vegetation within the city.

CHAIR—This huge scar on the environment that is Brisbane puts a lot of pressure on the rest of the catchment. What are you doing about water reuse?

Ms Kerr—We are helping the state government sort it out. We are part of that committee that the Department of Natural Resources, DNR, has instituted on water reuse. Our mayor is very keen to pump sewage effluent back to the Lockyer Valley. I think there will be support to investigate the feasibility of it from BCC. I am not sure how strong we are on reuse on golf courses and so on. It is happening on some golf courses.

CHAIR—Do you have any grey water schemes on new developments? It is difficult for old developments but for new developments you could have dual reticulation.

Ms Barley—I think we are at the research and investigation stage. I know that the Brisbane Water, our supply and treatment and sewage disposal agency, is involved in that. But it is at a level that would best be described as a pilot scheme rather than standard measures at this stage. For example, there are difficulties in that a method developed in a Melbourne or Sydney catchment probably would not translate to Brisbane, just due to the differences in climate and rainfall. We have to start over again on things like grey water reuse.

Mr JENKINS—Your submission makes an earth-shattering statement for this inquiry—an inquiry into catchment management. Your submission states that ‘catchment management has no generally agreed definition and has developed along different lines and different reasons’. Do you want to hazard a guess as to where we should look for a suitable definition of ‘catchment management’?

CHAIR—I think the previous witness told us the same thing, didn’t he? It is like ‘sustainable development’—all things to all people.

Mr JENKINS—No, I think I know what that is.

Ms Barley—I think my honest answer to that would be to say, no, I would prefer not to offer a definition, because I would merely be adding one more to a plethora. With a term like ‘sustainable development’ we all know which ballpark we are in. The difficulty is in being able to precisely compare a product or a process. Given the biogeographical differences and, much more importantly, the statutory differences between regions, the product has to differ.

Mr JENKINS—The other thing that you have highlighted in the submission is the difficulty of exchanging information about what is known about not only catchment management but also natural resource management. Can you hazard a guess about what sorts of things we should be delving into to help improve that situation? In what form do they need to be? Whom should we be pitching at? Obviously, at your level you need it. Do we need to bother making it available to the people beyond catchment care committees or assisting you in putting together the catchment plans?

Ms Kerr—I think it would assist if it went to state agencies as well in recognising the different needs of rural areas versus urban areas. I have been working in this field for some years now. I sense that, within the two agencies in Queensland, the Department of Natural Resources and the Environmental Protection Agency, there is not really agreement between them as to the range and scope of work that should be undertaken by local government and the range and scope that should be undertaken by them.

So it is really a little bit in limbo at the moment, I sense. Basically Brisbane City devised its own system because there were no guidelines available when the environmental protection policy for water came out from the state. There was a statement of one line saying that each council shall prepare an urban stormwater management strategy if it had more than 5,000

people in its catchment. So we set out and basically did our own. I am hopeful that some of the work that was undertaken will also now guide the state, simply because it is already there and we certainly have been most keen to have it transferred into more general guidelines for other urban areas in Queensland.

Mr JENKINS—Are you involved in commissioning research into waterway management or any aspect of the works that you are doing, or do you rely on others?

Ms Kerr—No, through our involvement with the two CRCs on coastal management and catchment hydrology, we are now on the board of those two CRCs and have a chair to influence some of those decisions. There is quite a strong connection between the regional water quality strategy and the two CRCs. In fact, at the moment, while the third stage in the upper catchment is undertaken, we are in daily exchange with the three universities in Brisbane who are looking for this sort of operational arm in council and also the staff with operational experience to assist in writing briefs, reviewing submissions and so on.

Mr JENKINS—That is it for the questions. I just have a statement to put on the record. For the information of my two colleagues, today in research we have had the CRCs, the LWRRDC and the two industry R&D organisations mentioned by the fertiliser association.

CHAIR—Thank you very much. Yours is a different catchment—I suppose it is similar to some of the city catchments, such as Sydney, except that they are greater polluters, aren't they?

Mrs VALE—They are.

Resolved (on motion by **Mrs Vale**):

That, pursuant to the power conferred by paragraph (a) of standing order 346, this committee authorises the publication of evidence given before it at public hearing this day.

Committee adjourned at 4.02 p.m.

