

Appendix Two: Technical Advisory Group – Interim Report

KCDC TECHNICAL ADVISORY GROUP (TAG)

INTERIM REPORT

(for Council meeting on 11 March 2010)

1. Establishment and Composition

TAG was set up by Council resolution of 13 November 2008.

The Council's intention was that TAG would provide advice to Council on a final preferred option. The focus would be on considering the water supply needs and options for the Waikanae, Paraparaumu, and Raumati areas. This may include a range of technical supply options that extend to the wider District, or Regional options. TAG focus is on addressing the technical issue of water supply systems rather than wider water management issues.

A list of TAG members and their biodata describing their background and experience is attached at Annexe A.

2. Terms of Reference

The TOR are also attached at Annexe B. It is important to note that the TOR exclude Paekakariki and Otaki from TAG's area of responsibility, although much of the material, including the various consultants' reports, deal with the whole district. Moreover the public consultation process was undertaken on a district-wide basis.

The second paragraph of the TOR sets out TAG's programme of work. So far we have completed all but the final stage of the first task ("development of options assessment criteria"). The four remaining tasks will be considered by the group over the next three months i.e. until we produce our report for the Council's final decision meeting in June.

3. Meetings

TAG has met on 7 occasions since it was set up. TAG members attended one of the pre-Christmas public consultation meetings and were represented at all the consultation meetings held in January/February.

TAG has had a voice in all the steps taken so far including the selection of the consultants and the consideration of their 2 reports. On the whole TAG has been supportive of the process to date although it expressed some reservations about both the consultation document which was sent out with the rates demands, as well as the multiple criteria analysis methodology (see below).

Now that we have been asked to comment on the consultants' paper on "Option Selection" we have decided it is important to present the Council with an independent view.

4. Process

Public consultation is essential throughout this exercise, as Council is well aware – for statutory reasons, for goodwill, to use available expertise, and to show that it has occurred in any later challenges to the decisions made. However, overall TAG has found the qualitative comments from public meetings etc of more use than the values exercise within the MCA. MCA is simply a tool to try to weight basically incommensurable aspects of each option – as in the end has to be done in SOME way to make a decision. All the values are desirable and some people have found it hard or undesirable to put weightings on them. And within the values, the criteria were for some incomprehensible and perhaps in conflict with each other. Nevertheless, some interesting indicative results were received from the 385 plus (still a small number as a proportion of the population) who filled in the survey form. The public put a very high value on water quality (34% weighting) and a low value on social/cultural (3%). On environmental, performance, implementation, and economic (respectively 14%, 22%, 9%, 15%) they differed only slightly from the preferred scenario adopted by BECA (at 15%, 20%, 10%, 15%). The crucial difference is that the preferred scenario reduces water quality to 20% and increases social and cultural to 10% each, based on past Council policies (such as Water Matters) and discussion with Council officers on this and other aspects. This is probably reasonable, but it is important to grasp that it makes all the difference. Once each option is scored on each of the criteria, and the value/criteria weightings applied, the results are totally predictable and in line with the problems well known to Council and the public from the beginning. If water quality is valued highly and social/cultural issues low, the borefield options rank is low because of the perceived taste and hardness problems – and the Otaki and district wide options rank highly – with two dams and aquifer storage also in the top ten options. If the social and cultural weightings are increased and the quality weighting decreased, the borefields, groundwater, river recharge and storage ponds options gain six of the top ten rankings, with only one Otaki option remaining and two different dams. The results are in sharp contrast.

Overall, the most striking element of the results of the MCA using the preferred weightings' (with their fairly tight range of 10% to 20% for the seven values) is the quite narrow range in the overall scores of the 20 options. 'Compromise' weightings make, at this preliminary stage, all 20 options quite close in ranking and could be seen as making the issue easier or harder in the sense that they scarcely discriminate between the options. And it can be seen that social and cultural issues almost exactly balance the community's clearly stated highest priority of quality in generating those close results which is why the different weightings give such different results as explained in the previous paragraph.

5. Issues

In the course of its work TAG has begun to define the major issues which impact on the water project and while it has not taken its thinking to the point that it can develop a series of findings or recommendations, it has begun to tease out the extent and depth of all the matters that have to be considered.

We have decided against giving the Council a detailed exposition at this stage, but we think it important we should provide Councillors with an annotated list of the major issues as we see them, so that they can weigh them up in making decisions on the

future management of the project. It is our intention to generate a check-list of these issues and questions which will form the basis of our further work with Council officials and the consultants. Five members of the group prepared notes which, together with the discussions we have had over the past three months, have been drawn on in the preparation of this paper. These notes can be made available to Councillors should they wish to see them.

a) Past experience, Council commitments, public and stakeholder expectations. Councillors are well aware of the sensitivity of the water issue so there is no point in labouring it. It is our understanding that the current water project is intended to take into account all the past experience and forge a new understanding with the community which will enable practical decisions to be made. However it is not clear that the degree to which the Council has committed itself to adhere to a set of district wide principles and a framework (which emerged from the “Water Matters” project); and the obligations it has imposed on itself through a series of resolutions, have been sufficiently operationalised.

The recent “values” survey, while it has produced some useful information, has had the effect of raising all the old issues once again. From our perspective it has also confused the distinction between what is “technical” and what is “social/cultural” and how far the latter should be considered by us in giving “technical” advice when ultimately these matters are political ones which can only be settled by Councillors. The Council is responsible for meeting the “needs” of the community for both potable and non-potable water but there is not yet consensus within the community as to what those “needs” are and how far they are prepared to pay for them either directly through charging systems or indirectly through their rates..

Since the formation of TAG our members have received many comments from Kapiti residents, the essence of their message being – “Stop the talk. Decide on a cost effective solution and get on with it. We’ve got plenty of rainwater so let’s take advantage of it”. Our conclusion from that is that the public expect immediate, tangible results from the current water project, concentrating on capturing the district-wide precipitation – which, indeed all the options recommended for the detailed study would do.

b) Demand/supply and conservation.

The Council has decided to action these two sides of the coin separately. It is our contention that this is an artificial distinction and that the two are so interlinked they must both be considered together within an overall strategic and operational context. For example, the success or failure of any conservation measures to reduce water usage to the target figure will have a direct impact on the extent to which additional supply must be provided. An important matter in this context is how far it will be possible to use existing bore water sources when there is such public antipathy to them. Equally there is a difference of view as to whether it is feasible to rely on greywater as an alternative for non-potable use. Both of these potential sources (are they realistically available, useable and acceptable or not?) will have a significant influence on the ability of the district to meet its water demands.

c) Definition of supply problem and availability of data.

It is not obvious to us what the essential problem is since there is not sufficient data on either the demand/supply or conservation sides on which to base a thorough analysis. As was observed at one of the public meetings in February it is strange that after all these years we still don't know enough about the aquifers, the borefields, the treatment, and storage of our water and our consumption patterns to take advantage of the sufficient quantities of rainfall we enjoy. Boiled down to its fundamentals, at the moment the problem the TAG has been asked to help solve is what must be done to ensure the supply of both potable and non-potable water to Paraparaumu/Raumati/Waikanae at the rate of 400 litres per household per day, with a daily ceiling consumption rate of 26000m³, including periods of peak annual demand and allowing for projected population growth for the next 50 years - it being the task of the conservation group to reduce current demand in order to achieve the target figures for household and overall daily use.

That is no doubt a simplistic statement of the water project's purpose but it illustrates our point that not enough has been done, or in some areas, is known, to define the problem the Council is seeking to solve. As an example, the recent Auditor General's report on local authority planning to meet the forecast demand for drinking water, says "providing security of supply into the future depends on, in some instances, significant improvements in forecasting, planning and upgrading infrastructure. Some of the challenges such as increasing competition for access to water, the need to reduce consumption, and the costs associated with upgrading infrastructure are only likely to increase in difficulty.....{Three Councils of which KCDC was one}were adequately managing their drinking water supplies, and were adequately placed to meet the forecast demand for drinking water. They had more to do to improve the accuracy of their forecasts and implement their strategies to meet future demand".

Reference to the experience of other Councils around the country also raises the question as to whether we have sufficient information about experience elsewhere both in New Zealand and overseas so that we can benchmark ourselves against international standards.(Of the 8 Councils reviewed by the Auditor General, KCDC was seen to be in the second rank in terms of effective water supply).

d) Project parameters and design assumptions.

As the TAG has worked its way through the various consultants' reports and the material with which it has been provided, the parameters of the project are starting to emerge. We consider these should now be tested to ascertain whether in fact they form the basic structure of the project or are open to further discussion. Some of the parameters are critical to the evaluation of the options. Among them would be:

- consumption in Paraparaumu/Waikanae/ Raumati to be limited to 400 lppd and an overall daily consumption rate, including during peak demand periods, of 26000m³ (this is based on the Council's acceptance of the medium population growth forecasts);
- Otaki and Paekakariki are outside of the scope of TAG's area of investigation;
- water meters are not to be considered, at least for the ;present;
- preferably options would be within the P/W/R catchment area;
- all options should be sustainable and affordable both in terms of capital work and operational costs, with an upper limit for capital expenditure of \$23m;
- all works to be based on a 50 year timeframe and be completed by 2015;

- social and cultural issues are to be considered as an integral part of the project (see pp 27 of the consultants' report);
- conservation and supply are to be two parallel streams of work, the purpose of the conservation measures to reduce demand to the target figures and for the supply side to ensure those targets can be provided;
- given public opposition to the bore –supplied water, bores would only be used if improving water quality is cost effective or in an emergency.

There may be other factors which the Council may want to use as determining the ultimate scope and nature of the supply side solutions. If so, it would be important for them to be articulated now. These parameters, if confirmed, will be built into the design assumptions which will begin to be applied once the reduced number of options has been finalised and the critical analysis of them has commenced. The adoption of the design assumptions will be the next major step in the project.

e) Preferred approach to choice of options

TAG agreed with the proposal to apply the multiple criteria analysis as a useful way of trying to assess community values which would be determinants of any future water schemes although we also expressed certain reservations both about MCA and the survey form which was sent out with the rates. In retrospect we consider that the results of the “values’ exercise has borne out our concerns. The raw data from the community response showed clearly that the public’s highest priority was to ensure the quality of future water supply. When other weightings were applied, particularly giving greater emphasis to the Council’s responsibility for social and cultural matters, the result was to flatten out the scores so that the exercise produced no clear cut ranking of options.

In these circumstances TAG would suggest that the approach to option selection should be to:

- have a clear statement of the Council’s objectives;
- ensure there is a comprehensive definition of the problem(s) to be solved to achieve that objective;
- review the data available and agree on what additional data is required;
- test the likely public acceptability of any option (which would ensure the application of sound common sense to any ultimate solution);
- confirm or amend the project parameters;
- apply a set of criteria to the range of choices (see our suggestion below);
- develop a risk profile so that both costs and benefits are clear

f) Public consultation.

We have made a number of comments about the public consultation process. What should be added is that in our opinion the most valuable outcome of the survey and the public meetings was the range of comments obtained from the participants (see Appendix 5 of the Consultants’ report). These should now be analysed and tabulated under headings so that it will be possible to use them as a checklist for the Council’s ultimate decisions. The public should also be given some feed-back at the appropriate time to indicate their views were considered seriously.- it will be especially important to show that the Council registered the public’s view that water quality should be a major objective of any future schemes

g) Public information, education, and involvement in water management.

What also became obvious during the public consultations was the breadth and depth of community knowledge and experience of water matters. At the same time there continue to be areas of preconception and prejudice which get in the way of long term sensible solutions. The Kapiti public's fear of water privatisation is well known and is a political reality for Councillors. However there isn't any question that water management is essential to the success of local government and that management requires measurement – as both the Parliamentary Commissioner's report and the Council's own principles acknowledge. Elsewhere in New Zealand water meters have been accepted and it would be useful to draw on that experience. The success of both conservation and demand measures will also depend on a better understanding within the community which would hopefully lead to acceptance of greater discipline in the use of water. Continuing communications and education programmes will be necessary to bring the public along with the Council's efforts to improve water usage and supply. One way of achieving this greater buy-in on the public's part could be some form of public participation in the district's water management – the Friends of the Waikanae and Otaki Rivers come to mind as useful precedents.

h) Demand management.

A number of reports have stressed the importance of demand management and in its response to the Parliamentary Commissioner's report and the policy parameters decided during the "Water Matters" project, the Council has accepted the necessity of having such a plan and has directed that work be done on it. For the time being the question of water meters has been parked, but that should not prevent the exploration of other possibilities which may have significant influence on reducing demand (and thus pressure on supply). The KCDC is something of a pioneer in requiring water tanks for new houses. Such innovative thinking could be applied to the voluntary introduction of water meters and the installation of rain water tanks in existing buildings as well as such measures as are being worked on by our neighbours in Pukerua Bay to install emergency tanks in schools. We have already referred to greywater as an avenue to be considered especially in maintaining the beauty of our garden environment which is a particular feature of our district and must remain so. In this context the Council may need to consider the whole question of incentives and disincentives in achieving its demand management goals – Is there any intention, for example, to direct some of the water funding towards encouraging individual residents to install water tanks or greywater systems, bearing in mind the difficulty low income families would have in meeting the cost of these?

i) Legal issues

We have done no work in this area but we are conscious of the importance of legal issues in considering future water plans. The issues here will be around ownership, acquisition, and consentability. Some proposals will be more readily consentable than others. Amendments to the Resource Management Act are intended to make the consent path smoother. Council will also be aware of consideration being given by central government to water issues and this could well lead to a new set of national regulations and standards.

j) Pre-conditions and timetable.

Our reading of the Council's document "Water Matters – District Wide Principles and Framework" has indicated to us that the Council has made a number of commitments, some explicit, others implied, to processes which should be activated before any final decisions are made. It is our impression that some of those processes which would need to have been completed, have not yet been initiated and others may not be capable of being completed before the Council's planned decision-making meeting in June. Moreover some other matters in this and the consultants' report may take longer than three months to resolve. We would suggest it might be advisable to re-examine the timetable to ensure the decision-making process is not put under such pressure that it might affect the quality of those decisions.

6. Options for detailed analysis - general considerations

The purpose of the Council's meeting is to decide which of the original 40 options (having been whittled down to 31 with the Council's agreement) should now be subjected to critical analysis by the consultants. We are therefore approaching the sharp end of the project and it will be essential to ensure this analytical phase is conducted on the basis of a clear understanding of the Council's views and directions, a clear definition of the problem to be solved and agreement on how the results of the project to date and the options analysis will be conveyed to the public (as well as to the principal stakeholders, including the iwi).

Subject to the comments in the previous paragraphs, the TAG agrees with Council officials and the consultants that the number of options that have been identified over the past decade, which have been reviewed in the work undertaken over the past 4 months, should be restricted to a manageable number for a more detailed critical analysis. Until some of the proposals are subjected to this more intensive examination, the project cannot advance beyond the generalised discussions about values and community expectations which have taken place. It is TAG's view that the public will expect not only to have answers to the questions they have raised in the consultation process (and the consultants have compiled a very interesting list in Appendix 5 of their report) but also to have access to the information on which the Council's anticipated decision in June will be based i.e. they will want to see the report emerging from this next round of analysis.

The consultants have suggested a set of criteria which the Council might apply in selecting which of the 32 options should be dropped at this point. Our view is that it would be useful for the Council, before it makes its selection, to agree on some additional criteria to be taken into account.

For example, we would suggest:

1. it should not be expected that any one option could provide a total solution, a combination of "solutions" might be preferable for a range of reasons;
2. stemming from this it might be found that the gradual introduction of components over time (in accordance with an overall plan for the decade) would be preferable to a single one-off project – not least from the standpoint of the impact on the rates;
3. to the greatest extent possible the existing water infrastructure should be incorporated in any option (especially sensitive in this respect will be the sunk cost of the borefield of \$14m);

4. rather than attempting to “cherry-pick” among the 32 options, the selection should seek to ensure that any short list should cover the range of option types. These have been described in the consultants’ report as :
 - i. run of river
 - ii. dam
 - iii. storage ponds
 - iv. bore
 - v. recharge
 - vi. groundwater
 - vii. district-wide
5. we would suggest that in response to the public’s emphasis on taking advantage of the district’s annual rainfall, the option types might be slightly amended so that ‘rain capture’ would incorporate dams and storage ponds.
6. account should be taken of the public’s clearly expressed view that the highest priority should be given to improving the quality of drinking water supply;
7. while, from a technical standpoint, it will be useful to have in-depth detail on all the types so that the Council can make informed decisions in June, our understanding is that there will continue to be significant opposition to out-catchment solutions, so that to avoid delays and protracted resource consent procedures, the weighting of the selection of options should be in favour of in-catchment approaches.

7. Specific options for analysis

All of the proposed options incorporate the Waikanae Water Treatment Plant and to varying degrees the current distribution infrastructure. All but one is in-catchment. According to the consultants’ first cut, they can all be funded within the \$23m limit although that would have to be confirmed and cost will be influenced by whether there is a single or a multiple solution. We do not have sufficient information to know, apart from Option 4, whether these options on their own would provide the yield that is being sought.

There are two riders that we must make to this list. First, we have considerable scepticism about Option 27. It appears to be the most risky, not having been tested in this country. At the same time it is an imaginative use of our existing potential. For that reason and because it will give an opportunity to look more closely at groundwater possibilities, we have included it in our list of agreed options but we would not see a disproportionate effort being made to develop it.

Second, we have to record that there is not a consensus as to Option 4 (our TOR require us to have a consensus conclusion on key issues). On the one hand there is a view that TAG is a technical group which should concern itself with technical matters and therefore it is unquestionable that an Otaki River Option should be on the list. On the other hand there is an equally strong view that the position of the tangata whenua remains opposed to the taking of water from one catchment and using it in another so that any Otaki River option is off the table – indeed in this view the whole “values” exercise, which was predicated on a non-Otaki majority of participants, could be seen as an elaborate means of recycling the Otaki river proposals of 2001 through the back door. There is a third opinion in TAG that the differences in these two viewpoints, which reflect strong views within the community itself, are sincerely held and as they

represent differences in cultural value systems which will take a long time to resolve, Option 4 could be ruled out on the grounds that the length of time to implement it would be prohibitive. In short this Option raises not just technical but major social and cultural issues as well. As such these matters are outside the scope of TAG and the Council may wish to apply its community judgment to whether Option 4 (or any other Otaki River option) should proceed.

8 Analysis and recommended approach

Pages 40 to 44 are an important part of the consultants' report. Our comments would be:

a) Catchment approach.

For our part we would agree that the in-catchment and out-of-catchment alternatives should be considered separately since somewhat different criteria apply. However, in the light of so many unknowns, we would prefer to approach the final assessment of options in two stages. A first stage would look at the list of preferred options as a group so as to obtain a clearer view of their relative technical merits: this should include some physical work to clarify some of the issues we know will arise. The second stage would look at those options which then appeared to be most likely to achieve the Council's objectives.

b) Risk assessment.

The description in section 8.2 of the consultants' report is a fair preliminary assessment of the risks of the various options. We would anticipate that a more detailed risk profile would emerge from a first stage of detailed assessment such as we have suggested above. It is worth bearing in mind that past experience has shown that in some instances (particularly in the case of dams) difficulties do not become apparent until a fairly advanced stage. The financial risk this poses to a small district is something that Councillors will want to consider.

c) Combination options

It is a major omission in this report that there is insufficient information in it to enable Councillors to consider the potential of combinations. Not only would such an approach provide the Council with more flexibility in managing water demand over time and through a range of circumstances, it would also allow for a staged approach to implementation, more in keeping with affordability, than a one-off "big bang".

d) Recommendations

1. We agree the work should proceed as suggested by the consultant bearing in mind our concerns that they should be tested against an agreed set of criteria as suggested above in 5(e) and that the project parameters (see 5(d) above) are confirmed or amended.
2. As we have pointed out above, we anticipate there is likely to be continued strong opposition to any options involving the transfer of Ōtaki River water out-of-catchment. Nevertheless, we would agree it would be sensible to explore the issue with the iwi and Ōtaki residents, (and it would be advisable to include supply of Ōtaki itself in any options discussed) to ascertain whether there are conditions under which such options might be acceptable.
3. We agree with this recommendation on the understanding that in the medium to long term no option is completely ruled out – "other times, other faces".

9. Conclusion

Finally we should conclude our comments with the observation that the information yet to be obtained plus the questions yet to be answered have cast doubt on the feasibility of achieving the June target date for the Council's final decisions on the preferred option or options. However, rather than recommending that the Council should agree now to a rescheduling of the June dead line, we would prefer to engage in further discussion with Council officials and the consultant after the Council has indicated which of the current 32 options it would want to subject to the more detailed investigation. We simply make the point here that in the light of any additional information we may receive over the next month, we may decide to recommend such a postponement to the Council.

23 February 2010 12:56 P.M.