Tasmanian Conservation Trust Submission on the Meander Dam Development Proposal and Environmental Management Plan

Coordinator
Water Management Administration
Water Management Branch
DPIWE
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Dear Sir/Madam

Meander Dam Development Proposal and Environmental Management Plan

The Tasmanian Conservation Trust would like to make the following comments on this proposal.

Ultimate proponent
There has been an inconsistent approach to the designation of a proponent for this proposal. The DPEMP states that the Rivers and Waters Supply Commission (RWSC)is the proponent. However, the EPBC Referral for this proposal states that the State Government does not envisage the RWSC remaining the proponent throughout the development proposal. The TCT considers this to be inconsistent.

Purpose of the project
There are a number of patently false or misleading statements regarding the purpose of this proposal. The stated purpose of this project (DPEMP page 4) is to:

- provide a reliable supply of water for domestic, industrial and irrigation activities;

A reliable supply of water for domestic and industrial use is already available. This statement therefore misrepresents the actual situation. The only purpose of this dam is to supply irrigation water, of which there is also already a reliable supply. This purpose should therefore read: "provide a reliable supply for increased irrigation activity".

- improve the ecological health of the Meander River, especially in its lower reaches;

There is no precedent in Australia for the construction of a large in-stream dam to improve river health. The environmental impacts of such structures are so great so as to always be environmentally damaging. Impacts on the

ecology of the Meander River will include a decrease in sediment transport downstream, resulting in changes to channel morphology and in-stream habitat, increased fragmentation of the channel and heightened propensity for willow invasion; altered and artificial flow regimes; and increased presence of brown trout, a major introduced predator of aquatic fauna.

- provide the opportunity for economic growth of the region through intensification of agriculture;

No hard evidence is supplied for any increase in agriculture resulting from the construction of this dam. Intensification of agriculture will only result if water supplied by the dam is affordable to landholders in the area. There is no evidence to support this, and an independent economic assessment of this proposal commissioned by the TCT has indicated that this proposal is not financially viable (see attached Meander Dam Financial Analysis).

- supply some attenuation of flooding;

This is an obvious statement, and to claim it as a purpose of the project is misleading. It is simply a side effect of the construction of the dam. Flood events play an important role in the ecology and geomorphology of the Meander River, and attenuation of flooding events is more likely to be an impact than a benefit.

- provide a new source of renewable energy; and

Such a new renewable source of energy will only be of use if the proposed Basslink cable proceeds. There is no current need in Tasmania for further power production.

- provide potential for enhanced recreational activities in the region.

There are a number of negative impacts on recreational activities that would result from this proposal, which would at the least cancel out any positive impacts. Additionally, enhanced recreational activities as a result of this proposal are purely incidental. It is therefore disingenuous of the proponent to suggest that enhanced recreation is a purpose of this project. As has been noted already increased propagation of the introduced brown trout is at odds with the aim of improving the health of the Meander River, as this species is a major predator of aquatic fauna.

Meander Catchment Water Management Planning Process
This proposal is proceeding in parallel with the development of a Water Management Plan (WMP) for the Meander Catchment. The TCT is of the opinion that consideration of this proposal before the WMP is completed is ridiculous, and risks compromising both processes.

Land Capability

The DPEMP contains a serious error in the differentiation within the Class 4 category. This is done even though it is conceded such divisions may not be readily distinguishable. One possible conclusion for this, given the overall positive bias within this document, is to improve the perceived viability of the proposal. This internal differentiation must be ignored in any objective analysis of land capability, due to the admitted inaccuracies.

Only 23% of the land within the proposed irrigation area is Class 3, the most suitable for irrigation. 65% of the land is Class 4, 9% Class 5 and 3% Class 6. Of the Class 3 Land, 2,700 ha is in the Rubicon/Western creek catchments, which the DPEMP concludes are not likely to be developed (page 63), and in any case no economic or environmental viability has been developed. This leaves a total of only 4,800 ha of Class 3 land within the study area. It is likely that the majority of this land is already irrigated (4,600 ha irrigated in 2001-02, DPEMP, Appendix E page 1). The DPEMP fails to distinguish between land currently under irrigation and land with the potential for irrigation. In the absence of this data, and assuming the worst case scenario, the majority of Class 4 land in the area may already be under irrigation, seriously weakening the need for the proposed dam.

Geomorphology and Geology

The Meander River currently transports suspended sediment downstream where it settles on alluvial floodplains. The proposed dam would fundamentally alter this, as is conceded in the DPEMP (page 196). Decreased deposition of sediments downstream would result in changes to channel morphology and instream habitat, increased fragmentation of the channel and heightened propensity for willow invasion. No definite mitigation strategies are offered, simply a commitment to conduct further research.

Additionally, the Executive Summary of the Environmental Feasibility Review (Appendix D) concedes that the dam is likely to collect sediment, resulting in environmental impacts as well as affecting the operation of the dam. It is stated that "the geologically active nature of the upper catchment is likely to result in further landslips similar to the 1999 Dunnings Rivulet landslide, resulting in the potential for significant sediment and nutrient accumulation within the dam and with consequent impacts on the ecology of the storage." (page 3)

This is supported by the findings of Cullen (*Land Degradation on the Central Plateau, Tasmania* Parks & Wildlife Service, 1995), which nominates Wild Dog Tier as the most severely eroded and degraded sub-alpine area in the State (page 20). Wild Dog Tier feeds the headwaters of both Dunnings

Rivulet and Warners Creek, both of which would feed directly into the impoundment of the proposed dam.

Inter-catchment water transfer
The DPEMP persists in the inclusion of Western and Rubicon Creek catchment water usage in the irrigation area and economic analysis (Chapter 4, Appendix E, Appendix F). This is despite no consideration of construction impacts. This is an unacceptable manner for the presentation of DPEMP for public comment, and is an act of bad intent on the part of the proponent.

Altered flow regimes in the Meander River
The issue of altered, artificial flow regimes are dealt with in a superficial manner. Impacts on downstream vegetation communities are likely to be significant, as are impacts on channel geomorphology. It is a serious and telling oversight on the part of the proponent to not fully consider downstream impacts.

Economic viability
Support for the economic viability is limited to speculation. The Executive Summary of the Economic Feasibility Review (appendix E) makes a number of negative statements such as:

- "…the majority of prices within the theoretical pricing range appear to be outside existing market tolerance levels…" (page 4)
- "A commercial viewpoint of the project on a stand-alone basis indicates that the project is unviable given the economic report on price and demand levels vis-à-vis the capital cost of the project and investment rates of return." (page 4)

However, these concerns are not reflected within the DPEMP itself, which apparently unjustifiably maintains the economic viability of this proposal. Additionally, the DPEMP relies heavily on a desktop feasibility review conducted by Hydro Tasmania (Appendix B). This review is fundamentally flawed, as it bases its primary conclusion supporting the dam proposal on the current state of flows in the Meander River. These are two completely different issues. Current estimated usage within the Meander Catchment is more than 3 times the licenced usage: 22.4 ML/day licenced, 68.8 ML/day estimated (Meander Catchment Water Resources Information Package, Land and Water Management Branch, 2001). The issue of low summer water availability is therefore a direct result of unlicenced extraction from the Meander River. This could be remedied by water metering, and does not require a large dam.

A number of conclusions drawn from this desktop review and stated in the DPEMP are quite ridiculous. It is stated that "The on-farm storage scheme appears to be the better option economically…" (DPEMP page 13), but then a number of unfounded reasons for this being a worse option than a large dam are put forward, specifically:

- The fact that many sites have already been developed, leaving insufficient sites to meet the perceived water demand;

This is not a relevant issue, and simply reflects that the sustainable development of agriculture within the Meander Valley is approaching, or has exceeded, its maximum limit.

- environmental considerations such as the high potential for localised, uncontrolled impacts on associated tributaries;

Farm dams are assessed on environmental grounds before approval is given. DPIWE is currently further strengthening the assessment process for farm dams. This point is irrelevant.

- social considerations such as a low potential for providing community recreational benefits; and

This is patently ridiculous. Recreational activities have already been discussed.

- the fact that farm dams offer no power generation potential.

Quite obviously this is the case. Hydro power generation has previously been discussed.

In summary, these conclusions offer no real reason for the proposed dam to be more viable than the farm dam option. A report by Professor A. Hocking (*Meander Irrigation Scheme Economic Evaluation* University of Tasmania, 1993) concluded that the farm dam option is economically superior to proposed large storage options. Professor Hocking's conclusions were based on economic principles rather than vague social considerations.

Finally, an independent assessment commissioned by the TCT projects a loss of up to $56 million for this proposal (see attached *Meander Dam Financial Analysis,* N. Edwards).

National Competition Policy and COAG Water Reform Framework
The requirements of National Competition Policy and the COAG Water Reform Framework are significant factors affecting this proposal. It is unfortunate that the DPEMP does not give more attention to these issues.

Environmental impacts
Significant and wide-ranging environmental impacts would result from the construction of this dam. and the proponent offers only token or ineffective mitigation strategies. Specific impacts are dealt with in detail below.

Impacts on spotted-tailed quoll *Dasyuris maculatus*
Proposed to be listed as Vulnerable on the *Threatened Species Protection Act 1995* and listed as Vulnerable on the *Environment Protection and Biodiversity Conservation Act 1999.*

A state survey of this species in 1996 indicated that there are between 3,000 and 4,000 adults left in Tasmania (Appendix N, page 6). Note this population estimate occurred during the Tasmanian Regional Forest Agreement, and the Spotted-tailed quoll has suffered further loss and fragmentation since then. A survey conducted from January to October 2001 identified a minimum of 12 adults in the area of inundation. This is an above average population, and indicates that this is an area of high quality habitat.

Quoting from the Meander Dam DPEMP, Appendix , page 15:

"Our recommendation, based on the findings detailed in this report, is that the proposed Meander Dam site in the upper Meander catchment should remain undisturbed. This site represents a very rich area for spotted-tailed quolls, in a region that has been severely impacted in terms of spotted-tailed quoll habitat and movement corridors. Spotted-tailed quoll activity in the district was focused within the proposed inundation area, comprising a large riparian zone bordered by eucalypt forest. Riparian habitats in particular have been identified as of importance to the spotted-tailed quoll, and land management recommendations suggest these areas be protected for conservation of the species (Belcher 2000). There are no viable alternatives other than protection of this important habitat and population. The current conservation status of the Tasmanian spotted-tailed quolls is of great concern. Based on current estimates of habitat loss, this small and genetically distinct population is almost certainly in decline. This species has already experienced a dramatic reduction in geographic extent and population size nationally. Tasmania supports the largest remaining population of the species and so is critical to its survival. The predicted detrimental effects of the dam on populations at a local, regional and state-wide level are significant."

The proponent does not acknowledge this recommendation, and instead offers three "potential" mitigation/offset strategies. The first of these is the creation of new habitat adjacent to the Meander Dam impoundment. This ignores impacts on the quolls in the meantime, and does not compensate for the loss of high quality habitat within the impoundment. The second

involves translocation of the quolls, despite stating that this practice is recognised as ineffective when dealing with this species. The third potential strategy suggests the creation of new habitat. No further detail is given on how or where this might be achieved, and this again ignore the loss of high quality habitat within the impoundment.

In summary, the proponent fails to offer any substantial mitigation strategies to deal with impacts on this threatened species.

Impacts on *Epacris* aff. *exserta* 'union bridge'
Listed as Vulnerable on the *Threatened Species Protection Act 1995* and listed as Endangered on the *Environment Protection and Biodiversity Conservation Act 1999*

118 individuals of this species will be lost as a result of dam construction, representing 13% of the local minimum population and 6% of the total minimum population. Additionally, changes to flow regimes and corresponding impacts on downstream communities of this species are acknowledged as likely to be significant (Appendix J, page 12). A minimum 1,482 individuals, representing 77% of the known minimum population, are located downstream of the proposed dam site.

The proponent offers no substantial mitigation strategy to deal with impacts on this species. Reference is made to vegetation rehabilitation, weed control, *Phytophora* control, minimising disturbance and soil/erosion management, but no detail on how this could mitigate impacts on this species.

In summary, the proponent fails to offer any substantial mitigation strategies to deal with significant impacts on this threatened species.

Impacts on wedge tailed eagle *Aquila audax fleayi*
Listed as Vulnerable on the *Threatened Species Protection Act 1995* and as Endangered on the *Environment Protection and Biodiversity Conservation Act 1999*

There are an estimated 100 breeding pairs of this species left in Tasmania. The referral does not rule out the presence of a nest site in the vicinity of the proposed dam, and one area was not assessed either visually or accessed physically. An eagle was sighted during the survey, indicating at least the presence of the species in this area. Wedge tailed eagles are vulnerable to disturbance during nesting, which could conceivably be caused by dam works if a nest is located in the area that was not assessed. Due to the very low numbers of this species, the loss of just one juvenile would be at the very least locally significant. This potential impact requires greater scrutiny.

Impacts on the eastern barred bandicoot *Parmeles gunnii*
Listed as Vulnerable on the *Environment Protection and Biodiversity Conservation Act 1999*

The DPEMP (Appendix M page 16) states that scats and diggings consistent with this species were noted in the inundation area. No assessment was conducted of the numbers of this species present. It must be assumed then, that inundation would have at least a locally significant impact on this species. This potential impact requires greater scrutiny.

Impacts on *Glycine latrobean, Colobanthus curtisae* and *Leucochrysum albicans* subsp. *albicans* var. *tricolor*
Listed as Vulnerable on the *Environment Protection and Biodiversity Conservation Act 1999*

The records of these species within the inundation area are credible, and it is an act of bad intent on the part of the proponents that impacts on any resident populations have not been considered

Impacts on *Ovata vimnalis* community
Currently before the *Environment Protection and Biodiversity Conservation Act 1999* Scientific Advisory Committee.

The presence of the species *Ovata vimnalis* in the innundation area has been previously recorded, and thus does not exclude the presence of this community. However, the DPEMP does not even acknowledge the presence of the species *O. vimnalis.*

Impacts on *Pomaderris phylicifolia* supsp. *phycifolia*
Listed as Rare on the *Threatened Species Protection Act 1995.*

A stand of this species comprising of 20-30 individuals has been identified in the inundation area. There are no other recorded instances of this species in the Meander Catchment. The total number of populations of this species is estimated to be 20, and the total population estimated to be in the 100's. Tellingly, no assessment was made of the possible presence of downstream populations.

The proponent has offered no mitigation strategy for the destruction of a significant number of the known population of this species. There will therefore be a significant impact.

Conclusion
The Objectives of the Resource Management and Planning System of Tasmania are as follows:

1 (a) to promote the sustainable development of natural and physical resources and the maintenance of ecological processes and genetic diversity; and

(b) to provide for the fair, orderly and sustainable use and development of air, land and water; and

(c)to encourage public involvement in resource management and planning; and

(d) to facilitate economic development in accordance with the objectives set out in paragraphs (a), (b) and (c); and

(e) to promote the sharing of responsibility for resource management and planning between the different spheres of Government, the community and industry in the State.

2. In clause 1(a), "sustainable development" means managing the use, development and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic and cultural well-being and for their health and safety while -

(a) sustaining the potential of natural and physical resources to meet the reasonably foreseeable needs of future generations; and

(b) safeguarding the life-supporting capacity of air, water, soil and ecosystems; and

(c) avoiding, remedying or mitigating any adverse effects of activities on the environment.

This proposal quite patently fails to meet these criteria, as detailed in the body of this submission. In summary:

1. The loss of individuals and damage to populations of threatened species, particularly spotted-tailed quoll, *Epacris* aff. *exserta* and *Pomaderris phylicifolia* supsp. *phycifolia,* will impact significantly upon the genetic diversity of Tasmania's flora and fauna, contravening objective 1 (a).

2. The construction of the dam will impact significantly upon the ecological processes of the Meander River by altering flow regimes and geomorphological processes, contravening objectives 1 (a) and (b).

3. Economic development cannot be conclusively demonstrated by the proponent, and in any case cannot be conducted in a sustainable manner, contravening objectives 1 (d) and 2.

4. The need for the dam, in terms of potential land available that is suitable for irrigation, and the capacity for landholders to pay for water, is grossly over-stated, contravening objective 1 (d).

5. No effective mitigation measures have been proposed on a number of major impacts, contravening objective 2 (c).

6. The State Government, through the Rivers and Water Supply Commission, has acted as sole proponent for this proposal, and has ignored the advice of consultants, experts and the community, contravening objectives 1 (c) and (e).

7. A Government staff member has been instructed not to provide advice to the TCT on aspects of this proposal, contravening objective 1 (e). See attached letter to the Minister for Primary Industries, Water and Environment.

Yours sincerely

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