

Tasmanian Conservation Trust Submission on the Basslink Draft Integrated Impact Assessment Statement

Basslink Joint Advisory Panel
GPO Box 2036
Hobart TAS 7001

29 August 2001

Dear Sir/Madam

Basslink Draft Integrated Impact Assessment Statement

The Tasmanian Conservation Trust would like to comment on the Basslink Project Draft Integrated Impact Assessment Statement (Draft IIAS). Please note that the Trust has forwarded comments in two separate submissions: the first focussing solely on marine and marine related issues, and the second (this submission) focussing on river-related issues.

1. Impacts on the Gordon River

The Draft IIAS Summary Report makes the following statements regarding discharge patterns in the Gordon River (page 8-9):

- Basslink increases on-off operation of the power station
- Basslink increases the number of weekend shutdowns of the power station.
- Basslink flows are higher than historical median flows.
- Basslink increases substantially the number of discharge and zero-flow events (from 219 to 297...and from 73 to 254...).
- There is an increase in both the average and the annual number of 2- to 6-hour and 24-hour shutdowns and in the 2- to 24-hour discharges greater than the mean flow.
- Gordon Power Station discharges greater than 150 m³/s occur much more often under Basslink. Flows greater than 210 m³/s increase from 9% to 29% of the time with Basslink.

These new discharge patterns represent substantial and far-reaching changes to the Gordon River. Projected flows under Basslink will be significantly different to both current and natural flow regimes. A key issue here is the fact that the Gordon River is already a regulated system. However, this does not justify flow modification resulting in a situation even further removed from natural regimes. Environmental impacts will also be significant, as acknowledged:

- Basslink is predicted to change the geomorphic processes controlling stability of the Gordon River banks, increasing the probability of scour and changing the pattern of bank saturation and seepage erosion. (Draft IIAS Summary Report page 8-9)
- Basslink is predicted to alter the community composition of macroinvertebrates in the middle Gordon River and to further reduce diversity and abundance both upstream and downstream of the Denison River confluence. Follow-on effects may be seen in platypus and native water rats, which rely on macroinvertebrates for their food supplies. (Draft IIAS Summary Report page 8-10)
- Basslink is predicted to reduce both the availability of fish habitat within the Middle Gordon River and food supplies. The fish population of the Middle Gordon would reduce as a result. (Draft IIAS Summary Report page 8-10)
- Increase in the use of 3 turbines and full gate capacity of the Power Station under Basslink will increase the degree of inundation suffered by riparian plants and reduce the light available for photosynthesis, growth and reproduction, manifest and their capacity to recover from stress. (Gordon River Riparian Vegetation Report page 24)

This combination of impacts represents a systematic degradation of the ecological and geological features of the Gordon River, and therefore also the Tasmanian Wilderness World Heritage Area. Proposed mitigation measures will be discussed shortly, but in short, are insufficient. It is accepted that the TEMSIM model used may overestimate flows in certain situations. However, flaws in the modelling are the responsibility of the proponents, and it would be unreasonable to expect comment on anything other than the data presented. It is disappointing that modelling for such an important project was not properly completed.

This series of geomorphological and ecological impacts also contravenes the Commonwealth World Heritage Properties Conservation Act 1983. This enacts the international World Heritage Convention within Australia, which applies to the Gordon River as it lies within the Tasmanian Wilderness World Heritage Area. As a signatory to this Convention, Australia is obliged to protect all values within the Tasmanian Wilderness World Heritage Area. These values will quite obviously be damaged under the projected flow regime, and this is admitted in the Draft IIAS Summary Report (pages 8-11 to 8-12).

Aside from environmental impacts and contravention of the World Heritage Convention, there is a public expectation that the values of the Gordon River

will not be further eroded. The public outcry over the proposed Gordon below Franklin hydroelectric scheme in 1979, and the subsequent intervention by the Commonwealth Government in 1983, clearly illustrates the icon status that this river holds to not only Tasmanians, but all Australians. Further degradation of the Gordon River would therefore also be socially unacceptable.

Proposed mitigation measures

Two mitigation measures are proposed to offset the impacts discussed above. The first of these is the provision of an environmental flow for the Gordon River, to be phased in over a number of years. To claim this as a mitigating effect is disingenuous, as environmental flows are obligatory under the Council of Australian Governments agreement on water reforms. In the light of this obligation, the proposed phasing in of these environmental flows is unacceptable and cannot be justified under the pretext of 'adaptive management'. The full value that has been identified as providing an adequate environmental flow should be implemented as soon as possible, regardless of the outcome of the Basslink proposal.

The second proposed mitigation measure is not specified, but is referred to generally as something that will "Minimise seepage-induced erosion of the Middle Gordon riverbanks..." (Draft IAS Summary Report page 8-14). Ramping is alluded to, but not confirmed as, this measure. It is difficult to see how ramping of flows is consistent with the requirements of meeting peak energy needs, the stated main purpose for the Basslink project. Additionally, the ramping example given, of a reduction from 210 to 150 m³/s over one hour, followed by shutdown, and with no attempt to ramp up flows, would represent a minor mitigation measure at best. To properly mitigate the impacts of increased flows, significant ramping must be factored in to the operation of the Gordon Dam

The Draft IAS Summary Report also claims (page 8-11) that an incidental mitigating effect of Basslink would be greater dispersal of fish and platypus due to more frequent shutdowns. In light of the admission of reduced habitat and food supplies for fish and platypus under projected flow regimes, this claim would appear to be contradictory.

As an aside, there has been an unfortunate tendency for environmental monitoring to be reported in the press as a mitigation measure. Although this is not claimed in any of the Draft IAS documents, it leads to the possibility of misrepresentation of mitigation measures to the general public.

2. Impacts on Brumbys Creek

The Draft IAS Summary Report admits to the following changes to

discharge patterns into Brumbys Creek from the Poatina power station under Basslink (pages 8-14 to 8-15):

- Basslink increases on-off operation in both wet and dry years.
- During a wet year, there is an increase in full-capacity discharge.
- Basslink tend to increase the occurrence of weekend shutdowns.
- Basslink will increase the annual average frequency of flow events greater than mean flow from 74 to 302.
- Basslink will increase the annual average frequency of flow events less than 5m³/s from 51 to 269.
- Flow duration curves show that capacity discharges are exceeded more often under Basslink.

As with the Gordon, this change in discharge patterns represents substantial changes to flow in Brumbys Creek. This new flow regime is also significantly different to flows under natural condition. As with the Gordon River, the fact that Brumbys Creek is already a regulated system does not justify modification resulting in flows even further removed from natural regimes.

The following impacts will be a result of these changes (Draft IIAS Summary Report page 8-15 to 8-16):

- Thermal pollution and rapid fluctuations in water quality.
- Increased scouring and slumping.
- Increased stresses on aquatic plants, fish and macroinvertebrates.
- Potential for increased salt mobility.

These impact represent, once again, significant damage to the geological and ecological values of Brumbys Creek. The fact that this system is already modified is no justification for increasing or creating new impacts. Any changes in current flow regimes should only be permitted if designed to shift Brumbys Creek closer to natural flow regimes.

Additionally, changes in water level due to hydroelectric operations are specifically mentioned as a key threat to the Great Lake Ecosystem (*Tasmania's Threatened Fauna Handbook*, Bryant and Jackson, 1999, page 397). Rapid changes in water levels may effect *Chara* and *Nitella* algae beds, and thus have a knock-on effect on 13 species of vulnerable, rare or conservation significant invertebrates that rely on these beds for food and

shelter. These algal beds may be affected by either exposure to air due to rapid draw-down or decreased light levels due to overfilling of the lake. Both scenarios are possible under Basslink, and it is a matter of some concern that these potential impacts do not appear to have been properly addressed in the Draft IIAS.

Proposed mitigation measures

Mitigation for these impacts is limited to the construction of a re-regulation weir. It is acknowledged that this weir will only dampen flows by 40%, and thus downstream impacts will still occur, albeit at a lesser rate. In-stream weirs and dams are the single most damaging human impact on Australia's freshwater ecosystems, and any proposal for the construction of a new weir, even in an attempt to alleviate impacts, should only be considered as a final option. It is disappointing that a re-regulation weir is the only proposed mitigation measure for impacts on Brumbys Creek.

3. Conclusions on Basslink impacts on Tasmanian waterways

The Draft IIAS Summary Report concludes that Basslink will increase impacts on Tasmanian waterways without mitigation (page 8-17). As has been discussed, the proposed mitigation measures are not sufficiently robust to alleviate these impacts, and thus it must be concluded that there will be increased impacts on Tasmanian waterways. As the Tasmanian Conservation Trust is opposed to further impacts on Tasmanian rivers, it is opposed to the Basslink proposal in its current form.

If you would like to discuss this or any related issue, please do not hesitate to contact me. The Tasmanian Conservation Trust would appreciate an opportunity to make a presentation at the upcoming panel hearings.

Yours sincerely

Michael Lynch
Director
Tasmanian Conservation Trust