

29 March 2021

Daniel Connor  
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Dear Dan

**Review of NSW Macquarie River Valley Model Build, Scenarios and Environmental Outcomes reports relevant to Floodplain Harvesting Policy implementation**

Thanks for allowing us the opportunity to review the Model Build, Scenarios and Environmental Outcomes reports for the Macquarie River Valley. It is good to see continued progress with addressing our review recommendations around documentation of the modelling processes and this report follows from the Gwydir and Border reports as being a very useful record of the considerable work done in support of the Floodplain Harvesting Policy implementation.

We note that the following processes have been undertaken in reviewing these documents and this endorsement letter forms the final part of that from our independent review perspective. The key elements of the review process are:

- a) Model Build and Scenario Reports sent to us on 4 February 2021 for review
- b) Environmental Outcomes Report sent to us on 15 February 2021 for review
- c) Independent Reviewers examined the documents and provided annotated reports and specific comments to DPIE-W on 25 February 2021
- d) Responses to reviewers comments provided by DPIE-W on 12 March 2021 for final consideration
- e) This letter

**Macquarie Valley Model Build Report**

We have both reviewed this Model Build Report and overall, we think the report is very well written with a lot of very helpful information and explanations, both for the Macquarie Valley and building on earlier Model Build reports. It does appear that further improvements have been made in reporting based on previous report reviews and that the report deals with a number of key recommendations from our Independent Review.

We note the statements in the report that the uncertainty in individual FPH take estimates (leading to entitlements) is still significant and measurement data is needed to improve on that. The calibration results show acceptability for all statistical criteria though the mass difference plots for some gauges show some large divergences between observed and modelled flows. Further explanation regarding these mass differences were provided in the response to reviewers' comments from DPIE-W on 12 March which outlined the reasons for these and how that in the end, while there are some differences, any further work to reduce these has impacts on other areas of model performance. As such, we are prepared to accept these explanations and consider the modelling is suitable for use as reported.

### **Macquarie Valley Model Scenarios Report**

We have reviewed version 2.3 of the Macquarie FPH Scenarios Report provided to us and consider that version satisfies our independent review requirements and recommendations. These scenario reports are probably those which are likely to have the highest degree of scrutiny from stakeholders and we commend the Department on providing a clear and concise summary.

We do note that the Cap scenario run has not been fully updated however we consider that this is immaterial as the Cap scenario gives a long-term diversion that is significantly higher than Plan Limit conditions, hence the latter will dictate the final diversion values to be used.

### **Macquarie Valley FPH Environmental Outcomes Report**

We have both reviewed the Final Draft version of the Macquarie FPH Environmental Outcomes (EO) Report provided on 15 February 2021 and consider that version satisfies our independent review requirements and recommendations.

As in our earlier reviews of FPH EO reports, our review of the Macquarie FPH EO Report has not included perusing the references used nor have we been provided with the detailed modelling data for the two modelled scenarios (the current situation without implementation of the FPH policy and the situation that would/will apply with implementation of the FPH policy). However, we do note that, based on the reported hydrological modelling, diversions in the Macquarie Valley are within the plan limit and there is consequently very little overall change predicted in the environmental outcomes as a result of licensing of floodplain harvesting in the Macquarie Valley.

While the underlying limitations in the report with respect to, for example, knowledge of change in hydrology/change in ecology relationships, available floodplain hydrological data and what modelling can be done with the available data and understandings, continue to exist, (as identified in the report), the report enables a relatively clear narrative to be presented of the potential environmental benefits of implementing the FPH policy. The report also contains a considerable body of information about environmental water requirements (EWR) that may be impacted by diversions, including floodplain harvesting.

In conclusion, we believe the Macquarie FPH Environmental Outcomes Report is a helpful one, recognising it is making use of available EWR information within the constraints and limitations of the available hydrological data and modelling

### **Further assistance**

We note that both Tony and Greg have been asked to continue in their reviewer role for other valleys across the Northern MDB. In addition, Tony Weber has been asked to support the Floodplain Harvesting Review Committee with regards to Technical Support for the Committee's deliberations. As such, we look forward to continuing to assist the Department in addressing our review recommendations and in the ongoing process of implementing the Floodplain Harvesting Policy.

We hope that the above summary review comments are helpful and confirm our views about how our Independent Review recommendations regarding proper documentation have been met for the NSW Macquarie Valley. As always, we are more than willing to assist in the interpretation of these comments and/or expansion of them should it be required.

Yours sincerely

**Tony Weber and Greg Claydon**

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