

NSW Department of Climate Change, Energy, the Environment and Water

Our ref: OUT24/16909

Drew Anderson
Planning Group
NSW Department of Planning, Housing and Infrastructure
Email: Drew.Anderson@dpie.nsw.gov.au

28/11/2024

Subject: Billabong Creek Environmental Waters Regulators - SSI-50831979 – EIS

Dear Drew,

I refer to your request for advice sent on 31 October 2024 to the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW) Water Group about the above matter.

The proposed development is to replace two existing weirs on the Billabong Creek with 2 new regulators at Hartwood (upstream) and Wanganella (downstream), approximately 25 km north of Deniliquin.

NSW DCCEEW Water Group has reviewed the Environmental Impact Statement and has recommendations regarding water supply, take and licensing, surface water impacts and groundwater impacts. Please see **Attachment A** for more detail.

Should you have any further queries in relation to this submission please do not hesitate to contact the Water Assessments team at water.assessments@dpie.nsw.gov.au.

Yours sincerely

A handwritten signature in black ink, appearing to read "Rob Brownbill".

Rob Brownbill,
Manager, Water Assessments, Knowledge Division
NSW Department of Climate Change, Energy, the Environment and Water

Attachment A

Detailed advice to DPHI Planning & Assessment regarding the Billabong Creek Environmental Waters Regulators - SSI-50831979 – EIS

1.0 Water supply, take and licensing

1.1 Recommendation – pre-determination

The proponent should quantify maximum potential water take per water year for all impacted sources during construction and operation of the project.

Explanation

The proponent identifies 0.16 L/s of groundwater inflows at Wanganella Regulator during construction. It is unclear if there is any other groundwater intercept associated with trenching for services, the borrow pit expansion or other works. The volume of water expected to be removed from the coffer dams at each phase of construction is also requested.

1.2 Recommendation – pre-determination

The proponent should identify site water demands and their proposed sources.

Explanation

Insufficient information has been provided to understand the site water needs for the project. The proponent must quantify maximum required demands and provide an assessment of feasible and reliable sources to meet these demands. If these sources are third parties, it is recommended consultation occurs to ensure these are available and volumes that can be provided.

1.3 Recommendation – pre-determination

The proponent should demonstrate the ability to obtain sufficient entitlement to account for maximum potential take unless an exemption applies.

Explanation

The proponent must demonstrate they are able to obtain sufficient entitlement or identify an applicable exemption to account for maximum potential water take. This take should consider groundwater, surface water or site water demands.

1.4 Recommendation – pre-determination

The proponent should provide an impact statement of the proposed borrow pit expansion during construction and ongoing.

Explanation

Insufficient information is provided to understand the location or impacts of this proposed expansion. The assessment should identify the location, who the owner will be, quantify groundwater take, the current licencing arrangements and ongoing licencing arrangements

for both ground and surface water take. Considerations should include exemptions under the *Water Management (General) Regulation 2018*, Harvestable Rights or holding entitlement.

1.5 Recommendation – post approval

The proponent should ensure a water access licence (WAL) is obtained to account for the maximum predicted water take for construction and operation activities unless an exemption applies under the *Water Management (General) Regulation 2018*.

Explanation

Under the *Water Management Act 2000*, if groundwater is intercepted a WAL must be obtained prior to any water take occurring unless an exemption under Clause 7 of Schedule 4 of the *Water Management (General) Regulation 2018* applies. An exemption may be available if water take is less than or equal to 3 ML per water year, subject to the development meeting other exemption requirements, such as:

- the water is not taken for consumption or supply;
- the person claiming the exemption keeps a record of the water taken under the exemption and provides this to the Minister within 28 days of the end of the water year; and
- the records are kept for 5 years.

Further information on these requirements and other information on licensing and approvals, exemptions, including an exemption application form and a form to report and record water taken can be found at:

<https://water.dpie.nsw.gov.au/licensing-and-trade>

2.0 Surface water impacts

2.1 Recommendation – post approval

In addition to the proposed energy dissipation measures, the proponent should utilise rock armouring of the banks together with vegetation along bank toes and bank faces where possible. Vegetation should be established in disturbed river sections and in any river section where local flow velocity and/or bed shear stress increases due to the operation of the flow regulators.

Explanation

Downstream of each regulator, energy dissipation structures are proposed, including bank armouring and stilling pools in Billabong Creek below the two regulators. A concrete apron is proposed below each regulator to protect the bed from scour. Although such measures have been employed, concrete aprons are limited in their ability to reduce scour velocities unless they incorporate energy dissipation roughness elements. The distance below the weirs at which bed shear stress maximises cannot be managed by concrete aprons and site-specific energy dissipation measures will be required. These should include large wood features as bank toe revetments and bank attached jams where sediment accumulation is recommended to prevent further channel expansion.

2.2 Recommendation – post approval

Large in-channel wood features should be used where historic river regulation has resulted in their removal. Rehabilitation of disturbed areas should occur as soon as practicable, using large wood features and revegetation with native species.

Explanation

Large wood features are important in inland rivers as habitat elements and to form channel bed diversity. Where possible, they should be employed to create scour holes and biofilm substrate to encourage native fauna. Where previous weir operations resulted in large wood removal from river channels, these should be replaced to form microhabitats for crustaceans, fish and mammals.

Channel rehabilitation should occur as quickly as feasible to minimise excessive sediment influx and to protect water quality.

2.3 Recommendation – post approval

Ongoing monitoring of site conditions and any sediment build up behind the structures or associated with fishways should occur following half bank height to bankfull flow events.

Explanation

Sediment flushing is important for river feature rejuvenation downstream of each regulator. Sediment accumulation will occur within the weir pools behind the regulators unless flushing flows limit deposition and sediment flushing is incorporated into the regulator outflow structure design.

2.4 Recommendation – post approval

The proponent should prepare a Construction Environmental Management Plan that includes:

- geomorphic monitoring and suitable response measures,
- ongoing monitoring of channel form, and;
- ongoing monitoring of erosion that could occur due to the structures and inlets or outlets of the regulators.

3.0 Operations Management Plan

3.1 Recommendation – post approval

The proponent should prepare an Operations Management Plan and detail how the operation of the project meets the requirements of the relevant Water Sharing Plan(s).

Explanation

Details of the operation of the proposed regulators and their flows have not yet been established. This should be provided to NSW DCCEE Water Group within an Operations Management Plan, including assessment of how the operation of the regulators meets the requirements of the relevant Water Sharing Plan(s).

4.0 Controlled activities on waterfront land

4.1 Recommendation – pre-determination

The proponent should provide further information on the design of the Forest Creek Block Bank.

Explanation

Limited information has been provided to understand the proposed design of the block bank and what exactly this structure is. NSW DCCEEW Water Group requests further information so we can review the structure's compliance with the Guidelines for Controlled Activities on Waterfront Land and any associated water take. Confirmation of the proposed design and proposed works is requested.

4.2 Recommendation – post approval

The proponent should ensure works within waterfront land are in accordance with the Guidelines for Controlled Activities on Waterfront Land.

Explanation

All works within waterfront land must consider the Guidelines for Controlled Activities on Waterfront Land. This includes but is not limited to regulator design, crossings, block bank design, pipes and cables. The guidelines can be found here:

<https://water.dpie.nsw.gov.au/licensing-and-trade/controlled-activity-approvals/guidelines>

End Attachment A
