Australian Capital Territory

Planning and Development (Conditional Environmental Significance Opinion – Blocks 1667 and 1613, Tuggeranong, Block 1 Section 26 and Block 5 Section 27, Tharwa – Tharwa Fish Habitat Project Stage 2) Notice 2017

Notifiable Instrument NI2017–510

Made under the

Planning and Development Act 2007 s 138AD (Requirements in relation to environmental significance opinions)

1 Name of instrument

This instrument is the *Planning and Development (Conditional Environmental Significance Opinion – Blocks 1667 and 1613, Tuggeranong, Block 1 Section 26 and Block 5 Section 27, Tharwa – Tharwa Fish Habitat Project Stage 2) Notice 2017.*

2 Conditional Environmental Significance Opinion

(1) On 15 September 2017, the Conservator of Flora and Fauna, pursuant to section 138AB(4) of the *Planning and Development Act 2007* (the **Act**), gave the Applicant a conditional environmental significance opinion in relation to the construction, on Blocks 1667 and 1613, District of Tuggeranong and Block 1 Section 26 and Block 5 Section 27, District of Tharwa, of an engineered log jam and associated works.

(2) In this section:

Conditional environmental significance opinion means the opinion in the schedule.

Note Under section 138AD(6) of the Act, the conditional environmental significance opinion and this notice expire 18 months after the day the notice is notified.

Ben Ponton
Chief Planning Executive
29 September 2017

Schedule

See section 2(2)

ENVIRONMENTAL SIGNIFICANCE OPINION

In accordance with section 138AB(4) of the *Planning and Development Act 2007* (the Act), I provide the following environmental significance opinion:

APPLICANT

Conservation Research, Environment, Planning and Sustainable Development Directorate, as represented by Lisa Evans, Senior Aquatic Ecologist.

APPLICATION and DEVELOPMENT PROPOSAL

The applicant has applied under section 138AA of the Act to the Conservator of Flora and Fauna for an environmental significance opinion to the effect that the development proposal set out in the submission is not likely to have a significant adverse environmental impact (the application).

The development proposal is for the construction of engineered log jams in the Murrumbidgee River approximately 1 km downstream from the Tharwa Bridge as described in the submission.

LOCATION

Blocks 1667 and 1613 District of Tuggeranong and Block 3 Section 20, Block 1 Section 26 and Block 5 Section 27 Tharwa within the Murrumbidgee River Corridor.

MATTERS TO WHICH THIS OPINION APPLIES

This opinion applies only the development proposal as described in the application.

OPINION

Provided the works are undertaken in the manner consistent with the following conditions, they are unlikely to cause a significant adverse environmental impact.

This opinion is granted subject to the following conditions made under s138AB(4) of the Act.

- Construction within the actual waterway to be undertaken between 1 Dec and 30 June.
- Machinery to be washed down before entering site.

- All fuels and chemicals to be stored appropriately.
- No native trees or shrubs to be removed without the prior approval of the Parks and Conservation Service.
- The construction site is to be managed to ensure the minimum disturbance of river bank and erosion and sediment control structures are to be in place for the duration of the works, and until disturbed areas are stabilised.
- That all works are in accordance with a Waterways Works Licence issued by the Environment Protection Authority.
- If either Water Plantain plant or Red Water Milfoil plants are encountered during the works then these plants are be transplanted to a suitable site within this Tharwa/Lanyon stretch of the Murrumbidgee.

Attached is a Statement of Reasons for the decision.

Dr A. Lane
Conservator of Flora and Fauna

15 September 2017

STATEMENT OF REASONS
REASONS FOR THE DECISION

The proposed development is a proposal mentioned in Schedule 4 of the *Planning and Development Act 2007* – Development proposal for an activity requiring an EIS Schedule 4, being:

Part 4.3, item 1(a) development that may impact on a species or ecological community that is endangered, a species that is vulnerable; protected; or has special protection status;

In the vicinity of the works the Murrumbidgee River has the potential to support:

- Trout Cod, listed as endangered under the provisions of the *Nature Conservation Act 2014* (NC Act) and the Commonwealth's Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)
- Murray Cod, listed as vulnerable under the EPBC Act, and
- Murray Crayfish listed as vulnerable under the NC Act.

Part 4.3, item 3 proposal for development on land reserved under s 315 for the purpose of a wilderness area, national park, nature reserve or special purpose reserve.

The area of works is within an area reserved as public land special purpose reserve within the Murrumbidgee River Corridor.

The proponent wants the application for the development approval assessed in the merit track on the grounds that the proposal is not likely to have a significant adverse environmental impact, and has applied to the Conservator of Flora and Fauna to that effect.

Meaning of *significant* adverse environmental impact
An adverse environmental impact is ***significant*** if—

(a) the environmental function, system, value or entity that might be adversely impacted by a proposed development is significant; or
(b) the cumulative or incremental effect of a proposed development might contribute to a substantial adverse impact on an environmental function, system, value or entity.

In deciding whether an adverse environmental impact is ***significant***, the following matters must be taken into account:

(a) the kind, size, frequency, intensity, scope and length of time of the impact;
(b) the sensitivity, resilience and rarity of the environmental function, system, value or entity likely to be affected.

In deciding whether a development proposal is likely to have a significant adverse environmental impact it does not matter whether the adverse environmental impact is likely to occur on the site of the development or elsewhere.

It has been determined that the proposal is unlikely to have a significant environmental impact, based on the documentation submitted, known values of the site, and provided the works and ongoing management are carried out in accordance with the conditions attached to this ESO.

Project description

Large sections of the Murrumbidgee River near Tharwa are blanketed by a 'sand slug' that smothers the rocky and woody habitat favoured by native fish, and prevents fish movement along the river. Large fish need approximately a metre of water for passage, but summer average water depth along this stretch of the river is about 30cm.

This project is Stage 2 of the Tharwa Reach rehabilitation project using the construction of engineered log jams (ELJs) to deepen the channel and create pools that will make it easier for native fish to pass this section of river. The log jams are constructed of interlocking hardwood logs that will manipulate the water flow and scour away the sand build-up. The works will deepen the channel and create pools making fish passage easier and provide habitat that will benefit native fish.

The works will also augment an existing rock groyne constructed in 2000 that are at the end of their lifecycle and operational usefulness.

Activities will include the construction of the ELJs using logs, rock and cabling, rock and timber revetment works, and augmentation of the existing rock groynes using rock and timber to create scour and channel deepening of the Tharwa sandslug.

Storage of materials is to be located on the adjoining rural lease, Block 5 Section 27 Tharwa.

Documentation Submitted

- Project Plan Tharwa Fish Habitat Improvement – engineered log lams 2016-18
- Project Statement
- EPBC Significance Assessment;
- Numerous Plans;
- Form 1M.

Natural conservation values present

In the location of the proposed works the river is a shallow broad channel infilled with sand as a result of land clearing in the 1850's to 1900's. The sedimentation in the channel, or sand slug, results in no natural structural habitat in the river for native aquatic fauna and a very shallow river channel which prevents fish from moving up and down stream. The previous sedimentation mitigation with the construction of rock groynes and Stage 1 of the ELJs has provided improved but restricted and isolated habitat.

The riparian vegetation on the eastern bank is degraded from clearing and pastoral use. There are sparse remnant eucalypts and scattered revegetation of native trees between the bank and the adjoining agricultural lease. The understory is predominantly exotic grasses and weeds. Some scattered patches of common emergent macrophytes (*Phragmities australis and Juncus sp.*) occur along the bank. Beyond the bank the surrounding area is cleared agricultural land on river flats.

The western bank is dominated by weeds such as willows and poplars with an understorey of exotic and native grasses and weeds. The riparian vegetation in the area provides some habitat for native birds and common mammals such as wombats as well as vertebrate pests such as foxes and rabbits.

Two species of plant, which are poorly recorded in the ACT, and may be uncommon species, have been recorded in the vicinity of the works. However they have restricted occurrences in the area and it should be possible to completely avoid the Water Plantain plant and most, if not all, of the Red Water Milfoil plants, as they don't seem to be in the direct area of proposed works.

If it is not possible to avoid these plants then they will be transplanted to a suitable site within this Tharwa/Lanyon stretch of the Murrumbidgee River.

The area of proposed log and rock storage is a paddock dominated by exotic pasture grasses.

Impact on the Reserve

It has been determined that the proposed works are unlikely to have any detrimental significant impact on the fish species, and the channel deepening is designed to improve fish passage and improve aquatic habitat.

The proposed projects address key management priorities for the ACT Government Parks and Conservation Service as outlined within the Murrumbidgee River Corridor Plan of Management (1998), specifically to:

- Protect the ecological processes of the Murrumbidgee river;

- Conserve native fish and other native aquatic animal species;
- Minimise barriers to the migration of aquatic fauna;
- Maintain recreational fishing activities;
- Minimise bank erosion and stream sedimentation;
- Revegetation of disturbed areas with stabilising vegetation.

The proposed works are also consistent with the Action Plan No 29, Aquatic Species and Riparian Zone Conservation Strategy. Habitat improvements and mitigation of sedimentation is considered important actions for the recovery of the threatened aquatic species.

The following issues have been identified as having potential to affect these threatened species during construction and operation of the ELJs. The potential for impact will be mitigated through planning or environment protection measures and the overall result of the works is considered to be positive for the threatened species.

Turbidity and Water quality

The project will consist of instream construction and is likely to cause localised turbidity and a risk to water quality from spills. These risks will be managed under the contractor's environmental management plan and potential mitigation measures could include bunding of work areas, off site refuelling and fuel storage, sediment fencing and sediment booms. The works will be undertaken outside the critical breeding period for the threatened species.

Damage to habitat

The area of investigation is a sand slug with little habitat value. It is likely that there will be some temporary loss of habitat in the associated groyne works as the existing groynes will be disturbed to augment the structures. There may be some loss of emergent riparian vegetation within the footprint during construction. However, this will be augmented in the site rehabilitation phase by replanting the banks and bar around the works.

Direct impact on threatened species

All of the threatened species that occur in the vicinity of the project are mobile and once plant and equipment start work are likely to move to other locations to avoid disturbance.

Increase in predation and fishing.

It is likely that the ELJ's will become a target for fishing. Installation of advisory signs and local enforcement will manage the threat to threatened species. There is the potential for an increased predation by avian predators such as cormorants due to the provision of a near river roosting site. This is offset by the higher protection offered by the structure itself and the increased depth in the channel.

Increased sediment transport and sedimentation.
Although the ELJ is designed to scour sand and sediment from the river channel it is not expected that this scouring will cause any increased risk to populations downstream. The Murrumbidgee at Tharwa has an annual sediment transport budget of approximately 50,000m^3/annum. The proposed works will not significantly increase this amount and may decrease the amount in the short term by trapping sediment between the structures.

Erosion and bank instability
The banks around the ELJ will be armoured with rock to provide bank protection. The area will be reformed back to its initial slope and extensively revegetated.

The following measures are being implemented to ensure mitigation of any potential impacts:

- Rehabilitation and revegetation of all bank areas disturbed by construction.
- Additional revegetation of the banks for a minimum of 10 metres upstream and downstream of the structures.
- Undertake instream construction outside of breeding seasons.
- Ongoing weed control on the bar surfaces around the structures
- All works to be in accordance with a Water Works Licence approved by the Environment Protection Authority;

Revegetation
The ESO application identifies that revegetation of the riparian zone will occur as part of the completion of the works. It is agreed that revegetation of the riparian zone and other areas impacted by the works must be undertaken. The exact scope of works must be determined in conjunction with Parks and Conservation staff, to ensure that appropriate species are used in the revegetation works. Where possible, plants from local provenance are to be used.

If either Water Plantain plant or Red Water Milfoil plants are encountered during the works then these plants should be transplanted to a suitable site within this Tharwa/Lanyon stretch of the Murrumbidgee.

Potentially Significant Environmental Impacts
There are no issues with potential to be considered significant given the mitigation measures included in the project. In addition the majority of the ELJ deflector will be buried within the stream bed with the piles and basal key logs to be keyed into the underlying gravel/cobble layer. This is to ensure the structure foundations are deep enough so they are not undercut during a high magnitude flow event and fail.

The potential for a significant environmental impact is low provided works are in accordance with the conditions as imposed. Implementation of the mitigation measures and the conditions imposed, as well as the rehabilitation works, will reduce the likelihood of off-site impacts.