

Jai Reid
The Department of Planning & Environment

Re: **Narragamba Solar Farm (SSD-60575715) SEARs**

DPI Fisheries is responsible for ensuring that fish stocks are conserved and that there is no net loss of key fish habitats upon which they depend. To achieve this, DPI Fisheries ensures that developments comply with the requirements of the *Fisheries Management Act 1994* (namely the aquatic habitat protection and threatened species conservation provisions in Parts 7 and 7A of the Act, respectively), and the associated *Policy and Guidelines for Fish Habitat Conservation and Management (2013)*. In addition, DPI Fisheries is responsible for ensuring the sustainable management of commercial, recreational and Aboriginal cultural fishing, aquaculture, marine parks and aquatic reserves within NSW.

The EA should specifically address impacts on the aquatic ecology and controls to be established for permanent access tracks, temporary access tracks or powerlines in or adjacent to *Key Fish Habitats* (Third order streams or larger (Strahler Stream Order System) and potential impacts on riparian vegetation and threatened species as per below:

AQUATIC ECOLOGICAL ASSESSMENT

An aquatic ecological assessment is required that addresses all direct and indirect impacts of the Narragamba Solar Farm Project on Key Fish Habitat and associated flora and fauna including threatened species, populations, and communities during construction and operation for the life of the asset.

The Aquatic Ecological Assessment should cover the assessment requirements outlined in Chapter 3 of the *Policy and Guidelines for Fish Habitat Conservation and Management (2013)* including:

- Recent aerial photograph (preferably colour), map or GIS of the locality which details the Key Fish Habitat of the development site, all habitats impacted by the development, and waterway classification (CLASS) as defined in Tables 1 and 2 of the *Policy and Guidelines for Fish Habitat Conservation and Management (2013)*.
- Location details of all temporary and permanent infrastructure and construction activities, such as waterway crossings, powerlines, access tracks, etc.
- Mapping of the full aerial extent of Key Fish Habitat types that will be impacted either directly or indirectly by the development and subsequent operation of the Narragamba Solar Farm Project, with impacted habitats clearly identified on recent aerial photographs, maps or GIS.
- Description, quantification, and mapping of all aquatic and riparian vegetation communities potentially impacted by the development. This should include an assessment of the extent and condition of aquatic and riparian vegetation and the presence of significant habitat features (e.g. gravel beds, snags, reed beds, rock bars, etc).

- Quantification of the extent of aquatic and riparian habitat removal, modification or inundation (whether temporary or permanent) that will result from the proposed development.
- Development of mitigation measures during construction (e.g. Environmental Management Plans) and operation (e.g. Operational Management Plan) including monitoring of proposed mitigation measures and plans to confirm their effectiveness.

WATERWAY CROSSINGS

The construction of permanent or temporary access tracks or underground cables through *Key Fish Habitat* should be in accordance with DPI Fisheries Guideline document: *Policy and Guidelines for Fish Habitat Conservation and Management (Update 2013)*, and the *Policy and Guidelines for Fish Friendly Waterway Crossings (DPI 2003)*. This is to ensure that the works are designed and constructed in accordance with best management practice and with minimal impact on the aquatic environment and fish passage requirements.

LOSS OF RIPARIAN VEGETATION

There is also the likelihood of a loss of riparian vegetation associated with the proposed solar area footprint, alongside Key Fish Habitats. The “*degradation of native riparian vegetation*” has been listed as a Key Threatening Process under the provisions of the *Fisheries Management Act 1994*. DPI Fisheries policy advocates the use of terrestrial buffer zones as per the *Policy and Guidelines for Fish Habitat Conservation and Management (Update 2013)* available on the Department’s website at <http://www.dpi.nsw.gov.au/fishing/habitat/publications/pubs/fish-habitat-conservation> in order to maintain the riparian buffer zone and limit disturbance and susceptibility to bed or bank erosion.

THREATENED SPECIES, POPULATIONS AND ECOLOGICAL COMMUNITIES

An assessment under Part 7A of the *FMA 1994* is required to address whether there are likely to be any significant impacts on listed threatened species, populations or ecological communities. Assessment of the impacts may require initial ‘Seven-Part Test’s. Updated Threatened species distributions can be found at www.dpi.nsw.gov.au/fishing/species-protection/threatened-species-distributions-in-nsw/freshwater-threatened-species-distribution-maps.

D. Ward.

David Ward
A/ Senior Fisheries Manager, Murray Darling.