Director General's Environmental Assessment Requirements

Section 115Y of the *Environmental Planning and Assessment Act 1979*
Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*

Application Number	SSI - 5125
Infrastructure Project	**Bootawa Dam Raising** The proposal includes increasing the storage capacity from 2,275 megalitres (ML) to 4,500 ML, by raising the main embankment by 7 metres and constructing a new intake tower and a saddle dam. A spillway would also be constructed to allow the dam to safely pass the worst case possible flood (Probable Maximum Flood).
Location	Bootawa, approximately 3 km south of the Manning River and 8 km west of Taree
Proponent	MidCoast Water
Date of Issue	16 February 2012
General Requirements	The Environmental Impact Statement (EIS) must be prepared in accordance with, and meet the minimum requirements of, Part 3 of Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* (the EP&A Regulation) and include the following: 1. the information required under clause 6 of Schedule 2 of the EP&A Regulation; and 2. the content listed in clause 7 of Schedule 2 of the EP&A Regulation, including, but not limited to: • a summary of the environmental impact statement, • a statement of the objectives of the project, including a description of the strategic need, justification, objectives and outcomes, with particular reference to securing the yield of the dam and the environmental flows in the Manning River (refer further to the key issues); • an analysis of feasible alternatives to the carrying out of the project, including an analysis of options considered having regard to the project objectives (including an assessment of the environmental costs and benefits of the project relative to alternatives and the consequences of not carrying out the project), the suitability of the chosen option and whether or not the project is in the public interest, • an analysis of the project, including an assessment, with a particular focus on the requirements of the listed key issues, in accordance with clause 7(1)(d) of Schedule 2 of the EP&A Regulation (where relevant), • an identification of how relevant planning, land use and development matters (including relevant strategic and statutory matters, such as relevant water sharing plans, including the *Water Sharing Plan for the Lower North Coast Unregulated and Alluvial Water Sources 2009* (Water Sharing Plan, 2009) and Regional water supply schemes have been considered in the impact assessment (direct, indirect and cumulative impacts) and/or in developing management/ mitigation measures, • a compilation of the measures proposed to mitigate any adverse effects of the project on the environment, • a justification for the preferred project taking into consideration the objects of the *Environmental Planning and Assessment Act 1979*, and • detailing how the principles of ecologically sustainable development will be incorporated in the design, construction and ongoing operation phases of the project.
Key issues	The EIS must address the following specific matters: **Project Justification** – including but not limited to: • an assessment and quantification of the yield and the drought security required (both at current storage level and without the Cease to Pump rule outlined under the Water Sharing Plan, 2009 and at increased storage and with the Cease to Pump rule in place); • historical pumping records from the Manning River, including an assessment of the impacts on pumping opportunity of the increased storage and of introducing the Cease to Pump requirements; • quantification of the changes in quantity, reliability of supply, yield or

	increased drought security to the local water utility; and • details of any alternative options considered with respect to the water management outcomes of the project. **Soil and Water** – including but not limited to: • impacts on surface water flows, quality and quantity and risks to groundwater quality, with particular reference to impacts on surrounding (up and down stream) waterways, their habitats and environmental flows, and inclusion of baseline water quality and flow conditions; • detail impacts on water quality as a result of increasing the dam depth and impacts relevant to the depth of withdrawal (including temperature, levels of dissolved gases, nutrients and turbidity) and potential downstream impacts due to increasing the extraction rates of water from the Manning River in periods of high flow (such as changes to natural flooding patterns and ecological processes); • the frequency and likely impacts of spills, with reference to the potential for downstream ecologic, geomorphologic, water quality and temperature impacts; • flooding impacts and characteristics, with an assessment of the potential changes to flooding behaviour (levels, velocities and direction) and impacts on bed and bank stability, through flood modelling, including: o hydraulic modelling for a range of flood events, o description, justification and assessment of design objectives, o an assessment of afflux and flood duration (inundation period) on land, infrastructure, property and business operations, o consideration of the changes in rainfall frequency and/or intensity as a result of climate change; and o outline contingency measures for flooding events with potential for inundation and discharge through the spillway area during construction; • waterways to be modified as a result of the project, including ecological, hydrological and geomorphic impacts (as relevant), including temporary crossings, and measures to rehabilitate the waterways to pre-construction conditions or better, including fish passage requirements taking into account *Policy and Guidelines for Fish Friendly Waterway Crossings* (Department of Primary Industries, 2004); and • identification and assessment of soil characteristics and properties that may impact or be impacted by the project and details of erosion and sedimentation control measures. **Biodiversity** - including but not limited to: • impacts on the biodiversity values of the site and adjoining areas, both up and down stream of the dam (including impacts on Manning River downstream of the pump offtake), including terrestrial, riparian and aquatic habitats, and impacts on the borrow areas (A and B) that are to be used for construction. Consideration of alternatives to the use of algicides to treat dam water should also be included; • impacts on Endangered Ecological Communities, critical habitat, threatened and protected species, populations and their habitats, listed under both State and Commonwealth legislation that have been recorded or considered likely to occur on the site and surrounding land, and whether the proposal or specific aspects of the proposal constitute Key Threatening Processes in terms of the *Threatened Species Conservation Act 1995* (including the Black-necked Stork, Glossy Black Cockatoo, Koala, Grey-headed Flying-fox and Eastern Cave Bat); • targeted surveys of threatened flora and fauna species and their habitat that are known or likely to occur within the project's study area based on the presence of suitable habitat. Details of the survey methodology employed, including survey effort and timing and representativeness for the species targeted, should be included; • the details of available offset measures to compensate the biodiversity impacts of the proposal where offset measures are proposed, consistent with the *Principles for the use of biodiversity offsets in NSW*; and • taking into account the *Draft Guidelines for Threatened Species Assessment* (Department of Environment and Conservation, 2005); *Threatened Species Survey and Assessment Guidelines: Field Survey Methods for Fauna* -

Amphibians (DECCW, 2009); and *Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities – Working Draft* (DEC, 2004).

Heritage – including but not limited to:

- impacts to ***Aboriginal heritage*** (including cultural and archaeological significance), in particular impacts to Aboriginal heritage sites identified within or near the project. Where impacts are identified, the assessment shall:
  - outline the proposed mitigation and management measures (including measures to avoid significant impacts and an evaluation of the effectiveness of the measures), demonstrate effective consultation with Aboriginal communities in determining and assessing impacts and developing and selecting options and mitigation measures (including the final proposed measures),
  - demonstration that an appropriate archaeological assessment methodology, including research design (where relevant), has been undertaken, including results, and,
  - take into account the *Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation* (Department of Environment and Conservation, 2005) and be undertaken by a suitably qualified heritage consultant; and
- impacts to ***historic heritage*** (including archaeology, heritage items, conservation areas and natural areas) should be assessed. Where impacts to State or locally significant historic heritage items are identified, the assessment shall:
  - outline the proposed mitigation and management measures (including measures to avoid significant impacts and an evaluation of the effectiveness of the mitigation measures),
  - include a statement of heritage impact for heritage items (including significance assessment),
  - demonstrate that an appropriate archaeological assessment methodology, including research design (where relevant), has been undertaken, including results, and
  - take into account the guidelines in the NSW Heritage Manual (1996) and be undertaken by a suitably qualified heritage consultant.

Traffic and Transport – including but not limited to:

- construction traffic impacts, including:
  - the identification of construction traffic routes and the nature of existing traffic on these routes,
  - an assessment of construction traffic volumes, and
  - potential impacts to the regional and local road network (including safety and level of service) and disruption to existing public transport/school bus services and access to properties and businesses; and
- operational traffic and transport impacts to the local and regional road network, including changes to local road connectivity and impacts on local traffic arrangements, road capacity/ safety and modified access to realigned roads.

Noise and Vibration – including but not limited to construction noise and vibration impacts taking into account (where relevant) the *Interim Construction Noise Guideline* (Department of Environment and Climate Change, 2009) and *Assessing Vibration: A Technical Guideline* (Department of Environment and Conservation, 2006).

Air Quality – including but not limited to an assessment of the construction air quality impacts on sensitive receptors, including impacts from particulate matter, total suspended solids and other air pollutants generated by the project.

Visual Amenity – including but not limited to an assessment of the visual impact of the project on the landscape character of the area and details of landscaping treatment and design.

	Land Use, Property and Socioeconomic - including but not limited to: • impacts on directly affected properties and land uses, including Crown land, and reserves and impacts related to access and property infrastructure; • impacts on natural resources, including mining and extractive resources utilisation; • impacts on downstream areas in the event of a catastrophic failure of the dam embankment, using hydraulic dam break modelling for a range of coincident flooding scenarios in the Manning River; and • identification of any services and utilities to be relocated. **Spoil and Waste Management** – including but not limited to an estimation of the likely spoil generation and type (including identification of known or potential contamination issues), disposal/recycling sites and management of all types of waste material. **Hazards and Risk** – including an assessment of the hazards and risk associated with the proposal including details of hazardous materials used or kept on the premises during the construction and operation phases. The assessment shall refer to the Department's Guideline *Applying SEPP 33* (DUAP, 1994), where relevant.
Environmental Risk Analysis	Notwithstanding the above key assessment requirements, the EIS must include an environmental risk analysis to identify potential environmental impacts associated with the project (construction and operation), proposed mitigation measures and potentially significant residual environmental impacts after the application of proposed mitigation measures. Where additional key environmental impacts are identified through this environmental risk analysis, an appropriately detailed impact assessment of this additional key environmental impact must be included in the EIS.

Consultation	You should undertake an appropriate and justified level of consultation with relevant parties during the preparation of the EIS, including but not limited to:
	• local, State and Commonwealth government authorities, including the:
	  ○ Department of Primary Industries (Agriculture, Forests, Fisheries, Minerals, Crown Land and Office of Water),
	  ○ Office of Environment and Heritage (Environment Protection Authority and Heritage Office),
	  ○ Roads and Maritime Services,
	  ○ Hunter-Central Rivers Catchment Management Authority,
	  ○ NSW Dams Safety Committee, and
	  ○ Greater Taree City Council;
	• specialist interest groups, including Local Aboriginal Councils, Aboriginal stakeholders and industry/ growers associations, mining and petroleum title holders and exploration licence holders;
	• utilities and service providers; and
	• the public, including community groups and adjoining and affected landowners.
	
	The consultation process shall include measures for disseminating information to increase awareness of the project as well as methods for actively engaging stakeholders on issues that would be of interest/concern to them. The EIS must:
	• demonstrate effective consultation with stakeholders, and that the level of consultation with each stakeholder is commensurate with their degree of interest/concern or likely impact;
	• clearly describe the consultation process undertaken for each stakeholder/group including details of the dates of consultation and copies of any information disseminated as part of the consultation process (subject to confidentiality); and
	• describe the issues raised during consultation and how and where these have been addressed in the EIS, including where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.

Further consultation after 2 years	If you do not lodge an EIS for the infrastructure within 2 years of the issue date of these DGRs, you must consult with the Director General in relation to the requirements for lodgement.