

Planning Secretary's Environmental Assessment Requirements

Section 5.16 of the *Environmental Planning and Assessment Act 1979*

Part 8 of the *Environmental Planning and Assessment Regulation 2021*

Application Number	SSI-65020460
Project	Clarrie Hall Dam Raising
Location	45 Clarrie Hall Dam Rd, Uki NSW 2484 within Tweed Shire
Proponent	TWEED SHIRE COUNCIL ABN 90 178 732 496
Date of Issue	31/05/2024
General Requirements	Form of Environmental Impact Statement (EIS) The Environmental Impact Statement (EIS) must meet the minimum form and content requirements in Section 190 and Section 192 of the <i>Environmental Planning and Assessment Regulation 2021</i> and must have due regard to the <i>State Significant Infrastructure Guidelines</i>. The EIS must include, but not necessarily be limited to, the following: A) An executive summary B) A full description of the water storage and associated infrastructure proposed (the project), including: i) The design for the project that is proposed to be constructed and operated including: the strategic objectives of the proposal; the size, volume and type of the operation; and the nature of any treatment processes, products, by-products and wastes produced. ii) Details of all components, disturbance areas, materials, activities, site preparation and construction infrastructure required to construct the project, including any ancillary development that may require separate approvals. iii) A construction timetable and staging; hours of construction, proposed construction methods, including any earthworks or site clearing, reuse and disposal of cleared material. iv) Details of the operation of the project, and associated

infrastructure that is proposed to be constructed.

- v) Site plans, maps, drawings and diagrams at an adequate scale with dimensions in an electronic format that enables integration with mapping and other technical software, showing:
 - o The location and dimensions of all project components. Include a site diagram showing the site layout and location of environmental controls and proximity to water resources.
 - o Existing infrastructure, land use, and environmental features, as well as details of any acquisitions or easements that may be required.
 - vi) The likely interactions between the project and any other existing, approved, proposed, reasonably foreseeable development in the vicinity of the site, including an assessment of the cumulative impacts on the environment.
- C) A summary of the strategic need for the proposal with regard to its State Significance and relevant State Government Policy.
- D) A description of how alternatives to and options within the project were analysed and optimised to inform the selection of the preferred alternative/option.
- E) An assessment of the likely impacts of the project on the biophysical and socio-economic environment, focusing on the specific issues identified below and any other significant issues identified, including:
- i) A description of the existing environment likely to be affected by the project using relevant and adequate data.
 - ii) An assessment of the potential impacts of the project, including any cumulative impacts, and taking into consideration relevant guidelines, policies, plans and industry codes of practice.
 - iii) A description and details of how the project has been designed to avoid, minimise and offset impacts (through design, or construction or operation methodologies).
 - iv) A description of how any residual impacts will be managed or offset, and the approach and effectiveness of these measures.
 - v) Assessment must be in consultation with relevant agencies and in accordance with agency advice.
- F) A chapter that synthesises the environmental impact assessment and provides:
- i) A succinct but complete description of the project for which approval is sought.
 - ii) A description of any uncertainties that still exist around design, construction and/or operational methodologies and how these will be resolved in the next stages of the project.

- iii) A compilation of the impacts of the project that have not been avoided.
- iv) A compilation of the proposed measures associated with each impact to avoid or minimise or offset these impacts
- v) A compilation of the outcome(s) the proponent will achieve.
- vi) The reasons justifying carrying out the project as proposed, having regard to the biophysical, economic and social considerations, including ecologically sustainable development and cumulative impacts.
- vii) A consolidated summary of all the proposed environmental management and monitoring measures, identifying all the commitments in the EIS, including the anticipated level of performance in meeting required environmental standards and cleaner production principles.

The EIS must also be accompanied by a Quantity Surveyor Report for Capital Investment Value and Employment, providing:

- a detailed calculation of the estimated capital investment value (CIV) of the development, prepared by a AIQS Certified Quantity Surveyor or RICS Chartered Quantity Surveyor in accordance with *Planning Circular PS 21-020: Calculation of capital investment value*. The calculation of the estimated CIV is to be accurate at the date of application and include details of all components and assumptions from which it is derived.
- an estimate of the retained and new jobs that would be created during the construction and operational phases, including details of the methodology to determine the figures provided.

In addition to key issues specified below, the EIS must include an environmental risk assessment to identify the potential environmental impacts associated with the infrastructure.

Where relevant, the assessment of key issues below and any other significant issues identified in the risk assessment, must include:

- adequate baseline data
- consideration of the potential cumulative impacts due to other developments in the vicinity (completed, underway or proposed);
- measures to manage and avoid environmental risk including but not limited to risk from bushfire, flood, storm, subsidence, dangerous substances, and vehicular traffic
- measures to avoid, minimise and if necessary, offset predicted impacts, including detailed contingency plans for managing any significant risks to the environment; and
- a health impact assessment of local and regional impacts associated with the development, including those health risks associated with

	relevant key issues. The EIS must only include data and analysis that is reasonably needed to make a decision on the project. Relevant information must be succinctly summarised in the EIS and included in full in appendices. Irrelevant, conflicting or duplicated information must be avoided.
Key issues	The EIS must address the following specific matters: Statutory and Strategic Context 1. Include consideration of how the project meets the provisions of the Environmental Planning and Assessment Act 1979 (the EP&A Act) and the EP&A Regulation and a list of any approvals that must be obtained under any other Act or law before the project may lawfully be carried out. 2. Consider the provisions of relevant environmental planning instruments including: - o State Environmental Planning Policy (Planning Systems) 2021; - o State Environmental Planning Policy (Transport and Infrastructure) 2021; - o State Environmental Planning Policy (Primary Production) 2021; - o State Environmental Planning Policy (Biodiversity and Conservation) 2021; - o State Environmental Planning Policy (Resilience and Hazards) 2021 - o Any other relevant State Environment Planning Policies (SEPPs), Regional Planning Plans (REPs) Local Environmental Plans (LEPs), or draft SEPPs, REPs and LEPs 3. Address the relevant planning provisions, goals and strategic planning objectives including but not limited to the following (or relevant draft documents that may supersede or supplement these): - o Tweed Local Environmental Plan 2014 - o Far North Coast Regional Water Strategy 2023 - o Far North Coast – Implementation Plan Regional Water Strategy 2023 - o North Coast Regional Plan 2041 - o Relevant Tweed Shire Council policies plans and strategies, including: - o Community Strategic Plan - o Local Strategic Planning Statement

- Integrated Water Cycle Management Plan
- Water Supply Strategic Business Plan; and
- Delivery Program and Operational Plan

4. Identify all approvals and licences required under environmental protection legislation including details of all scheduled activities, types of ancillary activities and types of discharges (to air, land and water).

Biodiversity

1. Biodiversity impacts related to the proposal are to be assessed in accordance with section 7.9 of the Biodiversity Conservation Act 2016, the Biodiversity Assessment Method 2020 (BAM) and documented in a Biodiversity Development Assessment Report (BDAR). The BDAR must include information in the form detailed in the Biodiversity Conservation Act 2016 (s6.12), Biodiversity Conservation Regulation 2017 (s6.8) and Biodiversity Assessment Method, unless OEH and the Department determine that the proposed development is not likely to have any significant impacts on biodiversity values.
2. The BDAR must document the application of the avoid, minimise and offset framework including assessing all direct, indirect and prescribed impacts in accordance with the Biodiversity Assessment Method.
3. The BDAR must include details of the measures proposed to address the offset obligation as follows:
 - (a) the total number and classes of biodiversity credits required to be retired for the proposal
 - (b) the number and classes of like-for-like biodiversity credits proposed to be retired
 - (c) the number and classes of biodiversity credits proposed to be retired in accordance with the variation rules
 - (d) any proposal to fund a biodiversity conservation action
 - (e) any proposal to make a payment to the Biodiversity Conservation Fund. If seeking approval to use the variation rules, the BDAR must contain details of the reasonable steps that have been taken to obtain requisite like-for-like biodiversity credits.
4. The BDAR must be submitted with all spatial data associated with the survey and assessment as per Appendix 10 of the BAM.
5. The BDAR must be prepared by a person accredited in accordance with the Accreditation Scheme for the Application of the Biodiversity Assessment Method Order 2017 under s6.10 of the Biodiversity

Conservation Act 2016.

6. The EIS should map habitat (actual and predicted) for the Giant Barred Frog (*Mixophyes iterates*) and calculate the area of this habitat to be directly or indirectly impacted. Other threatened frogs known, or with potential to occur, or with potential to be indirectly impacted, should also be discussed and assessed in terms of the spatial extent of actual or potential habitat in the locality and whether these areas will be indirectly impacted. Species that should also be considered for inclusion in this list are Hip-pocket Frog (*Assa darlingtonia*), Loveridge's Frog (*Philoria loveridgei*) and Fleay's Barred Frog (*Mixophyes fleayi*).
7. An assessment of the numbers of Red Lilly Pilly (*Syzygium hodgekinsoniae*) likely to be directly or indirectly impacted by the proposal should also be included in the EIS. The spatial extent of this habitat should be provided as a map and a calculated area.
8. The Lowland Rainforest Threatened Ecological Community should be clearly mapped and the extent of likely direct and indirect impacts from the proposal should be assessed.
9. The proponent must undertake a test of significance as required by Part 7A of the Fisheries Management Act 1994 for relevant threatened fish species, including the Southern Purple Spotted Gudgeon (*Mogurnda adspersa*), with known or expected distributions within areas impacted by the proposal.
10. The proponent must undertake an assessment of suitable opportunities within the Tweed catchment to offset the impact of the proposed dam upgrade on fish passage and the potential impacts to fish associated with water releases and overtopping of the dam.

Hydrology, Flooding and Water Quality

1. The Proponent must describe (and map) the existing hydrological regime for surface and groundwater resources (including reliance by users and for ecological purposes) likely to be impacted by the proposal and identify any requirements for baseline monitoring of hydrological attributes. Mapping must include upstream and downstream tributaries that may potentially be impacted.
2. The Proponent must assess and model the impact of the operation of the proposal and any ancillary facilities (both built elements and discharges) on hydrology in accordance with the current guidelines, including:
 - (a) natural processes within rivers, wetlands and floodplains that affect ecological health, aquatic connectivity and access to habitat for spawning and refuge.
 - (b) impacts from any permanent and temporary interruption of

groundwater flow, including the extent of drawdown, barriers to flows, implications for groundwater dependent surface flows, ecosystems and species and groundwater users.

- (c) changes to environmental water availability and flows, both regulated/licensed and unregulated/rules-based sources.
 - (d) direct or indirect increases in erosion, siltation, destruction of riparian vegetation or a reduction in the stability of riverbanks or watercourses.
3. The Proponent must detail a framework for managing stratification within the dam and associated algal blooms and water releases from the dam that ensures impacts to upstream and downstream areas and ecosystems are minimised. The framework must include consideration of the potential rates of rise and fall in the river and timing of water releases and consider antecedent conditions within the river, flooding impacts up to the probably maximum flood and water clarity and temperature.
 4. The Proponent must assess and model the impacts on flood behaviour during construction and operation for a full range of flood events including:
 - (a) any detrimental increases in the potential flood affectation of other properties, assets and infrastructure including changes to flood hazard categories
 - (b) flood storage capacity of the proposal, including quantifying what flood events can be mitigated by the dam
 - (c) the effect of the proposal on flood behaviour in the broader catchment including any change to flood storage areas
 - (d) consistency (or inconsistency) with applicable Council floodplain risk management plans
 - (e) impacts on flood emergency management - these matters must be discussed with the State Emergency Services and Council
 - (f) any increase in social and economic costs to the community from changes in flood behaviour.
 5. The EIS must include a sensitivity analysis for increases in rainfall intensity as a result of climate change, and the risk and vulnerability of the project to changes in flooding behaviour resulting from climate change in accordance with and using appropriate NSW Government guidelines, data and modelling (including justification about the use of those guidelines, data and modelling).

6. The Proponent must describe background conditions for current operations and any water resource likely to be affected by the proposal, including:
 - (a) existing surface and groundwater quality
 - (b) frequency and quality of dam discharges including for environmental flows
 - (c) downstream intake locations
 - (d) Water Quality Objectives (as endorsed by the NSW Government) as appropriate that represent the community's uses and values for the receiving waters.
 - (e) water quality monitoring programs and indicators and trigger values/criteria.
7. The EIS must assess the impacts of the proposal on water quality, including the nature and degree of impact on receiving waters for both surface and groundwater.

Climate Change Risk

1. The Proponent must assess the risk and vulnerability of the proposal to climate change in accordance with the current guidelines, including any Regional Water Strategy and associated climate change modelling as relevant to the project.
2. The Proponent must quantify specific climate change risks with reference to the NSW Government's climate projections, including relevant data and information from NSW and ACT Regional Climate Modelling partnership (NARCLiM) (data, models, simulations, guidance), and incorporate specific adaptation actions in the design and operation where reasonable and feasible. NARCLiM 1.5 must be used, unless otherwise agreed by the Planning Secretary. Other data, projections, or information may also be used in addition to NARCLiM.
3. An assessment of potential future climate variability impacts on the operation and management of the dam and associated delivery works (such as water deliver by way of river operations, or pipe infrastructure), having regard to research on groundwater recharge and surface run-off and the NSW Climate Impact Profile.
4. Assessment of the greenhouse gas emissions from the construction and operation of the project for the life of infrastructure, including:
 - (a) documentation and justification of an appropriate methodology for estimating greenhouse gas emissions for the project as a water storage, or water reservoirs project where permanent land use change

occurs

- (b) assessment of carbon dioxide, nitrous oxide and methane gas emissions, including gases emitted by decomposing plants and organic material within the dam inundation area
- (c) quantitative assessment of Scope 1, 2 and 3 greenhouse gas emissions
- (d) an assessment of reasonable and feasible measures to minimise greenhouse gas emissions and ensure energy efficiency
- (e) project emissions as a proportion of NSW and Australia's greenhouse gas emissions budgets
- (f) details of all proposed mitigation, management and monitoring measures.

Health and Safety

1. The Proponent must demonstrate that the proposed works would comply with Dam Safety NSW and Dam Safety NSW Board advice, and the statutory requirements of the Dams Safety Act 2015, Dams Safety Regulation 2019.
2. The Proponent must assess the potential health impacts of the proposal, in accordance with the current guidelines.
3. Preparation of a bush fire assessment report that identifies the extent to which the proposed development conforms with or deviates from provisions of the Planning for Bush Fire Protection 2019 (RFS 2019).
4. The Proponent must assess the likely risks of the proposal to public safety, paying particular attention to visitor safety and access, bushfire risks and the handling and use of dangerous goods.
5. The Proponent must identify potential ignition sources during construction, and detail proposed bush fire protection measures for the development, including fire suppression capabilities.
6. The Proponent must address proposed emergency management, evacuation and access, and contingency measures, and whether the proposal incorporates specific measures to manage risk to life from flood. These matters are to be discussed with the SES.

Heritage

1. The Proponent must identify and assess any direct and/or indirect impacts (including cumulative impacts) to the heritage significance of:
 - (a) Aboriginal places and objects, as defined under the National Parks and Wildlife Act 1974 and in accordance with the principles and methods of assessment identified in the current guidelines
 - (b) Aboriginal places of heritage significance, as defined in the Standard

Instrument – Principal Local Environmental Plan

- (c) Environmental heritage, as defined under the Heritage Act 1977
 - (d) Items listed on the National and World Heritage lists.
2. Where impacts to State or locally significant heritage items are identified, the assessment must:
 - (a) include a statement of heritage impact for all heritage items (including significance assessment)
 - (b) consider impacts to the item of significance caused by the proposal, but not limited to, vibration, demolition, archaeological disturbance, altered historical arrangements and access, visual amenity, landscape and vistas, curtilage, subsidence and architectural noise treatment (as relevant)
 - (c) outline measures to avoid and minimise those impacts in accordance with the current guidelines
 - (d) be undertaken by a suitably qualified heritage consultant(s) (note: where archaeological excavations are proposed the relevant consultant must meet the NSW Heritage Council's Excavation Director criteria).
 3. A historical archaeological assessment should be prepared by a suitably qualified historical archaeologist in accordance with the relevant guidelines. This assessment should identify what relics, if any, are likely to be present, assess their significance and consider the impacts from the proposal on this potential resource. Where harm is likely to occur, it is recommended that the significance of the relics be considered in determining an appropriate mitigation strategy. If harm cannot be avoided in whole or part, an appropriate Research Design and Excavation Methodology should also be prepared to guide any proposed excavations.
 4. The EIS must identify and describe the Aboriginal cultural heritage values that exist across the whole area that will be affected by the proposal and document these in an Aboriginal Cultural Heritage Assessment Report (ACHAR). This may include the need for surface survey and test excavation. The investigation, assessment and reporting of Aboriginal cultural heritage values must be conducted in accordance with the current Code of Practice and Guide and in consultation with Heritage NSW regional branch officers. Impacts on Aboriginal cultural heritage values are to be assessed and documented in the ACHAR. The ACHAR must demonstrate attempts to avoid impact on cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the ACHAR must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to Heritage NSW.

5. Consultation with Aboriginal people must be undertaken and documented in accordance with the current consultation requirements for proponents. The significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be documented in the ACHAR.

Noise and Vibration

1. The Proponent must assess construction noise and vibration impacts in accordance with current NSW noise and vibration guidelines including consideration of noise characteristics (tonal, intermittent and low frequency noise) and the impact on sensitive receivers.
2. The assessment must include consideration of impacts to the structural integrity and heritage significance of items (including Aboriginal places and items of environmental heritage).
3. The Proponent must demonstrate that blast impacts are capable of complying with the current guidelines, if blasting is required.

Protected and Sensitive Lands

1. The Proponent must assess the impacts of the proposal on environmentally sensitive land, including (but not limited to):
 - (a) protected areas (including land and water) managed by NPWS, DPI Fisheries under the National Parks and Wildlife Act 1974
 - (b) Key Fish Habitat as mapped and defined in accordance with the Fisheries Management Act 1994 (FM Act)
 - (c) Land or waters identified as Critical Habitat under the FM Act.
 - (d) Waterfront land as defined in the Water Management Act 2000.
 - (e) Matters protected under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act), or other Commonwealth legislation
 - (f) Areas of outstanding biodiversity value under the BC Act
 - (g) Biodiversity stewardship sites, private conservation lands and other lands identified relating to offsets and biodiversity credits under the BC Act, or statutory schemes for biodiversity and conservation management
2. Maps must be included in the assessment that clearly indicate the relationship between the project's proposed full supply level (FSL), and protected and sensitive lands, which indicate the:
 - (a) Areas impacted by backwater flooding upstream of the dam wall (for a range of flood conditions)

- (b) Flood storage zone (FSZ), if proposed
- (c) Flood mitigation zone (FMZ), if proposed

Social, Land Use and Property

1. Provide a Social Impact Assessment prepared in accordance with the *Social Impact Assessment Guideline for State Significant Projects*
2. The Proponent must undertake a comprehensive social impact assessment, supported and informed by a comprehensive, inclusive, and participatory program of community engagement, actively seeking input from the affected community and other stakeholders
3. The Proponent must assess impacts from construction and operation on potentially affected properties, businesses, recreational users and land and water users (for example, agricultural land uses), including property acquisitions/adjustments, access, amenity and relevant statutory rights

Soils

1. The Proponent must assess the impacts of sourcing, importation and emplacement of fill/ quarried material for the proposal
2. The Proponent must assess potential impacts on landforms (topography), paying particular attention to the long term geotechnical stability of any new landforms (such as embankments etc)
3. The Proponent must assess whether the land is likely to be contaminated and identify if remediation of the land is required, having regard to the ecological and human health risks posed by the contamination in the context of past, existing and future land uses. Where assessment and/or remediation is required, the Proponent must document how the assessment and/or remediation would be undertaken in accordance with current guidelines
4. The Proponent must assess whether salinity is likely to be an issue and if so, assess the impacts of the proposal on soil salinity
5. The Proponent must assess the impacts on soil and land resources (including erosion risk or hazard). Particular attention must be given to soil erosion and sediment transport, consistent with the practices and principles in the current guidelines
6. Consideration should also be given to areas inundated, up to and including the probable maximum flood, and how soil and other impacts due to changed hydrological regimes as a result of the proposal would be managed and/or remediated
7. The Proponent must detail the capacity of the site to support the increased size of the structure

Sustainability & ESD

1. The Proponent must assess the proposal against the current guidelines including targets and strategies to improve Government efficiency in use of water, energy and transport
2. The Proponent must detail the power generation of any hydro power component of the proposal
3. An assessment against an accredited ESD rating system or an equivalent program of ESD performance. This should include a minimum rating scheme target level
4. Identify how ESD principles (as defined in section 193 of the EP&A Regulation) are incorporated in the design and ongoing operation of the project.
5. Demonstrate how the project minimizes greenhouse gas emissions (reflecting the Government's goal of net zero emissions by 2050) and consumption of energy, water (including water sensitive urban design) and material resources.

Transport and Traffic

1. The Proponent must prepare a Traffic Impact Assessment in accordance with the current guidelines. The Traffic Impact Assessment is to address, but not be limited to the following:
 - (a) intersection sight distances at key intersections along the primary haul route
 - (b) turning paths for the largest vehicle at key intersections
 - (c) details of any proposed improvements to affected intersections
 - (d) existing and proposed site access standards
 - (e) details of servicing and parking arrangements
 - (f) impact on public transport (public and school bus routes)
 - (g) impacts of road traffic noise and dust generated along the primary haul route/s

Waste

1. The Proponent must assess predicted waste generated from the proposal during construction, including:
 - (a) classification of the waste in accordance with the current guidelines
 - (b) estimates / details of the quantity of each classification of waste to be generated during the construction of the proposal
 - (c) handling of waste including measures to facilitate segregation and

	prevent cross contamination (d) management of waste including estimated location and volume of stockpiles (e) waste minimisation and reuse (f) lawful disposal or recycling locations for each type of waste (g) contingencies for the above, including managing unexpected waste volumes 2. The Proponent must assess potential environmental impacts from the excavation, handling, storage on site and transport of the waste particularly in relation to sediment control and dust.
Plans and Documents	The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Part 8 of the Regulation. Provide these as part of the EIS rather than as separate documents.
Engagement	During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners. Ensure that all consultation undertaken is documented in the EIS. In particular you must consult with: - o Australian Government Department of Climate Change, Energy, the Environment and Water - o NSW Department of Natural Resources Access Regulator - o Department of Planning, Housing, and Infrastructure, specifically the: - o Crown Lands as applicable for consideration of any use or occupation of a Crown Reserve, road or waterway - o NSW Department of Climate Change, Energy, the Environment and Water - o NSW Climate and Energy Action - o Environment and Heritage - o DCCEE Water - o NPWS - o NSW Environment Protection Authority - o NSW Biodiversity Conservation Trust

	○ Adapt NSW ○ Department of Regional NSW, specifically ○ Department of Primary Industries – Fisheries ○ Regional NSW Group ○ Local Lands Services The EIS must detail the engagement undertaken and demonstrate how it was consistent with the <i>Undertaking Engagement Guidelines for State Significant Projects</i> (DPE 2022). The EIS must detail how issues raised and feedback provided have been considered and responded to in the project.
Expiry Date	If you do not lodge an EIS for the infrastructure within 2 years of the issue date of these SEARs, your SEARs will expire. If an extension to these SEARs will be required, please consult with the Planning Secretary 3 months prior to the expiry date.
References	The assessment of the key issues listed above must take into account relevant guidelines, policies, and plans as identified. While not exhaustive, the following attachment contains a list of some of the current relevant guidelines, policies, and plans that may be relevant to the environmental assessment of this proposal.

ATTACHMENT A

Technical and Policy Guidelines

The following guidelines may assist in the preparation of the environmental impact statement. This list is not exhaustive and not all of these guidelines may be relevant to your proposal.

Policies, Guidelines & Plans

State Significant Infrastructure & General Guidelines

State Significant Infrastructure Guidelines (DPE 2022)
 Undertaking Engagement Guide – Guidance for State Significant Projects (DPE 2021)
 Cumulative Impact Assessment Guidelines for State Significant Projects (DPE 2021)
 Registered Environmental Assessment Practitioner Guidelines (DPE 2022)
 Social Impact Assessment Guideline for State Significant Projects (DPE 2021)
 Guidance to Assist a Decision-Maker to Determine a Serious and Irreversible Impact (DPE 2019)

Water, Flooding and Hydrology

Applying goals for ambient water quality guidance for operations officers - mixing zones
 Approved methods for the sampling and analysis of water pollutant in NSW (NSW EPA 2022)
 Australian and New Zealand Fresh and Marine Water Quality Guidelines (ANZG 2018)
 Australian Drinking Water Guidelines (2011) – Updated September 2022
 Controlled activities – Guidelines for instream works on waterfront land (DPE 2022)
 Groundwater Assessment Toolbox for major projects in NSW (DPE 2022)
 Guidelines for Groundwater Documentation for SSD/SSI Projects (DPE 2022)
 Cumulative Groundwater Impact Assessment Approaches (DPE 2022)
 Guidelines for Controlled Activities on Waterfront Land (DPE 2022)
 Guidelines for Groundwater Quality Protection in Australia
 Guidelines for Preparing Coastal Zone Management Plans
 NSW Aquifer Interference Policy (DPI 2012)
 NSW Water Quality and River Flow Objectives
 Planning Circular PS21-006 Considering flooding in land use planning: guidance and statutory requirements (DPE 2021)
 NSW Coastal Management Framework
 Floodplain Management Plans relevant to the area
 Relevant NSW Regional Water Strategies
 Relevant NSW Water Resource Plans
 Relevant Water Sharing Plans
 Risk Assessment Guidelines for Groundwater Dependent Ecosystems (Office of Water 2012)
 Risk-based Framework for Considering Waterway Health Outcomes in Strategic Land-use Planning Decisions (OEH/EPA 2017)
 Using the ANZECC Guidelines and Water Quality Objectives in NSW (DEC 2006)
 Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC/ ARMCANZ 2000); Water Quality Guidelines, ANZG 2018 (the updated guidelines).
 Water Management Act 2000
 Water Management Regulation 2018
 Water Sharing Plan for the Tweed River Area Unregulated and Alluvial Water Sources 2023
 Flood Risk Management Manual - The policy and manual for the management of flood liable land (EHG 2023)
 Flood Impact and Risk Assessment Flood Risk Management Guide LU01 (DPE 2022)

Aboriginal Heritage

Guide to Investigating Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH 2011)
Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW (DECCW 2010)
Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010)
Aboriginal Site Recording Form
Aboriginal Site Impact Recording Form
Aboriginal Heritage Information Management System site registration
Application for the transfer of Aboriginal objects for safekeeping
Connecting With Country Framework (GANSW 2023)
Non-Aboriginal Heritage
Archaeological Assessment Guidelines (Heritage Council 1996)
Assessing Heritage Significance (DPE 2001)
Assessing Significance for Historical Archaeological Sites and Relics (Heritage Branch 2009)
Criteria for the assessing excavation directors (Heritage Council NSW 2019)
Guidelines for Preparing Statements of Heritage Impact (DPE 2023)
NSW Heritage Manual (Heritage Office and Department of Urban Affairs and Planning 1994)
NSW Skeletal Remains: Guidelines for Management of Human Remains (Heritage Office, 1998)
The Australia ICOMOS Burra Charter
Social
Social Impact Assessment Guideline for State Significant Projects
Technical Supplement: Social Impact Assessment Guideline for State Significant Projects (DPIE 2021)
Sustainability and Ecologically Sustainable Development
NSW and ACT Government Regional Climate Modelling climate change projections (NARCLiM)
Infrastructure Sustainability Rating Tool Scorecard relating to energy and carbon for large infrastructure projects, ISCA – where relevant
Biodiversity and Aquatic Ecology
Accreditation Scheme for Application of the Biodiversity Assessment Method Order 2017
BAM 2020 Operational Manual – Stage 1 (DPE 2022)
BAM Operational Manual Stage 2 (DPE 2019)
BDAR Template (DPE 2022)
Biodiversity Assessment Method (DPE 2020)
Biodiversity Conservation Act 2016
Biodiversity Conservation Regulation 2017
BioNet Vegetation Classification NSW Plant Community Type (PCT) Database
DPI Fishway Design Guidelines (DPI Fisheries 2015)
EPBC Act Environment Assessment Process (SEWPAC 2010)
Field Survey Methods (OEH 2004)
Field survey methods for environmental consultants and surveyors when assessing proposed developments or other activities on sites containing threatened species (OEH undated)
Fisheries Management Act 1994
Koala (<i>Phascolarctos cinereus</i>) Biodiversity Assessment Method Survey Guide (DPE 2022)
NSW Guide to Surveying Threatened Plants (OEH 2016)
NSW Survey Guide for Threatened Frogs (DPIE 2020)
Policy and Guidelines for Fish Habitat Conservation and Management (2013 Update) (DPI 2013)
Revocation, Recategorisation and Road Adjustment Policy (DPE 2017)
SEED Data Portal
Species Credit Threatened Bats and Their Habitats (OEH 2018)
Surveying Threatened Plants and Their Habitats NSW Survey Guide for the Biodiversity Assessment Method (DPE 2020)
Threatened Reptiles Biodiversity Assessment Method Survey Guide (DPE 2022)
Threatened Species Survey and Assessment Guidelines (Working Draft) (DEC 2004)

Threatened Species Assessment Guidelines – Assessment of Significance (DPI 2008)
Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings (NSW Fisheries 2003)
NPWS Estate
Developments adjacent to National Parks and Wildlife Service lands (DPIE 2020)
National Parks and Wildlife Act 1974
Soils and Contamination
Chapter 4 of the State Environmental Planning Policy (Resilience and Hazards) 2021 – (SEPP 55) and Managing Land Contamination: Planning Guidelines SEPP 55 Remediation of Land, (DUAP & EPA, 1998)
Draft Contaminated Land Guidelines (EPA 2023)
Consultants reporting on contaminated land: Contaminated Land Guidelines (EPA 2020)
Guidelines for the NSW Site Auditor Scheme (EPA 2017)
Guidelines on the duty to report contaminated under the Contaminated Land Management Act 1997 (EPA 2015)
Site Investigations for Urban Salinity - Guidance given in the Local Government Salinity Initiative booklets (DLWC 2002)
Practice Note guidelines for landslide risk management (2007)
Soil and Landscape Issues in Environmental Impact Assessment (DLWC 2000)
Guidelines made or approved under s105 of CLM Act 1997
Acid Sulfate Soil Manual (NSW Acid Sulfate Soil Management Advisory Committee 1998)
National Acid Sulfate soils guidance: Overview and management of monosulfidic black ooze accumulations in waterways and wetlands, (DAWR 2018)
Waste and Chemicals
Protection of the Environment Operations Act 1997
Waste Classification Guidelines (EPA 2014)
NSW Sustainable Design Guidelines Version 3.0 (TfNSW 2013)
Storing and Handling Liquids: Environmental Protection – Participant's Manual (EPA)
NSW Waste Avoidance and Resource Recovery Strategy 2014-2021 (EPA 2014)
Sediment, Erosion and Dust
Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom 2004)
Managing Urban Stormwater: Soils and Construction Volume 2 (DECC 2008)
Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA 2022)
Transport
AS/NZS 31000:2009 Risk Management - Principles and Guidelines
Australian Government's Climate Change Impacts and Risk Management – A Guide for Business and Government (EHG 2006)
Climate Risk Ready NSW Guide (EES 2021)
Guide to Climate Change Risk Assessment for NSW Local Government (EHG 2011)
National Climate Risk Assessment Methodology (DECCW 2023)
NSW Climate Impact Profile (EHG 2011)
Practical Consideration of Climate Change – Flood Risk Management Guideline
Strengthening Climate Adaptation in Australia (DECCW 2023)
Australian Standard 742.3s
Austroroads Guide to Traffic Management (2007):
- Part 3 Traffic Studies and Analysis - Guide to Traffic Management Part 12 (Austroroads) and the complementary Roads and Maritime Supplement
Future Transport 2026

Guide to Traffic Generating Developments (RTA 2013)
TfNSW Supplement to Austroads (Austroads 2020)
Work Health and Safety Regulation 2017
Health and Public Safety
Planning for Bushfire Protection (NSW RFS 2019)
SES Emergency Plan
Health Impact Assessment: A Practical Guide (NSW Health 2007)
Environmental Health Risk Assessment, Guidelines for assessing human health risks from environmental hazards (Commonwealth of Australia 2012)
Health Impact Assessment Guidelines (enHealth 2017)
Hazardous Industry Planning Advisory Papers (HIPAPs) (NSW Planning 2011)
Relevant Dam Safety Guidance, and archived Dam Safety Committee Guidance Sheets, including but not limited to, DSC2A (Dam Safety Management System) and DSC2B (Documentation and Information Flow Over Dam Life Cycle)
Noise and Vibration
Technical Basis for Guidelines to minimise annoyance due to blasting overpressure and ground vibration (ANZECC 1990)
Assessing Vibration: A Technical Guideline (DEC 2006)
German Standard DIN 4150-3:2016 Structural Vibration - Effects of Vibration on Structures
Interim Construction Noise Guideline (DECC 2009)
Construction Noise Strategy (TfNSW 2012)
Land Use
Biosecurity Risk Management in Land Use Planning and Development (DPI 2020)
Land Use Conflict Risk Assessment Guide (DPI 2011)
North Coast Local Strategic Plan 2021-2026 Extended Plan
NSW Governments Floodplain Development Manual (Dept Natural Resources 2005)
Relevant Regional Weed Management Plans
Aboriginal Land Rights Act 1983
Native Title Act 1993
Roads Act 1993
Biodiversity conservation agreements on Crown land (DPIE 2020, Policy IND-O-261)

Appendix A – Australian Government Accredited Assessment Requirements



PROJECT ASSESSMENT NOTES

Clarrie Hall Dam Raising Project, Doon Doon, NSW (2018/8339)

The proposed action is being assessed for the purposes of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) under Division 5.2 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). This document is intended to complement the assessment requirements and assist NSW Department of Planning and Environment (NSW DPE) to manage the environmental impact assessment process. The engagement steps pursuant to the EPBC Act process are detailed below.

Project details

To raise the Clarrie Hall Dam wall and construct associated infrastructure at Doon Doon, NSW.

Matters of National Environmental Significance

There are likely to be significant impacts on the following controlling provisions:

- Listed threatened species and communities (sections 18 and 18A).

All Matters of National Environmental Significance (MNES) protected under the triggered controlling provisions are potentially relevant, however the Department of the Environment and Energy considers that there is likely to be a significant impact on the following listed threatened species and communities:

- Lowland Rainforest of Subtropical Australia Ecological Community - Critically Endangered
- Giant Barred Frog (*Mixophyes iteratus*) - Endangered
- Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) (*Phascolarctos cinereus*) - Vulnerable
- Red Lilly Pilly (*Syzygium hodgekinsoniae*) - Vulnerable

The Department also considers that the proposed action may result in significant impacts to the following species:

- Coxen's Fig-Parrot (*Cyclopsitta diophthalma coxeni*) - Endangered
- Grey-headed Flying-fox (*Pteropus poliocephalus*) - Vulnerable
- Spot-tailed Quoll (*Dasyurus maculatus maculatus* (SE mainland population)) - Endangered
- Pink Underwing Moth (*Phyllodes imperialis smithersi*) - Endangered

Further information on the total area and quality of habitat to be impacted by the proposed action will be required during the assessment stage, to determine if significant impacts to these species are likely.

Note: This may not be a complete list and it is the responsibility of the proponent to ensure any protected matters under this controlling provision are assessed for the Commonwealth decision-maker's consideration.

Key issues

Significant impacts that will result due to the proposed action on MNES are associated with the inundation of native vegetation, in particular the inundation of Lowland Rainforest of Subtropical Australia Ecological Community, Red Lilly Pilly and Koala and Giant Barred Frog habitat. These impacts must be appropriately offset for EPBC Act purposes.

General Assessment Requirements

The EIS must address the matters outlined in Schedule 4 of the *Environment Protection and Biodiversity Conservation Regulations 2000* and the matters outlined below in relation to the controlling provisions.

Listed threatened species and communities (section 18 and 18A)

For each of the EPBC Act listed species or community likely to be significantly impacted, the Lowland Rainforest of Subtropical Australia, Giant Barred Frog, Koala and Red Lilly Pilly. The EIS/assessment must provide:

1. Survey results, including details of the scope, timing and methodology for studies or surveys used and how they are consistent with (or justification for divergence from) published Commonwealth guidelines and policy statements and/or the relevant NSW offsetting method.
2. A description and quantification of habitat in the study area (including suitable breeding habitat, suitable foraging habitat, important populations and habitat critical for survival), with consideration of, and reference to, any relevant Commonwealth guidelines and policy statements including listing advices, conservation advices, recovery plans, and threat abatement plans.
3. Maps displaying the above information (specific to each EPBC protected matter) overlaid with the proposed action. It is acceptable, where possible, to use the mapping and assessment of Plant Community Types (PCTs) and the species surveys prescribed by the FBA as the basis for identifying EPBC Act-listed species and communities. The EIS must clearly identify which PCTs are considered to align with habitat for the relevant EPBC Act listed species or community, and provide individual maps for each species or community.
4. Description of the nature, geographic extent, magnitude, timing and duration of any likely direct, indirect and consequential impacts on any relevant EPBC Act listed species and communities. It must clearly identify the location and quantify the extent of all impact areas to each relevant EPBC Act listed species or community.

5. Proposed avoidance and mitigation measures to deal with the impacts of the action, and a description of the predicted effectiveness and outcomes that the avoidance and mitigation measures will achieve.
6. Quantification of the offset liability for each species and community significantly impacted, and information on the proposed offset strategy, including discussion of the conservation benefit for each species and community, how offsets will be secured, and the timing of protection. All suitable habitat for MNES significantly impacted must be offset.

It is a requirement that offsets directly contribute to the ongoing viability of the specific protected matter impacted by a proposed action i.e. 'like-for-like'.

Like-for-like includes protection of native vegetation that is the same EEC or habitat being impacted, or funding to provide a direct benefit to the matter being impacted i.e. threat abatement, breeding and propagation programs or other relevant conservation measures.

For each of the EPBC Act listed species that may be significantly impacted, the Coxen's Fig-Parrot, Grey-headed Flying-fox, Spot-tailed Quoll and Pink Underwing Moth. The EIS/assessment must provide:

7. Survey results, including details of the scope, timing and methodology for studies or surveys used and how they are consistent with (or justification for divergence from) published Commonwealth guidelines and policy statements and/or the relevant NSW offsetting method.
8. A description and quantification of habitat in the study area (including suitable breeding habitat, suitable foraging habitat, important populations and habitat critical for survival), with consideration of, and reference to, any relevant Commonwealth guidelines and policy statements including listing advices, conservation advices, recovery plans, and threat abatement plans.
9. Maps displaying the above information (specific to each EPBC protected matter) overlaid with the proposed action. It is acceptable, where possible, to use the mapping and assessment of Plant Community Types (PCTs) and the species surveys prescribed by the FBA as the basis for identifying EPBC Act-listed species and communities. The EIS must clearly identify which PCTs are considered to align with habitat for the relevant EPBC Act listed species or community, and provide individual maps for each species or community.
10. Description of the nature, geographic extent, magnitude, timing and duration of any likely direct, indirect and consequential impacts on any relevant EPBC Act listed species and communities. It must clearly identify the location and quantify the extent of all impact areas to each relevant EPBC Act listed species or community.
11. A determination of the significance of these impacts on the species. If the impacts are determined to be significant, requirements 1 to 6 of this document apply.

For each of the EPBC Act listed species and communities likely to be impacted by the development, the EIS/assessment must provide information on proposed avoidance and mitigation measures to deal with the impacts of the action, and a description of the predicted effectiveness and outcomes that the avoidance and mitigation measures will achieve.