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Dear Kurtis

### **Secretary's Environmental Assessment Requirements – Lake Lyell Pumped Hydro Project**

I refer to your email dated 1 August 2023 seeking input into the Department of Planning and Environment Secretary's Environmental Assessment Requirements (SEARs) for the preparation of an Environmental Impact Statement (EIS) for the Lake Lyell Pumped Hydro project (SSD-60598738).

In preparing this advice, the Biodiversity, Conservation and Science Directorate (BCS) has consulted with the National Parks and Wildlife Service (NPWS). The attached SEARs set out the requirements of both BCS and NPWS.

NPWS recommends the EIS appropriately address the potential impacts on lands reserved or acquired under the *National Parks and Wildlife Act 1974* (NPW Act) and be prepared in consultation with NPWS. NPWS notes that, to date, there has been limited engagement and consultation undertaken by the proponent.

BCS notes that the indicative project area of 167 hectares and larger main works area of 317 hectares is entirely covered in heavily vegetated hills and valleys. This vegetation forms part of a contiguous area of forest and woodland that links to Marrangaroo National Park and Lidsdale State Forest. It is considered likely that this large expanse of woodland and forest, encompassing national park, state forest and the project area would support a wide range of flora and fauna species, including threatened species. It is also likely to contain habitat features such as hollow-bearing trees, abundant fallen timber and rocky outcrops that could provide shelter and breeding sites a range of threatened fauna.

It is critical that the BDAR demonstrate how significant impacts to threatened species and their habitat will be avoided and minimised. This includes all direct, indirect, uncertain and prescribed impacts in accordance with the *Biodiversity Assessment Method 2020*. Priority for avoidance and minimisation should be given to the expansive area of likely threatened species habitat currently proposed to be impacted.

Based on the currently presented project, BCS and NPWS have serious concerns as to how appropriate avoidance of impact can be applied, given the entire proposal area is completely vegetated by a significant landscape scale patch of continuous forest. We welcome the opportunity to continue to work with the proponent to ensure the full extent of impacts of this proposal are identified and appropriate avoidance measures determined.

Please also note that NPWS is unlikely to consider or support any potential for the proposed development to encroach onto or occupy parts of the adjoining Marrangaroo National Park, either on a temporary or permanent basis.

BCS and NPWS have considered your request and provide SEARs for the proposed development in **Attachments A** and **C**. NPWS have also provided project specific SEARs in **Attachment B**.

If you have any questions about this advice, please do not hesitate to contact Ben Ellis, A/ Principal Project Manager, via [ben.ellis@environment.nsw.gov.au](mailto:ben.ellis@environment.nsw.gov.au) or (02) 8275 1838.

Yours sincerely,



**Sarah Carr**  
**Director North West**  
**Biodiversity, Conservation and Science Directorate**

14 August 2023

Attachment A - Environmental Assessment Requirements

Attachment B - Guidance Material

## Standard Environmental Assessment Requirements

BCS	Biodiversity, Conservation and Science Directorate of the NSW Department of Planning and Environment
The Department	NSW Department of Planning and Environment
NPWS	National Parks and Wildlife Service

### Ancillary development components

The assessment should include all components of the proposal, including any ancillary activities such as road/track widening to enable transport of infrastructure components, connecting pipelines and transmission lines etc.

### Category 1 – exempt land

For SSD/SSI proposals that affect rural land as defined under Part 5A of the *Local Land Services Act 2013*, a draft Native Vegetation Regulatory Map (NVR Map) is available. If the subject land is proposed to be delineated based on the NVR map categories, the map as it relates to the development site may be requested from the DPE Data Broker during preparation of the Biodiversity Development Assessment Report (BDAR) and prior to the BDAR being submitted to the consent authority. Requests should be made via – [data.broker@environment.nsw.gov.au](mailto:data.broker@environment.nsw.gov.au).

Where Category 2 – Regulated land is likely to be present on a development site, this will be identified on the draft map supplied by the Data Broker and is land where the BAM must be applied.

Where Category 1 – Exempt Land is likely to be present on a development site, early engagement with BCS is encouraged. Site-based floristic assessment is required to verify the presence or absence of critically endangered ecological communities (CEECs), critically endangered plants and threatened grasslands and threatened fauna, in order to confirm at the site scale whether the criteria for Category 1 – Exempt Land is met. Note that prescribed impacts must still be assessed on land identified as Category 1 – Exempt Land. In addition, the *Environment Protection and Biodiversity Conservation Act 1999* might also still apply.

Prior to the BDAR Biodiversity Development Assessment Report being submitted to the consent authority, the accredited assessor should submit a proposed land categorisation method to the BCS North West Planning team at [rog.nw@environment.nsw.gov.au](mailto:rog.nw@environment.nsw.gov.au) for review. The BCS North West Planning Team may be able to provide in-principal support of land categorisation assessments prior to EIS exhibition.

For more information, see [Determining native vegetation land categorisation for application in the Biodiversity Offsets Scheme](#)

### Controlled Actions under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)

If the proposed development is likely to be a 'Controlled Action' under the EPBC Act, the accredited assessor should contact the BCS North West Planning team at [rog.nw@environment.nsw.gov.au](mailto:rog.nw@environment.nsw.gov.au) prior to submission of the EIS. The BCS North West Planning team can provide guidance on the minimum information requirements for the EIS for any entities that have been or are likely to be deemed a 'Controlled Action'.

## Biodiversity

1. Biodiversity impacts related to the proposed [development/project] are to be assessed in accordance with [Section 7.9 of the Biodiversity Conservation Act 2016](#) the [Biodiversity Assessment Method 2020](#) 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 2020](#), unless the Department determines that the proposed development is not likely to have any significant impacts on biodiversity values.
2. The BDAR must apply the avoid, minimise, and offset framework; including assessing all direct, indirect, uncertain and prescribed impacts in accordance with the [Biodiversity Assessment Method 2020](#).
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 development/project;
  - 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 conduct ecological rehabilitation (if a mining project);
  - f. 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 K 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](#).

**NOTE** – A BDAR template and guidance document has been created to assist accredited assessors to prepare a BDAR. It has been developed in accordance with best practice, the minimum information requirements, and to support BDAR reviewers. The BDAR Template can be found [here](#) and the Guidance for the BDAR Template can be found [here](#).

### Residual Prescribed Impacts within the BAM 2020

Prescribed impacts can be difficult to quantify as they may result in discrete impacts, spatially undefined impacts, ecological regime shifts and/or impact cascades over time. Consequently, avoiding or minimising such impacts is critical and will likely be a key consideration for the consent authority in determining conditions of approval for relevant proposals.

If avoidance and mitigation measures are not applicable or will not result in the complete reduction of prescribed impacts occurring, the assessor and proponent will need to consider options to compensate for unavoidable residual prescribed impacts.

The BAM-C does not calculate biodiversity credits to offset a prescribed impact. However, the consent authority has the discretion to increase the number of biodiversity credits to be retired (or other conservation measures to be undertaken), under a planning approval.

The assessment and calculation of a predicted offset obligation for any prescribed impacts must be presented prior to project determination and any impact occurring, in accordance with Section 7.14 of the Biodiversity Conservation Act 2016. The purpose of this requirement is to ensure:

- commitments to proposed mitigation measures for residual prescribed impacts are described and can be captured in the projects consent conditions; and
- the total offset obligation can be embedded in the project approval

It is recommended that the proponent and assessor consult with BCS during the assessment process on prescribed impact assessment and calculation, when required.

### Cumulative Impacts

Cumulative impacts should be assessed through application of the [Cumulative Impact Assessment for State Significant Projects guidance](#) (DPE, Oct 2022).

6. The EIS must contain a summary of the commitments set out in the BDAR to avoid, minimise and mitigate the biodiversity impacts of development that are to be implemented, post approval, by their inclusion in a Biodiversity Management Plan (BMP). The preparation of a BMP to fulfil the avoid and minimise requirements of the BDAR must be included as a condition of consent/approval, unless otherwise agreed with BCS. The BMP must include detailed measures to minimise impacts on biodiversity, monitoring and reporting requirements, proposed adaptive management measures, performance criteria recommended to meet states outcomes, remedial actions to be undertaken of actions fail to achieve stated outcomes, and any additional actions relevant to the management of biodiversity.

### Water and soils

7. The EIS must map the following features relevant to water and soils including:
  - a. Acid sulfate soils (Class 1, 2, 3 or 4 on the Acid Sulfate Soil Planning Map);
  - b. Rivers, streams, wetlands, estuaries (as described in s4.2 of the Biodiversity Assessment Method);
  - c. Wetlands as described in s4.2 of the Biodiversity Assessment Method;
  - d. Groundwater;
  - e. Groundwater dependent ecosystems;
  - f. Proposed intake and discharge locations.
8. The EIS must describe background conditions for any water resource likely to be affected by the project, including:
  - a. Existing surface and groundwater;
  - b. Hydrology, including volume, frequency and quality of discharges at proposed intake and discharge locations;
  - c. Water Quality Objectives (*as endorsed by the NSW Government*) including groundwater as appropriate that represent the community's uses and values for the receiving waters;
  - d. Indicators and trigger values/criteria for the environmental values identified at (c) in accordance with the [ANZECC \(2000\) Guidelines for Fresh and Marine Water Quality](#) and/or local objectives, criteria or targets endorsed by the NSW Government;
  - e. [Risk-based Framework for Considering Waterway Health Outcomes in Strategic Land-use Planning Decisions](#).
9. The EIS must assess the impacts of the project on water quality, including:
  - a. The nature and degree of impact on receiving waters for both surface and groundwater, demonstrating how the project protects the Water Quality Objectives where they are currently being achieved, and contributes towards achievement of the Water Quality Objectives over time where they are currently not being achieved. This

should include an assessment of the mitigating effects of proposed stormwater and wastewater management during and after construction;

- b. Identification of proposed monitoring of water quality.

10. The EIS must assess the impact of the project on hydrology, including:

- a. Water balance including quantity, quality and source;
- b. Effects to downstream rivers, wetlands, estuaries, marine waters and floodplain areas;
- c. Effects to downstream water-dependent fauna and flora including groundwater dependent ecosystems;
- d. Impacts to natural processes and functions within rivers, wetlands, estuaries and floodplains that affect river system and landscape health such as nutrient flow, aquatic connectivity and access to habitat for spawning and refuge (e.g. river benches);
- e. Changes to environmental water availability, both regulated/licensed and unregulated/rules-based sources of such water;
- f. Mitigating effects of proposed stormwater and wastewater management during and after construction on hydrological attributes such as volumes, flow rates, management methods and re-use options;
- g. Identification of proposed monitoring of hydrological attributes.

## Flooding

11. The EIS must map the following features relevant to flooding as described in the [Flood Risk Management Manual 2023](#) including:

- a. Flood prone land;
- b. Flood planning area, the area below the flood planning level;
- c. Hydraulic categorisation (floodways and flood storage areas);
- d. Flood hazard.

12. The EIS must describe flood assessment and modelling undertaken in determining the design flood levels for events, including a minimum of the 5% Annual Exceedance Probability (AEP), 1% AEP, flood levels and the probable maximum flood, or an equivalent extreme event.

13. The EIS must model the effect of the proposed project (including fill) on the flood behaviour under the following scenarios:

- a. Current flood behaviour for a range of design events as identified in 14 above. This includes the 0.5% and 0.2% AEP year flood events as proxies for assessing sensitivity to an increase in rainfall intensity of flood producing rainfall events due to climate change.

14. Modelling in the EIS must consider and document:

- a. Existing council flood studies in the area and examine consistency to the flood behaviour documented in these studies;
- b. The impact on existing flood behaviour for a full range of flood events including up to the probable maximum flood, or an equivalent extreme flood;
- c. Impacts of the development on flood behaviour resulting in detrimental changes in potential flood affection of other developments or land. This may include redirection of flow, flow velocities, flood levels, hazard categories and hydraulic categories;
- d. Relevant provisions of the NSW [Flood Risk Management Manual 2023](#).

15. The EIS must assess the impacts on the proposed project on flood behaviour, including:
- a. Whether there will be detrimental increases in the potential flood affectation of other properties, assets and infrastructure;
  - b. Consistency with Council floodplain risk management plans;
  - c. Consistency with any Rural Floodplain Management Plans;
  - d. Compatibility with the flood hazard of the land;
  - e. Compatibility with the hydraulic functions of flow conveyance in floodways and storage in flood storage areas of the land;
  - f. Whether there will be adverse effect to beneficial inundation of the floodplain environment, on, adjacent to or downstream of the site;
  - g. Whether there will be direct or indirect increase in erosion, siltation, destruction of riparian vegetation or a reduction in the stability of riverbanks or watercourses;
  - h. Any impacts the development may have upon existing community emergency management arrangements for flooding. These matters are to be discussed with the NSW SES and Council;
  - i. Whether the proposal incorporates specific measures to manage risk to life from flood. These matters are to be discussed with the NSW SES and Council;
  - j. Emergency management, evacuation and access, and contingency measures for the development considering the full range of flood risk (based upon the probable maximum flood or an equivalent extreme flood event). These matters are to be discussed with and have the support of Council and the NSW SES;
  - k. Any impacts the development may have on the social and economic costs to the community as consequence of flooding.

## NPWS Project Specific SEARs

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The EIS must:

- be prepared in consultation with the National Parks and Wildlife Service (NPWS)
- include an assessment of the nature, extent and duration of any potential direct or indirect impacts on the adjacent Marrangaroo National Park (the 'park'), addressing all matters outlined in *Developments adjacent to National Parks and Wildlife Service lands: guidelines for consent and planning authorities (NPWS 2020)* plus the following park-and project-specific issues:
  - potential impacts on park visitor amenity, with the noise assessment treating Marrangaroo camping area as a 'sensitive receiver', equivalent to a residence.
  - any access that may be required on roads or trails through the park for site preparation, construction, operation or decommissioning of the proposal, noting that all access through park will be subject to NPWS authorisation which may not be forthcoming.
  - the potential need for additional transmission lines through the park to be constructed or existing lines to be upgraded or realigned, with those impacts to be considered as part of this project and not separately.
  - consideration of biodiversity corridors in the vicinity of the project site and demonstration that fragmentation of the park has been minimised through avoiding these areas.
- identify measures proposed to prevent, control, abate, minimise and manage any potential direct and indirect impacts on the park, including an evaluation of the effectiveness and reliability of the proposed measures.
- quantify any residual impacts to the park.
- identify that all required buffers to limit impacts on neighbouring lands, including asset protection zones for any infrastructure, are fully contained within the development site.

Where there is a real potential for the proposed development to encroach onto or occupy parts of Marrangaroo National Park, either on a temporary or permanent basis, the EIS must:

- outline all consultation to date with NPWS and whether land owner's consent has been obtained from the Minister administering the *National Parks and Wildlife Act 1974* (NPW Act).
- justify, with reference to the NPW Act, how the development is permissible through being consistent with:
  - the objects of the NPW Act and

- the management principles for national parks; or
- is dependent on the revocation of that section of park.
- outline alternative options that have been explored that would avoid any encroachment/occupation of the park and justify why this encroachment/occupation must occur as part of the development.
- clearly identify:
  - the area of park to be temporarily occupied or utilised as part of the development, including any routes of access through the park or areas required for the storage of vehicles, plant, equipment or materials.
  - the area of park to be permanently occupied or utilised as part of the development, including access for future operations.

In the case of proposed revocation of lands reserved under the NPW Act, the EIS must provide:

- a full account of the biological and cultural values of the land subject to the revocation/transfer.
- an evaluation of the contribution of the impacted land to the biological and cultural values of the neighbouring park.
- details of any compensation proposal, including an assessment of the biological and cultural values of the proposed offset.

In terms of the impacts on biodiversity, the EIS must assess the following specific matters:

- impacts to stygofauna (as part of the consideration of impacts on ground-water dependent ecosystems).
- aquatic biodiversity impacts, in particular macroinvertebrates as a food source for platypus.

## Guidance Material

Title	Web address
<b><u>Relevant Legislation</u></b>	
<i>Biodiversity Conservation Act 2016</i>	<a href="https://www.legislation.nsw.gov.au/view/html/inforce/current/act-2016-063">https://www.legislation.nsw.gov.au/view/html/inforce/current/act-2016-063</a>
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	<a href="https://www.legislation.gov.au/Details/C2014C00140/Download">https://www.legislation.gov.au/Details/C2014C00140/Download</a>
<i>Environmental Planning and Assessment Act 1979</i>	<a href="https://www.legislation.nsw.gov.au/view/html/inforce/current/act-1979-203">https://www.legislation.nsw.gov.au/view/html/inforce/current/act-1979-203</a>
<i>Fisheries Management Act 1994</i>	<a href="https://www.legislation.nsw.gov.au/view/html/inforce/current/act-1994-038">https://www.legislation.nsw.gov.au/view/html/inforce/current/act-1994-038</a>
<i>National Parks and Wildlife Act 1974</i>	<a href="https://www.legislation.nsw.gov.au/view/html/inforce/current/act-1974-080">https://www.legislation.nsw.gov.au/view/html/inforce/current/act-1974-080</a>
<i>Protection of the Environment Operations Act 1997</i>	<a href="https://www.legislation.nsw.gov.au/view/html/inforce/current/act-1997-156">https://www.legislation.nsw.gov.au/view/html/inforce/current/act-1997-156</a>
<i>Water Management Act 2000</i>	<a href="https://www.legislation.nsw.gov.au/view/html/inforce/current/act-2000-092">https://www.legislation.nsw.gov.au/view/html/inforce/current/act-2000-092</a>
<i>Wilderness Act 1987</i>	<a href="https://www.legislation.nsw.gov.au/view/html/inforce/current/act-1987-196">https://www.legislation.nsw.gov.au/view/html/inforce/current/act-1987-196</a>
<b><u>Biodiversity</u></b>	
Biodiversity Assessment Method (OEH, 2020)	<a href="https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020">https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020</a>
Changes to the Biodiversity Assessment Method from 2017 to 2020	<a href="https://www.environment.nsw.gov.au/research-and-publications/publications-search/changes-to-the-biodiversity-assessment-method-from-2017-to-2020">https://www.environment.nsw.gov.au/research-and-publications/publications-search/changes-to-the-biodiversity-assessment-method-from-2017-to-2020</a>
Biodiversity Development Assessment Report Template	<a href="https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Biodiversity/biodiversity-development-assessment-report-template-220210.docx?la=en&amp;hash=1A4829C7ACA5A51ECE414A767C27361893706CEC">https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Biodiversity/biodiversity-development-assessment-report-template-220210.docx?la=en&amp;hash=1A4829C7ACA5A51ECE414A767C27361893706CEC</a>
Guidance for the Biodiversity Development Assessment Report Template	<a href="https://www.environment.nsw.gov.au/research-and-publications/publications-search/guidance-for-the-biodiversity-development-assessment-report-template">https://www.environment.nsw.gov.au/research-and-publications/publications-search/guidance-for-the-biodiversity-development-assessment-report-template</a>
BAM 2020 Operational Manual Stage 1	<a href="https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-manual-2020-operational-manual-stage-1">https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-manual-2020-operational-manual-stage-1</a>
BAM 2020 Operational Manual Stage 2	<a href="https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Biodiversity/biodiversity-assessment-method-operational-manual-stage-2-230164.pdf">https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Biodiversity/biodiversity-assessment-method-operational-manual-stage-2-230164.pdf</a>
BAM 2020 Operational Manual Stage 3	<a href="https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-operational-manual-stage-3">https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-operational-manual-stage-3</a>

Title	Web address
BAM Calculator User Guide	<a href="https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-user-guide">https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-user-guide</a>
Serious and irreversible impacts of development on biodiversity	<a href="https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/biodiversity-offsets-scheme/serious-and-irreversible-impacts">https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/biodiversity-offsets-scheme/serious-and-irreversible-impacts</a>
Practice Note - Guidance for assessors and decision makers in applying modified benchmarks to assessments of vegetation integrity: Biodiversity Assessment Method	<a href="https://www.environment.nsw.gov.au/research-and-publications/publications-search/guidance-assessors-decision-makers-applying-modified-benchmarks-to-assessments-vegetation-integrity">https://www.environment.nsw.gov.au/research-and-publications/publications-search/guidance-assessors-decision-makers-applying-modified-benchmarks-to-assessments-vegetation-integrity</a>
Guidance and Criteria to assist a decision maker to determine a serious and irreversible impact (OEH, 2017)	<a href="https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Biodiversity/guidance-decision-makers-determine-serious-irreversible-impact-190511.pdf">https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Biodiversity/guidance-decision-makers-determine-serious-irreversible-impact-190511.pdf</a>
Accreditation Scheme for Application of the Biodiversity Assessment Method Order 2017	<a href="https://www.legislation.nsw.gov.au/view/pdf/asmade/sl-2017-471">https://www.legislation.nsw.gov.au/view/pdf/asmade/sl-2017-471</a>
Ancillary rules: Biodiversity conservation actions	<a href="https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Biodiversity/ancillary-rules-biodiversity-conservation-actions-170496.pdf">https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Biodiversity/ancillary-rules-biodiversity-conservation-actions-170496.pdf</a>
Ancillary rules: Reasonable steps to seek like-for-like biodiversity credits for the purpose of applying the variation rules	<a href="https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Biodiversity/ancillary-rules-reasonable-steps-like-for-like-biodiversity-credits-170498.pdf">https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Biodiversity/ancillary-rules-reasonable-steps-like-for-like-biodiversity-credits-170498.pdf</a>
Ancillary rules: Impacts on threatened species and ecological communities excluded from application of variation rules	<a href="https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Biodiversity/ancillary-rules-impacts-on-threatened-entities-excluded-from-variation-170497.pdf?la=en&amp;hash=C38840BFF49F012433532DF72E3D90C741E4DAC1">https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Biodiversity/ancillary-rules-impacts-on-threatened-entities-excluded-from-variation-170497.pdf?la=en&amp;hash=C38840BFF49F012433532DF72E3D90C741E4DAC1</a>
The Department's Threatened Species Website	<a href="https://www.environment.nsw.gov.au/topics/animals-and-plants/threatened-species">https://www.environment.nsw.gov.au/topics/animals-and-plants/threatened-species</a>
NSW BioNet (Atlas of NSW Wildlife)	<a href="https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet">https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet</a>
Surveying Threatened Plants and their Habitats - NSW Survey Guide For The Biodiversity Assessment Method (DPIE 2020).	<a href="https://www.environment.nsw.gov.au/research-and-publications/publications-search/surveying-threatened-plants-and-their-habitats-survey-guide-for-the-biodiversity-assessment-method">https://www.environment.nsw.gov.au/research-and-publications/publications-search/surveying-threatened-plants-and-their-habitats-survey-guide-for-the-biodiversity-assessment-method</a>
Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities - November 2004	<a href="https://www.environment.nsw.gov.au/surveys/BiodiversitySurveyGuidelinesDraft.htm">https://www.environment.nsw.gov.au/surveys/BiodiversitySurveyGuidelinesDraft.htm</a>
Threatened species survey and assessment guidelines: field survey methods for fauna – amphibians	<a href="https://www.environment.nsw.gov.au/research-and-publications/publications-search/threatened-species-field-survey-methods-for-fauna-amphibians">https://www.environment.nsw.gov.au/research-and-publications/publications-search/threatened-species-field-survey-methods-for-fauna-amphibians</a>

<b>Title</b>	<b>Web address</b>
NSW Survey Guide for Threatened Frogs	<a href="https://www.environment.nsw.gov.au/research-and-publications/publications-search/nsw-survey-guide-for-threatened-frogs">https://www.environment.nsw.gov.au/research-and-publications/publications-search/nsw-survey-guide-for-threatened-frogs</a>
Surveying 'species credit' threatened bats and their habitats – NSW survey guide for the Biodiversity Assessment Method	<a href="https://www.environment.nsw.gov.au/research-and-publications/publications-search/species-credit-threatened-bats-nsw-survey-guide-for-biodiversity-assessment-method">https://www.environment.nsw.gov.au/research-and-publications/publications-search/species-credit-threatened-bats-nsw-survey-guide-for-biodiversity-assessment-method</a>
Bat calls of NSW - region-based guide to the echolocation calls of Microchiropteran bats	<a href="https://www.environment.nsw.gov.au/surveys/Batcalls.htm">https://www.environment.nsw.gov.au/surveys/Batcalls.htm</a>
Community Biodiversity Survey Manual	<a href="https://www.environment.nsw.gov.au/surveys/CommunityBiodiversitySurveyManual.htm">https://www.environment.nsw.gov.au/surveys/CommunityBiodiversitySurveyManual.htm</a>
BioNet Vegetation Classification - NSW Plant Community Type (PCT) database	<a href="http://www.environment.nsw.gov.au/research/VegetationInformationsystem.htm">www.environment.nsw.gov.au/research/VegetationInformationsystem.htm</a>
The Departments Data Portal (access to online spatial data)	<a href="http://data.environment.nsw.gov.au/">http://data.environment.nsw.gov.au/</a>
Determining native vegetation land categorisation for application in the Biodiversity Offsets Scheme	<a href="https://www.environment.nsw.gov.au/research-and-publications/publications-search/determining-native-vegetation-land-categorisation-for-application-in-the-biodiversity-offsets-scheme">https://www.environment.nsw.gov.au/research-and-publications/publications-search/determining-native-vegetation-land-categorisation-for-application-in-the-biodiversity-offsets-scheme</a>
Fisheries NSW policies and guidelines	<a href="https://www.dpi.nsw.gov.au/fishing/habitat/publications/pubs/fish-habitat-conservation">https://www.dpi.nsw.gov.au/fishing/habitat/publications/pubs/fish-habitat-conservation</a>
List of national parks	<a href="https://www.nationalparks.nsw.gov.au/conservation-and-heritage/national-parks">https://www.nationalparks.nsw.gov.au/conservation-and-heritage/national-parks</a>
Revocation, recategorisation and road adjustment policy (OEH, 2012)	<a href="https://www.environment.nsw.gov.au/topics/parks-reserves-and-protected-areas/park-policies/revocation-recategorisation-and-road-adjustment">https://www.environment.nsw.gov.au/topics/parks-reserves-and-protected-areas/park-policies/revocation-recategorisation-and-road-adjustment</a>
Guidelines for consent and planning authorities for Developments adjacent to National Parks and Wildlife Service Land (NPWS, 2020)	<a href="https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Parks-reserves-and-protected-areas/Development-guidelines/developments-adjacent-npws-lands-200362.pdf">https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Parks-reserves-and-protected-areas/Development-guidelines/developments-adjacent-npws-lands-200362.pdf</a>
<b><u>Water and Soils</u></b>	
<b>Acid sulphate soils</b>	
Acid Sulfate Soils Planning Maps via Data.NSW	<a href="https://datasets.seed.nsw.gov.au/dataset/acid-sulfate-soils-risk0196c">https://datasets.seed.nsw.gov.au/dataset/acid-sulfate-soils-risk0196c</a>
Acid Sulfate Soils Manual (Stone et al. 1998)	<a href="https://www.environment.nsw.gov.au/resources/epa/Acid-Sulfate-Manual-1998.pdf">https://www.environment.nsw.gov.au/resources/epa/Acid-Sulfate-Manual-1998.pdf</a>
Acid Sulfate Soils Laboratory Methods Guidelines (Ahern et al. 2004)	<a href="http://www.environment.nsw.gov.au/resources/soils/acid-sulfate-soils-laboratory-methods-guidelines.pdf">http://www.environment.nsw.gov.au/resources/soils/acid-sulfate-soils-laboratory-methods-guidelines.pdf</a> This replaces Chapter 4 of the Acid Sulfate Soils Manual above.

Title	Web address
<b>Flooding</b>	
Flood Risk Management Manual	<a href="https://www.environment.nsw.gov.au/topics/water/floodplains/floodplain-manual">https://www.environment.nsw.gov.au/topics/water/floodplains/floodplain-manual</a>
Floodplain Risk Management Guidelines	<a href="http://www.environment.nsw.gov.au/topics/water/coasts-and-floodplains/floodplains/floodplain-guidelines">http://www.environment.nsw.gov.au/topics/water/coasts-and-floodplains/floodplains/floodplain-guidelines</a>
NSW Climate Impact Profile	<a href="http://climatechange.environment.nsw.gov.au/">http://climatechange.environment.nsw.gov.au/</a>
Climate Change Impacts and Risk Management	<a href="https://www.environment.gov.au/climate-change/adaptation/publications/climate-change-impact-risk-management">https://www.environment.gov.au/climate-change/adaptation/publications/climate-change-impact-risk-management</a>
<b>Water</b>	
Water Quality Objectives	<a href="http://www.environment.nsw.gov.au/ieo/index.htm">http://www.environment.nsw.gov.au/ieo/index.htm</a>
ANZECC & ARMCANZ (2000) Water Quality Guidelines	<a href="https://www.waterquality.gov.au/anz-guidelines/resources/previous-guidelines/anzecc-armcanz-2000">https://www.waterquality.gov.au/anz-guidelines/resources/previous-guidelines/anzecc-armcanz-2000</a>
Applying Goals for Ambient Water Quality Guidance for Operations Officers – Mixing Zones	<a href="http://deccnet/water/resources/AWQGuidance7.pdf">http://deccnet/water/resources/AWQGuidance7.pdf</a>
Approved Methods for the Sampling and Analysis of Water Pollutant in NSW (2004)	<a href="http://www.environment.nsw.gov.au/resources/legislation/approvedmethods-water.pdf">http://www.environment.nsw.gov.au/resources/legislation/approvedmethods-water.pdf</a>