

Our ref: DOC23/837236-4
Your ref: SSD-62199230

Jess Watson
Planning Officer
Department of Planning and Environment
jess.watson@dpie.nsw.gov.au

Dear Jess

Kerr's Creek Wind Farm – Request for Secretary's Environmental Assessment Requirements

I refer to your email dated 12 September 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 Kerr's Creek Wind Farm (SSD-62199230).

The BDAR will need to include a comprehensive assessment of the potential impacts of the project on fauna, particularly birds and bats. The assessment must include both protected and threatened fauna species known or with potential to be present in the area.

It is recommended that the proponent consult with BCS during the assessment process to ensure that the bird and bat utilisation surveys are suitably robust and comprehensive, to adequately identify the potential impacts of the project. Ongoing engagement will allow BCS to update the proponent on new developments regarding the publication of any survey guidelines relevant to the project and to provide guidance on risk assessment of wind turbine strikes. Finally, these discussions will also allow BCS to better understand issues regarding identifying and monitoring any prescribed biodiversity impacts relating to the project.

The Biodiversity, Conservation and Science Directorate (BCS) has considered your request and provides SEARs for the proposed development in **Attachments A, B and C**.

BCS recommends the EIS needs to appropriately address the following:

1. Biodiversity and offsetting
2. Water and soils
3. Flooding

If you have any questions about this advice, please do not hesitate to contact Kate Tierney, Senior Conservation Planning Officer, via kate.tierney@environment.nsw.gov.au or (02) 4904 2782.

Yours sincerely,



Debbie Love
A/ Director North West
Biodiversity, Conservation and Science Directorate

21 September 2023

Attachment A - Environmental Assessment Requirements

Attachment B – Specific Environmental Assessment Requirements

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

Clearing of native vegetation on land that meets the definition of Category 1 - Exempt Land (as defined under the Local Land Services Act 2013 (LLS Act)) does not require assessment or offsetting under the *Biodiversity Conservation Act 2016*, however the following must still be considered:

- **Prescribed impacts** as outlined in chapter 6 of the Biodiversity Assessment Method (2020). E.g. there are threatened fauna species whose habitat may include land which meets Category 1- Exempt criteria. Fauna survey on Category 1 land may be necessary to meet the requirements of the BAM.
- Potential impacts to **Matters of National Environmental Significance** under the *Environment Protection and Biodiversity Conservation Act 1999* on Category 1 – exempt land must also be considered.

Section 60F of the LLS Act provides the transitional arrangements that are in place until a comprehensive NVR Map is published. During the ‘transitional period’ assessors can make a reasonable approximation of land categorisation for unpublished layers, in consultation with the landholder.

Where a reasonable approximation is required, it is recommended that:

- assessors first identify whether land meets criteria for Category 2 - Regulated Land, prior to Category 1 - Exempt Land.
 - In some circumstances, land may meet multiple map criteria i.e. criteria for Category 2 - Regulated Land, AND Category 1 - Exempt Land
 - In most circumstances’ Category 2 - Regulated Land criteria will determine the categorisation of the land, rather than Category 1 - Exempt Land criteria.

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.

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. However, there are some Category 2 criteria for which state-wide comprehensive mapping is not currently incorporated within the draft map.

Where the draft map indicates that Category 1 – Exempt Land is likely to be present on a development site, early engagement with BCS is encouraged in order to confirm at the site scale whether the criteria for Category 1 – Exempt Land is met:

- Site-based floristic assessment is required to verify the presence or absence of critically endangered ecological communities (CEECs) and critically endangered plants,
- Review of any *Environmental Planning and Assessment Act 1979* development consents or approvals applicable to the land is required to demonstrate whether the land has an existing obligation to be set aside for nature conservation; revegetation of native vegetation; or as a native vegetation offset.

Prior to the Biodiversity Development Assessment Report (BDAR) 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 for review. The BCS North West Planning Team may be able to provide in-principal support of land categorisation assessments prior to EIS exhibition.

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 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 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, 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.
7. The EIS must assess the impact of wind turbine strikes on protected animals including;
 - a. Predict the likelihood of impact on aerial species resident in, or likely to fly over, the project area, including but not limited to bat/bird strike and barotrauma.
 - b. Predict the rate of impact per turbine per year for species likely to be affected.
 - c. Justify predictions of likelihood of impact and rates of impact with reference to relevant literature and other published sources of information.

- d. Predict the consequences of impacts for the persistence of bioregional populations, with reference to relevant literature and other published sources of information.
- e. Predict and map the likely zone of disturbance around wind turbines for aerial species resident in, or likely to fly over, the project area, with reference to relevant literature and other published sources of information.
- f. Map significant landscape and habitat features within the zone of disturbance for species likely to be affected, including but not limited to hollow bearing trees, nest trees, microbat habitat and important habitat for migratory species.
- g. Predict the likelihood and describe the nature of indirect impacts on aerial species resident in, or likely to fly over, the project area including but not limited to barriers to migratory pathways and breeding, feeding and resting resources.
- h. For migratory species, predict the impact of avoidance behaviour relative to migration distances and the availability of suitable habitat for breeding, feeding and resting over the migration route, with reference to relevant literature and other sources of published information.
- i. Justify prediction of likelihood and nature of impact, with reference to relevant literature and other published sources of information.
- j. Predict the cumulative impact of the project together with existing wind farms with respect to movement patterns and the use of adjacent habitat and provide justification for these predictions.

Water and soils

8. 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.
9. 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*.
10. 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.
11. 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
12. 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.
13. 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.
14. 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.
15. 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*.

16. 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.

Specific Environmental Assessment Requirements

1. Fauna survey must quantify the presence, location and utilisation of specialist breeding and nesting habitat for protected species at risk from wind turbine strike on the development site and in adjacent habitat, in accordance with Section 8.2 of the BAM. BCS should be consulted regarding the application of BAM where land access issues on adjoining land occur.
2. Due to the nature of the development the project must document mitigation measures proposed to manage impacts, including impacts which are uncertain, in accordance with Section 8.4 of the BAM. This will inform the preparation of a Bird and Bat Adaptive Management Plan (BBAMP) for the development.
3. Due to the nature of the development the project must document commitments to address the residual prescribed impacts on threatened species or threatened ecological communities which may occur during the construction and operational phases of the project. Significant residual prescribed impacts may require the retirement of additional biodiversity credits to offset these impacts in accordance with Section 10.1 of the BAM.
4. Strategies for adaptive management and associated monitoring for the project will need to conform to the most current standards and guidelines present for windfarm developments.
5. The assessment is to include all components of the proposal, including any ancillary activities like road/track widening to enable transport of turbines to the site, or the installation of transmission lines.
6. The assessment is to include a bird and bat strike risk analysis for the location of each proposed wind turbine. The risk assessment should consider the proximity of proposed turbine locations to species habitat. This risk assessment should be iteratively adjusted in response to any development site changes, including micro-siting of turbines to avoid and minimise biodiversity impacts.

Guidance Material

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

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

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

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