

Your ref: SSD-78179499
Our ref: DOC24/1001238

Ewan Reid
Planning Officer
Department of Planning, Housing and Infrastructure
4 Parramatta Square
Parramatta NSW 2150

By email: ewan.reid@planning.nsw.gov.au

Subject: Request for Environmental Assessment Requirements – Hanworth Battery Energy Storage System (BESS) – SSD-78179499 - Upper Lachlan Shire Council

Dear Mr Reid

I refer to your request for input into the Secretary's Environmental Assessment Requirements (SEARs) for the proposed Hanworth BESS.

Our advice is in **Attachments A and B**. In preparing the Environmental Impact Statement (EIS), the proponent should refer to the relevant guidance material listed in **Attachment C**.

Biodiversity, Conservation and Science (BCS) recommends the EIS appropriately address the following:

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

To help facilitate the Biodiversity Development Assessment Report (BDAR) process, BCS is available to discuss targeted threatened fauna survey methods prior to their implementation.

To assist us in preparing for a future assessment of this project, we request that a Geographical Information System (GIS) shapefile of the current project site shown in the scoping report be provided. We are requesting this data due to the high number of projects in this general area.

If you have any questions about this advice, please do not hesitate to contact Nat O'Rourke, Team Leader Planning, South East at rog.southeast@environment.nsw.gov.au

Yours sincerely

A handwritten signature in black ink, appearing to read 'Michael Saxon', with a long horizontal flourish extending to the right.

6/12/2024

Michael Saxon

**Director South East
Regional Delivery**

Enclosures:

Attachment A – Standard Environmental Assessment Requirements

Attachment B – Project-specific Environmental Assessment Requirements

Attachment C - Guidance Material

Attachment A – Standard Environmental Assessment Requirements for Hanworth BESS (SSD-78179499)

Native Vegetation Regulatory Map – land categorisation

For State Significant Development (SSD) proposals that affect rural land as defined under Part 5A of the *Local Land Services Act 2013*, a draft Native Vegetation Regulatory Map is available upon request. This map as it relates to the development site must be requested from BCS 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 the Data Broker – data.broker@environment.nsw.gov.au.

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

Where Category 1 – Exempt Land is 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, threatened grasslands and threatened fauna, in order to confirm at the site scale whether the criteria for Category 1 – Exempt Land is met.

Prior to the BDAR being submitted to the consent authority, the accredited assessor should submit a proposed land categorisation method to the BCS South East Planning team at rog.southeast@environment.nsw.gov.au for review.

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

Biodiversity

1. The EIS must assess biodiversity impacts related to the proposed development in accordance with [Section 7.9 of the Biodiversity Conservation Act 2016](#) using the [Biodiversity Assessment Method \(BAM\) 2020](#) and documented in a Biodiversity Development Assessment Report (BDAR), unless:
 - a) a BDAR waiver is granted, or
 - b) the site is on biodiversity certified land.

The BDAR must include information in the form detailed in the *Biodiversity Conservation Act 2016* (s6.12), *Biodiversity Conservation Regulation 2017* (s6.8) and the BAM.

2. The BDAR must apply the avoid, minimise and offset hierarchy including assessing all direct, indirect, uncertain and prescribed impacts in accordance with the BAM.
3. The BDAR must be submitted with all spatial data associated with the survey and assessment as per Appendix K of the BAM.
4. 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.
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 <i>Biodiversity Conservation Act 2016</i> .
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 if actions fail to achieve stated outcomes, and any additional actions relevant to the management of biodiversity.
7. If the development is on biodiversity certified land, provide information to identify the site (using associated mapping) and demonstrate the proposed development is consistent with the relevant biodiversity measure conferred by the biodiversity certification
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, 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](#). Supporting digital data as per Appendix K of the BAM is also required to be submitted.

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 development, 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 <http://www.environment.nsw.gov.au/ieo/index.htm>) including groundwater as appropriate that represent the community's uses and values for the receiving waters.
 - d. Where locally derived indicators and guideline values are not available for the relevant Water Quality Objectives, the EIS must refer to the [Australian and New Zealand Guidelines for Fresh and Marine Water Quality](#) (ANZG, 2018).
10. The EIS must assess the impacts of the development on water quality, including:
 - a. The nature and degree of impact on receiving waters for both surface and groundwater, demonstrating how the development 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, using the [Risk-based framework for considering waterway health outcomes in strategic land use planning decisions](#).
 - b. Identification of proposed monitoring of water quality or required changes to existing monitoring programs
 - c. How the development meets the objects of the Coastal Management Act 2016 and management objectives of relevant Coastal Management Areas defined under this Act

d. Consistency with any relevant certified Coastal Management Program (or Coastal Zone Management Plan)

11. EIS must assess the impact of the development on hydrology, including:

- a. Water balance including quantity, quality and source
- b. Effects to downstream rivers, wetlands, estuaries, marine waters (including marine protected areas) 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 shall include a flood impact and risk assessment (FIRA). As a minimum the FIRA must:

- a. Consider the relevant provisions of the NSW Flood Risk Management Manual (2023) and associated guides, and existing council and government studies, information and requirements
- b. Identify and describe existing flood behaviour on the site and its surrounding areas for the full range of events, including 5% AEP, 1% AEP, PMF and 0.5% AEP or 0.2% AEP and provide an assessment of the compatibility of the development and its users with flood behaviour. This may require flood modelling where existing flood information is not available
- c. Determine and describe changes in post development flood behaviour, impacts of flooding on existing community and on the development and its future community for full range of events, 5% AEP, 1% AEP, PMF and 0.5% AEP or 0.2% AEP. This will typically require flood modelling
- d. Consider impacts of climate change due to both sea level rise and increase in rainfall intensities considering relevant Council and government advice. The 0.5% AEP or 0.2%

AEP events can be used to provide an understanding of the scale of change of flood behaviour relative to the 1% AEP event

- e. Propose and assess the effectiveness of management measures required to minimise the impacts and risks of flooding to the development and its users and existing community

Note:

- The scope of a FIRA is intended to be consistent with the Draft EHG FIRA Guide, which is being finalised currently.
- The FIRA will need to be tailored to suit the project being considered, whilst maintaining consistency with the FIRA guide.

Note:

- • Flood modelling is to be undertaken by a suitably qualified engineer consistent with Council's requirements and Australian rainfall and Runoff and is to consider the influence of oceanic conditions in coastal areas.
- • Flood behaviour includes flood volume, extent, depth, level, velocity, duration, rate of rise, flood function and flood hazard.
- • Impacts include those on different elements at risk such as the existing community, property, floor levels, access etc due to changes to flood behaviour and risks to the community including emergency management response for the community.

Attachment B – Project Specific Environmental Assessment Requirements for Hanworth BESS (SSD-78179499)

Biodiversity

13. The project must address any Serious and Irreversible impacts (SAIL) that may be impacted from the development. BCD recommends early engagement between BCD and the proponent where such entities are likely to be impacted.

Note: The ['Guidance to assist a decision-maker to determine a serious and irreversible impact'](#) provides criteria and supporting information to assist with the application of the SAIL principles, including potential entities that meet the SAIL principles and criteria.

14. The Cat 1 land must be assessed for additional biodiversity impacts under clause 6.1 of the BC Regulation. These are referred to as Prescribed impacts in accordance with 1(d) of the BAM 2020.

15. The BDAR must include surveys for grassland fauna such as striped legless lizard, and pink tailed legless lizard.

16. The following prescribed impacts in accordance with Clause 6.1 of the BC Act are to be assessed:

- the impacts of development on the following habitat of threatened species or ecological communities —
 - karst, caves, crevices, cliffs and other geological features of significance,
 - rocks,
 - human made structures,
 - non-native vegetation,
- the impacts of development on the connectivity of different areas of habitat of threatened species that facilitates the movement of those species across their range,
- the impacts of development on movement of threatened species that maintains their lifecycle,
- the impacts of development on water quality, water bodies and hydrological processes that sustain threatened species and threatened ecological communities (including from subsidence or upsidence resulting from underground mining or other development) – refer to Addendum to NSW Biodiversity Offsets Policy for Major Projects: Upland swamps impacted by longwall mining subsidence (OEH, 2016),

- the impacts of wind turbine strikes on protected animals – refer to Wind farms: Turbine Strike Assessment and Adaptive Management Plan: Biodiversity Assessment Method Guide (BCS, 2023)
- the impacts of vehicle strikes on threatened species of animals or on animals that are part of a threatened ecological community.

17. Offsets for prescribed impacts are to be considered if avoidance and mitigation measures are not applicable, or will not result in the complete reduction of prescribed impacts occurring. The assessment and calculation of a predicted offset obligation in accordance with Section 7.14 of the Biodiversity Conservation Act 2016 should be presented in the BDAR.

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

Flooding and coastal hazards

19. The EIS must address the following project-specific requirements for flood risk:

a. The EIS must assess the potential impact of flooding for the full range of events up to and including the PMF:

- On the proposed facility.
- On public safety including accesses to the proposed facility and waterway crossings.

b. The EIS must detail:

- The storage levels of any hazardous materials.
- The structural integrity of any proposed storage buildings / structures in events up to and including the PMF.
- An assessment of impacts, risks and controls associated with inundation of the facility or structures containing hazardous materials including any off-site impacts in large to extreme floods up to the PMF.

c. The EIS should:

- Demonstrate how the facility can continue to operate to avoid the potential for shutdown of power supply and/or power storage as a result of flooding.
- Address any flow on effects and risks of shutdown such as impacts to the telecommunications network.

d. The EIS must assess the hydrological impacts of the proposed development on the environment including erosion potential, off-site flooding and how that will be mitigated.

Attachment C – Guidance Material

Title	Web address
Relevant Legislation	
Biodiversity Conservation Act 2016	https://www.legislation.nsw.gov.au/#/view/act/2016/63/full
Coastal Management Act 2016	https://www.legislation.nsw.gov.au/#/view/act/2016/20/full
SEPP (Resilience and Hazards) 2021	https://legislation.nsw.gov.au/view/whole/html/inforce/current/epi-2021-0730
Commonwealth Environment Protection and Biodiversity Conservation Act 1999	https://www.legislation.gov.au/Series/C2004A00485
Environmental Planning and Assessment Act 1979	https://legislation.nsw.gov.au/view/html/inforce/current/act-1979-203
Fisheries Management Act 1994	https://legislation.nsw.gov.au/view/html/inforce/current/act-1979-203
Marine Estate Management Act 2014	https://legislation.nsw.gov.au/view/html/inforce/current/act-2014-072
National Parks and Wildlife Act 1974	https://legislation.nsw.gov.au/view/html/inforce/current/act-1974-080
Protection of the Environment Operations Act 1997	https://legislation.nsw.gov.au/view/html/inforce/current/act-1997-156
Water Management Act 2000	https://legislation.nsw.gov.au/view/html/inforce/current/act-2000-092

Title	Web address
Wilderness Act 1987	https://legislation.nsw.gov.au/view/html/inforce/current/act-1987-196
Biodiversity	
Biodiversity Assessment Method 2020 & assessor resources (including legislation, manuals, BDAR templates, survey guidelines, registers and databases)	https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020 https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/accredited-assessors/assessor-resources
Guidance to assist a decision maker to determine a serious and irreversible impact	https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Biodiversity/guidance-decision-makers-determine-serious-irreversible-impact-190511.pdf
Policy and guidelines for fish habitat conservation and management	https://www.dpi.nsw.gov.au/fishing/habitat/publications/pubs/fish-habitat-conservation
List of national parks	http://www.environment.nsw.gov.au/NationalParks/parksearchatoz.aspx
Revocation, recategorisation and road adjustment policy	https://www.environment.nsw.gov.au/topics/parks-reserves-and-protected-areas/park-policies/revocation-recategorisation-and-road-adjustment
Guidelines for developments adjacent to national parks and other reserves	https://www.environment.nsw.gov.au/topics/parks-reserves-and-protected-areas/development-guidelines

Title	Web address
SEED Data Portal (access to online spatial & environmental data)	http://seed.nsw.gov.au/
Conservation lands	
Guidelines for developments adjacent to NPWS managed lands	https://www.environment.nsw.gov.au/topics/parks-reserves-and-protected-areas/development-guidelines
National parks and other lands managed by NPWS	List https://www.nationalparks.nsw.gov.au/visit-a-park Spatial data https://datasets.seed.nsw.gov.au/dataset/npws-all-managed-land Recategorisation & adjustments https://www.environment.nsw.gov.au/topics/parks-reserves-and-protected-areas/park-policies/revocation-recategorisation-and-road-adjustment
Water and Soils	
Water	
Water Quality Objectives	http://www.environment.nsw.gov.au/ieo/index.htm
Australian and New Zealand Guidelines for Fresh and Marine Water Quality	https://www.waterquality.gov.au/anz-guidelines
Water Quality Guidelines Mixing zones	https://www.waterquality.gov.au/anz-guidelines/resources/key-concepts/mixing-zones

Title	Web address
Approved methods for the sampling and analysis of water pollutants in NSW (2022)	https://www.epa.nsw.gov.au/licensing-and-regulation/licensing/environment-protection-licences/licensing-under-poeo-act-1997/licensing-to-regulate-water-pollution/approved-methods-for-sampling-and-analysing-water-pollutants
Risk-based Framework for Considering Waterway Health Outcomes in Strategic Land-use Planning Decisions.	https://www.environment.nsw.gov.au/research-and-publications/publications-search/risk-based-framework-for-considering-waterway-health-outcomes-in-strategic-land-use-planning
Soils	
Acid Sulfate Soils Planning Maps via Data.NSW	http://data.nsw.gov.au/data/
Acid Sulfate Soils Manual (Stone et al. 1998)	http://www.environment.nsw.gov.au/resources/epa/Acid-Sulfate-Manual-1998.pdf
National Acid Sulfate Soils Guidance: National acid sulfate soils identification and laboratory methods manual, Department of Agriculture and Water Resources, Canberra, ACT. (Sullivan, L, Ward, N, Toppler, N and Lancaster, G. 2018a).	https://www.waterquality.gov.au/sites/default/files/documents/dewatering-acid-sulfate-soils.pdf

Title	Web address
National Acid Sulfate Soils guidance: National acid sulfate soils sampling and identification methods manual, Department of Agriculture and Water Resources, Canberra ACT. (Sullivan, L, Ward, N, Toppler, N and Lancaster, G. 2018b).	https://www.scu.edu.au/media/scueduau/eal/documents/National-acid-sulfate-soils-sampling-and-indentification-methods-manual.pdf
National Acid Sulfate soils Guidance: Overview and management of monosulfidic black ooze (MBO) accumulations in waterways and wetlands, Department of Agriculture and Water Resources, Canberra ACT. (Sullivan, LA, Ward, NJ, Bush, RT, Toppler, NR, Choppala, G. 2018c)	https://www.scu.edu.au/media/scueduau/eal/documents/Overview-and-management-of-monosulfidic-black-ooze-MBO-accumulations-in-waterways-and-wetlands.pdf
National Acid sulfate soils guidance: Guidelines for the dredging of acid sulfate soil sediments and associated dredge spoil management, Department of Agriculture and Water Resources, Canberra, ACT (Simpson, SL, Mosley, L, Batley, GE and Shand P. 2018).	https://www.waterquality.gov.au/sites/default/files/documents/dredging-sediments-spoil.pdf

Title	Web address
National Acid Sulfate Soils Guidance: Guidance for the dewatering of acid sulfate soils in shallow groundwater environments, Department of Agriculture and Water Resources, Canberra, ACT. (Shand, P, Appleyard, S, Simpson, SL, Degens, B, Mosley, LM 2018)	https://www.waterquality.gov.au/sites/default/files/documents/dewatering-acid-sulfate-soils.pdf
Flooding and Coastal Hazards	
Coastal management	https://www.environment.nsw.gov.au/topics/water/coasts/coastal-management
Floodplain development manual	https://www.environment.nsw.gov.au/topics/water/floodplains/floodplain-manual
Coastal Management Manual	https://www.environment.nsw.gov.au/topics/water/coasts/coastal-management/manual
NSW Climate Impact Profile	http://climatechange.environment.nsw.gov.au/
Floodplain Risk Management Guidelines	http://www.environment.nsw.gov.au/topics/water/coasts-and-floodplains/floodplains/floodplain-guidelines
Australian Rainfall and Runoff: A Guide to Flood Estimation	http://arr.ga.gov.au/

Title	Web address
Marine and Coastal ecology	
Marine Estate Management Strategy	https://www.marine.nsw.gov.au/marine-estate-programs/marine-estate-management-strategy
NSW Marine Estate Threat and Risk Assessment	https://www.marine.nsw.gov.au/marine-estate-programs/threat-and-risk-assessment
National Light Pollution Guidelines for Wildlife including Marine Turtles, Seabirds and Migratory Shorebirds	https://www.dcceew.gov.au/environment/biodiversity/publications/national-light-pollution-guidelines-wildlife
NSW Marine Protected Areas	https://www.marine.nsw.gov.au/your-marine-estate/marine-protected-areas