



File Ref: DN26/0011

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Development Referral No. DN26/0002

Proposal: Request for response for the State Significant Development Application - Kamay Battery Energy Storage System

Property: 171-189 Captain Cook Drive, Kurnell

I refer to the above which has been referred to Council for comment in relation to the proposed application for a battery energy storage system in accordance with the provisions of the Act, the Regulations and SEPP Planning Systems 2021.

Council supports providing alternate energy supplies systems to assist in the demands for electricity and encourage their placement on strategically located land that is suitable for such infrastructure.

Following the review of the application, we are of the opinion that the application cannot be supported in its current form as there is insufficient information available to undertake a comprehensive assessment of impacts and to determine if the site is suitable for the development.

The application has not provided the necessary plans to understand the site planning and layout. Rather it advises that this information will be prepared following the determination of the proposal and prior to construction. It is critical that this is provided prior before any determination is made rather than rely on a single plan (Site Plan) which appears to be generic and in concept form.

It is not agreed that the proposal in its current form will have minimal impact on the environmentally sensitive land that directly adjoins the site. The property to the north, west and south of the site contain land that is mapped as biodiversity values and wetlands. Our review has concluded works will be undertaken within these mapped areas, and this must be avoided, not mitigated. The 8m high walls are not supported given visual impact and lack of plan details, particularly as their other mitigation measures available that can be used which will have lesser impacts.

Prior to any determination of the application, the following must be addressed:

Detailed Development Plans

A comprehensive assessment cannot be undertaken as only a single plan has been provided. This plan does not meet the requirements for assessment. To ensure that a comprehensive assessment can be undertaken, the following plans must be provided which will assist in our review and making an informed decision on the proposal:

- Preparation of a Site Analysis Plan illustrating site context

- Revised Site Plan containing all relevant details: North Point, contours (specifically in this case at 0.5m intervals), boundary dimensions and site area, dimensions/setbacks of existing and proposed structures and works from property boundaries and the biodiversity values and wetland areas, details of natural features and utilities.
- Elevations and Sections of all structures and works. For example, the visual analysis assessment does not show the proposed 8m high noise attenuation walls. Existing and proposed finished ground levels must be shown.
- Demolition Plan.
- Floor Plans – the application shows light blue areas will contain ‘ancillary infrastructure’, but the application does not provide any information of their dimensions, distances from boundaries, etc. This is important having regard to separation distances from the biodiversity and wetlands, particularly as the application specifies a 10m setback having regard to bushfire safety.
- Civil, Engineering and Stormwater Plans – full details needed, particularly as the site is directly adjacent to biodiversity values and wetland areas. The total depth of excavation is not known due to the lack of plans, and it cannot be certain if the proposal will intercept the groundwater table.
- Car Parking and Vehicular Access Plans.
- Excavation and/or Fill Plan – details are needed to account for the totality of works, including provision of infrastructure. Of critical importance is understanding the depth of trenching and the size and proximity of batters to the biodiversity and wetland areas.
- Sediment and Erosion Control /Soil and Water Management Plans.
- Schedule of Colours and Materials.
- Land Survey Plan – at either 0.5m or 1m intervals given the site is flat.
- Landscape Plans – this plan must show the extent of structural root and tree protection zones of all onsite and offsite vegetation. This is necessary to ensure works are located and undertaken to have minimal impacts on the long term health and wellbeing of vegetation within the biodiversity values and wetland areas.

It is drawn to the Department’s attention that the Site Plan shows proposed landscaping along Captain Cook Drive is partly located within the road verge. This is not supported. The wall must be inset from the boundary so proposed landscaping is located wholly within the site boundaries.

A schedule of works must be detailed. The application simply states that a range of mitigation measures will be implemented later. Certainty must be provided in the assessment stage so the potential impacts can be understood and if the proposal is supportable, specific rather than generic conditions can be imposed.

Biodiversity

The land located directly to the north, west and south are mapped as having biodiversity values in accordance with the provisions of the Biodiversity Conservation Act 2016 and is mapped as being wetlands in accordance with SEPP Resilience and Hazards 2021. These wetlands are also of international importance in accordance with the RAMSAR Convention on Wetlands. The fringe areas of the site, along the northern, western and southern boundaries are mapped as containing biodiversity values and wetlands (refer to mapping extract provided below).

On Page 17, Section 1, it is detailed that the BESS will be connected to the Kurnell Substation Infrastructure and this is represented by a light blue line on the Site Plan – refer to Image 1 below. The following mapping extracts (Images 2 and 3) show the mapped biodiversity values and wetlands. It has been calculated that the new connection will be through the environmentally sensitive land.

Of critical importance, the excavation and/or works to install this connection will further impact the environmentally sensitive land. On this basis, the application must be revised and detailed plans provided to show no intrusion into these areas, and in addition, including pre and proposed finished ground levels, batter height and width, drainage controls, foundation systems for the noise abatement walls and the like.

Detailed plans showing the mapped environmentally sensitive land and all structural root and tree protection zones must be delineated to certify that works within sensitive areas will be avoided.

The above matters cannot be addressed as a condition of any approval. The application must be revised to ensure minimal impacts to offsite vegetation.

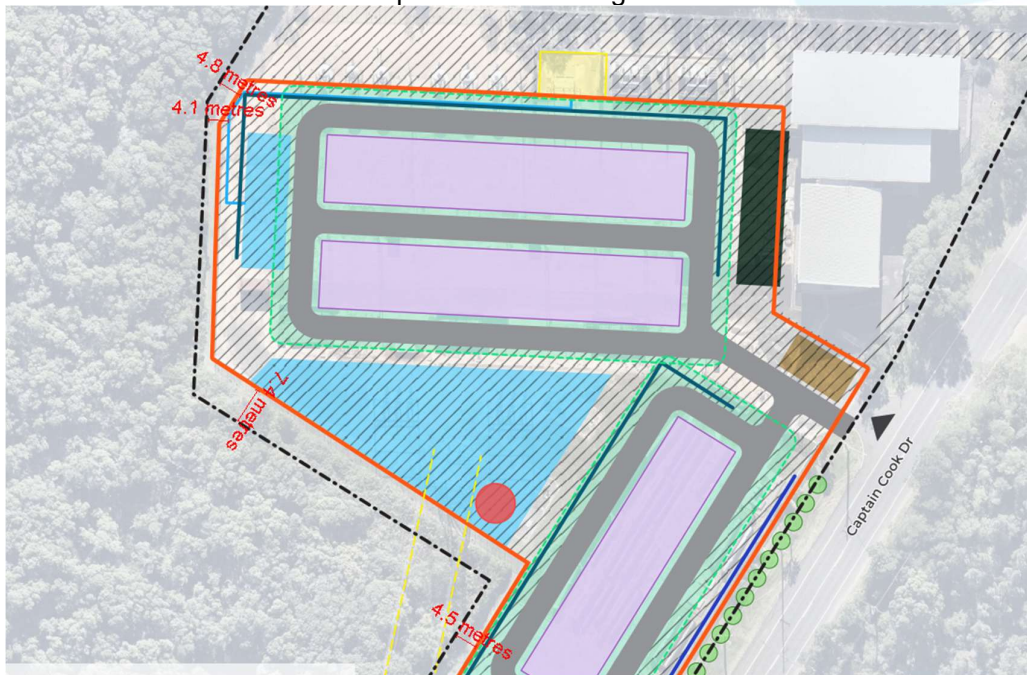


Image 1: Site Plan with annotations of setback distances to property boundaries (Source: Application Material)



Image 2: Mapping extract showing the mapped biodiversity values land (in purple) with annotations showing the setback and intrusion into the site.



Image 3: Mapping extract showing the mapped wetlands (in blue) with annotations showing the setback and intrusion into the site.

It is not agreed that the application has satisfactorily addressed the water quality issues raised in Council's letter in response to the Draft SEARs regarding the Towra Point Aquatic Reserve (Our Ref: DN25/0025). It is acknowledged that the planning statement has been provided commentary regarding surface water runoff, there are no plans to show the control measures and infrastructure that will be used to ensure minimal impacts. Further information must be provided. This is not a conditional matter where information is to be developed prior to the commencement of site works.

Page 63 details that the BDAR has determined that one ecosystem credit is required to offset the 0.1 hectare of (indirectly) impacted Swamp Floodplain Forest (PCT 4028). A review of the BDAR report has been undertaken, and it cannot be established which part of the site vegetation is being removed, nor has any detail been provided on the Site Plan. The application must be revised to clearly show the area of vegetation that is proposed to be removed.

Following on, Figure 10 – Plant Community Types (Page 40 of the BDAR) delineates an area of PCT 4028 (approximately 650m² in patch size) in the southern area of the site, which is shaded in yellow on the Site Plan as *'HV connection infrastructure, area subject to separate approvals process'*. It is assumed this is the area of vegetation that is proposed to be removed. Given this area of land is subject to a future application, there is no purpose for this vegetation to be removed and as such, must be retained.

Soils, Groundwater and Contamination

On Page 68 of the planning statement, it is detailed that excavation is *'not expected to exceed 1.0mbgl'* for drainage works and the installation of cable trenches. This figure is questioned.

As stated earlier in this report, there is a lack of information and plans to substantiate the excavation depth. Clarity is needed regarding this figure.

Further, the planning statement has not accounted for the foundation system depths for the construction of the 8m high noise attenuation walls. It is assumed that excavation will exceed 1m given the weight of each panel and the associated foundation system.

All reporting will need to be revised following further investigation into the extent of site excavation.

Surface Water and Flooding

The issues raised in council's response to the Draft SEARs are maintained. Section 9.3.2 details that each battery unit will be installed on individual plinth bases set above the 1% AEP flood level at the site for a conservative future climate scenario based on the existing flooding assessment and bunding to contain contaminated firewater.

The application does not contain existing and proposed finished ground levels to determine the height and the scope of works required to construct the plinth bases and there are no details of bunding, their location, their size and/or capacity. The latter is of particular importance as the design and the capacity of any bunds must account for the worst case scenario. In this regard, a significant flooding event occurred in April 2022 where a 1 in 500 year flood event occurred and resulted in approximately 9,200L of hydrocarbon liquid to leave the Ampol Site at 160-166 Captain Cook Drive.

Dot Point 3, Page 73 and Mitigation Measure FL-2 (Page 74) in the planning statement details that the height of the bunding will be based on upon the ability to contain the maximum quantity of firewater to be supplied and the design following the determination will determine how contaminated fire water will be managed. Page 94 details that firewater will either be pumped into a water tank or if filled, contained in a bund located onsite.

This information and detail should be known now and should inform the site planning of the development. Not understanding this detail in the assessment of the proposal raises several questions, particularly how the applicant can advise that there will be minimal impacts when required infrastructure design and location is not yet known. Certainty is needed, particularly given the sensitive environmental land that directly adjoins.

Section 4.10.2.1 in the Water Impact Assessment details simulations of inundation have been run showing flood depths range *'during storm events up to the conservative future 1 % AEP event, typically being up to 150 mm over the existing Ausgrid Kurnell Zone Substation, with some local depths up to approximately 250 mm due to overland flow'* and *'(d)uring the PMF, flood depth increases further with areas of the site subject to flooding typically up to 300 mm, with some localised increases up to 500mm'*. This is a significant concern given any existing flood storage of the site will be displaced as a result of lifting the landform to create the building platforms to accommodate the batteries and all other ancillary infrastructure, as well as the potential of surface materials being washed from the site towards the environmentally sensitive areas that directly adjoin the property.

Civil plans must be provided showing the location of existing and proposed drainage throughout the site, including details of any onsite detention system, gross pollutant traps, water quality and other treatment devices, swales, existing and proposed finished ground levels and the like.

Heritage – Aboriginal and European

Towra Point Nature Reserve and Quibray Bay are local items of heritage (archaeological) significance in accordance with Schedule 5 from the Sutherland Shire Local Environmental Plan 2015. It is not agreed that the proposal will have minimal impact upon the setting and the significance of the items, particularly due to the construction of the 8m high noise attenuation walls. The site is currently low scale in height, and the noise abatement walls must be reduced to reflect the current low height site conditions. Introducing colours, textures and/or materials to increase their visual aesthetic is not considered an acceptable response to mitigating their visual intrusiveness.

Noise and Vibration / Wall Design

The installation of 8m high walls on the northern, western and southern sides of the batteries is not acceptable due to their visual impacts. It is acknowledged that noise attenuation measures are needed to ensure minimal impacts to the adjoining and nearby sensitive receptors, but alternate measures must be explored which will reduce the visual impacts and intrusiveness. For example, a lesser wall height with an angled top portion which will assist with redirecting the noise.

The Noise Wall Design Guideline produced by Transport for NSW is a useful tool that must be used for alternate noise abatement designs, including colours, textures and materiality. The publication can be sourced using the following link: [Noise wall design guideline June 2023](#)

Page 34 of the noise impact assessment report details current background noise levels will be exceeded, specifically Sensitive Receptor R6 (28 Tasman Street). The report details that existing noise levels for this receptor is 38dB(A) and during the operation of the site, the noise levels will increase to 44dB(A) in the evening and 40dB(A) during the night. Greater efforts must be made to reduce the noise levels of intrusiveness to minimise sleep arousal and maintain current levels of intrusiveness at all sensitive receptors.

Traffic and Transport

Concerns are raised regarding the capacity of Captain Cook Drive during an emergency period, particularly the traffic conflict if first responders close the road preventing residents of Kurnell to leave.

Hazards and Risks

Concerns are raised regarding the batteries and runaway fires. It is acknowledged that a raft of measures are proposed and these will be reviewed by the Department of Planning Hazards Team.

Bushfire

The Bushfire Assessment Report details that the site and those directly adjoining are not mapped as being bushfire prone. Despite this, Section 2.2 of the report details that a conservative approach will be undertaken and a minimum 10m setback will be used to provide a fuel free and defensible area between the works and the vegetation that directly surrounds the site.

However, the site plan shows that the light blue area denoting the area to be used for 'ancillary development' has buffers/setbacks to vegetation that are less than 10m – refer to Image 4. It is acknowledged that a condition could be imposed to require a minimum 10m separation buffer, however, it is considered that the plans must be amended and the report revised to provide greater clarity and be representative of what is proposed.

Page 63 states that an APZ currently surrounds the site and management will continue without change. The proximity of the development to the environmentally sensitive land (i.e. less than 10m) raises issues. The application must be amended where the APZ buffer is established from the mapped biodiversity values and wetland areas, not the existing vegetative land. The seed bank of the vegetation is also protected by legislation, and this must not be impacted.

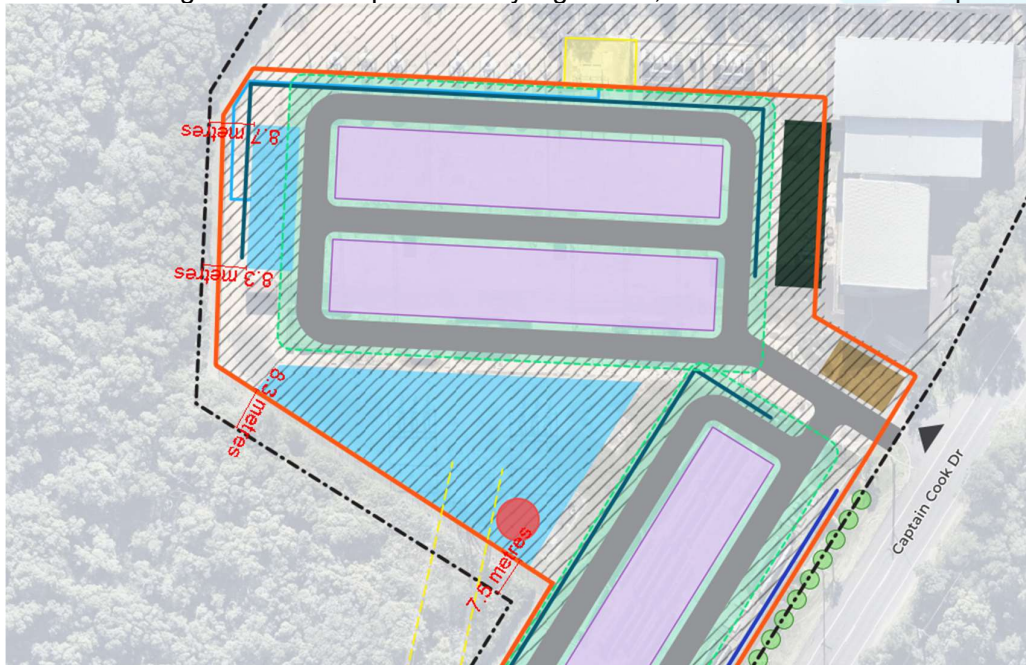


Image 4: Mapping extract showing the ancillary infrastructure area having setbacks less than 10m

Other Environmental Impacts

- The Landscape and Visual Impact Assessment must be revised. The yellow outlines that represent only models or shows the height of the batteries (being 2.8m high) but does not show the totality of the works. That is, the 3m wall along Captain Cook Drive and the 8m walls to be constructed on the northern, western and southern sides of the batteries are not shown. The report must be revised to include this detail.

- A visual representation of the proposed 3m wall is provided on Page 112 of the planning statement but does not appear in the visual impact assessment. It is not understood why this image was not included in the Landscape and Visual Impact Assessment.
- Further, this report must provide viewpoint analysis of the project from several vantage points from Towra Point, Quibray Bay and closer to the site along Captain Cook Drive. Viewpoints 3 and 4 are taken a considerable distance from the site on Captain Cook Drive and the view impacts are negated by existing mature vegetation.

Viewpoints must also be taken from the nearest sensitive receptors/dwellings located along Horning and Tasman Streets, being the properties that are located opposite the site and across the wetlands, rather than a single viewpoint on Dampier Street, which is located further from the properties.

The view assessment should include an analysis from the residential dwellings that are oriented towards the site. The applicant should request access to a number of these properties so an informed assessment can be made.

- It would be advantageous to model light spill impacts from all vantage points, particularly from the nearby sensitive receptors.
- Proposed and existing verge landscaping must not be the primary mitigation measure to screen the proposal based on the Land and Environment Planning Principle contained in the Super Studio judgement. Landscaping must be a secondary measure and the aesthetic 3m wall along Captain Cook Drive must be reconsidered.
- The proposal does not show where lighting will be installed. It is acknowledged that the maximum lighting lux level will be limited to 3000k to minimise impacts, but concerns are raised that lighting will be installed well above the batteries (which will be no greater than 2.8m in height). To minimise light spill impacts, lights must not be located higher than the noise attenuation walls and be top down in design.
- As highlighted in the Biodiversity Section in this response, it is not agreed that the proposal satisfies the provisions in Section 2.7 from SEPP Resilience and Hazards 2021. A comprehensive set of plans must be provided to certify that no works are proposed within the mapped wetland areas. Further, it is not agreed that the proposal satisfies Section 2.8 as there is a deficiency of information to certify compliance.
- Mitigation Measures RH-15 and RH-17 on Page 96 details the stormwater management plan is to be developed, designed and installed in accordance with FRNSW guidelines. Mitigation Measure BF-1 details that a Fire Safety Study will be prepared prior to construction to determine the quantum and location of bushfire fighting water supply. This is not acceptable and the location and extent of works must be provided prior to any determination.
- As noted in this application, DPHI's Benefit Sharing Guideline (November 2024) provides a policy position for large scale battery energy storage systems (BESS). It proposes how benefit sharing should be incorporated into State Significant Development for BESS projects. The Guideline advises a BESS on non-rural zoned land *"would be subject to standard Council rates and contributions based on land use zoning and any relevant impacts on local infrastructure and services."*

Consistent with the Guideline, it is requested that, should the application be approved, conditions requiring payment of Council's local infrastructure contribution levy in accordance with Section 7.12 of the EP&A Act 1979 are imposed on the development consent.

Community Concerns

Submissions have been made direct to council from members of the public and community groups, raising several issues. The primary issues raised include:

- The proposal needs to be considered in the broader context, having regard to the Kurnell Energy and Industry Precinct and the proposed Holt / Bidhiinja Beach development.
- Noise impacts and proximity to residential development.
- Issues with the noise impact assessment,
- The application does not provide a quantified funding commitment, duration or agreed community governance model for community benefit sharing. Although the proposal is not supported, if the application is approved, Kurnell should receive a meaningful, long term community benefit fund, and used towards beautification, environmental remediation and community improvements in Kurnell, with local residents having a genuine role in deciding how those funds are used in partnership with Council.

It is requested that the Department responds to these submissions.

Conclusion

Councils review of documentation concludes that works will be undertaken within mapped biodiversity values and wetland areas. It is necessary for detailed plans and information to be lodged with the application to enable an assessment of impacts, rather than to defer this detail following determination.

The construction of 8m high noise attenuation walls is not supported. Alternate noise attenuation measures must be explored. High barrier walls will have a visual impact from those residential properties that are oriented towards the site and the public domain, including the waterways, and from Towra Point and Quibray Bay.

It is acknowledged that there is a need to assist and protect the energy needs of the Sutherland Shire Local Government Area and broadly, Council supports this type of infrastructure. However, this application is not supported in its current form for the issues raised in this response. Additional information must be provided so that an assessment can be undertaken, and changes must be made to ensure that the environmentally sensitive areas that directly adjoin the site, and the nearby sensitive receptors, are not impacted from the construction and operation of the BESS.

If you need any clarification of the above comments, please contact Council's Senior Development Assessment Officer Daniel Lukic on 9710 0668 or email dlukic@ssc.nsw.gov.au and quote the application number in the subject.

Yours faithfully



Sue McMahon
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