Notes

1. This report covers proposed works (Activity) assessed as likely to have minor, non-extensive, and non-complex impacts, requiring a Part 5 assessment under the Environmental Planning and Assessment Act 1979 (NSW).
2. Once verified, the SER forms Ausgrid's conditional determination, including controls in this SER and NS174C Environmental Handbook. If inconsistencies arise, SER controls take precedence.

Project information

Project name	33kV switchgear replacement and 120 MVA 132/33kV transformer replacement Willoughby STS
Project number	SJ-10032
Street number	
Street name	Clarendon and Campbell St
Suburb	Artarmon
Ausgrid project coordinator	Lyn Nguyen
Version Date	Wednesday, March 11, 2026 3:40:29 PM
SER Status	Approved

Summary of key discussion points (automatically generated) – see SER for full controls

Comply with NS174C Environmental Handbook and specific controls below (if listed).
- Sensitive ecology in the area. No impacts to vegetation/habitat/waterways unless complying with SER controls (s2.1).
- Contaminated land is in the area. No ground disturbance works unless complying with SER controls (s2.10).
- Hazardous materials are in the area. All works to comply with NS211.
- Specific controls in s2.20 Other issues
- Specific controls in s2.6 Oils, fuels and other chemicals
- Specific controls in s2.7 Water quality (erosion and sedimentation, discharges, extraction, reclamation, dredging)
- Specific controls in s2.8 Construction noise and vibration

Table 1 – Project Details

1.1 Scope of activities covered by this SER

Description

Works: Ausgrid proposes to replace a 120 MVA 132/33kV transformer and replace 33kV switchgear at Willoughby STS on the corner of Clarendon St and Campbell St, Artarmon.

The project would be staged and involves the following components:
1. SJ- 10032 Construction of a new switchroom building on Ausgrid's existing substation site.
2. SJ-10032 Replace Willoughby STS 33kV switchgear in a new switchroom (completed Dec 2032)
3. SJ-10078 Install new 120 MVA 132/33kV transformer (completed Dec 2029)
4. SJ-10033 Willoughby STS 33kV feeder transfer from old to new switchgear (completed Dec 2032)
5. NER replacement and auxiliary transformer replacement

Demolition and decommissioning of existing plant and equipment will be assessed separately under the relevant provisions of the Environmental Planning and Assessment Act. See related projects in S1.3 below.

Design reference: Refer to Schematic Design Package - Architectural - 17 Oct 2025 PDF attached to this SER.
NOTE: CHANGES TO THE DESCRIPTION OF THE PROPOSED ACTIVITY (INCLUDING THE DESIGN) MAY REQUIRE A REASSESSMENT.

Typical construction methodologies would be utilised and include the use of a concrete cutter and wet vac, cranes, demolition jammer attachments, drill rig, excavator, tip truck, skip bin, concrete pour, pre cast slabs, scaffolding.

Scope of excavation works: Excavation and ground disturbance would occur within Willoughby STS on Ausgrid property. Refer to design for extent of excavation.

Scope of vegetation trimming/clearing: The works would involve removal of 29 trees within Willoughby Substation. This is discussed in Section 2.1.

Access: All work would occur within Ausgrid's property boundary. Access during construction would be limited to existing roadways. As such, provisions for traffic management would be made sufficient to meet local Council and the Roads and Maritime Service (RMS) standards.

Expected number of trees (>3m in height) to be removed

29

Select specific activities that may apply

☐ Disturbing the ground (for example, excavating, trenching, drilling, underboring, access track works, driving tracked vehicles)
☑ Clearing or trimming vegetation or removing ground cover
☑ Impacting trunks or root structures (excavating within 15m of trees)
☐ Impacting undisturbed land
☐ Impacting natural waterways, including dredging (excavating) or reclamation (filling)
☑ Removing or damaging bushrock, tree hollows, or dead trees
☐ Decommissioning substations

1.2 Future maintenance activities and ongoing operational requirements

Description

The Activity includes future maintenance, operation, inspection, repair and decommissioning. This may include works undertaken out of normal working hours and vegetation management works. All works would be undertaken in accordance with NS174C Environmental Handbook for Construction and Maintenance and Ausgrid's Tree Safety Management Plan (TSMP) or equivalent procedures in force at the time.

1.3 Related Projects

Description

- SJ-10040 Decommissioning 33kV switchgear will occur at Willoughby STS, however these works will be undertaken separately and will not start until around 2032.
- SJ-10032-1 - Early works external joint bay - SER has been completed separate to this SER.

- There is a new data centre being constructed on Campbell St opposite Willoughby STS. These works are not part of this SER.

1.4 Need for the Proposed Activity

Description

Willoughby 132/33kV STS contains four 132/33kV transformers and supplies approximately 28,000 residential and industrial/commercial customers. Willoughby STS peak load is 115 MVA summer and is forecast to reach above 300 MVA by FY2030 with the addition of new data centres (NextDC, Goodman DC), which will exceed the substation capacity of 225MVA in summer. Condition issues have been identified in the 33kV switchgear and the assets are near to the end of their service life. The switchgear and one transformer will need to be replaced as part of this project.

1.5 Route/site option justification: (Complete in conjunction with Table 2)

Description

Several factors were considered when determining the most suitable option. The preferred project achieves the best balance of social, environmental, technical, safety and financial objectives. Options for this project have been restricted due to the need to connect to existing high voltage cables and existing congestion of underground cables within the Ausgrid land. Several locations were considered within Willoughby STS however due to high congestion of underground power cables, the only suitable option was for the replacement building to be at the front of the site. Ausgrid is working hard to contain as much excavation work within our site.

1.6 Indicative commencement date and duration of works

Description

The proposed commencement date is early 2026. The works would be staged, with component 1 and 2 to be completed by December 2032.

Early works are expected to commence in March/April 2026 and be completed by Dec 2026. Early works comprises relocating some underground assets and removal of trees to clear the construction area. The main building works is expected to commence after January 2027. The work would be completed by Dec 2032. This timeframe is indicative and may vary due to the contractor or specialist availability, resources and consultation with the community.

The construction period may also vary in duration depending on weather conditions, technical parameters, environmental issues, resources and availability of contractors and specialists.

Working hours are restricted to Monday to Friday 7 am to 6 pm and Saturdays 8 am to 1 pm, with no work on Sundays and public holidays. Working outside these hours, although not expected, may be required where RMS Road Occupancy Licences stipulate out of hours work / there would be a greater environmental or social benefit as a result of out of hours work occurring / electrical outages require that work must be undertaken out of standard operating hours. Refer to Table 2 regarding any specific construction controls.

1.7 Description of the land - environmental characteristics, land use and land ownership

Description

The Assessor undertook a site visit on August 1st 2025.

The Study Area for this project has been defined by coordinates indicated in the attached WebGIS EL Report. The Study Area encompasses all those matters potentially affected as a result of the proposal. Matters likely to be affected are addressed in this assessment.

The area is dominated by commercial / industrial land uses. Distinguishing features relating to this activity include a main road and Ausgrid's existing substation facility within a former quarry adjacent to a concrete batching plant.

The area has been mapped on Ausgrid's WebGIS EL Report to include:
- Ausgrid - Sensitive Environmental Features, access tracks, easements, licences etc.
- Hazards - Asbestos, PCBs, hazardous materials, antennas, acid sulfate soils, bushfire prone land etc.
- Planning - Sydney Harbour catchment, Precincts etc.

Land ownership: work would occur within Ausgrid property. Ausgrid's Property section has undertaken a title search which shows that the land is owned by Ausgrid.

Select any environmental features identified by WebGIS EL report, site inspection and other means

☑ Ausgrid – Sensitive Environmental Features, access tracks, easements, licences etc.
☐ Climate change adaptation – flood, sea level etc.
☐ Ecology – Area of Outstanding Biodiversity Value (AOBV), Ramsar wetlands
☐ Ecology – Endangered Ecological Communities (EEC) and threatened species
☐ Ecology – Native vegetation, migratory birds, marine vegetation, marine parks and aquatic reserves, BV map, powerful owl breeding territory, flying fox camps etc.
☑ Hazards – Contaminated land
☑ Hazards – Asbestos, PCBs, hazardous materials, antennas, acid sulfate soils, bushfire prone land etc.
☐ Heritage – Aboriginal
☐ Heritage – Local, State, World, National, Commonwealth, S170, movable etc.
☐ Planning – Coastal management (coastal wetlands and littoral rainforests)
☑ Planning – Sydney Harbour catchment, Precincts etc.
☐ Restricted area – Biodiversity Conservation Trust agreement areas
☐ Restricted areas – National Parks
☐ Restricted areas - Mine subsidence, state forests, Sydney harbour foreshore areas, SOPA, crown land, classified road etc.
☐ Vulnerable land – Protected riparian land, erodible land etc.
☐ Water – Drinking water catchment areas, waterway and wetland buffer etc.

1.8 Community engagement

Description

A Consultation Summary Report was prepared for the works and is attached to this SER (see Willoughby STS consultation report). It includes the project scope, Council and community consultation undertaken.

Council consultation:
Local Council notification date: 11th June 2025 via email (see EF 500 40 day council consultation Willoughby Council).

Summary of responses: Council made a submission on 22nd July and 22nd August in response to the mandatory notification provided in accordance with Section 45 of the Electricity Supply Act 1995 (NSW). It included comments on vegetation removal, impact to street trees and a proposed driveway (which has since been removed from the scope). Positive feedback was received in relation to increased business for local cafes in the area. In addition, Ausgrid are in consultation with Willoughby Council's Landscape Team to provide a voluntary contribution towards tree replanting within Willoughby Council. These discussions are ongoing as at February 2026. The above comments have been considered as part of this assessment and have informed Ausgrid's planning decision.

Community consultation:
Ausgrid undertook a door-knock on the 25th of July to immediate neighbours. The door-knock involved providing background on the project. The purpose was to gather initial feedback/concerns and obtain contact detail preferences. One business raised comments regarding parking on Carlotta Street. These comments have been considered as part of this assessment. For residents who were not consulted during the door-knock, a letter box notification was provided. The letter is attached to this SER (see 250725 Ausgrid Willoughby STS Replacement Project).

Further consultation: All potentially affected businesses will be notified between 5 and 14 days prior to the commencement of work. Where businesses are directly affected by the work, for example their access would be restricted, at least four clear business days' notice must be given. Notices issued would outline the reason for the work, a suitable point of contact, estimated duration and any potential construction impacts. This may include temporary changes to traffic, construction noise and the location of site compounds.

Select Key Stakeholders that were consulted as part of this SER

☑ Local Council - any works excluding repairs, maintenance or emergency works (ES Act 40days)
☐ Local Council - excavating footpaths and roads, disrupting pedestrian or vehicular traffic, impacting local heritage or installing a new substation (SEPP(T&I) 21 days)
☐ National Parks and Wildlife Service - works within or adjacent to a National Park (SEPP(T&I) 21 days)
☐ Subsidence Advisory NSW – new structures on land in a mine subsidence district (SEPP(T&I) 21 days)
☑ Adjoining occupiers – new substations (SEPP(T&I) 21 days)
☐ Heritage NSW – demolishing/transferring an item on Ausgrid's S170 Heritage Register (H Act 14 days)
☐ Land owners – accessing or impacting private land (ES Act)
☐ Sydney Water/Hunter Water – works in Drinking Water Catchment areas
☑ Nearby receivers – restricting access, affecting businesses or sensitive receivers etc.
☐ Other

1.9 Approvals, licenses and permits

Description

All approvals, licences and permits (where required) are attached to this SER.

Select Approvals and Permits required for this project
☐ Potentially impacting Aboriginal heritage (NP&W Act)
☐ New works in a National Park (NP&W Act)
☐ Impacting State heritage items/places (H Act)
☐ Impacting an item of Ausgrid's S170 Heritage Register (H Act)
☐ Working where a heritage relic is likely to be discovered (H Act)
☐ New works on Crown Lands which are not a public road or public reserve (NT Act)
☐ Works in a biodiversity conservation trust agreement areas (NP&W Act and BC Act))
☐ Works within a State Forest, Flora Reserve or Crown Timber Land (F Act)
☐ Dredging or reclamation of a natural waterway or harming seagrass, mangroves or salt marsh (FM Act)
☐ Impacting Ramsar wetlands, Commonwealth heritage, Commonwealth marine areas/parks or Commonwealth land (EPBC Act)
☐ Other

1.10 Statutory context

Description

The project is subject to Chapter 2 of State Environmental Planning Policy (Transport and Infrastructure) 2021 as 'development permitted without consent' and is not on land reserved under the National Parks and Wildlife Act 1974 (NSW).

The activity is not in a Coastal Wetland or Littoral rainforest area as defined by the State Environmental Planning Policy (Resilience and Hazards) 2021.

This SER forms an assessment for the purposes of 5.5 of the Environmental Planning and Assessment Act 1979 (NSW) in accordance with section 171(2) of the Environmental Planning and Assessment Regulation 2021 (NSW). The SER satisfies the NSW Code of Practice for Authorised Network Operators.

The proposed development supports both local and state strategic plans, providing a more reliable supply of electricity that keeps pace with development associated with those plans while facilitating NSWs transition to net zero.

Table 2 – Assess

Ecology

2.1 Biodiversity (Commonwealth, NSW and other)
Level: Level 3 - Referral to Environmental Services for further assessment
Description:
The proposal is NOT within the following areas (as identified by WebGIS EL Report, consultation process and other means):
-Areas of Outstanding Biodiversity Value
-Biodiversity Conservation Trust Agreement Areas
-Commonwealth Marine Reserves
-NSW Declared Wild Rivers or Declared Wilderness
-NSW National Parks Estate
-Ramsar Wetlands
-RMS Biodiversity Offsets

The proposal will involve the removal of 29 trees on Ausgrid property. No street trees would be impacted.

Lesryk Environmental were engaged to conduct an ecological survey to determine the ecological value of the vegetation to be cleared/removed. Lesryk conducted a site visit on 11 July 2025 and provided an Ecological report (attached).

The report concluded that no State or Federally listed threatened species were recorded. No unique or significant habitats for those threatened species were observed. The proposal is not considered to result in an adverse impact on the habitat or life cycle requirements of any threatened species listed under the BC or EPBC Act.

No Threatened Ecological Communities listed under either the EPBC or BC Acts were recorded within, or in close proximity to, the proposal area. The proposed activity would not have a significant effect on any threatened species, ecological communities or their habitats.

One potential habitat tree (Tree #27 in Appendix 4 of the Ecological report) was identified. Avoidance of impacts would be appropriately managed with the specific construction controls.

Specific Construction Controls:
1. Comply with recommendations in the Ecological Report which include;

- Having an ecologist or suitably qualified/competent person to undertake a faunal inspection prior to and during the removal of trees, in particular, habitat tree (tree #27 in Appendix 4).

2. Before excavating close to trees to be retained on Campbell St, calculate Tree Protection Zones (TPZ and SRZ) using Figure 6.1-3 in NS174C and mark them on site.

3. During excavation, obtain arborist advice when;
- roots greater than 40mm need to be severed within the TPZ
- any intrusive work is required within the structural root zone (SRZ). Monitoring may be required.

4. Where arborist advice is required, it should be documented with a statement that the work undertaken has not compromised the health or structural integrity of the tree.

5. Where arborist advice concludes the work cannot be undertaken safely. A re-design or additional approval for removal may be required. Contact Environmental Services.

6. Comply with the controls in NS174C-Section 6.1 and Section 6.2.
Note: 'Disturbance' includes trimming, pruning or removing vegetation including root structure.

2.2 Marine vegetation (mangroves, seagrass etc)
Level: Level 1 - No potential impacts identified
Description:
The proposal is NOT within 100m of marine vegetation including seagrass, mangroves, saltmarsh etc. (as identified by the WebGIS EL Report, consultation process, site inspection and other means).

The proposal is NOT within:
-NSW Marine Parks and Aquatic Reserves
-Commonwealth Marine Reserves

Specific Construction Controls:
NS174C Environmental Handbook applies

Heritage

2.3 Environmental heritage
Level: Level 1 - No potential impacts identified
Description:
There are NO non-Aboriginal heritage items in the Assessment Area (as identified by WebGIS EL Report, consultation process, site inspection and other means) AND
The proposal would NOT impact potential heritage items such as sandstone gutters, cobblestone roads or sandstone walls.

Specific Construction Controls:
NS174C Environmental Handbook applies

2.4 Aboriginal cultural heritage
Level: Level 1 - No potential impacts identified
Description:
There is NO known Aboriginal cultural heritage in the Assessment Area (as identified by WebGIS EL report, developer/client assessments, consultation process, site inspection and other means); AND

The proposal does NOT involve disturbing rock outcrops; AND

The proposal is NOT in undisturbed land with the following landscape features:
- within 200m of waters, or
- within a sand dune system, or
- on a ridge top, ridge line or headland, or
- within 200m below or above a cliff face, or
- within 20m of or in a cave, rock shelter, or cave mouth

Specific Construction Controls:
NS174C Environmental Handbook applies

Pollution

2.5 Air quality (dust, and other emissions)
Level: Level 2 - Impacts would be avoided / minimised. Specific controls may be required.
Description:
The proposal involves activities that could generate dust and other emissions, however, avoidance of impacts would be appropriately managed with specific construction controls.
Potential receivers include:
- Nearby commercial properties. Nearest receiver is Boral Concrete (40 m east), 1C Clarendon St (Commercial) (40m west)

The proposal would NOT involve dust leaving the worksite or generate offensive odours/fumes.

The proposal would NOT involve any of the following:
- transmission tower paint or corrosion removal or
- installing a permanent exhaust.

Specific Construction Controls:
1. Manage the worksite to prevent dust and fumes leaving the worksite.

2. Comply with the controls in NS174C-Section 4.1.

2.6 Oils, fuels and other chemicals

Level: Level 3 - Referral to Environmental Services for further assessment

Description:

The replacement 120 MVA transformer would require a transfer of approximately 39 000 L of oil.

Two auxiliary transformer replacements will also require <5000 L of oil to be transferred.

Avoidance of impacts would be appropriately managed with specific construction controls.

Specific Construction Controls:

1. An EWMS is to be prepared and implemented for the oil transfer.

2. All workers to be made aware of the presence of drainage lines, grates, drains, inlets and waterways and the need to avoid impacts.

3. Dangerous Goods (including scheduled PCBs) must be labelled and transported in accordance with the Australian Dangerous Goods Code.

4. Manage worksite to prevent oils, fuels and other chemicals entering a waterway, drain, groundwater, stormwater drain or ground.

5. No siting oil filled equipment within 40m of a sensitive area or within 5m upstream of a drain.

5. Comply with the controls in NS174C-Sections 2.3 and 3.2.

2.7 Water quality (erosion and sedimentation, discharges, extraction)
Level: Level 3 - Referral to Environmental Services for further assessment
Description:
The proposal would involve ground disturbance of >250 m2 at one time. Excavating the cable basement would involve approximately 830 m2 area with a depth of 1-2 m prior to pouring the concrete slab.

During bulk earthworks, water may accumulate in the excavated pit. Given the nature and extent of the excavation, there is a risk the volume of water requiring management which is beyond the scope of NS174C, would need to be detailed in a Dewatering Management Plan. Onsite treatment and or tankering to a licensed facility may be required.

Avoidance of impacts would be appropriately managed with specific construction controls.

Specific Construction Controls:
1. Prior to ground disturbance works, an Erosion and Sediment Control Plan (ESCP) is to be prepared by a suitably qualified person in accordance with Managing Urban Stormwater - Soils and Construction. The ESCP may form part of the contractors CEMP, refer to S2.20 for additional detail.

2. All workers to be made aware of sensitive areas (drainage lines, grates, drains, inlets, exposed surfaces, areas subject to bogging and waterways) and the need to avoid impacts.

3. Manage worksite to prevent sediment and unclean water leaving the site.

4. The contractor is to make provision for a site specific dewatering management plan prior to removing any bulk accumulated water within the excavated pit. Minor amounts of water may be managed consistent with NS174C. The dewatering management plan may form part of the contractors CEMP, refer to S2.20 for additional detail.

5. Comply with the controls in NS174C-Section 2.1 Erosion and Sediment Control and Section 2.2 Water Discharges.

Noise

2.8 Construction noise and vibration

Level: Level 3 - Referral to Environmental Services for further assessment

Description:

The proposal involves audible, high impact works. Avoidance of impacts would be effectively managed with specific construction controls.

Potential receivers include:
- Nearby commercial premises

The distance to the nearest receiver is Boral Concrete (40m east), 1C Clarendon St (Commercial) (40m west)

The proposal would impact a receiver for >3 consecutive weeks. The most continuous work would be excavating rock using a jackhammer and concrete cutter. A noise and vibration management plan would be implemented for the works.

Avoidance of impacts would be appropriately managed with specific construction controls.

Specific Construction Controls:

1. Comply with Section 4.2 of NS174C Environmental Handbook.

2. Prepare and implement a Construction Noise and Vibration Management Plan in accordance with the Interim Construction Noise Guidelines (NSW, DEEC, 2009). The CNVMP should provide provisions for noise monitoring, noise goals, along with reasonable and feasible controls (including consultation) to minimise impacts. The CNVMP may form part of the contractors CEMP, refer to S2.20 for additional detail.

3. Out of hours work must meet strict justification, notification and other requirements and not impact a receiver:
- for more than 2 nights in any 7-day period
- on Sunday after 6pm
- on a Monday before 7am
- on a public holiday
- after 12am (midnight) if undertaking high impact activities.

2.9 Operational noise and vibration

Level: Level 2 - Impacts would be avoided / minimised. Specific controls may be required.

Description:

The proposal involves replacement of a transformer and construction of a new 33kV switch and control room building. The new transformer replacement would be like for like, with the new equipment being less noisy than the old equipment, so operational noise is not expected to exceed the allowable criteria. Noise generated by the switch & control room building would be minimal.

In addition, the proposal involves removing the existing walls around each transformer. There would be construction of three transformer separation walls.

Potential receivers include:
- Nearby commercial properties

The distance to the nearest receiver is Boral Concrete (40 m east), 1C Clarendon St (Commercial) (40m west)
The distance to the nearest sensitive receiver is Little Lion Early Learning Artarmon (150 m north)

Ausgrid undertook a Preliminary Operational Noise Assessment using dB Map noise modelling. The modelling showed that removing the walls would not result in a material change to operational noise levels (refer to the attached noise screening assessment). The assessment concluded that the proposal would not exceed the allowable criteria, and operational noise and vibration are not expected to have any significant impact on surrounding receivers, which are primarily commercial. The nearest sensitive receiver (Little Lion Early Learning 150m away) would not be impacted by operational noise from the transformers. The community is unlikely to raise any concerns regarding noise.

Specific Construction Controls:

N/A

Contamination and waste

2.10 Contamination

Level: Level 2 - Impacts would be avoided / minimised. Specific controls may be required.

Description:

Known or suspected contaminated land is in the Study Area, however, avoidance of impacts would be appropriately managed with specific construction controls, AND

There would be NO:
- ground disturbance works within an area of known or indicators of contaminated land (as identified by WebGIS EL report, consultation process, site inspection and other means).
- decommissioning any substations with indicators of contaminated land or decommissioning zone substations.

Areas of known or suspected contaminated land in the area include:

- SEF356 - Possible Organochlorine Pesticides (OCPs)

This includes in service / decommissioned 132kV fluid filled cables. Bedding sands around 132kV fluid filled cables may contain Scheduled Pesticides (Organochlorine Pesticides).

The report found that PCBs detected in samples taken met the definition of non-scheduled PCB material. However, the report did note that there exists a potential for PCB contamination within the broader substation, beyond the samples that had been taken. It is therefore recommended that potential PCBs be managed under a CEMP. Douglas Partners considered the site suitable for the proposed development, given specific construction controls are implemented.

Specific Construction Controls:

1. Implement specific construction controls as advised by Douglas Partners in the PSI:
- Prior to any ground disturbance works, engage a suitably qualified consultant to develop and implement a contamination management plan (CMP) to manage potential exposure of identified PCBs to site personnel during excavation and construction. The CMP may form part of a construction environmental management plan (CEMP) or be prepared as a standalone document. The CMP should outline the methodology for excavation, segregation and management of excavated contaminated fill.
- The CMP is to include an assessment of impacts of PCB to groundwater and the risk of offsite migration.
- Develop and implement an unexpected finds protocol (UFP) for management of any potentially unexpected contamination (e.g. asbestos) during excavation.
- Prepare a formal waste classification report to inform the off-site disposal of excavated soils.
- Dispose of excavated soils under the formal waste classification assigned.

For work that will disturb the ground surface:
- Work in accordance with NS156 Working Near or Around Underground Cables
- Comply with NS174C 5.1 Contamination

2. All workers to monitor for indicators of contaminated land:
- unusual odours (eg fuels, solvents, rotten egg gas)
- oil staining or oil sheen in groundwater
- underground storage tanks (UST)
- buried waste (eg asbestos in soil, construction waste, containers)

- imported fill (eg ash, coke, slag, coal tar, asbestos)
- unusually coloured material (eg green clay)

3. If suspected contaminated land is encountered stop works and contact your supervisor and Environmental Services on 9394 6659.

2.11 Acid sulphate soils

Level: Level 1 - No potential impacts identified

Description:

The proposal is situated on land classified as Class 5 Acid Sulfate Soils (ASS). ASS are unlikely to be encountered as a result of the proposal.

Avoidance of impacts would be appropriately managed with specific construction controls.

Specific Construction Controls:

NS174C Environmental Handbook applies

Clause 6.1 of Willoughby Council's LEP 2012 is to be followed. For Class 5 Acid Sulphate Soils, further approval/assessment is required where there are:

- Works within 500 metres of adjacent Class 1, 2, 3 or 4 land that is below 5 metres Australian Height Datum and by which the watertable is likely to be lowered below 1 metre Australian Height Datum on adjacent Class 1, 2, 3 or 4 land.

2.12 Waste

Level: Level 2 - Impacts would be avoided / minimised. Specific controls may be required.

Description:

The proposal would generate hazardous, restricted solid, liquid, special (eg asbestos), PCB waste, or OCPs, however, avoidance of impacts would be appropriately managed with specific construction controls.

Wastes include:

- waste oils, liquids and fuels from maintenance of construction plant and equipment
- wastes from site compounds (including sewage waste, putrescible waste etc.)
- conduit off-cuts/ out of service 132 kV cables
- ripple filter equipment
- other general construction waste.

Specific Construction Controls:

1. Manage all wastes in accordance with NS174C-Section 5.3.

2. Manage PCBs in accordance with NS174C-Section 3.2.

3. Manage spoil from 132 and33 kV cable trenches in accordance with NS156 Working near or around underground cables.

Hazards

2.13 Hazardous materials

Level: Level 2 - Impacts would be avoided / minimised. Specific controls may be required.

Description:

Hazardous materials are in the Study Area, however, avoidance of impacts would be appropriately managed with specific construction controls:

- Hazards - PCBs >2-<50 ppm
- Hazards - PCBs <2ppm

Douglas Partners was engaged by Ausgrid to undertake a Preliminary Site (Contamination) Investigation (PSI) (report attached to this SER). The report found no asbestos detected by laboratory analysis or observed during the investigation. Ausgrid has advised that previous asbestos containing materials were identified within the vicinity of the previous 33kV building. Therefore, asbestos should be managed as an expected find during excavation.

The report found that PCBs detected in samples taken met the definition of non-scheduled PCB material. However, the report did note that there exists a potential for PCB contamination within the broader substation, beyond the samples that had been taken. It is therefore recommended that potential PCBs be managed under a CEMP. Douglas Partners considered the site suitable for the proposed development, given specific construction controls are implemented.

Specific Construction Controls:

CAUTION: HAZARDOUS MATERIALS

1. All workers to be made aware of the presence of known and suspected hazardous materials.

2. All works with the potential to disturb asbestos containing materials must be undertaken in accordance with WHS requirements, SafeWorkNSW Code of Practice – How to Safely Remove Asbestos, the specific work instructions detailed in NS211 Working with asbestos products and Ausgrid's Asbestos training.

3. Implement specific construction controls as advised by Douglas Partners in the PSI:
- Develop and implement a contamination management plan (CMP) to manage potential exposure of identified PCB to site personnel during excavation and construction. The CMP may form part of a construction environmental management plan (CEMP) or be prepared as a standalone document. The CMP should outline methodology for excavation, segregation and management of excavated contaminated fill.
- Develop and implement an unexpected finds protocol (UFP) for management of any potentially unexpected contamination (e.g. asbestos) during excavation. The UFP may form part of the contractors CEMP, refer to S2.20 for additional detail.
- Prepare a formal waste classification report to inform the off-site disposal of excavated soils.
- Dispose of excavated soils under the formal waste classification assigned.

2.14 Electromagnetic Energy

Level: Level 2 - Impacts would be avoided / minimised. Specific controls may be required.

Description:

The proposal would result in changes to EMF levels, however, EMF levels are within the ICNIRP 2010 Public Reference Levels and there are no further measures to reduce exposure consistent with prudent avoidance (ie very low cost and without unduly compromising other issues).

The community is unlikely to raise concerns.

Specific Construction Controls:

1. Refer all EMF enquiries to Environmental Services on 9394 6659.

2.15 Climate change

Level: Level 1 - No potential impacts identified

Description:

The proposal would NOT involve works within flood planning areas, coastal vulnerability areas or below projected sea level rise (1m above mean high-water mark) (as identified by WebGIS EL report, consultation process, site inspection and other means).

Specific Construction Controls:

NS174C Environmental Handbook applies

2.16 Fire hazard

Level: Level 1 - No potential impacts identified

Description:

The proposal is NOT within bushfire prone land (as identified by WebGIS EL report, consultation process and other means).

Specific Construction Controls:

NS174C Environmental Handbook applies

Community

2.17 Traffic and access

Level: Level 2 - Impacts would be avoided / minimised. Specific controls may be required.

Description:

The proposal would involve traffic and access impacts, however, impacts would be appropriately managed with specific construction controls.

Extent and nature of the impacts include:

- pedestrians on public footpaths
- vehicles on Clarendon St, Campbell St and Carlotta St

The proposal would NOT involve any of the following:

- works on a public road which are non-compliant with the relevant RMS approval and road occupancy licence (ROL) requirements.
- works non-compliant with notification requirements for affected residences and businesses.
- permanent access restrictions for people with disabilities.

Specific Construction Controls:

1. Where required, approvals and ROLs must be in place prior to works commencing. Comply with associated conditions.

2.18 Visual and aesthetics

Level: Level 2 - Impacts would be avoided / minimised. Specific controls may be required.

Description:

The proposal could result in some visual impacts, however, the type, bulk, scale and size of the proposal is considered appropriate for the location.

Extent and nature of the impacts include:

- New switchroom - see '3868 Willoughby - Trees' design
- Removal of 29 trees within Ausgrid property

There will NOT be material visual modifications to:

- significant viewsheds or scenic corridors (eg ridgelines, coastal vistas)
- heritage buildings or Aboriginal cultural areas
- tourist areas, lookouts

All reasonable measures to reduce visual impacts have been considered. See attached '3868 Willoughby - Trees' for a visual image of how the new switchroom will look. No street trees will be removed which will aid in limiting the visual impact. The area is primarily commercial and industrial and property owners are unlikely to raise concerns.

A Consultation Summary Report was prepared for the works and is attached to this SER (see Willoughby STS consultation report). It includes the project scope, Council and community consultation undertaken.

Specific Construction Controls:

- NS174C Environmental Handbook applies.
- Consultation with neighbouring properties, including consideration of any feedback provided
- Retain street trees as screening along Campbell Street
- Consider incorporating environmental/eco-aesthetic design into the project e.g. considered paint colours, leaf pattern facade on louvres

2.19 Social and economic

Level: Level 2 - Impacts would be avoided / minimised. Specific controls may be required.

Description:

During construction, potential impacts include increased noise and construction traffic, resulting in temporary disruptions to amenity for residents and local businesses. Any impacts are short term and likely to be minor and are expected to be effectively managed with the implementation of environmental and traffic management measures and consultation and communication with local communities.

Once operational, the proposal would benefit communities, businesses and industry by increasing the reliability of electricity.

The proposal would NOT directly impact on existing community services, social infrastructure community investment, social cohesion or resilience.

Further assessment of impacts associated with matters such as ecology, EMF, noise heritage, traffic, visual are assessed above in this SER and can be effectively managed with their associated controls.

Specific Construction Controls:

NS174C Environmental Handbook applies

Other

2.20 Other issues

Level: Level 3 - Referral to Environmental Services for further assessment

Description:

There are no other environmental issues that have impacts associated with the proposal (as identified by WebGIS EL report, consultation process, site inspection and other means).

This SER provides a review of all potential impacts and the controls necessary to ensure no more than minimal impact on the environment. The controls in this SER are legally enforceable and must be complied with.

It is important these controls are complied with and detailed in a procedural and technical manner sufficient for the purposes of facilitating construction and to meet the objective of minimal impact on the environment.

Specific Construction Controls:

1. Prepare and comply with a site-specific Construction Environmental Management Plan (CEMP) to reflect the controls in this SER. The CEMP is to meet the requirements of the NSW Department of Planning, Industry and Environment's (formerly DIPNIR) Guideline for the Preparation of Environmental Management Plans (2004) and the specific construction controls outlined in this assessment.

2. The CEMP is to bring together all requirements of this SER, specialist management plans, detailed method and outline Specific, Measurable, achievable, realistic and timely (SMART) controls which can be audited.

3. The CEMP must establish an Environmental Management Representative (EMR) and include a monitoring and inspection schedule of key environmental issues. The contractor is to provide the details of the EMR to Ausgrid prior to construction. 4. The CEMP is to be considered a live document and updated regularly to reflect key changes/ findings/ outcomes during construction. 5. The CEMP is to adapt to and suitably consider any submission or further regulatory consultation received on the project during the construction period. 6. Ausgrid are to be provided with the latest version of the CEMP as material changes are made during the construction period.

Cumulative

2.21 Cumulative impact

Level: Level 1 - No potential impacts identified

Description:

There are no other projects/proposals that have impacts that could interact with this project (as identified by the consultation process, site inspection and other means).

Specific Construction Controls:

NS174C Environmental Handbook applies

Attachments

All attachments relating to this Summary Environmental Report (SER) can be found at this location:
https://services.ausgrid.com.au/ser/ser-attachments/?id=905e9014-4c94-f011-aa44-002248181e33

Note: If you don't have your own account, you can access the images with the following generic logon:
Username: *ser@ausgrid.com.au*
Password: *Ausgrid1*

Assessor Decision

Agree

Agree ☑

I certify to the best of my knowledge and belief that:

- I have completed this SER in accordance with EGN 174B SER Guidance Notes and NS174B Environmental Assessment Guidelines.
- The information contained in this SER is neither false nor misleading and I have been appropriately trained to consider and assess the impacts of the Activity.
- The Activity's impacts are minor and neither extensive nor complex and can proceed subject to compliance with specific controls in this SER and minimum construction controls in NS174C Environmental Handbook for Construction and Maintenance.
- The scope of works for the Activity includes all construction, maintenance, operation and ancillary activities and accurately reflects the attached design plan for the Activity.
- I have completed a site inspection.

Assessor name	Lyn Nguyen
Assessor ID no	65772
Assessor Company	Ausgrid
Assessor Contact No.	0497398935
Assessor Email	lyn.nguyen@ausgrid.com.au

Verifier Decision

Agree

- As an authorised person, I have approved this SER, on behalf of Ausgrid, in accordance with NS174B Environmental Assessment Guidelines and EF 17450 - SER Verification Checklist.
- In considering this SER and other matters, the Activity has impacts that are minor and neither extensive nor complex and can proceed subject to compliance with specific controls in this SER and minimum construction controls in NS174C Environmental Handbook for Construction and Maintenance.
- The scope of works for the Activity accurately reflects the attached design.

Verifier name	James Hart
Verifier job title	Manager-Environmental Services
Verifier Contact Details.	JHart@ausgrid.com.au 0293946659