

Determination

Kingsford to Randwick Cable Project



Proposal details			
NIG	13188	WBS	SJ-00232 & SJ-00293
REF date	19 th October 2018	REF version number	326
Proponent name	Ausgrid Operator Partnership (ABN 78 508 211 731), trading as Ausgrid	Proponent address	570 George Street, Sydney NSW 2000
Activity class	4	HPRM reference	2017/12108/2

The *Review of Environmental Factors (REF) - Kingsford to Randwick Cable Project 19th October 2018- Version 1.0* has been reviewed and considered against the requirements of sections 111 and 112 of the *Environmental Planning and Assessment Act 1979 (EP&A Act)*.

In considering the proposal, this determination has examined and taken into account to the fullest extent possible, all matters affecting or likely to affect the environment by reason of that activity as addressed in the REF and by associated investigations and studies including the following:

- Consultation Summary Report Kingsford to Randwick Cable Project
- Geotechnical Investigation
- Electric and Magnetic Fields Assessment
- Aborist Assessment

This determination is made following a consideration of the factors in section 111 of the EP&A Act, clause 228 of the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation) and the *NSW Code of Practice for Authorised Network Operators (DP&E, 2015)*.

Among other factors, the REF has considered potential impacts of the activity on critical habitat and threatened species, populations and ecological communities and their habitats for both terrestrial and aquatic species. The REF has also assessed the need for referral to the Commonwealth Minister for the Environment under the *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)*.

As an authorised person on behalf of Ausgrid, who did not prepare the REF, I discharge the duty as a determining authority under section 111 of the EP&A Act and conclude that the proposal:

- is not an activity prescribed by the EP&A Regulation as requiring an environmental impact statement (EIS)
- is not likely to significantly affect the environment (including critical habitat) or threatened species, populations or ecological communities, or their habitats, and therefore an EIS is not required
- is not to be carried out on land that is, or is a part of critical habitat, or is not likely to significantly affect threatened species, populations or ecological communities, or their habitats, and therefore a species impact statement (SIS) is not required
- is not likely to have a significant impact on matters of national environmental significance, or on the environment on Commonwealth land, and therefore referral to the Minister under the EPBC Act is not required.

Therefore the proposal to construct, operate and maintain a 132kV underground cable from Kingsford zone substation to Clovelly zone substation, as described in the REF, is approved on behalf of Ausgrid and may proceed without further assessment subject to compliance with and including the implementation of the following conditions of approval required to prevent, minimise, and/or offset adverse environmental impacts including economic and social impacts:

- Mitigation measures in *REF Kingsford to Randwick Cable Project* 19th October 2018- Version 1.0
- All relevant statutory requirements, including approvals, licences, notifications, permits and authorisations.

Any aspects of the proposal which do not comply with the specified mitigation measures are in breach of this determination.



Jason Wall

Manager – Project Development

26/10/18.

October 2018

Attachment 1 Mitigation measures in REF Kingsford to Randwick Cable Project 19th Oct V1.0

Impact	No.	Mitigation measures	Construction	Operation
			✓	✓
Land use	5.1.1	Consult with affected stakeholders about the proposal.	✓	
	5.1.2	Provide information via a free call 1800 number, email address and Ausgrid's website for people wanting more information.	✓	
	5.1.3	XXX	✓	✓
Climate Change	5.2.1	Comply with section 8 of NS174C Environmental Handbook.	✓	
	5.2.2	Report information on energy production, energy consumption and the amount of greenhouse gas emissions to the Clean Energy Regulator for the facilities on an annual basis by 31 October the following year.		✓
	5.2.3	Recycled materials considered and used where cost effective and no impact on engineering properties.	✓	
	5.2.4	All plant and equipment would be turned off when not in use.	✓	✓
Electric and magnetic fields	5.3.1	Implement no cost and very low cost measures to reduce magnetic field exposure, including where relevant: <ul style="list-style-type: none"> • using a compact phase configuration (e.g. trefoil) • using optimum phase arrangement for dual circuits • allowing for spare conduits to be arranged in the optimal phase arrangement, namely inverted trefoil 	✓	
	5.3.2	Within the carriageway locate cables to minimise exposure as far as reasonably practicable (with potential increased temporary construction impacts).	✓	
Noise and vibration	5.4.1	Comply with sections 4.2 of NS174C Environmental Handbook.	✓	
	5.4.2	All workers to be made aware of the presence of sensitive receivers in the area and the need to avoid impacts.	✓	
	5.4.3	Provide at least four clear business days' notice (but not more than 14 days) to affected receivers prior to starting work unless it is emergency works or it is discussed with the affected receivers face-to-face. Include the following information in notification letters: <ul style="list-style-type: none"> • a description of the works and why they are being undertaken • details of the works that will be noisy • work hours and expected duration • what is being done to minimise the impacts (eg respite periods) 24 hour contact number.	✓	
	5.4.4	Consult with affected sensitive receivers (eg schools, restaurants, hospitals, childcare, etc)	✓	
	5.4.5	Schedule works outside worship times and during school holidays when in proximity to educational facilities.	✓	

Impact	No.	Mitigation measures	Construction	Operation
	5.4.6	No high impact activities after 11 pm. (High impact activities include saw cutting, vibratory rolling, grinding, rock cutting, rock breaking, jack hammering, underboring/ directional drilling and impact piling).	✓	
	5.4.7	Plan the site layout to minimise movements that would activate audible reversing and movement alarms.	✓	
	5.4.8	Provide respite periods for affected receivers: <ul style="list-style-type: none"> • one hour respite after every three consecutive hours of high impact activities • one day respite after every three consecutive days of high impact activities. (High impact activities include saw cutting, vibratory rolling, grinding, rock cutting, rock breaking, jack hammering, underboring/ directional drilling and impact piling)	✓	
	5.4.9	Do not affect a receiver for more than two nights in a one week period.	✓	
	5.4.10	Due to unavoidable work requirements or due to a regulatory licence requirement (eg RMS) out of hours and/or night works may be required.	✓	
	5.4.11	Where the ROL stipulates out of hours work the works must meet the requirements of NS174C Environmental Handbook, out of hours work criteria or a site specific noise management plan.	✓	
	5.4.12	No work is permitted on Sunday night/ Monday morning unless fully justified as necessary due to unavoidable and exceptional circumstances.	✓	
	5.4.13	Develop a Construction Noise and Vibration Management Plan (CNVMP) as part of the CEMP. The noise component must include but is not limited to underbores, joint bay works and out of hours works. The vibration component must include but is not limited to works within five metres of structures. Prior to any out of hours works commencing a site specific out of hours works procedure must be prepared and endorsed by Ausgrid's Environmental Services Unit and Community Relations Section. <ul style="list-style-type: none"> • The CNVMP would take in to consideration the ICNG, OEH Assessing Vibration a Technical Guideline and Ausgrid's EG420 Construction Noise. 	✓	
	5.4.14	Works would be undertaken between 7am and 6pm Monday to Friday and 8am and 1pm on Saturday. Between 7am and 8am on Saturdays, works that are inaudible to the nearest residential premises are allowed. Audible works may be undertaken outside of these hours if: <ul style="list-style-type: none"> • the works are emergency works AND the affected residents have been notified as far as reasonably practicable; OR • the works fall into one of the following categories AND the affected residents are provided with a notification letter at least four clear business days prior to the works: <ul style="list-style-type: none"> • the delivery of oversized plant or structures that require special approval • maintenance and repair of essential public infrastructure that is unable to occur during standard hours public infrastructure works that shorten the length of the work and are supported by the affected community (this would require community consultation). 	✓	

Impact	No.	Mitigation measures	Construction	Operation
			✓	✓
	5.4.15	For out of hours work, consider notifying local council.	✓	
	5.4.16	Provide information via a free call 1800 number, email address and Ausgrid's website for people wanting more information.	✓	
	5.4.17	Provide signage outside the worksite detailing who is undertaking the works and a 24 hour contact number.	✓	
	5.4.18	Have a documented complaints process, including an escalation procedure so that if a complainant is not satisfied there is a clear path to follow	✓	
	5.4.19	Keep a register of any complaints, including details of the complaint such as date, time, person receiving complaint, complainant's contact number, person referred to, description of the complaint, time of verbal response and timeframe for written response where appropriate.	✓	
	5.4.20	Undertake condition reports of structures within five metres of vibration generating works.	✓	
	5.4.21	Refer operational noise enquires to Ausgrid Environmental Services.		✓
	5.4.22	Reinstate joint bays as soon as practicable so as to minimise the time that road plates are left in place.	✓	
	5.4.23	Once installed pits lids must not rock and make noise. Impact absorbing material must be installed between pit lids to prevent noise nuisance as a result of joint pits.	✓	
	5.4.24	Consider recessing road plates flush with the road surface when not in use for more than 2 nights.	✓	
	5.4.25	Comply with the attached Construction Noise and Vibration Management Plan.	✓	
	5.4.26	Pre-cast joint bays are to be utilised to reduced timing of construction. If joint bay construction is take more than three weeks a quantitative noise assessment in accordance with the ICNG will be required at each location.	✓	
	5.4.27	Mains supply should be used at joint bays were practicable. Where mains supply is not reasonable, low noise generators are to be used at joint bays and accompanied with noise barriers surrounding the generator, which are; <ul style="list-style-type: none"> • Positioned close to the noise source • Continuous with no gaps • Break the line of sight between the source and receiver • Constructed of material sufficient to dampen or reduce noise from the source. 	✓	
	5.4.28	Construction works should adopt Best Management Practice (BMP) and Best Available Technology Economically Achievable (BATEA) practices as addressed in the ICNG. BMP includes factors discussed within this report and encouragement of a project objective to reduce noise emissions. BATEA practices involve incorporating the most advanced and affordable technology to minimise noise emissions.	✓	

Impact	No.	Mitigation measures	Construction	Operation
			✓	✓
	5.4.29	A noise screen of minimum height of 3 metres is to be located within 2 metres on all facades of all construction plant and equipment required for the underbore. To provide a transmission loss of at least 10 dB(A) a noise screen of typical 10 kg/m ² superficial weight and 12 mm thickness is recommended.	✓	
	5.4.30	Orienting equipment away from noise sensitive areas.	✓	
Air quality	5.5.1	Comply with sections 2.1 Erosion and sediment control and 4.1 Air of NS174C Environmental Handbook	✓	
	5.5.2	All workers to be made aware of the presence of sensitive receivers in the area and the need to avoid impacts.	✓	
	5.5.3	Use water sprays to dampen (but not saturate) disturbed surfaces and stockpiles, at material transfer points and during construction and demolition.	✓	
	5.5.4	Visually monitor dust levels during works. If dust is leaving site, causing a safety issue or complaints are received suspend works and consider mitigation options and/or substitute with an alternate process.	✓	
	5.5.5	Restrict traffic movement and vehicle speeds over disturbed areas and unsealed roads.	✓	
	5.5.6	Use dust collection devices (such as vacuum) on construction and rock breaking equipment where available.	✓	
	5.5.7	No stockpiling on this site. All spoil to be tipped into a truck or skip bin.	✓	
	5.5.8	Position vehicles and equipment where the fumes will least affect receivers, where practicable.	✓	✓
	5.5.9	Do not leave vehicles or equipment idling when they are not needed.	✓	✓
Hydrology	5.6.1	Comply with sections 2.1 Erosion and sediment control, 2.3 Oil fuel and chemicals and 2.2 Water discharge of NS174C Environmental Handbook.	✓	
	5.6.2	All workers to be made aware of the presence of sensitive areas and the need to avoid impacts.	✓	
	5.6.3	Prior to construction, prepare and implement an ESCP/SWMP as part of the CEMP in accordance with the Blue Book. The ESCP/SWMP must be prepared by a suitably qualified person (i.e. who has completed an International Erosion Control Association (IECA) endorsed course or passed the examination for Certified Professional in Erosion and Sediment Control (CPESC)) in accordance with <i>Managing Urban Stormwater – Soils and Construction</i> . The ESCP/SWMP must address storage of spoil.	✓	
	5.6.4	Maintain sediment controls, especially during periods of rainfall.	✓	
	5.6.5	Remove temporary erosion and sediment controls as the site is stabilised or rehabilitation is complete	✓	
	5.6.6	No stockpiling on this site. All spoil to be tipped into a truck or skip bin	✓	
	5.6.7	Stabilise disturbed areas promptly, this may include progressive rehabilitation	✓	✓

Impact	No.	Mitigation measures	Construction	Operation
			✓	✓
	5.6.8	For maintenance, work in accordance with Erosion and sediment control on unsealed roads (OEH, 2012) and Managing Urban Stormwater Volume 2C Unsealed Roads.	✓	✓
	5.6.9	Contain slurry using a wet-vac.	✓	
	5.6.10	Organise a licensed taker to remove the water if the relevant discharge criteria cannot be met.	✓	✓
	5.6.11	If dewatering of groundwater is required during construction, works would cease and additional testing would be undertaken to develop a Water Quality Management Plan.	✓	
	5.6.12	If dewatering of groundwater is required during construction, obtain a licence under the <i>Water Act 1912</i> or <i>Water Management Act 2000</i> from NSW Office of Water.	✓	
	5.6.13	Store oil in a bund unless it is temporary storage.	✓	✓
	5.6.14	Ensure a spill kit is readily available and workers and know how to use it.	✓	✓
	5.6.15	Decommissioning of fluid filled cables and fluid tanks will be conducted in accordance with Fluid Filled Cable Decommissioning Plan. Ongoing management of decommissioned cables in accordance with Ausgrid Procedures.	✓	✓
Geology and soil	5.7.1	Comply with section 2.1 Erosion and sediment control of NS174C Environmental Handbook.	✓	
	5.7.2	All workers to be made aware of the presence of sensitive areas (such as steep gradients in proximity to drains and gutters) and the need to avoid impacts associated with sediment control.	✓	
Contamination	5.8.1	Comply with section 5.1 Contamination of NS174C Environmental Handbook.	✓	
	5.8.2	All workers to be made aware of the presence of sensitive areas and the need to avoid impacts.	✓	
	5.8.3	Toolbox talk is to include a discussion of the potential contamination when excavating adjacent to potential causes of contamination.	✓	
	5.8.4	Segregate suspected contaminated spoil from clean spoil to reduce disposal costs.	✓	
	5.8.5	Undertake testing to determine the waste classification and subsequent storage, transport, tracking, licensing and disposal requirements.	✓	
	5.8.6	Provide a secure and bunded area for the storage of fuel, oil or chemicals. This area would be imperviously bunded with a capacity to contain not less than 110% of the volume of the largest container.	✓	✓
	5.8.7	Temporarily store excavated known or suspected contaminated spoil in a covered, lined/ sealed skip or bulk storage bag or sealed container on-site for classification prior to disposal off site. Where there are site restrictions for on-site storage, store offsite. If storing more than 5 tonnes of spoil, use a licensed storage facility. There may also be a requirement for having a licence to transport the spoil (there are exemptions for Ausgrid staff).	✓	

Impact	No.	Mitigation measures	Construction	Operation
	5.8.8	If you think that you have found contamination, you must stop work immediately, restrict access and notify: <ul style="list-style-type: none"> • your supervisor • Ausgrid's Environmental Services • your local safety advisor for WHS requirements. 	✓	
	5.8.9	Soil excavated from Ausgrid's 132kV fluid filled cable trenches must be contained in a plastic lined and covered secure bin to prevent water ingress or dust escape.	✓	✓
	5.8.10	Any person handling the waste is trained in handling Scheduled Chemicals and methods of containing Scheduled Chemical spills, and wears Personal Protective Equipment (PPE).		
	5.8.11	All packages / storage containers are clearly labelled and maintained in good order.		
	5.8.12	Where more than 50kg but less than 1 tonne is stored, ensure that: There is a clearly defined storage area with conspicuous warning notices identifying the area. The storage area is constructed to prevent discharge in the external environment. For soil this can be satisfied by storing in a lined and covered bin.		
	5.8.13	Engage an AS1 licensed contractor to manage asbestos impacted fill in accordance with Work Cover NSW (2008).	✓	
	5.8.14	Provide a secure, lockable and floored area for the storage of fuel, oil or chemicals. This area would be imperviously bunded with a capacity to contain not less than 110% of the volume of the largest container.	✓	✓
	5.8.15	Prior to construction, nominate and sign post a plant refueling area.	✓	
	5.8.16	Comply with NS 156 when working near or around underground cables.	✓	✓
	5.8.17	Stockpile soils from above the slab of existing 132kV cable trenches in a plastic lined and covered secure bin.	✓	✓
	5.8.18	Manage soil from below the slab of existing 132kV cable trenches in the following manner: <ul style="list-style-type: none"> • keep them separate from soils from above the slab • any person handling the waste is trained in handling scheduled chemicals and methods of containing scheduled chemical spills and wear personal protective equipment (PPE) • all packages / storage containers must be clearly labelled and maintained in good order. 	✓	✓
	5.8.19	If the soil is not contaminated with cable fluid (or anything other than OCP) it can be replaced in the trench to original depths. Soil excavated from the below the protective slab must be reinstated below the protective slab.	✓	✓
	5.8.20	Where the soil contains contaminants such as cable fluid, the fill material should be disposed off-site to a suitably licensed waste facility. The waste must be classified in accordance with the NSW DECC's Waste Classification Guidelines. The sampling must include OCPs.	✓	✓

Impact	No.	Mitigation measures	Construction	Operation
			✓	✓
	5.8.21	When transporting soil where the concentration of Aldrin or Dieldrin in the soil is 5-mg/kg or greater, or the presence has not been ruled out, the following additional controls apply: The transport vehicle must carry personnel trained in containing spills of OCP contaminated spoil. Appropriate PPE, clean up material and equipment must be carried on the transport vehicle.	✓	✓
	5.8.22	If soil from below the slab of existing 132kV cable trenches is not contaminated with anything other than OCP, reinstate it below the slab.	✓	✓
	5.8.23	If soils from below the slab of existing 132kV cable trenches is contaminated with substances other than OCP: <ul style="list-style-type: none"> do not reinstate the soil in the trench and assume the soil is hazardous waste until it is classified wear appropriate PPE transport using a licensed transporter to a premises licensed to store the contaminated soil arrange for classification of the soil dispose of the soil offsite in accordance with the classification	✓	✓
	5.8.24	If asbestos is encountered in soil or old conduits or joint bays during construction, the works would cease, access restricted and the asbestos managed and disposed of in accordance with NS 211 Working with Asbestos Products and NSW EPA Waste Classification Guidelines 2014.	✓	✓
Waste	5.9.1	Comply with section 5.3 Waste management of NS174C Environmental Handbook.	✓	
	5.9.2	All workers to be made aware of the presence of sensitive areas and the need to avoid impacts.	✓	
	5.9.3	Classify wastes to determine licensing, waste tracking and disposal requirements.	✓	
	5.9.4	Segregate and label waste to improve recycling opportunities, avoid cross contamination and reduce disposal costs.	✓	
	5.9.5	Where possible, reuse or recycle or return to the supplier wastes including metal components, transformer oil, spoil and packaging.	✓	✓
	5.9.6	Reuse VENM and ENM where options are available. Ensure that: <ul style="list-style-type: none"> a valid waste classification certificate is available and the reuse meets the conditions of the planning approval for that site. 	✓	
	5.9.7	Where more than 50kg but less than 1 tonne of Scheduled Chemical Waste (SCW) is stored, ensure that: <ul style="list-style-type: none"> there is a clearly defined storage area with conspicuous warning notices the storage area is constructed to prevent discharge into the external environment. This can be satisfied by storing in a plastic lined and covered bin <ul style="list-style-type: none"> an adequate supply of PPE, clean-up material and equipment must be available in a secure external location from the storage area. 	✓	

Impact	No.	Mitigation measures	Construction	Operation
			✓	
	5.9.8	Where more than 1 tonne of SCW is stored: <ul style="list-style-type: none"> • a licence is required to store the waste. • comply with the conditions of the licence <ul style="list-style-type: none"> • perform monthly inspections for unauthorised entry or leakage and keep a log at the storage area containing details and reports of inspections. 	✓	
	5.9.9	When transporting SCW with a concentration of more than 50mg/kg, personnel accompanying the vehicle must: <ul style="list-style-type: none"> • be trained in methods of containing spilled scheduled chemicals • be provided with adequate personal protective equipment, clean up material and equipment to deal with any spill <ul style="list-style-type: none"> • notify the EPA of any spill. 	✓	
	5.9.10	A transport licence or waste tracking is not required to transport oil (liquid or hazardous waste) in Ausgrid vehicles between Ausgrid locations (eg from the substation to a depot). A licence for storage of liquid or hazardous waste of greater than 5 tonnes is required. If these licensing thresholds are breached ensure storage is on a licensed Ausgrid depot. If liquid or hazardous waste will be transported by non-Ausgrid vehicles the appropriate licences must be in place. The waste oil must be disposed of to a facility licensed to accept Liquid and, or hazardous waste. Ausgrid employees must manage the waste oil in accordance with Ausgrid's waste licence and additional requirements outlined in EG 120 Waste Guidelines.	✓	
	5.9.11	Ensure a spill kit is readily available and workers and know how to use it.	✓	
Flora and fauna	5.10.1	Comply with section 6 Ecology of NS174C Environmental Handbook.	✓	
	5.10.2	All workers to be made aware of the presence of sensitive areas and the need to avoid impacts.	✓	
	5.10.3	Prior to construction, mark and fence off areas to avoid tree protection structural root zones (SRZTP) where works are in close proximity. Works should where possible be confined to the road surface and away from the footpath so that fencing is not required.	✓	
	5.10.4	Where cables must be laid within the SRZTPZ, minimise the extent impacted and for significant encroachments, underbore HDD/ directional drill at least 600 mm beneath the ground surface, or if excavating, hand dig or use an air knife.	✓	
	5.10.5	Keep storage areas, stockpiles, vehicle parking, and access tracks clear of the TPZ. Works should where possible be confined to the road surface only.	✓	✓
	5.10.6	Comply with the Tree Safety Management Plan when undertaking vegetation pruning/ removal and maintenance works. No tree can be removed. Minor branches can only be pruned in a very minor or inconsequential manner.		✓
	5.10.7	Vegetation clearing and pruning to comply with NEG-OH21 Vegetation Safety Clearances / ISSC3 Guideline for Managing Vegetation Near Powerlines/Bushfire Risk Management Plan .		✓
	5.10.8	Where works could inadvertently harm adjacent vegetation, implement measures to protect the TPZ and the vegetation.	✓	

Impact	No.	Mitigation measures	Construction	Operation
			✓	✓
	5.10.9	Trench or excavate outside the SRZ. If trenching is within the SRZ ensure an arborist is present if roots greater than 50mm diameter would be impacted.	✓	
	5.10.10	Contact local wildlife rescue organisations for the rescue or care of native wildlife (refer to section 10 of NS174C Environmental Handbook)	✓	
	5.10.11	Keep to designated roads and access tracks. Restrict vehicle and plant movements to existing cleared areas.	✓	✓
	5.10.12	No disturbance of bush rock, tree hollows, wetlands, mangroves, nests, aquatic or other sensitive habitats.	✓	
	5.10.13	No storing equipment, parking vehicles or accessing the site through undisturbed areas.	✓	
	5.10.14	Use non invasive species for landscaping or as determined by Council.	✓	
	5.10.15	No disturbance of native vegetation other than pruned in a very minor or inconsequential manner	✓	
	5.10.16	Where the removal of native vegetation is considered necessary; stop work and justify the removal to Ausgrid. Ausgrid may consult with Council and potentially impacted residents. Ausgrid may require further impact assessment.	✓	
	5.10.17	No importing mulch from other sites.	✓	
	5.10.18	Provide an escape route for fauna if trenches or pits will be open extended periods (eg log or stick)	✓	✓
	5.10.19	Keep storage areas, stockpiles, vehicle parking, and access tracks clear of the TPZ.	✓	✓
	5.10.20	Vegetation to be retained must be identified and protected to prevent damage from workers and machinery and remain in place for the duration of construction work.	✓	
	5.10.21	A number of mitigation measures will be implemented to avoid impacts on the root systems of trees including marking out of protection zones when works are in proximity, presence of arborist whenever works are within the structural root zone and utilising horizontal directional drilling to avoid the root systems of major trees. Refer to attached Arborist report (Appendix F) for all mitigation measures.	✓	
Bush fire	5.11.1	Comply with section 6.4 Total fire bans of NS174C Environmental Handbook.	✓	
	5.11.2	All workers to be made aware of sensitive areas and the need to avoid impacts.	✓	
	5.11.3	During a total fire ban, no open fires or hot works are to be undertaken unless in accordance with an exemption granted by the NSW RFS.	✓	✓
	5.11.4	Any hot works during a total fire ban must be in accordance with an approved exemption Ausgrid employees to work in accordance with DG33. This includes grinding, welding, brazing, oxy-cutting, heat treatment or processes that generate heat or continuous streams of sparks. The Contractor or ASP must obtain their own exemption.	✓	✓

Impact	No.	Mitigation measures	Construction	Operation
			✓	✓
	5.11.5	Hot work activities to be clear of combustible matter by at least 3 metres. Keep adequate firefighting equipment immediately at hand. Avoid driving a vehicle through long grass or operating motors and equipment in proximity to vegetation.	✓	✓
	5.11.6	Undertake consultation with the local fire authority prior to commencing hot works to advise of works in bushfire prone areas and of any access restrictions to fire trails.		
	5.11.7	Schedule hot works activities during the more favourable period of the day and week.	✓	
Aboriginal heritage	5.12.1	Comply with section 7.1 Aboriginal heritage of NS174C Environmental Handbook.	✓	
	5.12.2	All workers to be made aware of sensitive areas and the need to avoid impacts.	✓	
	5.12.3	No impact on rock outcrops	✓	
Non-Aboriginal heritage	5.13.1	Comply with section 7.2 Non-Aboriginal heritage of NS174C Environmental Handbook.	✓	
	5.13.2	All workers to be made aware of sensitive areas and the need to avoid impacts.	✓	
	5.13.3	No physical alterations to heritage items	✓	
	5.13.4	No impacts to actual or potential heritage items eg sandstone gutters, sandstone walls	✓	
	5.13.5	No excavations within an archaeological area.	✓	
	5.13.6	All works to cease if potential heritage is discovered. Access should be restricted and Supervisor notified to ensure regulator is contacted. Ausgrid employees should contact Ausgrid Environmental Services on 9394 6659.	✓	
	5.13.7	Barricades or equivalent to be used to prevent damage to the heritage item and the location of the item should be highlighted to all construction personnel as part of the site induction.	✓	
	5.13.8	Undertake a dilapidation survey of the heritage listed building prior to the commencement of works.	✓	
Visual and aesthetics	5.14.1	Consult with affected stakeholders about the proposal.	✓	
	5.14.2	The cables would be installed underground within existing roadways.		
	5.14.3	Reinstate the roadways post works to a suitable condition.	✓	
Traffic and access	5.15.1	Comply with section 2. 4 Noise and vibration of NS174C Environmental Handbook.	✓	

Impact	No.	Mitigation measures	Construction	Operation
	5.15.2	Where works are proposed on a classified road, consent is required under section 138(1) of the Roads Act 1993. To apply for a section 138 consent, write to RMS for classified state roads or the relevant local council for classified regional roads to request approval, providing a description of the work and including a plan showing the extent of the works. Ausgrid employees should use the relevant templates from Appendix 1 of Ausgrid's Procedure to Seek Consent Under Section 138 of the Roads Act. An ROL must be obtained from RMS if working on a classified Road, a total road closure or within 100m of traffic lights.	✓	
	5.15.3	Prepare and implement a Traffic Management Plan in accordance with relevant requirements, including provisions for pedestrian and cycle ways.	✓	
	5.15.4	Prior to construction, prepare a TCP in accordance with the Australian Standard 1742.3	✓	
	5.15.5	<i>The TMP and /or TCP must consider the cumulative impact of construction traffic movements from other Ausgrid and non-Ausgrid works.</i>	✓	
	5.15.6	<i>All potentially affected residents and businesses are to be provided with 48 hours' notice of any access changes to properties. Where residents and businesses are directly affected by the work (eg their access will be restricted), one week's notice must be given.</i>	✓	
	5.15.7	Reinstate roads post works in consultation with council/RMS.	✓	
Social and economic	5.16.1	EMF, noise, visual and traffic mitigation measures (sections Error! Reference source not found. , Error! Reference source not found. , Error! Reference source not found. and Error! Reference source not found. would reduce potential impacts on the surrounding community.	✓	✓