

Strathfield South zone substation project Consultation Summary Report

December 2018



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1 Executive Summary

This report gives an overview of of the community and stakeholder consultation done to date for the Starthfield South zone substation project.

The report includes a summary of the feedback received about the project to date via phone calls, emails and face-to-face meetings. All feedback received has been considered by Ausgrid in developing the project.

A Review of Environmental Factors (REF) was prepared for the Strathfield South zone substation project by Downer and Ausgrid.

The REF was prepared in accordance with Part 5 of the Environmental Planning and Assessment Act (1979) (EP&A Act) and following exhibition of the REF, Ausgrid received one submission from a member of the community.

This report also supports the REF by providing a response to matters raised during the public exhibition period. Ausgrid received one submission during the exhibition period.

In the interest of privacy, personal contact details of the community member have not been presented. The submission is summarised and a response prepared by Ausgrid is presented below.

Ausgrid considers that this report adequately addresses the issues raised in the submission received.

2 Background

Ausgrid adopted the approach of early consultation with the community during the development and planning stages along the proposed substaion site.

Ausgrid has undertaken a range of activities to ensure community members are aware of the proposed activities and have an opportunity to provide feedback on the project.

Community engagement activities undertaken for this proposal include:

- Project introduction newsletter sent to the local community in October 2017 to notify them of the proposal and provide more information about the project.
- Consultation with the adjoining residents and the local community to outline the proposed works. During this process Ausgrid explained the proposal including designs and building and equipment layouts. This consultation enabled Ausgrid to achieve the most acceptable outcome for the wider community and minimise social and environmental impacts from the proposal.

- A REF prepared for the Strathfield South zone substation project by Downer and Ausgrid and on public exhibition between 7 November 2018 and 27 November 2018.
- The REF was prepared in accordance with Part 5 of the EP&A Act. Following exhibition of the REF, Ausgrid received one submission from a member of the community.

Consultation with the community and stakeholders and inviting comments and submissions during the REF exhibition period by:

- Advertising the REF exhibition period and the details of a community drop-in session in the Inner Western Courier on Wednesday 7 November 2018.
- Delivering newsletters to the local community along the proposed substation site through a letterbox drop. The newsletter contained information about the REF exhibition period, including details on the drop-in session and how to give feedback.
- Emailing information about the REF to the key stakeholders, including:
 - Ms Jodi McKay MP
 - Strathfield Council
- Ausgrid organised community information session for local residents and interested members of the wider community to meet the project team, learn more about the proposal and provide feedback to Ausgrid about the concept designs.
- A toll free 1800 information line established and an email address made available for people wanting more information on the proposal or to ask questions or to raise issues during construction.
- A dedicated project information page can be accessed via Ausgrid website.

3 Response to the submission

3.1 Submission 1

3.1.1 Concerns about the high voltage substation to be built on Dunlop Street and the implications and possible consequences to local residents health.

Ausgrid is aware of concerns in the community regarding the possibility of adverse health effects from exposure to EMF. The new Strathfield zone substation is being planned on the basis that it can and will be operated safely in the community. This is Ausgrid's first and most important consideration.

It is well accepted by scientists that no study considered in isolation will provide a meaningful answer to the question of whether or not EMF can contribute to

adverse health effects. In order to make an informed conclusion from all of the research, it is necessary to consider the science in its totality. Research on EMF and possible health effects has been conducted for over 44 years. This includes over 2,900 studies at a cost of more than \$490 million. All of the research is extensively reviewed by Australian and international inquiries and expert panels established for the purpose of trying to determine whether or not human exposure to EMF is related to adverse health effects.

Ausgrid is guided by the Australian Government agency ARPANSA (Australian Radiation Protection and Nuclear Safety Agency) in relation to health and EMF. ARPANSA (as part of the Health and Ageing Portfolio) is a Federal Government agency charged with responsibility for protecting the health and safety of people, and the environment, from EMF. ARPANSA advises that:

"The scientific evidence does not establish that exposure to the electric and magnetic fields found around the home, the office or near powerlines causes health effects."

"There is no established evidence that the exposure to magnetic fields from powerlines, substations, transformers or other electrical sources, regardless of the proximity, causes any health effects."

The World Health Organisation (WHO) advises that:

"Despite the feeling of some people that more research needs to be done, scientific knowledge in this area is now more extensive than for most chemicals. Based on a recent in-depth review of the scientific literature, the WHO concluded that current evidence does not confirm the existence of any health consequences from exposure to low level electromagnetic fields."

Ausgrid's position on EMF is consistent with that of Energy Networks Australia. It has been adopted in the light of authoritative reviews having concluded that no adverse health effects from exposure to low level EMF have been established recognising that there is some concern within the community about the issue which must be addressed. This position involves providing balanced and accurate information, operating our electrical power system prudently within relevant health guidelines and closely monitoring scientific research on the EMF health issue.

3.1.2 Concerns about exposure to ELF (extremely low frequency) and EMF (electro magnetic field) (limit 50hz in Australia) can affect the functions of the nerve systems, as agencies for research on cancer has classified prolonged exposure to ELF magnetic field as a possible carcinogenic to human. eg. childhood leukaemia etc. Ausgrid's stance on this? Request on more information and comments on the above. Concerns about health dangers.

The International Agency for Research on Cancer (IARC) classified power frequency magnetic fields in 2011 as 'possibly carcinogenic'. IARC advises that the term 'possibly' has no quantitative significance and is used simply as a descriptor. This descriptor applies where there is limited human evidence, a lack of evidence in animals and no biological explanation. There are currently 311 agents listed as 'possibly carcinogenic', including warm beverages.

No credible public health authority has found any established health risk from EMF at levels below the international guidelines developed by ICNIRP - see below for more information.

3.1.3 Concerns regarding ELF magnetic field strength if residents have prolonged exposure and if it is within the safety limit that comply with Australia/international standards

Yes. In 2010, the International Commission on Non-Ionizing Radiation Protection (ICNIRP) has issued exposure guidelines for established health effects. The public exposure limit in these guidelines is 2,000mG. ARPANSA advise that “The ICNIRP EMF guidelines are consistent with ARPANSA’s understanding of the scientific basis for the protection of people from exposure to ELF EMF”.

3.1.4 Concerns that homes near high voltage (HV) power lines need to be at least 50m. Are the residents affected and does this also apply to underground cables.

3.1.5 Concerns that homes near Substation/transformers need to be 10m – would that be the case.

Unless required for compliance with the guidelines, there is no basis (nor requirements) for specific setbacks on the basis of EMF. The Strathfield South zone substation and associated cables will operate well within the guidelines.

3.1.6 Concerns that the ELF magnetic field may cause disturbance/interference to house hold electronic appliances. Comments on this.

3.1.7 Concerns if there is any risk to residents/pets/animals during rainy/thunder storms and if ELF/EMF is within safety range during these conditions ?

The substation is designed in accordance with standards developed to prevent interference with appliances and to operate normally during rain and thunderstorms.

3.1.8 International commission on Non-Ionizing radiation Protection ICNIRP has issued guidelines for limiting exposure to time varying electric and magnetic fields. Does the proposed substation comply with this

3.1.9 Concerns about the amount of ELF magnetic field exposure to children / adults / animals entering the park since they will be walking on top of the underground cable and only meters away from the proposed Substation.

Yes. Please refer to the point above around the ICNIRP guidelines and the new substation. Based on modelling by Downer (see Appendix D of the Review of Environmental Factors (REF) available here <https://www.ausgrid.com.au/-/media/Documents/In-your-community/Construction-projects/Strathfield-South/REF/Appendix-D.pdf>) the predicted magnetic fields from the substation would be as follows:

- along the western boundary (Dean Reserve side) - typically less than 20mG. That means it would be only 1% of the general public exposure guideline level (2000mG)
- along the eastern boundary (Dunlop Street side) - typically 13.92mG or less. That is less than 0.696% of the general public exposure guideline level.
- along the northern and southern boundaries - typically less than 12.96mG and 20.64mG respectively. That is less than 1.03% of the exposure guideline level.

Ausgrid is proposing a number of prudent avoidance measures which substantially reduce the EMF around the new substation. Prudent avoidance involves reducing exposure where this can be done at modest expense and without undue inconvenience.

These measures are outlined in Appendix D (Section 3.4.1) of the REF. They include using an innovative trefoil configuration when installing new cables. This increases the rate at which the magnetic field levels drop off with increasing distance from the source. In addition, the substation site has been kept towards the centre of the property as much as possible to reduce EMFs along the front pedestrian walkway and rear parkland to as low as possible.

3.1.10 Concerns about drop in property price if Substation is to go ahead.

The impact of a powerlines and substations on property values is a function of the design, appearance, local issues, restriction of activities and the perception of buyers and sellers. Ausgrid is proposing a number of mitigation measures to reduce the visual impact. Community concerns have been considered in the design and will continue to be addressed through community consultation. Measures used include:

- compact design
- replacing existing infrastructure, where possible
- putting the powerlines underground
- exercising a policy of prudent avoidance
- providing access to information

The proposed works will increase the quality of electricity supply to the local area.

3.1.11 If the substation is still pending approval, why has work already begun on the underground cables located on dean and Dunlop street?

The REF covers the development of the proposed substation at 7-9 Dunlop Street and the 132kV connections to UG/OHs in Dean Reserve. Work has already begun as there are two separate packages of early works, which are being managed by Ausgrid, namely:

- 132kV poles in Dean Reserve, and
- 11kV works - including conduits and cables in Dean Reserve as well as Dean, Dunlop, Brooklyn Streets.

4 Next Steps

This summary report is an appendix report in the REF and will be made available to the community and key stakeholders on the project web page. Ausgrid will determine the Strathfield South zone substation project for approval based on the information available in the REF.

If the project proceeds into detailed design and construction, Ausgrid would continue to engage with the community and key stakeholders and provide:

- A dedicated community liaison officer who would work closely with construction personnel to ensure the community is informed about upcoming works and potential impacts, and to address any construction related issues as quickly as possible.
- A 24 hour community information line, project email address and web page.
- Project signage at the site of the proposed substation to ensure community members are aware of who is carrying out the work. Signage would include details of the project community information line.
- Notifications to residents and other neighbours prior to the start of work in the area to provide information about the proposed construction activities, timing, work hours and traffic and parking arrangements, as well as details of how to find out more information or raise any issues with the project team.
- Door knocking and face to face meetings as required to provide impacted residents and businesses with detailed information about construction work and potential impacts.

5 Conclusion

Ausgrid considers that this report adequately summarises the consultation done to date for the proposed Strathfield South zone substation and addresses the issues raised in the submission received.

This report will be considered alongside the REF and other relevant information and reports in the final determination for whether the project should proceed.