

Acoustic Amenity (noise)

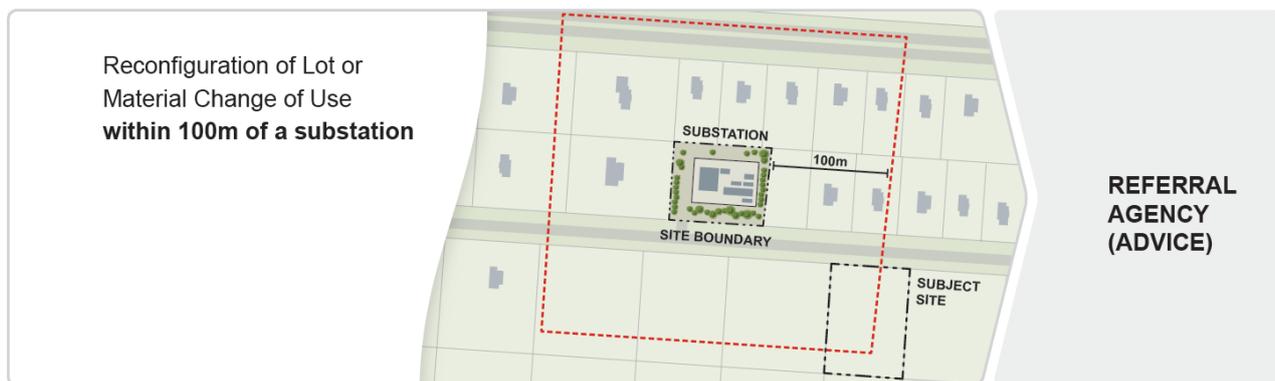
19 February 2019



Part of the Energy Queensland Group

As a Referral Agency under the [Planning Regulation 2017](#), we receive all development applications for a reconfiguration of a lot or material change of use for all or part of a lot that are within 100 metres of our substations. We must responsibly manage any issues generated by the application, including ensuring new development considers acoustic amenity requirements.

All development applicants must consider any noise generated by the substation, as standard equipment like transformers and capacitor banks can produce low-level noise emissions. This noise may cause disruptions to surrounding sensitive uses if not managed appropriately.



When we build our substations, we design them to ensure compliance with the relevant noise emission standards. Although noise legislation recognises the order in which land uses are established (and their respective acoustic levels), our sites can sometimes be at risk of requiring major retrofitting to ease the effects of substation noise on more recent land developments.

Managing noise issues

As a Referral Agency under the [Planning Regulation 2017](#), we receive all development applications for a reconfiguration of a lot or material change of use for all or part of a lot that are within 100m of our substations. This allows us to assess potential noise impacts caused by the proposed development's proximity to our substations.

There are measures that can be taken by developers to reduce potential noise impacts, for example, ensuring that a habitable room is not built too close to a substation boundary.

Managing potential noise impacts at the application stage benefits developers, end users and us by reducing the potential for noise issues for future developments located near a substation.

When is it too loud?

The *Environmental Protection Act 1994* outlines provisions to deal with noise emissions – including audibility, frequency, and vibrations of the emission itself. The Act also recognises who occupied the land first, especially between the noise emitter and the affected party. This provision helps us to protect the ongoing operation of a number of our long-standing substations, which are now located in densely populated residential areas due to urbanisation. However, the cost of fixing noise issues often falls to us as the emitter.

Our noise mitigation strategies can include:

- enclosing some substation components
- installing noise walls
- investing in significant buffering
- incorporating large setbacks
- in severe cases, rearranging the entire substation layout.

These measures can incur great financial and social costs to both a project and a community – a cost that can be completely avoided through the careful management of surrounding development at the application stage.



Noise levels before redevelopment

Noise levels after redevelopment

This substation above underwent significant and necessary redevelopment. Although the area has always been largely residential, more local construction resulted in the need for a Noise Impact Assessment. In this case, the redeveloped substation layout was able to accommodate a range of measures to reduce the substation's noise impact, however this is not always possible.

We can sometimes be restricted in our efforts to reduce noise by site-specific or technical issues. For example, enclosing equipment can greatly reduce its operational lifetime, so we will need to replace expensive assets more often than expected.

Certain substation components also need specific clearances and configurations to operate efficiently, and so changes are not always possible. Setback and/or adequate buffering arrangements aren't always possible either. This is why we strongly encourage proactive planning by developers to ensure we minimise the need for reactive costs.

Contact us

For more information about our Referral Agency, please visit our website or contact us at:

- www.energex.com.au/referralagency
- 13 12 53 (8am to 5:30pm, Monday to Friday)
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And, for more information about working safely near powerlines, please see our [working safely near powerlines information](#).

