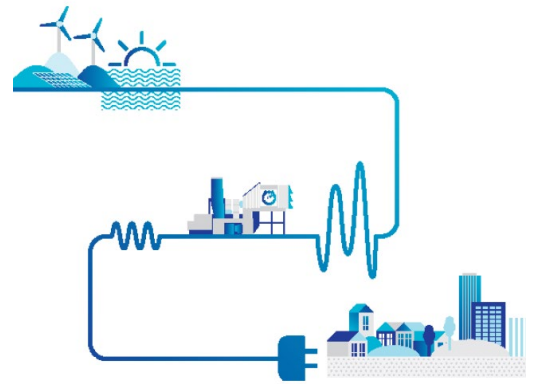


# Newcastle Power Station Project

## Environmental Impact Statement

AGL has undertaken a comprehensive assessment of the potential impacts of the Newcastle Power Station Project. A brief summary of some of the environmental assessments and mitigation strategies to manage any noise concerns for the Project are summarised below:



### Noise and Vibration

AGL has taken steps to ensure the noise impacts associated with building and operating the Project are minimised, and acoustic attenuation systems will be installed to ensure compliance with all construction and operation noise related conditions.

The proposed site for the Newcastle Power Station is within an industrial area.

The closest residence is located 400m away. Construction noise levels at this point are expected to be below the relevant construction noise criteria and no more than existing traffic noise levels.

AGL also conducted a sleep disturbance assessment, as some construction works, and operations may need to be undertaken at night. This showed that construction noise levels are below the sleep disturbance criteria and unlikely to disturb the sleep of residential receivers.

The Power Station Project is a 'peaker', which means that it will not work all the time every day. However, for modelling purposes, AGL has made noise calculations with a worst-case scenario of continual operation over a 12-month period in conjunction with unfavourable meteorological conditions.

This worst-case scenario showed that, without any sound attenuation, the project would exceed noise trigger levels at residential receivers.

When attenuation is applied to the same worst-case scenario, the predicted noise levels comply with the criteria at all surrounding residential and non-residential receivers. In addition, it is expected that the project will only operate intermittently during peak electricity demands.

Noise attenuation may include silencers, lined ducts, acoustic enclosures, noise screens/barriers, selection of quieter plant/equipment, or a combination of these.

A cumulative operational noise impact assessment was undertaken to determine the combined noise impacts of the power station and existing facilities in the industrial estate. This indicated the noise levels at most residences is below existing ambient noise levels, with a few experiencing 1 decibel increase from existing noise levels.

During operation, noise mitigation measures will be installed to ensure compliance with all noise related conditions.

No vibration impacts are anticipated.

### To know more

Contact AGL on:

Email: [AGLCommunity@agl.com.au](mailto:AGLCommunity@agl.com.au)

Phone: 1800 039 600





**Legend**

- Project Boundary (Blue outline)
- Cadastre (Lot) (Thin grey lines)
- Receivers:
  - Commercial (Pink dot)
  - Industrial (Blue dot)
  - Place of worship (Green dot)
  - Residential (Red dot)
- Noise Contours (dBA) (Color-coded lines):
  - 35 (Lightest green)
  - 40 (Light green)
  - 45 (Medium-light green)
  - 50 (Medium green)
  - 55 (Yellow-green)
  - 60 (Yellow)
  - 65 (Light orange)
  - 70 (Orange)
  - 75 (Dark orange)
  - 80 (Red-orange)
  - 85 (Red)
  - 90 (Dark red)
  - 95 (Dark red)
  - 100 (Darkest red)

Data Source:  
 Project Boundary: Client Provided (February 2019)  
 Neemap Imagery January 2019

Typical sound level in decibels	Sound source
140	Jet engine at 30 m
130	Rivet hammer (pain can be felt at this threshold)
120	Rock drill
110	Chainsaw
100	Sheet metal workshop
90	Lawn mower
85	Front-end loader
80	Kerbside heavy traffic
70	Loud conversation
60	Normal conversation
40	Quiet radio music
30	Whispering
0	Hearing threshold

\*source SafeWork Australia

**Reciprocating Engine (with Noise Control)  
 Temperature Inversion Condition**

Drawing No: 0468623a\_HA\_G010\_R3.mxd  
 Date: 10/10/2019  
 Drawn By: VN  
 Coordinate System: GDA 1994 MGA Zone 56

Newcastle Power Station  
 Reviewed By: RT  
 Client: Aurecon

0 200 400m

N

This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

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