



13 August 2009

40-1871 Tarneit pump station noise limits.doc

KBR
441 St.Kilda Road
Melbourne, Vic. 3004

Attention: Garrath James

Dear Garrath,

Barwon Water MGI pump station, Tarneit Determination of environmental noise limits

A new pumping station is proposed to be constructed beside the existing water tanks installation on Tarneit Road. A residential housing estate is proposed to be constructed along the boundary of the pump station and therefore may be affected by noise emissions.

1 Statutory Requirements

In the Melbourne metropolitan area noise from commerce, industry and trade is subject to the provisions of the Environment Protection Authority State Environment Protection Policy (Control of Noise from Commerce, Industry and Trade) No. N-1 (SEPP N-1). Under the Policy the noise limit is the maximum allowable "level of noise emitted from the commercial, industrial or trade premise", in a "noise sensitive area" as defined by the Policy. Noise limits are prescribed for residential premises for the day, evening and night periods, as defined below. The lowest limits apply to the night period.

Table 1: SEPP N-1 Definitions of daytime, evening and night-time periods

Period	Day	Time
Daytime	Monday to Friday	0700h to 1800h
	Saturday	0700h to 1300h
Evening	Monday to Friday	1800h to 2200h
	Saturday	1300h to 2200h
	Sunday and public holidays	0700h to 2200h
Night time	Monday to Sunday	2200h to 24:00h
		0000h to 0700h

Noise limits are based on the land-use zoning of the area surrounding the residence, as defined by the relevant authority, and on the measured background noise levels when background levels are especially high or low.

HEGGIES PTY LTD

ABN 29 001 584 612
Suite 6, 131 Bulleen Road
Balwyn North VIC 3104 Australia
Telephone 61 3 9249 9400 Facsimile 61 3 9249 9499
Email melbourne@heggies.com Website www.heggies.com



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SEPP N-1 requires that noise measurements be made directly outside the residence potentially affected by noise from commerce or industry. For multiple level buildings, measurements can be made outside the building on a balcony or with the microphone extended from an open window.

The measured and predicted noise from commercial, industrial or trade sites is adjusted for character, including tonality, intermittency and duration. The adjusted noise level is compared with the noise limit to determine whether or not the premises complies with SEPP N-1.

2 Noise limit determination

Since the pump station will operate 24hours per day the critical noise limit to comply with is the night time noise limit as this will be lower than the day and evening limits.

The following map **Figure 1** shows the land-use zonings for the area and the calculated zoning level. The pump station is zoned public service and utility, and is surrounded by residential zoning. The Tarneit Road is zoned RDZ2.

We have calculated the noise limit for a residence close to the pump station as they will be the most affected. For residences further away the zoning level may reduce slightly due to there being less influence of the PUZ1 zone, but they will be less affected by the pump station noise.

A background noise measurement was carried out on Tuesday 11 August 2009 between 2400h and 2430h on Tarneit Road opposite the pump station site. There was no noise audible from the existing installation. There was no significant wind at the time and the dominant noise was from distant traffic.

The measured background noise level was 36.5 dBA, L90. This is considered to be neutral according to SEPP N-1. Therefore the zoning level becomes the noise limit.

Noise limit (night) = 41 dBA

Yours faithfully,
Heggies Pty. Ltd.

Graeme R. Campbell
SENIOR CONSULTANT

www.heggies.com.au

graeme.campbell@heggies.com.au



Figure 1 Land-use zoning map

