

18 June 2015

VUW  
C/ Urban Perspectives Ltd  
PO Box 9042  
Wellington 9042

**Attention: Peter Coop**

Peter

**GORDON WILSON FLATS – DEMOLITION PLAN NOISE REVIEW**

It is proposed to demolish the Gordon Wilson Flats located at 320 The Terrace, Wellington. Marshall Day Acoustics has been engaged to review the methodology within the Demolition Management Plan (DMP) and assess noise emissions from the demolition works against the standard NZS 6803: 1999 “Acoustics - Construction Noise”

**Subject Site**

The closest structure to the subject site is the currently unoccupied McLean Flats immediately to the southeast of the building . The closest occupied buildings are 324 The Terrace to the south, 2 Maurice Terrace to the north and 300 The Terrace to the northeast. These are all residential occupancies and are located at between 10 and 25 metres from the façade of the Gordon Wilson Flats.

The structure is approximately 70 metres in length and as a result, the degree to which noise affects the surrounding buildings will vary depending on the location of works.

**Construction Works**

The proposed works are to exceed 20 weeks in duration and would be considered as long-term under NZS 6803:1999. Machinery hours are proposed to be between 7.30am and 5pm and therefore, the recommended upper limit for construction noise is  $L_{eq}$  70 dBA and  $L_{max}$  85 dBA.

It is proposed that the internal demolition (floors etc.) is carried out with the building external walls still intact and windows to remain closed, providing some mitigation to the surrounding environment.

However, much of the noisy works are to occur during demolition of the façade and structure which would involve cutters, crushers and breakers. Rubble will be loaded onto a tipper truck in the load out zone adjacent to the site gate.

**Assessment against NZS 6803:1999**

*Internal Works*

Demolition of internal elements will be by way of chainsaws, bench saws and breakers. As stated above, these activities will be carried out with the façade remaining intact and windows closed. Under these conditions, noise levels are predicted to comply with the limits as set out in NZS 6803:1999.

*External Works*

We have reviewed the equipment proposed to be used and typical associated noise levels. In the absence of any mitigation measures, the relevant noise limit would be exceeded for at least one assessment location during the crusher and breaker operations.

Section 8.0 the DMP details proposed mitigation measures, such as the use of hydraulic crusher jaws. With these measures implemented, exceedance over the NZS 6803:1999 limits are predicted to occur when works are within 30 metres of a receiver. This is particularly relevant for demolition at the northern and southern ends of the building, where equipment will be closer to receivers.

**Additional Recommendations**

Due to the type of activity there is limited additional mitigation that can be implemented (e.g. jaw crushers used on higher floors). Therefore it is paramount that community liaison is undertaken to reduce annoyance and complaints received during these high risk periods. This aspect should form part of a noise management plan for the site.

This liaison should be undertaken at the beginning of the project and should include written notification to residents to give advance warning of specific construction activities that may create a disturbance (particularly demolition operations close to houses), and provide contact details for complaints and/or queries. Further details on what should be included within the noise plan can be provided if required.

We trust this information is satisfactory. If you have any further questions please do not hesitate to contact us.

Yours faithfully

**MARSHALL DAY ACOUSTICS LTD**



**Steve Arden**

**Consultant**