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Senior Planner, City Development
Dunedin City Council
P O Box 5045
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Attention: Mr Peter Rawson

Re: Dunedin 2GP Proposed Plan – Noise & Vibration Matters – Matters Under Appeal

We set out below 2GP appeal matters you have referred to Malcolm Hunt Associates (MHA) for consideration in relation to noise and vibration matters, specifically seeking technical advice on the merits or otherwise of agreeing with the appellant's proposition.

Recommendations for dealing with each appeal item have been arrived at following consideration of the provisions of the 2GP district plan (appeals version), the decisions arrived at by the 2GP hearings committee, notices of appeal lodged with council and, where relevant, the provisions of NZ Standards and international guidelines. As agreed, we have not carried out any consultation with other parties, including the appellants.

A description of the issue, relevant factual matters and our recommendations on the three matters you requested be reviewed are attached.

Please advise if there are any matters arising.

Yours sincerely,



Malcolm Hunt
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Principal Acoustic Consultant

Harvey Norman Property Limited Appeal

The Harvey Norman appeal point 33 seeks the following relief:

Removal of the Speights Buffer mapped area from 20 MacLaggan Street and 201 Rattray Street.

The zoning of the affected sites are Central Business District (CBD), which is a type of Commercial & Mixed Use zone. The 2GP rules and policy relevant to this appeal being:

Rule: 18.5.4.5 Location of residential activities

- a. New residential activities or residential buildings must not be located within the **Speights buffer mapped area**.
- b. Activities that contravene this performance standard are restricted discretionary activities.

Policy 18.2.2.11	Only allow residential activity in the Speights buffer mapped area where the potential for reverse sensitivity will be avoided or, if avoidance is not practicable, adequately mitigated.
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The Commercial and Mixed-Use Zones (CMU) 2GP decisions document of the Hearing Panel (Section 4.1.9 - CBD Edge Commercial Zone provisions) discusses the basis of the Speights buffer mapped area. The CBD zoning was agreed to because it was seen as appropriate given the mix of office and large-scale retail activities currently occurring in the area. However, the Speights buffer mapped area was put in place in response to reverse sensitivity effects on the nearby Speights' complex which has an industrial zoning. Reverse sensitivity concerns were identified by submitters with the decisions document specifically identifying noise and odour from the Speights site as being of concern.

The Hearing Panel decision document acknowledged noise created by the industrial nature of the brewery activity including vehicles loading and unloading and the need to use Rattray Street to access various parts of the site and developed the 'Speights buffer mapped area' as a means of restricting residential development which may be sensitive to the noise and odour effects arising from activities on the Speights site.

The permitted activity noise standards for activities on the Speights site allows for noise to be received within CMU sites (Rule 9.3.6.5) at up to 60 dB LAeq (15 min) during daytime, evening and night time. MHA provided advice to Council regarding acoustic insulation in a report dated September 2014 which informed the drafting of the 2GP noise rules prior to notification¹ (Section 10.3 Acoustic Insulation Of Habitable Spaces). In summary, adverse indoor health and amenity effects due to outdoor noise were recommended to be avoided by imposing an effective acoustic insulation standard for new or altered habitable spaces on sites where district plan rules allow for residential uses receive noise from nearby land use activities to exceed LAeq 55 dB daytime or LAeq 45 dB night time.

As a result, Policy 2.2.6.1 (c) requires acoustic insulation of buildings containing noise sensitive activities in mixed use environments. Specifically, Policy 9.2.2.2 requires noise sensitive activities undertaken within buildings to have adequate acoustic insulation to avoid, as far as practicable, significant adverse effects from the higher noise environment anticipated in the CBD Zone.

The applicable insulation requirements are set out in Rule 9.3.1.1 which requires rooms to be used for noise sensitive activities to be acoustically insulated to a minimum design standard of DnT, w + Ctr > 30. In addition, Rule 9.3.1.5 requires acoustically insulated rooms to be supplied with a positive supplementary source of ventilation to enable adequate ventilation when windows are closed.

In combination, Rules 9.3.1.1 and 9.3.1.5 are considered sufficient to;

- a) Reduce noise from nearby activities received outdoors at levels of LAeq 60 to 65 dB to levels of LAeq 30 to 35 dB indoors which is a level of indoor sound consistent with accepted standards adequate to protect sleep; and;
- b) Ensure occupants are able to maintain a reasonable standard of indoor thermal comfort with windows closed such that they are not forced to choose between higher indoor noise levels when

¹ MHA Report "Dunedin City Council - Second Generation District Plan - Noise and Vibration Review" Report Number 14-12088-03/1 September 2014

windows are open for thermal comfort and other reasons and thermal discomfort when windows are closed to reduce indoor sound due to outdoor sources.

It appears the 2GP Hearing Panel were persuaded by legal advisors representing Speights that 2GP acoustic insulation standards for residential properties were inadequate to prevent the risk of reverse sensitivity effects (ref. para 253 of the CMU decisions report) as they are only effective when windows are shut.

Recommendation

- It is considered that, in fact, the combination of acoustic insulation and ventilation requirements of Rules 9.3.1.1 and 9.3.1.5 are adequate to deal with reverse sensitivity noise effects and that there is no noise effects based reasons to not allow residential uses to establish within the Speights Buffer;
- On noise grounds and for the above reasons, we recommend accepting the appellants request to remove Speights Buffer mapped area from 20 MacLaggan Street and 201 Rattray Street.
- We make no comment on the potential for odour from activities on the Speights site to cause reverse sensitivity effects, other than to note the ventilation requirements of Rule 9.3.1.5 are designed to provide a measure of thermal comfort indoors when windows are kept closed.