EVIDENCE 2
TOPIC GNLC Ltd
SUB# PC 135 - GNLC Ltd
DATE 31/05/2017

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of Private Plan Change 135 (PC135) at Marsden Primary Centre by GNLC Limited

STATEMENT OF EVIDENCE OF JON ROBERT STYLES ON BEHALF OF WHANGAREI DISTRICT COUNCIL

ACOUSTICS

31st MAY 2017

1. INTRODUCTION AND EXPERIENCE

1.1 My name is Jon Robert Styles. I have been engaged by the Whangarei District Council to advise on the noise effects associated with the proposed private plan change 135 (PC135). I have prepared this short statement of evidence to address the primary acoustic issues associated with PC135. This statement is not intended to comprise a comprehensive analysis of the noise issues but has been prepared to record agreement on the most important of the noise-related matters and to record any disagreement with the provisions of PC135.

1.2 I am an acoustic consultant and director and principal of Styles Group Acoustics and Vibration Consultants. I am the president of the Acoustical Society of New Zealand and prior to being elected I was the secretary and on the committee of the Society for 8 years. I lead a team of 6 consultants specialising in the measurement, prediction and assessment of environmental and underwater noise, building acoustics and vibration. I hold a Bachelor of Applied Science majoring in Environmental Health and I have completed the Ministry for the Environments' Making Good Decisions programme.

1.3 I have approximately 16 years' experience in the industry, the first 4 as the Auckland City Council's Environmental Health Specialist – Noise, and the latter 12 as the director and principal of Styles Group.

1.4 I have worked on a large number of projects involving the management of noise generated by transport infrastructure and industrial activities and its effects on residential and mixed use environments, including work on a large number of District Plan reviews and plan changes around New Zealand. I am familiar with the Noise and Vibration (NAV) provisions in the recently developed NAV chapter of the District Plan and I am familiar with the general area covered by PC135 and its surrounds.

2. CODE OF CONDUCT

2.1 My qualifications as an expert are set out above. I confirm that I have read the Expert Witness Code of Conduct set out in the Environment Court's Practice Note 2014. I have complied with the Code of Conduct in preparing this evidence. Except where I state that I am relying on the evidence of another person, this evidence is within my area of expertise. I have not omitted to

consider material facts known to me that might alter or detract from the opinions expressed in this evidence.

3. REVERSE SENSITIVITY EFFECTS ON TRANSPORT INFRASTRUCTURE

3.1 As PC135 was originally proposed, Noise Zone 2 contained no noise insulation requirements for any noise sensitive activity establishing close to SH15 or the rail designation. I understand that as a result of submissions, Noise Zone 2A has been created which essentially comprises a 100m wide strip adjacent to SH15 and the rail designation within which any noise sensitive activity would need to be designed and constructed to achieve a suitable internal noise level.

3.2 I support this revised proposal, although I note that a distance of 100m is a bare-minimum given the very high proportion of trucks on SH15 (now and in the future) and the high speed environment.

4. REDUCED NOISE LIMITS FOR NOISE ZONE 2

4.1 PC135 includes lower noise limits for activities within Noise Zone 2 and also for activities in Noise Zone 1 that may affect properties in Noise Zone 2. The proposed noise limits are 55dB L_{Aeq} applying during the day (0700 – 2200) and 45dB L_{Aeq} (and 70dB L_{Amax}) applying at night (2200 – 0700). These limits are designed to provide the minimum level of acoustic amenity for a residential receiver where outdoor spaces associated with dwellings are regularly used or common and where there are no requirements to insulate dwellings from noise emissions from other sites.

4.2 I agree that the proposed noise limits will provide a reasonable degree of amenity for residential land use inside Noise Zone 2, although they are at the upper end of what is normally considered reasonable.

4.3 When compared to the original noise limits for the area as prescribed in the Operative District Plan of 60dB L_{Aeq} during the day and 55dB L_{Aeq} (and 70dB L_{Amax}) at night, the proposed limits represent a considerable reduction and clearly favour the development of residential activity.

5. NOISE LIMITS FOR NOISE ZONE 1 / NOISE ZONE 2 INTERFACE

5.1 PC135 also proposes that the noise limits applying to activities in the Noise Zone 1 as they affect properties in Noise Zone 2 are reduced from 60dB L_{Aeq} during the day and 55dB L_{Aeq} (and 70dB L_{Amax}) at night to 55dB L_{Aeq} applying during the day and 45dB L_{Aeq} (and 70dB L_{Amax}) applying at night. This represents a reduction of 5dB during the day and 10dB at night compared to the Operative District Plan rules.

5.2 The noise limit between sites in the Noise Zone 1 is not proposed to be changed, and will therefore remain at 65dB L_{Aeq} at all hours and 70dB L_{Amax} at night. These noise limits are very high and permit for a wide range of industrial activities to occur without any unreasonable restriction.

5.3 According to PC135, an activity on a site zoned Noise Zone 1 sharing a boundary with another site in the Noise Zone 1 and also sharing a boundary with a site in the Noise Zone 2 would have a 20dB differential in the night time noise limit on the two boundaries. This is a significant difference and the lower limit would introduce significant operational difficulties for many industrial activities.

5.4 I agree with Mr Ibbotson that the reduction in the noise limits applying across the Noise Zone 1 / Noise Zone 2 interface will likely require a considerable level of restriction on the future activities in the Noise Zone 1. I consider that it would be unlikely for the industrial activities on this interface to be able to accommodate any appreciable level of night time activity, and day time activities are likely to be subject to strict controls in order to meet the proposed limit of 55dB L_{Aeq} in the Noise Zone 2.

5.5 In addition to the effects discussed in section 5.2 of the Marshall Day Acoustics report submitted with PC135, based on my experience I consider that the close proximity of the noise-sensitive residential activity in the Noise Zone 2 to the reasonably heavy industrial activity in the Noise Zone 1 will likely lead to tension in the future and a situation where complaints about noise are common, notwithstanding the noise limits that are proposed.

5.6 In my opinion it is quite unusual to have a reasonably heavy industrial zone immediately abutting land zoned for residential without any kind of buffer area in between. Such buffer areas can often comprise a wide road reserve, a

landscaped buffer or a strip of land zoned for light industrial or retail activity which would be able to practicably comply with the lower noise limits on the interface.

6. ROAD LAYOUT

6.1 According to the Marsden Primary Centre Precinct Plans included in the marked up version of the rules for the Marsden Primary Centre, there is no way for trucks and heavy vehicles to access the industrial activities in Noise Zone 1 without traversing through what would be residential areas under PC135.

6.2 This means that any night time traffic servicing the industrial activities in the Noise Zone 1 will need to travel through or adjacent to Noise Zone 2 generating noise levels at night that the dwellings in those areas will not be designed to be insulated from (under PC135). Although the day time truck traffic movements into the industrial area would not cause sleep disturbance issues in the Noise Zone 2, the high noise levels they generate will still likely be an issue. In my opinion this does not comprise a particularly sensible layout from an acoustic perspective, and is another factor which is likely to lead to tension between the different land uses once the area is developed.

7. CONCLUSION

7.1 Overall, I generally agree with the analysis of the noise-related issues arising from PC135 set out in the evidence and reports prepared by Mr Ibbotson for GNLC Limited.

7.2 However, I consider that the lack of an effective buffer between Noise Zone 1 and Noise Zone 2 will result in considerable and potentially significant operational constraints for activities on sites in Noise Zone 1 which are abutting or close to Noise Zone 2. I also consider that based on my experience, the very different activities in these zones and their close (abutting) proximity is likely to lead to tension in the future where complaints about noise are common.

7.3 I have also noted that the road layout for the Marsden Primary Centre appears to require all heavy traffic servicing the industrial activities to traverse through and past residential activities in Noise Zone 2 which under PC135 will not be

insulated from any outdoor noise, including road traffic noise. I do not consider that this presents a sensible layout from a noise perspective and the noise from night time truck traffic in particular would be likely to cause adverse community reaction from the occupants of dwellings not insulated from noise in Noise Zone 2.

Jon Robert Styles
31st May 2017