

**BEFORE KAPITI COAST DISTRICT COUNCIL**

**RM170060**

**IN THE MATTER**

of the Resource Management Act  
1991

**AND**

**IN THE MATTER**

Notice of Requirements [NoR] by  
KiwiRail Holdings Limited [KiwiRail]  
to alter an existing designation at the  
Paekakariki Rail Yard, Tilley Road,  
Paekakariki, Kapiti Coast District.

**STATEMENT OF EVIDENCE OF  
MALCOLM JAMES HUNT  
ENVIRONMENTAL NOISE AND VIBRATION**

11 January 2018

# STATEMENT OF EVIDENCE OF MALCOLM HUNT

## INTRODUCTION

1. My name is Malcolm James Hunt. I am the Principal of the environmental noise and acoustic consultancy firm, Malcolm Hunt Associates [MHA].
2. I hold the degrees of Bachelor of Science [BSc] from Victoria University and Master of Mechanical Engineering [ME] specialising in Acoustics from the University of Canterbury.
3. I hold other qualifications with respect to the Environmental Health Officer Qualification Regulations 1975. I also hold a Royal Society of Health Diploma specialising in Noise Control Engineering.
4. I have over 30 years direct experience in the fields of environmental noise and building acoustics both in New Zealand and overseas.
5. I am a 'Full Member' of the New Zealand Acoustics Society, with a requirement of Full Membership being that I satisfy the Society's requirements in regards to continuing professional development [CPD].
6. I have held the past position of Vice President of the New Zealand Acoustical Society and Elected Committee Member. I am also a Member of the New Zealand Institute of Environmental Health.
7. Malcolm Hunt Associates are a full member of the *Association of Australasian Acoustical Consultants*, otherwise known as AAAC. Members of the AAAC must be independently assessed by the AAAC to be competent and capable in the field of acoustics and must provide professional unbiased advice.
8. I have been a member of various national and international acoustic standards committees, and expert working groups regarding environmental acoustics, including traffic noise and noise from vehicles.
9. I have been on a number of past New Zealand Standard's committees, including the past New Zealand Standards committees reviewing NZS6808, the NZS1991, NZS1999 and

NZS2008 versions of NZS6801 and NZS6802 [covering the measurement and assessment of environmental noise].

10. In 2011 I was awarded the Standards New Zealand 'Meritorious Service Award' by Standards New Zealand recognising my involvement in the development of New Zealand Acoustic Standards.
11. I have acted as a noise expert in many Resource Consent Hearings, District Plan Hearings, hearings in the Environment Court and hearings held in the High Court of New Zealand.
12. I have appeared before several Boards of Inquiry in relation to large scale projects such as power projects and roading projects.
13. I have completed the 'Making Good Decisions' courses for Resource Management Act [RMA] Practitioners which provides me with *current* certification as an RMA Practitioner able to undertake a role as a Commissioner assisting Consent Authorities with RMA decision-making processes.
14. Through my on-going consulting work I have conducted measurements, predictions assessment as well as acoustic design work for a range of activities. This work has also included a number of depots and storage yards as well as transportation noise including railway based sources.
15. I have measured and predicted sound emissions associated with transport depots [including conducting independent reviews on behalf of Territorial Authorities] for a number of facilities including at Hutt Railway Workshops as well as for ONTrack.

## **CODE OF CONDUCT**

16. I advise that I am authorised to give this evidence on behalf of Kapiti Coast District Council. I confirm that I have read the 'Code of Conduct for Expert Witnesses' contained in the Environment Court Consolidated Practice Note.
17. I agree to comply with this Code of Conduct. In particular, unless I state otherwise, this evidence is within my sphere of expertise and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.

## SCOPE OF EVIDENCE

18. My evidence below sets out:
  - A. A summary of my involvement in this project;
  - B. A summary of the background and findings of my noise assessment works;
  - C. Commentary on the noise matters raised by the submissions received;
  - D. A discussion of the main difference between the two noise experts that arose as a result of expert conferencing;
  - E. Commentary on the noise aspects of the Kapiti Coast District Council s.42a RMA Planning Report;
  - F. Recommended designation conditions covering noise-related matters.

## INVOLVEMENT IN PROJECT

19. The Notice Of Requirement [NoR<sup>[1]</sup>] was submitted by KiwiRail to Kāpiti Coast District Council seeking to amend the existing rail designation in March 2017 to include land considered to be part of the Paekakariki Rail Yard that is located to the east of 24 to 28 Tilley Road. The NoR includes a noise assessment report prepared by Stephen Chiles of Child Ltd which forms part of the application<sup>[2]</sup>.
20. My involvement with this application dates back to April 2017 when my firm was commissioned by Kāpiti Coast District Council to review the noise aspects of the KiwiRail AEE which described potential noise and vibration effects associated with the NoR involving non-residential use of a residentially zoned sites. I visited the site in April 2017 in order to take into account the layout of the site and local area and to ascertain sensitivity of the receiving environment which includes residential properties at 24 - 32 and 46 Tilley Road.

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<sup>1</sup> Incite Notice of Requirement to Alter an Existing Designation for Kiwi Holdings Limited prepared by Tom Anderson dated 28<sup>th</sup> March 2017

<sup>2</sup> Chiles Limited Notice of Requirement to Alter an Existing Designation Noise Report prepared for Kiwi Holdings Limited prepared by S Chiles Anderson dated 21<sup>th</sup> March 2017. Ref 130407b [attached as Appendix B to the Incite Report]

21. Following my assessment, I prepared a written review [<sup>3</sup>] to Kāpiti Coast District Council to assess potential noise and vibration effects associated with the non-residential use of the residentially zoned sites. My review found while we were accepting of aspects of the assessment provided, I considered the assessment by Chiles Ltd was lacking details on the extent of works planned for the site [especially works to be conducted at night time], the types of sound likely to be emitted [and whether they may possess ‘special audible character’].
22. Following the above assessment work, I attended a Pre-Hearing Meeting held on 20<sup>th</sup> July. I have reviewed the Pre-Hearing Report prepared by Independent Facilitator Gina Sweetman dated 9<sup>th</sup> October 2017, noting the meeting left some unresolved (noise-related) issues.
23. The NoR application for designation amendment was served on six affected parties in the area on 22<sup>nd</sup> May 2017. Following the closing of the submission period on 26 June 2017 a total of three submissions were received. My evidence below sets out comments on the noise matters raised within these submissions.
24. In response to instructions from the Commissioners, I participated in expert noise conferencing with Dr Stephen Chiles, acoustics advisor to KiwiRail. There being no other acoustic experts involved, Dr Chiles and I communicated on noise matters a number of times during early December resulting in a joint statement on noise matters dated 12 December 2017. A copy of this statement is ATTACHED as **ATTACHMENT A**.
25. As discussed in my evidence below, the statement records Dr Chiles disagrees whether noise-related conditions attached to the amended designation (if granted) would be a worthy measure to control noise effects, including requiring all rail-related activities on the site to be undertaken in accordance with a Noise Management Plan prepared by KiwiRail for this purpose. While I believe these measures are reasonably necessary, Dr Childs does not.

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<sup>3</sup> Malcolm Hunt Associates Review of NoR Application To Amend Designation Paekakariki dated 10th May 2017, MJHA Project Reference KCDC Paekak\_NoR\_V2

26. I have reviewed the Section 42A Officer Report by Phillip Hindrup on behalf of Kapiti Coast District Council and briefly comment on this report within my evidence below. I agree with the finding of Mr Hindrup that suitably worded conditions can be recommended to avoid excessive or unreasonable noise of non-residential activities proposed for the amended designation will apply. I agree with suitable measures in place, the amended NOR (if granted) will result in noise effects consistent with the relevant objectives and policies of the District Plan(s).
27. I set out my recommended noise-related conditions at the conclusion of this evidence.

### **EXECUTIVE SUMMARY**

28. I have assessed the actual and potential environmental noise effects associated with the proposal set out within the NoR. I have focussed on assessing the effects of operational noise effects.
29. I consider potential noise and vibration effects associated with the use of the site for its designated purpose will, at times, be likely to have a more than minor effect on adjacent residential sites at 24 to 32 Tilley Road and at 46 Tilley Road.
30. I am concerned that the times of disturbance include night times and weekends when quieter conditions are needed for sleep and relaxation within residentially zoned sites. I note that railway activities are and have been occurring on the undesignated residential zoned land, which are not consistent with the Residential Zone provisions of the Operative Kapiti Coast District Plan. This view differs from those of the Applicant's noise consultant regarding the scale and acceptability of potential noise effects of the uses expected for the site.
31. However, I am of the view that so long as the site screening is adequate that noise effects can be contained to reasonable levels by adherence to appropriately worded conditions attached to the modified designation.
32. Overall if Council accept the request for the designation amendment, I recommend two inter-related noise conditions be attached to the designation applying to the newly designated sites which require the requiring authority to undertake monitoring and to manage the potential for adverse noise effects associated with the use in accordance with a certified Noise Management Plan for the site.

## SUMMARY OF SITE, NOISE SOURCE AND PROPOSED ACTIVITY

33. The NoR and supporting documents set out details relating to the site and surrounds as well as providing detail on the nature and scale of the activity and related noise sources. I summarise this information as follows:
34. The subject site is zoned Residential and is currently not designated in the Operative Kapiti Coast District Plan. The adjacent designated railway land is zoned rural.
35. KiwiRail is seeking a designation over the undesignated residential zoned land. There are two issues being reviewed under the NoR, the first is the NoR itself and the second matter compliance with the Operative District Plan.
36. The subject site comprises five land parcels or sites, all are proposed to be included in the existing designation. The five sites are all identified on their certificates of title as being for Railway purposes and are claimed as 'Railway land'. There are three buildings on the site.
37. The following image is an aerial photo of the site [the area outlined in red denotes the site boundary] and rail corridor [pale yellow shading].



38. I understand that the site has a long history of being used for railway purposes; primarily for long-term storage. A formal lease was signed in March 2015 for the use

of the site by a joint venture for railway purposes. Since that time, based on information available, activities on the site appear to have changed.

39. I understand the land is currently leased, on a month by month basis to the Fulton Hogan John Holland KiwiRail Joint Venture [the JV] who undertake railway maintenance work. The subject land is also used for minor KiwiRail projects and maintenance around the Wellington and Central regions.
40. The NoR notes that typically the site operates between the hours of 7.00am and 7.00pm [daytime as defined in the Plan] however the Chiles Noise Repot does note that the site may operate under extended hours at time i.e. outside daytime thus operating at night time also.
41. KiwiRail seek to designate the site and continue its use for railway operation and maintenance. The site is of strategic importance to the Wellington Region and needs to be close to the people who undertake the work.

#### **COMMENTS ON SUBMISSIONS RECEIVED - NOISE**

42. Following the closing of the submission period on 26 June 2017 a total of three submissions were received. I have reviewed the submissions received by Council and make the following comments regarding noise.

##### **Submission from Matthew Robinson and Beba McLean 26B Tilley Road**

43. Mr Robinson and Ms McLean reside at 26B Tilley Road. Their property backs directly onto the western most end of the KiwiRail site. Both Mr Robinson and Ms McLean OPPOSE the application in full. I note one of the reasons for the opposition relates to noise and the effects it has on their residential amenity and health.
44. The submission contends that on the days which Dr Chiles took his acoustic measurements Ms McLean was home and witnessed first-hand that the noise monitoring being carried out on two separate occasions. The submission notes that at both times there was very little activity onsite and claims it was not indicative of the true sound levels that neighbours have been subjected to in the past.

45. The submission also provides photographic evidence of the KiwiRail site and clearly shows good line of sight, for example photos are shown of a truck being loaded, with no visual or acoustic screening due to direct line of sight.
46. The submitters have provided these photos as they note that the application states the boundary fence provides an appropriate screen between the two properties. However, the submitter notes that the fence on the back boundary of 24 Tilley is only 1m high and does not provide sufficient screening of the site.
47. I note direct line of sight can be seen in photos provided within the submission. In addition, other photos also clearly show activity on site such as trucks being loaded over the top of the 2m-high fence when viewing it from inside the submitters house, thus again where there is limited or no screening present as the noise source is higher than the 2m high fence.
48. These submitters also note [and again provide photos to support their comments] that their driveway leading to the subject site is not screened and there are often multiple vehicles arriving and leaving and being loaded at this location that are clearly visible. I make the point that if the noise sources are clearly visible [as shown in the photos] then there would be no acoustic screening or mitigation provided and thus noise would freely travel unmitigated onto this site.
49. A point made in this submission is that the submitters dispute the statement made by Dr Chiles that the noise originating from the subject site would have a negligible environmental effect. The submitters also note *“we have been forced to listen to the constant movements of a forklift, loud hammering, the use of other tools, and the running and loading of heavy vehicles with heavy equipment”*. Although these neighbours feel they have been *“forced to listen to”* noise from the subject site, this wording belies the pervasiveness of unwanted sound and the inability to switch-off or avoid the sounds complained of.
50. These submitters take issue with Dr Chiles who has implied the *‘workshop building’* is currently only used for storage. These submitters comment that they do not believe this is accurate based on their observations of activities taking place in this shed.
51. The submitters allege noise effects occur across all seven days of the week including public holidays. On occasions when activity levels have resulted in reported noise

effects occurring sequentially day after day, it does not appear that 'respite' from the noise is available. Periods of respite [i.e. periods with no noise-making activity] are useful in reducing the adverse effects of noise on health and amenity<sup>4</sup>.

52. I note that Ms McLean also made the point at the Pre-Hearing meeting that some works on the site had involved loud noise and crashing beyond normal working hours, including the previous night between 8:30 and 10.00pm, and previously had recorded works occurring at 1.00am.
53. The submitters allege information provided by the Rail Yard Manager to Dr Chiles regarding the nature and scale of the past and present operation do not align with their experience, leading Dr Chiles to under estimate the actual and potential noise effects on the surrounding areas including the submitters.
54. In summary, these submitters oppose this application for a number of reasons including noise and disturbance of sleep and acoustic amenity, experienced both inside and outside their dwelling. Although the submitters oppose the NoR Application they provide a host of relief they would like to see if NoR was granted, including [but not limited to] acoustic grade fencing and no night time operations.

#### **Submission from Louise and Ben Falepau 26A Tilley Road**

55. Mr and Mrs Falepau are the owners of No 26A Tilley Road. The Falepau property lies directly in front No 26B Tilley Road. Mr and Mrs Falepau state that they rent the property and as the owner believe their tenants have the right to live at this site undisbursed and thus this is the main reason they have prepared their submission. Mr and Mrs Falepau OPPOSE the application in full.
56. The submission states that the quality of life for the tenant at the site [who has been there for approx. 5 years] is significantly affected by the increase of KiwiRail activity in the vicinity of the site, which includes noise.

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<sup>4</sup> WHO Environmental Noise Guidelines for the European Region: A Systematic Review of Transport Noise Interventions and Their Impacts on Health by Alan Lex Brown and Irene van Kamp. Int J Environ Res Public Health. 2017 Aug; 14(8): 873. Published online 2017 Aug 3.

57. Regarding noise effects, the submitters makes it clear the that an increase in noise has occurred and that the tenant has been woken from sleep at night by what the submitters describe as 'excessive noise'.
58. The submitters note that night time noise is an issue consisting of a host of noise sources such as vehicles arriving and departing as well as stereos in vehicles and the slamming of doors and loud voices of people on the site.
59. The submission also makes it clear that night time noise is a key issue and so is the health effects on broken sleep which has had a negative effect on the tenant's ability to function in daily life.
60. The submitters seek the Application be declined however notes if Council allow the NoR then requires relief in the form of approval and implementation outlined in the MHA report [Refer to Pages 7-8]. The submitters also seek monitoring of the site no less than 4 times a year during both day and night. Finally, the submitter also seeks mitigation to excessive noise which they note should include an acoustic grade barrier fence.

#### **Submission from Zophia and Timothy Nolan 65 Tilley Road**

61. Mr and Mrs Nolan reside at 65 Tilley Road. The submission does not appear to clearly note the submitters position i.e. support or oppose, however a number of concerns are raised by the submitters including vehicle movements during day and night as well as what the submission describes as 'full scale commercial activity' occurring on site. These submitters and their submission raises similar concern to Mr Robinson and Ms McLean regarding noise sources. No relief appears to be sought in this submission. The submitter may wish to clarify their position in support or opposition and any relief sought if present at the hearing.

#### **Closing Comments On Submitter Noise Concerns**

62. Noise is clearly a major concern for submitters although the primary concerns of submitters appear to be procedural (in that the activities that have been occurring to date should be legitimised through the NoR process).

63. Noise is one of the major effects raised by submitters. Noise is reported to be produced from a range of activities including [but not limited to] operation and loading of heavy vehicles, roller doors, horns, beepers and engineering/maintenance works such as hand tools [such as hammering]. Submitters also note concerns around weekend and night time use of the site i.e. between 7.00pm and 7.00am. It is clear the neighbours would appreciate better 'Noise Management' of non-residential activities, especially in the part of the designated rail site that is subject to this NoR.
64. While the noise expert advising KiwiRail (Stephen Chiles) indicates that compliance with the District Plan noise limits will normally be achieved, there are multiple comments by submitters that various noise associated with workshop activity and from transport and materials handling on the site significantly affect adjacent residential sites, including those of submitters in Tilley Road. Based on the submissions received and anecdotal evidence of effects, the use of the subject site does appear to cause a 'more than minor' effect at times on adjacent residential sites in Tilley Road, including at night and weekends.

### **NOISE EXPERT CONFERENCING**

65. In response to instructions from the Commissioners, I participated in noise expert conferencing with Dr Stephen Chiles during early December 2017 resulting in a joint statement on noise matters dated 12 December 2017. A copy of this statement is ATTACHED as ATTACHMENT A.
66. One of the key differences between the experts is that Dr Chiles disagrees that noise-related conditions attached to the amended designation (if granted) would be a worthy measure to control noise effects, including requiring all rail-related activities on the site to be undertaken in accordance with a Noise Management Plan prepared by KiwiRail for this purpose. I believe these measures are reasonably necessary and will assist should any enforcement action need to be taken. Limitations on noise emission within conditions attached to District Plan designations are not unusual or difficult to implement in my experience.
67. I recommend noise-related conditions be attached to the amended designation applying to activities undertaken within the expanded designation area.

68. I support the attached of noise-related conditions to any amended designation arising from the NoR as I consider they are an important ‘tool’ Council can rely upon to control noise effects. I note one of the specific functions of territorial authorities under RMA 31(1)(d) is “...*the control of the emission of noise and the mitigation of the effects of noise*”.
69. Section 16 of the RMA requires all noise makers to adopt the *Best Practicable Option* (BPO) to avoid the emission of unreasonable noise.
70. As defined in s2 of the RMA, BPO means 'the best method for preventing or minimising the adverse effects on the environment having regard, among other things, to -
- a) The nature of the discharge or emission and the sensitivity of the receiving environment to adverse effects; and
  - b) The financial implications, and the effects on the environment, of that option when compared with other options; and
  - c) The current state of technical knowledge and the likelihood that the option can be successfully applied.
71. The duty to adopt the best practicable option applies to every person, company, legal entity, and the Crown, and includes persons undertaking activities on designated sites. There are no exceptions.

## **SECTION 42A PLANNING REPORT**

72. I have reviewed the Section 42A Report by Mr Phillip Hindrup dated 11 January 2018, including Section G where the effects of noise are discussed. I agree with the finding of Mr Hindrup that suitably worded conditions can be recommended to control and avoid excessive or unreasonable noise from non-residential activities authorised by the amended designation (if granted).
73. I agree with suitable measures in place, the amended NOR (if granted) will result in noise effects consistent with the relevant objectives and policies of the District Plan(s). I believe conditions attached to the amended designation will help determine the BPO for this site and activity. I

have set out recommended wording of noise-related designation conditions at the conclusion of this evidence<sup>5</sup>.

74. I have been asked by the Planner to comment on achieving compliance with buffer distances and use of acoustic fencing. I note both these methods would assist in reducing noise however based on the information presented, including some receiver sites which are elevated, the noise-reducing effect of acoustic fencing could be limited for some sites. Noise from activities conducted at ground level which are screened by properly designed fences will help reduce noise within adjacent residential sites. I am of the view that, regardless of acoustic ineffectiveness for some receiver sites, site fencing forms an important part of the BPO for this site and activity, specifically for adjacent dwellings which back directly on to the site.
75. I have been asked by the Planner to comment on technical compliance with the Operative Plan noise limits. I consider potential noise and vibration effects associated with the use of the site for its designated purpose will, at times, be likely to result in a more than minor noise effect on adjacent residential sites at 24 to 32 Tilley Road and at 46 Tilley Road. Based on the information presented as part of the NoR including the noise report and my investigations I believe night time operations would not always be fully compliant with the District Plan, including the  $L_{max}$  limits. There are likely to be adverse effects associated with such noise 'excursions' regardless of the presence of significant ambient noise, at times, during the night time period.
76. It is also my view that, at times during the day, the operative Plan daytime noise limits are also likely to be non-compliant due to rail-related activity on the subject site. However, I consider the presence of significant ambient noise throughout the daytime period has the effect of reducing the impact such exceedances would normally create.
77. I have been asked by the Planner to comment on vibration. Regarding potential vibration effects from day to day activity, I consider little or no likely vibration effects are likely to be received within any residentially occupied site and therefore causes no risks to health, amenity or building structures in my view. Vibration concerns can be adequately addressed by keeping the road surface smooth and free from pot holes, as well as using signage to slow vehicles in this area. These steps would be suitable methods to incorporate into the recommended Noise Management Plan to control vibration as well as noise effects.

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<sup>5</sup> I note Mr Hindrup has also made recommendations in this regard. Where any differences are evident, I am accepting of Mr Hindrup's approach.

## RECOMMENDED CONDITIONS

78. Despite the concerns I hold around noise effects on neighbours during night time, I consider the site is appropriate for some of rail-related activities (defined as railway purposes) provided adequate mitigation is in place as part of the designation to deal with the effects of noise.
79. Should the amendment to District Plan designation *DO301* be adopted, I recommend the following conditions be attached to the designation to ensure noise effects are adequately controlled;

1. Not less than 30 days from the date on which this designation amendment is approved, the requiring authority shall submit for certification to the Compliance Manager, Kāpiti Coast District Council a **Noise Management Plan [NMP]** prepared by a suitably experienced acoustics engineer [acceptable to Council] that includes [but is not limited to] the following matters:

- Identification of potential noise sources and a description of the physical and management methods to be used to reduce these noise emissions to reasonable levels at all times. Options to consider include site signage, roller door closing policy, worker on-site behaviour, and standard operating procedures for the use of the workshop.
- Set a ‘design target’ noise emission cap on maximum activity noise based on compliance with the following:

Noise associated with non-residential activities shall be managed and controlled so that the following limits are not be exceeded at any point within the boundary of a residential site:

Daytime	55 dB $L_{Aeq(15\ min)}$
Evening	50 dB $L_{Aeq(15\ min)}$
Night-time	45 dB $L_{Aeq(15\ min)}$
Night-time	75 dB $L_{AFmax}$

Noise levels shall be measured and assessed in accordance with NZS6801:2008 *Acoustics – Measurement of Environmental Sound* and NZS6802:2008 *Acoustics- Environmental Noise*.

- Details of steps taken to ensure the ‘**best practical option**’ is adopted [and updated as necessary] to achieve compliance with the above noise limit, including a signed statement from the author [acoustic engineer acceptable to Council] that the methods and procedures set out within the noise management plan are sufficient to ensure compliance with the above design target noise limits.
- **Monitoring;** The Plan shall include a monitoring plan setting out the methods and procedures to be adopted to measure sound emissions [in accordance with NZS6801:2008] at or within the closest residential sites at 24 to 36 Tilley Road, Paekakariki. The plan shall include provision for;

- 1) **Measuring** noise over the first TWO ‘worse case’ night time noise events, and TWO daytime events involving significant noise; and
  - 2) Providing a copy of any **noise monitoring report** prepared following monitoring undertaken under (a) above within 20 days of completing the measurements.
2. All activity on the subject site shall be undertaken in accordance with a **Noise Management Plan** certified by Council for this purpose.

## CONCLUSION

80. I am happy to answer any questions that the Hearing Panel may have for me in relation to my evidence.

A handwritten signature in black ink, appearing to read 'M J Hunt', is written over a light grey rectangular background.

**Malcolm James Hunt**  
**11 January 2018**

**ATTACHMENT A:**

**Noise Expert Conferencing Statement**

**Dr Stephen Chiles and Mr Malcolm Hunt**

**Joint statement on noise matters dated 12 December 2017**