

# MalcolmHuntAssociates

noise and environmental consultants

Memo To: Max Dunn  
Principal Planning and Policy Consultant  
4Sight  
Max Dunn <maxd@4sight.co.nz>

From: Malcolm Hunt, Malcolm Hunt Associates

Date: 28 February 2018

Re; *EPL Port Noise Monitoring*  
Description of system & purpose

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Dear Max

In response to your enquiry, we set out below and attached information regarding the assistance provided to Eastland Port Limited by Malcolm Hunt Associates regarding researching and establishing a permanent port noise monitor in the 'noise sensitive' area close to port activities.

Council's Tairahwiti Resource Management Plan (TRMP) sets out noise limits for port noise that apply to both 'essential' and 'non-essential' port activities. The rules regime sets out 'long term' and 'short term' noise emission limits that apply within the receiving environment around the port. Field monitoring of port noise levels has been undertaken by Malcolm Hunt Associates over a number of days during 2017. The results (shared with Gisborne District Council) indicated compliance with all relevant noise limits applying at any noise sensitive site in the area surrounding the port.

The proper functioning of the TRMP's port noise rules rely on carrying out regular checks on the 'long term' noise limit which requires daily port noise to be quantified using 24 hour Level Day/Night (Ldn) sound levels. In addition, port noise is regulated using short term (15 minute) and maximum noise levels. Thus, we advised EPL that should noise monitoring be contemplated, this will require a sophisticated measurement system, ideally also measuring (if possible) weather conditions and storing photographs of port activity matched to the stored noise level information.

We were engaged to seek out suppliers of such a system and arrange for a quote to be provided to EPL. The specification of the system was based on the TRMP requirement at Rule 11.2.15.8 that states "all measurements shall be taken in accordance with.....(e) NZS:6809:1999 Acoustics – *Port Management and Land Use Planning*". This Standard and the TRMP envisions on-going noise monitoring so that compliance with the applicable noise limits can be determined from time to time (NZS6809:1999 clause 6.1.2 and TRMP rule C11.2.15.1(G)(1)(e)).

We have been involved since 2015 in planning towards installing a port noise monitor at the port of Gisborne. As NZS6809:1999 requires monitoring equipment and measurement methods to be in accordance with the recommendations of NZS6801 (e.g. NZS6801:2008 Acoustics – *Measurement of Environmental Sound*), the request to equipment suppliers was for a system that complied with NZS6801:2008, which was mains powered and with its data stored and accessed via internet IP communications over the cellular network.

The Jepsen offer was investigated, and an acoustic assessment undertaken on a suitable monitoring location within the 'noise affected' areas near the location of main port activities. Initially three residential sites were examined, as shown in the following aerial photograph.



The Portside Hotel site was selected as being technically superior owing to its elevation and proximity to port activities. Discussions were had with the management of Portside Hotel to establish a permanent noise monitor on the roof of this residential building which is one of the most exposed locations within the "Commercial Amenity" directly adjacent to the port.

I attach the quote received from Jepsen Electronics in December 2017 which we understand EPL have accepted. We further understand the measurement location has been finalised at the rooftop location on the Portside Hotel as shown within the attached proposal.

The system specifications have been reviewed and are considered to be sufficient to comply with NZS6801. The system is appropriately fitted with a weather station and camera technology allowing noise data to be interrogated also including stored imagery to be assess activities undertaken at the time.

We understand the system is to be installed shortly. Subject to passing commissioning tests, the system is expected to be online within two or three weeks.

I have read in a submission to the Wharf 6 & 7 notified resource consent indicating that it is necessary to undertake port noise monitoring at an alternative residential location near the port. I consider the selected Portside Hotel monitoring location to be the best available site to undertake monitoring in compliance with the district plan and the relevant NZ Standard. I can confirm noise received at the alternative suggested monitoring site from the noisiest port activities can be effectively controlled via monitoring and compliance checking undertaken at the Portside Hotel monitoring location.

Please do not hesitate to contact the writer should any further information be required.

Regards,



**Malcolm Hunt**

B.Sc., M.E.(mech), Dip Noise Control



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December 5 2017

Malcolm Hunt Associates  
Arco House  
Level 1/47 Cuba Street  
WELLINGTON

**RE: Installation of Noise Logger and Digital Imaging of Port Activity**

Dear Malcolm,

I understand that the site and equipment have now been finalised as follows:

**Site:**

Electronic equipment to be mounted inside the roof space as shown in photo 1. The equipment would consist of a small self-contained electrical cabinet fixed to the timber structure in the ceiling space.



Electronic cabinet secured to rafters inside roof space.

**External Structure:** 2m high 50mm aluminium pole fastened to the fascia, with microphone, wind vane and camera. No solar cell required. Concept as shown below.



50mm pole with camera, microphone and wind vane. (Not to scale)

**Power Supply:**

Mains power, with battery backup. Power connection to be carried out by client's electrician. Power requirement approximately 5 watts. i.e approximately 97c per month.

**Camera.**

Subsequent to our last offer, we now use the Mobotex M15/M16 camera, which offers day and night dual lenses, wide angle 106degrees and vastly superior image quality compared to previously used USB cameras. Power requirement 5 watts.

**M16 AllroundDual**

Thanks to superb features, our flagship product delivers videos in brilliant color during the day and high-contrast black/white footage in dark settings.

Switching between the day and night sensor is carried out in a fully digital manner without any mechanical parts.

This makes the process extremely reliable in any weather conditions.

For full camera specification, see:

<https://www.icamsecurity.com/assets/brochures/IC-MX-M15D-SEC.pdf>

### Camera Specification (Mobitix M15):

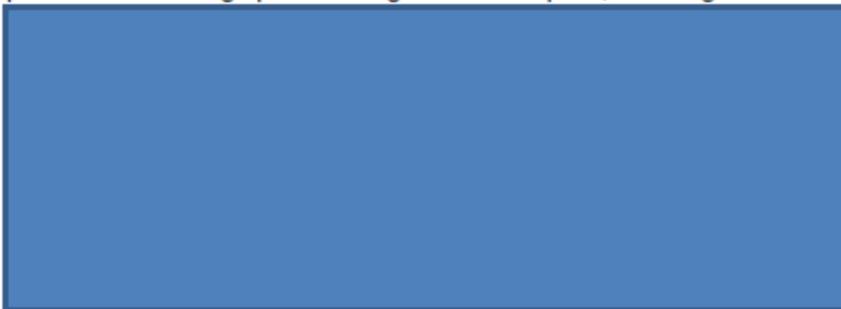
Image size	6mB full colour wide angle daytime, B & W night time
Image frequency	Every 15 minutes and on each noise event – can be set to other frequency on the web site. <sup>Note 1</sup>
Image viewing	from web site.
Image selection	Date time picker from thumbnails on screen, with scrolling
Date time stamp	All images date time stamped
Illumination	No additional illumination. Relies on daylight and existing lighting.
Manual Tilting head	Camera can be pan & tilted through 90deg + 90deg manually.
IP rating	Outdoor IP65
Supply Voltage	POE 12v supply 5w average pwr
Mounting	Fixed to alloy pole
Additional Image Trigger	Images can be triggered by sms, by noise events, or time of day.
Storage	Latest 9000 images stored on web site. (oldest images replaced as FIFO.)
Printing	Images printed from screen
Image Format	.jpeg

Note 1. Image frequencies of every 5 minutes - every 24 hours available and can be set by the client on the web site.

### Pricing:

Standard noise and weather monitor, 1 second LAeq, standard Ln(15min), audio recording of noise events with trigger by Lmax, or LAeq(15min), or Ln(15min), photo-image taken coincidentally with each noise event, automatic email to responders email list on each and every noise event, mains power supply & battery backup

Standard station with quoted options as per July quote, plus audio recording option and digital camera option, including



**Warranty**

Two years 100% replacement/repair warranty on all parts and software is provided. Free software upgrades for 2 years. Freight & travel to site if required is charged at cost. The warranty does not include damage due to extreme weather events, vandalism, improper use or operation outside of intended use.

**Delivery**

Generally, equipment is 3 - 4 weeks from receipt of order. All equipment and hardware is available ex stock Palmerston North.

**Validity.**

This quotation is valid for 20 days.

Please do not hesitate to visit the website and check out the features, or contact the undersigned for further information and a temporary password for other sites.

Yours faithfully



Neil Jepsen. B.Sc. M.Sc(Hons). CPL. MASNZ