



BarnOwl® – Real time directional noise monitoring

World first patented technology for multiple noise source detection & analysis

*'With BarnOwl® you can now tell in real time not only **how loud** the noise is, but also **where it is coming from**'*

The BarnOwl® Solution

BarnOwl® is an integrated system of 3 microphones, precision engineered mounting plate, acoustical hardware and sophisticated signal processing and reporting software.

It provides the world's only 24/7, 360 degree, real time directional noise monitoring and control solution.

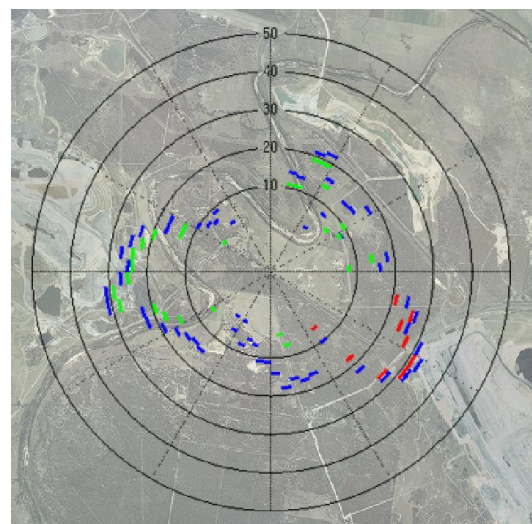
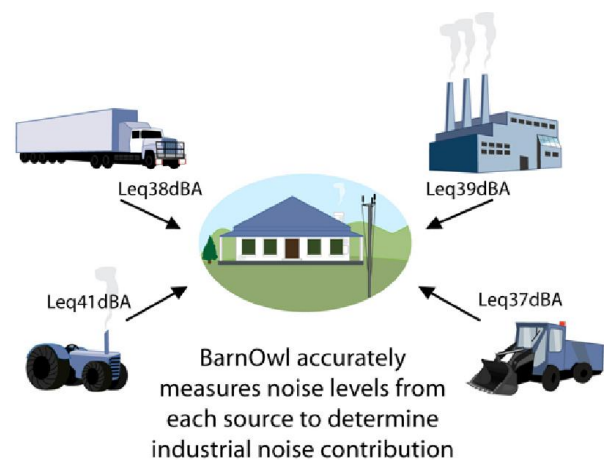
Accurate real time noise levels & direction:

The benefits of the BarnOwl® noise monitoring method over traditional techniques are:

- Allows noise professionals to provide more accurate advice to their clients;
- Quicker and more accurate resolution of noise issues;
- Allows industry to improve operational efficiency;
- Fairer negotiations between industry and regulators; and
- Better outcome for affected communities.

BarnOwl® achieves this by:

- Providing accurate measurements with true directional monitoring;
- Eliminating debate over the subjective nature of attended measurements;
- Allowing longer measurement durations to give proper consideration to variable conditions (weather and site operations);
- Providing fully automated and unattended monitoring that reduces the resource overhead associated with attended monitoring; and
- Allowing real time noise data to be received and acted on by site personnel to reduce noise.



BarnOwl® radar plot showing direction & strength of noise sources



BarnOwl® Applications

Accurate Compliance Monitoring

BarnOwl's® accurate measurement of noise levels and direction gives both industry and regulatory authorities certainty as to whether noise from a site meets the required limits. In summary BarnOwl® can:

- Check compliance with consent conditions, without interference from other noise sources;
- Watch the movement of noise sources on a remote monitor in real time;
- Track and report on the noise level from multiple sources over days, weeks or years;
- Exclude extraneous noise from measurement results, such as high frequency insect noise; and
- Identify the source of intermittent, unpredictable noise.

Real Time Noise Monitoring & Control (including Audio)

BarnOwl's® second-by-second noise monitoring gives operations managers a way to manage and control noise in real time.

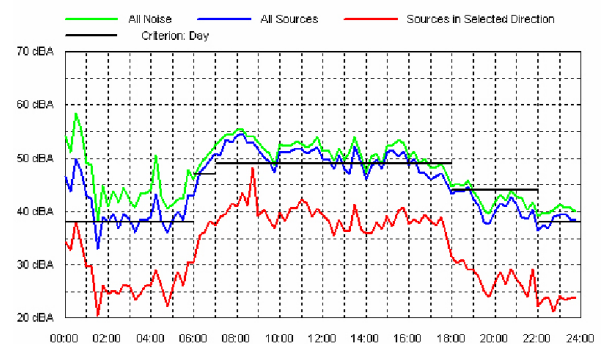
- Multiple noise sources can be monitored ensuring the site's noise contribution is accurately presented alongside other sources e.g. nearby road traffic.
- Alerts can be sent immediately when noise contribution exceeds a threshold.
- Real time data reports and real time audio feeds are available immediately to a site controller.
- If required, immediate action can be taken by operational managers to rectify the potential problem.

BarnOwl® Feature Summary

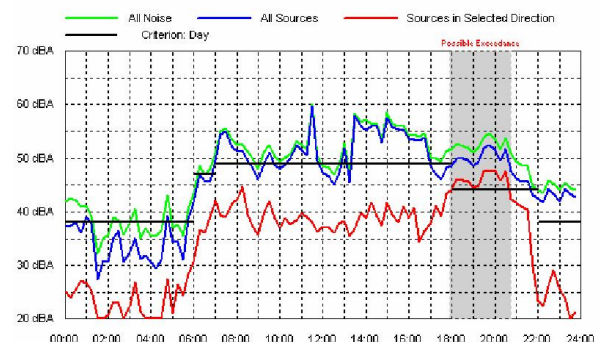
- Multiple noise source detection
- Automatic unattended real time noise detection (every second) from 72 directions (5 degrees)
- Directional monitoring with low pass filter to eliminate insect noise
- Real time graphical display and reporting
- Noise levels in L_{Aeq} and L_{A10}
- Trigger and alert options for real time control
- Networked and wireless connectivity
- Configurable for access by SCADA or similar system
- Records samples of audio signals
- Direct real time audio over network connection
- Automated microphone calibration
- Archiving facility
- Permanent and mobile (low power) options



BarnOwl® added as one component at a BHP Billiton environmental monitoring station



*BarnOwl® real time report shows that sources other than the designated industrial site (**red line**) are causing the exceedance of the specified noise limit (**black line**)*



*BarnOwl® real time report shows that there is a possible exceedance in the evening from the designated industrial source (**red line**)*