

Nuisance vs Compliance

Manufacturing Compliance

Noise compliance is based on the say-so of wind farm acousticians.

Wind farm acousticians will present themselves as “independent experts” when in reality they are paid big dollars to produce reports to say the wind farm is compliant with the permit.

Their independence must be questioned when, although multiple complaints are registered, the acoustician will report that the turbine noise does not exceed the limit and that the noise problem is due to increased background levels from increased tree foliage growth.

The regulators accept these opinion-based reports without question.

Regulators don't require the raw data to be publicly disclosed or scrutinised. Regulators merely require the conclusions or opinions of the acoustician.

As the raw data is not disclosed the reports can never be validated. Such reports can only be regarded as hearsay.

Noise compliance is automatically issued on receipt of these hearsay reports.

Wind farm acousticians can manipulate the data and falsify the reports free from scrutiny by authorities.

The only way neighbours can question the reports is to obtain their own data and produce their own independent reports.

Regulators don't consider 90% of the noise from a wind farm.

In Victoria, 40dB LA90 (10min) is the noise compliance level.

This is a statistical level. Noise nuisance causing sleep disturbance is not identified by this statistic.

The graph below shows a 40dB LA90 statistic.

The blue spikes are the noise people hear, whilst the red line is the processed LA90 level, the noise they say you hear.

The red line is the compliance level – this is the noise they plot on the graph, and this is the noise level they use for compliance.

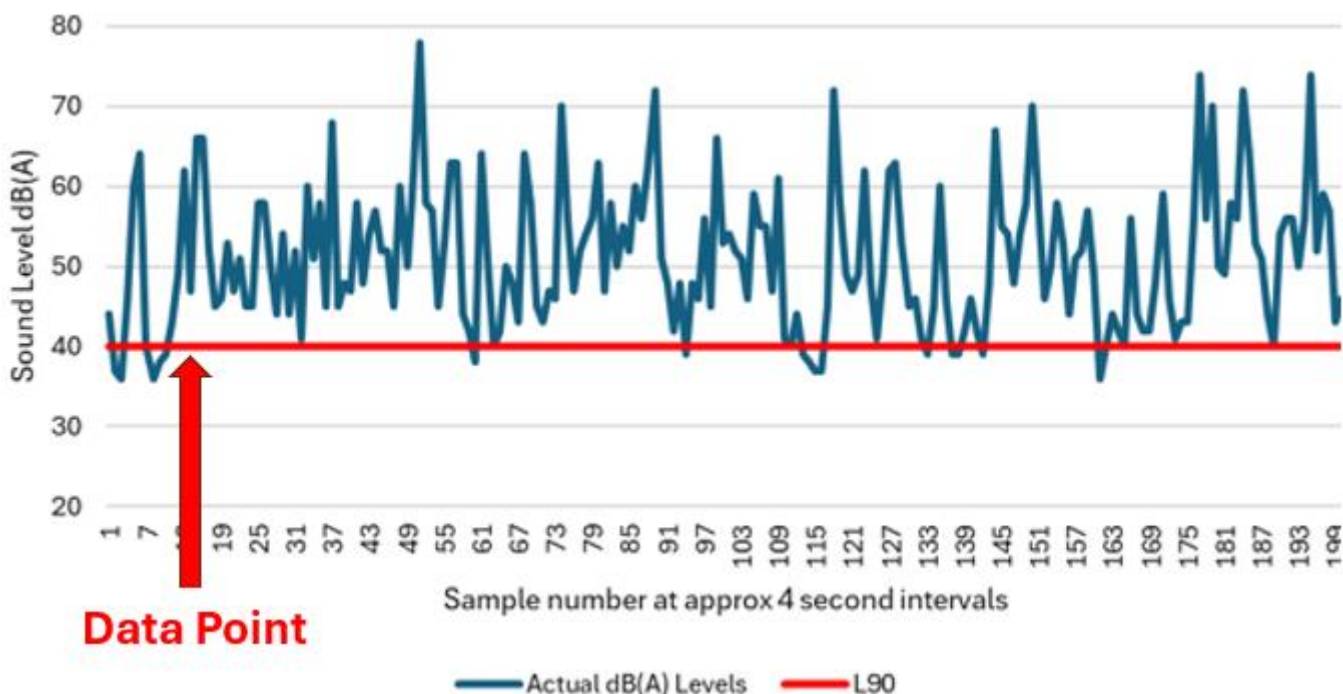
The intermittent noise nuisance spikes are not identified in an LA90 or any averaging method of analysis.

90% of the noise emitted from wind farms is not considered for compliance.

In a 40dB LA90, noise exceeds 40dB for 90% of the time – this is the noise nuisance people hear and this is the noise regulators ignore.

Wind farm acousticians do not report on these noise nuisance spikes. Instead, they average out the data and attribute the noise problem to insects, birds, and tree foliage growth.

An LA90 hides the spikes of high noise that cause the Nuisance.



A Data Point is a dot on a graph.

Each dot on a compliance graph is 10 minutes of noise monitoring. This is called a data point.

One single data point is a statistical analysis of hundreds of noise measurements received from the monitor.

In Victoria Australia, the statistical analysis is LA90(10min). An LA90(10min) means that for every 10 minutes, the noise exceeds the dB level for 90% of the time.

A **40dB LA90(10min)**, means that for every 10mins, the noise exceeds **40dB** for 90% of the time.

Or, in a **40dB LA90(10min)**, 9 out of every 10 minutes is higher than 40dB.

Statistically, over any one night, in a compliant wind farm, 90% of the noise can be above 40dB.

People can be woken by intermittent noise nuisance and suffer harm through sleep disturbance, yet the wind farms can create a graph to show, on paper, that the wind farm is compliant for noise.

And this graph is never questioned.

Using a LA90 manufactures compliance.

The spikes of intermittent noise nuisance cannot be identified on any compliance graph.

Instead, only the processed data point is recorded.

The data point value (red line level) is plotted as a single dot.

The high noise spikes that people hear are hidden behind the dot.

There is no way of determining noise nuisance from the dots on a compliance graph.

They say 40dB is a compliant noise level, but they never explain that in a 40dB LA90, 90% of the noise you hear is above 40dB.

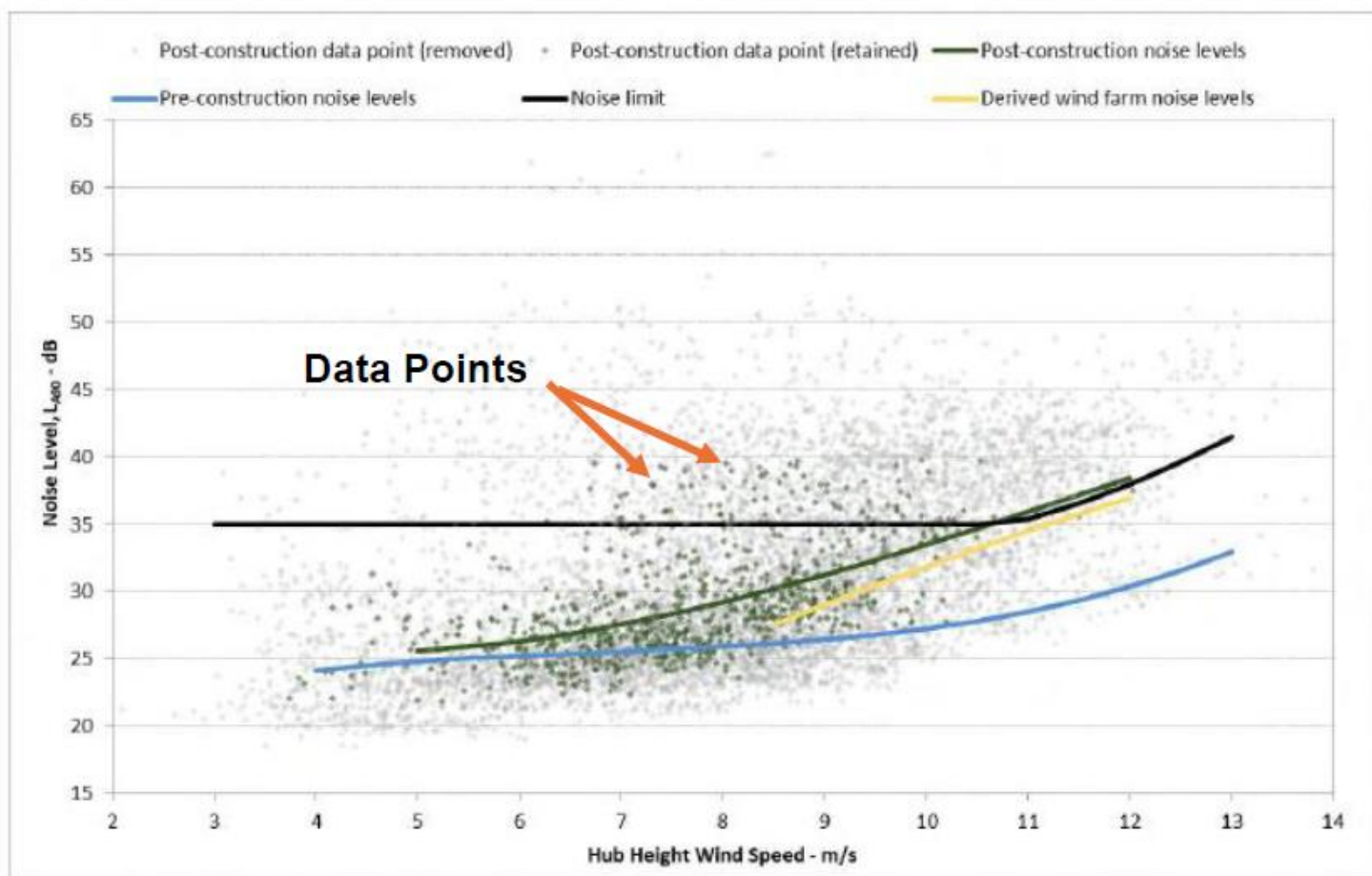
And they never admit that in a 40dB LA90 there is no maximum dB level.

Therefore, the very use of an LA90 means that noise nuisance will occur, albeit intermittently.

Given this, it can be said that the use of a 40dB LA90 statistical measurement for post-construction noise assessment means that statistically noise nuisance will always occur.

A Data Point (dot) contains hundreds of noise measurements

Figure 15: Receiver R05 night-time periods - post-construction noise levels and noise limits versus site wind speed



Averaging the data points hides the sleep disturbance nights.

Wind turbines generate special intermittent noise, low-frequency noise, pulsations, and surges of pressure.

Intermittent noise nuisance is ongoing year after year and gets worse as the mechanical parts deteriorate.

Sleep disturbance can be caused by this intermittent noise containing high nuisance noise spikes.

Wind turbine compliance does not identify intermittent noise, or nuisance noise on any one night.

Wind turbine noise is averaged out over many weeks and months, with the noise nuisance lost in the averaging.

Data points are plotted against wind speeds and then an average line is drawn through the dots. Compliance is assessed according to this line.

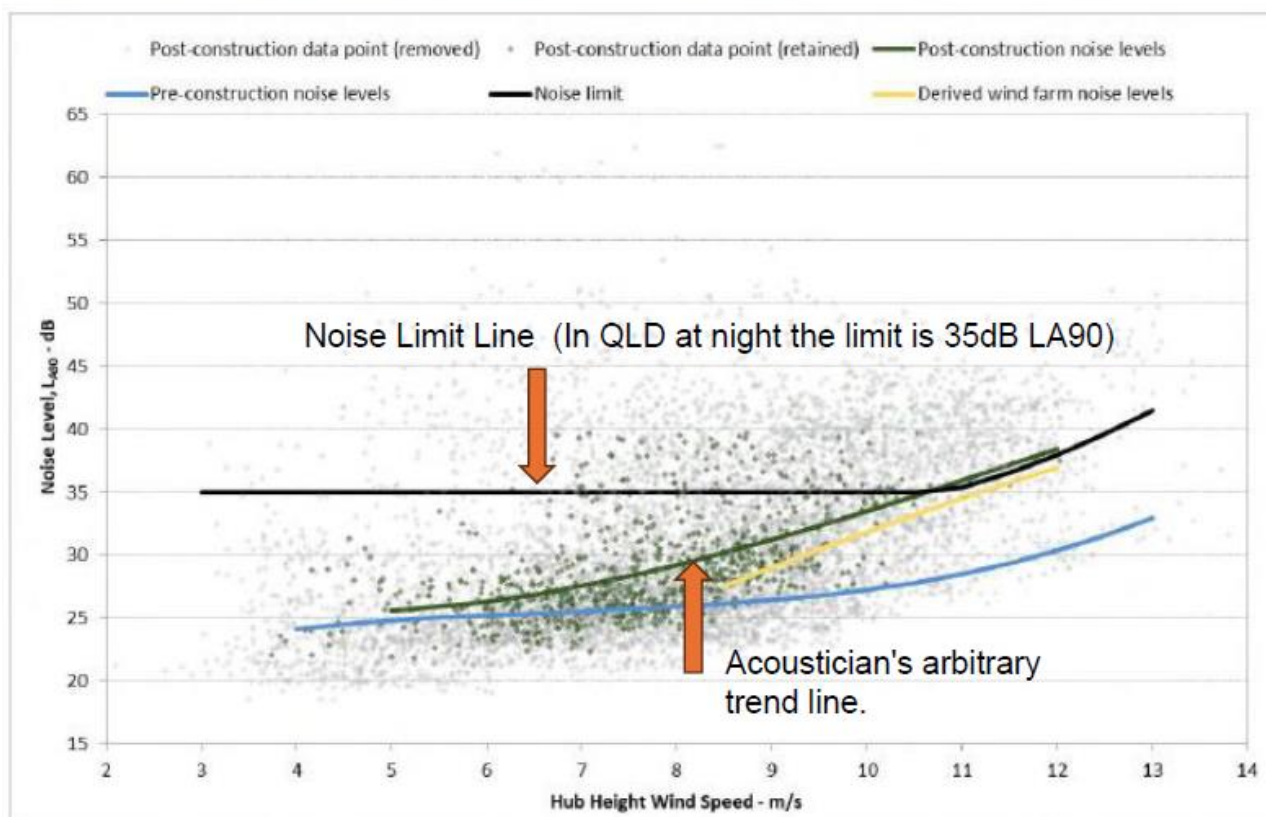
Wind farm acousticians can easily manipulate the line to manufacture compliance.

Acousticians decide where the compliance line (regression/trend line) is drawn, it is an arbitrary line and each acoustician will draw the line differently.

Wind farms pay acousticians big money to draw a line that shows compliance.

And regulators never query the line.

Figure 15: Receiver R05 night-time periods - post-construction noise levels and noise limits versus site wind speed



Nuisance cannot be identified on Compliance Graphs.

Wind farms cause sleep disturbance on certain nights of the year depending on the wind direction, season, atmospheric conditions, and design of the house.

This noise nuisance is not considered in compliance analysis. Nuisance nights are not required to be identified in compliance graphs.

If the acoustician's post-construction line (arbitrary trend line) sits on or below the noise limit, then, according to the regulators, the wind farm is compliant and there is no noise problem.

Wind turbine compliance does not require the wind farm to show the noise on a specific night.

Instead, the acoustician monitors the noise over many weeks and months and then lumps all the data points together onto a single graph.

The many weeks of data are collected and plotted against wind speed. The nuisance nights, which occur at various wind speeds and wind directions, are lost among the jumbled dots.

The nuisance nights or short periods of nuisance on any one night cannot be identified on this graph.

Compliance graphs do not identify noise nuisance.

Using filtering to delete high noise Data Points

Regulators allow acousticians to filter out or “remove” high noise data points without question.

Deleting high noise data lowers the average level which allows the acoustician to draw a lower trend line.

Regulators don’t query the deleted data points; they readily accept the lowered line without question.

They then use this trend line to fob off neighbours suffering nuisance. They will tell the neighbours ...

“The reports show the wind farm is compliant for noise so we can’t help you; you will need to take your complaint up with the wind farm”.

There are 60 data points per night.
(10 hours x 6 data points = 60)

It takes 129 nights to generate 7,774 data points.

The table below shows that 90% of the noise was filtered out or deleted at the house.

Out of the 7,774 data points 6,997 were deleted and only 777 were retained.

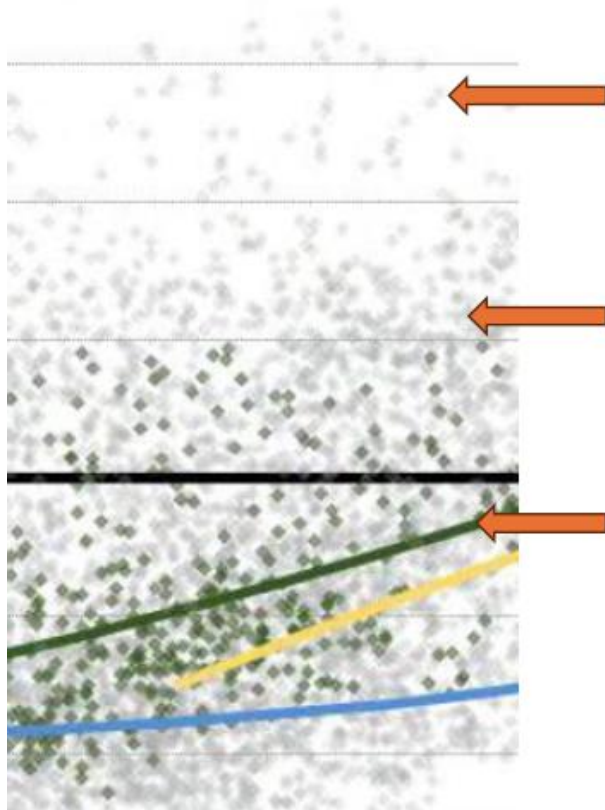
This acoustician only used 10% of the noise data monitored to draw the post-construction trend line.

And the Regulators never question the line.

Table 34: Receiver R05 noise level analysis summary

| Data points | Daytime | Night-time |
|------------------------------------|------------|------------|
| Total collected points | 13107 | 7774 |
| Removed ¹ | 1489 | 1452 |
| Operational filtering ² | 10890 | 5545 |
| Total retained | 728 | 777 |

Deleting data points lowers the Line.



The greyed-out dots are deleted data points.

Acousticians are free to delete as many data points as they wish.

Regulators never question the deleted data points.

Deleting data points lowers the trend line.

Acoustician delete the data points and then draw the line.

Acousticians are free to manipulate the line to show compliance.

Regulators never question deleted data.

Authorities deem a wind farm compliant because the line on a graph says it's compliant.

This line is an arbitrary line drawn by the wind farm's acoustician.

High noise can be made to look compliant on paper simply by lowering the line.

Deleting high noise data lowers the line.

Acousticians delete the data, draw the line, and then claim compliance.

Acousticians are free to delete as much high noise data as they wish.

The regulators don't require validation of the deleted data.

Authorities accept the say-so of the acoustician. The deleted data is never scrutinised.

They accept any reasoning the acoustician dreams up as to why the data should be deleted. They are eager to accept these manufactured graphs and eager to issue compliance.

Here's an acoustician's reasoning that was never questioned by the regulators.



G2 Receiver R05 measurement data summary

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Notes: [1] Removed data points due to rain, extraneous noise, or wind speeds outside assessment range
[2] Removed data points as detailed in Section 5.4 of the NMP.

For the night-time period audio was reviewed across a range of wind speeds – in all cases, the data points where levels were greater than 40 dB were dominated by background or extraneous noise and the influence of the wind farm was generally not discernible. Accordingly, all points greater than 40 dB are considered to have been caused by factors not related to the wind farm and removed from the analysis.

Similarly, for the daytime period, all data points where levels were greater than 45 dB were dominated by background or extraneous noise and were removed from the analysis.

Tree planting is used to manufacture higher background levels.

Wind turbine noise levels are compared to the noise levels before the wind farm was built.

The higher the environment or background noise, the higher the noise the wind farms can emit.

Background noise is a problem for wind farms because rural environments are quiet at night. And, quiet background levels make it difficult for wind farms to meet the noise compliance limit.

So, instead of reducing turbine noise emissions, they manufacture higher background levels.

For example, they offer “free” tree planting to claim background levels have increased.

Their ploy is to increase the tree growth around a house to claim the trees have increased the background levels therefore the noise limit can be increased.

Once the trees have grown, they then undertake further background testing called “pre-construction noise testing”. They produce new graphs showing, “surprise – surprise”, the background levels have increased.

With these new graphs, they then apply to the Regulators for an increased noise limit.

Regulators never question the fanciful explanation or the newly manufactured graphs and readily authorise the increased noise limit.

Here's an EPA Auditor making provision for increased noise compliance levels due to vegetation growth:

“I note that the background noise checks were conducted in March 2017 and it is likely that vegetation has grown in the intervening period, which may increase the background noise due to vegetation. If this is the case a greater noise limit may be applicable”. (Woolsthorpe Wind Farm Audit. 03 June 2022)

Paddock Loggers are used to delete high noise data.

A paddock logger (intermediate location) is used to delete high noise data at a house (sensitive receiver).

Acousticians compare the noise from the paddock logger with the noise at the house, then delete the higher noise at the house.

They claim the higher noise at the house is due to background noise, not turbine noise, so it can be deleted.

The regulators sign off on this methodology.

For example,

The Victorian Planning Minister signed off on the Lal Lal Wind Farm Noise Compliance Testing Plan that states:

“Data filtering: any ten (10) minute period in which the measured noise level at the noise sensitive receiver location is higher than the simultaneously measured level at the intermediate location shall be considered background noise affected and may be removed from the analysis”.

Don't give them any excuse to use a Paddock Logger.

Wind farms want to use paddock loggers because paddock loggers allow them to manipulate the data and manufacture compliance.

Paddock loggers allow wind farms to show on paper that a noisy wind farm is compliant with the noise limit.

They use the following trickery to justify the use of paddock loggers:

- They will claim the residents refused access to their homes.
- They will claim the increased foliage growth at the house increased the background noise, therefore the measurements in the paddock are more representative of the turbine noise than the noise measured at the house.
- They will claim the high noise at the house is due to extraneous noise when compared to the noise in the paddock, therefore any higher noise at the house is to be deleted.

It is therefore more important than ever for residents to obtain their own data.

Protect yourself. Obtain your own Background Data

Wind farms are never required to disclose the raw data so it is very easy for them to falsify the reports.

The peer review process looks at methodology only and not the analysis of the raw data behind the reports.

The raw data is never scrutinised, a wind farm acoustician's report is always accepted as truthful.

Compliance is automatically given once the Regulators receive the reports.

Regulatory authorities can't and won't help neighbours because there is no way of validating if the reports received have been falsified using manipulated data.

It is easier and more convenient for Regulators to automatically issue compliance.

They tell neighbours the reports show the wind farm is compliant, so there is no noise problem. Then they send the neighbours back to the wind farm to sort it out between themselves. The wind farm claims compliance, telling them the problem is due to increased tree growth.

If the wind farm causes you harm – neighbours have 3 options:

1. Accept a confidential compensation agreement and put up with the sleep disturbance. This agreement follows the land title – so every occupant of the house in the future is also bound to endure sleep disturbance.
2. Sleep elsewhere – or try to sell up and leave the area.
3. Take legal action.

To take legal action against a wind farm your lawyer will need access to background data. If you have your own background data you are in a stronger position.

Background data can be used as leverage to negotiate a better payout deal or it can become crucial evidence if your fight takes you to court.

Only allow the wind farm acoustician access to your external house on condition they provide you with the raw wind and noise data straight from the meters.

Have your lawyer draw up a contract that requires them to hand over the raw data.

NEVER let them use paddock loggers.

ALWAYS allow a wind farm acoustician **conditional** access to your house. (Conditional upon you receiving the raw data straight from the wind and noise meters).

NEVER allow a wind farm acoustician to put a paddock logger on your land.

NEVER allow them to put a logger more than 20m away from your house.