



RESPONSE TO COMMENTS — NOISE FROM INDUSTRY IN REGIONAL VICTORIA

Publication 1414 October 2011

In early 2010, EPA Victoria released two draft guidelines for public comment:

- Draft *Noise from industry in regional Victoria* (EPA publication 1316 – ‘draft NIRV’)
- Draft *Industry noise and statutory approvals guidelines* (EPA publication 1317 – ‘draft approvals guide’).

Following an assessment of public comments and further consultation, EPA released a final version of the NIRV guideline in October 2011 (publication 1411 – ‘final NIRV’). This response to comments document outlines the issues raised during consultation and EPA’s responses to these. The most substantial changes from the draft NIRV to the final NIRV are as follows:

- The population threshold for cities defined as ‘major urban areas’ has changed from 15,000 to 7000 people.
- A different method is being applied to delineate major urban areas and rural areas, based on GIS information from the Australian Bureau of Statistics, rather than planning schemes.
- The description of ‘background-relevant areas’ has changed.
- In a background-relevant area, the day period recommended level is based on background +8 dB, rather than background +10 dB.
- There is a new approach to setting recommended levels where a noise-sensitive area (such as a residence) is exposed to high levels of traffic noise.
- There is a new approach for setting recommended levels for utilities (for example, an electrical substation) that differs from the general industry approach.
- The recommended levels for earth resources now vary according to the zone where the noise receiver is located.
- NIRV has more explicit recognition of the impacts of approving new industry in quiet rural areas, and advice for regulators (such as planning authorities).

EPA has also developed two supporting documents for NIRV:

- *Applying NIRV to proposed and existing industry* (publication 1413) to assist regulators to apply NIRV (‘Applying NIRV guide’)
- *SEPP N-1 and NIRV explanatory notes* (publication 1412) (‘explanatory notes’). This is an update to the

explanatory notes for SEPP N-1¹ (publication IBN4-91).

This response to comments document is structured to follow the structure and content of the final NIRV, as follows:

- NIRV Part 1: Sources not covered by NIRV – wind farms and motor racing, protection of sleep, and legal status and application of NIRV.
- NIRV Part 2: Planning for quiet areas, noise from multiple industrial premises.
- NIRV Part 3.1: Best practice, procedures for setting recommended levels – major urban areas and rural areas, distance adjustments, background-relevant areas.
- NIRV Part 3.2 and Part 5: Earth resources recommended levels, and mine, quarry and landfill variations.
- NIRV’s relationship to the planning system.
- Technical acoustic issues.

FURTHER WORK

EPA is currently revising the *Guide to the measurement and analysis of noise* (publication 280) to address technical questions raised during consultation on draft NIRV.

The Applying NIRV guide incorporates key provisions from the draft approvals guide (for example, Section 9 of the draft approvals guide). In response to stakeholder feedback, EPA is assessing the best ways to communicate the other information in the draft approvals guide, which has now been removed from the EPA website.

EPA will review any issues with the implementation of the final NIRV and relevant policy changes that would affect NIRV (such as planning scheme changes), as they arise, with a further holistic review within 18 months of release of the final NIRV. EPA welcomes questions or comments on the application of NIRV by email to:

noiseguidelines@epa.vic.gov.au

¹State environment protection policy (Control of noise from commerce, industry and trade) No N-1

1 NIRV’S GUIDELINE STATUS, SOURCES NOT COVERED AND SLEEP PROTECTION

The following questions and responses relate to NIRV Part 1 (pages 2-4), which introduces the guidelines, explains their statutory underpinning and identifies the sources not assessed under NIRV.

Issue or question raised by stakeholders	EPA response
<p>Questions on the legal status of NIRV and its application</p> <p>Because NIRV is not law, there cannot be any enforcement because it is not a SEPP or a legislative document.</p> <p>Under the EP Act, there is nothing that covers noise from industry other than EPA scheduled premises.</p> <p>Concern that NIRV only applies to new premises.</p> <p>The incorporation of procedures from SEPP N-1 makes the legal status of NIRV confusing. For example, in Major Urban Areas, does NIRV have statutory force?</p> <p>NIRV should become a statutory policy to provide general certainty and simpler enforcement</p>	<p>The Applying NIRV guide explains how the recommended levels can be applied in approvals and enforceable compliance tools. Enforcement action using these tools can generally be taken on the basis of the impact of the noise. The NIRV recommended levels can help to make these assessments.</p> <p>Where the NIRV recommended levels are applied in an approval document such as a permit or work plan, the levels would have statutory effect.</p> <p>S31A (a) and (e) Pollution Abatement Notices of the EP Act apply to unreasonable noise, including noise from non-scheduled industrial premises.</p> <p>NIRV applies to both existing and new premises. The Applying NIRV guide clarifies when and how to apply NIRV.</p> <p>NIRV does not have statutory status. For the recommended levels to have legal force, they must be incorporated in the conditions of an approval or compliance tool.</p> <p>Without prejudicing the ability of EPA to consider different approaches in future, EPA considers that non-statutory approach of NIRV is currently appropriate in regional Victoria.</p> <p>The explanatory notes Appendix G provides further background to this decision.</p>

Issue or question raised by stakeholders	EPA response
<p>Varying from the recommended levels/flexibility</p> <p>Support that NIRV guidelines have more flexibility for enforcement than under SEPP N-1, and broader scope for setting decibel levels depending on circumstance. However, as the guidelines are fluid, it would be important to provide set judgement criteria that planners and councils can refer to so as to make a consistent maximum noise level assessment according to area.</p> <p>If the recommended levels cannot be attained, then the proposal should not be allowed to go ahead. Provisions for varying from the levels appear to allow for industry to 'convince' regulators to forgo community protection.</p> <p>NIRV and the Draft Approvals Guideline (now Applying NIRV guideline) emphasise 'industry linked to a mineral or stone resource' when describing the provisions for 'cases where it is impractical to meet the recommended levels.' Concern that this carries the implication that all proposed mine or quarry sites are 'mandatory locations' and should automatically qualify for the alternative process.</p>	<p>NIRV should not be understood as generally 'fluid' in application of decibel levels. In NIRV Part 1 and the Applying NIRV guide, EPA has clarified that authorities should not routinely vary from the levels. In most cases the levels should be applied strictly in approval and compliance decisions. Section 4 of the Applying NIRV guide sets out the situations where the recommended levels may be deviated from those in NIRV. This has limited application and should not be used to provide alternative decibel levels whenever meeting the levels is challenging or carries a material cost.</p> <p>The Applying NIRV guideline provides an alternative process to achieve a reasonable noise outcome if industry cannot meet the recommended levels. NIRV clearly states that authorities should not approve proposals that exceed the recommended levels unless they have applied this complete process, which looks at alternatives to achieve the appropriate level of protection.</p> <p>In response to this query, the Applying NIRV guideline section 4.2 now states that 'even through a site may face location constraints, it does not mean that it will automatically qualify for the alternative approach.'</p>
<p>Other implementation questions</p> <p>Concerned that without adequate ongoing education and quality resources the local government will denigrate to simple application of generic limits.</p> <p>Concerned with implementation, particularly where NIRV levels will be lower than existing cases.</p> <p>Mine work plans are regularly varied, due to changed operations or by DPI. How will this be managed with NIRV?</p> <p>Some projects have licence conditions that refer to 'the most recent regulatory requirement.' Seek confirmation that regulators will not simply apply the new limits to existing sites.</p>	<p>The Applying NIRV guide was produced in response to these concerns. As part of implementing NIRV, EPA will also meet with other regulators to advise on these matters.</p>

Issue or question raised by stakeholders	EPA response
<p>Wind turbine noise</p> <p>Why does NIRV not cover wind turbine noise?</p>	<p>The way that wind farms generate noise is unlike most sources of industrial noise, and guidelines and standards have been developed for their assessment.</p> <p>NIRV was developed to complement the industry noise Policy, SEPP N-1. SEPP N-1 sets noise measurement requirements for most sources of industrial and commercial noise. However, SEPP N-1 was not designed for windfarm measurement. Because NIRV is based on SEPP N-1, and there were more appropriate controls for wind farm measurement, EPA did not include them within NIRV.</p> <p>The main reasons that windfarms require tailored noise controls are that:</p> <ul style="list-style-type: none"> • the noise from windfarms increases with windspeed and can be loudest in moderate to high wind conditions. This is unlike typical industrial noise, which is most intrusive in very low or still wind conditions. • wind farm noise measurement involves assessing the combined noise from natural wind effects (such as the rustle of foliage) with the turbine noise. With other industrial sources of noise, measurement is done without wind disturbance. Unique noise measurement techniques and noise criteria are needed to account for this difference. • prediction of wind farm noise requires specific assessment of wind and other atmospheric conditions, accounting for the height of the turbines and other concerns unique to wind turbines. <p>Specific wind farm guidelines have processes for assessing these issues.</p>
<p>Where a motor racing track is conducting frequent commercial vehicle testing not directly associated with a race, what controls apply?</p>	<p>Noise from sporting events is not assessed under SEPP N-1. It is also not assessed under NIRV.</p> <p>However, commercial vehicle testing not in association with a race event would not be considered a sporting event and the NIRV recommended levels would apply. Footnote 3 on page 3 of final NIRV addresses this.</p>
<p>EPA's <i>Guidelines on noise from frost fans</i> (publication 1043) currently sets different noise levels in GWZ and FZ. These levels should be the same.</p>	<p>EPA will reassess the frost fan guidelines in future.</p>

Issue or question raised by stakeholders	EPA response
<p>Sleep protection</p> <p>Draft NIRV stated that overall its recommended levels protected sleep at night. How is this achieved?</p>	<p>At the time of development of draft NIRV, the most recent World Health Organisation (WHO) advice for protection of sleep recommended levels of 45 dB at night. NIRV's zone level table resulted in levels no higher than 45 dB in any residential zone.</p> <p>Since release of draft NIRV, EPA became aware of new WHO recommendations for a lower level of 40 dB at night.</p> <p>EPA assessed the land use situations where NIRV's recommended levels would exceed 40 dB, such as where residential areas are adjacent to heavy industrial areas.</p> <p>While recognising these situations, changes were not made to the recommended levels in these cases, as:</p> <ul style="list-style-type: none"> • the NIRV levels are based on the mechanisms of SEPP N-1 and such a change would reduce consistency between current statutory Policy and guidelines based on this Policy. • to do so would create inappropriate differences in the obligations for industry noise between Rural Areas and Major Urban areas (and between NIRV and SEPP N-1) • by modifying their sleeping arrangements, residents adjacent to heavy industrial areas are able to achieve higher levels of acoustic protection than assumed under the WHO guidelines, providing a sleep-protective outcome suitable to the land use situation. <p>The final NIRV introduction now states that the recommended levels provide different degrees of amenity protection in different land use zones, and promote normal domestic use of the home and sleep at night.</p> <p>Final NIRV also notes that land zoning will affect the level of protection provided to sensitive uses, particularly where residential areas are adjacent to heavy industrial or business zones. The explanatory notes section 3 expands on this issue, and the Applying NIRV guide section 6 encourages planning authorities to separate heavy industrial and residential zones.</p> <p>EPA envisages that policy decisions for appropriate levels of night time noise would be addressed through a review of SEPP N-1. A Policy review provides for the balancing of ideal environmental standards with other considerations such as cost and community views.</p>

Issue or question raised by stakeholders	EPA response
<p>NIRV consistency with Environment Protection Act principles</p> <p>The approach of NIRV allows for the introduction of new noise in previously quiet environments, and in some cases increases noise from the levels in N3/89. Concern that the approach is not consistent with the Purpose of the EP Act, and EPA’s duties. In particular, 1B ‘principle of integration of economic, social and environmental considerations.’</p>	<p>The approach of NIRV expressly responds to the need to balance environmental, economic and social considerations.</p> <p>NIRV sets recommended levels higher than existing ambient sound in quiet areas because EPA recognises that this is a necessary measure to enable appropriate development in rural areas. To set recommended levels at the existing ambient level would result in significant restrictions that would go beyond those necessary to provide reasonable protection to people, and to align with planning scheme permissions and restrictions for industry uses.</p> <p>NIRV’s approach embeds considerations of environmental need, economic development, overall community wellbeing and cost-effective and proportional environmental control measures.</p>

2 ADVICE FOR REGULATORS: PARTICULAR QUIET AREAS, MULTIPLE PREMISES

Final NIRV Part 2 (pages 5-6), which raises issues that regulators must consider when applying NIRV.

<p>Where impacts may not be appropriate</p> <p>The N3/89 guidelines recognise protection of the existing ambient levels in the advice stating 'When in the opinion of the Authority a particularly quiet area should be preserved it may establish more stringent limits or to oppose the proposal at the outset.' Where is this advice in draft NIRV?</p> <p>Concern about new industry altering the natural soundscape, including for those who live in quiet areas to record or use sound.</p> <p>Within the Farming Zone, a 'Bed and breakfast' is a Section 1 (permit not required) use, whereas noisy premises such as 'stone extraction' is a Section 2 (permit required) use.</p> <p>Establishing noisy uses near existing residential premises can limit their ability to develop complementary uses such as bed and breakfasts, which would otherwise be allowed. This may not be an appropriate outcome considering the different permit requirements of these uses. NIRV guidance should address this.</p>	<p>EPA recognises that draft NIRV omitted advice on protecting existing quiet areas similar to that in N3/89.</p> <p>In response to this concern, NIRV Part 2.1 now guides approval bodies when making decisions that introduce noise to quiet rural environments.</p> <p>New industries, designed to meet the recommended levels, can disturb the natural soundscape in quiet areas.</p> <p>To address this concern, EPA included a new section in NIRV. Part 2.1 of NIRV guides approving bodies on factors to consider when making decisions that introduce noise to quiet rural environments. This section recognises that the recommended levels do not prevent change in sound within areas such as parkland.</p> <p>An approving body may decide to not allow a use if this change in acoustic environment is inappropriate for the area.</p> <p>It is important for government decision-makers to understand the effect of noise on these types of uses.</p> <p>Final NIRV Part 2 advises regulators that approving a new use that meets the recommended levels might not match the expectations associated with some types of current uses, such as a bed and breakfast.</p>
---	---

<p>Planning for particularly quiet areas (octave band levels - draft NIRV step 6B)</p> <p>The frequency weighting should be specified.</p> <p>In isolation, this allowance seems very generous.</p> <p>The range of 5-10dB above background is unclear.</p> <p>Industries are unlikely to comply with this provision.</p> <p>It is unclear how this requirement would operate in combination with the other aspects of NIRV.</p>	<p>EPA has significantly revised this section in final NIRV, section 2.1.</p> <p>NIRV now specifies linear octave bands.</p> <p>The design requirement is based on octave bands rather than LA90. It may present a substantial engineering challenge.</p> <p>A range is provided as this advice should not be taken as a prescriptive limit. The section should be understood as advisory and encouraging, with an emphasis on applying commonly available technology to attain the lowest achievable outcome to address issues.</p> <p>A decision on applying this requirement would be made through the approval and design process, rather than industry response to reports of noise impact. It would typically apply during environmental effects statements, EPA works approvals, or other proposals with the input of EPA.</p> <p>The provisions for octave band levels have been refined. It is now clearer that application of octave band levels would not be routinely considered. Additional text describes the type of cases where octave band levels would be applied. See also the explanatory notes for this section.</p>
<p>Managing noise from multiple premises</p> <p>The draft NIRV variation for multiple noise contributors is unclear. The guidelines appear to allow for some 'creep' above the recommended levels in some situations.</p>	<p>NIRV now outlines a general obligation for regulators and industry to consider noise from multiple premises.</p> <p>The applying NIRV guide section 5 advises on how to apply these requirements where there are multiple current or anticipated noise sources in an area. It applies to new proposals or noise reduction works for existing situations.</p> <p>This advice has more information than draft NIRV, with further explanation regarding noise 'creep' and multiple premises.</p>

3 NIRV METHODS FOR DETERMINING RECOMMENDED LEVELS, BEST PRACTICE

The following questions and responses relate to NIRV Part 3 (pages 7-12), which provides the procedures for setting recommended levels. EPA substantially changed these aspects of draft NIRV in response to the concerns raised.

Issue or question raised by stakeholders	EPA response
<p>Best practice</p> <p>Questions/statements:</p> <ul style="list-style-type: none"> • Interpretation may vary on what constitutes best practice, e.g., when going lower than the limits • A commercial reality test must be applied to the application of best practice. • The application of 'reasonableness' when applying best practice may be beyond the capacity of local agencies, risking inconsistency. <p>EPA should detail examples of best practice strategies to reduce noise, as well as specify a minimum to maximum range of dB levels that should be attained as a result of implementing the best practice minimisation.</p> <p>If there is an Environmental Effects Statement, this should be considered as applying best practice, no later approval should contradict this.</p> <p>When inspectors, such as local council and planning officers, inspect businesses and find that current methods noise reduction are not sufficient to meet recommended levels, the cost to business to rectify these issues can often exceed reasonable judgement in regards to best practice.</p> <p>The business' difficulty in complying to suggested 'best practice' scenarios could relate to cost, restriction of space or the degree of difficulty in implementation of a specific strategy.</p>	<p>The introduction to final NIRV Part 3 addresses this topic. It has a different emphasis on best practice. The new section 'taking reasonable opportunities to reduce noise' is more in line with the obligations under SEPP N-1.</p> <p>The revised explanatory notes section 4 has further advice on best practice that responds to these concerns. This supersedes the advice in the Draft Approval Guide.</p> <p>No change. EPA does not consider that the principles for best practice noise control, and taking reasonable opportunities to reduce noise, are amenable to this approach.</p> <p>Where noise control measures to meet a defined noise level are approved through a statutory process, such as an EES, these will continue to have effect until changes that require a new approval are proposed. Taking reasonable opportunities to reduce noise would be part of the proposal for new works or other site changes.</p> <p>The Applying NIRV guide provides steps for authorities to follow when requiring controls for existing noise issues.</p> <p>The guidance emphasises action may need to be taken even where noise control may carry a cost, or that an industry may need to change practices or relocate to address issues. This advice is complemented by advice in Section 2 of the Applying NIRV guide on principles for applying NIRV, and Section 3.1 on applying NIRV to existing uses.</p> <p>These state that regulators should give industry reasonable opportunity to raise significant challenges with reaching recommended levels and responding to these issues. Section 4.1 also provides for cases where a location-constrained industry may not be able to reach the recommended levels.</p> <p>These processes provide scope for reasonable judgement on what noise control options are attainable for a premises.</p>

Issue or question raised by stakeholders	EPA response
<p>Major urban and rural areas</p> <p>Comments:</p> <ul style="list-style-type: none"> • The 15,000 population threshold for Major Urban areas was too high, as some smaller cities had background levels comparable to Melbourne • The planning zoning based approach to delineating Major Urban and Rural Areas did not work well, such as for transition to parkland or for where farming zones were mixed with other zones • In areas to the east of Melbourne there are large areas of Green Wedge Zone which mean that the planning approach does not work well. <p>Where the noise emitter is in a rural area, and the noise receiver is within the major urban area abutting the rural area, which method applies?</p> <p>A stakeholder suggested that, as the approach under NIRV is easier to follow than SEPP N-1, it should be applied to peri-urban areas on the fringes of Melbourne, and any land in rural, rural conservation, farming and green wedge zones.</p>	<p>Following further research and consultation, these issues have been addressed by:</p> <ul style="list-style-type: none"> • revising the major urban area population threshold to 7000 people • delineating the areas using GIS information on Urban Centres from the Australian Bureau of Statistics. • basing the major urban area for Melbourne on the extent of the Urban Growth Boundary (at the time of NIRV publication), where this extends beyond the SEPP N-1 area. <p>The 'major urban area' approach would apply. See final NIRV Part 3.</p> <p>The change to the Melbourne major urban area (see above) means that more of these peri-urban areas in Melbourne's outer east are rural areas under NIRV. However, it is not appropriate to apply the NIRV 'Rural areas' method to all urban fringe areas. Much of the rural land to the north and west of Melbourne is located within the current SEPP N-1 boundary. In these areas, SEPP N-1 must be applied.</p>
<p>Special purpose zone treatment (Draft NIRV Step 1, page 6, before zone level table)</p> <p>In draft NIRV, the Special Use Zone defaulted to the levels for an Industrial 3 Zone. What is the approach where a Special Use Zone is provided for an industrial park, or for agricultural uses?</p> <p>Draft NIRV recognises that an Urban Growth Zone will incorporate a Precinct Structure Plan, which should be used for NIRV zone classifications. The Comprehensive Development Zone may have a development plan that performs a similar function.</p>	<p>Final NIRV provides clearer advice and examples under part 3, step 1.</p> <p>Final NIRV now has advice relating to the Comprehensive Development Zone and applying its development plan for NIRV zone classifications.</p>

Issue or question raised by stakeholders	EPA response
<p>Distance adjustments (Draft NIRV Step 2)</p> <p>The text is difficult to follow, and the flowchart reference is unclear.</p> <p>This step is open to being ignored or abused by industry.</p> <p>When industry is established next to existing sensitive areas, it is not reasonable that people living closer by should expect less protection than those at greater distance. People living closer by must have the same rights of protection and amenity as anyone further away.</p> <p>The distance adjustment should specifically account for Public Use Zones (e.g. PUZ, PPRZ) for a body of water between a noise emitter and a noise receiver.</p> <p>Because a body of water can attenuate noise less than ground, the distance adjustment should be 1 dB per 200 m, rather than 1 dB per 100 m.</p>	<p>EPA has rephrased this section (Final NIRV s3.1) and the flowchart (now in the explanatory notes)</p> <p>This step is clearly a required part of NIRV. The Zone Level table now states that it must be used with the distance adjustment. Regulators can validate whether industry has appropriately followed all the NIRV steps.</p> <p>No change has been made. The distance adjustment is made on the basis of proximity to the noise emitting zone, rather than existing or later established industry uses. See discussion in section 5, 'Land-use planning principles and NIRV' of this document. Where the noise generator and receiver are in the same zone, the same recommended levels apply regardless of distance.</p> <p>No change.</p> <p>Smaller rivers and streams often fall within the same zone as the surrounding land use. No distance adjustment applies in these cases.</p> <p>Where there is an intervening zone for a body of water, a distance adjustment applies. This is typically because the waterway is large or surrounded by park or other reserved land.</p> <p>The adjustment would be from the end of the emitting zone, with the distance measured across the water body.</p> <p>The distance adjustment accounts for reasonable amenity expectations at further distances from the noise emitting zone, and is not to represent acoustical attenuation over distance. The 1 dB/100 m distance adjustment is appropriate for both land and water.</p>
<p>Minimum noise levels/base noise levels (Draft NIRV Step 4)</p> <p>Draft NIRV used the terminology 'minimum noise levels'. The recommended levels are the maximum not the minimum that are allowed, so this term is confusing.</p>	<p>Final NIRV Step 3 now uses the term 'base noise level.' It refers to the lowest recommended levels that can be set.</p>

Issue or question raised by stakeholders	EPA response
<p>Background-relevant areas (Draft NIRV Step 5)</p> <p>Draft NIRV advised on cases where a background noise assessment may be relevant (e.g. within a distance from a freeway). A number of issues were raised:</p> <ul style="list-style-type: none"> • The definitions for road types were unclear, e.g. 'undivided main road'. • Some 'small' roads can influence background levels at greater distances than estimated by EPA. • The approach did not consider the categories under AS 1055.2-1997. <p>At a few hundred meters distance from a regional road, the background noise from traffic can vary significantly with changes in atmospheric conditions. How are noise limits established in reference to these levels?</p> <p>NIRV provides for a background assessment where the noise receiver is greater than 600m from the noise emitting <i>zone</i> boundary. There should be a similar provision for assessment where the distance between the <i>noise emitting premises</i> and receiver is greater than 600m.</p> <p>Background level checks are difficult to perform, particularly where there is established industry.</p>	<p>EPA has revised the definition of 'background-relevant area' under final NIRV Steps 4 and E2. It allows for more flexibility and judgement about when to undertake a background level assessment. Areas where background sound is influenced by road traffic are background relevant areas.</p> <p>The updated Guide to Measurement and Analysis of Noise will address this.</p> <p>No change. This background noise assessment relates to the Step 2 distance adjustment, which subtracts 1 dB for every 100 metres from the emitting zone boundary. Where the distance from the emitting zone boundary is greater than 600metres, the adjustment will be -6 to -9dB. The background level assessment helps to prevent the Step 2 distance-adjustment from setting recommended levels that are lower than the background level.</p> <p>The actual distance between the noise emitter and receiver is not considered in the distance adjustment. Any additional undeveloped industrial land, or land owned as a 'buffer,' is not considered in the distance adjustment and is therefore not relevant to the background level assessment.</p> <p>NIRV recognises this issue and does not require background level assessments in most situations. It only recommends assessment where freeway or highway traffic, or surf are significant audible noise sources, or at large distances from the emitting zone boundary.</p> <p>Where there is established industry in an area, the SEPP N-1 method adopted in NIRV allows for background measurement to be conducted at another representative location that is unaffected by industry noise.</p>

Issue or question raised by stakeholders	EPA response
<p>Variations for utilities</p> <p>Draft NIRV set higher levels for industry in the Farming Zone than industry in low density residential or rural living type zones. These higher levels are provided to recognise the emphasis on farming uses in the Farming Zone. Is it appropriate to apply these levels to other industrial uses not related to farming?</p> <p>Although lower amenity associated with agricultural activity would be reasonably expected in the Farming Zone, these areas are otherwise generally considered to have high amenity values and low background levels, and it would not be appropriate to extend the provisions for farming to other industry uses.</p>	<p>In response to these queries, EPA assessed the range of industry uses permitted in the Farming Zone, Rural Activity Zone and Green Wedge Zone.</p> <p>Generally, only 'rural industry' is permitted in these environments and EPA considers the recommended levels appropriate for managing these noise sources. However, utility installations, such as electrical substations, or electrical transformers are also usually allowed in all these zones.</p> <p>After assessing the range of likely uses and how they are located in rural environments, EPA modified NIRV (box for Steps 2 and 3) to set specific provisions for utility recommended levels. These changes recognise that differing community views may be had for rural industry and other noise sources in farming areas. They are explained in the explanatory notes, section 3, page 13.</p>

4 EARTH RESOURCES ISSUES

The following questions and responses relate to how NIRV sets levels and provides variations for earth resources. NIRV Part 3.2 has procedures for setting recommended levels for earth resources. NIRV Part 4 describes variations that may be applied.

Issue or question raised by stakeholders	EPA response
<p>The draft NIRV guidelines make the assumption that mining always occurs in the Farming Zone and prescribes default noise limits based on the Farming Zone planning scheme criteria. Whilst it is recognised that the Planning Scheme zone levels may not be a reliable means of characterising background levels and receptors for earth resource operations, it is not considered appropriate to nominate limits based on an assumption that all operations are best characterised by Farming Zone attributes. Other criteria should be considered.</p>	<p>Draft NIRV prescribed a single set of recommended levels for all earth resources.</p> <p>In response to the submissions and further consultation with the earth resources industry and regulators, final NIRV sets recommended levels for earth resources which respond to the land use zoning where the noise receiver is located. NIRV sets lower levels for people living in quieter rural zones and higher levels for industrial areas.</p>
<p>Mining operations may have ancillary infrastructure located across significant geographic areas, remote from the main mine site.</p> <p>It is not clear from the guidelines whether ancillary infrastructure (e.g. an evaporation pond facility ventilation shafts, tailings dams, pumping stations etc.) are still classified as earth resources, and whether the earth resources noise levels would apply.</p>	<p>Final NIRV Part 3.2 confirms that these installations, within the approved work area, would be covered by the earth resources recommended levels.</p>
<p>Draft NIRV Step 6 Section D has provisions for final 'site rehabilitation, short projects and necessary unshielded work'. These describe circumstances where an allowance period may be approved providing increased noise limits, up to 10 decibels greater than the recommended levels in the Day Period. The provisions allow for periods of higher noise level works. However, for some sites, higher noise output from unshielded work would be intermittent. Therefore, designation of a fixed period of time for a 'noise allowance' is not likely to be practical. The most practical means of applying a noise allowance is to measure the 'worst-case' activities, and tally the number of days where the measured levels exceed the normal recommended levels. The allowance period should be allocated on this basis.</p>	<p>This part of final NIRV (Part 4) has been revised to make it clearer which processes qualify for a variation, what variation to the recommended levels applies, and limitations to applying the variation.</p> <p>The defined period allows time in which these noisier unshielded works may occur. It does not mean that noise levels from these noisier activities will exceed the recommended levels every day during this period. The noise levels will usually depend on the site activities conducted and the weather conditions at the time.</p> <p>EPA decided not to provide for a tally method for noisier unshielded works. A defined allowance period gives the community certainty and advance notice of when noisier works may occur. Using a tally system where it would only be known after the fact that the noisier work day was 'part of the allowed tally' would not provide appropriate notice for the community.</p> <p>Final NIRV does however more explicitly recognise that a project might present other exceptional circumstances that make noise above the recommended levels necessary, and provides scope for regulators to consider these circumstances as variations from NIRV Table 2. The examples in the explanatory notes Appendix E also assist in explaining the nature of these decisions.</p>

Issue or question raised by stakeholders	EPA response
<p>Many extractive sites at present are required to carry out deliveries twenty-four hours a day, seven days a week. The demand for other sites to lengthen their operating hours will increase in the future and it is of concern that some extractive sites which may exceed the evening limit in quiet country areas may find it difficult to operate before 7.00 am or on Saturday afternoons.</p>	<p>This obligation applies under N3/89 currently and does not fundamentally change under NIRV. These current challenges for meeting noise levels do not give basis for varying or removing evening recommended levels.</p>
<p>Why are the variations for particular open are activities provided? This indicates an unreasonable bias towards industry needs, above environmental protection.</p> <p>Concern that the text providing for multiple periods of higher noise from particular open air activities (now in final NIRV Table 4) gives too much licence to industry, particularly where regulators are not attentive to on-the-ground site practices.</p> <p>The introductory text to this section in draft NIRV stated that regulators may vary from the recommendations. The language adopted appeared to give too much scope for variation, without justification.</p>	<p>These variations are necessary to enable some projects to occur. In many cases, the variations are to provide for noise control works that offer broader project benefits. In others, they are for defined periods of noisier works that cannot practicably be mitigated. EPA considers that it is reasonable to expect some additional noise in these circumstances as the different nature of the work clearly necessitates a different approach more akin to that generally accepted by the community for construction-type noise. The variations are only applied where best practice measures to meet the recommended levels are not available.</p> <p>The text in this section now more clearly expresses the restrictions around these variations and how regulators need to endorse them in approval documents.</p> <p>This text has been replaced with different messages that recognise that any variation from the approach in Table 4 would need to be due to 'exceptional circumstances' that make noise above the recommended levels necessary. NIRV relies on regulators to apply appropriate judgement in considering these circumstances. The new examples in the explanatory notes assist regulators to make these decisions.</p>

Issue or question raised by stakeholders	EPA response
<p>Activities associated with Earth Resources differ in their potential to emit noise from other activities within the Farming Zone (e.g. pumps, tractors, spray equipment). EPA's own assessment indicated that if earth resources were to be considered to be industrial that for many sites where the activity is closer than 500 m from the working area to the nearest resident, that meeting the recommended levels within the draft NIRV would not be possible. Not being able to meet the recommended levels is not a valid reason to not classify the activity as industrial. Earth resources are industrial in nature and best practice obligations should apply to them.</p> <p>Draft NIRV does not appropriately manage earth resources noise because it increases the allowable noise levels from those in N3/89.</p> <p>EPA stated that it could not adopt a planning-scheme based approach (with levels varying depending on the location of noise sensitive uses) because the mine and quarry licensing system is not transparent enough to clearly define site boundaries from which to calculate noise levels. This is not an adequate justification for earth resources not having site-specific recommended levels. The levels should be based on the specific site, in a way similar to how other segments of the environment are regulated (e.g. wastewater discharges).</p>	<p>Earth resources are a subset of industry covered by NIRV. Like under draft NIRV, in final NIRV earth resources will need to meet the applicable recommended levels.</p> <p>The requirement to take reasonable opportunities to reduce noise also applies to earth resources, and earth resources industry need to apply best practice before the variations in Part 4 of NIRV can be considered.</p> <p>EPA considers that the recommended levels for earth resources are appropriate in the context of the overall approach of final NIRV.</p> <p>NIRV now sets recommended levels for earth resources which respond to the land use zoning where the noise receiver is located. NIRV sets lower levels for people living in quieter rural zones and higher levels for industrial areas.</p> <p>While the approach is not the same as for other industry, EPA considers that the environmental outcomes provided appropriately follow the intent of the planning system while providing clear and workable parameters for industry, regulators and the community.</p>

5 LAND-USE PLANNING PRINCIPLES AND NIRV

The following questions and responses relate to land-use planning principles and the way NIRV sets recommended levels based on these.

Issue or question raised by stakeholders	EPA response
<p>Many residential premises in rural Victoria are located in areas where the current planning scheme would not permit them to be located. Therefore the use of planning zones as the key determinate is also problematic.</p>	<p>Planning schemes change over time, and can result in inconsistencies such as residential housing in now non-residential zones. While recognising this, EPA considers that a planning-based system for setting recommended levels is still appropriate.</p> <p>The recommended levels in NIRV are based on similar principles to those used in SEPP N-1, which take into account the influence of land-use zoning.</p> <p>As in the SEPP N-1 area, where there is a 'non-conforming' sensitive use in a commercial or industrial area, a lesser degree of protection applies to the sensitive uses. For example where a dwelling is located within an industrial zone.</p> <p>The commercial or industrial land use zoning needs to be taken into consideration. If lower noise levels were set due to the 'non-conforming' sensitive use, industrial uses would face unreasonable additional compliance challenges, inconsistent with purpose of the zone to encourage industrial activity.</p>
<p>It is not reasonable to provide a generic set of recommended levels across all Farming Zones.</p>	<p>The farming zone is categorised into two types, with higher levels recommended for cases where the agricultural activity is 'intensive'.</p>
<p>There are areas within the Farming Zone that are subject to noise. However, there are many areas in the State within Farming Zones that are quiet, without noise from local farming activity.</p> <p>A person should reasonably expect noise impacts when moving into an area with farming activity. However, a person should also reasonably expect that if they move into a Farming Zone without local noisy activity, that they be protected from new impacts.</p>	<p>The recommended levels are set according the mix of activities and premises that could reasonably be expected to occur, given the intent and allowed uses in the zone(s).</p> <p>The levels respond to the purpose of a zone, rather than the mix of premises existing at a point in time.</p> <p>In some cases the existing quiet of area should be preserved. Part 2 of NIRV guides approval bodies this issue.</p>

Issue or question raised by stakeholders	EPA response
<p>The approach in draft NIRV is inconsistent with the requirements of the planning scheme.</p> <p>The scheme requires protection and enhancement of residential amenity in numerous clauses including State Planning Policy Framework cl13.04-1 (Environmental risk – Noise and cl52.09 (Extractive Industry And Extractive Industry Interest Areas).</p> <p>Through its references to protection of amenity, the scheme requires that existing amenity (i.e. existing ambient noise levels) is retained and that new developments do not detract from this.</p> <p>Neighbours should be entitled to retain the ambient noise level at the time of purchase.</p>	<p>EPA does not support this interpretation of the amenity principles of the planning scheme.</p> <p>The scheme’s references to protecting amenity do not equate to no change in the environment.</p> <p>While the impact of noise needs to be considered, existing quiet is not ‘as of right’ just as a property’s existing views are not ‘as of right’.</p> <p>However, EPA recognises that approving new industry can change the sound levels experienced in an area.</p> <p>To help ensure that regulators understand this, there is a new section in NIRV (Part 2) to assist planning authorities and other approval bodies in making decisions about new industry in quiet areas.</p> <p>In some cases, the existing quiet of an area is valued and emphasised in the local planning policy framework. In these situations, there may be a case for the planning authority to decide that the change brought about from a new use is inappropriate.</p>
<p>For someone living in a farming zone that is seen as pristine or having high living amenity (only transient occasional farming noise sources), why should they be subjected to noise levels in excess of those enjoyed by the rural living or other quiet areas?</p>	<p>The Farming Zone emphasises the importance of agricultural uses and protection of these uses. This includes ensuring that dwellings do not adversely affect the use of land for agriculture.</p> <p>This clearly differs from the rural living type areas, where residential uses in a rural environment and protection of amenity is emphasised in planning schemes.</p> <p>NIRV responds to this planning scheme intent.</p>
<p>The protection of all uses and sensitive sites should be the same, no matter which zone they are in and no matter what time of day evening or night.</p>	<p>The recommended levels are set according the mix of activities and premises that could reasonably be expected to occur, given the intent and allowed uses in the zone(s).</p> <p>Different noise levels are allowed for different times of day, to reflect the uses that are to be protected and the variation in background levels throughout the day and night. For example background levels are typically quieter at night.</p> <p>This approach aligns to SEPP N-1 and is considered appropriate, and consistent with nuisance law principles and the intent of the planning scheme.</p>

Issue or question raised by stakeholders	EPA response
<p>The NIRV guidance does not coordinate with requirements for stone resource industries to own or control land buffers (State Planning Policy Framework cl13 cl13.03-2) and obligations for these industries to meet relevant environmental criteria at the boundary of this area.</p> <p>The NIRV levels should be applied in conjunction with suitable buffer zones around quarries that do not permit noise sensitive developments, such as housing, in close proximity to quarries.</p>	<p>EPA consulted with the Department of Planning and Community Development, Department of Primary Industries and relevant industry groups on this issue.</p> <p>EPA recognises the obligations under the planning scheme but considers that requirements for industry to meet emission levels at the boundary of a 'buffer' are not very compatible with NIRV or SEPP N-1, as these set limits by reference to the location of noise sensitive areas (e.g. residential premises).</p> <p>EPA recognises the importance of maintaining appropriate land use separation. Approval bodies need to be assured that the recommended levels will be met at sensitive areas before approving a use. Planning authorities should also be cautious before facilitating sensitive development near to a quarry, and should not assume that 'buffers' around a site, such as for preventing impacts from blasting, will also prevent noise impacts.</p> <p>The Applying NIRV guide section 6 guides planning authorities on these issues.</p>
<p>The final NIRV needs to describe the concept of land zone use determining the allowable noise levels.</p> <p>As zonings have a strong influence on the outcomes, it is important for planning authorities to be aware of the noise outcomes of planning decision making.</p>	<p>The introduction of NIRV raises this issue.</p> <p>The Applying NIRV guide section 6 addresses how rezoning land changes the recommended levels.</p>
<p>The issue of zone encroachment of new residential and green wedge zones on existing industry is an issue for business.</p> <p>Many sites in rural areas may start to see an increase in noise complaints due to the change in zoning, and for these areas a more 'case by case' approach may need to be taken.</p>	<p>Like SEPP N-1, NIRV does not provide recommended levels that respond to the difficulties created by land use change and encroachment. Managing land use change was outside of the scope of NIRV.</p> <p>EPA recognises that these situations can generate compliance challenges and it is important for planning authorities to understand these impacts. The Applying NIRV guide highlights these issues and encourages planning authorities to properly consider risk of noise impacts as part of strategic land use planning.</p>

6 TECHNICAL ACOUSTIC CONCERNS

A number of comments related to the need for further guidance to assist noise prediction and evaluation in rural environments, particularly where noise carries for significant distances from industry.

EPA recognises these difficulties and will address many of these issues through an update to the *Guide to measurement and analysis of noise* and other publications incorporating content from the draft *Industry noise and statutory approvals* guidelines.

<p>Request for assessment tools for noise not covered by SEPP N-1</p> <p>EPA should provide advice on noise measurement techniques for:</p> <ul style="list-style-type: none"> • loud, sporadic, short-term noise events • low-frequency noise. 	<p>NIRV adopts the measurement techniques of SEPP N-1, which does not have specific provisions for either of these issues. Developing additional measurement techniques is outside of the scope of NIRV.</p> <p>NIRV and the explanatory notes provide further information to clarify the operation of the octave band criteria for protecting particular areas, and the how these criteria relate to control of noise sources with a strong low frequency component. See NIRV Part 2, and the explanatory notes for NIRV Part 2.</p>
<p>Questions about offsite monitoring</p> <p>Mine and quarry approvals often require noise monitoring, this can be costly and impossible to curtail even after years of proof of compliance. Unfortunately the NIRV offers no relief for this. EPA advice is sought on cost-effective methodology and equipment for mines and quarries</p>	<p>These issues relate to operational decisions of regulatory authorities and are outside of the scope of NIRV.</p> <p>EPA will advise on appropriate monitoring methods and periods through future planning and approval related guidance.</p>

<p>Acoustic assessment issues</p> <p>Approval and compliance in rural circumstances should focus on modelling, and where necessary calibration and validation of the model in near and far-field situations.</p> <p>If the model with checks shows compliance, this should be sufficient for sign-off of the licence.</p> <p>Checking noise compliance at remote locations can be problematic. If a model was sufficient for initial approvals (works approval or permit) then this should be appropriate, once validated, to demonstrate compliance. Doing so helps avoid the many issues associated with remote measurement, particularly with variable atmospheric conditions and other local noise sources.</p> <p>EPA should recommended suitable noise modelling packages. For example, a base model package that if used appropriately will provide sufficient results for modelling and approval.</p> <p>Guidance needed for what are background levels, particularly for the Latrobe Valley.</p> <p>Guidance needed where high winds and seasonal variation are a feature of the area.</p> <p>Need advice on assessment of noise under adverse (noise-favourable) weather conditions.</p> <p>It is unreasonable to expect compliance with worst-case conditions.</p> <p>NIRV should make an explicit statement about compliance to be for the 20% favourable conditions, and this means there will be single exceedances above this that does not mean non-compliance</p>	<p>EPA will address these issues through an update to the <i>Guide to measurement and analysis of noise</i>.</p>
---	--

7 OTHER ISSUES NOT WITHIN THE SCOPE OF THE NIRV DOCUMENTS

During consultation, EPA received several questions relating to investigation and enforcement. These concerns were forwarded (without submitter's details) to inform EPA's Compliance and Enforcement Review. In summary, these queries were:

- a local council's position that, where the premises did not require a planning permit, EPA should lead investigations.
- concern from a resident that the Department of Primary Industries required greater input and support of EPA to undertake investigations.
- concern that EPA does not take on its environmental protection and enforcement role where other agencies may not have not effectively addressed an issue.
- concern that extractive industries are not generally scheduled premises under the EP Act and therefore do not have enough regulatory oversight relative to the impacts they cause.
- concern about the effectiveness of memoranda of understanding between EPA and other state agencies.
- queries about EPA's approval and compliance role in relation to motorsport venues.

In addition, the following comments were considered outside the scope of NIRV and its associated documents. EPA appreciates this feedback and will consider it in forming future noise-related projects:

- a request for EPA to provide advice, tools and support to industry on noise issues.
- a suggestion that government funding be available to encourage industry best practice.
- a suggestion that the guidelines should contain details of EPA regional and head office experts to contact for assistance.