Dulles Toll Road Highway Traffic Noise Policy

February 2, 2011

Note: This Traffic Noise Policy will be submitted to the Federal Highway Administration for review and approval. In order for this policy to comply with criteria set forth in the Federal Highway Administration regulations, 23 CFR Part 772 (June 2010), modifications may be required in light of FHWA comments.

Table of Contents

Appendices

Draft Dulles Toll Road Highway Noise Policy

February 2, 2011

1. Purpose

The Metropolitan Washington Airports Authority (Airports Authority) strives to be a good neighbor to adjacent communities and endeavors to address highway traffic noise generated by the Dulles Toll Road to protect the health and welfare of the public residing in those communities. The purpose of this highway traffic noise policy is to provide noise abatement criteria and requirements for highway traffic noise studies and noise abatement measures.

It is the policy of the Airports Authority to employ the following guidelines for highway traffic noise evaluation and abatement along the Dulles Toll Road: U.S. Code of Federal Regulations, Title 23, Part 772, Federal Highway Administration, "Procedures for Abatement of Highway Traffic Noise and Construction Noise" (June 2010).

2. Definitions

Abatement: Measures used to mitigate or reduce highway traffic noise levels such as noise barriers. Examples of abatement can include traffic management measures, alteration of horizontal and vertical alignments, acquisition of property, construction of noise barriers, or noise insulation of public use or nonprofit institutional structures. Planting vegetation between the noise source and receptor(s) is not considered an abatement measure because it is rarely acoustically effective.

Approach, as used in 23 CFR 772.5(g): Noise levels Leq(h) which are 1 decibel [dB(A)] below the levels shown in the Noise Abatement Criteria (NAC; Table 2) of the guidelines in 23 CFR 772 dated June 2010.

Barrier: A solid wall, earth berm, or combination earth berm and wall to provide highway traffic noise reduction for impacted properties. It is typically designed to break the line-of-sight between the receiver and the roadway noise sources.

Berm: Linear earthen mound constructed to provide a highway traffic noise reduction for impacted receptors.

Benefited: The recipient of an abatement measure that receives a noise reduction at or above the minimum threshold of 5 dB(A), but not to exceed the reasonableness design goal.

CFR: Code of Federal Regulations.

Date of Public Knowledge: The date of approval of the Categorical Exclusion (CE), the Finding of No Significant Impact (FONSI), or the Record of Decision (ROD) on a proposed Type I Project. The definitions of CE, FONSI, and ROD are in 23 CFR 771, *Environmental Impact and Related Procedures*.

A-Weighted Sound Level - dB(A): The unit used to measure noise that best corresponds to the frequency response of the human ear. More weight is given to the frequencies that people hear more easily, between 1,000 and 6,000 Hertz (cycles per second).

Decibel (dB): A unit used to measure sound pressure levels.

Design Year: The future year used to estimate the probable traffic volume for which a highway is designed. A period of time, usually 10 to 20 years from the start of construction, is used to determine the design year.

Existing Noise Level: The loudest hour noise levels from the combination of natural and mechanical sources and human activity that currently exist in a particular area. Existing noise levels generally should not include infrequent noise sources (e.g., lawn mowers).

Feasibility: The combination of acoustical and engineering factors considered in the evaluation of a noise abatement measure. It deals primarily with engineering considerations such as ability to provide noise abatement, constructability, utility impacts, safety concerns, and access restrictions.

FHWA: Federal Highway Administration.

Future Noise Level: The highest hourly highway traffic noise level predicted using the Federal Highway Administration's Traffic Noise Model in the design year.

Impacted: Any receiver/receptor or property that has a worst-case Leq approaching [within 1 dB(A)] or exceeding the Noise Abatement Criteria for the corresponding land use category, or that has predicted future noise levels in the build conditions substantially exceeding existing noise levels, even though the predicted future levels may not exceed the NAC.

Insertion Loss (IL): Insertion loss is the amount of noise reduction provided by the noise abatement measure, typically a noise barrier. The insertion loss is the difference between design year build noise levels with a noise barrier and design year build noise levels without a noise barrier. As such, the insertion loss is a function of a noise barrier's

height, length, and location, but it is independent of the magnitude of the future noise levels.

L*10*: The sound level that is exceeded 10 percent of the time (the 90th percentile) for the period under consideration, with L10(h) being the hourly value of L10.

Leq: The equivalent steady-state sound level that in a stated period of time contains the same acoustic energy as the time-varying sound level during the same time period, with Leq(h) being the hourly value of Leq.

Multifamily Dwelling: A residential structure containing more than one residence. Each residence in a multifamily dwelling shall be counted as one receptor when determining impacted and benefited receptors.

NAC: The Noise Abatement Criteria as shown in Table 2 of this Highway Traffic Noise Policy.

Noise: Unwanted or excessive sound.

Noise Sensitive Area (NSA): A discrete or representative location within a geographic location of a noise sensitive area for any of the land uses listed in Table 2 where a lowered noise level would be of benefit. In cases where a representative location is used, the entire noise-sensitive area does not have to experience noise levels that approach or exceed the Noise Abatement Criteria.

Noise Reduction Design Goal: The optimum desired [insertion loss determined from calculating the difference between noise levels with abatement to noise levels without abatement. The noise reduction design goal is considered to be achieved when at least one first row benefited receptor attains a minimum of 7 dB(A) of insertion loss.

Reasonableness: The combination of social, economic, and environmental factors considered in the evaluation of a noise abatement measure. This generally pertains to the cost-effectiveness of a noise abatement measure and the opinion of the property owners that the noise abatement measure would provide benefit. Other factors that can be considered include visual impacts, adjacent historical properties, or cultural impacts.

Receiver/Receptor: The precise location where highway traffic noise levels are either measured or modeled. It is typically located on a property where frequent outdoor activity occurs.

Section 4(f) Resources: Publicly owned parks, recreation areas and wildlife and waterfowl refuges, as well as historic sites of national, state, or local significance (whether publicly or privately owned).

Sound: The sensation produced in the organs of hearing by certain pressure variations or vibrations in the air.

Substantially exceed the existing noise levels, as cited in 23 CFR 772.5(g): Increases of 10 dB(A) or more above the existing noise level.

Traffic Noise Impacts: Impacts that occur when the predicted highway traffic noise levels approach or exceed the noise abatement criteria (Table 2), or when the predicted highway traffic noise levels substantially exceed the existing noise levels.

Type I Project: A proposed highway project on the Dulles Toll Road, whether or not the project is Federally funded, which represents:

(1) The construction of a highway on new location;

(2) The physical alteration of an existing highway where there is either:
(i) Substantial Horizontal Alteration. A project that halves the distance between the highway traffic noise source and the closest receptor between the existing condition to the future build condition; or,
(ii) Substantial Vertical Alteration. A project that removes shielding, and thus exposes the line-of-sight between the receptor and the highway traffic noise source. This is done by either altering the vertical alignment of the highway or by altering the topography between the highway traffic noise source and the receptor;

(3) The addition of a through-traffic lane(s). This includes the addition of a through-traffic lane that functions as a HOV lane, High-Occupancy Toll (HOT) lane, bus lane, or truck climbing lane;

(4) The addition of an auxiliary lane, except for when the auxiliary lane is a turn lane;

(5) The addition or relocation of interchange lanes or ramps added to a quadrant to complete an existing partial interchange;

(6) Restriping existing pavement for the purpose of adding a through-traffic lane or an auxiliary lane; or

(7) The addition of a new or substantial alteration of a weigh station, rest stop, ride-share lot or toll plaza.

If any segment or component of a proposed project meets the definition of a Type I Project, then the entire project is considered to a Type I Project.

Type II Project: A proposed noise abatement project undertaken on the Dulles Toll Road whether or not the project is Federally funded. .

Type III Project: A proposed highway or noise abatement project on the Dulles Toll Road, whether or not Federally funded, that is not a Type I or Type II project.

Worst Case Noise Levels: The highway traffic noise levels that result from traffic conditions that would create the theoretical loudest noise scenario as determined by a traffic engineering analysis. Generally, for mainline highway segments, the worst case noise level corresponds to traffic conditions that would be rated between Level of Service C and Level of Service D, as defined by the Federal Highway Administration's *Highway Capacity Manual*.

3. Applicability

Beginning on the effective date of this document, this Policy shall apply uniformly and consistently to all Type I Projects under the Airports Authority's operational jurisdiction. The Airports Authority will follow the noise impact assessment process described in this Policy whether or not a Type I project receives Federal-aid or Federal funding.

Type I Projects: A highway traffic noise analysis is required for all build alternatives under detailed study in the National Environmental Policy Act (NEPA) process. Refer to 23 CFR, Part 772 for further guidance. This Policy applies to all Type I projects on the Dulles Toll Road, whether or not the project receives Federal-aid funds or is otherwise subject to FHWA approval. The requirements of this Policy apply uniformly and consistently to all Type I projects on the Dulles Toll Road.

Type II Projects: The Airports Authority initiated a modified Type II highway traffic noise study along the Dulles Toll Road in 2010. This Policy shall apply only to this Type II highway traffic noise study. Upon completion of the study and the adoption of a Type II program for the Dulles Toll Road that is based on the study (a program to be funded under the Airports Authority's Capital Improvement Program), no further Type II noise study or analysis will be undertaken under or required by this Policy. See Appendix A for details concerning this modified Type II highway traffic noise study.

Type III Projects: This Policy does not apply to any Type III Project.

If there are any questions about whether a project is subject to this policy or the FHWA Noise Standard, contact the Metropolitan Washington Airports Authority Vice President for Engineering at 703-417-8140. Due to the long lead time to complete a highway

traffic noise study, it is necessary to determine if a noise study is necessary early in project scoping.

4. Sound Fundamentals

Sound is created when an object moves and the movements create sound pressure waves, or vibrations, in the air. When these vibrations reach our ears, they cause us to hear what we call sound. Sound pressure levels are used to measure the intensity of sound and are described in terms of decibels (dB). Sound frequency is as important as pressure in how a human perceives noise. The human ear does not respond identically to all sound frequencies. Therefore, more weight is given to the frequencies that people hear more easily, between 1,000 and 6,000 Hertz (cycles per second). The weighted scale that is used to measure noise that best corresponds to the frequency response of the human ear is called A-scale. Sound pressure levels measured on the A-scale are abbreviated dB(A).

When considering the impacts of changes to the sound environment, it is important to understand how sound level changes are perceived. In Table 1, sound level change is compared to how it is typically perceived by the human ear.

Table 1. Noise Perception

Sound Level Change dB(A)	Relative Loudness Change
+10	Twice as Loud
+5	Readily Perceptible Increase
+3	Barely Perceptible Increase
0	No Change
-3	Barely Perceptible Decrease
-5	Readily Perceptible Decrease
-10	Half as Loud

Source: Adapted from the FHWA Highway Traffic Noise: Analysis and Abatement Guidance, (June 2010)

Because highway noise intensities fluctuate with varying levels of traffic, a "metric" representing a composite sound level, or Leq, is used in the industry. This is the equivalent steady-state sound level that, in a stated period of time, contains the same acoustic energy as the time-varying sound levels during the same time period. Leq(h) is the equivalent sound level for a one-hour period. An additional descriptor of time variation, the L*10*, is sometimes used. This is simply the A-weighted sound level that is exceeded 10 percent of the time within the period of observation or prediction.

5. Highway Traffic Noise Analysis

Highway traffic noise is a combination of the noises produced by the engine, exhaust, and tires of vehicles. For the purpose of highway traffic noise analyses, motor vehicles fall into one of five categories:

- Automobiles - vehicles with two axles and four wheels;
- Medium trucks - vehicles with two axles and six wheels;
- Heavy trucks - vehicles with three or more axles;
- Busses; and
- Motorcycles.

Highway traffic noise levels depend on:

- Traffic volume;
- Vehicle speed;
- Vehicle category mix;
- Duration and frequency of traffic;
- Distance between vehicles and receptors;
- Intervening barriers;
- Ambient environment; and,
- Terrain.

Generally, heavier traffic volumes, higher speeds, and greater numbers of trucks increase highway traffic noise levels.

In accordance with FHWA's noise regulations, all highway traffic noise studies for Type I Projects along the Dulles Toll Road must be conducted by using the FHWA Traffic Noise Model (TNM) Version 2.5 (or the latest version) or by using any other model FHWA determines to be consistent with the methodology of the FHWA TNM. The TNM model was developed in order to model highway traffic noise levels. The model takes into account the existing terrain of the project area and how the noise will attenuate throughout. This is done through the modeling of changes in terrain, buildings, existing noise barriers and other types of barriers, dense vegetation, and a variety of ground types, such as ponds and parking lots, all of which affect the noise attenuation. The model also accounts for five standard vehicle types, including automobiles, medium trucks, heavy trucks, buses, and motorcycles, as well as user-defined vehicles. A traffic analysis will be performed to determine the traffic conditions that occur on the highway that create the worst case highway traffic noise. These traffic volumes will be input into the highway traffic noise model to determine the worst case highway traffic noise scenario.

In order to use TNM to conduct a highway traffic noise analysis, the TNM model must first be validated to ensure that it is modeling the sound environment correctly. This is done by:

- performing simultaneous sound monitoring and traffic data collection
- inputting the traffic data into the model
- running the model
- comparing the model output to the measured sound levels

If the model output is within 3 decibels of the measured sound levels, then the model is considered valid for further use in worst-case highway traffic noise assessment.

The engineer shall refer to the following two guidance documents when performing the highway traffic noise study: FHWA's *Highway Traffic Noise: Analysis and Abatement Guidance (June 2010)*, and the Virginia Department of Transportation's (VDOT's) *Highway Traffic Noise Impact Analysis Guidance Manual*. Any guidance given in the *Dulles Toll Road Highway Traffic Noise Policy* that is in conflict with the VDOT guidance document will supersede the VDOT guidance.

6. Federal Noise Abatement Criteria

Highway traffic noise can adversely affect human activities. Noise is considered problematic when it interferes with speech communication. FHWA has, therefore, established Noise Abatement Criteria (NAC) to help protect public health, welfare, and livability from excessive vehicle noise. The NAC are described in Table 2.

Table 2. Noise Abatement Criteria

Noise Abatement Criteria [Hourly A-Weighted Sound Level—decibels dB(A)[1]]				
Activity Category	**Activity Criteria[2] Leq(h)**	**Activity Criteria[2] L_{10}(h)**	**Evaluation Location**	**Description of Activity Category**
A	57	60	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B[3]	67	70	Exterior	Residential
C[3]	67	70	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools , television studios, trails, and trail crossings
D	52	55	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios
E[3]	72	75	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F
F	-	-	-	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing
G	-	-	-	Undeveloped lands that are not permitted.

1. Either L10(h) or Leq(h) (but not both) may be used on a project.
2. The Leq(h) and L10(h) Activity Criteria values are for impact determination only, and are not design standards for noise abatement measures.
3. Includes undeveloped lands permitted for this activity category.

Source: Code of Federal Regulations, Title 23, Part 772 (23 CFR, Part 772), June 2010.

The noise analysis for Type I Projects along the Dulles Toll Road must evaluate noise levels in each activity category in the study zone (except Activity Category F). In some cases, lands that are undeveloped at the time of the project may be known to be permitted

for development in the future. The Airports Authority considers the date of issuance of a building permit by the local jurisdiction or by the appropriate governing entity as defining undeveloped lands for which development is permitted. If undeveloped land is determined to be permitted (i.e., a building permit has been issued on or before the Date of Public Knowledge), then the land will be assigned to the appropriate activity category and be analyzed in the same manner as developed lands in that activity category.

If undeveloped land is not permitted for development by the Date of Public Knowledge, The Airports Authority will determine the distance from the roadway to the exterior noise abatement criterion for each Activity Category in Table 2 and provide this information to local officials by documenting the results in the project's environmental clearance documents and noise analysis documents. Federal and State funding of noise abatement measures will not be considered for lands that are not permitted by the Date of Public Knowledge. If the local government allows development to occur on undeveloped lands where highway traffic noise impacts were predicted to occur, then mitigation will be the responsibility of the local government and/or property owner.

7. Impact Criteria

Impact criteria set the standards that a property must meet to initiate investigation of highway traffic noise abatement feasibility and reasonableness. Any receiver/receptor or property is considered impacted if either:

(1) design year noise levels are predicted to have a worst case Leq approaching [within 1 dB(A)] or exceeding the Noise Abatement Criteria for the corresponding land use category; or,

(2) design year noise levels are predicted to have a worst-case Leq that substantially exceeds the existing noise levels.

8. Feasibility/Reasonableness Criteria

In order for a noise abatement measure to be approved by the Airports Authority, it must meet both feasibility and reasonableness criteria.

Feasibility Criteria

To be considered feasible, a highway traffic noise abatement measure must meet all of the following:

(1) Overall highway traffic noise reduction of at least 5 decibels is achievable for at least all first row receivers. In certain cases, if it is not feasible to achieve a noise reduction of 5 dB(A) at all first row receivers, the Airports Authority will consider

constructing noise barriers that provide partial abatement (i.e. reduction in noise levels at 3 or 4 dB(A) at first row receivers).

(2) The placement of the noise abatement measure will not restrict pedestrian or vehicular access.

(3) The construction of the noise abatement measure will not cause any safety or maintenance problems.

(4) The highway traffic noise abatement measure is constructible considering constraints related to utilities, topography, drainage, maintenance of traffic, and other site-specific constraints.

(5) Non-highway noise sources, such as urban streets, industrial facilities and airplane flight paths, do not reduce or limit the effectiveness of a proposed highway traffic noise abatement measure.

(6) There are no zoning laws or ordinances passed by a local jurisdiction that restricts heights of walls or barriers if the proposed noise abatement measure is outside of the Airports Authority's right-of-way.

(7) For properties subject to Section 4(f), impacts must be evaluated on a case-by-case basis to determine if there is a "substantial impairment" to the intended use of the property, consistent with Federal law.

Reasonableness Criteria

To be considered reasonable, a highway traffic noise abatement measure must meet all of the following:

(1) Properties are impacted by highway traffic noise.

(2) The desires of the property owners impacted by highway traffic noise in the noise study area are considered and those owners generally approve of the proposed highway traffic noise abatement measure. The Airports Authority will notify the owners on record of the impacted properties. 51% must vote to approve the highway traffic noise abatement measure. A non-vote will be considered a vote of approval for the highway traffic noise abatement measure.

(3) The total cost of the highway traffic noise abatement measure is equal to or less than $50,000 per benefited property. The total cost will be evaluated and submitted to FHWA every 5 years for approval. The unit cost per square foot used to determine the total cost of a highway traffic noise abatement measure shall be

from the VDOT guidance document. A property is considered benefited if it receives a minimum 5 dB(A) highway traffic noise reduction as the direct result of construction of the noise abatement measure. The methodology used to determine residence equivalencies for non- residential activity categories shall be from the VDOT guidance document. If the total cost of the highway traffic noise abatement measure is greater than $50,000 per benefited property, cost averaging will be allowed following direction given in the VDOT guidance document.

(4) A noise reduction design goal of at least 7 dB(A) is achieved for at least one receiver. The noise reduction goal will be evaluated and submitted to FHWA every 5 years for approval.

(5) Right-of-way or easements that may be required for the construction or permanent location of a noise abatement measure is donated to the Airports Authority. The value of the donated right-of-way or easement will not be considered in the cost per benefited property calculation. The Airports Authority will not purchase right-of-way or easements for the sole purpose of construction or permanent location of a noise abatement measure.

9. Funding

For Type I Projects that receive Federal-aid funds or are subject to FHWA approval, third party funding may not be used to make up the difference in cost between the reasonable cost allowance and the actual cost. However, third party funding may be used to pay for additional features, such as landscaping, aesthetic treatments, etc., for noise barriers that meet cost-effectiveness criteria.

For Type I Projects that do not receive Federal-aid funds and are not subject to FHWA approval, third-party funding shall be allowed. When the cost of a noise abatement measure exceeds the Airports Authority's cost effectiveness ceiling but the measure otherwise satisfies the criteria contained in this Policy, the measure may still be constructed, provided:

(1) a third party funds the amount above the cost ceiling; and,

(2) the Airports Authority receives the third party share prior to the date of submittal of the plans, specifications, and estimates (PS&E).

10. Reconstruction of Existing Noise Walls for Structural Concerns

Based on an engineering determination that an existing highway traffic noise wall has experienced structural damage the Airports Authority will repair or replace the noise wall

in kind; provided, that noise walls existing on the effective date of this Policy may qualify for a re-designed configuration under the provisions of Appendix A.

11. Other Obligations and Agreements

This Policy does not amend or affect, and it shall be construed as amending or affecting, any agreements to which the Airports Authority is a party, or any permits issued to the Airports Authority, that were in effect on the effective date of this Policy.

Dulles Toll Road
Appendix A
Modified Type II Highway Noise Study
Memorandum

February 2, 2011

The Metropolitan Washington Airports Authority (Airports Authority) strives to be a good neighbor to adjacent communities and endeavors to address highway traffic noise generated by the Dulles Toll Road to protect the health and welfare of the public residing in those communities. In order to immediately address concerns related to highway traffic noise protection, the Airports Authority has initiated a Modified Type II Highway Traffic Noise Project ("Type II Project") along the Dulles Toll Road. This Type II Project was initiated in 2010. It is being performed in accordance with the *Dulles Toll Road Highway Traffic Noise Policy* ("Policy"), adopted February 2, 2011, and the U.S. Code of Federal Regulations, Title 23, Part 772, Federal Highway Administration, "*Procedures for Abatement of Highway Traffic Noise and Construction*", June 2010. It will be conducted following the same procedures used under the Policy for a Type I Highway Traffic Noise Project.

The Type II Project is being initiated through a Modified Type II Highway Traffic Noise Study ("Study") which will evaluate the sound levels and noise impacts along the Dulles Toll Road and, based on that evaluation, identify Noise Sensitive Areas that are eligible

for noise abatement measures, including areas that were developed after completion of the Dulles Toll Road in 1984 under plans approved prior to the adoption of the Policy, whether or not these areas currently have noise abatement measures in place. The Study will also analyze existing highway traffic noise barriers along the Dulles Toll Road to determine whether they are meeting the Airports Authority's current noise abatement design goals. Projected noise from the Dulles Corridor Metrorail Project will be included as part of this Study. A report will be developed that will present the results of the Study.

Areas identified by the Study as being eligible for noise abatement measures are not entitled to, and will not automatically receive, such abatement measures. Rather, the actual implementation of noise abatement measures in any year will be determined by the level of funds that the Airports Authority has budgeted for this purpose.

Following completion of the Study, the Airports Authority will perform further highway traffic noise studies along the Dulles Toll Road only pursuant to the Policy, only for Type I Projects, and only when triggered by the Policy's criteria.

Impact Criteria

Impact criteria for the Study are as follows:

- Any receiver/receptor or property in the area has an existing worst-case Leq approaching (within 1 dB(A)) or exceeding the Noise Abatement Criteria for its corresponding land use category, based upon the cumulative noise level produced by existing worst-case Dulles Toll Road traffic conditions and predicted from the Dulles Corridor Metrorail Project.

Priority System

In this Study, the Airports Authority will prioritize Noise Sensitive Areas that have been determined to be eligible for noise abatement measures based on the feasibility and reasonableness of the measures.

Priority will be initially based on the assignment of each Noise Sensitive Area to an Activity Category, with Category A being the highest priority, and Category E the lowest. The Activity Categories are as follows:

(1) Activity Category A:
(2) Activity Category B: Residences
(3) Activity Category C:
    - Schools
    - Parks, Playgrounds, and Trails
    - Hospitals
    - Places of Worship
(4) Activity Category E: Hotels and Motels

In order to prioritize multiple Noise Sensitive Areas that are assigned to the same Active Category, a Priority System Value (PSV) will be determined for the noise abatement measure identified for each such area. The following equation shall be used.

$$PSV = \frac{\text{(Total Noise Abatement Measure Cost)}}{\text{(Number of Benefited Residences)} \times \text{(Highest Existing Worst Case Leq at One Property in the Noise Sensitive Area)}}$$

The lower the PSV associated with a noise abatement measure, the higher the priority the measure, and its related Noise Sensitive Area, will have within Activity Category to which the area has been assigned.