5. ENVIRONMENTAL SYSTEMS

POLICY NO: 3.20

POLICY TITLE: **ENVIRONMENTAL NOISE POLICY**

RESPONSIBILITY: **Director Development & Health**

ADOPTED: 10 June 2008

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RELATED LEGISLATION: Protection of the Environment Operations Act 1998

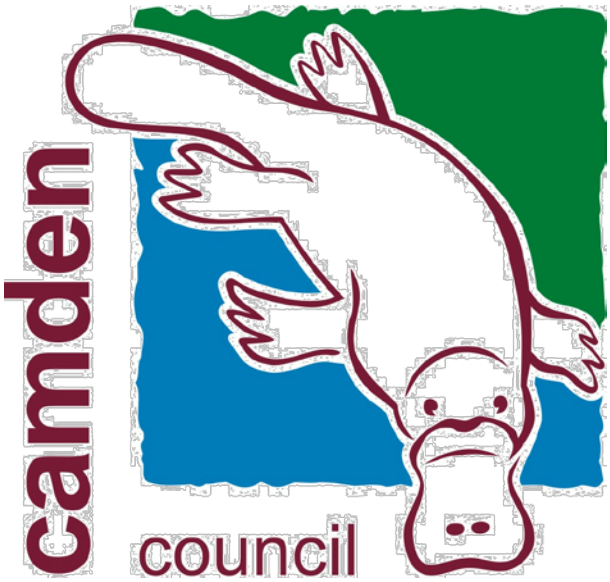
STAFF TRAINING REQUIRED?: NO

POLICY STATEMENT: *(See Policy Document over page).*

This document contains guidelines for the submission of acoustic reports for proposed developments within the Camden Local Government Area, which have the potential to generate noise that may unreasonably and detrimentally impact acoustic amenity.

The Policy for Environmental Noise provides a framework and criteria for the assessment of noise impacts from development upon potentially sensitive receivers and describes the procedure to be followed in the preparation of an acoustic assessment report. Where possible, recommendations have been included for indicative control measures, which can be incorporated into a development to reduce the potential noise impact on the surrounding environment.

Further, this Policy recognises community noise within residential communities that can give rise to significant levels of noise generation and establishes criteria or management techniques by which noise impact can be regulated and minimised.



CAMDEN COUNCIL'S

ENVIRONMENTAL NOISE POLICY

Adopted by resolution of Council on 10/06/2008
Date of commencement 18/06/2008

TABLE OF CONTENTS

PART A: Noise and Policy Development and Background

PART B: Guidelines for Assessment of Noise from Development

PART C: Guidelines for Assessment of Community Noise

PART D: Definitions / References

Note: Where a word or phrase is identified in *italics* you may refer to the definition section of this policy for its meaning.

TABLE OF CONTENTS

PART A: NOISE POLICY DEVELOPMENT AND BACKGROUND

1 INTRODUCTION

This document contains guidelines for the submission of acoustic reports for proposed developments within the Camden Local Government Area, which have the potential to generate noise that may unreasonably and detrimentally impact acoustic amenity.

The Policy for Environmental Noise provides a framework and criteria for the assessment of noise impacts from development upon potentially sensitive receivers and describes the procedure to be followed in the preparation of an acoustic assessment report. Where possible, recommendations have been included for indicative control measures, which can be incorporated into a development to reduce the potential noise impact on the surrounding environment.

Further, this Policy recognises community noise within residential communities that can give rise to significant levels of noise generation and establishes criteria or management techniques by which noise impact can be regulated and minimised.

2 OBJECTIVES OF THE POLICY

The objectives of the Policy are:

a) To define Council's role and responsibilities in the assessment and control of noise from development.
b) To define the procedures for the assessment of noise emission issues.
c) To enable controls for noise emission to be considered and allowed for at the planning stage through the existing approvals framework.
d) To consider the impact of noise in Masterplans for areas which are likely to be impacted by noise.
e) To provide for ongoing management of noise emissions.
f) To establish planning guidelines to prevent an escalation of ambient noise levels.
g) To provide guidance to the public concerning the assessment of noise from development and noise related activities.
h) Consolidate and clarify relevant noise policies.

3 ENVIRONMENTAL NOISE – POLICY STATEMENT

Camden Council is committed to ensuring that development and other activities within its Local Government Area take place in an environmentally sustainable manner that does not unreasonably impact upon other members of the community.

In regard to noise emission from developments it is Council's Policy to:

a) restrict the location of noise generating activities to appropriate areas by means of land zoning and planning policy;
b) utilise the existing approvals process to control noise emission from proposed developments;
c) apply its *Guidelines for Environmental Noise* across all forms of proposed new noise generating development, with due regard to the key issues of local community amenity, the social worth of developments and the feasibility of noise control;
d) make its guidelines for acoustic assessment available to applicants and the community. Where appropriate, these guidelines will be consistent with those of the NSW Department of Environment & Climate Change (DECC) (formerly EPA) and with community expectations;
e) require an acoustic assessment for any development proposal that may adversely affect the acoustical amenity of the community. These assessments must be in accordance with Council's *Environmental Noise Policy.*

Note: Any reference in this Policy to the NSW "EPA" and NSW "DEC" should now be considered to be the newly named NSW "DECC". Each reference should be considered to represent the same organisation.

4 RELATIONSHIP TO OTHER NOISE POLICIES AND GUIDELINES

This policy is guided by and refers to much of the information that is contained within the following NSW Department of Environment & Climate Change's noise publications and other related publications and regulations:

- ✓ NSW EPA Industrial Noise Policy (2000)
- ✓ NSW EPA Application Notes – NSW Industrial Noise Policy (July 2006)
- ✓ NSW EPA Environmental Criteria for Road Traffic Noise (1999)
- ✓ NSW EPA Noise Guide for Local Government (2004)
- ✓ NSW DECC Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects (April 2007)
- ✓ Australian Standard AS2021-2000: Acoustics –Aircraft Noise Intrusion – Building Siting and Construction
- ✓ State Environmental Planning Policy (Infrastructure) 2007
- ✓ Protection of the Environment Operations (Noise Control) Regulations 2008

PART B: GUIDELINES FOR ASSESSMENT OF NOISE FROM DEVELOPMENT

1 INTRODUCTION

Council as the Consent Authority is responsible for planning for development within the Camden Local Government Area and has environmental planning instruments and legislative powers to control noise emissions. Whilst some industrial and commercial developments are deemed to be "*scheduled activities"* requiring a license under the provisions of the Protection of the Environment Operations Act 1997, many developments require Council approval prior to proceeding.

The following guidelines have been developed to provide a clearly defined process for acoustic assessment of developments which includes new roads that have potential with use to generate noise. Equally important, Council has included guidelines for assessing the acoustic adequacy of noise sensitive developments (such as residential developments affected by noise from major roads).

Noise is a technical issue and in many instances the advice of a suitably qualified acoustic consultant will be required.

Where developments have little potential to exceed noise criteria as stated in the policy and emissions are well regulated, the process of acoustic assessment has been kept as simple as possible.

Where exceedance of noise criteria exists, the proponent will be required to submit an acoustic report to accompany the development application. Acoustic assessment reports shall be prepared by a *suitably qualified acoustic consultant.*

Reporting requirements and criteria for acoustic assessment are set out in these guidelines.

In all instances, Council reserves the right to request an acoustic report and to request additional supporting information, where the initial report is considered inadequate. Where reports are considered by Council to be highly complex Council may refer an acoustic report for an independent peer review by an independent acoustic consultant at Council's costs or alternatively the application may be refused.

2 QUICK REFERENCE TO ACOUSTIC REQUIREMENTS

Table 2.1 may be used to quickly identify which sections of the Guidelines are applicable in each case.

Table 2.1 Quick reference to Acoustic Requirements

Type of Development or Noise Source	Refer to Guideline Part / Section
Air-conditioners – on residential premises	Part C - 3.3
Airport (Camden) Noise effect on Developments	Part C - 5
Amplified music on residential premises	Part C – 3.1
Audible Bird Scare Devices (Including Gas Scare Guns)	Part C – 2.7
Bike Parks (non-motorised bikes only)	Part C - 4.2.3
Birds or Caged Birds (Domestic) on residential premises	Part C – 3.4
Child Care Centres	Part C – 2.1
Churches and Religious Development	Part C – 2.2
Commercial Premises	Part B – 4
Community and Multi-purpose Halls	Part C – 2.3
Construction Sites	Part B - 4.2.2
Dogs – commercial kennels	Part B - 4,
Dogs on residential premises	Part C – 3.2
Equestrian Centres	Part C – 4.2.3
Four Wheel Drive Facilities	Part C - 4.2.4
Home Businesses	Part C – 2.4
Industrial Developments	Part B - 4, 5
Lawnmowers	Part C – 3.5
Learn-to-Swim Schools on Residential Premises	Part C – 2.5
Licensed Premises	Part B - 7, 4, 5
Model Aircraft	Part C - 4.2.3
Motocross Facilities	Part C – 4.2.4
Motor Sport Noise effect on Developments	Part C - 5.2.2
Music Festivals	Part C – 4.2.1
Open Air Cinemas	Part C – 4.2.2
Open Air Concerts	Part C – 4.2.1
Parks Noise effects on Developments	Part C - 6
Paintball Facilities	Part B - 4, 5
Pubs & Clubs	Part B - 7, 4, 5
Rail	Part B - 6
Recreational Facilities (equestrian, skate parks, etc)	Part C - 4.2.3
Recreational Vehicle Facilities	Part C - 4.2.4
Residential Developments (Multi-dwelling)	Part B – 5, 6 (*refer BCA , SEPP65)
Residential Subdivision	Part B – 5, 6
Restaurants (licensed)	Part B - 7, 4, 5
Restaurants (not licensed)	Part B - 4, 5
Roads	Part B - 5
Schools	Part C – 2.6
Shooting Ranges	Part C - 4.2.5
Skate Parks	Part C - 4.2.3
Sporting Facilities – Outdoor ball games etc	Part C - 4.2.5
Swimming Pool & Spa Pool & Heat Pumps	Part C – 3.6

Tennis Courts for Commercial Use	Part B - 4, 5
Tennis Courts on Residential Premises	Part C – 3.7
Trail Bikes in Off-Road Areas	Part C – 3.8
Veterinary clinics	Part B - 4, 5
Development / Activities Not Listed	Refer to Council for requirements

* Where relevant refer directly to the Building Code of Australia and / or SEPP 65 – Design Quality of Residential Flat Development.

3 STATUS OF GUIDELINES

The guidelines as set out within this Policy have been prepared with the intention of providing consistent and equitable assessment of noise impacts from development by Council staff. They apply to operational noise and in addition include guidelines to be applied to construction activities. Criteria is also included for protecting some types of developments from existing noise sources.

Whilst this Policy primarily applies to new developments, Council may choose to apply these criteria to existing developments where a noise problem is identified, with appropriate recognition given to existing development consents, where applicable.

In certain circumstances, for example where a temporary development application is received for a public event such as fair, festival, or circus or where an event is only for a short period of time, it may be necessary for Council to impose more or less stringent criteria in the interests of local amenity or broader community benefit. Such instances will be examined on a case-by-case basis by Council officers.

Where the control of noise to meet the guidelines criteria is not economically feasible, or has a negative impact on other aspects of local amenity, Council will consider applications to apply alternative criteria. Applications of this nature will be considered in the light of the public benefit of the development, and with a view to Council's responsibility to adequately protect the local amenity.

In addition to the specific criteria, Council may limit the hours of operation of a development or the number of events, particularly if a development is unable to comply with the guideline levels.

4 NOISE FROM INDUSTRIAL AND COMMERCIAL DEVELOPMENT

This section applies to industrial, commercial and retail premises as well as warehousing facilities.

In January 2000 the NSW Department of Environment & Climate Change (DECC, formerly EPA) published its *NSW Industrial Noise Policy* (INP). The policy applies to the assessment of noise impact from industrial developments that are scheduled under the *Protection of the Environment Operations Act 1997.* The DECC states that Councils may also wish to use the policy to assess and control noise from non-scheduled industrial noise sources under their control, including commercial premises and warehousing facilities.

Where Council requires the submission of a development application (DA) for new building work and for the use or change of use of commercial and industrial premises, a development application must be lodged with Council for consideration. This application is to be accompanied by a Statement of Environmental Effects and such statements must address noise impacts.

For any development proposal the need for acoustic assessment needs to be undertaken in accordance with this Section (note that in any case, noise assessments may be required to accord with other Sections of this policy). Section 4.1 determines this requirement. If an assessment is required then it is to be carried out in accordance with the requirements of Part B - Section 4.2 and Section 4.4 of this document.

4.1 Requirement for acoustic assessment

In accordance with this Section of the policy, some developments do not generate sufficient noise to require an acoustic assessment. As a guide the applicant should ensure that the development is checked against the following points. If the development qualifies for any of the following points and is likely to cause an adverse noise impact then an assessment of noise will be required.

- External mechanical plant or any plant or equipment ducted to outside
- External forklift operations
- Regular use of powered equipment on site (including handheld power tools, compressors, hoists etc but excluding standard office equipment)
- Operates beyond Monday-Saturday 7am-6pm
- More than one heavy truck delivery/pickup per day where loading / unloading is undertaken outside of any building (i.e. open yard area)
- More than six light truck delivery/pickups per day
- More than eighteen vehicle movements on site per hour where adjoining premises are noise sensitive (i.e. residential)

- Boundary or part of the site (including car parks or driveways) within 30m of a residential boundary
- External amplified music or PA/paging systems (note that internal systems will still need to comply)
- More than 7 children receiving care (excludes home based childcare) or for existing centres increase by more than 7 children

Note: Any new development which falls to any of the points above under Section 4 of this policy must comply with the criteria regardless of whether an acoustic report is required. A compliance test may be sought by Council on completion. If non-compliance is found then noise control works will need to be carried out at the applicant's expense.

If an applicant believes that complying with the noise criteria may be difficult then it is strongly advised that the advice of a qualified acoustic consultant is sought prior to submission of the DA. Council may also be consulted at this time, however, it is still the responsibility of the applicant to ensure the development will comply.

If Council receives a DA without an acoustic assessment and one is deemed necessary, additional information will be sought in accordance with the provisions of the Environmental Planning and Assessment Act.

Council reserves the right to request an acoustic assessment for any development – at the applicant's expense should the assessment deem that there will be impact by way of noise on the amenity of the area.

4.2 Criteria

4.2.1 Operational Criteria

Operational noise from the development will need to be assessed in accordance with the DECC's NSW Industrial Noise Policy. All developments must be designed to "Acceptable Recommended" L_{Aeq} Noise Levels in Table 2.1 of that document. The Recommended Maximum L_{Aeq} Noise Levels in Table 2.1 are not to apply to any development. (Refer to Table 4.3.1 of this Policy, page 16).

The L_{Aeq} noise emission level from the operation shall be determined by means of prediction using a recognised calculation or modelling procedure. Where possible it is the preference of this policy to accept actual data obtained from assessment of a similar development elsewhere over modelled data, however it is acknowledged that this may not always be appropriate dependent on background noise levels.

As a guide, where several industrial / employment developments are proposed in a given area, these developments may be assessed (where practical) as a group to facilitate project-specific noise levels to be set for each development. Implementation of this approach involves:

(i) Determining the number of development proposals to be assessed;
(ii) Determining the amenity levels from Table 2.1 and 2.2 from the Industrial Noise Policy (DECC 2000);
(iii) Determining the project specific noise levels to be achieved for each development when measured at the receiver, so that when each is added together logarithmically, the resultant total level of noise received from industry at any affected receiver will meet the amenity level identified in Table 2.1 and Table 2.2 of the Industrial Noise Policy.

Developments may also need to refer to Part B - Section 5 of this policy to assess the impact of increased traffic on surrounding roads, where applicable.

Construction noise associated with a development must be assessed in accordance with Section 4.2.2 below.

4.2.2 Guidelines for Construction Site Noise

Acoustic assessment reports of construction noise are not normally required unless requested by Council. However, Council may request noise levels be assessed at any time.

This applies to non-scheduled premises such as commercial buildings where a long construction time is likely. However and despite the above, noise level criteria may not be applicable to long-term construction projects such as sand mining which may take several years to construct.

Council may vary the noise level and time restrictions based on the type of development proposed. Assessment of noise for compliance purposes should be measured from the boundary of the most affected residence.

- **The noise level restrictions for construction activities include but are not limited to the following:**

  (i) Construction period of 4 weeks and under:

  The L_{Aeq} level measured over a period of not less than 15 minutes when the construction site is in operation must not exceed the background level by more than 20 dB(A).

  (ii) Construction period greater than 4 weeks and not exceeding 26 weeks:

The L_{Aeq} level measured over a period of not less than 15 minutes when the construction site is in operation must not exceed the background level more than 10 dB(A).

(iii) Construction period greater than 26 weeks:

The L_{Aeq} level measured over a period of not less than 15 minutes when the construction site is in operation must not exceed the background level more than 5 dB(a).

- **The time restrictions for construction activities are as follows:**

  Monday to Friday, 7 am to 6 pm

  Saturday, 8 am to 4 pm

  Note: Work outside of these hours may be considered on its merits by way of submission at development assessment stage.

  No construction work is to take place on Sundays or Public Holidays unless specifically stated in the conditions of development approval.

4.3 Informative Summary of INP

The following summary and extracts from the INP are provided for the information of applicants. This is a brief summary only, consultants must refer to the INP for full criteria and assessment requirements.

The assessment procedure has two main components:

- Controlling *intrusive noise* impacts in the short term.
- Maintaining noise level amenity for particular land uses in the long term.

The assessment needs to consider both components. However, in most cases one of them will become the limiting criterion depending on the noise environment and the type of receiver.

In low noise areas, controlled increases in *ambient noise* levels are permitted, up to the point where the noise level limit appropriate to the particular land use is reached. This increase is usually limited to 5 dB(A) above the *background noise* level where residences are potentially or likely to be impacted.

In developed areas with higher levels of ambient noise, the noise limit that would be applied could be either:

- 5 dB(A) above the background noise level, or
- The noise limit set for the appropriate land use designed to preserve amenity, whichever is lower.

In highly developed areas with high existing ambient noise levels, DECC's Noise Policy specifies different levels that are dependent whereupon whether ambient noise is likely to be reduced in the future.

- Where ambient noise levels are likely to be reduced, the policy recommends design limits intended to return the noise environment to the levels appropriate to the particular land use.
- Where ambient noise levels are unlikely to be reduced, the policy does not allow any increase above the existing noise environment.

The criterion is applied under local *prevailing weather conditions* in the reporting and assessment of any acoustic report.

Noise assessment is to reflect the proposed hours of operation and include as part of the assessment the lowest background noise levels applicable.

Adjustments are made for noise emissions with tonal, low-frequency, impulsive or intermittent (at night) characteristics. An adjustment may also be made for the duration of a single event noise (to account for unusual and one-off events, not for to regular high-noise levels that occur daily).

Noise amenity is considered in order to prevent the continuing escalation in ambient noise levels, which would otherwise occur with successive development. For the Camden area the maximum ambient noise levels within an area should not normally exceed the "acceptable" levels specified in **Table 4.3.1.**

Table 4.3.1 Amenity Criteria – Recommended L_{Aeq} Noise Levels from Industrial Noise Sources

Type of Receiver	**Area**	**Time of Day**	Recommended L_{Aeq} Noise Level (dBA)	
			Acceptable	**Recommended Maximum** *(see Note 1)*
Residence	Rural	Day	50	55
		Evening	45	50
		Night	40	45
	Suburban	Day	55	60
		Evening	45	50
		Night	40	45
	Urban	Day	60	65
		Evening	50	55
		Night	45	50
	Urban/ Industrial Interface – for existing situations only	Day	65	70
		Evening	55	60
		Night	50	55
School Classroom – Internal	All	Noisiest 1-hour period when in use	35	40
Hospital Ward - Internal	All	Noisiest 1-hour period	35	40
- External	All	Noisiest 1-hour period	50	55
Place of Worship – Internal	All	When in use	40	45
Area specifically reserved for passive recreation (e.g. National Park)	All	When in use	50	55
Active recreation area (e.g. school playground, golf course)	All	When in use	55	60
Commercial premises	All	When in use	65	70
Industrial premises	All	When in use	70	75

(Source: Table 2.1, Page16, NSW DECC, Industrial Noise Policy, 2000)

Notes to Support the Noise Level Tables

1. The recommended **maximum noise levels** refer only to noise from industrial sources. Due to the existing low background noise levels in the Camden Local Government area the maximum noise levels are **not applicable** in Camden. The levels refer to noise from all such sources at the receiver location, and not only noise due to a specific project under consideration. The levels represent outdoor levels except where otherwise stated.

Where the existing noise level from development is close to the recommended "acceptable" level, the noise contribution from any new development must be controlled to ensure that ambient noise does not exceed the levels considered appropriate for the particular area and land use.

If, as a result of development, the existing noise environment of the area already exceeds the recommended "acceptable" level, the L_{Aeq} noise level contribution from any new development should not be greater than:

- 10 dB below the recommended "acceptable" level if it is possible that existing levels may be reduced in the future.
- 10 dB below the existing level if there is no possibility that existing levels will fall and no significant changes to land use are envisaged.

The required criteria for preserving amenity are shown in **Table 4.3.2.**

Table 4.3.2 Modification to Acceptable Noise Level (ANL) to Account for Existing Level of Industrial Noise

Total Existing L_{Aeq} Noise Level	**Maximum L_{Aeq} Noise Level for Noise from New Sources Alone (dBA)**
≥ANL + 2	If existing noise level is likely to decrease in future: ANL – 10 If existing noise level is unlikely to decrease in future: Existing Level – 10
ANL + 1	ANL – 8
ANL	ANL – 8
ANL – 1	ANL – 6
ANL – 2	ANL – 4
ANL – 3	ANL – 3
ANL – 4	ANL – 2
ANL – 5	ANL – 2
ANL – 6	ANL – 1
<ANL – 6	ANL

(Source: Table 2.2, Page 17, NSW DECC, Industrial Noise Policy, 2000)

ANL = Recommended Acceptable L_{Aeq} Noise Level for the specific receiver, area and time of day from Table 4.3.1.

4.4 Acoustic Assessment Report

An Acoustic Assessment Report prepared by a suitably qualified acoustic consultant detailing compliance with the specified acoustic criteria shall accompany the development application submitted to Council for approval.

The full Acoustic Assessment Report shall present, as a minimum, the information listed in Appendix 1 of this policy.

4.5 Implementation of the Policy and Compliance

Council's requirements for compliance certification of the installed/implemented noise attenuation measures, as noted in the recommendations of the acoustic report attached to the relevant development consent, will be noted as a condition of that consent.

The following is an example of such a condition:

"Noise Attenuation Report Compliance *- A report (from the author of the approved Noise Attenuation Report/Independent Auditor) that contains a certifying statement confirming that the recommendations of the approved Noise Attenuation Report have been implemented and are compliant must be submitted to the Principal Certifying Authority for inclusion in any (Occupation/Subdivision) Certificate".*

The acoustic consultant must conduct sufficient inspections to verify that all construction aspects of the noise attenuation components/measures are being carried out in accordance with the approved report recommendations.

Should the acoustic consultant confirm that:

1. any specific construction aspect does not comply with the report recommendations; or

2. that the constructed noise attenuation components/measures do not achieve the criteria set by the approved report and this policy;

the acoustic consultant must advise the applicant and the Principal Certifying Authority of such non-compliance. The applicant must arrange for the submission of an application pursuant to s.96 of the *Environmental Planning and Assessment Act 1979* for the modification of the issued development consent to the Consent Authority, Camden Council, for determination.

5 NOISE FROM ROAD TRAFFIC

In May 1999 the NSW Department of Climate Change (DECC, formerly EPA) published a guideline entitled Environmental Criteria for Road Traffic Noise (ECRTN). The guideline provides a framework that "guides the consideration and management of traffic noise issues associated with new building developments near existing roads, and new upgraded road developments adjacent to new or planned building developments[1]".

The main intention of this guideline is to allow:

- Council to develop and set their own controls and criteria for land uses that are affected by road traffic noise;
- Council to integrate land use and road transport planning;
- Inform road builders and their managers to select feasible and reasonable noise mitigation measures as required.

In addition to the ECRTN Guidelines, the NSW Department of Planning (DoP) gazetted in December 2007 the "State Environmental Planning Policy (Infrastructure)" under the Environmental Planning and Assessment Act 1979.

From the SEPP, "*Part 3 - Division 17 Roads and Traffic, Clause 102 – Impact of road noise or vibration on non-road development",* provides a number of sub-clauses that apply to development. This development involves buildings for residential use, a place of worship, a hospital, and educational establishments or child care centres that are proposed "on land in or adjacent to the road corridor that includes freeways, tollways or transitway or any other road with an annual average daily traffic volume of more than 40000 vehicles (RTA website) and that the consent authority considers is likely to be adversely affected by road noise or vibration[2]".

The main intention of this SEPP with respect to noise is to ensure:

- that the Consent Authority considers any guidelines issued by the Director General prior to determining a development application; and
- that the proposed buildings for residential use comply with appropriate internal acoustic levels.

Council's Policy adopts the assessment criteria as contained within the ECRTN and the SEPP for assessing noise impact from road traffic noise on developments. However, consideration of the SEPP acoustic criteria will only apply to developments impacted by roads that have an annual average daily traffic volume of more than 40000 vehicles.

[1] NSW EPA, 1999, Environmental Criteria for Road Traffic Noise, Environment Protection Authority, Chatswood, p.2.
[2] NSW Department of Planning, 2007, State Environmental Planning Policy (Infrastructure), Sydney, p.86.

Regarding the ECRTN, the policy provides further guidance to compliment, as well as simplify the procedure set out in the ECRTN. Any assessment conducted in accordance with any of DECC's documented procedure are acceptable to Council.

With reference to the ECRTN, Table 5.3.1 sets out the criteria to be applied to particular types of roads and land use developments with potential to create additional traffic on quieter roads. Table 5.3.2 is applicable for assessing the impact and mitigation strategies for road development on new noise sensitive land use development affected by road traffic noise.

With reference to the SEPP, the consent authority must be satisfied that appropriate measure are taken to ensure that the following internal L_{Aeq} acoustic levels are not exceeded:

a) In any bedroom in the building - 35 dB(A) at any time between 10pm and 7am; and
b) Anywhere else in the building (other than the garage, kitchen, bathroom or hallway) – 40 dB(A) at any time.

5.1 Developments Requiring Assessment

New developments <u>will</u> require an acoustic assessment report to be submitted <u>unless</u> all of the following points are applicable for the development:

a) Does <u>not</u> increase the percentage of heavy vehicle movements by more than 10% (over the 11 hour period 7am to 6pm, Monday to Saturday); and
b) Has <u>no</u> heavy vehicle movements between 6pm and 7am or any heavy vehicle movements on Sunday and Public Holidays; and
c) Does <u>not</u> increase the total number of vehicle movements by more than 20% (over the 15 hour period 7am to 10pm and the 9 hour period 10pm to 7am); and
d) Has <u>no</u> residential component affected by a collector road with an existing or potential (10 years hence) Annual Average Daily Traffic (AADT) of > 6000; and
e) Has <u>no</u> residential component affected by a collector road where the building façade is less than 4m to the primary frontage or less than 2m to a secondary frontage to the collector road; and
f) Has <u>no</u> residential component within 400m from any freeway, arterial or sub-arterial road.

5.2 Council Criteria

Where an acoustic assessment is required to be prepared the criteria of the:

- The DECC (formerly EPA) Environmental Criteria for Road Traffic Noise;

- Camden Council's Development Control Plan 2006; and if applicable
- State Environmental Planning Policy (Infrastructure) 2007.

shall also apply.

Assessments are to be carried out in accordance with the requirements of Part B - Section 5.5 of this document.

5.3 Informative Summary of ECRTN

The following tables are reproduced from the NSW DECC's Environmental Criteria for Road Traffic Noise document in order to provide an informative summary of the criteria in that document. This summary is not complete in itself and consultants should refer to the full document when preparing an assessment.

Table 5.3.1 - Road Traffic Noise Criteria for Proposed Road or Residential Landuse Developments

TYPE OF DEVELOPMENT	**DAY** (7 am-10 pm) dB(A)	**NIGHT** (10 pm-7 am) dB(A)
1. New freeway or arterial road corridor	$L_{Aeq(15hr)}$55	L_{Aeq}(9hr)50
2. New residential land use developments affected by freeway/arterial traffic noise	$L_{Aeq(15hr)}$55	$L_{Aeq(9hr)}$50
3. Redevelopment of existing freeway/arterial road	LAeq$_{(15hr)}$60	LAeq$_{(9hr)}$55
4. New collector road corridor	$L_{Aeq(15hr)60}$	L_{Aeq}(9hr)55
5. New residential land use developments affected by collector traffic noise	$L_{Aeq(1hr)}$60	$L_{Aeq(1hr)}$55
6. Redevelopment of existing Collector	$L_{Aeq(15hr)}$60	$L_{Aeq(9hr)}$55
7. Land use developments with potential to create additional traffic on existing freeways/arterials	$L_{Aeq(15hr)}$60	L_{Aeq}(9hr)55
8. Land use developments with potential to create additional traffic on collector road	$L_{Aeq(1hr)}$60	$L_{Aeq(1hr)}$55
9. New local road corridor in a metropolitan area	$L_{Aeq(1hr)}$55	$L_{Aeq(1hr)}$50
10. New local road corridor in a rural area	$L_{Aeq(1hr)}$50	$L_{Aeq(1hr)}$45
11. New residential developments affected by traffic noise from local roads	$L_{Aeq(1hr)}$55	$L_{Aeq(1hr)}$50
12. Redevelopment of existing local roads	$L_{Aeq(1hr)}$55	$L_{Aeq(1hr)}$50
13. Land use developments with	$L_{Aeq(1hr)}$55	$L_{Aeq(1hr)}$50

potential to create additional traffic on local roads.		

(Source: Table 1, Page 6, NSW DECC, Environmental Criteria for Road Traffic Noise, 1999)

Table 5.3.2 - Road Traffic Noise Criteria For Sensitive Landuse

Sensitive Land Use	Day (7am-10pm) dBA	Night (10pm-7am) dBA	Noise Mitigation Measures
1. Proposed school classrooms (For existing schools see Technical Note x)	$L_{Aeq\ (1\ hour)}$ 40 (internal)		To achieve internal noise criteria in the short term, the most practicable mitigation measures are often related to building or façade treatments. In the medium to longer term, strategies such as regulation of exhaust noise from in-service vehicles, limitations on exhaust brake use, and restricting access for sensitive areas or during sensitive times to low noise vehicles can be applied to mitigate noise impacts across the road system. Other measures include improved planning, design and construction of sensitive land use developments; reduced new vehicle emission standards, greater use of public transport; and alternative methods of freight haulage. These medium to long-term strategies apply equally to mitigating internal and external noise levels. Where existing levels of traffic noise exceed the criteria, all feasible and reasonable noise control measures should be evaluated and applied. Where this has been done and the internal or external criteria (as appropriate) cannot be achieved, the proposed road or land use development should be designed so as not to increase existing road traffic noise levels by more than 0.5 dBA for new roads and 2 dBA for redeveloped roads or land use development with potential to create additional traffic.
2. Hospital wards	$L_{Aeq\ (1\ hour)}$ 35 (internal)	$L_{Aeq\ (1\ hour)}$ 35 (internal)	
3. Places of worship	$L_{Aeq\ (1\ hour)}$ 40 (internal)	$L_{Aeq\ (1\ hour)}$ 40 (internal)	
4. Active recreation (for example, golf courses)	Collector and local roads: $L_{Aeq\ (1\ hour)}$ 60 Freeway/ arterial roads: $L_{Aeq\ (15\ hour)}$ 60		
5. Passive recreation and school playgrounds	Collector and local roads: $L_{Aeq\ (1\ hour)}$ 55 Freeway/ arterial roads: $L_{Aeq\ (15\ hour)}$ 55		

(Source – Table 2, Page 10, NSW DECC, Environmental Criteria for Road Traffic Noise, 1999)

Note: "X" increases where existing schools are affected by noise from proposed roads, the daytime criteria is LAeq (1hr) 45 dB(A) (internal)

5.4 Determination of Noise Levels

The required criteria shall be determined by means of prediction using a recognised calculation procedure such as the

calculation of Road Traffic Noise (CORTN 1988) method or similar, utilising the latest available traffic volume figures and predicted traffic flows for 10 years hence.

5.5 Acoustic Assessment Report

An assessment of the impact of road traffic, including all heavy vehicle movements, shall be included in an Acoustic Assessment Report prepared by a suitably qualified consultant in acoustics and submitted to Council for development approval.

The full Acoustic Assessment Report shall present, as a minimum the information listed in Appendix 2 of this policy.

5.6 Implementation of the Policy and Compliance

Council's requirements for compliance certification of the installed/implemented noise attenuation measures, as noted in the recommendations of the acoustic report attached to the relevant development consent, will be noted as a condition of that consent.

The following is an example of such a condition:

"Noise Attenuation Report Compliance *- A report (from the author of the approved Noise Attenuation Report/ Independent Auditor) that contains a certifying statement confirming that the recommendations of the approved Noise Attenuation Report have been implemented and are compliant must be submitted to the Principal Certifying Authority for inclusion in any (Occupation/ Subdivision) Certificate".*

The acoustic consultant must conduct sufficient inspections to verify that all construction aspects of the noise attenuation components/measures are being carried out in accordance with the approved report recommendations.

Should the acoustic consultant confirm that:

1. any specific construction aspect does not comply with the report recommendations; or

2. that the constructed noise attenuation components/measures do not achieve the criteria set by the approved report and this policy;

the acoustic consultant must advise the applicant and the Principal Certifying Authority of such non-compliance. The applicant must arrange for the submission of an application pursuant to s.96 of the *Environmental Planning and Assessment Act 1979* for the modification of the issued development consent to the Consent Authority, Camden Council, for determination.

6 NOISE FROM RAIL TRAFFIC

There are currently no public railway lines within the Camden local government area however, a new rail line and associated infrastructure is proposed in the near future for the area.

In response to such a proposal this Policy adopts the "Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects (April 2007)", produced by DECC, Department of Planning (DoP), Railcorp and the Transport Infrastructure Development Corporation (TIDC). The Policy also adopts the "State Environmental Planning Policy (Infrastructure) 2007" produced by the DoP.

The interim guidelines provide for the assessment of noise and vibration from new rail infrastructure projects and the mitigation of such impacts and provides noise trigger levels that determine, if they are exceeded, the requirement for an assessment of potential noise and vibration impacts.

The trigger levels are applicable for residential developments and sensitive land uses (other than residential) affected by noise from:

1. rail lines where a new line development is proposed or where there is an existing line; or
2. where an existing line is planned to be substantially realigned outside of an existing rail corridor.

Note: The guideline does not apply to existing rail operations and its impact on existing receivers unless there is a realignment of the existing rail corridor.

By contrast the SEPP (Infrastructure) 2007, "*Part 3 - Division 15 Railways, Clause 87 – Impact of rail noise or vibration on non-rail development",* considers the impact of existing rail on proposed development that includes buildings for residential use, a place of worship, a hospital, and an educational establishment or child care centre, where this development is proposed "on land in or adjacent to a rail corridor and that the consent authority considers is likely to be adversely affected by rail noise or vibration[1]".

The main intention of this SEPP with respect to noise is to ensure:

- that the Consent Authority considers any guidelines issued by the Director General prior to determining a development application; and
- that the proposed buildings for residential use comply with appropriate internal acoustic levels.

6.1 Developments requiring an acoustic assessment

Where a new railway line or corridor is proposed or an existing line is planned near residential or sensitive land use development and the appropriate noise and vibration trigger levels (from the tables) are determined to be exceeded, an

acoustic assessment in accordance with this section of the Policy will be required.

Where residential or sensitive development is proposed on land adjacent to an existing railway line or corridor and that the consent authority considers is likely to be adversely affected by rail noise or vibration, an acoustic assessment in accordance with this section of the Policy will be required.

Note: where noise and vibration has the potential to negatively impact on non-residential or less sensitive landuse development, suitable criteria applicable to such developments should be sought from a qualified acoustical consultant.

Residential or sensitive land use development must comply with the interim guideline noise and vibration trigger levels regardless of whether an acoustic report is required.

If Council receives a submission for development without an acoustic assessment and one is deemed necessary the application may be delayed until an assessment has been completed and received by the Consent Authority.

Council reserve the right to request an acoustic assessment for any development – at the applicant's expense.

6.2 Noise Criteria

Council's Policy adopts the assessment requirements and trigger level (criteria) contained within the NSW DECC "Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects (April 2007)" and the SEPP (Infrastructure) 2007 for the assessment of rail noise. Applications for development must demonstrate compliance with the SEPP (where relevant) and the Interim Guidelines.

Note: Where there is any conflict of criteria between the SEPP and the interim guidelines the criteria within the SEPP and any supporting guidelines / documents will prevail.

The SEPP (Infrastructure) 2007 requires that the consent authority must be satisfied that appropriate measure are taken to ensure that the following internal L_{Aeq} levels are not exceeded:

a) In any bedroom in the building - 35 dB(A) at any time between 10pm and 7am; and
b) Anywhere else in the building (other than the garage, kitchen, bathroom or hallway) – 40 dB(A) at any time.

The interim guidelines includes the following tables which are reproduced in order to provide an informative summary of both the *airborne rail traffic noise* and *ground-borne noise* trigger levels (criteria) in that document. This summary is not complete

in itself and consultants should refer to the full document when preparing an assessment.

Table 6.2.1 Airborne Rail Traffic Noise Trigger Levels For Residential Land Uses

<table>
<tr><th rowspan="2">Type of Development</th><th colspan="3">Noise trigger levels dB(A)</th></tr>
<tr><th>Day (7am – 10pm)</th><th>Night (10pm – 7pm)</th><th>Comment</th></tr>
<tr><td rowspan="2">New rail line development</td><td colspan="2">Development increases existing rail noise levels

and

resulting rail noise levels exceed:</td><td rowspan="4">These numbers represent external levels of noise that trigger the need for an assessment of the potential noise impacts from a rail infrastructure project.

An ‘increase’ in existing rail noise levels is taken to be an increase of 2 dB(A) or more in L_{Aeq} in any hour or an increase of 3 dB(A) or more in L_{Amax}.</td></tr>
<tr><td>60 $L_{Aeq(15h)}$

80 L_{Amax}</td><td>55 $L_{Aeq(9h)}$

80 L_{Amax}</td></tr>
<tr><td rowspan="2">Redevelopment of existing rail line</td><td colspan="2">Development increases existing rail noise levels

and

resulting rail noise levels exceed:</td></tr>
<tr><td>65 $L_{Aeq(15h)}$

85 L_{Amax}</td><td>60 $L_{Aeq(9h)}$

85 L_{Amax}</td></tr>
</table>

(Source: Table 1 – Airborne rail traffic noise levels for residential land uses, Page 6, Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects, NSW DECC, 2007.)

Table 6.2.2 Airborne Rail Traffic Noise Trigger Levels For Sensitive Land Uses Other Than Residential

Sensitive land use	Noise trigger levels dB(A)	
	New rail line development	**Redevelopment of existing rail line**
	Development increases existing rail noise levels by 2 dB(A) or more in L_{Aeq} in any hour ***and*** Resulting rail noise levels exceed:	
Schools, educational institutions - internal	40 $L_{Aeq(1h)}$	45 $L_{Aeq(1h)}$
Places or worship – internal	40 $L_{Aeq(1h}$	45 $L_{Aeq(1h)}$
Hospitals	60 $L_{Aeq(1h)}$	60 $L_{Aeq(1h)}$
Hospitals – internal	35 $L_{Aeq(1h)}$	35 $L_{Aeq(1h)}$
Passive recreation	L_{Aeq} as per residential noise level values in Table 1 (does not include maximum noise level component)	
Active recreation (e.g. golf course)	65 $L_{Aeq(24h)}$	65 $L_{Aeq(24h)}$

(Source: Table 2 – Airborne rail traffic noise levels for residential land uses, Page 6, Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects, NSW DECC, 2007.)

Table 6.2.3 Ground-borne (internal) Noise Trigger Levels

Receiver	Time of day	Noise trigger levels dB(A)
		Development increases existing rail noise levels by 3 dB(A) or more *and* Resulting rail noise levels exceed:
Residential	Day (7am – 10pm)	40 L_{Amax} (slow)
	Night (10pm – 7am)	35 L_{Amax} (slow)
Schools, educational institutions, places of worship	When in use	40-45 L_{Amax} (slow)

(Source: Table 3 – Ground-borne (internal) Noise Trigger Levels, Page 10, Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects, NSW DECC, 2007.)

6.3 Vibration Criteria

Trigger levels have been determined for vibration impacts and these can be assessed using the DECC's "Assessing vibration: A technical guideline" (December 2006). When the trigger levels contained within the "Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects (April 2007)" and the above associated guideline are exceeded then a noise and

vibration assessment needs to be undertaken by a consultant for the development.

6.4 Determination of Noise Levels

A suitably qualified acoustic consultant should carry out acoustic measurements. The noise levels for assessment shall be measured over at least eight consecutive train passbys. Where freight movements are present at least two freight passbys must be measured.

Where the rail line is yet to be completed a qualified acoustic consultant may predict the noise levels expected. We note that accurate prediction of vibration levels may not be possible.

6.5 Acoustic Assessment Report

An acoustic assessment of the impact of rail noise shall be included in an Acoustic Assessment Report prepared by a qualified consultant in acoustics and submitted to Council for development approval.

The full Acoustic Assessment Report shall present as a minimum the information listed in Appendix 3 of this policy.

6.6 Implementation of the Policy and Compliance

Council's requirements for compliance certification of the installed/implemented noise attenuation measures, as noted in the recommendations of the acoustic report attached to the relevant development consent, will be noted as a condition of that consent.

The following is an example of such a condition:

"Noise Attenuation Report Compliance *- A report (from the author of the approved Noise Attenuation Report/Independent Auditor) that contains a certifying statement confirming that the recommendations of the approved Noise Attenuation Report have been implemented and are compliant must be submitted to the Principal Certifying Authority for inclusion in any (Occupation/Subdivision) Certificate".*

The acoustic consultant must conduct sufficient inspections to verify that all construction aspects of the noise attenuation components/measures are being carried out in accordance with the approved report recommendations.

Should the acoustic consultant confirm that:

1. any specific construction aspect does not comply with the report recommendations; or

2. that the constructed noise attenuation components/measures do not achieve the criteria set by the approved report and this policy;

the acoustic consultant must advise the applicant and the Principal Certifying Authority of such non-compliance. The applicant must arrange for the submission of an application pursuant to s.96 of the *Environmental Planning and Assessment Act 1979* for the modification of the issued development consent to the Consent Authority, Camden Council, for determination.

7 NOISE FROM LICENCED PREMISES

7.1 Jurisdiction

Where a premise holds a liquor licence, primary responsibility for the control of noise lies with the NSW Police and the Liquor Administration Board. These departments may, however, liaise with the local Council for assistance with the measurement of noise levels and for advice on noise control treatment. Council may take action against a licensed premise before a Licensing Court under the Liquor Act or the Registered Clubs Act but initially such action would normally be taken through the NSW Police or the Liquor Administration Board. Council may lodge an objection when the premise applies to the Licensing Court for a new licence or to change existing licence conditions.

7.2 Discussion

Licensed premises, particularly hotels and clubs, can cause noise disturbance to nearby residential premises that result in complaints. Amplified music and noise associated with patron departure when trading hours extend past 10.00pm are frequently cited as sources of complaint. Whilst noise emissions from amplified music are more easily controlled, noise from patron departure is difficult to address satisfactorily when the premise is situated near residential premises.

The primary means of control is by restricting trading hours to prevent sleep disturbance at nearby residential premises. Consideration of the locality is taken into account in any application to the licensing court for extended trading hours. Implementing a Noise Management Plan or similar practices to ensure patron departure is achieved with a minimum of disruption to neighbouring premises is another effective means of control.

Mechanical plant and equipment associated with ventilation and refrigeration systems requires consideration to ensure that its operation does not cause disturbance at other commercial premises, and particularly at any nearby residential premises.

7.3 Criteria for Licensed Premises

The noise emission criteria from the NSW Liquor Administration Board (LAB) shall be applied to any music/entertainment and patrons from the licensed premises.

The LAB criteria are as set out below.

"The L_{A10} noise level emitted from the licensed premises shall not exceed the background noise level in any Octave Band Centre Frequency (31.5Hz – 8kHz inclusive) by more than 5dB between 7:00am and 12:00 midnight at the boundary of any affected residence."*

"The L_{A10}[2] noise level emitted from the licensed premises shall not exceed the background noise level in any Octave Band Centre Frequency (31.5Hz – 8kHz inclusive) between 12:00 midnight and 7:00am at the boundary of any affected residence."*

"Notwithstanding compliance with the above, the noise from the licensed premises shall not be audible within any habitable room in any residential premises between the hours of 12:00 midnight and 7:00am."

Interior noise levels that still exceed safe hearing levels are in no way supported or condoned by Council.

Noise emission from other sources on the site, including mechanical plant and vehicle movements within site, shall be assessed in accordance with Part B - Section 4 of this document.

Noise increases due to increased traffic flow on surrounding roads (due to vehicle flow from the site) shall be assessed in accordance with Part B - Section 5 of this document where applicable.

In addition to meeting all noise criteria to obtain Council approval, a Noise Management Plan (NMP) is to be submitted to council that addresses noise associated with patron departure, particularly after 10.00pm. Points of access and egress should be restricted wherever possible to minimise adverse impact upon noise sensitive receivers. Noise emissions from car parking facilities shall be monitored by management to ensure patrons arrive and/or depart in the quietest manner possible.

[2]* For the purpose of this condition, the L_{A10} can be taken as the average maximum deflection of the noise emission from the licensed premises.

7.4 Determination of Noise Levels

The noise levels from the licensed premises shall be determined by means of prediction (using a recognised calculation or modelling procedure) or measurements at the boundary of the nearest or most affected premises; or, if the boundary is more than 30 metres from a residential dwelling at the most affected point, within 30 metres of the residence.

For the purpose of investigating a complaint from a resident regarding noise associated with patron departure, measurement of the noise level shall be conducted at the boundary of the most affected premises or, if the boundary is more than 30 metres from the residence, at the most affected point within 30 metres of the residence.

7.5 Acoustic Assessment Report

An Acoustic Assessment Report prepared by a suitably qualified acoustic consultant detailing the extent of compliance with the specified acoustic criteria shall be submitted concurrently with the development application submitted to Council for approval.

The full Acoustic Assessment Report shall present as a minimum the information listed in Appendix 4 of this policy.

7.6 Implementation of the Policy and Compliance

Council's requirements for compliance certification of the installed/implemented noise attenuation measures, as noted in the recommendations of the acoustic report attached to the relevant development consent, will be noted as a condition of that consent.

The following is an example of such a condition:

"Noise Attenuation Report Compliance *- A report (from the author of the approved Noise Attenuation Report/ Independent Auditor) that contains a certifying statement confirming that the recommendations of the approved Noise Attenuation Report have been implemented and are compliant must be submitted to the Principal Certifying Authority for inclusion in any (Occupation/ Subdivision) Certificate".*

The acoustic consultant must conduct sufficient inspections to verify that all construction aspects of the noise attenuation components/measures are being carried out in accordance with the approved report recommendations.

Should the acoustic consultant confirm that:

1. any specific construction aspect does not comply with the

report recommendations; or

2. that the constructed noise attenuation components/measures do not achieve the criteria set by the approved report and this policy;

the acoustic consultant must advise the applicant and the Principal Certifying Authority of such non-compliance. The applicant must arrange for the submission of an application pursuant to s.96 of the *Environmental Planning and Assessment Act 1979* for the modification of the issued development consent to the Consent Authority, Camden Council, for determination.

PART C: Guidelines for Assessment of Community Noise

1 INTRODUCTION

Within residential communities there are various facilities and activities which can give rise to significant levels of noise generation. Whether the noise levels emitted are perceived by other community members as "annoying" is very much dependent upon the relevance of the facility or activity to the receiver, the level of the noise, the character of the noise and the time at which noise is made.

For this reason, many of the noisy activities or articles frequently operated in residential communities (such as lawnmowers, air conditioners and swimming pool pumps) have time restrictions applying as determined by the Protection of the Environment Operations (Noise Control) Regulations 2000.

The restricted times, apply to domestic activities specified in the regulations that should be inaudible in a neighbour's house. By limiting the hours of operation of these noisy items / activities, the potential for disturbance at neighbouring premise is greatly reduced.

The potential noise impacts of other sources of community noise, such as schools, are outweighed by the community benefit provided by such facilities and community acceptance is generally widespread. The importance of educational establishments is recognised by the majority of the community and the limited hours of operation generally serves to mitigate noise impact.

It is therefore important for Council to identify the various source of neighbourhood noise and establish criteria or management techniques by which noise impact can be minimised.

2 COMMUNITY NOISE COMMERCIAL

2.1 Child Care Centres (excluding home based/ family childcare)

Childcare centres are commercial enterprises and are recognised as providing a valuable service to working parents in the community. Council is responsible for administering the control of noise from these commercial premises.

The noise sources of concern with regard to the operation of child care centres (excluding home based / family care) consist of mechanical plant and equipment associated with air conditioning, kitchen mechanical exhaust, children at play, and the operation of vehicles within car parks associated with staff movements and the drop-off and collection of children.

The major source of noise emission from child care centres primarily occur when the children are involved in outdoor play or sporting activities. Strict daytime hours of operation, generally Monday to Friday, does help to limit the duration of noise disturbance to daytime periods only.

The $L_{Aeq(15\ minutes)}$ noise level from children in the outdoor areas of the site must not exceed the background L_{A90} sound level by more than 10dB(A). When measured at the boundary of the nearest or most affected residential premises, or if the boundary is more than 30 metres from a residential dwelling, at the most affected point within 30 metres of a residence.

All other noise impacts from the use of the site, including children inside the buildings, mechanical plant, kitchen exhaust, amplified music, vehicle use of the car park must comply with Part B - Section 4 of this document. Noise impact on the site from external noise sources such as nearby industry must also comply with Part B - Section 4.

Noise increases due to increased traffic flow on surrounding roads (due to vehicle flow from the site) shall be assessed in accordance with Part B - Section 5 of this document where applicable.

Council may restrict the areas in which pre-schools and day care centres will be permitted. Factors of non-acoustical nature will also play a large part in the determination of appropriate zonings, such as traffic volumes on local roads, proximity to potential health hazards, safety concerns and the like. In addition to zoning restrictions, Council can also impose noise control measures as part of the conditions of consent.

By implementing such an approach, Council recognises that childcare centre developments do generate noise that can impact negatively on the amenity of an area.

Where a childcare development is proposed, the applicant / acoustic consultant may need to consider a range of noise control measures to be incorporated into the design and operation of the centre.

Note: for additional guidelines and standards applicable to childcare centres, applications are also required to comply with Camden Council's Development Control Plan 2006.

2.2 Churches and Religious Developments

Churches and religious establishments, whilst an acknowledged part of the community, can be a source of excessive noise causing disturbance to neighbouring premises.

Where neighbouring properties may be adversely impacted by offensive noise that is generated from the arrival and departure of religious congregations or from the conducting of religious services, an acoustic assessment of such noise impacts must be included in any report submitted with the development application. Noise exemptions for occasions of special religious significance (typically less than six events per year) may be permitted by Council.

Noise emission from amplified music shall be assessed in accordance with the LAB criteria, set out in Part B - Section 7.

Noise emission from other sources on the site, including mechanical plant and vehicle movements within the site, shall be assessed in accordance with Part B - Section 4 of this document.

Noise increases due to increased traffic flow on surrounding roads (due to vehicle flow from the site) shall be assessed in accordance with Part B - Section 5 of this document where applicable.

Assessment of noise and acoustic reports for such developments shall be conducted as outlined in Part B - Section 7.5 – Acoustic Assessment Report.

2.3 Community and Multipurpose Halls and Facilities

The operation of any community or multipurpose hall or similar facility shall not give rise to offensive noise at any nearby residential premises.

Noise emission from amplified music shall be assessed in accordance with the LAB criteria, set out in Part B - Section 7.

Noise emission from other sources on the site, including mechanical plant and vehicle movements within site, shall be assessed in accordance with Part B - Section 4 of this document.

Noise increases due to increased traffic flow on surrounding roads (due to vehicle flow from the site) shall be assessed in

accordance with Part B - Section 5 of this document where applicable.

Assessment of noise and reports for such developments shall be conducted as outlined in Part B - Section 7.5 – Acoustic Assessment Report.

Where a hall is deemed to be of significant community benefit (e.g. scout halls, church halls and the like) and used for community (and not commercial) purposes Council may apply time restrictions in lieu of the above noise criteria. This concession should not be applied to noise emission from mechanical plant or amplified music.

In determining the approved hours of operation, Council shall give consideration to traffic generation and noise impact due to patron departure.

2.4 Home Business

Approval shall not be granted for the operation of a home business unless it can be established to the satisfaction of Council that the $L_{Aeq\ (15\ minutes)}$ noise level due to noise level emissions of a continuous or semi-continuous nature from the home business operation will not exceed the background $L_{A90\ (15min.)}$ sound level by more than 5 dB(A) when measured at the property boundary of any nearby residence. If the boundary is more than 30 metres from a residential dwelling at the most affected point within 30 metres of the residence.

Where tonality or impulsiveness can be established at the receiver location, a 5 dB(A) penalty shall be applied

Where there is a perceived high noise risk, assessment of noise from the business shall be conducted as outlined in Part B - Section 4.4 – Acoustic Assessment Report.

2.5 Learn-to-Swim Schools on Residential Premises

These facilities are of benefit to the wider community. However, when located within a residential area, their operation may result in some acoustic impact on neighbouring properties. The hours of operation and the number of children attending classes should be considered in relation to the suitability of the subject site and the location of neighbouring properties.

The major noise emissions from these facilities involve children arriving and departing the site, raised voices from instructors or children during lessons, splashing noises, the possible use of amplified sound and in some larger operations, traffic generation on the residential street in which the facility is located.

The $L_{Aeq(15\ minutes)}$ noise level from children in the outdoor areas of the site must not exceed the background $L_{A90\ (15min)}$ sound level by more than 10dB(A) when measured at the boundary of the nearest or most affected residential premises, or if the boundary is more than 30 metres from a residential dwelling, at the most affected point within 30 metres of a residence.

All other noise on the site, including children inside the buildings, mechanical plant and cars within the carpark must comply with Part B - Section 4 of this document.

Noise increases due to increased traffic flow on surrounding roads (due to vehicle flow from the site) shall be assessed in accordance with Part B - Section 5 of this document where applicable.

Council may restrict the areas in which such facilities are permitted. Factors of a non-acoustic nature may also play a part in the determination of appropriate zonings, such as the size of the site, location of surrounding premises, traffic volumes on local roads, safety concerns, size and frequency of classes and the like.

By implementing such an approach, Council recognises that such developments do generate noise but such emissions have the potential to be controlled by the time restrictions imposed on the facility's hours of operation. In addition to zoning restrictions, Council can impose noise control measures as part of the approved development application conditions of consent.

The following noise control measures may be incorporated where appropriate to reduce noise levels. Note however that incorporation of these controls DOES NOT in any way guarantee compliance (or viability for a development to comply) and are provided for informative purposes only.

- Hours of operation should be restricted to between 8.00 am to 6.00 pm Monday to Friday and 8.00 am to 5.00 pm Saturday with no classes on Sundays or public holidays.
- A noise screen fence of solid and continuous construction should be erected along the property boundaries adjacent to neighbouring residences. The fence shall be free of gaps and cracks.
- The applicant shall demonstrate to the satisfaction of Council that a strategy for noise management has been prepared.

Whilst the submission of an acoustic report is not a pre-requisite Council may require an acoustic report where there is a perceived high noise risk.

2.6 Schools

Although schools have the potential to generate significant levels of noise, the restricted hours of operation generally serve to limit noise impact to neighbours. In addition, the periods when students are outside en masse are limited to a short time before school, recess and lunch.

Public school buildings are designed in accordance with State Government requirements, of which noise emissions to the boundary are a consideration. However, it is recognised that Private schools may not need to be designed to comply with the same requirements.

Despite the above, generally building design should ensure that rooms in which noise generating activities will be conducted, such as woodwork, metalwork, music, etc, are located as remotely from the school boundaries as possible. Consideration should also be given to the separation between outdoor play areas and boundaries.

As a guide the $L_{Aeq(15\ minutes)}$ noise level from children in the outdoor areas of the site should not exceed the background $L_{A90\ (15minutes)}$ sound level by more than 10dB(A) when measured at the boundary of the nearest or most affected residential premises, or if the boundary is more than 30 metres from a residential dwelling, at the most affected point within 30 metres of a residence.

All other noise on the site, including children inside the buildings, woodwork/metalwork/music rooms, public address systems, bells / alarms, mechanical plant, children's external play areas, and cars within the carpark must comply with Part B - Section 4 of this document.

Noise increases due to increased traffic flow on surrounding roads (due to vehicle flow from the site) shall be assessed in accordance with Part B - Section 5 of this document where applicable.

Assessment of the noise from the school shall be conducted as outlined in Part C - Section 2.8 – Acoustic Assessment Report.

2.7 Audible Bird Scare Devices (Including Gas Scare Guns)

Audible bird scare devices are used by some orchardists and viticulturalists to protect their crops from attack from birds and fruit bats. The noise from the use of such devices, whilst seasonal, may present a noise problem for residents in close proximity to these properties.

Council and the NSW Police have statutory powers under the POEO Act 1997 and the Noise Control Regulations to deal with

such activities by applying the Offensive Noise test (refer to definition of "offensive noise" under POEO). Noise Abatement Directions and Penalty Notices can be issued where offensive noise has been determined to exist.

Alternatively, Council can assess the suitability of the devices by considering the South Australian Environment Protection Authority Guidelines – "Draft Environment Noise Guidelines for Audible Bird Scarers" (http://www.environment.sa.gov.au/epa/pdfs/bird_scarers.pdf).

2.8 Acoustic Assessment Report

An Acoustic Assessment Report prepared by a suitably qualified acoustic consultant detailing compliance with the specified acoustic criteria shall accompany the development application submitted to Council for approval.

The full Acoustic Assessment Report shall present as a minimum the information listed in Appendix 5 of this policy.

2.9 Implementation of the Policy and Compliance

Council's requirements for compliance certification of the installed/implemented noise attenuation measures, as noted in the recommendations of the acoustic report attached to the relevant development consent, will be noted as a condition of that consent.

The following is an example of such a condition:

"Noise Attenuation Report Compliance *- A report (from the author of the approved Noise Attenuation Report/Independent Auditor) that contains a certifying statement confirming that the recommendations of the approved Noise Attenuation Report have been implemented and are compliant must be submitted to the Principal Certifying Authority for inclusion in any (Occupation/Subdivision) Certificate".*

The acoustic consultant must conduct sufficient inspections to verify that all construction aspects of the noise attenuation components/measures are being carried out in accordance with the approved report recommendations.

Should the acoustic consultant confirm that:

1. any specific construction aspect does not comply with the report recommendations; or

2. that the constructed noise attenuation components/measures do not achieve the criteria set by the approved report and this policy;

the acoustic consultant must advise the applicant and the Principal Certifying Authority of such non-compliance. The applicant must arrange for the submission of an application pursuant to s.96 of the *Environmental Planning and Assessment Act 1979* for the modification of the issued development consent to the Consent Authority, Camden Council, for determination.

3 COMMUNITY NOISE RESIDENTIAL

3.1 Amplified Music (from residential premises)

The Protection of the Environment Operations (Noise Control) Regulations 2008 restricts noise from the use of musical instruments and amplified sound equipment between the hours of:

- 10pm to 8.00am Sunday to Thursday;
- 12 midnight to 8am on Friday, Saturday and any other night following a public holiday.

Where the sound is audible in a neighbour's residence during this time and a statutory warning to this effect is ignored, the person operating the sound equipment is guilty of an offence under the Act.

During the permitted hours of operation, the sound must be deemed offensive by an Authorised Officer (in a *habitable room*) before a noise notice or direction can be issued. As a guide to minimise the likelihood of disturbance, the $L_{Aeq\ (15\ minutes)}$ noise level due to the operation of amplified sound equipment should not exceed the background LA90 plus 5dBA sound level when measured in the immediate vicinity of the external structure of any nearby residence.

3.2 Barking Dogs (from residential premises)

Where a barking dog continually causes disturbance to the sleep of neighbours, it is a source of concern. Dogs that bark during the daytime may also be a source of annoyance to residents at home during the day.

Dog barking can be due to a variety of factors with perhaps the two most common being boredom and visual stimulation. Owners of barking dogs should be encouraged to exercise the animal regularly for a sufficient period and to reduce the visual stimulation of the dogs, particularly at night.

Council has statutory powers to deal with barking dogs under the Companion Animals Act 1998 by issuing a nuisance order to the registered owner or person who normally keeps the animal.

Additionally, under the Protection of the Environment Act, 1997 Council can issue a Prevention Notice on the owner of a noisy dog.

Council deals with the issue of noisy dogs located on residential premises by way of set procedures. These procedures largely fall outside the scope of this Policy. Residents also have the right to take their own action against the owners of noisy dogs by way of application to the Local Court requesting that the Magistrate issue a Noise Abatement Order.

Note: Applications for commercial kennels will require an acoustic assessment report to be submitted with development applications. Noise impact should be assessed in accordance with Part B - Section 4 of this Policy.

3.3 Air conditioners (on residential premises)

Under Council's DCP 2006 (Part B - Exempt and Complying Development), air conditioning units for dwellings are permitted as exempt development, meaning they do not require development consent where they are located a minimum distance of 3 metres from any property boundary and located behind the building line to any street frontage. Purchasers of domestic air conditioners should consult Council's DCP 2006 to ensure compliance with these requirements. Where there is non-compliance with this DCP, a development application shall be required.

The Protection Of the Environment Operations (Noise Control) Regulations 2008 sets out restricted times for the operation of domestic air conditioners that should not be heard in a neighbours home between the hours of 10.00pm to 7.00am weekdays and 10.00pm to 8.00am on weekends and public holidays. Where the operation of the air conditioner is audible in a neighbour's residence during these hours, and a statutory warning not to operate the air conditioner is ignored, the person operating the air conditioner is guilty of an offence under the POEO Act 1997.

Outside of the restricted hours, the operation of the unit must be deemed "offensive" by an Authorised Officer before a Noise Notice can be served. To minimise the likelihood of disturbance, the $L_{Aeq\ (15\ minutes)}$ noise level due to the operation of the air conditioner shall not exceed the background L_{A90} sound level by more than 5 dB(A) when measured at the property boundary in the immediate vicinity of the external structure of any nearby residence. Where tonality can be established, a 5 dB(A) penalty shall be applied.

Development Applications will need to be lodged with Council prior to the installation of any air conditioner unless it can be

clearly determined that full compliance can be achieved with Council's DCP 2006 – Part B, Chapter 2 "Exempt Development".

It is important to note that compliance with Council's DCP does not ensure that an air conditioner will meet the above noise goal. If noise from any air conditioner is identified as a problem to a neighbour the above noise criteria will need to be complied with at the owner's expense (regardless of compliance with DCP 2006).

Assessment of the noise from air conditioners should be conducted as outlined on Part C – Section 3.9 – Acoustic Assessment Report.

Note: Air conditioners for commercial premises are classified as mechanical plant and require a development application. Noise impact should be assessed in accordance with details contained within Part B - Section 4 of this Policy.

3.4 Birds or Caged Birds (Domestic) on Residential Premises

Domestic and caged birds kept upon any premises shall be deemed to cause *offensive noise* when the noise from the birds can be heard by an Authorised Officer within a habitable room in any affected residence between the hours of 10.00 pm and 7.00 am.

Outside of these hours complaints will be assessed in accordance with the POEO Act 1997, Local Government Act 1993, and other relevant statutory powers.

3.5 Lawnmowers

The Protection Of the Environment Operations (Noise Control) Regulations 2008 sets out restricted times for the operation of lawnmowers that should not be heard in a neighbours home between the hours of 8.00 pm and 7.00 am Monday to Saturday and 8.00 pm and 8.00 am Sundays and Public Holidays. Where the operation of the lawnmower is audible in a neighbour's residence during restricted hours, and a statutory warning to this effect is ignored, the person operating the lawnmower is guilty of an offence under the POEO Act.

3.6 Swimming Pool & Spa Pool & Heat Pumps

The Protection Of the Environment Operations (Noise Control) Regulations 2008 sets out restricted times for the operation of swimming pool pumps that should not be heard in a neighbours home between 8.00 pm and 7.00 am Mondays to Fridays and 8.00pm and 8.00 am weekdays and public holidays. Where the operation of the pump is audible in a neighbour's residence during this time, and a statutory warning to the effect is

ignored, the person operating the pool pump is guilty of an offence under the POEO Act.

Outside these restricted hours, the noise must be deemed "offensive" by an Authorised Officer before a Noise Notice can be served to minimise the likelihood of disturbance, the $L_{Aeq\ (15\ minutes)}$ noise level due to the operation of the swimming pool pump shall not exceed the background L_{A90} sound level by more than 5 dB(A) when measured at the property boundary of any nearby residence.

Where there is a likelihood of objectionable or offensive noise emissions beyond the property boundary, pumps must be housed in a suitably constructed, sound-proofed structure. Advice should be sought from a suitably qualified acoustic consultant or similar qualified person with regard to the materials to be used.

An acoustic report is not normally required to be submitted for a pool or spa pump unless requested by Council. However when installing such devices consideration is to be given to the location of such devices in relation to neighbouring residences and the noise criteria must still be complied with. The location of such pumps must be detailed on any plans submitted with the development application.

3.7 Tennis Courts on Residential Premises – Private Use

Attempting to regulate noise emissions from residential tennis courts by applying noise level limits is difficult due to the nature and duration of the noise source. As in the case of backyard swimming pools, some degree of noise must be expected at neighbouring premises from the activities conducted. Unless artificial lighting is installed, the use of tennis courts on residential premises is restricted to daylight hours, which is generally considered sufficient in terms of noise control.

However, where an application is made to install artificial lighting to permit private court use outside of daylight hours, the following restrictions shall be imposed upon the development.

- Hours of Operation shall be restricted to between 8.00 am to 10.00 pm.
- A guideline minimum distance of 10 metres shall be maintained between the edge of the court and the window of any habitable room in an adjacent premise, or an alternative form of noise mitigation shall be employed.

Note: Where it is proposed to use a tennis court for commercial purposes such as private/public coaching, an acoustic assessment report may be

required to be submitted for approval in accordance with Part B - Section 4.

3.8 Trail Bikes and Vehicles in Off-Road Areas

Trail bikes and vehicle activity in off-road areas, including both public reserves and private land, can be a source of annoyance to residents during the day. Council and the NSW Police have the statutory powers under the POEO Act 1997 and the Noise Control Regulations to deal with such activities by applying the Offensive Noise test (refer to definition of "offensive noise" under POEO). Noise Abatement Directions and Penalty Notices can be issued where offensive noise has been determined to exist.

3.9 Acoustic Assessment Report

An Acoustic Assessment Report prepared by a suitably qualified acoustic consultant detailing compliance with the specified acoustic criteria shall accompany the development application submitted to Council for approval.

The full Acoustic Assessment Report shall present as a minimum the information listed in Appendix 5 of this policy.

3.10 Implementation of the Policy and Compliance

Council's requirements for compliance certification of the installed/implemented noise attenuation measures, as noted in the recommendations of the acoustic report attached to the relevant development consent, will be noted as a condition of that consent.

The following is an example of such a condition:

"Noise Attenuation Report Compliance *- A report (from the author of the approved Noise Attenuation Report/Independent Auditor) that contains a certifying statement confirming that the recommendations of the approved Noise Attenuation Report have been implemented and are compliant must be submitted to the Principal Certifying Authority for inclusion in any (Occupation/Subdivision) Certificate".*

The acoustic consultant must conduct sufficient inspections to verify that all construction aspects of the noise attenuation components/measures are being carried out in accordance with the approved report recommendations.

Should the acoustic consultant confirm that:

1. any specific construction aspect does not comply with the report recommendations; or

2. that the constructed noise attenuation components/measures do not achieve the criteria set by the approved report and this policy;

the acoustic consultant must advise the applicant and the Principal Certifying Authority of such non-compliance. The applicant must arrange for the submission of an application pursuant to s.96 of the *Environmental Planning and Assessment Act 1979* for the modification of the issued development consent to the Consent Authority, Camden Council, for determination.

4 NOISE FROM OPEN AIR ENTERTAINMENT AND OUTDOOR FACILITIES

4.1 General

The following guidelines for the control of noise from open air entertainment and outdoor facilities have been devised in order to minimise the likelihood of disturbance to the surrounding community. In some instances, however, where an event or activity is determined to be of particular social or cultural benefit, more relaxed criteria may be applied at Council's discretion.

In the case of existing facilities, such as Oran Park Raceway, Council has applied specific noise criteria to the operation of the facility via an approval. These criteria will enable Council to regulate the noise emissions from the operation of the facility.

4.2 Guidelines

4.2.1 Outdoor special events

The staging of outdoor "special event" such as open-air concerts or music festivals will require Council approval. The criteria that follows is for events of an infrequent nature, perhaps once or twice per year. Events of special cultural or social significance as determined by Council will be given preference for approval.

Where approval is received the applicant will be required to submit a Noise Management Plan that addresses the following: suitable stage orientation, provision and location of foldback monitors, speaker stack height, location and orientation and implementation of noise control measures, how the community will be informed about the festival operating times, provision of a contact number for the event manager /staff, nomination of the person contactable on the day of the event.

Where Council approval is granted, the maximum permissible noise level measured at the nearest residential boundary shall not exceed 70 dB(A) $L_{Amax.}$ or 85 dB(C) L_{Cmax}. Ideally, warning should be issued to the mixing desk when the maximum level

reaches 65 dB(A) L_{Amax} or 80 dB(C) L_{Cmax} at the nearest or most potentially affected residential premises.

Ideally, the duration of such events should be restricted to no more than 4 hours with events to be completed by 10.00 pm. All patrons are to be off site by 10:30pm.

4.2.2 Open Air Cinemas

Open-air cinemas are similar to open-air concerts with regard to noise emissions. The main difference relates to the frequency of events where an approval for open-air cinemas may extend to cover a period of months of operation. In addition, the cinema may operate over a number of evenings each week and it is this frequency that is likely to cause annoyance amongst residences.

Assessment of noise from the open-air cinema shall be conducted as outlined in Part C - Section 4.3.

Noise emission from amplified sound sources on the site as well as any power generators or other plant, shall be assessed in accordance with Part B - Section 4 of this document.

Noise generation from vehicular traffic within the site may need to comply with Part B - Section 4 of this document. Council may apply this criterion at their discretion.

Noise generation from vehicular traffic on surrounding roads may need to comply with Part B - Section 5 of this document. Council may apply this criterion at their discretion. The preparation of a Noise Management Plan to accompany the acoustic report is required where traffic control is necessary.

Where off-street parking is available, events shall be completed by 10.30pm, with all patron cars off site by 11.00pm.

4.2.3 Recreational Facilities

Unless otherwise approved by a consent authority, the $L_{Aeq(15\ minutes)}$ noise level due to the operation of the recreational facility including the operation of any public address system shall not exceed the background L_{A90} sound level by more than 5dB(A) when measured over a fifteen minute period at the nearest residential boundary or, if that is more than 30 metres from the residence, at the most affect point within 30 metres of the residence.

Where a special event is deemed by Council to be of particular social or cultural benefit to the wider community, a 10 dB(A) exceedance of the background L_{A90} sound level may be permitted upon written approval from Council prior to the event.

An example of recreational facilities includes skate and bike parks (non-motorised), equestrian centres, model aircraft.

4.2.4 Recreational Vehicle Facility

Approval shall not be granted for the operation of a facility (such as a motocross track etc) for recreational vehicle use unless it can be demonstrated to the satisfaction of Council that the $L_{Aeq\ (15\ minutes)}$ noise level at any time during vehicle operation will not exceed the background L_{A90} sound level by more than 5 dB(A) when measured at the most affected point on or within the residential property boundary or, if that is more than 30 metres from the residence, at the most affected point within 30 metres of the residence.

The recommended operating hours for such facilities are:

Monday to Friday	8.00 am to 6.00 pm
Weekends and Public Holidays	8.00 am to 5.00 pm

Assessment of noise from recreational vehicles shall be conducted as outlined in Part C - Section 4.3.

4.2.5 Shooting Range Facility

Approval shall not be granted for the operation of any such facility unless it can be demonstrated to the satisfaction of Council that the following noise levels will not be exceeded when measured at the most affected point on or within the residential property boundary or, if that is more than 30 metres from the residence, at the most affect point within 30 metres of the residence.

Residential Level – dB (Lin) Peak Hold											
	60	**65**	**70**	**75**	**80**	**85**	**90**	**95**	**100**	**105**	**Over 105**
Maximum Usage – Days (Nights) per Week											
Future Range Daytime Use	7	6	5	4	3	2	1	-	-	-	-
Future Range Night-time Use	3	2	1	-	-	-	-	-	-	-	-

For assessment of shooting range facilities, daytime is defined as 10.00 am to 6.00 pm Monday to Saturday. Night-time is defined as 6.00 pm to 10.00 pm Monday to Saturday.

Assessment of noise from shooting ranges shall be conducted as outlined in Part C - Section 4.3.

Shooting on Sundays and Public Holidays is only permitted between the daytime hours of 10.00 am to 5.00 pm.

The requirements for sites using non-explosive projectiles, such as "paintball" facilities and the like, are to be assessed in accordance with Part B- Section 4 of this policy.

4.2.5 Sporting Activities

Organised outdoor sporting activities such as football, soccer, netball, hockey and the like conducted at sporting grounds are not subject to specific noise criteria (for participants and spectators) during the following daytime hours:

Monday to Friday	7.00 am to 6.00 pm
Weekends and Public Holidays	8.00 am to 6.00 pm

Outdoor sporting activities are permitted between the hours of 6.00 pm and 10.00 pm, Monday to Saturday provided the $L_{Aeq\ (15\ minutes)}$ noise level, measured over a fifteen minute period, does not exceed the background L_{A90} sound level by more than 10 dB(A). This is to be measured at the most affected point on or within the residential property boundary or, if that is more than 30 metres from the residence, at the most affected point within 30 metres of the residence.

At all times however the use of public address systems must not result in an $L_{Aeq\ (15\ minutes)}$ noise level, measured over a representative period which exceeds the background L_{A90} sound level by more than 5 dB(A) when measured at the most affected point on or within the residential property boundary or, if that is more than 30 metres from the residence, at the most affected point with 30 metres of the residence.

Noise emission from vehicle movements within the site shall be assessed in accordance with Part B - Section 4 of this document.

Noise increases due to increased traffic flow on surrounding roads (due to vehicle flow from the site) shall be assessed in accordance with Part B - Section 5 of this document where applicable.

In all cases new sporting fields etc must take into account noise during the planning and design process. Facilities should be laid out in such a way as to minimise noise impact on nearby residences.

Residential developments on land surrounding sporting fields must take into account noise generation from such facilities. Council reserve the right to require modifications of applications for residential developments adjacent to sporting fields in order to protect noise amenity and provide a buffer zone between the sporting facilities and residences. In all cases where development approval is granted near an existing facility (or site set aside for a future facility) it remains the responsibility of the

developer to provide sufficient noise control to protect resident amenity.

4.3 Acoustic Assessment Report

An Acoustic Assessment Report prepared by a suitably qualified acoustic consultant detailing compliance with the specified acoustic criteria shall accompany the development application submitted to Council for approval.

The full Acoustic Assessment Report shall present as a minimum the information listed in Appendix 5 of this policy.

4.4 Implementation of the Policy and Compliance

Council's requirements for compliance certification of the installed/implemented noise attenuation measures, as noted in the recommendations of the acoustic report attached to the relevant development consent, will be noted as a condition of that consent.

The following is an example of such a condition:

"Noise Attenuation Report Compliance *- A report (from the author of the approved Noise Attenuation Report/ Independent Auditor) that contains a certifying statement confirming that the recommendations of the approved Noise Attenuation Report have been implemented and are compliant must be submitted to the Principal Certifying Authority for inclusion in any (Occupation/ Subdivision) Certificate".*

The acoustic consultant must conduct sufficient inspections to verify that all construction aspects of the noise attenuation components/measures are being carried out in accordance with the approved report recommendations.

Should the acoustic consultant confirm that:

1. any specific construction aspect does not comply with the report recommendations; or

2. that the constructed noise attenuation components/measures do not achieve the criteria set by the approved report and this policy;

the acoustic consultant must advise the applicant and the Principal Certifying Authority of such non-compliance. The applicant must arrange for the submission of an application pursuant to s.96 of the *Environmental Planning and Assessment Act 1979* for the modification of the issued development consent to the Consent Authority, Camden Council, for determination.

5 NOISE FROM CAMDEN AIRPORT / MOTOR SPORT FACILITIES

5.1 General

Whilst Camden Council is responsible for regulating noise emissions from Oran Park Raceway, it is the Civil Aviation Safety Authority (CASA) who is responsible for regulating the operations of Camden Airport with respect to noise complaints.

In consideration of noise impact from Oran Park Raceway, Council has specific noise criteria applicable to the operation of the facility. This criterion enables Council to strictly regulate the noise emissions that occur during operation of the facility.

Despite the above, it is recognised that Camden Airport and Motor Sport Facilities independently have the potential to negatively impact on the amenity of surrounding residents with respect to noise. Therefore it is important to consider the level of noise impact where it is planned to rezone land for development when a more sensitive landuse is proposed.

The following guidelines for any assessment of noise from the Airport / Motor Sport facilities have been devised in order to minimise the likelihood of disturbance to the surrounding community. In some instances, however, where an event or activity is determined to be of particular social or cultural benefit, more relaxed criteria may be applied at Council's discretion.

5.2 Guidelines

5.2.1 Airport (Camden) Noise effect on Developments

In Australia, the acceptability of land in the vicinity of airports for development is assessed using the Australian Noise Exposure Forecast (ANEF) systems which is endorsed by Airservices Australia.

ANEF is based on forecasting future (as well as existing) aircraft movements, the number of movements, the type of these movements, and the time of day that movements are planned to occur. Using similar techniques to ANEF a set of noise contours are produced known as Australian Noise Exposure Concept (ANEC) contours which require final endorsement from Airservices Australia.

Australian Standard 2021 – 2000, Acoustics – Aircraft noise intrusion – Building siting and construction, provides recommendations regarding land use acceptability in consideration of the various zones on the ANEF chart.

Depending on the ANEF value at a specific location, certain building types are described by AS2021-2000 as either "acceptable", "conditionally acceptable", or "unacceptable" with reference to the ANEF value.

Developments outside the ANEF 20 contour do not require assessment for aircraft noise (unless specifically requested by Council).

Whilst the ANEF system provides guidance on the acceptability of a proposed land use it does not inform prospective residents in the "acceptable" or "conditionally acceptable" areas about the nature of any aircraft noise. Where this is the case, additional techniques will need to be applied to the assessment process that will inform proposed residents who are noise sensitive to be informed of noise disturbance.

Acoustic Assessments of noise from airport / aircraft shall be conducted as outlined in Part C – Section 5.3 and be strictly assessed in accordance with AS2021 –2000.

5.2.2 Motor Sport Noise effect on Developments

As previously indicated, Oran Park Raceway has specific noise criteria applicable to the operation of the facility. Whilst the criteria enables Council to strictly regulate the noise emissions that occur during operation of the facility it also provides intrusive noise criteria to be adopted for assessment of impact on a proposed development.

Where residential development is proposed on land that is likely to be impacted by noise from Motor Sport Facilities then an acoustic assessment report is required. The relevant intrusive noise level ($L_{Aeq(15\ minutes)}$) should not exceed the background (L_{A90}) plus 5 dB(A) at any proposed residential boundary or, if that boundary is proposed to be more than 30 metres from the residence, at the most affected point within 30 metres of the residence.

Acoustic assessments should also take into consideration the potential for night-time race events which are permitted (upon request and written approval) until 10.00pm and the potential meteorological effects on noise propagation.

Acoustic Assessments of noise from Motor Sport Facilities shall be conducted as outlined in Part C – Section 5.3.

5.3 Acoustic Assessment Report

An Acoustic Assessment Report prepared by a suitable qualified acoustic consultant detailing compliance with the specified acoustic criteria shall accompany the development application submitted to Council for approval.

The full Acoustic Assessment Report shall present as a minimum the information listed in Appendix 1 of this policy.

5.4 Implementation of the Policy and Compliance

Council's requirements for compliance certification of the installed/implemented noise attenuation measures, as noted in the recommendations of the acoustic report attached to the relevant development consent, will be noted as a condition of that consent.

The following is an example of such a condition

"Noise Attenuation Report Compliance *- A report (from the author of the approved Noise Attenuation Report/Independent Auditor) that contains a certifying statement confirming that the recommendations of the approved Noise Attenuation Report have been implemented and are compliant must be submitted to the Principal Certifying Authority for inclusion in any (Occupation/Subdivision) Certificate".*

The acoustic consultant must conduct sufficient inspections to verify that all construction aspects of the noise attenuation components/measures are being carried out in accordance with the approved report recommendations.

Should the acoustic consultant confirm that:

1.any specific construction aspect does not comply with the report recommendations, or

2.that the constructed noise attenuation components/measures do not achieve the criteria set by the approved report and this policy,

the acoustic consultant must advise the applicant and the Principal Certifying Authority of such non-compliance. The applicant must arrange for the submission of an application pursuant to s.96 of the *Environmental Planning and Assessment Act 1979* for the modification of the issued development consent to the Consent Authority, Camden Council, for determination.

6 Parks - Noise effects on Developments

6.1 General

Camden Council is responsible for regulating noise emissions from the recreational use of parks (such as Onslow and Kirkham Parks) which are used for sporting events, circuses, and special events.

It is recognised that the use of these parks has the potential to negatively impact on the amenity of surrounding residents with respect to noise. Therefore it is important to consider the level of noise impact when land in the vicinity of such parks is proposed to be rezoned for residential development or similar sensitive land-use.

The following guidelines for any assessment of noise from the use of these Parks have been devised in order to minimise the likelihood of disturbance to the surrounding community. In some instances, however, where an event or activity is determined by Council to be of particular social or cultural benefit, more relaxed criteria may be applied to the use of the site.

6.2 Guidelines

6.2.1 Parks

Where residential development is proposed on land that is likely to be impacted by noise from the use of parks then an acoustic assessment report is required.

During the daytime the following hours are:

Monday to Friday	7.00am to 6.00pm
Weekends and Public Holidays	8.00am to 6.00pm

For the above daytime hours the relevant intrusive noise level ($L_{Aeq,\ 15\ minutes}$) should not exceed the background (L_{A90}) plus 5 dB(A).

During night-time hours of 6.00pm and 10.00pm. the relevant intrusive noise level ($L_{Aeq,\ 15\ minutes}$) should not exceed the background (L_{A90}) plus 10 dB(A).

Noise shall be assessed at any proposed residential boundary or, if that boundary is proposed to be more than 30 metres from the residence, at the most affected point within 30 metres of the residence.

Acoustic assessments of noise from the use of parks shall be conducted as outlined in Part C – Section 6.3.

6.3 Acoustic Assessment Report

An Acoustic Assessment Report prepared by a recognised consultant in acoustics and detailing compliance with the specified acoustic criteria shall accompany the development application submitted to Council for approval.

The full Acoustic Assessment Report shall present as a minimum the information listed in Appendix 4 of this policy.

6.4 Implementation of the Policy and Compliance

Council's requirements for compliance certification of the installed/implemented noise attenuation measures, as noted in the recommendations of the acoustic report attached to the relevant development consent, will be noted as a condition of that consent.

The following is an example of such a condition:

"Noise Attenuation Report Compliance *- A report (from the author of the approved Noise Attenuation Report/Independent Auditor) that contains a certifying statement confirming that the recommendations of the approved Noise Attenuation Report have been implemented and are compliant must be submitted to the Principal Certifying Authority for inclusion in any (Occupation/Subdivision) Certificate".*

The acoustic consultant must conduct sufficient inspections to verify that all construction aspects of the noise attenuation components/measures are being carried out in accordance with the approved report recommendations.

Should the acoustic consultant confirm that:

1. any specific construction aspect does not comply with the report recommendations; or

2. that the constructed noise attenuation components/measures do not achieve the criteria set by the approved report and this policy;

the acoustic consultant must advise the applicant and the Principal Certifying Authority of such non-compliance. The applicant must arrange for the submission of an application pursuant to s.96 of the *Environmental Planning and Assessment Act 1979* for the modification of the issued development consent to the Consent Authority, Camden Council, for determination.

DEFINITIONS

A-weighted: See dB(A).

Adverse weather: **Weather effects that enhance noise (that is, wind and temperature inversions) that occur at a site for a significant period of time (that is, wind occurring more than 30% of the time in any assessment period in any season and/or temperature inversions occurring more than 30% of the nights in winter).**

Airborne rail traffic noise: **is noise from the operation of a surface rail line that is heard at, and within, noise-sensitive premises.**

Ambient noise**: The all-encompassing noise associated within a given environment. It is the composite of sounds from many sources, both near and far.**

Amenity criteria: **See *Tables 4.1.3.1* and *4.1.3.2.***

ANEF**: Australian Noise Exposure Forecast (which relates to assessment of Airport Noise).**

Annoyance: **The most common type of reaction felt by residents towards traffic noise. The degree of annoyance felt by an individual may be assessed using social survey techniques.**

Arterial Road: Includes sub-arterial roads as well as freeways and refers to roads handling through-traffic, with characteristically heavy and continuous traffic flows during peak periods. Through-traffic is traffic passing through a locality bound for another locality.

Background noise**: The underlying level of noise present in the ambient noise, excluding the noise source under investigation, when extraneous noise is removed. This is described using the L_{A90} descriptor.**

Barrier-noise: Any natural or artificial physical barrier to the propagation of noise (from a roadway), but generally referring to acoustically reflective or absorbent fences, walls or mounds (or combinations thereof) constructed beside a roadway.

Buffer: An area of land between a roadway and a noise-sensitive land use, used as open space or for some other noise-tolerant land use.

Collector road: Refers to a road situated in a built-up area that collects local traffic leaving a locality and connects to a sub-arterial road.

Compliance: The process of checking that source noise levels meet with the noise limits in a statutory context.

Construction activities: Activities that are related to the establishment phase of a development and that will occur on a site for only a limited period of time.

dB: Abbreviation for decibel – a unit of sound measurement. It is equivalent to 10 times the logarithm (to base 10) of the ratio of a given sound pressure to a reference pressure.

dB(A): Unit used to measure 'A-weighted' sound pressure levels. A-weighting is an adjustment made to sound-level measurement to approximate the response of the human ear.

DEC: Department of Environment and Conservation (formerly EPA)

DECC: Department of Environment and Climate Change (formerly DEC and EPA)

Environmental Noise Policy: Refers to this Policy.

EPA: Environment Protection Authority (now known as DECC).

Feasible and reasonable measures: Feasibility relates to engineering considerations and what is practical to build; reasonableness relates to the application of judgement in arriving at a decision, taking into account the following factors:

- noise mitigation benefits (amount of noise reduction provided, number of people protected)
- cost of mitigation (cost of mitigation versus benefit provided)
- community views (aesthetic impacts and community wishes)
- noise levels for affected land uses (existing and future levels, and changes in noise levels).

Freeway: See Arterial Roads

Ground-borne noise: is defined as noise generated inside a building by ground-borne vibration generated from pass-by of a vehicle on rail.

Guidelines for Environmental Noise: Refers to guidelines contained within this Policy.

Habitable room: Any room (in a dwelling) other than a garage, storage area, bathroom, laundry, toilet or pantry. Used in determining the audibility of noise under the 'Times of Use" sections of the POEO Noise Control Regulation.

Heavy vehicle: A truck, transport or other vehicle with a gross vehicle weight above a specified level (for example: over 8 tonnes).

Intrusive noise: Refers to noise that intrudes above the background level by more than 5 decibels.

L_{A90}: The A-weighted sound pressure level that is exceeded for 90 per cent of the time over which a given sound is measured. This is considered to represent the background noise.

L_{Aeq}: The A-weighted equivalent continuous noise level – the level of noise equivalent to the energy-average of noise levels occurring over a measurement period. Note that in some cases the Leq contribution from a site to be measured may not be directly measurable in the existing ambient environment. In such cases the Leq from the site may be determined indirectly (for example by a combination of measurements and calculations to include only the noise from site). In all such cases the method of determination of the Leq must be clearly explained and justified.

$L_{Aeq(15hr)}$: The L_{Aeq} noise level for the period 7 am to 10 pm.

$L_{Aeq(9hr)}$: The L_{Aeq} noise level for the period 10pm to 7am.

$L_{Aeq(1hr)}$: The L_{Aeq} noise level for a one-hour period. In the context Section 5 of this policy it represents the highest tenth percentile hourly A-weighted L_{eq} during the period 7 am to 10 pm, or 10 pm to 7 am (whichever is relevant). If this cannot be defined accurately, use the highest A-weighted L_{eq} noise level.

$L_{Aeq(15\ minutes)}$: The L_{Aeq} noise level for a fifteen-minute period. In the context of this policy it represents the typical worst-case fifteen-minute period.

L_{Amax} : For measurement purposes the L_{Amax} means A–weighted maximum Root Mean Square (RMS) sound pressure level measured over a one (1) second interval.

L_{Cmax} : For measurement purposes L_{Cmax} means C-weighted maximum RMS sound pressure level measured over a one (1) second interval.

Meteorological conditions: Wind and temperature-inversion conditions.

Most affected location(s): Locations that experience (or will experience) the greatest noise impact from the noise source under consideration. In determining these locations, one needs to consider existing background levels, exact noise source location(s), distance from source (or proposed source) to receiver, and any shielding between source and receiver.

Noise criteria: The general set of non-mandatory noise level targets for protecting against intrusive noise (for example, background noise plus 5 dB) and loss of amenity (for example, noise levels for various land uses).

Non-compliance: A development is deemed to be in non-compliance with its noise consent/licence conditions if the monitored noise levels exceed its statutory noise limit by more than 2 dB.

Offensive Noise: Noise:
(a) that, by reason of its level, nature, character or quality, or the time at which it is made, or any other circumstances:

(i) is harmful to (or is likely to be harmful to) a person who is outside the premises from which it is emitted, or

(ii) interferes unreasonably with, (or is likely to interfere unreasonably with) the comfort or repose of a person who is outside the premises from which it is emitted, or

(b) that is of a level, nature, character or quality prescribed by the regulations or that is made at a time, or in other circumstances, prescribed by the regulations

Protection of the Environment Operations Act 1997 (POEO Act) : An Act that consolidates air, water, noise and waste requirements into a single piece of legislation. The POEO Act repeals and replaces (among other Acts) the Noise Control Act 1975. It contains the provisions for Noise Control Notices, Prevention Notice, Compliance Cost Notice and Noise Abatement Directions.

Prevailing Weather Conditions: Usual / common weather conditions at a particular location as a particular time of year.

Receiver: The noise-sensitive land use at which noise from a development can be heard.

Recreational Vehicle: A motor vehicle (which is a vehicle that is built to be propelled by a motor that forms part of the vehicle) that is used for recreational purposes.

RTA: Roads and Traffic Authority.

Scheduled Activity: Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997.

Sleep disturbance: Awakenings and disturbance to sleep stages.

Sound pressure level: The level of noise, usually expressed in dB(A), as measured by a standard sound level meter with a pressure microphone. The sound pressure level in dB(A) gives a close indication of the subjective loudness of the noise.

Suitably Qualified Acoustic Consultant: a member of the Australian Acoustical Society, the Institute of Engineers, the Association of Australian Acoustical Consultants or a person with appropriate professional qualifications.

Temperature inversion: An atmospheric condition in which temperature increases with height above the ground.

Traffic noise: The total noise resulting from road traffic, including both light and heavy vehicles, steady and intermittent traffic flow and specific events such as the use of engine brakes.

REFERENCES

- "Application Notes – NSW Industrial Noise Policy", NSW Environmental Protection Authority, July 2006.

- *Department of Environment and Conservation* (2004) Noise Guide For Local Government, DEC, Sydney.

- *NSW Protection of the Environment Operations (Noise Control) Regulation 2008*, NSW Government Information Service.

- *Environmental Criteria for Road Traffic Noise*, NSW Environment Protection Authority, May 1999.

- Environment Protection Authority (1994) *Environmental Noise Control Manual,* EPA, Sydney.

- Hornsby Shire Council: Policy and Guidelines for Noise and Vibration Generating Development, November 2000.

- *Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects*, NSW Department of Environment and Climate Change, April 2007.

- *NSW Industrial Noise Policy,* NSW Environment Protection Authority, January 2000.

- *NSW Protection of the Environment Operations Act, 1997,* NSW Government Information Service.

- *State Environmental Planning Policy (Infrastructure) 2007*, NSW Department of Planning, Sydney.

- *State Rail Authority Interim Guidelines for Applicants – Consideration of Rail Noise and Vibration in the Planning Process*, November 2003.

- UK Department of Transport (1988) *Calculation of Road Traffic Noise (CORTN),* HMSO, London.

APPENDIX 1 – Industrial and Commercial Development

The full Acoustic Assessment Report shall present the following information:

- A description of the industrial/ commercial development outlining the major noise sources involved in operations on which the assessment of noise impact is based.
- The times of operation of the development.
- A description of the area and surrounding land uses and details of nearest potentially affected received locations.
- A site plan showing distances between plant and potentially affected receiver locations and detailing intervening topography that may affect noise propagation.
- Plans and elevations of building layouts and any enclosures of noise sources. Descriptions of building construction and means of ventilation should be included.
- Details of existing background levels during the proposed times of operation and the means by which these levels were obtained.
- Details of any control measures incorporated into the development to mitigate noise emissions that includes Noise Management Plans.
- Noise level data for all major noise sources, either as the sound pressure level at a specified distance or the sound power level in A-weighted decibels and preferably octave band levels.
- A description of the method used to determine the L_{Aeq} noise level emission.
- The predicted L_{Aeq} cumulative dBA level at the potentially sensitive received locations considered.
- A comparison of the predicted L_{Aeq} noise level emissions from industry with the relevant design criteria at each potentially sensitive receiver location considered.
- Any other significant or relevant acoustic information concerning the project.
- A Statement of Opinion confirming compliance with the acoustic assessment criteria requirements and detailing any mitigation measures required in order to achieve the required criteria.

Note: Council reserves the right to refer any acoustic report for an independent review by an independent acoustic consultant.

Appendix 2 – Road Traffic Noise

The Acoustic Report shall present the following information:

- Details of traffic generation during operation of the development;
- Details of times of significant traffic generation and hours of operation of heavy vehicles;
- Details of the prediction method used to calculate the noise level generated by road traffic;
- The predicted levels of road traffic noise at potentially sensitive received locations with and without the development;
- Details of the predicted future traffic flow increases expected over the next 10 year period.
- A statement of opinion regarding compliance with the acoustic assessment criteria requirements and detailing any mitigating measures required in order to achieve the required criteria that includes, where appropriate, noise and traffic management plans.

Note: Council reserves the right to refer any acoustic report for an independent review by an independent acoustic consultant.

Appendix 3 – Rail Noise Assessments

The Acoustic Report shall present the following information:

- A site plan showing the location of the proposed development in relation to the railway, annotated with relevant dimensions.
- A site plan showing the location of any measurements used in the assessment.
- Discussion of the characteristics of the site and proposed developments that is relevant in respect of noise and vibration propagation such as cuttings, embankments, ground type, structural design and building layout.
- Discussion of the relevant characteristics of railway activities, including reference to special characteristics such as curve squeal, wagon bunching or powering/braking on gradient.
- Consideration of daytime and nighttime activities.
- Consideration of future railway proposals.
- Details of the calculation methodologies used in the assessment and the results.
- A statement of opinion regarding compliance with the acoustic assessment criteria requirements and detailing any mitigating measures required in order to achieve the required criteria.

Note: Council reserves the right to refer any acoustic report for an independent review by an independent acoustic consultant.

Appendix 4 – Licensed Premises

The full Acoustic Assessment Report shall present the following information:

- A description of the development outlining the major noise sources involved in operations on which the assessment of noise impact is based.
- The times of operation of the development.
- A description of the area and surrounding land uses and details of nearest potentially affected receiver locations.
- A site plan showing distances between noise sources and potentially affected received locations and detailing intervening topography which may affect noise propagation.
- Plans and elevations of building layouts and any enclosures of noise sources. Descriptions of building construction and means of ventilation should be included.
- Details of existing background levels during the proposed times of operation and the means by which these levels were obtained.
- Details of any control measures incorporated into the development to mitigate noise emissions.
- Noise level data for all major noise sources, either as the sound pressure level at a specified distance or the sound power level in A-weighted decibels and preferably octave band levels.
- A description of the method used to determine the noise levels emission
- The predicted L_{Aeq} cumulative dB(A) level at the potentially sensitive received locations considered.
- A comparison of the predicted L_{Aeq} noise level emissions from the development with the relevant design criteria at each potentially sensitive received location considered.
- A comparison of predicted noise level emissions from the development with the Liquor Administration Board (LAB) noise at each potentially sensitive receiver location.
- Details of ingress and egress arrangements in use after 10.00pm. In addition, the applicant shall supply a statement detailing the means by which noise associated with patron arrival and departure is proposed to be controlled.
- Any other significant or relevant acoustic information concerning the project.
- A Statement of Opinion confirming compliance with the acoustic assessment criteria requirements and detailing any mitigation measures required in order to achieve the required criteria.

Note: Council reserves the right to refer any acoustic report for an independent review by an independent acoustic consultant.

Appendix 5 – Community Noise and Outdoor Facilities

The full Acoustic Assessment Report shall present the following information:

- A description of the development outlining the major noise sources involved in operations on which the assessment of noise impact is based.
- The times of operation of the development.
- A description of the area and surrounding land uses and details of nearest potentially affected receiver locations.
- A site plan showing distances to potentially affected received locations and detailing intervening topography which my affect noise propagation.
- Plans and elevations of building layouts and any enclosures of noise sources. Descriptions of building construction and means of ventilation should be included.
- Details of existing background levels during the proposed times of operation and the means by which these levels were obtained.
- Details of any control measures incorporated into the development to mitigate noise emissions.
- Noise level data for all major noise sources, either as the sound pressure level at a specified distance or the sound power level in A-weighted decibels and preferably octave band levels.
- A description of the method used to determine the L_{Aeq} noise level emission.
- The predicted L_{Aeq} cumulative dBA level at the potentially sensitive receiver locations considered.
- A comparison of the predicted L_{Aeq} noise level emissions from the development with the relevant design criteria at each potentially sensitive receiver location considered.
- In the case of multipurpose halls, clubs, pubs, restaurants and the like, details of access and egress arrangements in use after 10.00 pm. In addition, the applicant shall supply a statement detailing the means by which noise associated with patron arrival and departure is proposed to be controlled.
- Any other significant or relevant acoustic information concerning the project.
- A Statement of Opinion confirming compliance with the acoustic assessment criteria requirements and detailing any mitigation measures required in order to achieve the required criteria.

Note: Council reserves the right to refer any acoustic report for an independent review by an independent acoustic consultant.