

## Appropriate Visual and Acoustic Treatment of Roadways

### Date of Council Resolution

This guideline was adopted by Council on 27 May 2008 and takes effect on 3 June 2008, in accordance with section 2.3(2) of the Planning Scheme.

### Purpose of the Guideline

The purpose of this guideline is to assist with the implementation of the Planning Scheme by providing guidance for development adjoining roadways.

This guideline is intended to promote safe, efficient and attractive streetscapes, as well as prevent the proliferation of unnecessary acoustic and barrier fencing.

Development that properly engages with the streetscape has flow-on benefits to the community which include:-

- maintaining and enhancing the visual character and amenity of the City;
- providing visual interest to the pedestrian and motorist;
- promoting a greater level, and stronger perception of community safety;
- maintaining property values; and
- promoting pedestrian friendly environments.

Current Planning Scheme provisions relating to acoustic and barrier fencing are contained within the Reconfiguring a Lot Code (Part 12, Division 5) and the Residential Code (Part 12, Division 6).

This guideline is intended to clarify the guidance provided within the Reconfiguring a Lot Code, particularly in relation to the use of acoustic barriers as the preferred option for noise amelioration (Table 12.5.2, NOTE 11).

### Application of the Guideline

This guideline applies to development adjoining existing and proposed roadways.

Council's Implementation Guidelines are intended to apply a standard approach to the interpretation and implementation of the relevant aspects of the Planning Scheme.

They offer a degree of certainty and formality to applicants, Council and the community. Where an applicant is proposing a variation to the guidelines the onus is on the applicant to demonstrate the facts and circumstances to support the variation.

### Guidelines

#### 1. Introduction

- (1) Streetscape visual amenity should form an integral component of the site planning process.
- (2) Development should be designed and undertaken to provide for:-
  - (a) roadways that adequately cater for access by pedestrians, cyclists and vehicles;
  - (b) streetscapes that are activated by buildings and public spaces;
  - (c) roadways that are safe, comfortable, and interesting;
  - (d) streetscapes that provide good passive surveillance; and
  - (e) where required, acoustic treatments to reduce unacceptable levels of noise beyond the road reserve.
- (3) Acoustic fencing is the least preferred noise attenuation measure and should only be used in accordance with this guideline where all other measures have been explored, and where necessary to supplement other attenuation measures.
- (4) Inward focused development that utilise solid/barrier fencing is undesirable and unlikely to be approved (refer to Figure 1.1).



Figure 1.1 - Inappropriate Streetscape Treatment

- (5) Streetscapes should provide visual interest and contain buildings that face and activate the street (refer to Figure 1.2).



Figure 1.2 - Preferred Streetscape Treatment

## 2. Site Planning

- (1) Strong design emphasis should be placed on achieving high levels of connectivity, amenity, and integration to achieve safe, efficient and attractive street networks.
- (2) Streetscape visual amenity should be enhanced when considering the purpose, function and design of roadways.
- (3) As part of the site planning process, particular attention should be given to streetscape visual amenity where:-
  - (a) direct vehicle access is restricted to the roadway; or
  - (b) traffic noise requires on-site attenuation.

## 3. Direct Vehicle Access Restriction

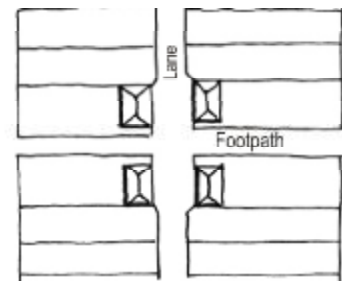
- (1) Direct vehicle access is generally restricted along Designated Roads, including State Controlled Roads, Distributor Roads, Sub Arterial Roads and Arterial Roads.
- (2) Barrier fencing is the least desirable response where direct vehicle access is restricted and is unlikely to be approved.
- (3) Where development is designed to address the street, barrier fencing is unnecessary.
- (4) Preferred solutions for lot layout and design where direct vehicle access is restricted include:-
  - (a) widening the existing carriageway to incorporate a parking lane and provide for improved vehicular access;
  - (b) incorporate 'rear loaded' dwellings and laneways (refer to Section 4 below for design standards);
  - (c) utilise side street access where appropriate, particularly for medium to high density development;
  - (d) utilise service roads where appropriate, particularly for commercial development;
  - (e) utilise a combination of the above methods; or
  - (f) any other suitable alternative as approved by Council.

## 4. Laneway Design Standards

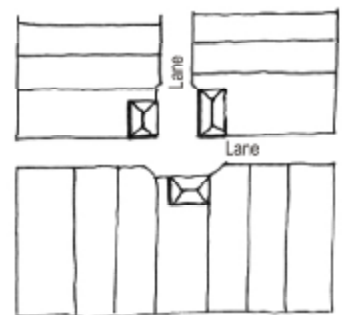
- (1) Rear-loaded development that incorporates car accommodation to the rear of the lot provides opportunity for development to address the street.
- (2) The success of this form of product is reliant upon the design, layout and detailing of the laneway.
- (3) Development that incorporates the use of a laneway should be designed and undertaken to provide for:-
  - (a) passive surveillance into and along laneways, which may include the use of second storey

studio units (Fonzie Flats) as shown in Figure 4.1;

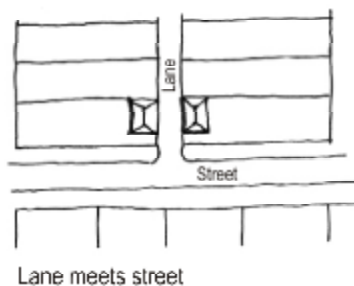
- (b) views along the laneway are unobstructed with dwellings or public spaces located at the termination points and the centre of the laneway;



T Junction with public access way



T Junction of lanes



Lane meets street

Figure 4.1 - Preferred Locations for Studio Units

- (c) straight laneways or T-laneways, generally no longer than 120m;
- (d) reduced laneway widths (6 metres) that provide for safe access into and out of garages;
- (e) garages on or near the rear boundary with appropriate door types (e.g. roller doors and exclude tilt-panel or other doors that extend into the laneway);



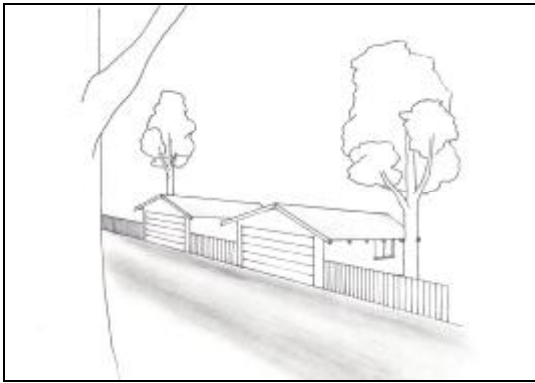


Figure 4.2 - Garages Adjoin Laneways

- (f) the use of laneway fencing generally limited to 1.8m in height to provide privacy to rear yards;
- (g) waste collection within the laneway;
- (h) very limited use of landscaping, with laneways predominately hardstand;
- (i) locating lighting so as not to obstruct reversing of vehicles; and
- (j) minimisation of stormwater infrastructure by directing the stormwater to adjoining streets, where possible.

## 5. Noise Attenuation

- (1) Noise attenuation should protect human health, both psychologically and physically, and promote social interaction.
- (2) An acoustic report will be required to be prepared by a suitably qualified acoustic consultant for significant development along a Sub-Arterial or higher order road, with an ultimate carrying capacity of 18,000 vehicles per day or greater.

### Preferred Solutions for Noise Attenuation

- (3) Buildings are designed and constructed to reduce the impact of noise, by locating rooms most sensitive to noise such as those for sleeping, relaxation or study, furthest from the existing and potential noise sources.
- (4) Buildings are constructed using noise attenuating materials to minimise the impacts of external noise sources to internal areas.
- (5) Buildings are designed, orientated and constructed to effectively screen external private open space areas from the noise source (refer to Figure 5.1).
- (6) Increased building setbacks and larger lot sizes may be used to reduce road noise impacts.
- (7) Use of land to buffer sensitive uses (by increasing separation distance from the noise source) including the use of open space, commercial uses, public buildings or the like, where appropriate.

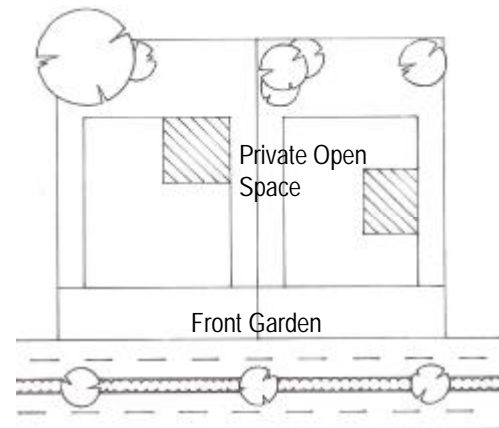


Figure 5.1 - Private Open Space Screened from Noise Source

- (8) Where Council accepts that no viable alternative is available, appropriately designed and landscaped acoustic fencing or barriers may be permitted (refer to Section 6 below for preferred design standards).

## 6. Acoustic Fencing and Barrier Standards

- (1) Acoustic fencing and barriers are the least preferred noise attenuation measure and will generally only be accepted for noise attenuation purposes along State Controlled Roads.
- (2) Acoustic fencing and barriers are to be designed to provide visual interest through the use of landscaping, building materials and architectural design features.
- (3) Preferred solutions for acoustic fencing and barriers:-
  - (a) fencing and barriers utilise high quality design, materials and finishes to provide visual interest;



Figure 6.1 - High Quality Acoustic Barrier (Source: Dan Coogan - Pima Freeway 3, Scottsdale)

- (b) fencing and barriers are generally limited to a maximum height of 2m;



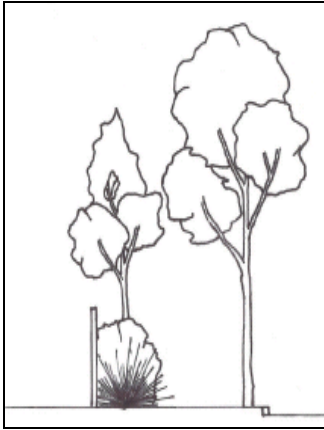


Figure 6.2 - Acoustic Fence (2m Maximum Height)

- (c) fencing and barriers are articulated and are appropriately landscaped to discourage vandalism;
- (d) landscaped mounding that incorporates vegetation of varying heights is utilised where noise attenuation requires a height greater than 2m;
- (e) the maximum mound height is 2m, providing a total maximum combined height of 4m;
- (f) acoustic fencing and barriers are designed to provide for uninterrupted flow of overland stormwater where appropriate;
- (g) the design incorporates CPTED (Crime Prevention Through Environmental Design) principles;
- (h) suitable maintenance access arrangements are incorporated;
- (i) mounding is designed with a maximum batter of 1:2 and incorporates soil stability controls such as hydro mulch;
- (j) designed to ensure water, sewer, communications and stormwater infrastructure is not impeded;
- (k) the design incorporates access ways and wildlife corridors where appropriate;
- (l) where the acoustic fence or a barrier separates the road reserve from private land, the acoustic fence or barrier is centred on the property boundary or is located within private land.

- (4) Where an acoustic fence or barrier is proposed for noise attenuation purposes, the acoustic report will be required to clearly identify that no viable alternative solution is available to ameliorate the noise impacts.

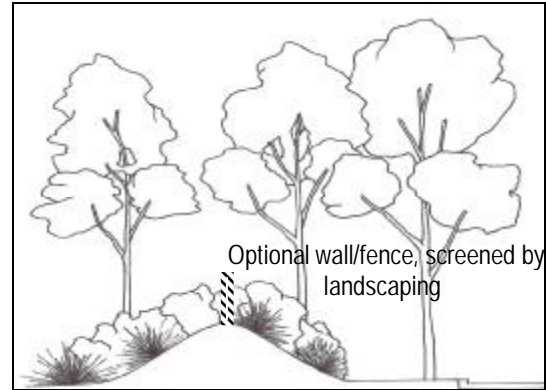


Figure 6.3 - Landscaped Acoustic Mound

