

Making room for pets in high and medium density housing - the role of urban planning

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INTRODUCTION

Designing homes with pets in mind is an issue for us to consider seriously as the new millennium approaches. Good design can help reduce the incidence and/or impact of unwanted pet behaviours, making it a useful addition to the repertoire of animal management tools. It will also become more important in the future with the move to high and medium density housing being experienced in cities and towns across Australia.

The design considerations appropriate to keeping dogs and cats were first considered in the 1993 report entitled *Pets in Urban Areas*. This document has been revised and updated and is contained in my recent publication *Companion Animals in the City*. This paper outlines the main features of the design guidelines and why we now need to plan for pets.

THE CONTEXT FOR CONSIDERING THE GUIDELINES

The move to more compact forms of accommodation as well as the fast pace of many people's lives has led some people to question if pets will have a place in cities of the future. While some say they won't, this scenario is neither desirable nor favoured by the vast majority of Australian households :

- 66% of Australian households own at least one pet making Australia one of the largest pet owning communities in the world. Of those that do not presently own a pet 53% would, in the future, like one, with 'unsuitable accommodation' reported as the main mitigating factor;
- there is also a wealth of evidence to support the benefits of owning pets. Pets are a simple, drug-free way to lower stress and improve health. They encourage people to enjoy the outdoors. They have been shown to stimulate conversation between strangers in public places and they increase people's sense of security - both in the home and with their owners in public places. Most importantly pets are wonderful companions, in some cases helping combat loneliness and social alienation. These benefits may well be the antidote we need to cope with the pressures of modern urban life.

We shouldn't, however, assume that the pace of life is increasing for everyone. There are significant counter-trends that could be making it more conducive for some households to own pets. Examples include the move to early retirement, the ageing of the population, the rise in home-based businesses, the increasing incidence of telecommuting for all or part of the week and an increase in part-time and contract-based employment.

What is important is to avoid simplistic notions about pets having no future in urban areas. Many assertions are based on cultural assumptions about what is an appropriate environment for keeping pets. These assumptions are often uniquely Australian. In fact there is no intrinsic reason why cats and dogs cannot be kept in flats and apartments, providing attention is paid to sensible breed choice and to owner responsibility.

If, in addition, we pay attention to pet-friendly housing design, then it should be practicable for people to own pets in most high and medium density housing developments. The intention here is not to promote pet ownership but to allow the types of households who would normally own pets to continue to do so in the future, if they so choose.

The design guidelines reported in this paper were developed to fill this need.

STRUCTURE OF THE GUIDE

The Guide consists of six design principles that I recommend be the basis for any consideration of pets in design and development. Ultimately any design needs to be judged against these principles, rather than a literal copying of the specific guidelines that follow.

The specific guidelines are then developed in accordance with nine 'design elements' or components of design and construction. Within the general discussion on each, there are examples of how to implement the general ideas. Depending on the circumstances of the site, not all will be relevant and some will be more important than others.

THE DESIGN PRINCIPLES

The six design principles are set out below:

1. Maximise the space available to pets

Ideally pets should have access to as much of the property and/or dwelling as possible. This will improve their quality of life and maximise opportunities for shade and shelter. Buildings and fences may restrict movement through the property. Inside, access depends on whether doors are left open. Pet doors will overcome some barriers and can be locked to restrict access at different times eg at night.

Maximising space for pets needs to be balanced against a need by some owners to exclude pets from parts of a dwelling or garden, whether temporarily or permanently, such as from a formal sitting room or flower garden when visitors are arriving etc. A fully open-planned interior, for example, will not provide this flexibility.

2. Environmental enrichment

An environment which provides stimulation and activity for pets can reduce, if not eliminate, many unwanted pet behaviours associated with boredom eg excessive barking. Other behavioural problems such as separation anxiety may also be alleviated. The key principles are variety, stimulation and challenge with a view to providing a rich and varied sensory experience. The aim is to provide pets with complexity, unpredictability and choice in the home environment. Animals behaviourists have traditionally recommended toys and objects to chew, scratching posts, climbing objects, cardboard boxes etc. Environmental enrichment can also be considered in dwelling siting, design and landscaping.

3. Provide a view of the outside world

Central to the concept of environmental enrichment is provision of a view of the outside world. This applies to dogs kept outdoors as well as to cats and dogs confined to a dwelling.

Dogs and cats may be better able to cope with confinement, loneliness, boredom or separation anxiety if they have a view of the outside world. Restraining a dog to a backyard with no view, companion or toys for long periods increases isolation, which may be linked to aggression, and boredom, which may be linked to excessive barking and other nuisance behaviours. While a dog may bark at passers-by it sees in the street the barking is likely to cease once the stimulus has passed and will be less intrusive to neighbours than the persistent barking of a bored or distressed dog. Providing a dog with surveillance of the street also enhances public security on the street.

The view of the outside world is influenced by proximity to the view, barriers that obstruct the view, the range of surveillance and the number of viewing opportunities provided.

4. Confinement

Design can help owners to responsibly confine their dog to their property. In some parts of Australia confinement of cats is also required, although cats are not as easily restrained as dogs. They are more agile and flexible in their use of space and attitude to the presence of other cats, whereas the dog's territory is usually defined by the owner's premises.

Confinement indoors will be a more prominent issue in the future as both a management tool (to protect wildlife) and because of the reality of higher urban densities. The question of whether dogs and cats can be confined indoors is fraught with cultural assumptions about what is an appropriate environment for keeping pets. Indoor confinement of cats is becoming more common for their health and safety (from cars, cat fights and the spread of disease) and to protect wildlife. However there is no inherent reason why dogs cannot be confined to a dwelling for long periods as well. While it is better for a dog to have access to some open space, animal behaviourists say dogs can be comfortably and humanely confined indoors providing attention is paid to breed choice and training, provision of an enriching home environment, interaction with humans or other animals and regular outings. As for cats, there are benefits as well - for a dog's health and safety, to prevent roaming and to insulate the surrounding neighbourhood against the possibility of excessive barking.

5. Acoustic separation

All dogs bark but excessive barking can adversely affect the neighbourhood. While it is important to reduce the incidence of excessive barking, design can also reduce its impact by focussing on acoustic separation between properties.

6. A safe and comfortable environment

Design and landscaping should consider a pet's safety (from injury, poisoning etc) as well as provision of adequate shade and shelter.

The guidelines that follow illustrate how these design principles might come into play.

THE DESIGN ELEMENTS

The following nine design elements highlight the main issues to take into consideration when designing with pets in mind. Non-compliance with any one of the suggestions does not mean pets are unsuitable since there is a plethora of design variations that could have been included if space were available.

Housing density

It is tempting to prescribe different pets for different housing densities. Some people already have firm views about pets and housing type mostly in relation to dogs (eg that the only environment for a dog is in conventional detached housing or that a 'big' dog is only suitable in the country). However these statements are not necessarily correct. Suitability is as much dependent on the quality of space as it is on the quantity. There is also a lot of misunderstanding about breed choice. A large dog like a Labrador, for example, needs a lot of exercise, but it may also be happy to amuse itself and/or lie quietly for a good part of the day. Size does not necessarily correlate with activity levels - many of the most active breeds are small to medium sized dogs. Finally suitability depends on the owner fulfilling his or her responsibilities - to train, to provide environmental enrichment and to walk the dog regularly.

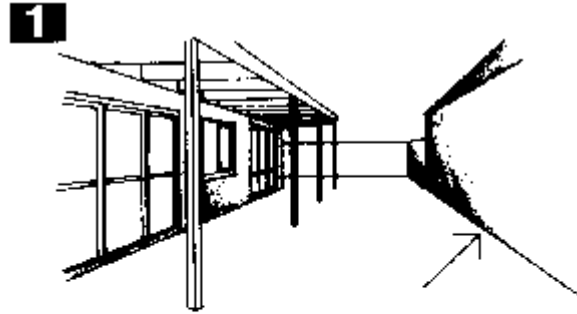
That is not to say that dogs are appropriate in all housing densities. However there are no clear standards. Some breeds cope well living in apartments, especially the apartments currently being built which are, in some cases, as large as an ordinary house.

The most definite prescription that can be made about housing density and pets is that as housing density increases so too does the need to pay attention to other variables such as correct breed choice, environmental enrichment, regular walking and design. The innovative examples of high and medium density housing now evident in the major capital cities around Australia are testimony to the potential scope for using good design to accommodate pets.

Housing type and precinct design

Housing type and precinct design can limit or promote access to private open space and a view of the outside world. It can also affect the relationship with adjacent properties:

- detached and semi-detached housing allows pets to move about the front and rear of the property;
- zero-lot line development (where a dwelling is constructed on one boundary) provides scope for acoustic separation between dwellings (Refer Figure 1);
- attached dwellings insulate one another from the noise of all household activities including excessive barking by dogs (Refer Figure 2);



ZERO LOT LINE DEVELOPMENTS PROVIDE ACOUSTIC SEPARATION BETWEEN DEVELOPMENTS (ARROW INDICATES THE SITE-BOUNDARY, AND WALL OF ADJACENT HOUSE)

- two and three storey dwellings provide more opportunities for surveillance of the outside world. Internal stairs also add to environmental enrichment;
- in multi-dwelling developments it is better to have a range of dwelling types and sizes providing choice and flexibility. A large top floor apartment with a roof top garden or a ground floor apartment with an outdoor courtyard may be more amenable to owning pets than smaller apartments with no outdoor space in the same block;



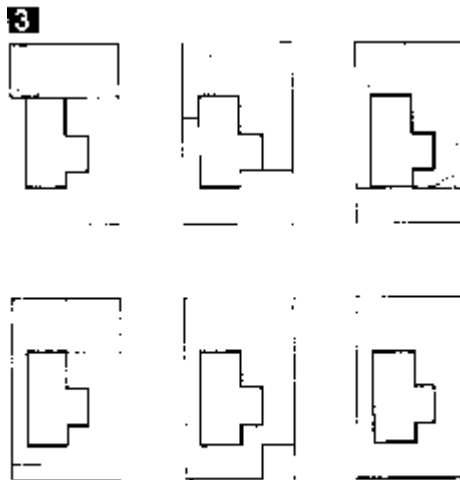
TERRACE STYLE DEVELOPMENT PROVIDES ACOUSTIC INSULATION AND SURVEILLANCE OF THE STREET

- multi-dwelling developments should consider a fenced area of communal open space where residents can enjoy time outdoors with their pets;
- warehouse conversions and small redevelopment sites often provide unique opportunities for environmental enrichment eg a high window overlooking a busy commercial street scene at ground level, changes in floor level, small pockets of open space that might be unusable for humans but are of interest to pets.

Open space and landscaping

It is preferable that a dog should have access to some open space, whether it be open space at ground level, a roof top garden or a balcony. It could also be an internal courtyard. Open space is not essential for a cat providing an enriching environment is maintained indoors. Guidelines for open space encompass access, design, landscaping, shade and shelter, and opportunities for play.

- unenclosed front yards reduce the amount of space available for dogs (Refer Figure 3);
- where practicable access between the dwelling and courtyard or balcony should be provided by way of a pet door or specially fitted window lock. This is especially important in high and medium density development;
- internal fencing and on-site building can restrict movement between different parts of a property (although this can be a positive feature if owners wish to protect parts of the garden from access by dogs). Pet doors can improve access between different parts of the property (Refer Figure 3);



INTERNAL AND PERIMETER FENCING AND PLACEMENT OF BUILDINGS AFFECTS THE AMOUNT OF SPACE AVAILABLE FOR DOGS

- the closer pets are able to get to the view of the outside world, the better that view will be ie a 180 degree view from the frontage is better than a 20-90 degree view from behind a fence set back from the street;
- an internal courtyard offers confinement and acoustic separation;
- balcony design should maximise space and pay attention to sight lines. Where possible balcony design should avoid bland rectangular shapes. Provision of more than one balcony could be considered;
- complexity and unpredictability in landscaping should emphasise a rich and varied sensory experience incorporating diversity in form, movement, texture and smell. An informal design is usually more amenable to pet ownership than a formal design;
- unpaved surfaces provide an improved olfactory experience for the pet. They are also cooler in summer;
- plant selection should emphasise durable plant materials. A variety of scented plants could also be considered to improve the pet's sensory experience;
- an area of soil should be provided somewhere in the garden for cats to scratch. In courtyards this can be a space surrounding a tree or shrub. Alternatively a tray or large pot filled with soil could be provided;
- consideration should be given to outdoor shade and shelter in all new developments eg large shady trees, access to a cool verandah, garage or car port;
- trees are beneficial for cats providing free-climbing, a post for scratching and increased surveillance. Trees that move and rustle in the wind add to environmental enrichment.

Fences

With adequate fencing, a dog will be confined to the property. Cats are less easily restrained and are discussed in a following section. Design and placement of fences affects a dog's access to open space within the property and its view of the outside world:

- a standard paling fence of 1.7m constructed on side and rear boundaries will restrain virtually all dogs;
- front fences are more problematic because urban policies discourage high front fences for streetscape and public safety reasons. In this context the recommendation is for a height of 1.2m for front fences. This will restrain most dogs. Dogs not confined by this height could be kept behind a higher fence set back further on

the property eg between the house and the side fence;

- internal fencing restricts movement between different parts of the property. Pet doors can overcome this barrier;
- on other boundaries solid brick fences can be used to provide acoustic separation;
- all gates should be fitted with a return-spring self-closing device to help owners to responsibly confine their dog.

With regard to fence design, two potentially conflicting interests influence the choice of fence design.

In some areas front fences are not permitted. These policies restrict people's ability to responsibly confine their dog and are not recommended.

First is the imperative to relieve canine boredom by maximising the view of the outside world. Ideally non-solid fences such as timber slats, steel rods or picket fences best meet this requirement (Refer Figure 4).

Second is the need to reduce barking. While some dogs are less likely to bark if they can see what is happening through a fence, others will be stimulated to bark, particularly if street traffic is intermittent.

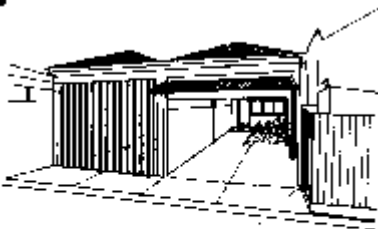
Thus prescriptive guidelines on solid versus non-solid fence design cannot be given. A compromise is to provide fencing which converts easily from one to the other.

4



SOLID FRONT FENCES PRECLUDE ANY OUTLOOK THROUGH GROUND FLOOR WINDOWS. A VIEW IS STILL POSSIBLE THROUGH UPPER STOREY WINDOWS.

5



CAR PORTS PROVIDE EXTRA SPACE, SHADE AND SHELTER. PERFORATED CARPORT DOGS PROVIDES PETS WITH A VIEW OF THE OUTSIDE WORLD

Car parking

Garages, carports and car spaces provide pets with extra space, shade and shelter:

- it is better for car parking to be provided alongside a dwelling rather than in a separate car parking area. This is especially important where minimal outdoor space is provided (Refer Figure 5);

- car parking should be provided within the enclosed part of the property;
- a garage needs sufficient fixed ventilation if pets are to be confined there for long periods.

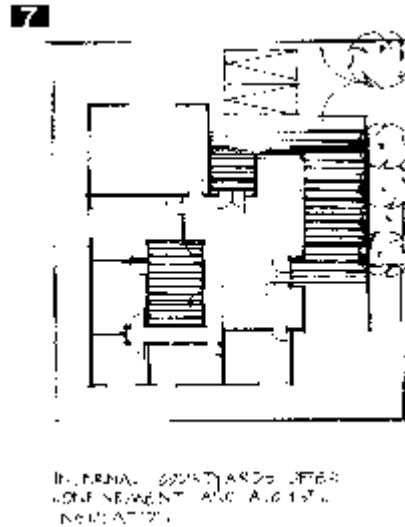
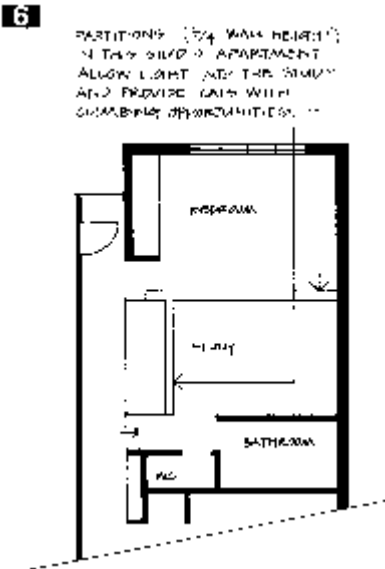
Dwelling entry and interior

Environmental enrichment inside a dwelling is important for improving the quality of a pet's life and reducing unwanted behaviours for pets confined indoors:

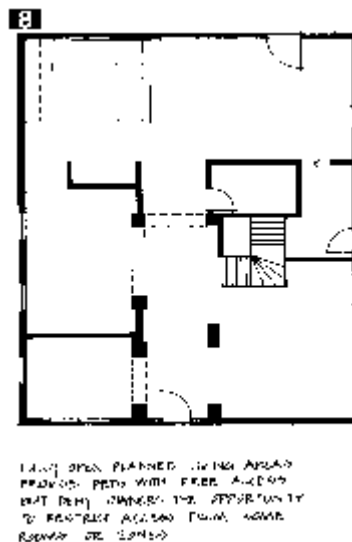
- cats should be provided with indoor climbing opportunities eg stairs, partitions and built-in furniture (Refer

Figure 6);

- animal behaviourists can recommend a wide range of toys eg balls and toys suspended on string from the ceiling;
- internal light courts and courtyards provide confined pets with interest, daylight and a small area of outdoor space (Refer Figure 7);
- direct access to a garage provides confined pets with additional space;



- where practicable provision should be made for owners who wish to restrict their pet's access from parts of the dwelling (eg study, formal sitting room). Fully open planned interiors preclude this possibility (Refer Figure 8);
- entries that are raised above ground level provide a better view of the outside world from inside the dwelling. This view will be more likely to be clear of fencing, landscaping or other design features;



- a security screen gives pets an opportunity to observe activities outside and can help to improve ventilation. This can be enhanced at ground level with a fully screened porch.

Windows

Well-designed and located windows are important for environmental enrichment, especially for pets kept inside. Windows overlooking the street provide a range of activity to be observed:

- bay and upper storey windows and a raised ground floor increase the range of surveillance;
- window sills that are wide enough for a pet to sit on and that are unencumbered (say by venetian blinds) should be provided inside;
- floor length windows provide easier access to the view and a warm spot in which to lie;
- double-glazing or thick glass windows help to reduce the effect of noisy dogs.

Refer Figures 9 and 10.

9



NEW DESIGNED & LOCATED WINDOWS
INCREASE THE RANGE OF SURVEILLANCE.
HERE, FIRST FLOOR, FLOOR LENGTH
AND BAY WINDOWS ARE ALL
PRESENT TO THE STREET.

10



Disposal of excrement

Consideration should be given to location of a cat's tray. Cats need to feel secure when excreting. This means avoiding high traffic areas. Balconies, space under stairs, laundries and bathrooms are idea, although the cat may not use the tray while the washing machine or dryer is on.

In high and medium density development, consideration should be given to the installation of a communal disposal unit for pet faeces.

Restraint of cats

Cats are not as easily restrained as dogs. They are more agile and flexible in their use of space and attitude to the presence of other cats, whereas the dog's territory is usually confined to the owner's premises.

Confinement of cats indoors is relatively straightforward providing an enriching internal environment is provided. More elaborate 'cat parks' can also be considered. These are modular-shaped cages that provide the cat with a stimulating yet confined outdoor experience.

Cat proof fences are sometimes required in new subdivisions adjacent to environmentally sensitive parks.

CONCLUSION

If pets are to have a place in cities of the future (and I fervidly believe they should have a place) then it can no longer be left to chance. We need to start planning for it now. This doesn't mean a radical pro-pet approach but it does mean looking for ways to integrate pets into the policy equation. One component of planning for pets is pet-friendly housing design and this paper has outlined the main features of new design guidelines prepared for the Companion Animals in the City Compendium.

Much of the implementation of the design guidelines rests with architects and planners, who have, until now, resisted any moves to consider pets in residential planning. This has started to change, perhaps because of my harping over the last five years but perhaps too because of the magnitude of the move to inner suburban living. There is still much to be done, however planners and architects are now realising that unless we start planning for pets then we may be throwing the baby (or pet!) out with the bathwater.

FURTHER READING

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Virginia is an urban policy analyst and town planner with specialist expertise in domestic animals management. Virginia advises government, industry and community groups on legislation and policy and is the only town planner in the world to have looked at the future of domestic pets in cities in a detailed and comprehensive way. Her most recent publication, released in June, is called *Companion Animals in the City : Defining a New Agenda for Local Government*. It is a compilation and extension of all her work in this area to date.

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