

Mirvac Fini: Burswood Lakes
Housing Design for Diverse Cultures



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Working Paper 14:

Housing Design for Diverse Cultures

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Burswood Lakes

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1.0 Introduction

This *Working Paper* complements the others in this series that provide guidance for dwelling design. Here we focus particularly on the needs of overseas-born residents and those who may have cultural requirements that impact on dwelling design.

To meet the diverse needs of new and established residents from other cultures, housing provided in Burswood Lakes will need to be developed with great sensitivity. The results of a multicultural housing study and input from social planning consultants have been used to provide some general guidance. This work will need to be refined in view of the specific cultural groups eventually intending to occupy housing in Burswood Lakes. (This matter will be addressed by Mirvac-Fini marketing and research staff and consultants.)

Community participation, community development and provision of social infrastructure will all need to highlight the needs of different cultural groups at a community level. At the housing siting and design level, great care will be required.

In general, it is argued that 'good housing' which would meet the needs of Australian-born residents would also be appropriate for people from other cultures, so long as certain cultural, religious and functional requirements are addressed. The following basic elements of 'good housing' would need to be addressed:

- ◆ Social and cultural validity;
- ◆ Economy;
- ◆ Healthfulness; and
- ◆ Ease of maintenance.



Figure 1: Vietnamese refugees discussing housing needs with researchers, Melbourne

Source: AHRC 146, 1985.

If Burswood Lakes is to return the home to its traditional importance (with emphasis on neighbourhood life and mixed uses), the design of dwellings will need to ensure that there is *congruence* or 'goodness of fit' between the dwelling and its users.

While care must be taken to provide integration and orientation opportunities for interstate and overseas residents and workers, it must be acknowledged that all those who live and work in Burswood Lakes will be 'immigrants' in one sense of the word: they will be the pioneers in a totally new community. Ethnic sub-groups can be accommodated with careful planning and good housing design, specially targeted to the needs of the new community, including: those working from home ('homeworkers'); extended families, etc. It is probably not necessary to develop different or 'special' housing for ethnic sub-groups.

2.0 General housing requirements

An environment which is easily 'read' and understood, which is easy to find one's way around by foot and cycle, as well as by car, will be appreciated by users of all ethnic and cultural backgrounds (see *Working Paper 7* and *Working Paper 8*). The following general recommendations should be borne in mind:

NO IDENTIFIABLY DIFFERENT HOUSING:

Provide housing which is 'good' housing for all ethnic groups, without providing identifiably different housing for anyone group. 'Good' housing could contain the following features:

- ◆ Differentiation between 'front stage' (formal) and 'backstage' (informal) zones of the dwelling;
- ◆ Sociable cooking and eating arrangements;
- ◆ Shelves or indented places in main living areas for 'altars' or other displays or memorabilia or worship; wide window ledges for display;
- ◆ Picture rails in main rooms to enable easy personalisation, especially for short-stay residents;
- ◆ Clear porch, entry, threshold and hallway definitions;
- ◆ Adequate indoor and outdoor storage;
- ◆ Adequate ventilation, especially to kitchens;
- ◆ Appropriate accommodation for people working at home;
- ◆ Large bathrooms and kitchen/dining rooms for large/extended families;
- ◆ Opportunities for communal meal preparation;
- ◆ Adequate acoustic privacy to sleeping areas;
- ◆ Clear differentiation between front and back yards in terms of privacy, fencing;
- ◆ Back yards and/or terraces appropriately oriented and large enough to accommodate a significant amount of food gardening; and

- ◆ Adequate solar access, insulation and heating (light, warm, well-ventilated dwellings).

3.0 Specific guidelines

The following more specific guidelines should be taken into account.

3.1 *The meaning of home*

Ensure that housing design is culturally appropriate.

Housing preferences and measures of satisfaction are intricately bound up with culture and the meaning of housing. Satisfaction does not necessarily relate exclusively to the dwelling's physical characteristics, but depends on a whole system of the occupant's beliefs and opinions. These relate to instrumentalism (convenience of access), expression (aesthetic values), and group mindedness vs. individualism (community vs. privacy). These preferences are, of course, closely tied to cultural values and experiences of the home country. When children are born in the home, the link is even stronger.

In every culture, the home is the setting for family life and the focus of family activities. In traditional cultures, it is often associated with the workplace, as the separation of uses by zoning is not as widespread as it is in Western developed countries. Specialists in housing in developing countries have argued that 'housing is a verb,' not simply 'shelter', a commodity or an investment. Rather, it is an institution, created for a complex set of purposes. For Burswood Lakes, effective dwelling design will need to acknowledge these factors and permit adaptation of housing by its users.

Therefore:

- ◆ Undertake consultations directly with children of families moving to Burswood Lakes to ensure that their particular preferences are incorporated in dwelling location and design decisions (this can be done by the CDO);
- ◆ Select dwelling designs which incorporate the features of a solid and substantial dwelling on its own block of land (even though this is to be achieved at higher densities); and
- ◆ Avoid *avant-garde* or 'post-modern' designs.

3.2 The appearance of a detached house

Ensure that all dwellings have at least the appearance of a detached house on its own land.

Research in many cultures reveals the predominance of the image of a detached house with a pitched roof. For many cultures, 'home' is a freestanding house on its own clearly defined plot of land facing an ordinary road, expressing anonymity and avoiding any form of grouping. Australian studies have shown a strong rejection by certain cultural groups (Polish, Indo-Chinese and Turkish migrants) of any form of medium-density or cluster housing which did not contain the images of a single-family house (individual front path, garden, porch, individual front door and opportunities for exterior personalisation).

Therefore:

- ◆ Provide dwellings which have at least the appearance of a house on its own land;
- ◆ Provide each dwelling with:
 - ◆ Fenced or buffered private open space;
 - ◆ A separate front path, a separate porch or porch-type space; and
 - ◆ Opportunities for personalisation outside the dwelling (gardening, fencing, paving, hanging plants, selecting paint colours, etc.).

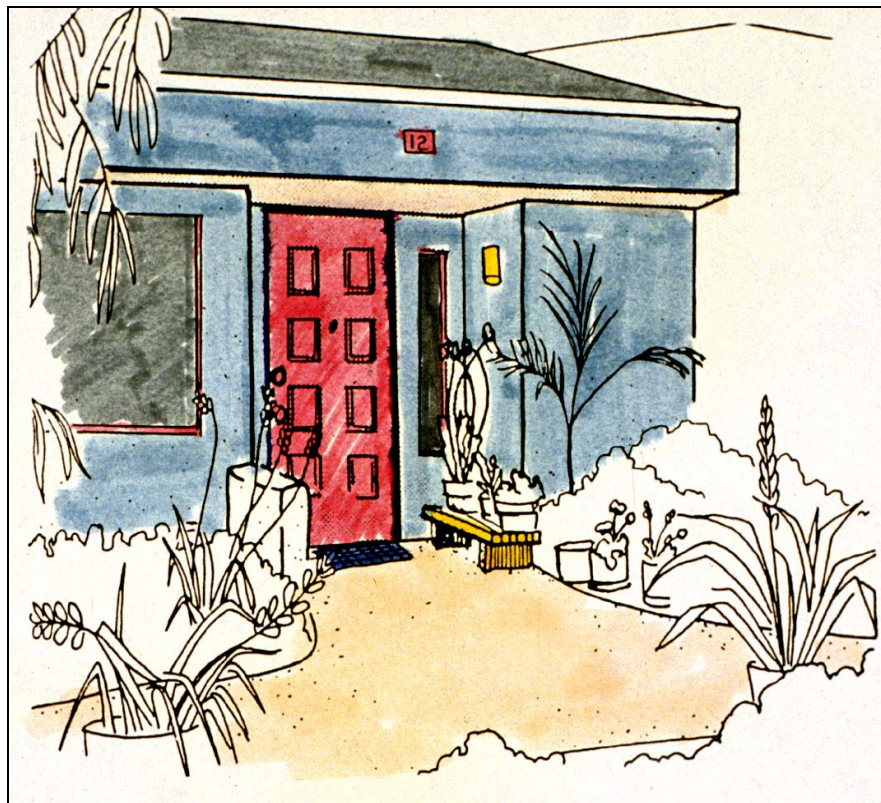


Figure 2: The appearance of a detached house at a high density



Figure 3: The entry of this suburban house embodies the qualities of a threshold



Figure 4: Undifferentiated paving of driveway and entry pathway limit dwelling individuality



Figure 5: Lack of differentiation of paving creates no sense of dwelling entry

3.3 Solidity, warmth and comfort

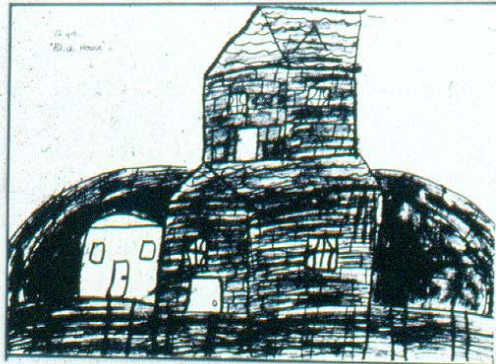
Especially for immigrants from temperate climates, ensure that housing conveys (and provides) the benefits of solidity, warmth and comfort.

The home is the location of homemaking and is seen as a place of rest and comfort. For immigrants from temperate regions in the northern hemisphere, in particular, 'solidity' is seen as being of solid brick, stone or concrete construction. Brick veneer construction, if used, will need to convey a very 'solid' appearance. The ideal home should be able to be shown off to visitors, and be cosy and hospitable, enabling the new residents to 'settle in' easily.

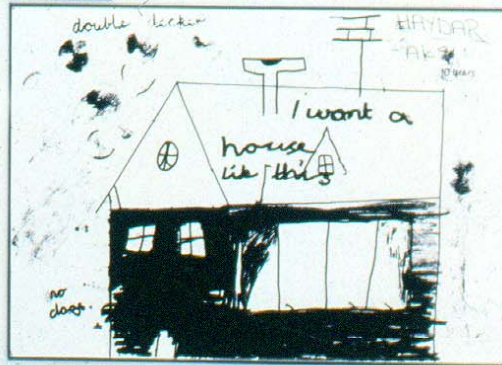
The sheet of children's drawings shown below in Figure 6, reveals outcomes of detailed research with Turkish children in Melbourne in the 1980s. It emphasises the importance of a house that looks solid and comfortable and, importantly, looks like a house.

MY IDEAL HOUSE

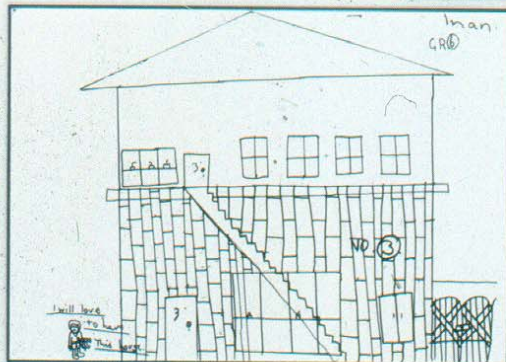
Turkish Children



Esme aged 12
"Brick House"



Haydar aged 10



Inan aged 11



Askin aged 12

Figure 6: Turkish Children's images of home
Source: AHRC 146, 1985.

Some other drawings by immigrant and refugee children reveal even more strongly the importance of a house that looks like a house, as shown below in Figures 7 to 9.



Figure 7: Olca's house (aged 8)
Source: AHRC 146, 1985.



Figure 8: Quyên's house (aged 12)
Source: AHRC 146, 1985.



Figure 9: Esme's brick house (aged 12)
Source: AHRC 146, 1985.

Therefore:

- ◆ Avoid lightweight construction materials;
- ◆ Attempt to create a 'solid' appearance in house design and construction;
- ◆ Select materials which contribute to the feeling of domesticity, solidity, warmth and comfort (that is, avoid 'institutional' and hard materials and surfaces); and
- ◆ Avoid avant-garde designs.

Houses that are not "home-like" in appearance also received poor marks from adults, as shown in Figures 10 and 11 below.



Figure 10: This Melbourne house was judged by people who had emigrated to Australia from Poland, Vietnam and Turkey not to be 'home-like'
Source: AHRC 146, 1985.



Figure 11: This innovative design was also poorly regarded
Source: AHRC 146, 1985.

3.4 Ownership and control

Ensure that residents can to maximise their opportunities for control of the dwelling and its environs.

In some cultures, home ownership features prominently in measures of resident satisfaction, with the emphasis being on investment and control.

Therefore:

- ◆ Ensure that all sales and management arrangements maximise resident opportunities for personalisation, manipulation and control of dwellings and attempt to minimise interference.

3.5 External territory or private open space

Ensure that all dwellings have access to a private open space (yard, garden, balcony or courtyard) which is large enough and appropriately oriented for both food production and socialising.

Territory, that is, space over which a person feels some possessiveness, is very important to all people, regardless of ethnic or cultural origin. Research on the use of space by different cultures and the way space is used as a form of communication indicates that definition of territory provides both cues for appropriate behaviour and enables residents to feel more secure and sense that they are able to 'defend' themselves on their home ground.

The concept of the 'ethnic domain', that is, the separation of spaces within the house and its territory and the 'sanctity of the threshold' are important concepts for multicultural housing design.

The most private exterior territory is the back yard. Research on the housing needs of people from Asia increasingly reveals an emphasis on the back yard as a place for family socialising and food production, especially gardening. For Indo-Chinese migrants, for example, a detached suburban brick house with a large garden was seen as an ideal (Social Planning Consortium, 1985). Privacy was deemed very important: for many who had come as refugees, in particular the house is seen as a haven, a shelter against more or less unfriendly neighbours.

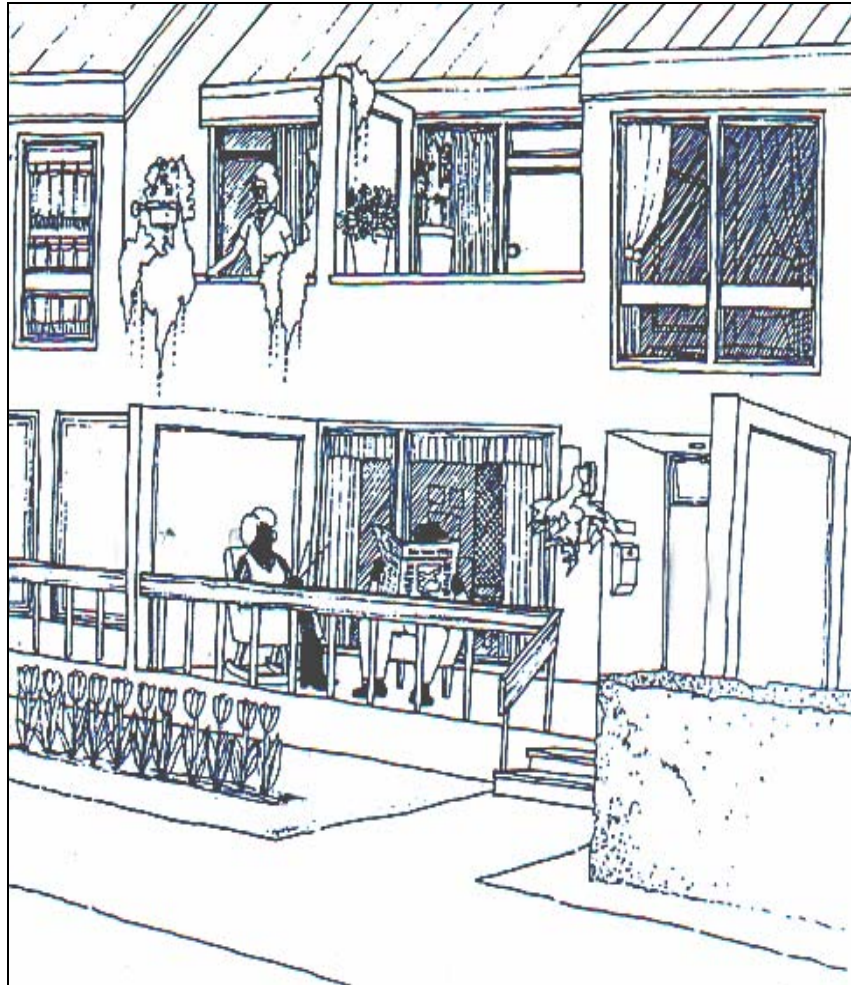


Figure 12: Private open space provides opportunities for socialising

Therefore:

- ◆ Ensure that all dwellings have access to their own fenced private open space;
- ◆ Ensure that back yards are fenced with a solid, opaque fence for privacy (1800mm; see *Working Paper 10* for details) on the sides between neighbours and a back fence the size and opacity of which depends on views, adjacent activities, crime levels, density and access to sunlight;
- ◆ Orient back yards so that they receive sun for a large part of the day so that they can be used for socialising, growing food and drying laundry;
- ◆ Ensure that sites for back yards of ground-level dwellings are well drained to support gardening;



Figure 13: Landscaping which can be added to provides opportunities for personalisation

- ◆ Consider alternatives (such as steel mesh) to poisoning under house slabs for termite control so that yards are not contaminated for food growing;
- ◆ Ensure that front gardens are no smaller than 2 metres minimum depth, with low see-through fences;
- ◆ Ensure that balconies are accessible from living rooms only (not bedrooms), with dimensions of not less than 2 metres wide and 3.5 metres long. Balustrades should permit views from a seated position, while being childproof. Security must be ensured: no footholds should be possible to gain access from above, below or from adjoining units (see *Working Paper 10*);
- ◆ To facilitate children's play in wet weather, consider providing a small exterior veranda or carport in ground-floor family housing units; and
- ◆ Ensure that all back yards are provided with dry, secure exterior storage.



Figure 14: No differentiation of private yards from shared open space compromises dwelling privacy

3.6 Children's housing needs

Pay particular attention to children's housing needs in house siting and design.

This issue is addressed in detail in *Working Paper 6*. Sturdy houses which convey a sense of security and solidity with access to private and public open space will be valued by all children and especially from other cultures. Privacy, especially with respect to individual bedrooms, will also be important.

Opportunities to keep pets and a garden also will assist younger children in adjusting to Australia.

Because in some more traditional cultures, women may not be able to use public parks unless attended by an adult male relative, young children may be kept within the confines of the private dwelling or garden. This may have negative implications for their territorial mobility and the eventual independence of the children, particularly in the case of girls. Thus, the provision of shared open space which can be the territory of a group of dwellings is particularly important. This matter is addressed in *Working Paper 7*.

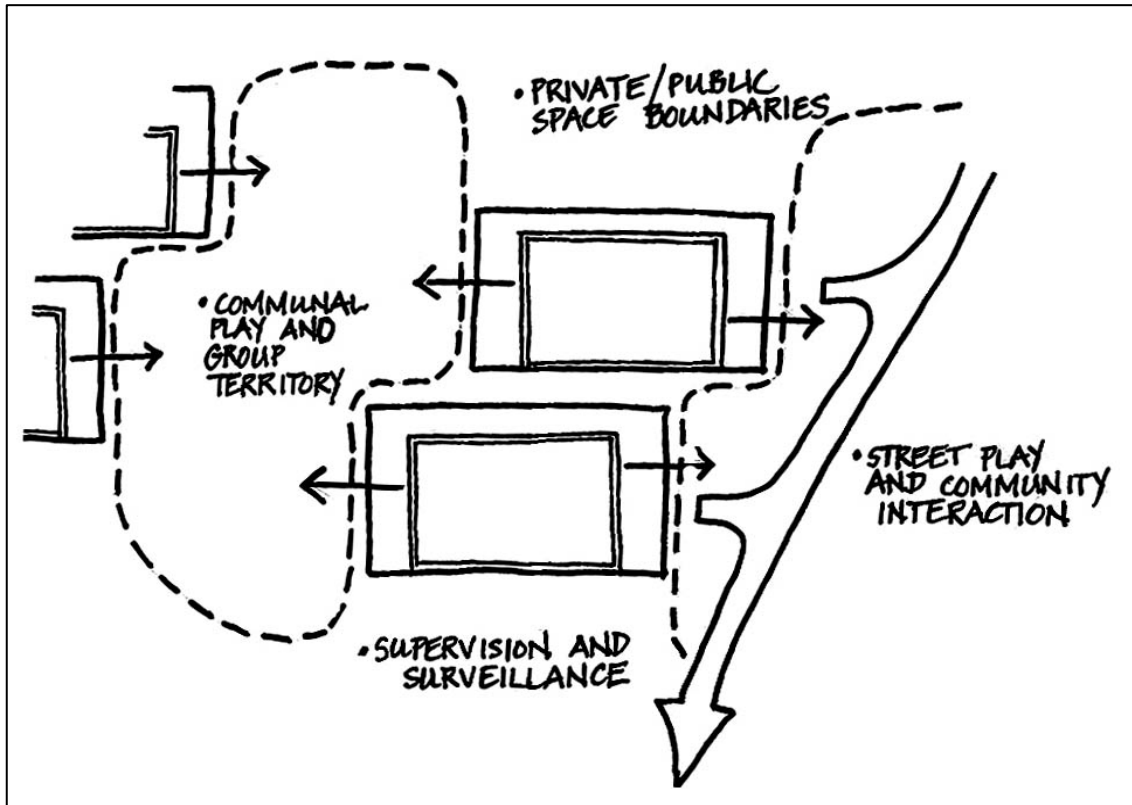


Figure 15: Shared outdoor space and play territory

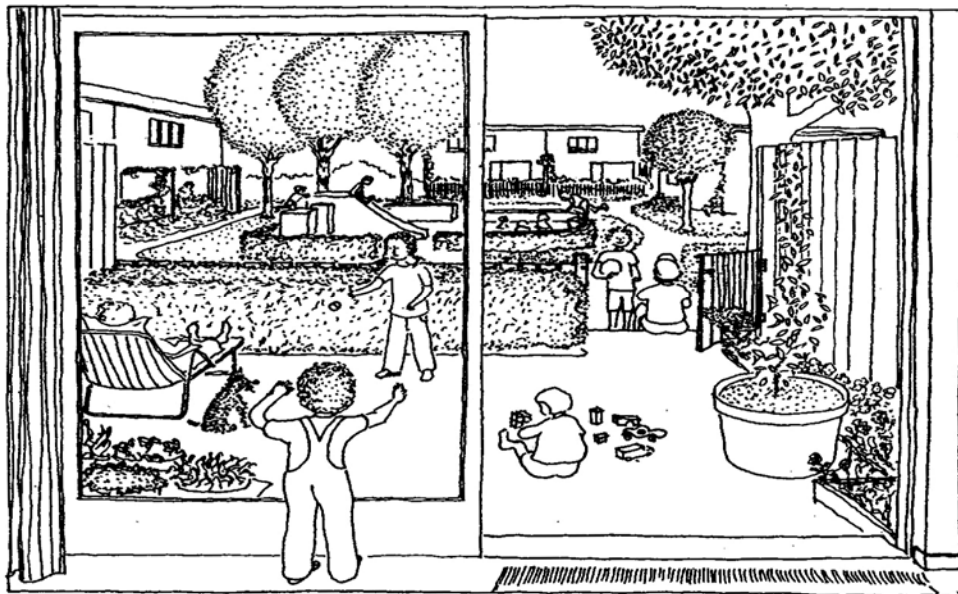


Figure 16: Looking out to shared outdoor space
Source: Marcus and Sarkissian, 1986.



Figure 17: A protected play area in shared open space in Vancouver



Figure 18: Will this young girl be permitted to play in a public park?

Source: <http://www.muhababah.com/images/faces/gallery.php?directory=.¤tPic=7>

3.7 Culturally sensitive approaches to higher density housing

Design housing at higher than traditional densities with great care to ensure a 'home-like' appearance to all dwellings.

While members of certain groups from other countries will accept higher densities to achieve access to transport, shops, schools, employment, recreation and community services and facilities, high-density housing without these benefits will not be highly regarded. High-rise family housing is not likely to be highly regarded for one significant reason: many of these people will have been attracted to Australia as a place to work and live by the low-density nature of our cities. Thus, density increases must be handled with care (see also *Working Paper 10*).

Therefore:

- ◆ Reduce the appearance of density by: varying rooflines, fenestration and setbacks, use of warm, 'domestic' higher materials, sensitive landscaping and small parking lots;
- ◆ Use cluster housing configurations with care and ensure wherever possible that dwellings are not attached; and
- ◆ Avoid the appearance of a large housing 'estate'.

3.8 Energy-efficient housing

Pay special attention to heating, cooling and ventilation in housing for people from other countries.

While research has shown that Australians are, as a general rule, lacking in understanding of solar access and energy issues in housing design, those from other cultures seem to be more attuned to these issues. Newcomers to Burswood Lakes are likely to value highly sun and light into rooms and private balconies and gardens. For residents from Asia, access to the morning sun will be important: a 'lucky house' may be one that faces east; sunrise and sunset are important times in many Asian cultures. The reasons for this are complex and are deeply intertwined with principles of geomancy (the Chinese discipline of *Feng Shui*) and attitudes toward health and prosperity. See *Working Paper 12* for more information on Feng Shui.)

Heating is an issue that concerns both those who come from warmer climates and those whose houses are conventionally centrally heated (as in the case of many European and Northern Hemisphere urban communities). Concerns are sometimes expressed about the impact of housing without central heating on the child-rearing practices of those who have depended on having every room the same temperature. As Mirvac-Fini is committed to energy efficiency in its planning and design, these issues must be handled with sensitivity to ensure that new residents do not experience undue discomfort.

Ventilation is often a concern for households whose cooking techniques rely on gas or charcoal, or where smoking of food, frying with fat and the use of spices causing problems with odours to other rooms in the dwelling or to neighbouring dwellings. This issue is dealt with below.

For residents from tropical climates, adjustment to Perth's Mediterranean climate will mean learning different ways of using the dwelling: that is, closing it up and shuttering windows on hot days, rather than leaving the house open for cooling breezes. Information to new residents in the residents' guide to be prepared by the CDO should provide advice on these matters.

Therefore:

- ◆ Provide clear information to new residents (in appropriate languages) about Perth's climate and implications for dwelling use, protection from sunlight, heating, ventilation, etc., as well as energy-efficiency features of dwellings and dwelling siting;
- ◆ Consider employing geomancers or *Feng Shui* specialists to work with local Asian people to assist with, dwelling design and location and features of interior design for dwellings which may be occupied specifically by people from Asian countries. There is no reason why these features should in any way compromise comfort or convenience for people from non-Asian cultures;
- ◆ Pay particular attention to location of front doors and access by morning sun to bedrooms and living rooms;
- ◆ Use passive solar design features to reduce heating costs;
- ◆ Carefully consider provision of energy-efficient heating systems, especially for those from cultures accustomed to central heating;
- ◆ Conduct in-depth market research and consult thoroughly with local representatives of cultural groups to ensure that symbolic and functional aspects of housing preferences, especially with respect to siting and design (and *Feng Shui* issues) are culturally relevant to the incoming groups; and
- ◆ Pay particular attention to natural ventilation of kitchens, especially in attached or higher density housing.

3.9 Entries and territorial differentiation within the dwelling

Differentiations of territory within the dwelling are probably more important than external territorial differentiations. In many cultures, there is a primary differentiation in housing interiors between the 'front' and 'back' regions (front stage and backstage). 'Front' regions are more for display to the visitor; guests rarely intrude into the more private 'back' regions, where the family can really relax. These elements and distinctions are much more clearly differentiated in other cultures than they are in

Australia and these are issues often ignored in Australian housing design, as shown in the drawings in Figure 19 below:

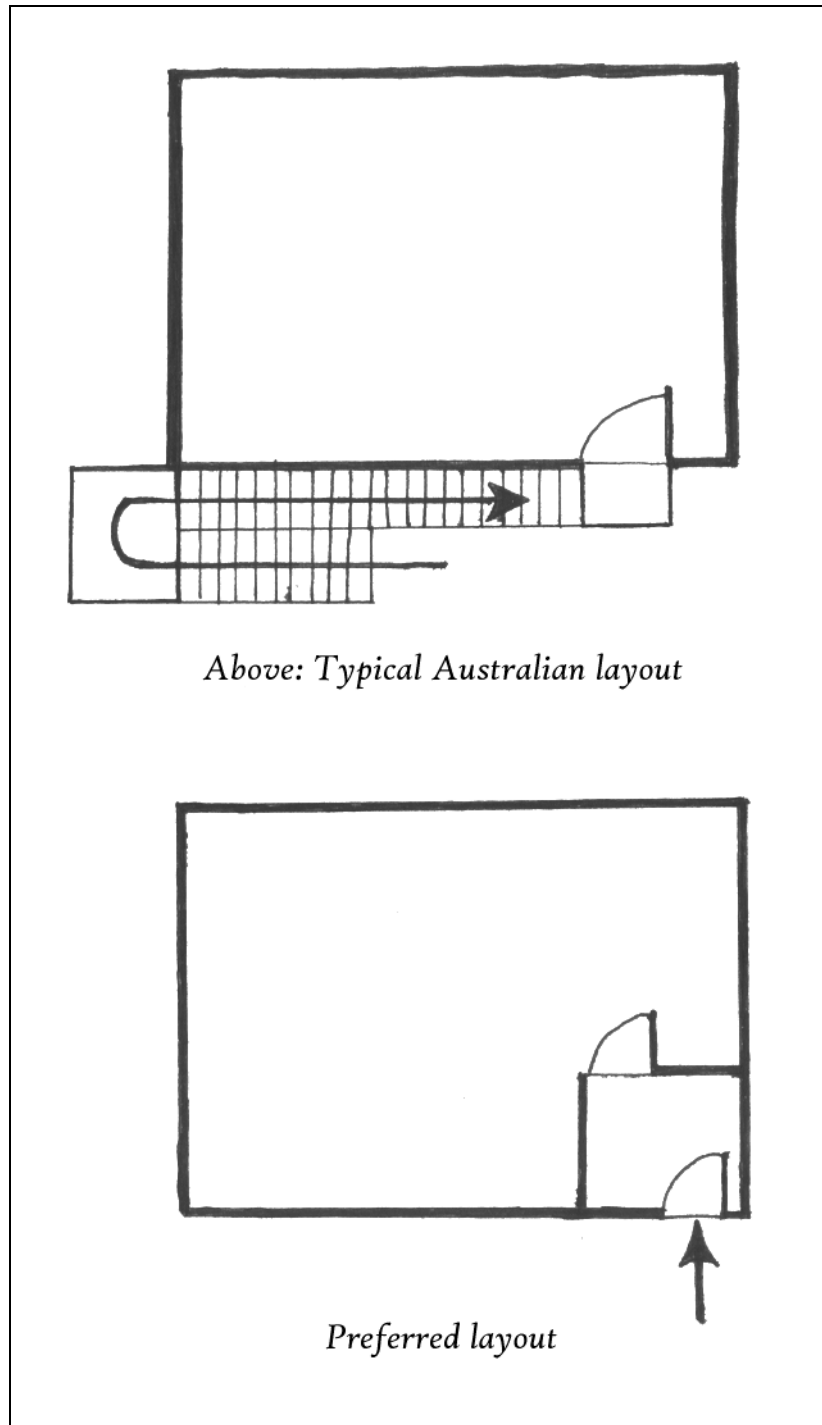


Figure 19: Typical Australian layout and preferred layout
Source: AHRC 146, 1985.

The key element in the separation of outer (front) and inner (back) spaces is the area at the entry, including the threshold and the foyer (reception hall or equivalent). Often shoes are left in an enclosed entrance zone just inside the doorway from where it is

possible to see most of the 'front stage' of the dwelling. Or shoes may be left on the landing or porch outside the door, depending on cultural practices. The buffer of the entry hallway (perhaps with a closet for shoes and clothes) separates the more inner parts of the dwelling.

In many Australian housing designs, doors lead directly into the front or living room. Australian research confirms that this approach most definitely is not acceptable to residents from many other cultures, as access directly into the central living area allows strangers to move uncomfortably close to the inner (or 'backstage') area of the dwelling (Social Planning Consortium, 1985).

Therefore:

- ◆ Provide clearly defined thresholds, 'front stage' and 'backstage' parts of each dwelling;
- ◆ Ensure that all dwelling units have clearly identifiable front entries with separate paths, if possible (see *Working Paper 8* and *Working Paper 10*);

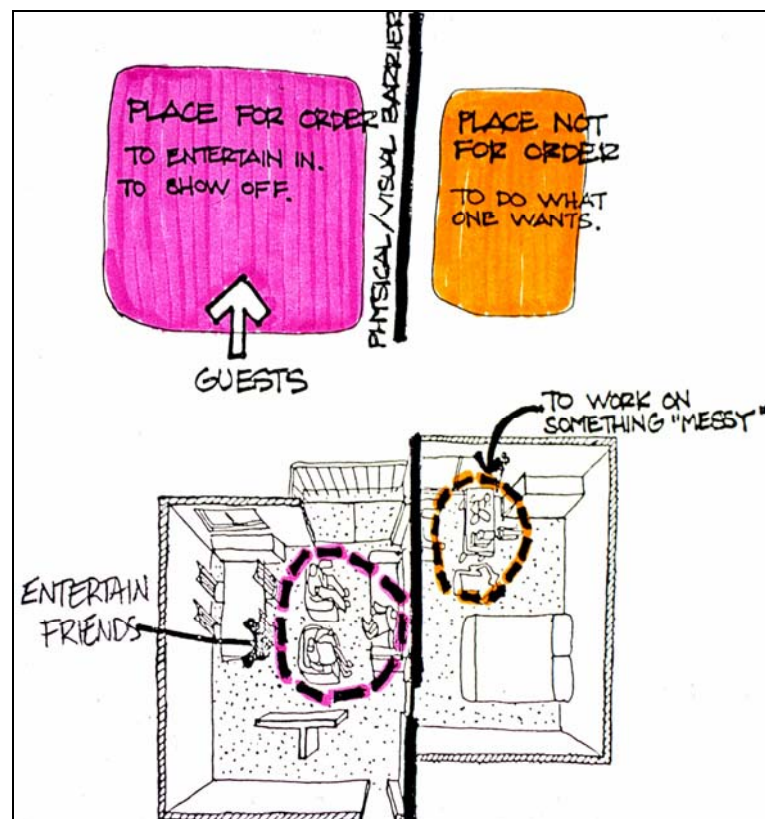


Figure 20: Frontstage and backstage of a dwelling

- ◆ Ensure that all units have a lit and roofed front porch, or, in high-rise blocks, at least a differentiated entry, where strangers coming to the front door can be held 'at bay' until a decision is made to admit them;

- ◆ Ensure that all dwellings incorporate an entry foyer no smaller than 1.2 metres in length and 1.2 metres in width for removing shoes and garments; and

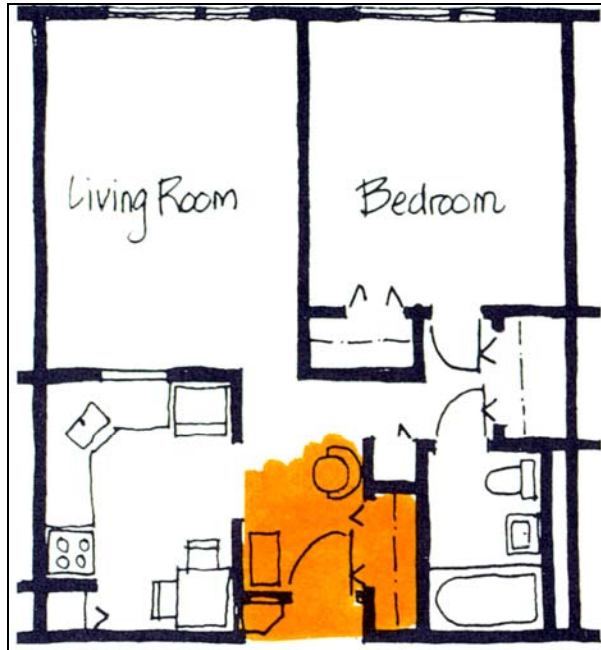


Figure 21: Entrance to a dwelling with a transition space

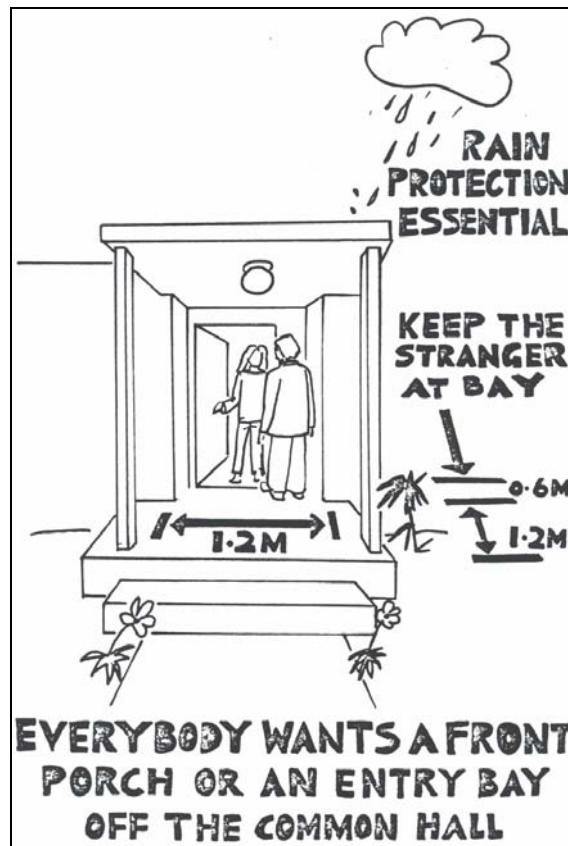


Figure 22: Dimensions of the front porch
Source: AHRC 146, 1985.

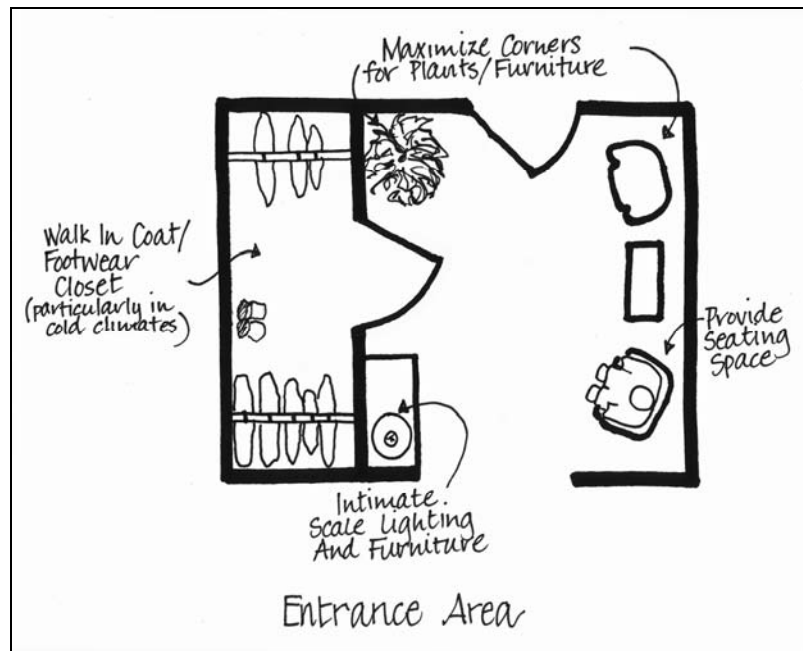


Figure 23: Features of the entrance

- ◆ Take care in the design of dwelling interiors to ensure that the interior of the dwelling is not visible from the central living area and that visitors do not have to pass through 'backstage' areas to use the toilet.



Figure 24: A shared path violates dwelling privacy and individuality



Figure 25: 'Eyes on the street' are important to people from all cultures

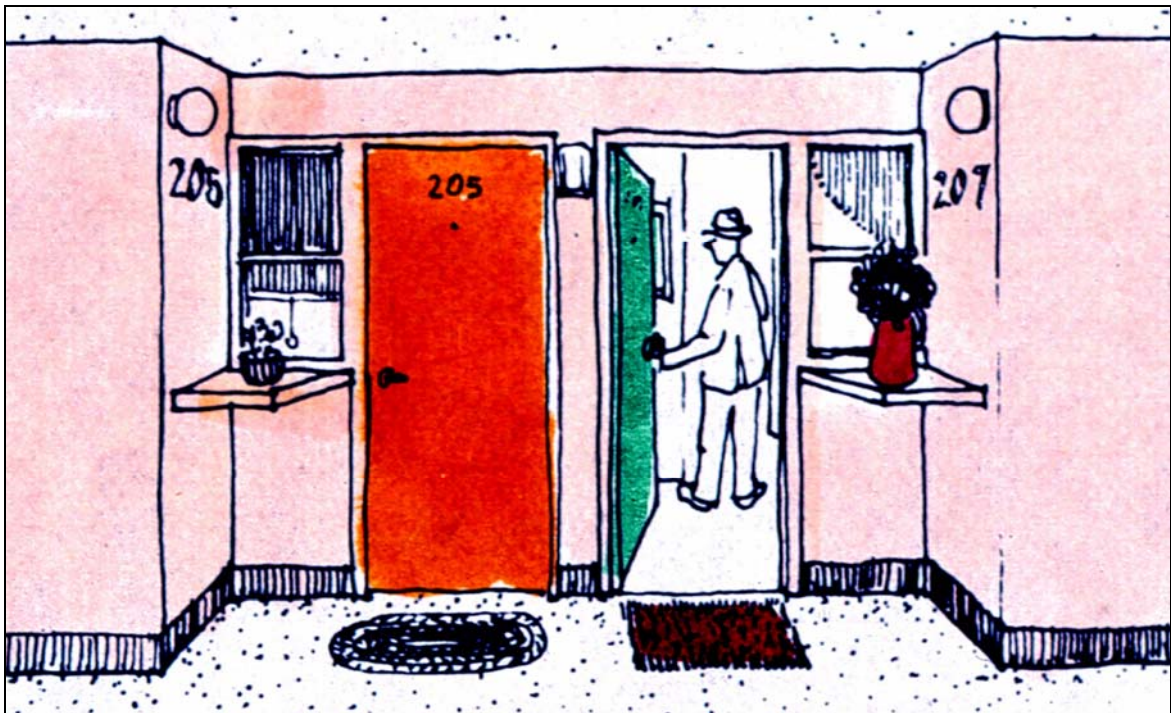


Figure 26: A personalised sense of entry can also be achieved in housing at high densities



Figure 27: A fence and gate can communicate dwelling privacy and entry individuality



Figure 28: This bare entry and awkward path in new medium-density housing in Auckland, NZ do not communicate 'welcome'

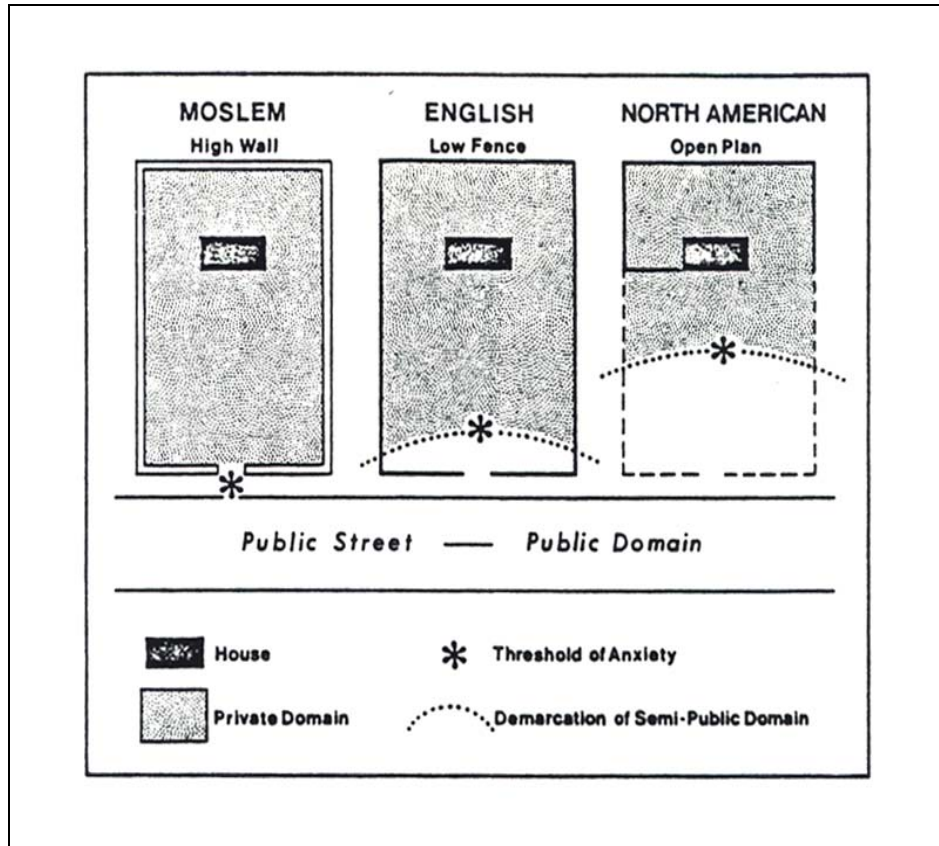


Figure 29: Threshold of anxiety in housing in three cultures
Source: Rapoport, 1969.

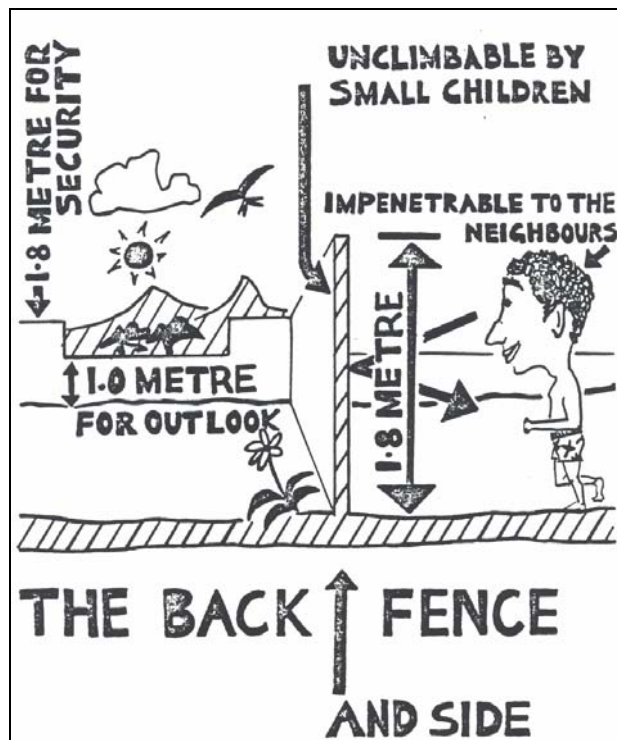


Figure 30: Preferred back and fences in the AHRC study
Source: AHRC, 1985.

3.10 Privacy within the dwelling

Dwelling privacy is important to all residents, especially those from more traditional cultures.

Three categories of privacy need to be respected in housing design:

1. Privacy in relation to others, such as neighbours;
2. Security against being watched; and
3. Privacy within the house. Households have a need both for privacy and interaction; these needs change depending on cultural factors and the stage of the family life cycle the household is in. For example, some households, especially those with extended families, will use spaces differently at different times of the day (for example, a room becoming a 'private' bedroom at night and reverting to communal use in daytime).

The privacy rights of children vary with the culture, although recognition of children's privacy rights is likely to increase over time. Certainly, middle-class and professional Asian families will expect their children to have a private area to do their homework.

Therefore:

- ◆ Take care to address resident privacy concerns, which are likely to involve the following:
- ◆ Visual privacy: this is especially important for traditional Muslims;
- ◆ Aural privacy: especially protection from neighbours' arguments;
- ◆ Identifiable individual territories within the dwelling; and
- ◆ Places for men and women who are practicing Muslims to pray in the dwelling.

3.11 Dwelling personalisation

Ensure that dwelling design and management encourage individual dwelling personalisation.

Dwelling personalisation (making one's mark and displaying items in the home) is seen as a very important aspect of psychological health. Opportunities to display mementos and cultural and religious objects will be important contributors to housing satisfaction and settling in.

Opportunities to choose paint and wallpaper, to hang shelves, pictures, altars and cabinets are extremely important, as they represent the rights of environmental control and modification associated with 'a home of one's own'.

Recesses and other features which can serve as altars are also greatly appreciated by members of certain cultural and religious groups.

Therefore:

- ◆ Provide wide window ledges which can be used to display mementoes;
- ◆ Make generous provision of shelves and ledges; and
- ◆ Provide all dwellings with standard picture rails on at least two walls of the living room to permit hanging pictures.

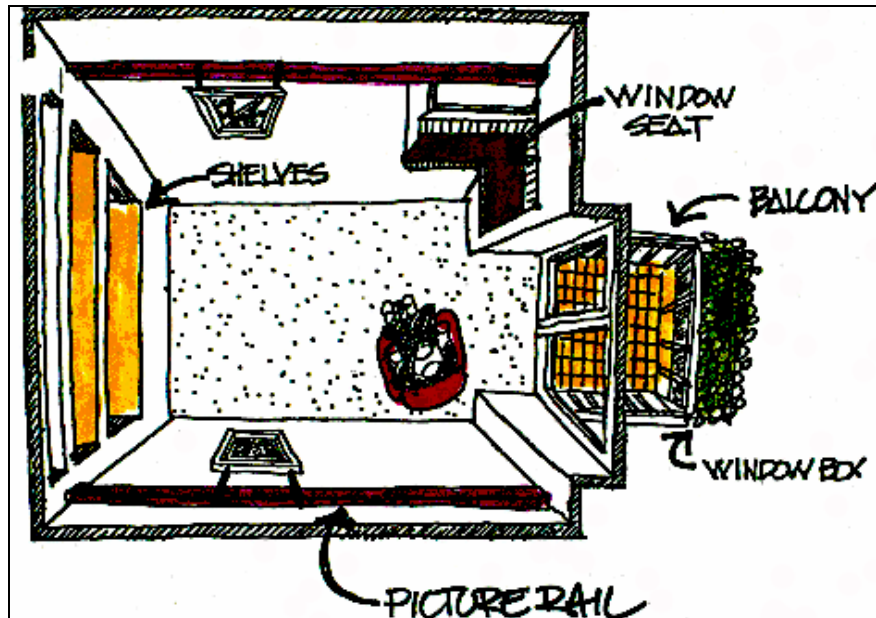


Figure 31: Dwelling personalisation opportunities

4.0 Household activities

Ensure that the specific household activities of overseas residents are catered for in dwelling designs.

The purpose of the dwelling is to provide an environment which supports household activities. Particularly for people coming to Burswood Lakes from other cultures, a good 'fit' between dwelling design and behavioural needs can contribute significantly to resident satisfaction and reduce the stress of new settlement. Some specific cultural requirements are outlined below.

4.1 *Cooking and eating*

Design kitchens to accommodate expected work and socialising patterns, ergonomic factors and cultural requirements.

Few people from other cultures have compliments for the way in which Australians accommodate the activities of cooking and eating in modern Australian homes. Kitchens are often seen as too small and poorly ventilated, with socialising or group cooking needs

poorly catered for (particularly for traditional cultures where the 'backstage' is emphasised). As tastes and activities will differ from culture to culture, it is not possible to specify precise arrangements in a generic way but some generic guidance can be offered, based on housing research.

Generally, it appears that members of different cultural groups will be satisfied with the larger kitchen where people can socialise while meals are being prepared and where more than one person can prepare food at a time. The common error in Australian kitchen design of making the kitchen a thoroughfare between the living areas and the back door, resulting in a tangle of children underfoot, should definitely be avoided.

Some of the issues which need to be clarified for each cultural group are the following:

- ◆ To what extent should the kitchen be separate from the dining room? It is expected that some separation will be required, while still allowing for socialising and supervision of children;
- ◆ What is the ideal size for a dining area, given the needs of large and extended families?
- ◆ What is the ideal arrangement of cooking facilities to accommodate cultural and religious requirements? For example, for those who may wish to keep a kosher household (requiring two sets of dishes and cooking equipment), what are the implications for storage or spatial other requirements?
- ◆ How will the segregation of domestic tasks by gender and the inner-outer differentiations of the dwelling affect the size and disposition of kitchen and dining room spaces?
- ◆ What are the differences among requirements of residents of different ages and more or less traditional cultures within a single ethnic group?

Therefore:

- ◆ As a general rule, ensure that kitchens are large enough to accommodate a dining table which comfortably seats at least five or six people (drawings illustrate people seated with chairs pulled out from the table);
- ◆ Pay attention to established ergonomic factors in kitchen design (the 'work triangle') and ensure that the kitchen is not a through-route to the back door;
- ◆ Ensure good over-stove ventilation and exhaust systems for all kitchens and provide for natural ventilation as well, wherever possible;
- ◆ Where possible locate kitchens as close to the balcony as possible to facilitate dining and cooking (barbecuing, etc.) on the balcony and to maximise natural ventilation;
- ◆ Ensure that exhaust systems can handle heavy oil vapours and can be easily cleaned and maintained;

- ◆ Provide all kitchens with adequate (and appropriately designed) storage to accommodate cultural requirements, such as separate cooking utensils and dishes for kosher households, storage of large pots and serving bowls, charcoal burners, hot pots, rice cookers, and large containers of oil, soya sauce and bulk quantities of rice and grains, etc.;
- ◆ Design storage arrangements in dwellings to accommodate composting and recycling activities by providing places for bins both inside the kitchen and immediately outside the back door (see *Working Paper 10*); and
- ◆ Ensure that kitchen work areas are large enough to accommodate two people working at once preparing food.

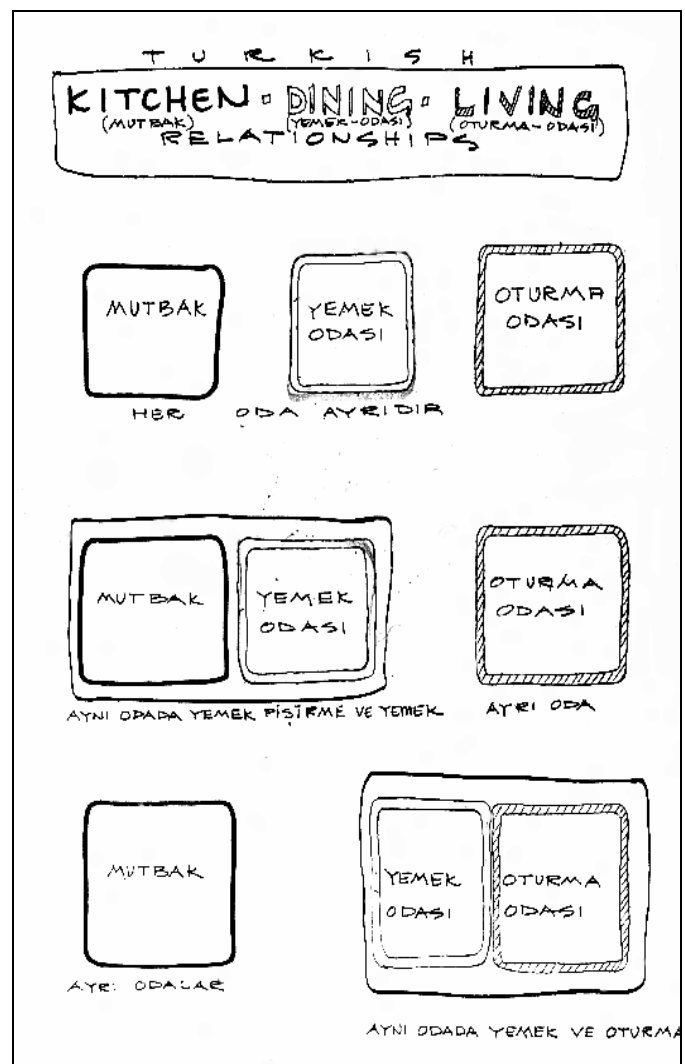


Figure 32: Turkish kitchen arrangements

Source: AHRC 146, 1985.

4.2 Body Hygiene

Undertake consultation with local representatives of cultural groups to provide for culturally appropriate solutions to body hygiene requirements.

Not all cultural groups have particular requirements. However, for Muslim households, a separate bath (with shower and tub) and toilet with basin and mixer tap are essential.

Toilets should be correctly oriented with respect to sacred requirements. Requirements of other cultural groups should be identified and accommodated.

The correct siting of a dwelling and the toilet for religious Muslims are shown in Figure 33 below.

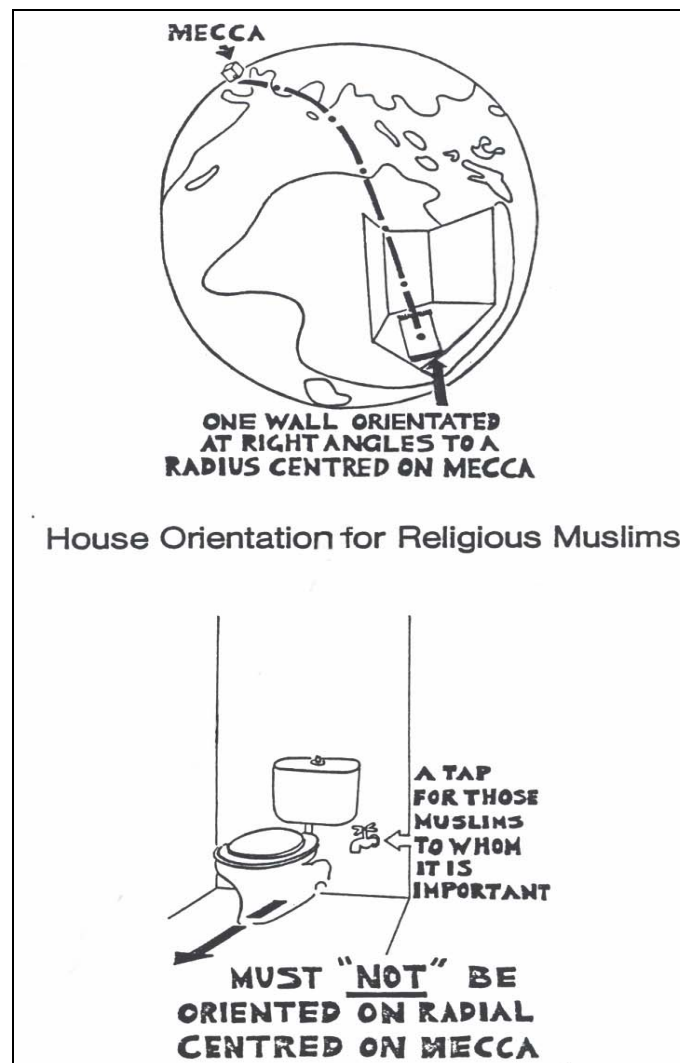


Figure 33: House orientation for religious Muslims
Source: AHRC 146, 1985.

4.3 Sleeping arrangements

Ensure that a full understanding of resident preferences dictates arrangements for bedroom size and disposition within dwellings.

As with other issues discussed above, it is important not to assume that child-rearing practices or other factors will necessitate children sleeping near or with parents. For example, in a Melbourne study, only 10 percent of the Turkish respondents (in households with large numbers of children) wanted their children's bedrooms located near the adults' bedrooms.

Small bedrooms were seen as appropriate. Indo-Chinese respondents felt that a child could sleep with parents until about age six but that only one child should sleep in the parents' room.

Therefore:

- ◆ Consult with cultural groups and conduct targeted market research about bedroom size and location;
- ◆ Provide main bedrooms large enough to accommodate a small extra bed;
- ◆ As a general rule for householders with children, provide separate small bedrooms for children;
- ◆ Ensure that bedrooms for children can easily accommodate a desk;
- ◆ Where small children's bedrooms are provided, ensure that play space (perhaps even a widened corridor) is provided in the dwelling; and
- ◆ See *Working Paper 11* for details of designing higher density housing for children.

4.4 Religious activities

Provide internal dwelling design features which could accommodate certain religious needs without disadvantaging others.

While not all residents from other cultures will require this, some simple modifications to dwelling designs at the initial design stage would render all dwellings more suitable for religious residents. These could include:

- ◆ Consider providing built-in shelves and wall recesses which can be used as altars, as shown in Figure 34 below.

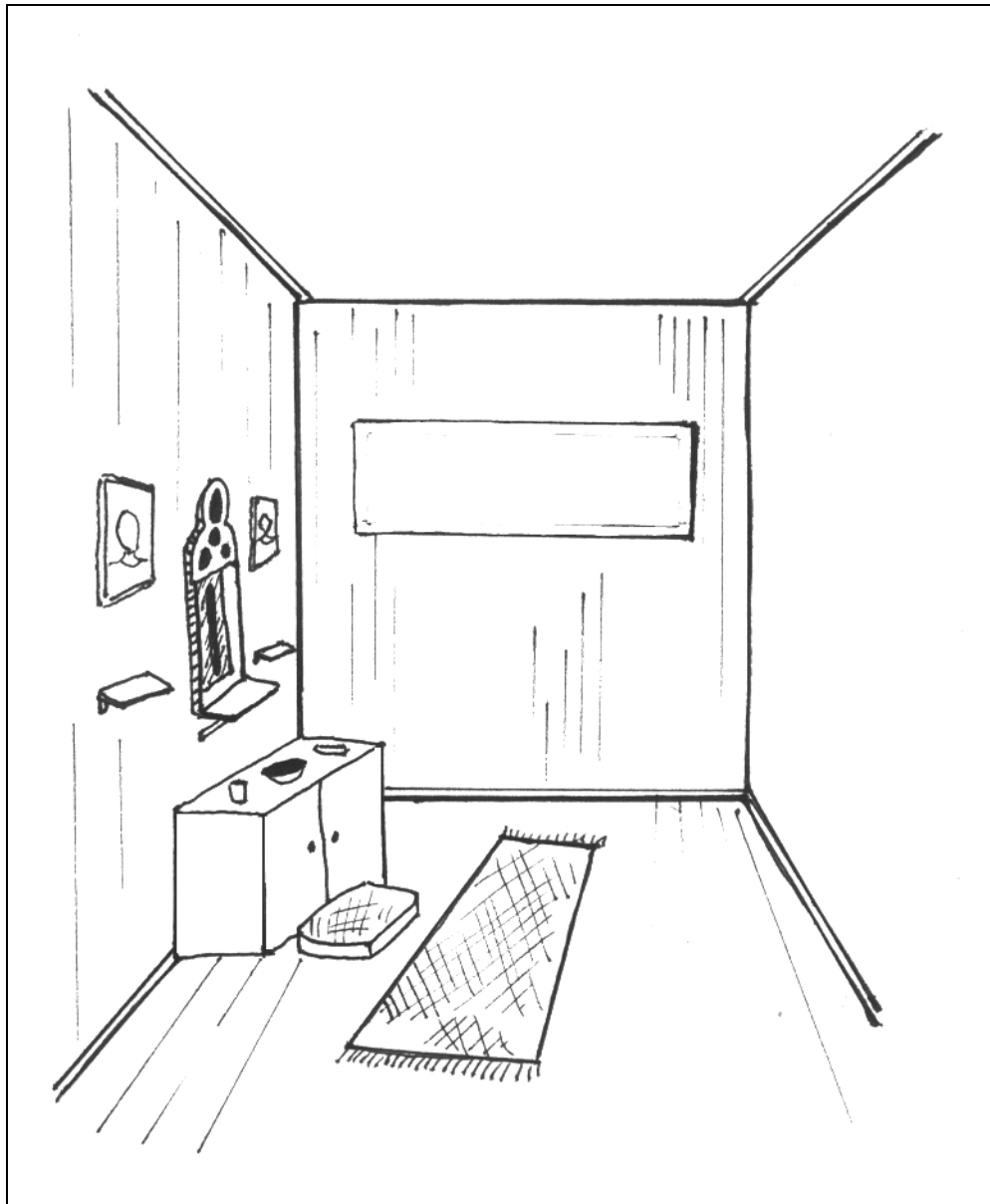


Figure 34: A space which can be used as an altar
Source: AHRC 146, 1985.

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