

An aerial photograph of a city, likely Darwin in the Northern Territory of Australia. The top half shows modern high-rise buildings and commercial structures. The middle section features a residential area with a grid of roads, green spaces, and smaller buildings. The bottom part shows a more rural or undeveloped area with a road, a river or stream, and some industrial or utility structures. The text is overlaid on the image in a bold, orange, serif font.

DESIGN GUIDE

**For Residential and
Commercial Development
in the Northern Territory**

DESIGN GUIDE

**For Residential and
Commercial Development
in the Northern Territory
2000**



ISBN 0724548068

This is an Incorporated Document, made under section 160 of the *Planning Act 1999*.

Contents

PURPOSE OF THIS GUIDE	1
RESIDENTIAL GUIDE	2
HOW TO USE THIS GUIDE	2
SITE ANALYSIS	3
1 DENSITY	5
2 INFRASTRUCTURE	6
3 NEIGHBOURHOOD CHARACTER	7
4 SITE LAYOUT AND LANDSCAPING	8
5A ENERGY EFFICIENCY - NORTHERN REGION	11
5B ENERGY EFFICIENCY - SOUTHERN REGION	14
6 BUILDING ENVELOPE	16
7 VISUAL AND ACOUSTIC PRIVACY	17
8 CAR PARKING AND VEHICLE ACCESS	19
9 OPEN SPACE	22
10 SITE FACILITIES	24
COMMERCIAL GUIDE	26
GENERAL	26
GUIDELINES	26

PURPOSE OF THIS GUIDE

The purpose of this Guide is to assist in the design and assessment of residential and commercial development applications to achieve the aims of:

- promoting site-responsive designs which function effectively, are pleasant for the occupants, and which do not impact adversely or unreasonably on neighbours or the surrounding environment;
- developing good quality and cost-effective buildings;
- encouraging innovative design;
- encouraging a variety of residential dwellings to suit the range of population needs and provide a choice of housing style;
- encouraging building styles which reflect the heritage, character and climate of the area; and
- encouraging the integration of buildings with the site, adjoining buildings and surrounding public spaces through good design and landscaping.

The residential guidelines are based on AMCORD 95, which has been adapted to suit the unique characteristics of the Northern Territory and to reflect its physical and social environmental diversity.

The aim of these residential guidelines is not to promote an increase in the number of medium or high density developments or to promote higher densities at the expense of the standard single dwelling development. On the contrary, by encouraging and promoting good design and form the existing residential fabric in the Territory's towns and suburbs will be maintained, protected and enhanced by improved neighbourhoods and streetscapes. This Guide should allow for better housing choice without compromising existing style and residential patterns. It is about how residential dwellings should be built, not where.

This Guide does not alter any requirements of the *Planning Act* that may apply to a development proposal.

**For further information please contact:
Department of Lands, Planning and Environment
GPO Box 1680
DARWIN NT 0801
Telephone: (08) 8999 6359**

RESIDENTIAL GUIDE

HOW TO USE THIS GUIDE

STRUCTURE

This Guide identifies aspects important to designing good residential developments, based on an initial site analysis. Together the elements provide a comprehensive agenda for good site-responsive design, which builds on information gathered through the site analysis.

These design elements are:

Density	Building envelope
Infrastructure	Visual and acoustic privacy
Neighbourhood character	Car parking and vehicle access
Site layout and landscaping	Open space
Energy efficiency	Site facilities

All of these elements are incorporated into the design by means of *objectives*, *requirements* and *design suggestions*.

OBJECTIVES

These are statements which define the intention of each element and indicate the desired outcomes to be achieved in completed developments.

REQUIREMENTS

These provide a basis for judging whether the objectives have been met. Each development must consider all the requirements but may not necessarily need to satisfy all of them.

DESIGN SUGGESTIONS

These provide some means by which the requirements may be addressed and met. Some design suggestions are ideas only whilst others provide technical solutions to design requirements.

USING THIS GUIDE

This Guide is to be used as a whole: all parts should be considered by the designer and the consent authority.

The preparation and submission of a site analysis plan, described in the following section, is a prerequisite for any development application drawn up under this Guide.

Following preparation of the site analysis plan, all ten design elements should be considered when preparing the development application. Wherever possible, a development application should satisfy the objectives and requirements of all the elements. Different weighting will have to be given to the elements for different proposals, due to the particular circumstances of the proposals and their sites. Because of this, the consent authority should exercise informed judgement as to whether a development proposal satisfies both the spirit and the intent of this Guide and enough of the objectives and requirements to be acceptable.

As this Guide is to be used for developments ranging from large scale to small infill, not all elements or the issues contained therein will be appropriate to all applications.

SITE ANALYSIS

A site analysis should desirably be submitted to the consent authority with an application for residential development. The site analysis may form part of the assessment report already required by the application procedure.

The purpose of the site analysis is to describe and graphically represent:

- the key influences on the proposed design; and
- the relationship of the proposed buildings/developments to each other and to the surrounding environment.

The site analysis should, where relevant, identify constraints on and opportunities for development on the site. It should guide design to minimise negative impacts on the amenity of adjoining developments and complement neighbourhood character.

A site analysis should document the site in terms of:

- topography and existing vegetation;
- buildings which should be retained;
- views to and from the site;
- access and connection points;
- drainage and services;
- orientation;
- microclimate;
- noise sources;
- fences, boundaries and easements; and
- any other characteristic of the site.

The site analysis should also document the surrounds in terms of:

- adjacent and opposite building location and use;
- abutting private open space areas and dwelling windows, distinguishing between habitable and non-habitable rooms;
- views and shade enjoyed by adjacent properties;
- major trees on adjacent properties;
- location and height of walls built to the boundary of the site;
- characteristics of any adjacent open space;
- street frontage features such as power poles, street trees, kerb crossovers and services; and
- the built form and character of adjacent development, including characteristic fencing and garden styles.

A hypothetical example of a site analysis is shown at Figure 1.

The site analysis should be accompanied by a written statement explaining how the proposed design responds to the site characteristics, and how the elements of this Guide have been addressed in the proposed design.

1. ORIENTATION

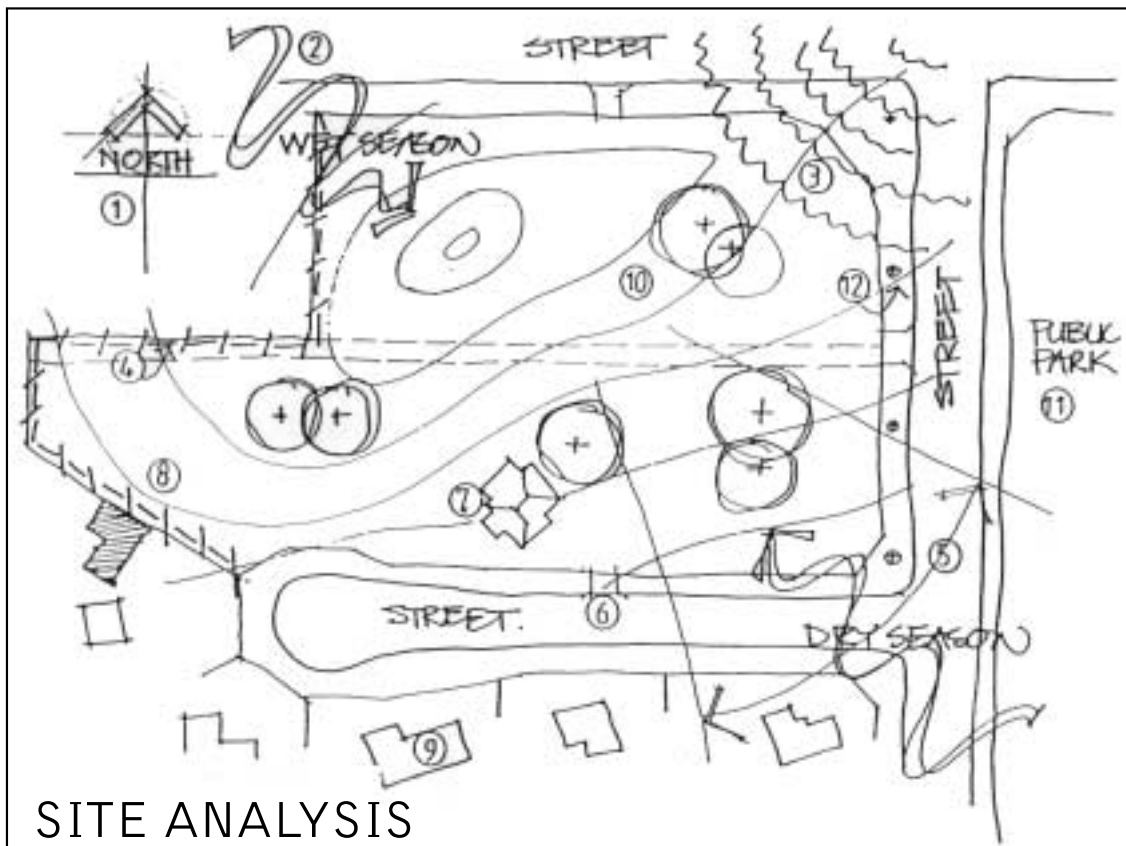
2. MICROCLIMATE,
PREVAILING
WIND PATTERS.

3. NOISE SOURCES

4. LOCATE EXISTING
FENCES, BOUNDARIES
EASEMENTS ETC.

5. VIEWS TO AND
FROM THE SITE.

6. ACCESS AND
CONNECTION
POINTS.



SITE ANALYSIS

7. BUILDINGS TO BE
RETAINED

8. LOCATION AND
HEIGHT OF WALLS
BUILT TO BOUNDARY

9. ADJACENT AND
OPPOSITE BUILDING
LOCATION AND USE

10. EXISTING VEGETATION
BOTH ON AND
ADJACENT TO THE SITE.
SITE TOPOGRAPHY.

11. LOCATION AND
CHARACTERISTICS
OF ANY OPEN SPACE.

12. STREET FEATURES.
EQ. TREES, POWER
POLES, KERB
CROSSOVERS ETC.

1 DENSITY

OBJECTIVES

- O1.1** Make the design of residential development appropriate to the residential density provided for the locality in the development provisions.
- O1.2** Encourage the location of higher density housing close to public transport, shopping and community facilities.
- O1.3** Limit development where site constraints exist which cannot be reasonably overcome.

REQUIREMENTS

- R1.1** Appropriate density for a site is to be determined by:
- the location, frontage, area, shape and features of the site;
 - the quality of the design;
 - the size of the dwellings; and
 - the impact on neighbours.

DESIGN SUGGESTIONS

- S1.1** One technique for satisfying the objectives and criteria outlined above is to build at densities in the following ranges:
- for lots less than 1000 m², between 1:300 and 1:250,
ie between 250 m² and 300 m² per dwelling;
 - for lots greater than 1000 m², between 1:250 and 1:200,
ie between 200 m² and 250 m² per dwelling.

Densities may be increased where it can be demonstrated that the design objectives and requirements of this Guide as a whole will be met.

Densities may be reduced where it is demonstrated that the objectives and requirements of this Guide as a whole will not be met or there will be any unreasonable off-site impact.

- S1.2** Opportunities to provide innovative higher density developments are encouraged especially within central business areas.

2 INFRASTRUCTURE

OBJECTIVES

- O2.1** To locate higher residential development in areas where it can take advantage of available physical and social infrastructure.
- O2.2** To achieve developments with appropriate and efficient on-site physical services.
- O2.3** To limit the impact of increased stormwater runoff on drainage systems.

REQUIREMENTS

- R2.1** The development should not overload the capacity of public infrastructure, including reticulated services, streets, open space and social and community services.
- R2.2** The design and layout of dwellings should provide sufficient space (including easements where required) and facilities for services to be maintained efficiently and economically.

DESIGN SUGGESTIONS

- S2.1** Maximise on-site infiltration with unpaved landscape areas or porous paving wherever possible.
- S2.2** Incorporate on-site water recycling systems in large-scale developments.
- S2.3** Direct stormwater runoff into garden areas to reduce watering and demand on drainage infrastructure.

3 NEIGHBOURHOOD CHARACTER

OBJECTIVES

- O3.1** To achieve residential development which respects or improves the character of the neighbourhood.
- O3.2** To maintain the dominant landscape and garden character of established neighbourhoods.
- O3.3** To provide for the retention and planting of shade trees in new developments.

REQUIREMENTS

- R3.1** Developments should be sited and designed to acknowledge the secluded private open space of surrounding dwellings.
- R3.2** Developments should visually address public streets.
- R3.3** Significant changes of building heights between existing dwellings and new developments should be graduated.
- R3.4** Identify predominant characteristics of the neighbourhood including:
- built form;
 - vegetation;
 - topography; and
 - road layout and pattern;
- and translate these into innovative design solutions.
- R3.5** In terms of built form, look for characteristics of:
- mass and proportion;
 - roof form and pitch;
 - window and door proportions;
 - facade articulation and detailing;
 - verandahs, eaves and parapets;
 - building materials, patterns, textures and colours;
 - decorative elements;
 - kerb crossovers, kerb styles and alignments; and
 - building setbacks.
- R3.6** In terms of landscaping, look for characteristics of:
- plant types;
 - hard-landscaping design; and
 - location and size of gardens.

DESIGN SUGGESTIONS

- S3.1** Provide sufficient open space for the planting of trees.
- S3.2** Retain and protect existing trees where possible.
- S3.3** Protect neighbours' trees from root damage.
- S3.4** Plant semi-mature trees in open space along boundaries adjacent to neighbouring open space.
- S3.5** Orient dwelling entries towards the street.
- S3.7** Where high solid front fences are required, limit them to part of the frontage in order to maintain views between the dwelling and the street.

4 SITE LAYOUT AND LANDSCAPING

OBJECTIVES

- O4.1** To integrate the layout of developments into the neighbourhood and provide a sense of address and privacy.
- O4.2** To achieve energy efficient and environmentally sensitive layouts.
- O4.3** To provide safe, comfortable and functional environments.
- O4.4** To provide for the efficient management and maintenance of developments.
- O4.5** To provide appropriate landscaping.

REQUIREMENTS

- R4.1** Design layouts to take account of neighbouring uses and buildings.
- R4.2** Provide adequate vehicle and pedestrian links which maintain or enhance local accessibility.
- R4.3** Layouts should limit exposure to adverse off-site noise and climatic effects.
- R4.4** Layouts should clearly delineate the public, communal and private areas of a development.
- R4.5** Common property, where required, should be functional and capable of efficient management.
- R4.6** Public open space reserves provided on site should:
 - be large enough and suitable for a local park or recreational facility;
 - be substantially surrounded by streets and fronted by dwellings;
 - provide outlook for as many dwellings as practicable;
 - be designed to protect any valuable natural features on the site; and
 - be clearly accessible, useable and available to the wider community.
- R4.7** Development next to existing open space should be laid out to complement the open space.
- R4.8** Developments should be designed to consider the needs of people with limited mobility.
- R4.9** The landscape design and layout should specify themes, provide a safe, attractive and functional environment for residents, and blend the development with the neighbourhood.

DESIGN SUGGESTIONS

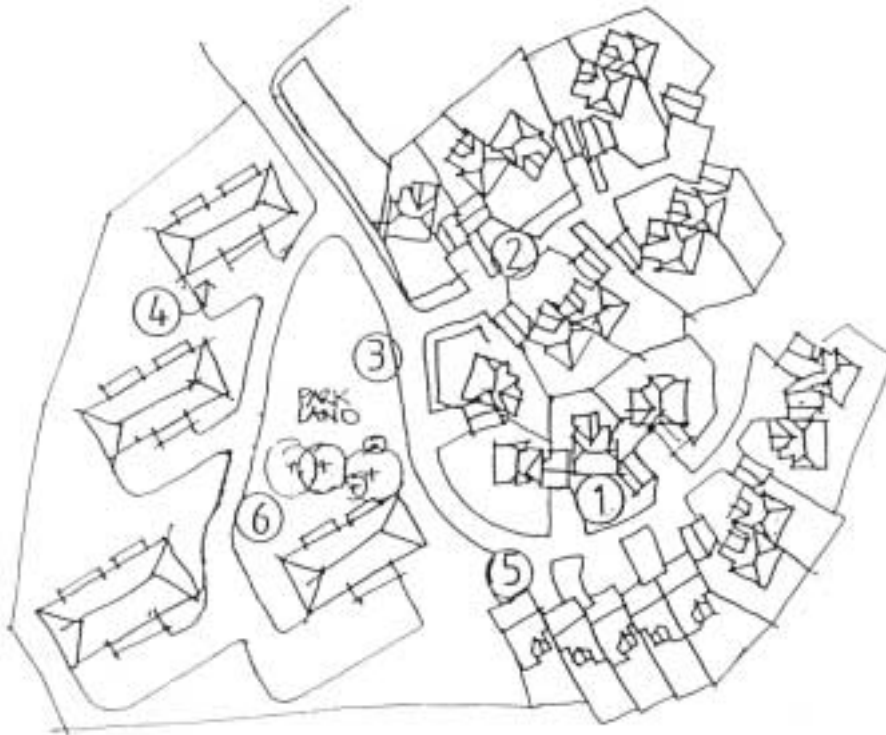
- S4.1** Design dwelling entries to address existing and proposed streets.
- S4.2** Avoid high fencing in front of dwellings and along streets.
- S4.3** Locate the car parking component of a development away from the street to limit impact on the amenity of adjacent properties.
- S4.4** Vary alignment of accessways to avoid a “gun barrel” effect.
- S4.5** Ensure garages and parking structures do not dominate the street frontage.
- S4.6** Provide good lighting, visibility and surveillance of car parks and internal accessways.
- S4.7** Avoid planting which creates obscured spaces or places of concealment along streets and accessways.
- S4.8** Where possible, provide streets on public open space boundaries.
- S4.9** Avoid abutting the open space with back fences.
- S4.10** Avoid the use of kerbs, pathways with steps, difficult surfaces or other impediments to wheelchairs, prams etc.
- S4.11** In large developments, provide resting places for pedestrians.
- S4.12** Shelter open car park areas.

- R4.10** Address the matters of:
- views from the site;
 - topography;
 - vegetation;
 - soil type;
 - drainage;
 - bushfire risk;
 - shape and orientation of the site;
 - overlooking from adjacent buildings;
 - traffic;
 - existing buildings; and
 - other site features.
- R4.11** Dwellings should allow observation of adjacent streets and public open space.
- R4.12** Dwelling entrances should not be obscured or isolated.
- R4.13** Allow for intended vegetation growth and structural protection of buildings.
- R4.14** Design for safety and security.
- R4.15** Contribute appropriate street planting.
- R4.16** Improve privacy between dwellings.
- R4.17** Minimise risk of damage to power lines and other services.
- R4.18** Design for efficient maintenance.
- S4.13** Provide paving to driveways, walkways, entries, garbage bin enclosures, mail boxes and shared clothes lines. Such paving should be:
- graded to maximise on-site infiltration of stormwater;
 - in materials and colours which complement the development; and
 - of adequate strength and in non-slip finishes.
- S4.14** Provide lighting for safety and security while minimising light entering adjacent properties.
- S4.15** Ensure seasonal shading of open space areas.

1. DWELLINGS TO FRONT EXISTING OR PROPOSED STREETS

2. VARY ALIGNMENT OF ACCESSWAYS TO AVOID A GUN BARREL EFFECT. ENSURE GARAGES DO NOT DOMINATE THE STREET FRONTAGE

3. PROVIDE STREETS ON PUBLIC OPEN SPACE BOUNDARIES



SITE LAYOUT AND LANDSCAPING

4. SHELTER OPEN CAR PARK AREAS.

5. PROVIDE PAVING TO DRIVEWAYS ENTRIES GARBAGE BIN ENCLOSURES MAILBOXES AND SHARED CLOTHES LINES

6. ENSURE SEASONAL SHADING OF OPEN SPACES.

5A ENERGY EFFICIENCY - NORTHERN REGION

OBJECTIVES

O5A.1 To achieve energy efficient design and development of medium density dwellings to promote energy conservation.

O5A.2 To achieve improved thermal comfort and reduced energy costs for residents.

REQUIREMENTS

R5A.1 Orientation, layout and landscaping of developments should aim to reduce energy consumption and make the best use of natural ventilation, daylight and solar energy.

R5A.2 Developments should be designed to:

- promote cooling breezes;
- ventilate by convection;
- reduce heat storage and radiation; and
- shelter walls and openings.

R5A.3 Air conditioning units should be located away from adjoining properties, where possible, to reduce thermal and noise impacts.

DESIGN SUGGESTIONS

S5A.1 Buildings should be designed as far as practicable as linear structures of one room width, to maximise the benefits of cross-ventilation.

S5A.2 Buildings should be oriented on site to maximise exposure to prevailing breezes and to minimise exposure to the sun.

S5A.3 Openings (windows and doors) should be located on opposite or adjacent walls for cross-ventilation.

S5A.4 All habitable rooms should be naturally ventilated, with at least one and preferably two external openings.

S5A.5 All external openings should be protected from direct sunlight with shade devices to prevent direct penetration of sunlight at the hottest time of the day, approximately between the hours of 10 am and 5 pm.

S5A.6 Use building materials of low thermal mass, especially in bedrooms, which will permit rapid loss of heat at night.

S5A.7 Use supplementary means of promoting air movement, such as ceiling fans, roof vents and whirly birds.

S5A.8 Provide vents in ceiling space, roof ridge or eaves to permit escape of rising heat, minimising heat buildup and promoting convective draughts.

S5A.9 Use heat reflective and light-coloured materials to reduce the opportunity for heat to be absorbed and radiated into the dwelling.

S5A.10 Use only non-insulative material to allow rapid heat loss.

S5A.11 The interior layout of dwellings should allow air movements throughout, eg by partition walls and internal louvres.

S5A.12 Buildings should be designed to have an area of roof with appropriate orientation for the installation of solar collectors.

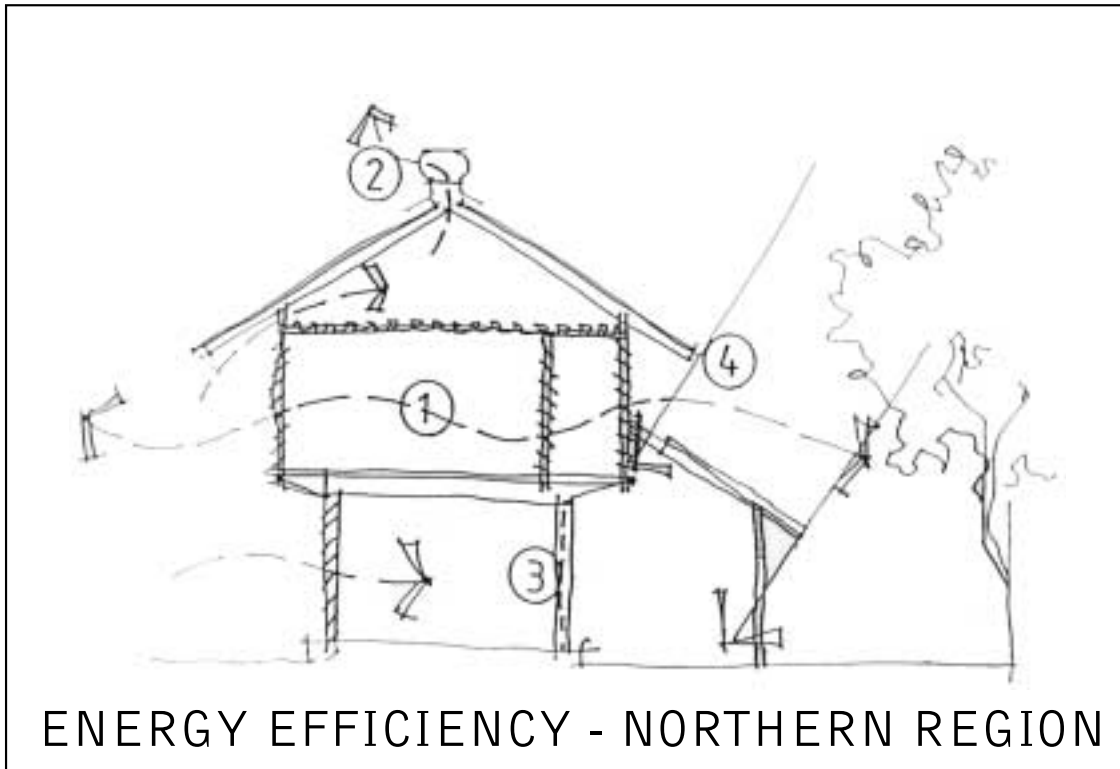
- S5A.13** Provide shade on all sides of dwellings by means of wide overhangs or verandahs, or suitable landscaping.
- S5A.14** Protection from torrential rain and strong winds (which can drive rain horizontally) should be provided on external openings.
- S5A.15** Use trees to shade walls and roofs, particularly on the western side of dwellings, to block afternoon sun and to channel cooling breezes.

1. PROMOTION OF COOLING BREEZES

- PRESENTATION TO BREEZES
- INTERACTION WITH THE OUTDOORS
- TREATMENT OF BARRIERS
- INCORPORATING SUPPLEMENTARY MEANS

2. VENTILATION BY CONVECTION

STEEP PITCH ROOFS WITH VENTING AT THE APEX/RIDGE



ENERGY EFFICIENCY - NORTHERN REGION

3. REDUCING RADIANT HEAT

LIGHTWEIGHT CONSTRUCTION MATERIALS THAT DO NOT ABSORB HEAT AND COOL RAPIDLY.

4. SHELTERING OF WALLS AND WINDOWS

SHELTER WALLS AND OPENINGS FROM BOTH THE SUN AND RAIN.

5B ENERGY EFFICIENCY - SOUTHERN REGION

OBJECTIVES

- O5B.1** To achieve energy efficient design and development of medium density dwellings to promote energy conservation.
- O5B.2** To achieve improved thermal comfort and reduced energy costs for residents.

REQUIREMENTS

- R5B.1** Orientation, layout and landscaping of developments should aim to reduce energy consumption and make the best use of natural ventilation daylight and solar energy.
- R5B.2** Developments should be designed to:
- minimise the need for mechanical cooling and heating;
 - maximise cross ventilation;
 - prevent solar access in summer; and
 - provide for covered outdoor living areas.
- R5B.3** Air conditioning units should be located away from adjoining properties, where possible, to reduce thermal and noise impacts.

DESIGN SUGGESTIONS

- S5B.1** Site buildings to maximise desirable breezes.
- S5B.2** Avoid long walls, particularly on western and eastern sides of dwellings.
- S5B.3** Construct walls using materials of high thermal mass (eg cavity bricks concrete blocks, stone, rammed earth, mud brick).
- S5B.4** Windows should be appropriately sized and located to allow entry of winter sun and should be protected, particularly on northern walls.
- S5B.5** All habitable rooms should be naturally ventilated, ie having at least one external opening.
- S5B.6** External openings are located on opposite or adjacent walls to promote cross-ventilation.
- S5B.7** All external openings should be protected from direct sunlight by shade devices to prevent solar penetration between the hours of 10 am and 4 pm in summer months.
- S5B.8** Dwellings should desirably have outdoor courtyards, shaded for about 30% of their area.
- S5B.9** Deciduous trees around dwellings will allow entry of sun in winter whilst providing shade in the summer.
- S5B.10** Outdoor living areas and courtyards can be shaded in summer and warmed in winter by the use of pergolas planted with deciduous vines.
- S5B.11** A shaded, moist courtyard will act as a cool air well, providing cooled and moistened air to enter the adjacent dwelling.
- S5B.12** Buildings should have an area of roof with appropriate orientation that is suitable for the installation of solar collectors.
- S5B.13** Dwellings should be designed to allow mechanically heated and cooled areas to be closed off from passively heated or cooled areas.

1. SHADING

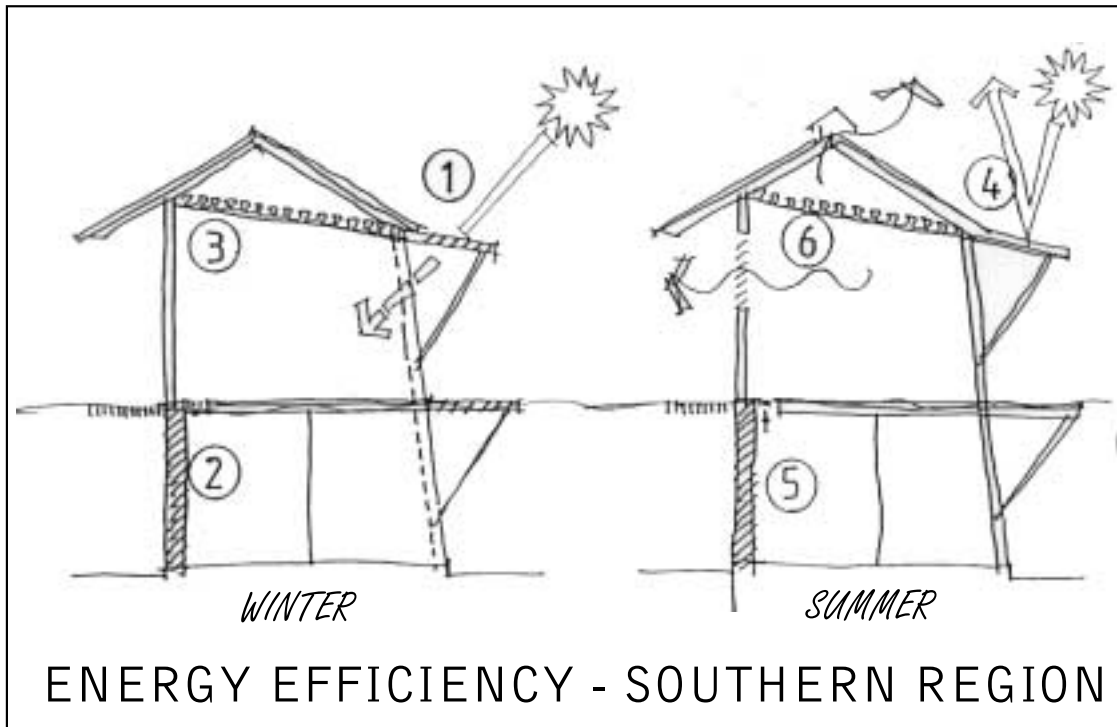
ALLOW WINTER SUN TO PENETRATE INTO HOUSE.

2. THERMAL MASS

MASSIVE WALLS IN WARMED AIR ZONES

3. VENTILATION

VENTS CLOSED AND ROOF SPACE INSULATED.



4. SHADING

SHADE ALL WALLS AND OPENINGS FROM SUMMER SUN.

5. THERMAL MASS

MASSIVE WALLS AS DAYTIME COOLING BALLAST.

6. VENTILATION

ALLOW FOR CROSS VENTILATION AT NIGHT/SHELTER DURING DAYTIME.

6 BUILDING ENVELOPE

OBJECTIVES

- O6.1** To ensure that the setbacks of a building from its boundaries, the height and length of its walls, its site coverage and visual bulk, are acceptable in the neighbourhood setting.
- O6.2** To respect access to natural ventilation for new and neighbouring buildings.

REQUIREMENTS

- R6.1** Setbacks to street frontages should suit the efficient use of the site, the amenity of residents and the character of the neighbourhood.
- R6.2** Building height, length, location and bulk should not cause a significant loss of amenity to neighbouring residents.

DESIGN SUGGESTIONS

Setbacks

- S6.1** Buildings should be set back from street frontages in accordance with the provisions of the development provisions, unless departure from the requirements will enhance the neighbourhood setting.

Allowable encroachments to setbacks

- S6.2** Eaves, fascias, gutters, downpipes, domestic fuel tanks, flues, pipes, cooling or heating appliances or other services may extend beyond the building envelope provided that the distance to the boundary is not less than 0.5 m. Such items may be located less than 0.5 m from the boundary if the relevant fire protection requirements of the *Building Code of Australia* are satisfied.

Light fittings, electricity meters, aerials or antennae, pergolas, screens or sun blinds are not restricted. Terraces, landings, steps or ramps not more than 1 m in height are not restricted.

Site coverage

- S6.3** Site coverage should be in accordance with the requirements of the development provisions, unless departure from the requirements will enhance the neighbourhood setting.

7 VISUAL AND ACOUSTIC PRIVACY

OBJECTIVES

- O7.1** Dwellings are designed to protect residents from external noise and to contain internal noise as far as practicable, and without unduly compromising the principles of design for energy efficiency.
- O7.2** Dwellings are designed to minimise overlooking over neighbours' properties and to protect residential amenity.

REQUIREMENTS

- R7.1** Habitable rooms and private open space of adjacent existing dwellings should be reasonably protected from direct overlooking, by use of dwelling layout, design detail, distance or landscaping.
- R7.2** Developments should be designed to control their own noise source and minimise the transmission of noise between dwellings.
- R7.3** Dwellings close to high noise sources such as busy roads, airport flight paths or industry should be of appropriate acoustic design and construction, or as required by any relevant Australian Standard.
- R7.4** Designing to provide for privacy and minimise noise transmission should be balanced with the requirements for maximum ventilation and passive cooling.

DESIGN SUGGESTIONS

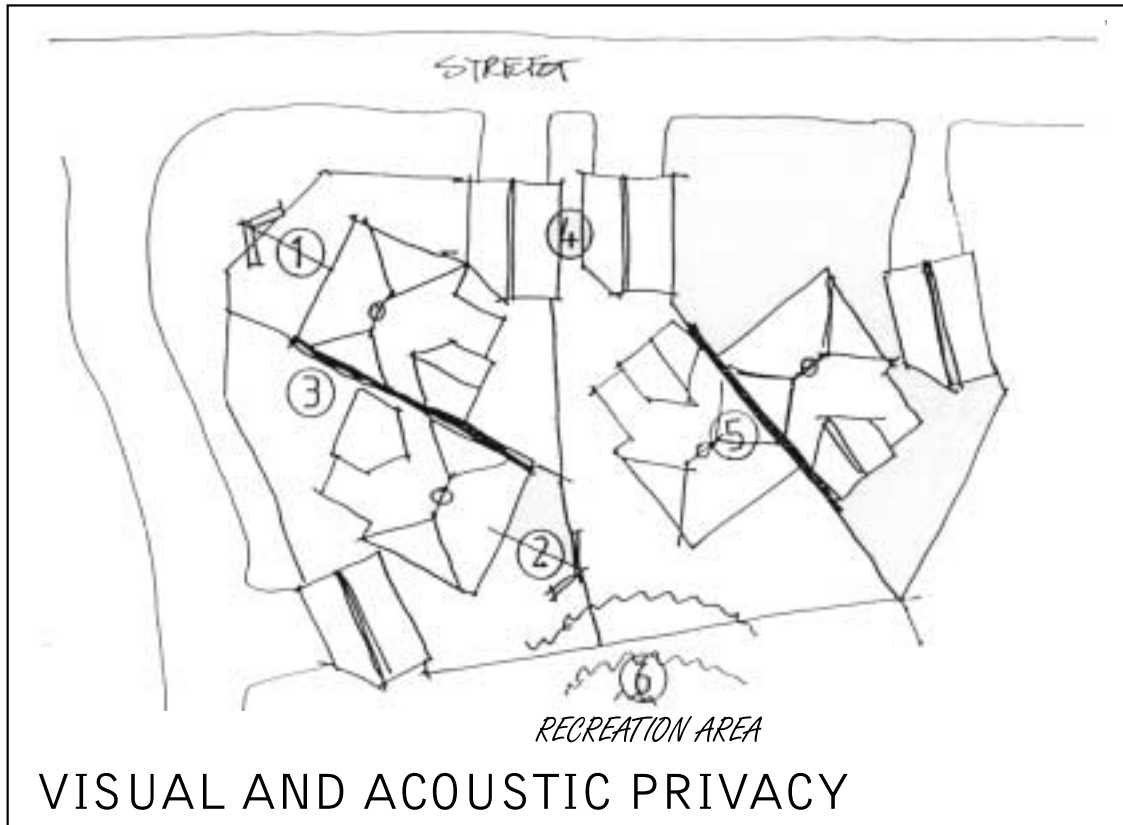
- S7.1** Upper storey living room windows and balconies should be located so that views are away from the habitable rooms and private open space of neighbouring dwellings.
- S7.2** The windows of a dwelling should be located so that they do not provide direct and close views into the windows of another.
- S7.3** Effective location of windows, verandahs and balconies to avoid overlooking is preferred to the use of screening devices, high sills or obscured glass. Where these other devices are used they should be well integrated in the overall design and have minimal impact on residents' or neighbours' amenity.
- S7.4** Active recreation areas such as pools, spas, tennis courts and barbecue areas, and services such as garbage chutes, pumps and compressors, should be located away from bedrooms of adjacent dwellings.
- S7.5** Garages, driveways and parking areas should be located away from bedroom windows of adjacent dwellings unless screened by a solid fence or other means.
- S7.6** Internal design layouts should locate bedrooms and private open spaces away from noise sources.

Note: In the southern region, double glazing or thick gaps, solid core doors, insulation and other barriers may provide means of noise reduction. These techniques are not preferred in the northern region as they prevent cross ventilation and/or heat loss.

1. UPPER STOREY
WINDOWS/BALCONIES
LOCATED FOR VIEWS
TO STREET

2. WINDOWS/
BALCONIES LOCATED
TO AVOID OVER-
LOOKING OR DIRECT
CLOSE VIEWS OF
OTHER DWELLINGS

3. PARTITION WALLS
SCREENS AND
HIGH SILLS TO
PROTECT PRIVACY
BETWEEN
DWELLINGS



4. LOCATE GARAGES
AWAY FROM
BEDROOMS OF
ADJACENT
DWELLINGS.

5. INTERNAL LAYOUTS
TO LOCATE BEDROOMS
AWAY FROM NOISE
SOURCES.

6. ACTIVE RECREATION
AREAS TO BE LOCATED
AWAY FROM BEDROOMS
OF ADJACENT
DWELLINGS..

8 CAR PARKING AND VEHICLE ACCESS

OBJECTIVES

- O8.1** To provide adequate, safe and convenient parking and access for resident, visitor and service vehicles.
- O8.2** To avoid parking and traffic difficulties in the development and in the neighbourhood.
- O8.3** To ensure that streets are not dominated by garages and carports.

REQUIREMENTS

- R8.1** Resident and visitor parking should be provided according to likely use needs and taking into account:
- the number, size and type of dwellings;
 - the availability of public transport;
 - the availability of on street or nearby parking;
 - local traffic and parking management plans and safety considerations; and
 - the reduction of on-street spaces associated with the provision of off-street spaces.
- R8.2** Car parking facilities should:
- be designed for efficient use and management;
 - define shared visitor parking where provided;
 - be reasonably close and convenient with appropriate weather protection connections to dwellings;
 - be well ventilated if enclosed;
 - be separated from habitable room windows to reduce noise and fumes entering dwellings; and
 - have appropriate lighting.
- R8.3** On main roads the number of access points should be limited.
- R8.4** On busy roads and in larger developments, vehicles should be able to exit the development in forward gear.
- R8.5** Parking areas and accessways should be designed surfaced and graded to reduce run-off and allow stormwater to drain into the site.
- R8.6** Where any dwelling is remote from a public street, access for service, emergency and delivery vehicles should be provided.

DESIGN SUGGESTIONS

Location of parking areas

- S8.1** Parking should be located well within a development.
- S8.2** Large parking areas should be broken up with trees, buildings, or different surface treatments.
- S8.3** Residents' car parking should be provided underground, in semi-basements or under-croft where possible.
- S8.4** Parking should be located so that views between the street and the front windows of a dwelling are not obscured.

Number of spaces

- S8.5** Car parking for residents should be provided in accordance with the requirements of the development provisions.
- S8.6** Streets and vehicle accessways are to be provided in accordance with the development provisions and Australian Standard.

Car space and access dimensions

- S8.7** Car parking space should have dimensions in accordance with the development provisions.

Location of accessways and garages

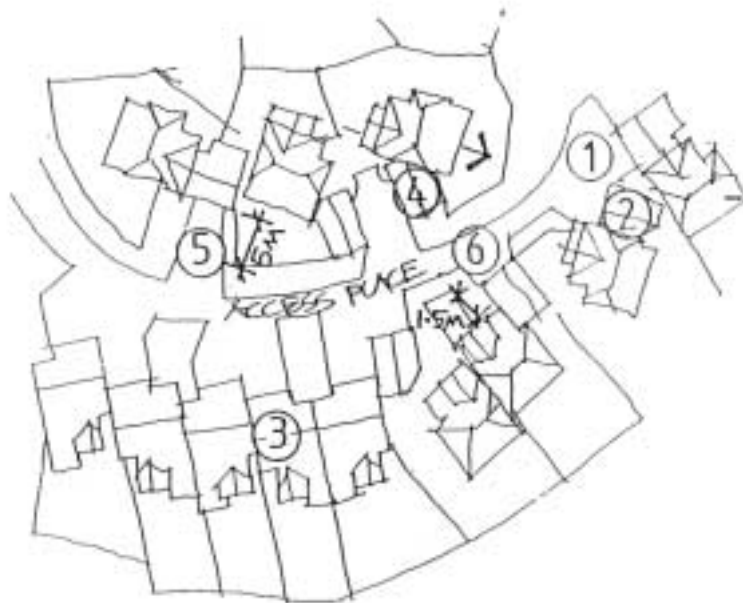
- S8.8** Garage doors and carports should be set back a minimum of 5 m from a street if practicable to allow cars to pull off the road before opening the doors.
- This setback may be reduced to 1 m where there is an intervening fence 1.5 m high or greater, or where the window sill is a minimum of 1.4 m above the accessway.

- R8.7** Garages and carports should be visually compatible with the development.
- R8.8** Vehicular accessways should not be located on the inside of road curves where it can be avoided because of the potential loss of safe sight distance.

1. PARKING SHOULD BE LOCATED WELL WITHIN A DEVELOPMENT.

2. GARAGE DOORS AND CARPORTS FRONTING A STREET SHOULD BE SET BACK BEHIND THE FRONT FACADES OF DWELLINGS

3. RESIDENTS CAR PARKING SHOULD BE PROVIDED WHERE POSSIBLE IN UNDERCROFTS OR BASEMENTS.



CARPARKING AND VEHICLAR ACCESS

4. PARKING SHOULD BE LOCATED SO THAT VIEWS BETWEEN THE STREET AND THE FRONT WINDOWS OF A DWELLING ARE NOT OBSCURED.

5. GARAGE DOORS AND CARPORTS SHOULD BE SET BACK A MIN OF 5M TO ALLOW CARS TO PULL OFF THE ROAD BEFORE OPENING DOORS.

6. SHARED ACCESSWAYS OR CARPARKS OF OTHER DWELLINGS SHOULD BE LOCATED A MIN OF 1.5M AWAY FROM HABITABLE ROOM WINDOWS.

9 OPEN SPACE

OBJECTIVES

- O9.1** To provide sufficient private open space for the reasonable recreation needs of residents.
- O9.2** To ensure that communal open space or recreation facilities are well designed, safe and useful and can be efficiently maintained.

REQUIREMENTS

- R9.1** Dwellings should have private outdoor areas which:
- are adequate in area and dimension for residents;
 - are appropriate for the climate; and
 - have convenient access from a main living room.
- R9.2** Outdoor areas at ground level between dwelling fronts should be designed to create a good physical and visual connection.
- R9.3** Private open space may be reduced where communal open space or recreation facilities will better serve the needs of residents.

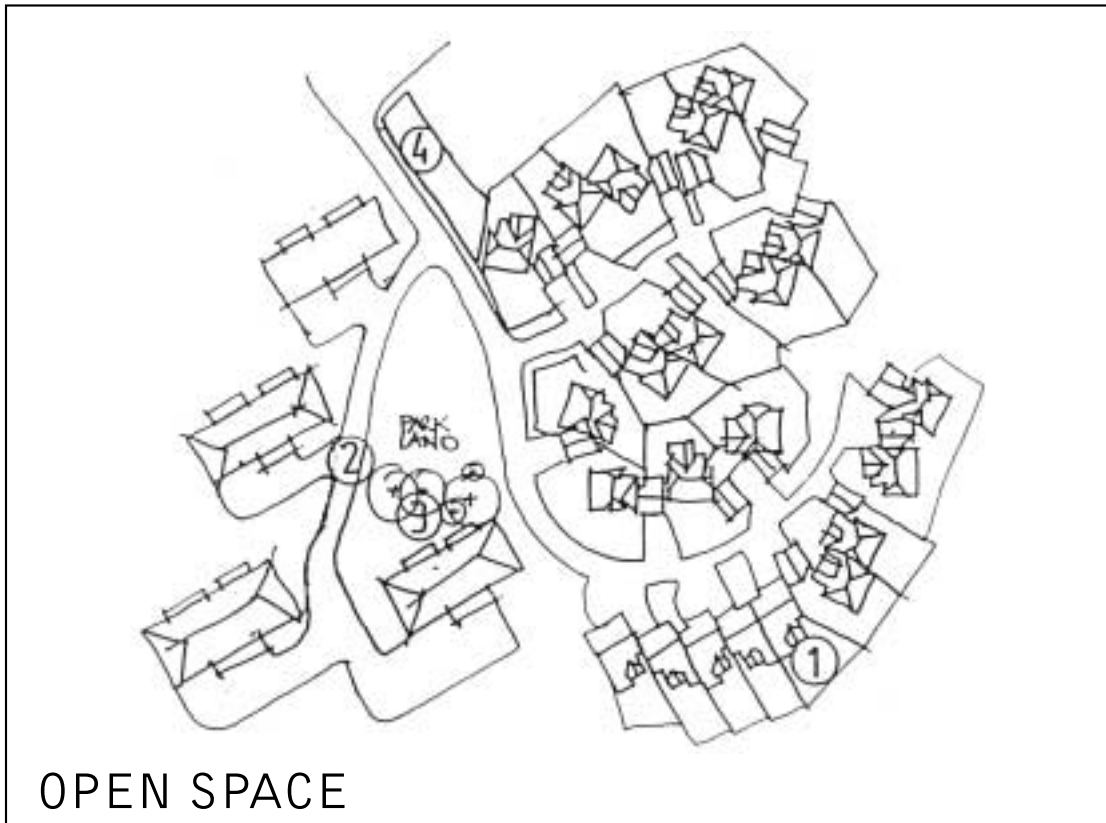
DESIGN SUGGESTIONS

- S9.1** Dwellings should have private open space consisting of at least:
- an area at ground level totalling 35 m², with a minimum dimension of 4 m, which has convenient access from a main living room; or
 - a balcony with an area of 8 m², and a minimum width of 1.8 m, which has convenient access from a living room.
- S9.2** Developments providing private open space in the form of balconies only should provide an adequate outdoor area at ground level for communal use, appropriately landscaped.
- S9.3** Shade should be provided throughout the year to at least 30% of any private or communal open space, by means of landscaping with canopy trees or by a shade structure.
- S9.4** High front fences and unsightly service or utility areas should be avoided.

1. DWELLINGS SHOULD HAVE PRIVATE OPEN SPACE OF AT LEAST

- 35m² LEVEL AREA MIN 4M WIDE WITH DIRECT ACCESS FROM LIVING AREA
- 8m² BALCONY AREA MIN 1.8M WIDE WITH DIRECT ACCESS FROM LIVING AREA

2. DEVELOPMENTS PROVIDING PRIVATE SPACE IN THE FORM OF BALCONIES ONLY SHOULD PROVIDE AN ADEQUATE OUTDOOR AREA FOR COMMUNAL USE APPROPRIATELY LANDSCAPED.



3. SHADE SHOULD BE PROVIDED THROUGHOUT THE YEAR TO AT LEAST 30% OF ANY PRIVATE OR COMMUNAL OPEN SPACE BY MEANS OF CANOPY TREES OR SHADE STRUCTURE
(northern region)

4. HIGH FENCES AND UNSIGHTLY UTILITY AREAS SHOULD BE AVOIDED.

10 SITE FACILITIES

OBJECTIVES

- O10.1** To provide residents with practical, attractive and convenient site facilities which are easily maintained.

REQUIREMENTS

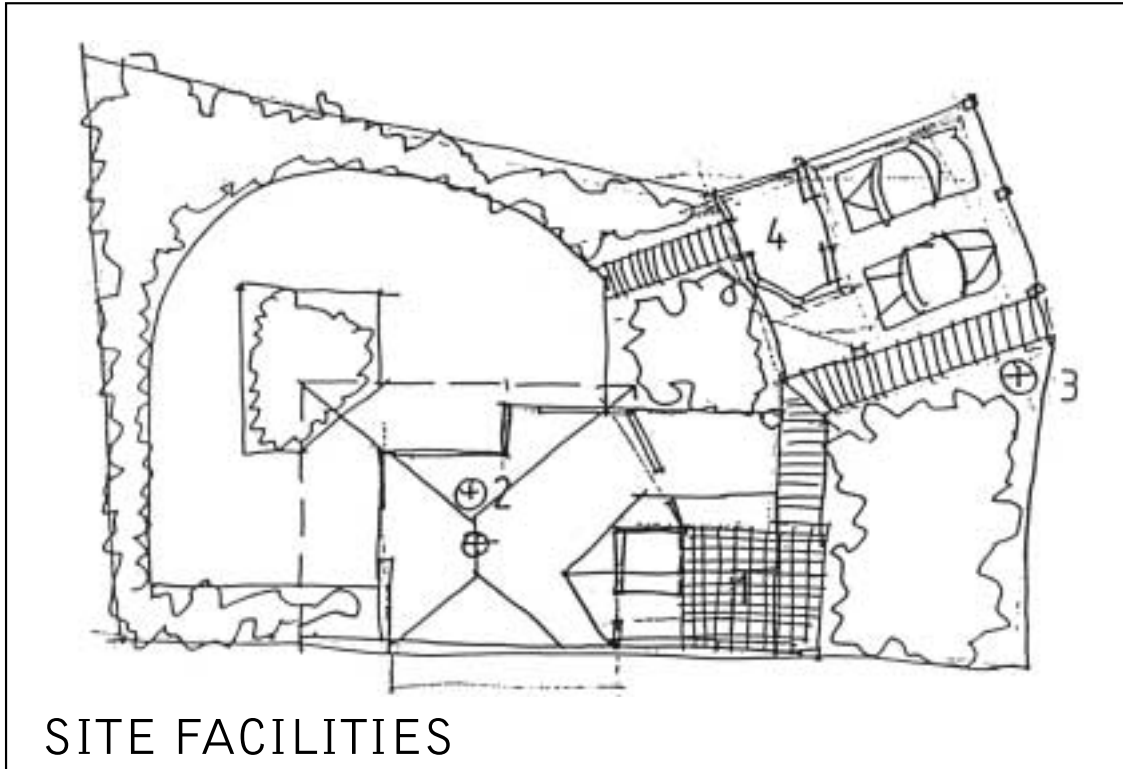
- R10.1** Garbage bin enclosures, mail boxes and other site facilities should be adequate in size, durable, waterproof, blend in with the development and avoid visual clutter.
- R10.2** Bin enclosures should be located for convenient access by residents and collection vehicles and should be located so as to not cause residents or neighbours any loss of amenity through appearance or odour.
- R10.3** Well designed mail boxes should be provided and located for convenient access by residents and as required by Australia Post.
- R10.4** Adequate, accessible and secure external storage should be provided for each dwelling.
- R10.5** Water, gas and electricity meters should be accessible.
- R10.6** Stormwater drainage should be directed to the street or, where approved, to a stormwater drainage system.

DESIGN SUGGESTIONS

- S10.1** Open-air clothes drying facilities should be provided and screened from the street.
- S10.2** The number of television antennae and other receiving devices should be kept to a minimum and appropriately located.
- S10.3** Mail boxes should be large enough to cope with large envelopes, junk mail and newspapers.
- S10.4** Provide a mail box for body corporate correspondence where applicable.
- S10.5** Consider storage and security for bicycles, prams and shopping trolleys as well as other household items.

1. OPEN-AIR CLOTHES DRYING FACILITIES SHOULD BE PROVIDED SCREENED FROM THE STREET.

2. THE No. OF TELEVISION ANTENNAE AND OTHER RECEIVING DEVICES SHOULD BE KEPT TO A MINIMUM.



SITE FACILITIES

3. MAIL BOXES TO BE BIG ENOUGH TO COPE WITH LARGE ENVELOPES, JUNK MAIL AND NEWSPAPERS.

4. CONSIDER STORAGE AND SECURITY FOR BICYCLES PRAMS AND OTHER HOUSEHOLD ITEMS.

COMMERCIAL GUIDE

GENERAL

This Guide generally applies to office, business, retail, tourist and integrated residential accommodation as mixed use development across the whole of the Northern Territory.

A flexible and innovative approach to development and building design is encouraged with emphasis on quality urban design appropriate to climate and place. Commercial buildings should attempt to retain the human scale at ground level by providing the essential elements of shade and shelter for pedestrians.

GUIDELINES

- The scale and height, character and density of development should be commensurate with the land use objectives for the locality in which the development is to be established.
- The following elements should be taken into account and addressed in building design:
 - (i) Integration of mixed-use medium to high density development, where appropriate, as a means of achieving more functional use of buildings;
 - (ii) Adequate on-site facilities including public toilets, child minding facilities, nursing mothers' rooms and the like where the size of the development warrants such facilities. The provision of landscaped plazas, malls or suitably furnished open public areas are encouraged with strong connections to public places, streets and pedestrian corridors;
 - (iii) Noise attenuation measures that protect adjoining buildings and public places from air-conditioning units and minimise traffic noise intrusion into buildings;
 - (iv) Vistas along streets to building and places of architectural, landscape or cultural significance. The strategic siting of buildings should maximise visual corridors and especially views enjoyed by existing developments;
 - (v) Building design that enhances opportunities for breeze penetration and circulation;
 - (vi) Proposed buildings with a glazed roof or façade or awning should be designed to minimise hazardous or uncomfortable glare arising from reflected sunlight. The excessive use of highly reflective surfaces is discouraged;
 - (vii) Concealment of all service ducts, pipes, airconditioning plants in the overall design of the building;
 - (viii) Weather protection and shade measures for pedestrians;
 - (ix) Provision of physical links to other buildings and public spaces;
 - (x) Pedestrian access, particularly for the elderly and disabled;
 - (xi) Provision of an appropriate level of car parking facilities which are desirably concealed from public view;
 - (xii) Streetscaping adjacent to the development providing opportunities to incorporate landscaping, pedestrian pavements and street furniture along the frontage or frontages;
 - (xiii) Utilisation of energy efficient design elements throughout the buildings;
 - (xiv) New development stepped back from the prevailing building line or skewed on the site for variety, interest, correct solar orientation and to avoid uninterrupted perimeter development which may cause areas of open space and the public domain to be overwhelmed;
 - (xv) Expanses of walls reduced by varying building heights, setbacks and facades;
 - (xvi) Facades of prominently located buildings being flood lit, including public spaces within a development;
 - (xvii) The use of local materials wherever possible, reinforcing natural physical elements of the region; and
 - (xviii) The transfer of unrealised floor space from sites accommodating historic buildings to other development sites to encourage the conservation of heritage items.

- New development or the adaptive re-use of buildings, should take into account details and proportions of existing development and new building facades should be sympathetic in proportions, scale and cohesive quality with the streetscape.
- Building design, including detailing and materials visible from public spaces and adjacent buildings should not be in strong visual contrast with the character of attractive buildings in the site's visible locality and the building.
- Building profiles, roof forms and external overall appearance should be designed to create a visually interesting streetscape and skyline. The use of flat roofs is discouraged. Buildings should be designed to reinforce the parapet height where this is a predominant design element in the locality.
- The setback distance of the building from the street alignment should be determined having regard to adjacent building setbacks, the overall streetscape, and the proximity of buildings of heritage value. Unsympathetic contrasts in proportions, scale and materials should be avoided.
- Side setbacks are generally not required unless the development is adjacent to a site occupied by a building of heritage significance.
- Development should contribute to the creation or maintenance of a pleasant streetscape by establishing landscaped areas adjoining the road frontages and by way of screening unsightly elements such as storage, service areas and car parks.
- The provision of parking below ground is encouraged. Above ground parking structures should be concealed from public view and designed or related to the scale and materials of adjacent buildings. The ground level should maintain continuity of frontage activity and/or visual interest by means of design detail. Efficient traffic movement and pedestrian priority where appropriate should be provided with linkages to pedestrian corridors and public transport facilities.
- Car parking spaces should generally be incorporated within developments. Alternatively, car parking could be provided upon adjacent land or by other means, having regard to the likely pattern of development in the vicinity. Outdoor car parking areas should be landscaped to reduce the visual impact of open expanses of pavement, and to provide shade.
- Provision should be made for convenient, safe and efficient movement of vehicles and pedestrians within the site, as well as to and from the site.
- Landscaped areas, public facilities and street furniture are features within a development that should be functional, visually unifying and enhance the amenity of the locality.
- Public spaces within and adjacent to development should be protected from exposure to sunlight and rain with an emphasis on maximising shade achieved through colonnades, awnings, verandahs, vegetation, screens or free standing covers, whilst maintaining utility and visual continuity.
- Buildings should be designed to create pedestrian interest at ground floor level by way of design which creates visual interest, and by accommodating uses that generate vitality.
- The use of bicycles by commuters and city residents should be encouraged through bicycle access, storage facilities and shower/change facilities in buildings.
- Strong pedestrian connections between buildings, public places and adjacent precincts should be achieved through the provision of pedestrian arcades integrated with on-street pedestrian linkages.
- Access provision should be made for loading and unloading delivery vehicles and refuse collection on development sites, having regard to the scale of the development and the size of the vehicles used.
- Signs should act as a unifying element within a streetscape. Well designed signs can contribute to, and enhance the quality and character, of a streetscape. The size and design details of signs should complement the scale and architectural detail of the buildings to which they are to be attached and reflect the character, activity and amenity of a locality. The location of signs should be incorporated in the design of new buildings. Priority should be given to the visibility of information and directional signs.

ISBN 072454806-8



9780724548064