

# RESIDENTIAL DESIGN GUIDELINES 2001 (Amended 2003)

plån i 'sphere and JOHN CURTIS PTY LTD

t C  $\mathbf{C}$ Π 

> sborough \* Elthom North \* Elthom \* R eensooronge Van Yean +Kinglake We sd∙North Warrandyte≉Panton Hill+St

+Christmas Hills+Watsons Creek+

Creek Cottles Bridge Kinglake Yan

•Kangaroo Ground • North Warrandyte • Panton Hill •

vs•Smiths Gully•Christmas Hills•Watsons Cre

Nutield • Yarrambat • Hustbridge • Watte Glen • Pl

reensborough • Eltham North

een • Nufield • Yanambar • Hurstbridge • Watt

alake West+Strathewen+D

lest+Strathewer

\* Statistics Statistics \* Aritists Gully \* Christmas Hills \* Watsons Creak \* Band of Islands \* Aritists Creak \* Greensborough \* Eliham North \* Eliham \* Research \* Kanganov & Statistics \* Van Yean \* Kinglake \* Stathewen \* Doreen \* Nutriel \* Statistics \* Van Yean \* Kinglake \* Stathewen \* Doreen \* Nutriel \* Vanandyte \* Panton Hill \* St. Andrews \* Smiths Gully \* Christmas Hills \* Watsons Creak \* Greensborough \* Eliham North \* Eliham \* Research \* Kanganov Ground \* North Warrandyte \* Panton Hill \* St. Andrews \* Smiths Gully \* Christmas Hills \* Watsons Creak \* Cottles Bridge \* Watle Gleen \* Kinglake \* Van Yean \* Kinglake West \* Strathewen \* Doreen \* Nutrield \* Vanandyte \* Panton Hill \* St. Andrews \* Smiths Gully \* Christmas Hills \* Watsons Creak \* Greensborough \* Eliham North \* Eliham \* Research \* Kanganov Ground \* North Warrandyte \* Panton Hill \* St. Andrews \* Smiths Gully \* Christmas Hills \* Watsons Creak \* Greensborough \* Eliham \* Research \* Kanganov Ground \* North Warrandyte \* Panton Hill \* St. Andrews \* Smiths Gully \* Christmas Hills \* Watsons Creak \* Bend of Islands \* Arthurs Creak \* Cottles Bridge \* Watle Gleen \* Planton Hill \* St. Andrews \* Smiths Gully \* Christmas Hills \* Watsons Creak \* Bend of Islands \* Arthurs Creak \* Cottles Bridge \* Watle Gleen \* Planton Hill \* St. Andrews \* Smiths Gully \* Christmas Hills \* Watsons Creak \* Greensborough \* Eliham North \* Eliham \* Research \* Kongaroo Ground \* North Warrandyte \* Panton Hill \* St. Andrews \* Smiths Gully \* Christmas Hills \* Watsons Creak \* Greensborough \* Eliham North \* Eliham \* Research \* Kongaroo Ground \* North Warrandyte \* Panton Hill \* St. Andrews \* Smiths Gully \* Christmas Hills \* Watsons Creak \* Greensborough \* Eliham North \* Eliham \* Research \* Kongaroo Ground \* North Warrandyte \* Creak \* Greensborough \* Eliham North \* Eliham \* Research \* Kongaroo Ground \* North Warrandyte \* Creak \* Greensborough \* <sup>b</sup> Gully + Christmas Hills - Mature Steine Orline Stands + Anhurs Creek + Cottex + Stands + Anhurs Creek + Cottex + Dana + Kinglake + Yan + Kinglake + Yan + Kinglake + Cottex + Stands + Kinglake + Yan + Yan + Kinglake + Yan

with Warrandyte • Pariton H

Vatsons Cre

Greensborough • Elthe

otles Bridge+Kingle Kangaroo Ground

Christmas Hills+W

utstbridge • Work

k+Bend of Isla

ton Hille



The Residential Design Guidelines form part of the implementation of the Nillumbik Neighbourhood Character Study. The Study has identified 18 Character Precincts in the Shire, each having a Preferred Future Character statement and Design Guidelines. The Residential Design Guidelines provide further detailed design advice and suggestions for methods to achieve the Preferred Character, Design Objectives and Design Responses contained in the Neighbourhood Character Precinct brochures.

Please refer to the Neighbourhood Character Precinct brochure for your area to determine the Character Area Type in which your site is located (ie. Rural, Settlement, Bush, Bush Garden, Garden Court or Eltham Central). Each Residential Design Guideline element is dealt with separately. The left hand column of each Guideline table lists the Character Area Type to which it refers. The second column repeats the relevant Design Objectives and Design Responses from the Precinct brochures. The third column contains Design Suggestions to achieve the Design Objectives and Responses in that Character Area, with accompanying illustrations on the next page.

Guideline number	Guideline element	Page number
1	Vegetation retention and landscaping	1
2	Footings/touching the ground	4
3	Building on sloping sites	6
4	Position on the site	10
5	Height and building form	12
6	Design detail and building materials	16
7	Vehicle access and storage	18
8	Front boundary treatment and fencing	22
9	Sustainability and environmental factors	26
10	Bushfire/wildfire protection	28
11	Construction and site management	31
12	Street tree planting	33
13	Footpaths/verges	35
14	Roadway treatments	38

contents



### vegetation retention and landscaping

CHARACTE	R
<b>AREA TYPE(</b>	S)

#### **DESIGN OBJECTIVE(S)** & DESIGN RESPONSE(S)

RURAL

BUSH

SEMI BUSH

SETTLEMENT

#### **DESIGN OBJECTIVE**

To maintain the indigenous vegetation including canopy trees and understorey planting and encourage the replanting of indigenous plants (where compatible with other planning requirements including bush fire safety).

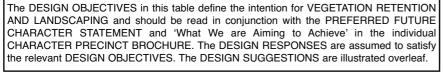
#### **DESIGN RESPONSES**

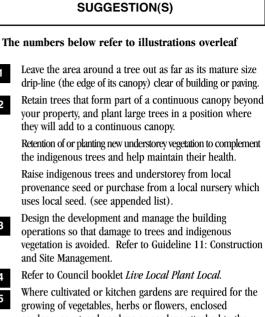
Retain existing high canopy trees.

Retain existing indigenous understorey vegetation wherever possible.

Replace any trees or understorey vegetation lost to development with similar size indigenous species.

Removal of existing trees or development adjacent to existing indigenous canopy trees may require an arboricultural report on the effects on existing vegetation.





2

10

12

DESIGN

gardens, courtyard gardens or gardens attached to the house are preferred. These gardens should not intrude into the bushland character particularly when viewed from the street. Care should be taken to avoid plants escaping into adjacent bushland areas and becoming weeds.

Plan the alignment of drains, pipes and other services so as to avoid damage to existing and proposed trees and their roots, or install root barriers.

Avoid planting all identified weed species which may spread through the bush setting. Weed species in the Shire of Nillumbik are identified in Live Local Plant Local and Environmental Weeds in Nillumbik.

Protect any area which has a particularly good community of plants such as orchids and grasses before any landscaping work is started.

Keep development compact to minimise the amount of disturbance to the indigenous vegetation.

Use landscaping materials such as gravel that blend with the colour, tone and texture of the bush. When designing landscape details, such as steps, retaining walls etc. consider them in relation to the scale of the bush.

Use indigenous plants to screen and soften buildings, driveways and tanks, to define outdoor spaces and reestablish disturbed areas.

To help with the selection of plants (ie. trees, shrubs, ground covers, creepers):

- Look at natural groupings of plants in the bush to get an idea of their spacing and the range of species. These plants in their natural state have an integrity and a quality all of their own.
- Consider the flowering times of the plants so that you get the colour effect you want.
- Take into account the leaf texture of the plants and how they can enhance each other when used together.

All planting works can be protected from rabbits and wallabies by providing wire or plastic guards to each plant. Avoid introducing visually dominant exotic vegetation, particularly in prominent locations.

```
plân i spher
```



### vegetation retention and landscaping

CHARACTER **AREA TYPE(S)** 

BUSH

GARDEN

#### **DESIGN OBJECTIVE(S)** DESIGN & DESIGN RESPONSE(S) SUGGESTION(S) The numbers below refer to illustrations overleaf **DESIGN OBJECTIVE** Leave the area around a tree out as far as its mature size drip-line (the edge of its canopy) clear of building or To retain remnant indigenous trees and paving. continue enhancing the landscape setting with indigenous and Australian natives and Retain trees that form part of a continuous canopy beyond understorey. your property, and plant large trees in a position where they will add to a continuous canopy. Where compatible with other planning Retention of or planting new understorey vegetation to requirements including bushfire safety. complement the indigenous trees and help maintain their health. **DESIGN RESPONSES** Raise indigenous trees and understorev from local Retain existing high canopy trees wherever possible. provenance seed or purchase from a local nursery which Retain all indigenous understorey vegetation and replant uses local seed. where appropriate. Design the development and manage the building Removal of existing trees or development adjacent to operations so that damage to trees and indigenous existing indigenous canopy trees may require an vegetation is avoided. Refer to Guideline 11: arboricultural report on the effects on existing Construction and Site Management. vegetation. Refer to Council booklet Live Local Plant Local. Plan the alignment of drains, pipes and other services so as to avoid damage to existing and proposed trees and their roots, or install root barriers. Avoid introducing visually dominant exotic vegetation, particularly in prominent locations. Screen unfavourable views and direct attention to favourable views. **DESIGN OBJECTIVE** Leave the area around a tree out as far as its mature size drip-line (the edge of its canopy) clear of building or To maintain the existing mix of native and paving. exotic vegetation including canopy trees and understorey. Retain trees that form part of a continuous canopy beyond your property, and plant large trees in a position where they will add to a continuous canopy. **DESIGN RESPONSES** Design the development and manage the building 3 Retain existing high canopy trees wherever possible. operations so that damage to trees and indigenous Retain any remnant indigenous understorey vegetation vegetation is avoided. Refer to Guideline 11: and replant where appropriate. Construction and Site Management. Removal of existing trees or development adjacent to Refer to Council booklet Live Local Plant Local. existing indigenous canopy trees may require an Plan the alignment of drains, pipes and other services so arboricultural report on the effects on existing as to avoid damage to existing and proposed trees and vegetation. their roots. Screen undesirable views and direct attention to favourable views. The DESIGN OBJECTIVES in this table define the intention for VEGETATION RETENTION AND LANDSCAPING and should be read in conjunction with the PREFERRED FUTURE CHARACTER STATEMENT and 'What We are Aiming to Achieve' in the individual

plán i sphere

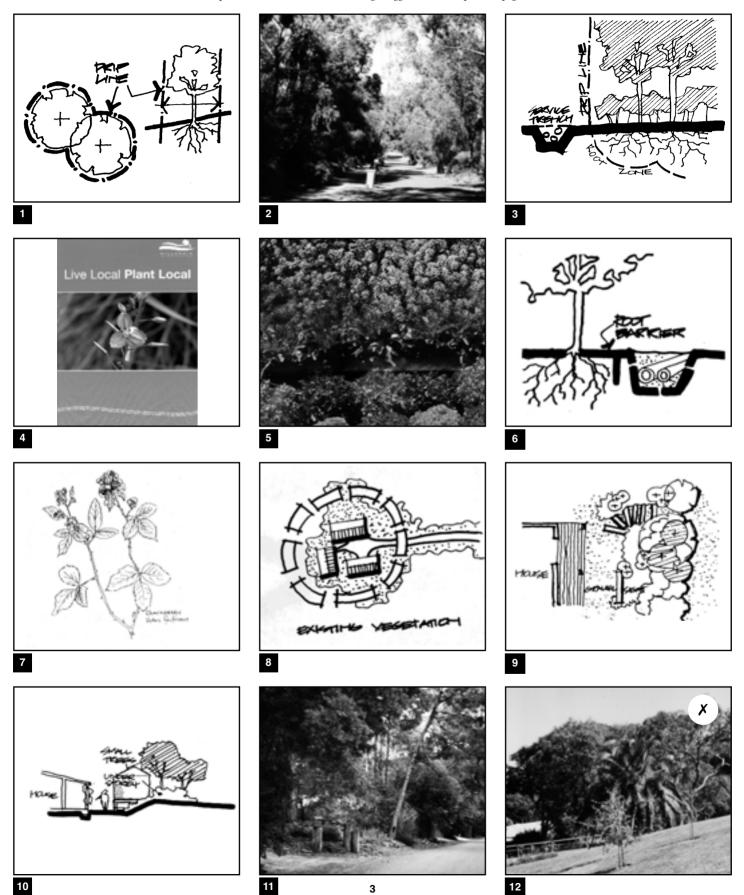
CHARACTER PRECINCT BROCHURE. The DESIGN RESPONSES are assumed to satisfy the relevant DESIGN OBJECTIVES. The DESIGN SUGGESTIONS are illustrated overleaf.

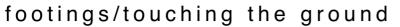
GARDEN COURT

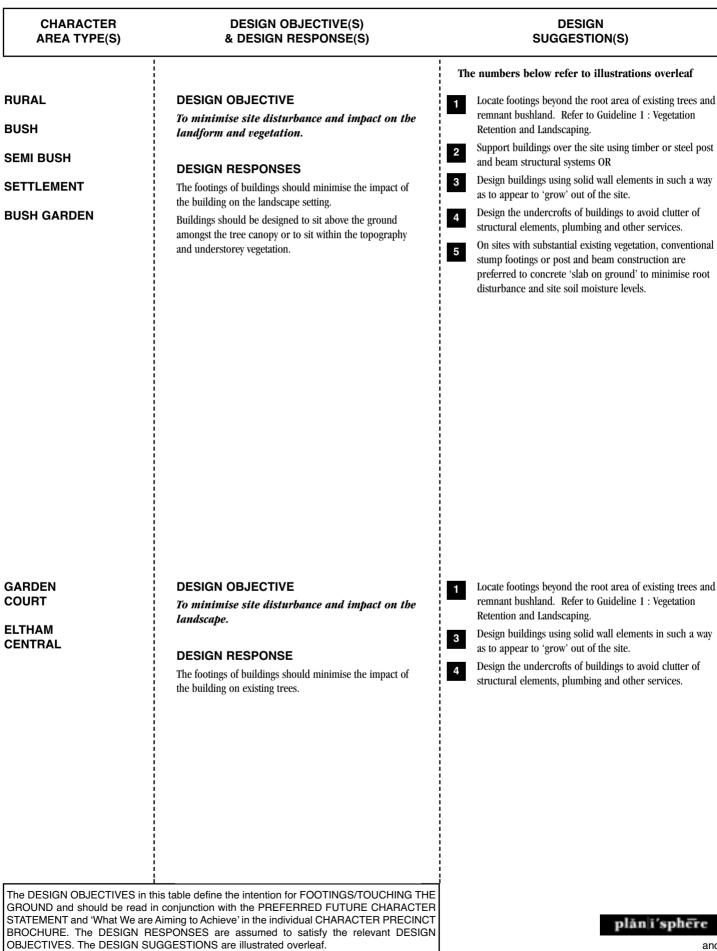
**ELTHAM** CENTRAL



### **RESIDENTIAL DESIGN GUIDELINE 1**



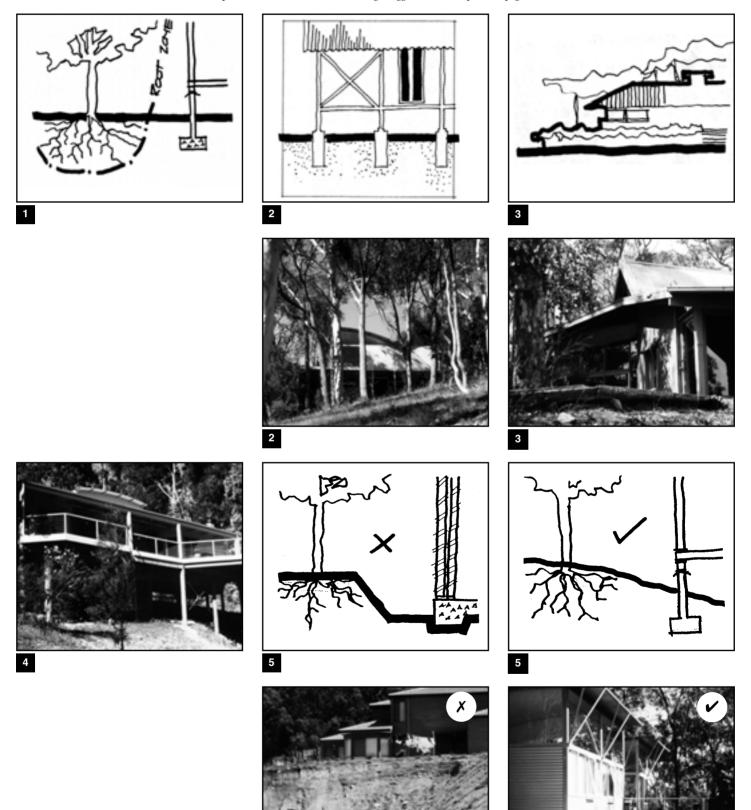






# **RESIDENTIAL DESIGN GUIDELINE 2**

The numbers underneath each illustration correspond with those attached to the Design Suggestions on the previous page(s).



5

5



**DESIGN OBJECTIVE** 

**DESIGN RESPONSES** 

of development.

topography of the site.

sloping sites.

CHARACTER AREA TYPE(S)

#### DESIGN OBJECTIVE(S) & DESIGN RESPONSE(S)

To minimise site erosion, the detrimental effects of excavation and the landscape impact

Buildings and other development should minimise the

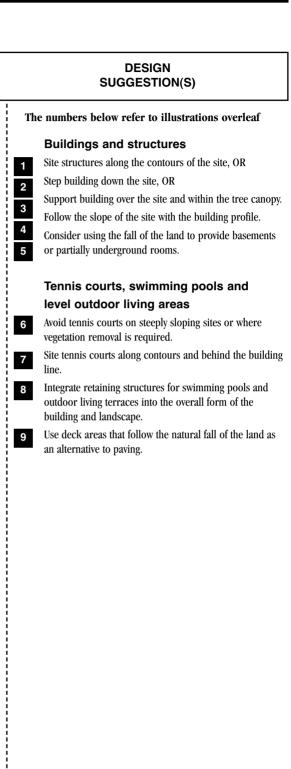
impact on the natural slope of the site by following the

Retain existing vegetation and plant ground covers and

plants with substantial root systems, especially on steeply

#### ALL CHARACTER AREA TYPES

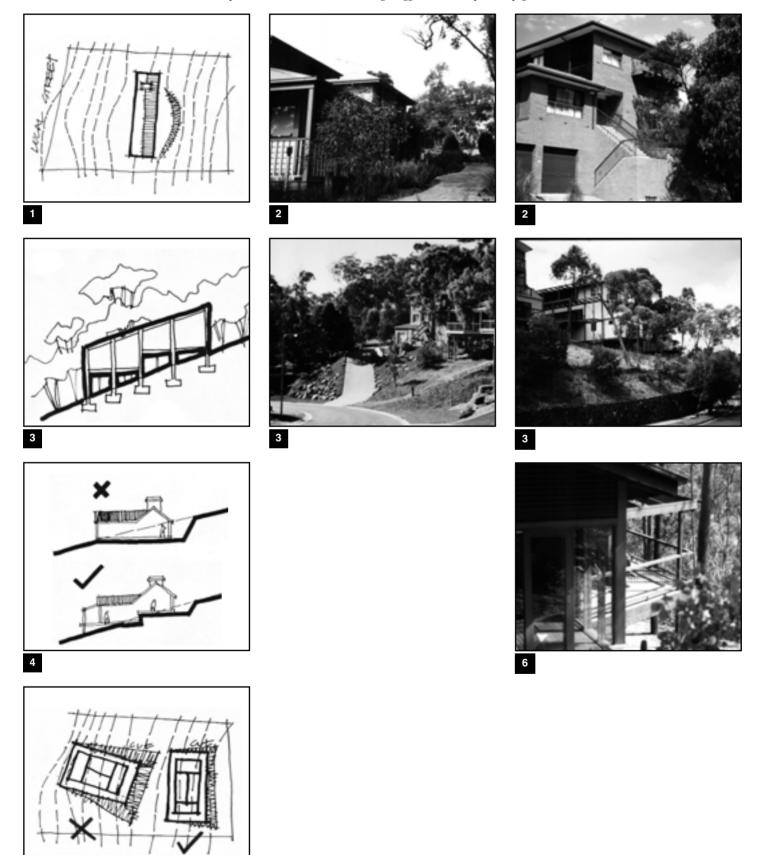
The DESIGN OBJECTIVES in this table define the intention for BUILDING ON SLOPING SITES (A) and should be read in conjunction with the PREFERRED FUTURE CHARACTER STATEMENT and 'What We are Aiming to Achieve' in the individual CHARACTER PRECINCT BROCHURE. The DESIGN RESPONSES are assumed to satisfy the relevant DESIGN OBJECTIVES. The DESIGN SUGGESTIONS are illustrated overleaf.







# **RESIDENTIAL DESIGN GUIDELINE 3(a)**







#### **DESIGN OBJECTIVE(S)** & DESIGN RESPONSE(S)

ALL CHARACTER	
AREA TYPES	

### **DESIGN OBJECTIVE**

To minimise the use and visual intrusion of retaining walls and batters.

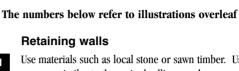
#### **DESIGN RESPONSES**

Minimise the height of retaining walls.

Minimise the use of retaining walls within the side and front setback areas.

Minimise the area and angle of any batter.

Use materials in walls and batters that are compatible with the bushland setting.



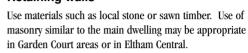
1

3

4

8

#### DESIGN SUGGESTION(S)



Incorporate planting into the wall,

Wet or dry stone walls are both suitable. Dry stone walls allow the wall to be softened by planting more easily.

The maximum height of any retaining wall should be 1.2 metres.

Avoid use of many different materials, instead use earth coloured finishes.

#### **Batters**

Stock pile and spread the topsoil from on-site excavation over the batter.

Use bush litter mulches, wood chip or erosion control matting while vegetation is re-established.

Steeper batters and slopes can use terracing with logs that will help prevent the topsoil from being washed away. The logs trap leaf litter, encourage humus and moisture to build up and provide suitable habitat for indigenous seedlings to grow. Random stone may also be used to stabilise the slope.

Batters should not exceed a slope of 4 to 1.

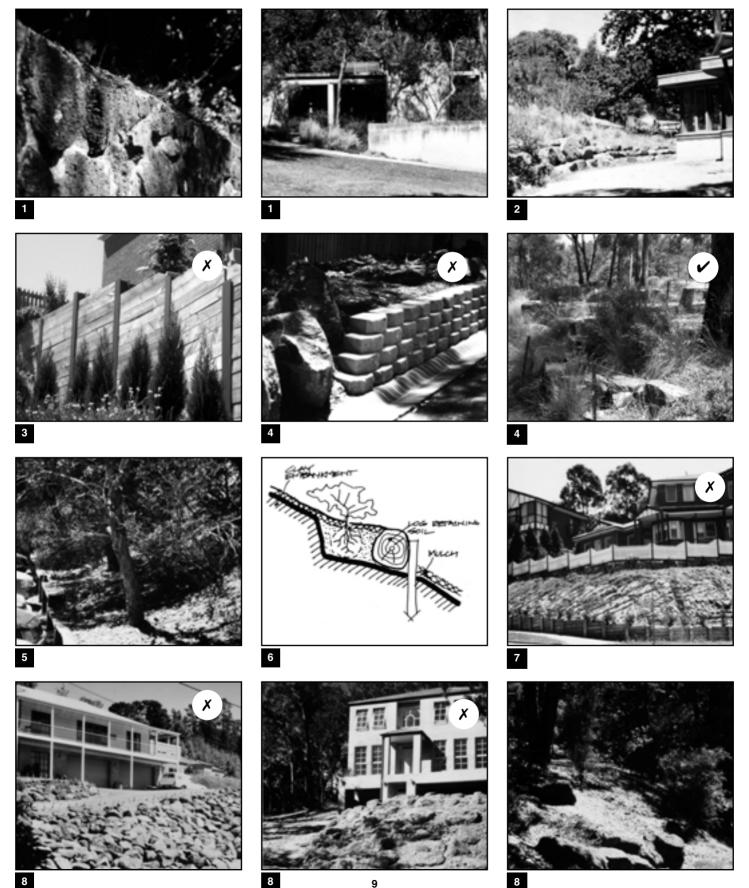
Avoid excessive use of rock boulders or exposed rock and subsoil.

The DESIGN OBJECTIVES in this table define the intention for BUILDING ON SLOPING SITES (B) and should be read in conjunction with the PREFERRED FUTURE CHARACTER STATEMENT and 'What We are Aiming to Achieve' in the individual CHARACTER PRECINCT BROCHURE. The DESIGN RESPONSES are assumed to satisfy the relevant DESIGN OBJECTIVES. The DESIGN SUGGESTIONS are illustrated overleaf.

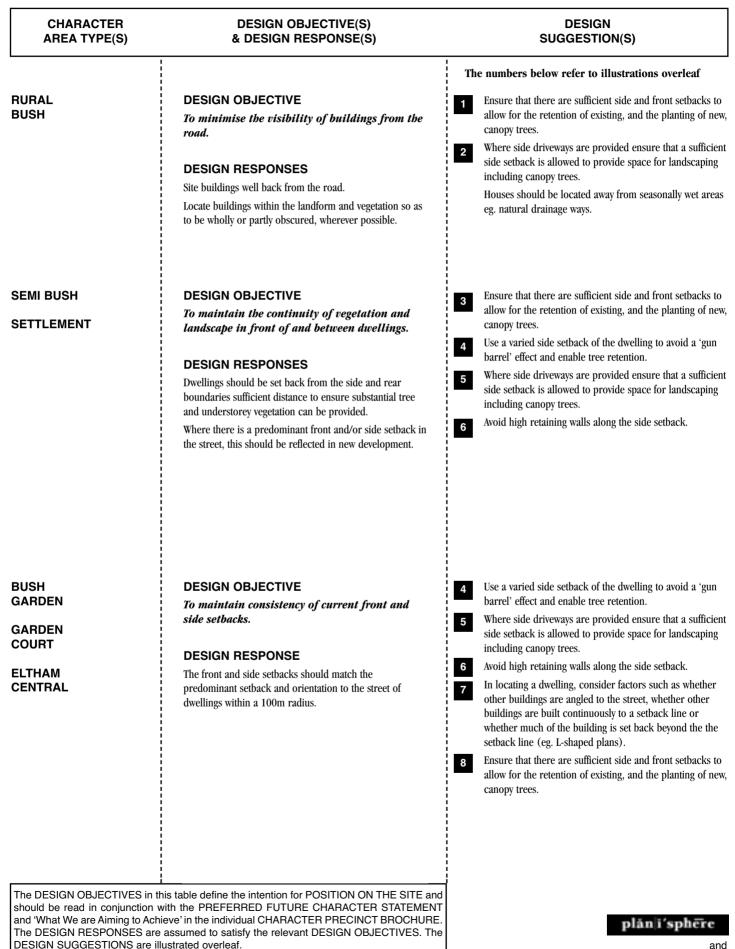
#### plån i 'sphere



# **RESIDENTIAL DESIGN GUIDELINE 3(b)**



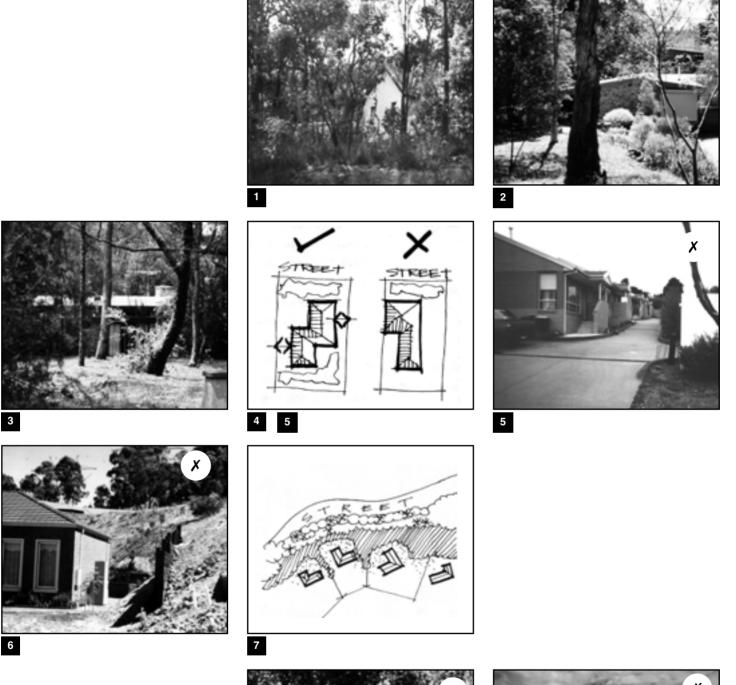
position on the site

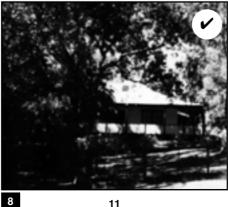




The numbers underneath each illustration correspond with those attached to the Design Suggestions on the previous page(s).

ILLUSTRATIONS







### height and building form

CHARACTER **AREA TYPE(S)** 

RURAL

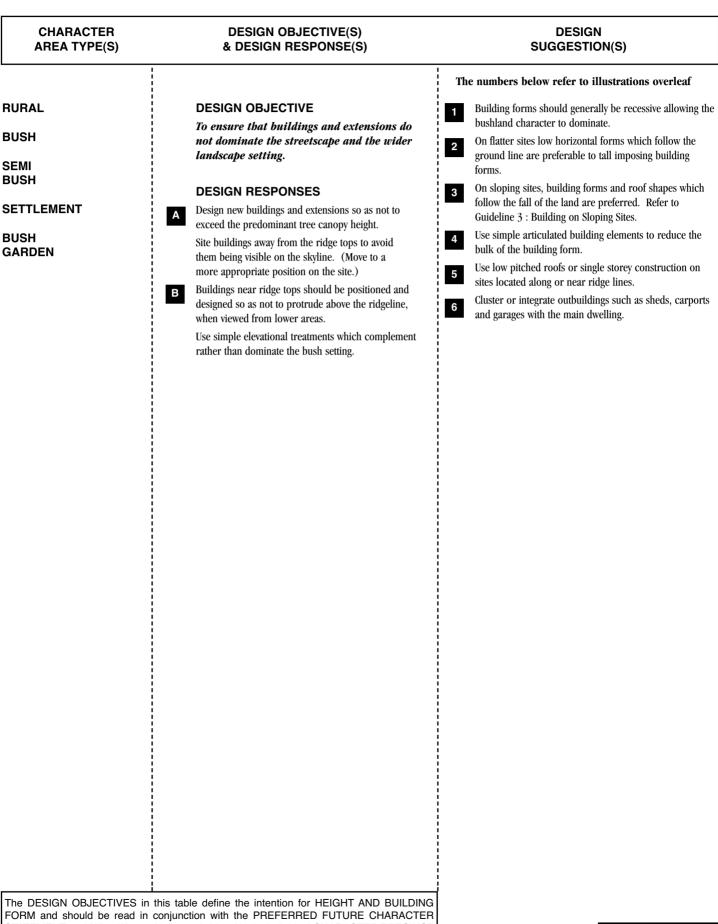
BUSH

SEMI

BUSH

BUSH

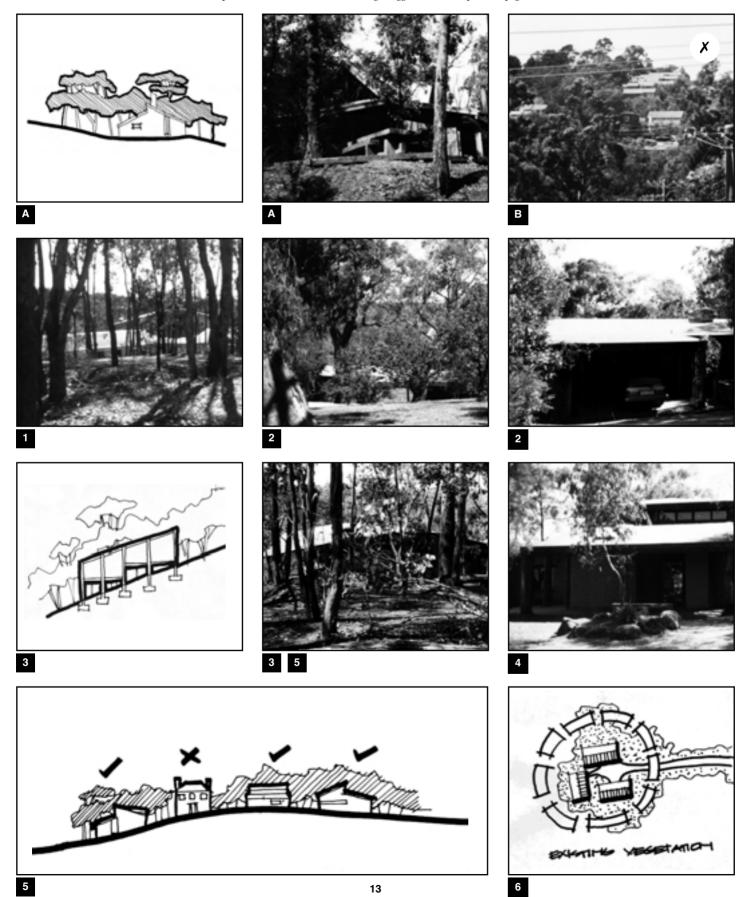
GARDEN

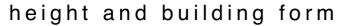


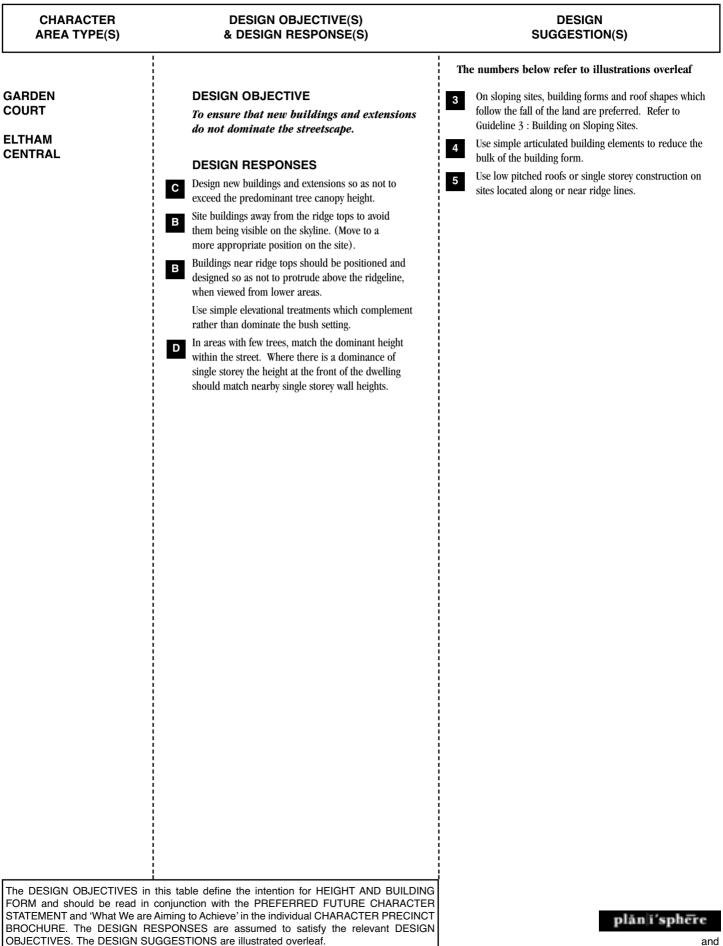
FORM and should be read in conjunction with the PREFERRED FUTURE CHARACTER STATEMENT and 'What We are Aiming to Achieve' in the individual CHARACTER PRECINCT BROCHURE. The DESIGN RESPONSES are assumed to satisfy the relevant DESIGN OBJECTIVES. The DESIGN SUGGESTIONS are illustrated overleaf.



## **RESIDENTIAL DESIGN GUIDELINE 5**



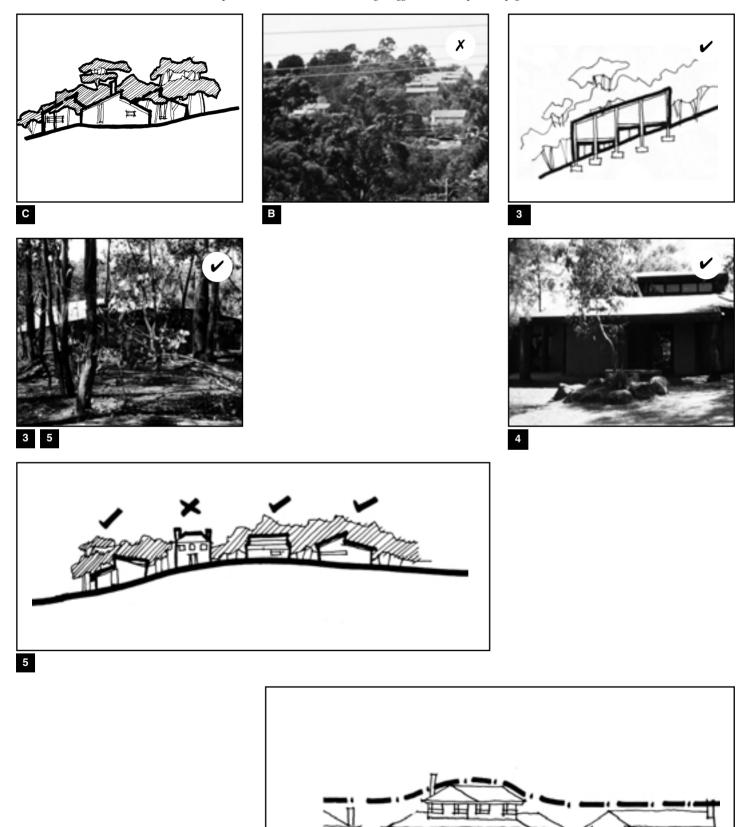






### **RESIDENTIAL DESIGN GUIDELINE 5**

The numbers underneath each illustration correspond with those attached to the Design Suggestions on the previous page(s).



15

D



# design details and building materials

CHARACTER AREA TYPE(S)	DESIGN OBJECTIVE(S) & DESIGN RESPONSE(S)	DESIGN SUGGESTION(S)
		The numbers below refer to illustrations overleaf
RURAL	DESIGN OBJECTIVE	Buildings and structures
BUSH	To use materials and building details that barmonise with the bushland setting.	Use verandahs and pergolas to reduce the mass of the building, and give depth to the elevation.
SEMI BUSH SETTLEMENT	DESIGN RESPONSES Use earthy bush toned building materials and paint colours. Cross reference to Guideline 10 : Bushfire / Wildfire Protection.	<ul> <li>Incorporate post construction, verandahs and pergola posts to reflect the vertical eucalypt trunks of bushland settings.</li> <li>Suitable materials include mud brick, timber, earth tone clay brick, second hand brick, local stone.</li> <li>Appropriate paint and finishing colours are earth and bush tones, silver/grey, blue grey and black.</li> <li>Use timber for exposed structures, cladding and windows with natural finishes.</li> <li>Use non-reflective materials and finishes for walls, roofs and windows. In particular avoid the use of unpainted Zincalume.</li> <li>Consider using traditional corrugated galvanised iron which weathers to a soft grey and reflects traditional Australian rural buildings and bushland settings.</li> <li>Incorporate plain wall areas and simple openings to allow the bush to 'read' against the building elevation.</li> <li>Avoid historic styles and reproduction roof and wall detailing.</li> <li>Select materials for outbuildings such as carports, sheds and garages which complement the main dwelling.</li> </ul>
BUSH	DESIGN OBJECTIVE	Buildings and structures
GARDEN	To use materials and building details that complement the dominant pattern within the	<b>11</b> Incorporate mono pitch, split gable or hip roof forms.
GARDEN	streetscape.	<b>12</b> Use balconies, verandahs and pergolas to reduce the mass of the building.
COURT ELTHAM CENTRAL	<b>DESIGN RESPONSE</b> Use earthy toned finishes and paint colours.	Suitable materials include earth toned brick, and roofs of terracotta, brown or grey coloured tiles, Colourbond or painted Zincalume.
BUILDING MATERIALS and s CHARACTER STATEMENT	n this table define the intention for DESIGN DETAILS Al should be read in conjunction with the PREFERRED FUTU and 'What We are Aiming to Achieve' in the individ OCHURE. The DESIGN RESPONSES are assumed to sati	RE ual plăn i sphere

the relevant DESIGN OBJECTIVES. The DESIGN SUGGESTIONS are illustrated overleaf.

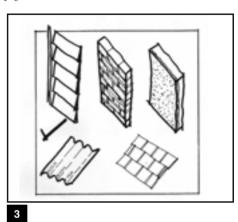


## **RESIDENTIAL DESIGN GUIDELINE 6**

The numbers underneath each illustration correspond with those attached to the Design Suggestions on the previous page(s).







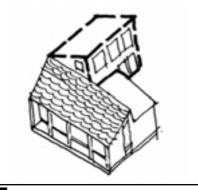
















11



CHARACTER **AREA TYPE(S)** 

RURAL

BUSH

SEMI

BUSH

**DESIGN OBJECTIVE(S)** DESIGN & DESIGN RESPONSE(S) SUGGESTION(S) The numbers below refer to illustrations overleaf **DESIGN OBJECTIVE** The form of the land should determine the alignment of the driveway. To minimise excavation for car access, impact on the visibility of car access Driveway alignments should avoid steep slopes, gullies driveway and storage facilities. and creeks. Curve driveways to avoid long straight lengths of access drive particularly on rising land. **DESIGN RESPONSES** Design driveways to minimise the impact on existing SETTLEMENT Integrate the design of carports and garages with 2 Α vegetation. the main dwelling. Avoid long lengths of table drains on sloping land to Use non impervious surfaces for driveways and only minimise erosion. seal the driveways in locations where erosion may Use grassed or vegetated swale drains where possible. occur. Design driveways and access tracks to follow the Disperse run off water to vegetated areas as frequently as В contours of the site to minimise gradients and the possible need for retaining walls. Finish driveways and access tracks with bush toned gravel 3 Car parking areas, garages or carports should not or crushed rock, or seal in a light asphalt where erosion dominate the site when viewed from the street. may occur. Minimise the number of vehicle crossovers, utilise existing crossover points where possible. Avoid established roadside vegetation when locating crossover points. Cut and fill required should be minimised with a maximum gradient of 1:8 where possible. The DESIGN OBJECTIVES in this table define the intention for VEHICLE ACCESS AND

STORAGE and should be read in conjunction with the PREFERRED FUTURE CHARACTER STATEMENT and 'What We are Aiming to Achieve' in the individual CHARACTER PRECINCT BROCHURE. The DESIGN RESPONSES are assumed to satisfy the relevant DESIGN OBJECTIVES. The DESIGN SUGGESTIONS are illustrated overleaf.

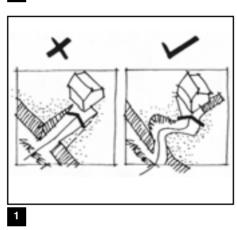




### **RESIDENTIAL DESIGN GUIDELINE 7**













### vehicle access and storage

С

CHARACTER AREA TYPE(S)

BUSH

GARDEN COURT

GARDEN

ELTHAM CENTRAL

#### DESIGN OBJECTIVE(S) & DESIGN RESPONSE(S)

#### DESIGN OBJECTIVE

To minimise excavation for car access, loss of front garden space and dominance of access driveway and car storage facilities.

#### **DESIGN RESPONSES**

Locate carports and garages behind the line of the dwelling or in the rear yard, unless this would require significant excavation.

Access drives should follow the contours of the site. Locate cars in front of the dwelling only where excavation would be required otherwise.

Car parking areas, garages or carports should not dominate the site when viewed from the street.

### SUGGESTION(S)

DESIGN

The numbers below refer to illustrations overleaf

#### Establish driveway and access track alignments to follow contours to minimise gradients and the need for retaining

walls. Curve driveways to avoid long straight lengths of access



8

9

10

5

drive particularly on rising land. Align driveways to avoid trees and remnant bushland.

Avoid long straight lengths of driveway and 'gun barrel' effects and exposed side fences.

In multi-unit developments use shorter lengths of access driveway enclosed by building.

In multi-unit developments avoid central symmetrical driveway layouts.

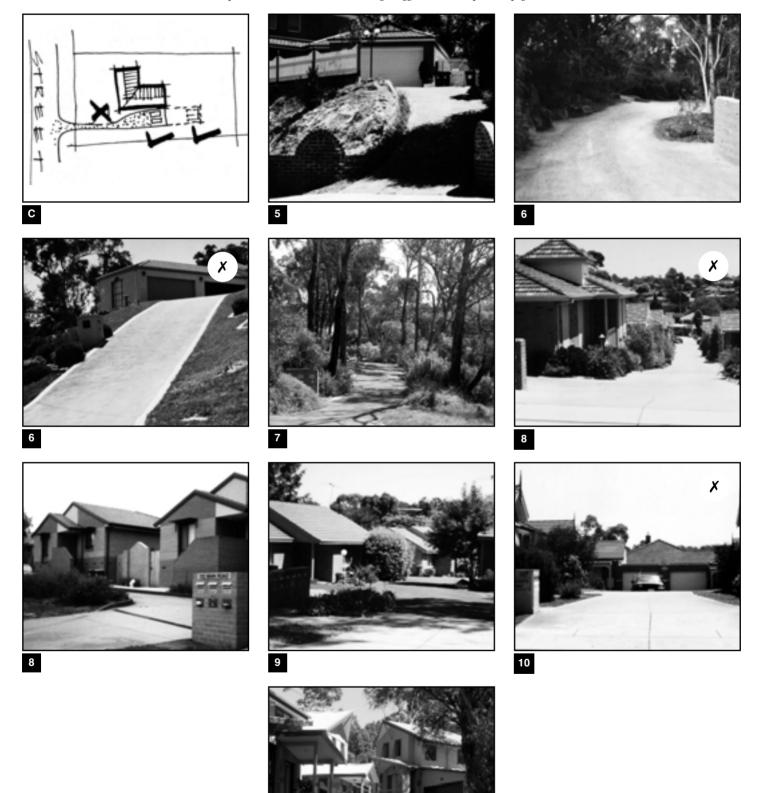
Use earth toned paving materials such as bitumen, stone or gravel (where gradient permits).

The DESIGN OBJECTIVES in this table define the intention for VEHICLE ACCESS AND STORAGE and should be read in conjunction with the PREFERRED FUTURE CHARACTER STATEMENT and 'What We are Aiming to Achieve' in the individual CHARACTER PRECINCT BROCHURE. The DESIGN RESPONSES are assumed to satisfy the relevant DESIGN OBJECTIVES. The DESIGN SUGGESTIONS are illustrated overleaf.



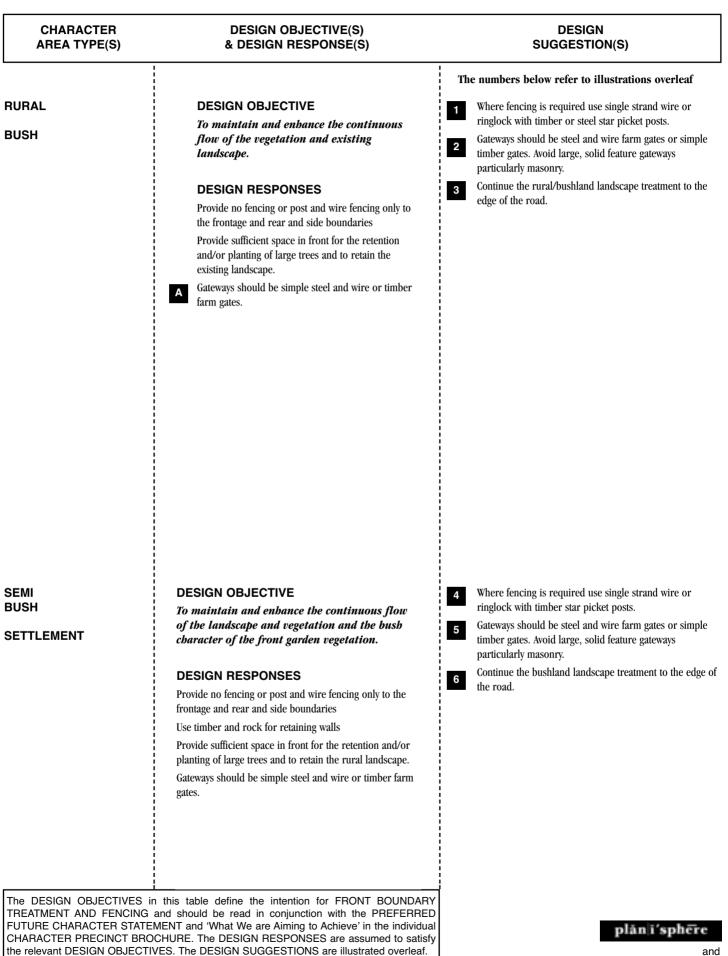
# **RESIDENTIAL DESIGN GUIDELINE 7**

The numbers underneath each illustration correspond with those attached to the Design Suggestions on the previous page(s).



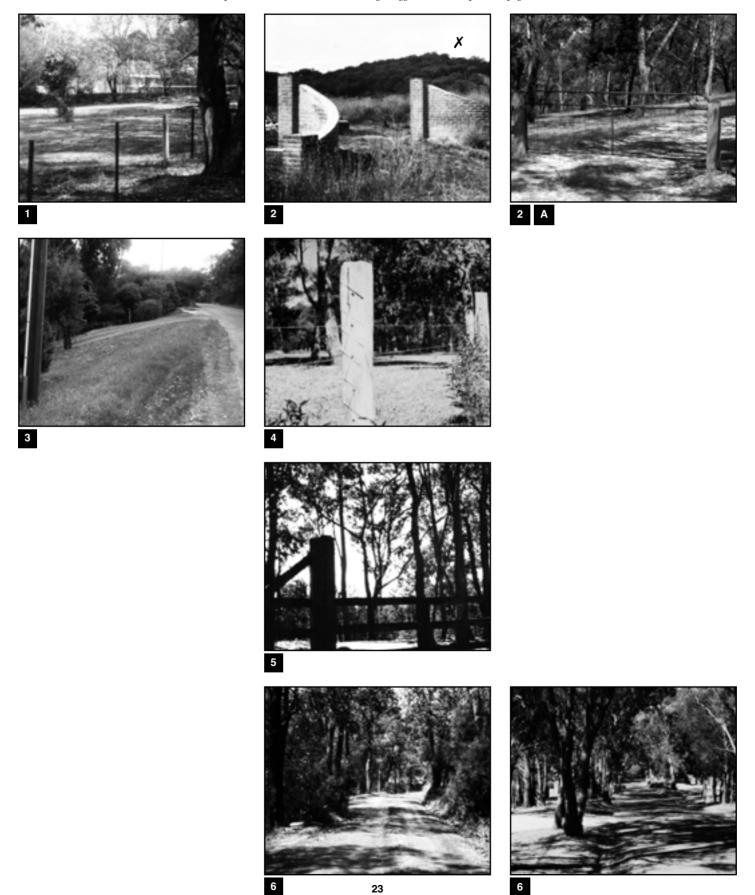


### front boundary treatment and fencing



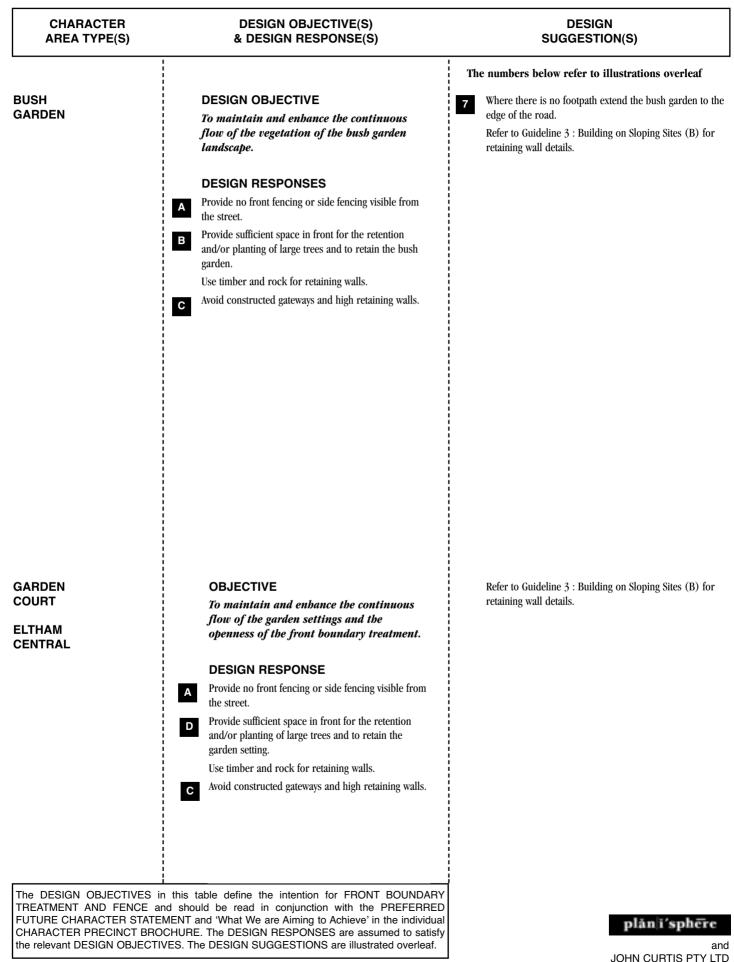


### **RESIDENTIAL DESIGN GUIDELINE 8**





### front boundary treatment and fencing





# **RESIDENTIAL DESIGN GUIDELINE 8**

The numbers underneath each illustration correspond with those attached to the Design Suggestions on the previous page(s).













### sustainability and environmental factors

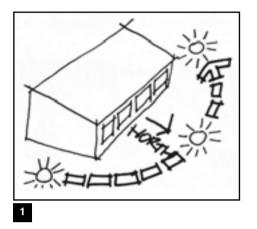
CHARACTER AREA TYPE(S)	DESIGN OBJECTIVE(S) & DESIGN RESPONSE(S)	DESIGN SUGGESTION(S)
		The numbers below refer to illustrations overleaf
ALL CHARACTER AREA TYPES	<b>DESIGN OBJECTIVE</b> To site and design buildings which maximise the potential for energy conservation and on site water collection.	<ol> <li>Orientate the principal living spaces towards the north for solar efficiency.</li> <li>Maximise windows to the north with appropriate eaves overhangs to provide winter sun and summer shade. Avoid large west facing windows.</li> </ol>
	DESIGN RESPONSES	<b>3</b> Locate window and door openings to maximise desirable ventilation.
	Orientate buildings to the north. Building forms should maximise the potential for solar heating, solar panel installation and rain water harvesting.	<ul> <li>Venuiauon.</li> <li>Maximise the use of building materials with good thermal mass eg. concrete slab floors, mud brick or pise, clay brick, concrete block or stone.</li> </ul>
		Incorporate appropriate insulation materials in roof structures and light weight walls.
		<b>5</b> Use landscaping to maximise solar access to the north and shade the western and eastern elevations.
		6 Incorporate north facing pitched roofs suitable for the mounting of solar cell collector panels and solar hot water panels.
		Integrate solar collection panels and other devices with the overall architecture of the building.
		7 Install rain water collection tanks and use roofing materials such as galvanised steel suitable for rain water collection.
		Avoid large rain water collection tanks on small sites where they may be visually intrusive or difficult to screen with vegetation.
		8 Where transpiration beds are used for on site effluent disposal, use these beds for a cultivated garden area.
		9 Use verandahs, eaves overhangs or pergolas to shade walls and windows.
ENVIRONMENTAL FACTORS	in this table define the intention for SUSTAINABILITY AND and should be read in conjunction with the PREFERRED EMENT and 'What We are Aiming to Achieve' in the individua OCHURE. The DESIGN RESPONSES are assumed to satisf	D al plán i sphēre

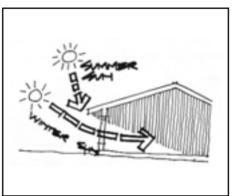
the relevant DESIGN OBJECTIVES. The DESIGN SUGGESTIONS are illustrated overleaf.

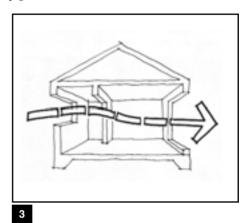


## **RESIDENTIAL DESIGN GUIDELINE 9**

The numbers underneath each illustration correspond with those attached to the Design Suggestions on the previous page(s).



















### bushfire / wildfire protection

CHARACTER AREA TYPE(S)

#### DESIGN OBJECTIVE(S) & DESIGN RESPONSE(S)

BUSH

SEMI BUSH (SB2 ONLY)

SETTLEMENT

BUSH GARDEN (BG3 ONLY)

#### DESIGN OBJECTIVE

To design buildings which minimise the risk of loss in a bushfire and landscaping which minimises the spread and intensity of bushfires.

#### DESIGN RESPONSES

#### **Bushfire/Wildfire Protection**

To design buildings which minimise the risk of loss in a bushfire and landscaping which minimises the spread and intensity of bushfires.

Development within the Wildfire Management Overlay is required to conform to prescribed vegetation management, access and water supply standards or be subject to an approved Fire Risk Management Plan.

Develop designs and layouts that increase the necessity for vegetation management.

Buildings with a designated Bushfire Prone Area are required to be built in accordance with Australian Standard 3959.Complicated roof lines and other design details where burning embers could lodge.

New properties should have a permanent built-in and easily maintained fire protection system, linked to an independent water and power supply.Sole reliance on reticulated water and/or electric powered pumps.

Landscaping and bush retention should maintain an area of defendable space around the dwelling. Dense dry vegetation and bush litter in close proximity to the house should be minimised.

#### DESIGN SUGGESTION(S)

The numbers below refer to illustrations overleaf

#### Building design and materials

Where landscape and tree retention permits, slab onground construction is preferable to elevated floors with exposed timber frames, as this prevents underfloor spark entry.

Low profile building forms are preferred, with simple pitched roofs. Profile the roof with the shape of the terrain.

3

Avoid breaks of slope in the roof line, and roof valleys, where leaves could accumulate and, if ignited, burn rafters or barge boards.

Avoid design details which enable sparks to enter the roof space or lodge in crevices.

Avoid building materials which catch sparks, such as rough sawn timber, or materials which warp or melt under radiant heat such as aluminium or vinyl cladding.

#### Landscaping and choice of plant material

Design the landscape around the house to enable annual fuel reduction and clear up before the fire season.

Consider locating cultivated or kitchen gardens adjacent to the house to the north or north west.

Avoid vegetation which touches the house or overhangs the roof.

Scattered trees and shrubs can be of benefit as a heat shield, can considerably lower wind speed and turbulence and form a fire screen to catch much of the burning debris.

Select least flammable species to plant closest to houses and outbuildings.

#### **Bushland and Site Management**

Management and annual fuel reduction is as important in fire protection as building design. Site design should accommodate simple annual fuel reduction.

Fuel must be managed to:

- · Prevent ignitions;
- Stop the spread of fire;
- · Facilitate suppression; and
- · Protect people and assets.





CHARACTER AREA TYPE(S)	DESIGN OBJECTIVE(S) & DESIGN RESPONSE(S)		DESIGN SUGGESTION(S)
		Th	e numbers below refer to illustrations overleaf
			Siting a dwelling and lot layout
		5	Avoid north or north west facing slopes, particularly the steeper ones and the ridges above them.
		5	Locate houses at the base of, or on, gentle south or south east facing slopes. These slopes are damper and usually on the lower side of a fire.
			If building on a ridge, located on the southerly or easterly side. The location may, however, still be in danger from 'fire storms' and turbulence from fires in high winds. Spot fires over the ridge may also approach after a southerly wind change.
			If building on ridge sites in bushland, ensure that bush to the north or west will be regularly 'fuel reduced' by, for example, prescribed burning (permit required during declared fire season) or slashing.
		6	If building on a slope it is safer to build the house on a 'cut-in' bench rather than have it perched on stilts. There are several reasons for this:
			• The profile of the slope is less broken, resulting in less turbulence.
			• A protruding house is endangered by a progressing fire, while a fire may jump one which is set in.
			The house on a cut can have a slab floor, thereby blocking sparks from entering the underfloor area.
			Flat or gently sloping sites are safer, and make it easier to implement fire protection measures.
			Provide access to water supplies for fire-fighting vehicles. Approximately 15,000 litres should be available for fire- fighting defence of the house. An accessible dam or pool may hold a portion of this reserve.
		7	A wide gravel driveway to the north or west of the house will help protect a house from fire.
		_	
PROTECTION and should be re-	is table define the intention for BUSHFIRE/WILDFIF ead in conjunction with the PREFERRED FUTUF	E	
CHARACTER PRECINCT BROCH	'What We are Aiming to Achieve' in the individu URE. The DESIGN RESPONSES are assumed to satis 3. The DESIGN SUGGESTIONS are illustrated overleaf.	fy	plān ī 'sphēre and

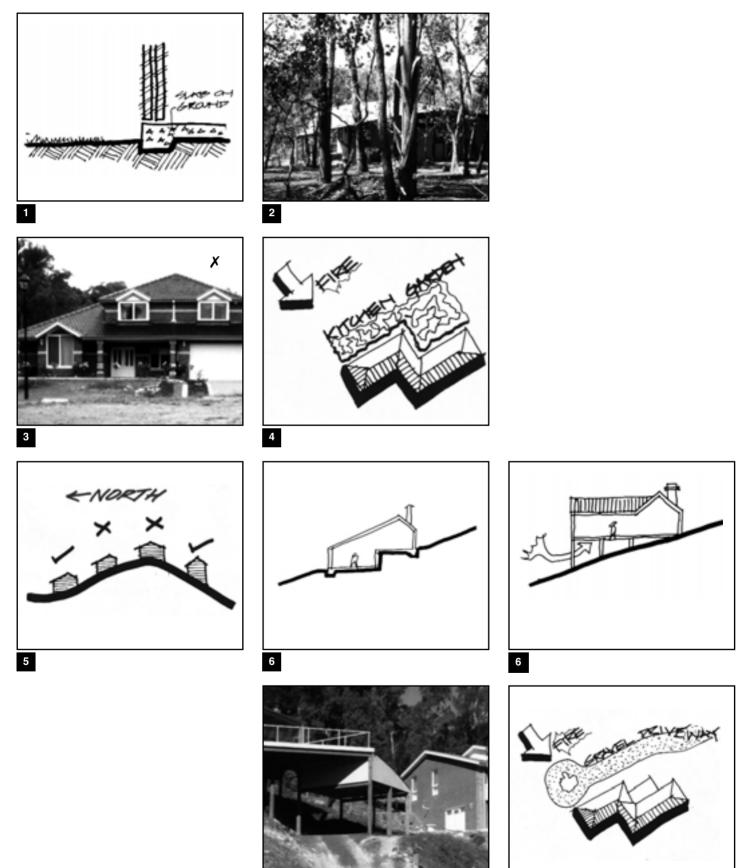
NILLUMBI



### **RESIDENTIAL DESIGN GUIDELINE 10**

The numbers underneath each illustration correspond with those attached to the Design Suggestions on the previous page(s).

6





### construction and site management

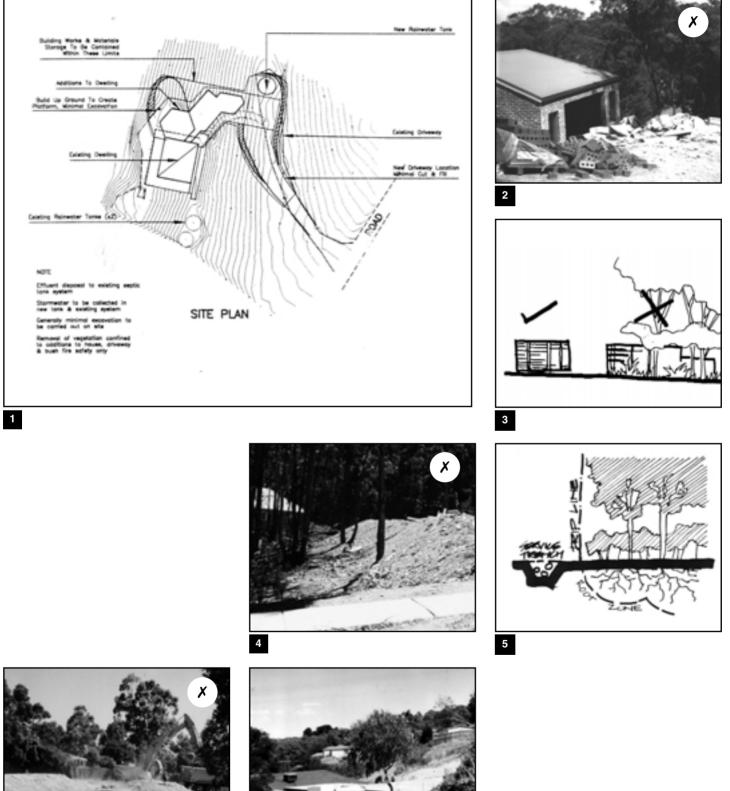
CHARACTER AREA TYPE(S)	DESIGN OBJECTIVE(S) & DESIGN RESPONSE(S)	DESIGN SUGGESTION(S)
		SUGGESTION(S)         The numbers below refer to illustrations overleaf         1       Show all areas of existing remnant vegetation on the site works plan. Use wire mesh or similar enclosures for containing building waste areas.         2       Avoid accumulation of large quantities of building waste on site. Fence out with marker ribbon, plastic mesh or similar, a remnant bush areas.         3       Avoid stockpiling overburden, soil, or building materials in remnant bush areas. Retain all top soil when excavating for use in future landscaping and bush restoration.         4       Avoid stock piling of materials adjacent to or up against existing trees.
		<ul> <li>Avoid excavation for underground services through remnant bush areas or within the drip line of mature trees.</li> <li>Avoid compaction of the soil within remnant bush areas and within the drip line of canopy trees by earth moving equipment and other construction activities.</li> <li>Undertake dust suppression measure in areas adjacent the existing residential development by damping down material or avoiding excavation on high wind days durin dry periods.</li> <li>Avoid storing building materials or rubbish within the road reserve.</li> <li>Avoid damage to or compaction around all roadside vegetation. All above vegetation guidelines apply equally to roadside vegetation and vegetation on neighbouring properties.</li> </ul>

and



## **RESIDENTIAL DESIGN GUIDELINE 11**

The numbers underneath each illustration correspond with those attached to the Design Suggestions on the previous page(s).



6

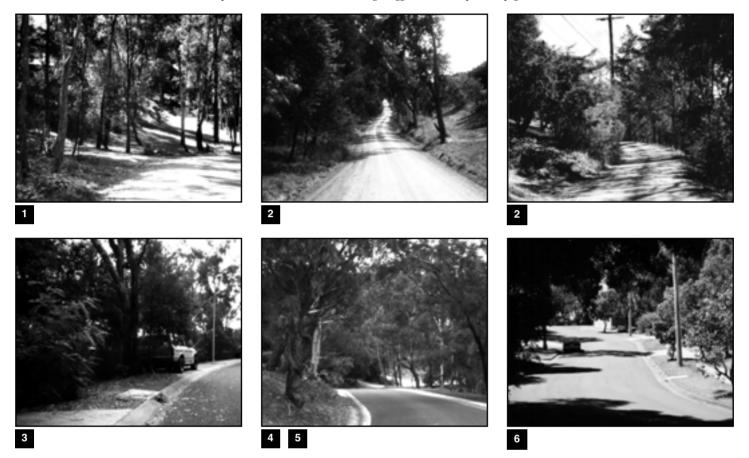
NILLUMBIK

street tree planting

CHARACTER AREA TYPE(S)	DESIGN OBJECTIVE(S) & DESIGN RESPONSE(S)	DESIGN SUGGESTION(S)
RURAL BUSH SEMI BUSH SETTLEMENT	<ul> <li>DESIGN OBJECTIVE</li> <li>To continue the indigenous tree canopy as part of a flowing busbland landscape.</li> <li>DESIGN RESPONSE</li> <li>Retain and replant indigenous canopy trees within the street space in an informal layout.</li> </ul>	<ul> <li>The numbers below refer to illustrations overleaf</li> <li>Replant with the dominant tree species of the area.</li> <li>Incorporate indigenous understorey species where appropriate.</li> <li>Refer to Guideline 1 : Vegetation Retention and Landscaping.</li> </ul>
BUSH GARDEN	DESIGN OBJECTIVE To continue the native tree canopy as part of a flowing bush garden landscape. DESIGN RESPONSE Retain and replant native and indigenous canopy trees within the street space. (BG4 only - Introduce consistent bush avenue with single theme species along all streets).	<ul> <li>Retain and enhance the street tree planting with both native Australian and indigenous street trees.</li> <li>Incorporate understorey species where appropriate.</li> <li>Integrate the street plantings with the garden landscape. In BG4 introduce consistent bush avenue with single theme species along all streets. Refer to Guideline 1 : Vegetation Retention and Landscaping.</li> </ul>
GARDEN COURT ELTHAM CENTRAL	DESIGN OBJECTIVE To continue the native tree canopy as part of a flowing tree dominated landscape. DESIGN RESPONSE Retain and replant Australian native canopy trees within the street space in informal avenue layouts.	<ul> <li>Where new plantings are required plant with the dominant tree species of the area</li> <li>Integrate the street tree plantings with the garden landscape.</li> <li>In Eltham Central continuous avenue plantings are appropriate. Refer to Guideline 1 : Vegetation Retention and Landscaping.</li> </ul>
and should be read in cor STATEMENT and 'What We are BROCHURE. The DESIGN F	this table define the intention for STREET TREE PLANTIN njunction with the PREFERRED FUTURE CHARACTE e Aiming to Achieve' in the individual CHARACTER PRECINC RESPONSES are assumed to satisfy the relevant DESIG UGGESTIONS are illustrated overleaf.	R T plánií sphēre

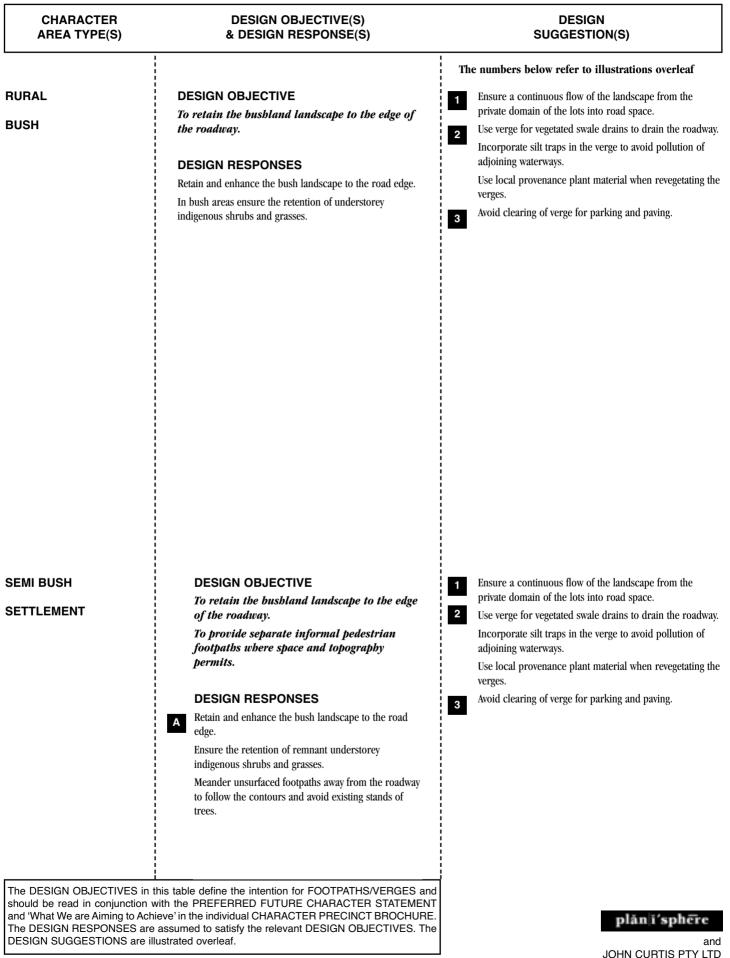


### **RESIDENTIAL DESIGN GUIDELINE 12**









NILLUMBI

footpaths / verges

BUSH GARDEN       DESIGN OBJECTIVE To retain the bask garden landscape to the edge of the roadway. To provide separate sealed pelestrian footpaths along key roates.       Meander loopaahs. Refer the dominant garden design pattern area.         BUSH BUSH BUSH BUSH BUSH BUSH EXAMPLE       DESIGN OBJECTIVES To retain the garden landscape to the roadway.       Meander loopaahs.         BUSH BGARDEN       DESIGN OBJECTIVES To retain the garden landscape to the edge of the roadway.       Meander loopaahs.         BUSH BGARDEN       DESIGN OBJECTIVES To retain the garden landscape to the edge of the roadway.       Meander loopaahs.         BUSH GARDEN       DESIGN OBJECTIVES To retain the garden landscape to the edge of the roadway.       Meander loopaahs.         BUSH GARDEN       DESIGN OBJECTIVES To retain the garden landscape to the odge of the roadway.       It module separate sealed pelestrian footpaths along key routes.       Meander loopaahs.         BUSH GENDEN       DESIGN OBJECTIVE To provide separate sealed pelestrian footpaths along key routes.       It moduce grawl, native grasses or other garden along key routes.       It moduce grawl, native grasses or other garden along key routes.         DESIGN OBJECTIVE To provide separate sealed pelestrian footpaths along key routes.       It moduce grawl, native grasses or other garden along key routes.         DESIGN RESPONSE Retain the realitional arrangement of scaled footpaths on both sides of the street.       It moduce grawl, native grasses or other garden strips.         The DESIGN OBJECTIVE To provide separate sealed pelestrian footpath	CHARACTER AREA TYPE(S)	DESIGN OBJECTIVE(S) & DESIGN RESPONSE(S)	DESIGN SUGGESTION(S)
CARDEN       To retain the bush garden landscape to the edge of the roudorap.         Image: The provide separate solied pedestrian footpaths along key routes.       Pellect the dominant garden design pattern area.         DESIGN RESPONSES       Retain and enhance the bush garden landscape to the roudows.       Meander footpaths.         BUSH       DESIGN OBJECTIVES       Reflect the dominant garden design pattern area.         BUSH       DESIGN OBJECTIVES       Reflect the dominant garden design pattern area.         BUSH       DESIGN OBJECTIVES       Reflect the dominant garden design pattern area.         BUSH       DESIGN OBJECTIVES       Reflect the dominant garden design pattern area.         BUSH       DESIGN OBJECTIVES       Reflect the dominant garden design pattern area.         BUSH       DESIGN OBJECTIVE       Reflect the dominant garden design pattern area.         Introduce grand, native grasses or other garden landscape to the roud or footpaths to follow contours and respect existing stands of trees.       Introduce grand, native grasses or other garding key routes.         In labor dege.       Design OBJECTIVE       To provide separate sealed podestrian footpaths to follow contours and respect existing stands of trees.       Introduce grand, native grasses or other garding key routes.         DESIGN OBJECTIVE       To provide separate sealed podestrian footpaths on both sides of the street.       DESIGN OBJECTIVES         The DESIGN OBJECTIVES       The ar			The numbers below refer to illustrations overleaf
Retain and enhance the bush garden landscape to the road edge.       Continue footpaths with an informal layout away from the roadway.       Meander footpaths.         BUSH       DESIGN OBJECTIVES       To retain the garden landscape to the edge of the roadway.       Reflect the dominant garden design pattern area.         To provide separate sealed pedestrian footpaths ultraway from the roadway.       DESIGN RESPONSES       Reflect the dominant garden design pattern area.         DESIGN RESPONSES       Retain and enhance the garden landscape to the road or footpath edge.       Continue prevel footpaths on all key routes.       To movide separate sealed pedestrian footpaths to follow contours and respect existing stands of trees.       To movide separate sealed pedestrian footpaths.         ELTHAM       DESIGN OBJECTIVE       To provide separate sealed pedestrian footpaths on follow contours and respect existing stands of trees.       To movide separate sealed pedestrian footpaths.         DESIGN OBJECTIVE       To provide separate sealed pedestrian footpaths on follow contours and respect existing stands of trees.       To retae the need for movin the stand sequence of scaled footpaths on both sides of the street.         DESIGN RESPONSE       Retain the traditional arrangement of scaled footpaths on both sides of the street.       Device pare consistent theme for each street.         The DESIGN OBJECTIVES in this table define the intention for FOOTPATHSVEFIGES and the street.       The DESIGN OBJECTIVES. The individual CHARACTER PRECINCES. The DESIGN DESIGN OBJECTIVES. The Indindual CHARACTER PRECINCE B. The DESIGN DESIGN OBJECTIVES		To retain the bush garden landscape to the edge of the roadway. To provide separate sealed pedestrian footpaths	Reflect the dominant garden design pattern in the verge
CARDEN       To retain the garden landscape to the edge of the road/uay.       To retain the garden landscape to the edge of the road/uay.       To provide separate sealed pedestrian footpaths along key routes.       The provide separate sealed pedestrian footpaths along key routes.       Retain and enhance the garden landscape to the road or footpath or footp		Retain and enhance the bush garden landscape to the road edge. Continue footpaths with an informal layout away from the	
Retain and enhance the garden landscape to the road or footpath edge.       Continue paved footpaths on all key routes.         In new areas encourage informal layouts of footpaths to follow contours and respect existing stands of trees.       Introduce gravel, native grasses or other gg plantings to reduce the need for mown turn strips.         DESIGN OBJECTIVE       To provide separate sealed pedestrian footpaths along key routes.       Introduce gravel, native grasses or other gg plantings to reduce the need for mown turn strips.         DESIGN RESPONSE       Retain the traditional arrangement of sealed footpaths on both sides of the street.       Develop a consistent theme for each street.         The DESIGN OBJECTIVES in this table define the intention for FOOTPATHS/VERGES and should be read in conjunction with the PREFERRED FUTURE CHARACTER STATEMENT and What We are Aiming to Achieve' in the individual CHARACTER PRECINCE BROCHULES. The       The DESIGN OBJECTIVES in the individual CHARACTER PRECINCE BROCHULES. The		To retain the garden landscape to the edge of the roadway. To provide separate sealed pedestrian footpaths	Reflect the dominant garden design pattern in the verge
CENTRAL       To provide separate sealed pedestrian footpaths along key routes.       plantings to reduce the need for mown turn strips.         DESIGN RESPONSE       Retain the traditional arrangement of sealed footpaths on both sides of the street.       Develop a consistent theme for each street.         The DESIGN OBJECTIVES in this table define the intention for FOOTPATHS/VERGES and should be read in conjunction with the PREFERRED FUTURE CHARACTER PRECINCT BROCHURE.       The DESIGN RESPONSE Street sasumed to satisfy the relevant DESIGN OBJECTIVES. The		Retain and enhance the garden landscape to the road or footpath edge. Continue paved footpaths on all key routes. In new areas encourage informal layouts of footpaths to	
should be read in conjunction with the PREFERRED FUTURE CHARACTER STATEMENT and 'What We are Aiming to Achieve' in the individual CHARACTER PRECINCT BROCHURE. The DESIGN RESPONSES are assumed to satisfy the relevant DESIGN OBJECTIVES. The	I	To provide separate sealed pedestrian footpaths along key routes. DESIGN RESPONSE Retain the traditional arrangement of sealed footpaths on	plantings to reduce the need for mown turf in nature
should be read in conjunction with the PREFERRED FUTURE CHARACTER STATEMENT and 'What We are Aiming to Achieve' in the individual CHARACTER PRECINCT BROCHURE. The DESIGN RESPONSES are assumed to satisfy the relevant DESIGN OBJECTIVES. The			
	hould be read in conjunction w nd 'What We are Aiming to Achie he DESIGN RESPONSES are	ith the PREFERRED FUTURE CHARACTER STATEMEN eve' in the individual CHARACTER PRECINCT BROCHURE assumed to satisfy the relevant DESIGN OBJECTIVES. Th	pláni (sphēre



### **RESIDENTIAL DESIGN GUIDELINE 13**











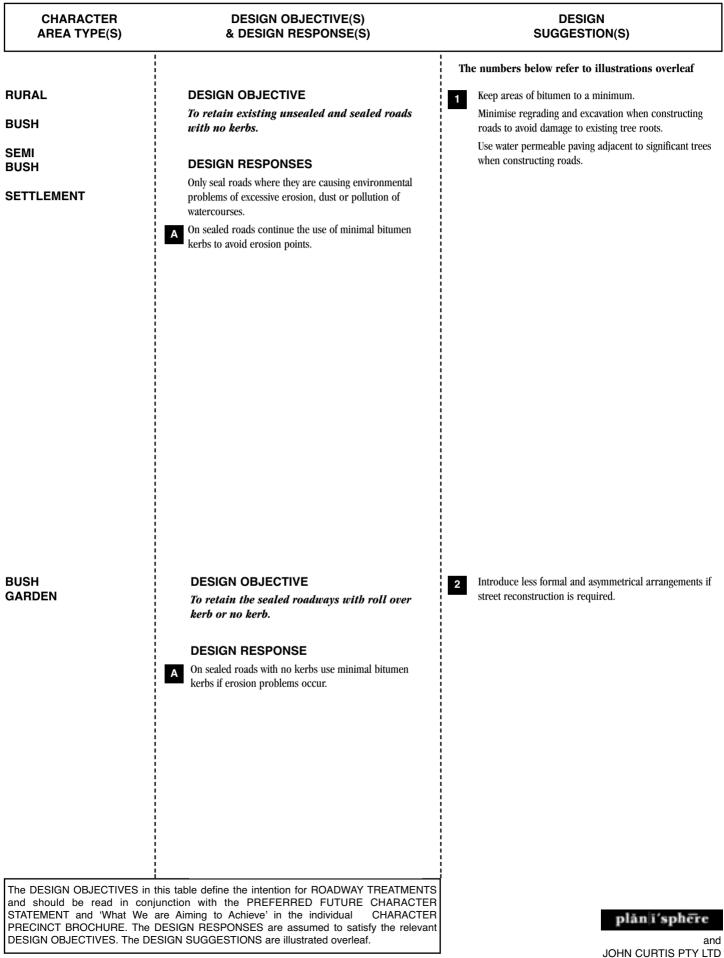








roadway treatments



NILLUMBI

### roadway treatments

CHARACTER AREA TYPE(S)	DESIGN OBJECTIVE(S) & DESIGN RESPONSE(S)	DESIGN SUGGESTION(S)
GARDEN COURT	<ul> <li>DESIGN OBJECTIVE</li> <li>To retain the sealed roadways with roll over kerb or upstand kerb.</li> <li>To reduce traffic speed on some collector roads.</li> <li>DESIGN RESPONSE</li> <li>Some traffic calming may be appropriate in some locations.</li> </ul>	The numbers below refer to illustrations overleaf Introduce traffic calming devices to collector roads where traffic speed is an issue.
ELTHAM CENTRAL	<ul> <li>DESIGN OBJECTIVE</li> <li>To retain the sealed roadways with roll over kerb or upstand kerb.</li> <li>To reduce traffic speed on some through roads.</li> <li>DESIGN RESPONSES</li> <li>Some traffic calming may be appropriate in some locations.</li> <li>Some road pavement narrowing may be appropriate.</li> <li>Retain the formal symmetrical arrangement.</li> </ul>	A Retain the symmetrical arrangement of the street if street reconstruction is required. Include additional space for avenue street tree planting with street reconstruction.
and should be read in con STATEMENT and 'What We PRECINCT BROCHURE. The	this table define the intention for ROADWAY TREATMENTS junction with the PREFERRED FUTURE CHARACTER are Aiming to Achieve' in the individual CHARACTER DESIGN RESPONSES are assumed to satisfy the relevant ESIGN SUGGESTIONS are illustrated overleaf.	plån i 'sphëre



### **RESIDENTIAL DESIGN GUIDELINE 14**







