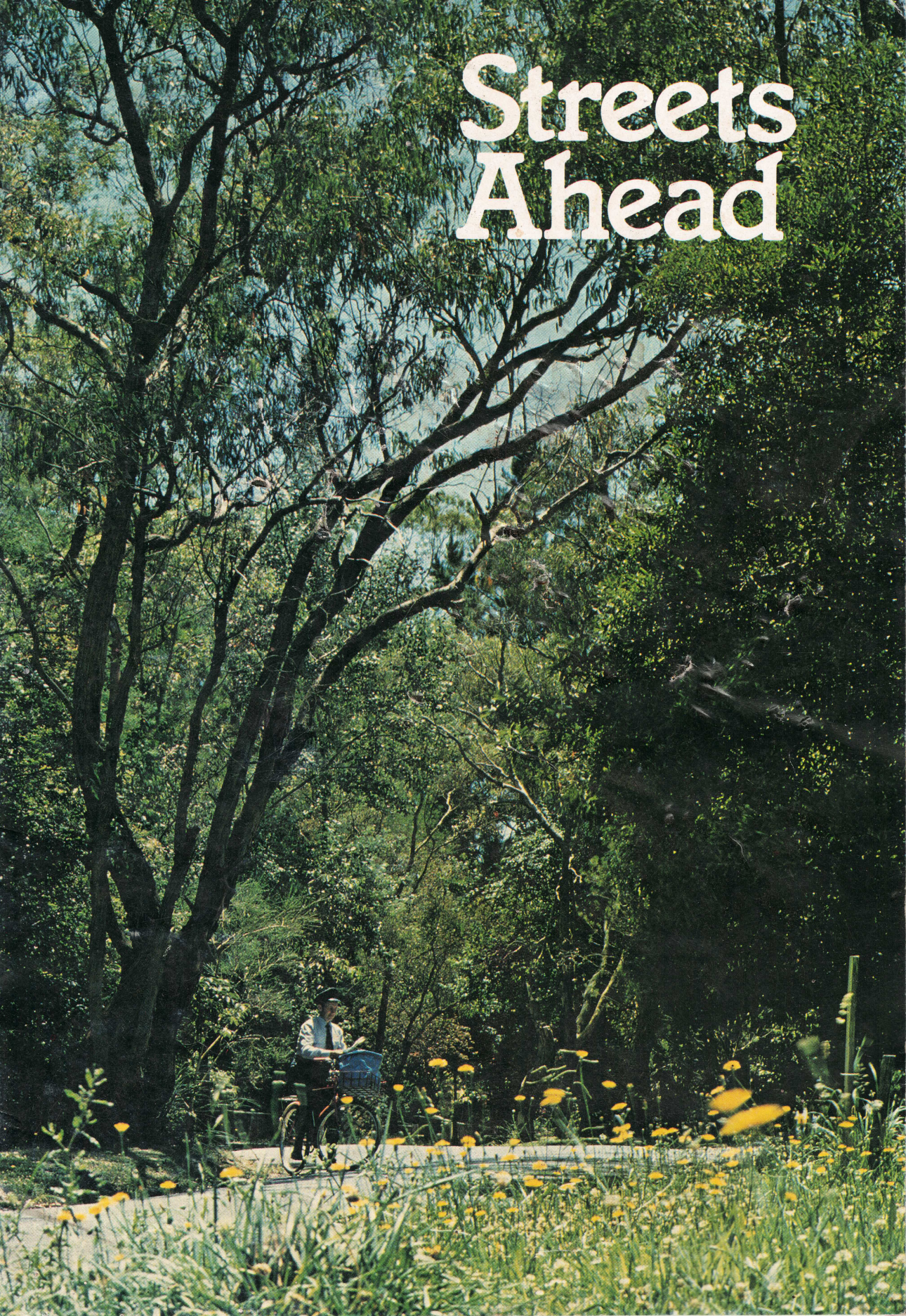


Streets Ahead



The environment is on our doorstep. It's not only peaceful countryside and wild bushland, but also the setting for our everyday lives — the street where we live. In many cases, it's possible to make a residential street a safer, more pleasant and interesting part of the environment. These objectives can be achieved

- * in new subdivisions, where councils can encourage developers to design in harmony with the landscape
- * in old-established suburbs, by re-modelling wide streets
- * and in old subdivisions, through imaginative private street schemes when making streets.

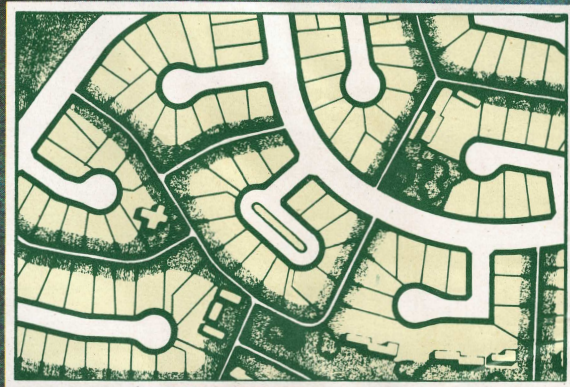
1. Background photo: Traditional street design will always have its place, but as Australian suburbia is often criticised for its monotony, it's worth aiming for diversity.



2.



3.



What's in a Street?

Obviously, the basic purpose of a street is utilitarian — it provides access for vehicles, together with facilities for water, drainage, electricity and other services. But if the area between the roadway and property boundaries was a more pleasant, welcoming place, residents would use it for other purposes as well.

Ideally, a residential street should be a safe and pleasant place in which to walk, or ride a bicycle, talk to the neighbours or let older children play, as well as providing access for vehicles. Given a choice, many people may opt for a more informal streetscape and value the individual quality which results.



2. In this brochure we are talking about short neighbourhood streets which carry local traffic only and where traffic volumes are very low.
3. A better balance between the needs of traffic and the residents can be obtained with a network of courts and loops. The inconvenience of travelling at reduced speed over a short distance to the nearest collector street is a small price to pay for the advantages of safety and usable space in front of the houses. If safety features for traffic and pedestrians are incorporated in the initial design, 'band aid' markings, signs and signals can be avoided later.
4. When a safe and pleasant streetscape invites you to walk and talk with the neighbours, a sense of community identity develops. There is a regular residents' newsletter for this Croydon estate, initiated when the private street scheme was first under discussion. Because everyone feels responsible for the general appearance of the area, it is well maintained in a state of 'ordered naturalness'.

4.



Historical Straitjacket

Surprisingly, the Victorian Health Act governs the minimum width of the road reservation (the land between facing property boundaries). Its stipulation of 15.2 metres (50 feet) originated in England a century ago, when it was considered necessary to legislate to allow for adequate light and air spaces between buildings.

Local Government authorities have discretion as to how that 15.2 metres is used, so there is a means of escape from the straitjacket of traditional street design. Although in the past it has been the practice for standard streets to be about 7.4 metres (24 feet) wide within the road reservation — a width capable of bearing heavy traffic — there are good reasons to modify this approach.

Some Constructive Proposals

Engineers, architects and planners are giving increasing attention to alternative street designs so that some of the disadvantages of the traditional pattern can be overcome. One advantage of the new proposals is that they can be applied flexibly, according to access needs, the nature of the soil and terrain, the vegetation and the climate, as well as the residents' wishes.

Narrowed Roadways

Do we really need roadways to be so wide when traffic volumes are low? In many cases, if parking/passing bays are provided at intervals, a single lane width is adequate.

Interest may be created within a straight road reservation by curving the thoroughfare and varying its width.



5.



5. Yes, this is a residential street! At Rosebud. The carriageway is narrow, yet there's ample room for informal parking among the clumps of natural vegetation.

6. Beautiful streetscapes such as this one in Beaumaris would be lost if a traditional street design were adopted.

7. Existing stands of trees may offer much greater landscape interest than uniform street planting. Apart from their visual appeal, trees retained in this way save the high cost of clearing.

7.



8.



In inner city areas, where the historical grid layout provides alternative routes for through traffic seeking to avoid congested arterial roads, motor vehicles pose particular problems in residential streets. Sometimes, by narrowing the roadway, it is possible to reduce these effects without overloading the arterial road system.

9.



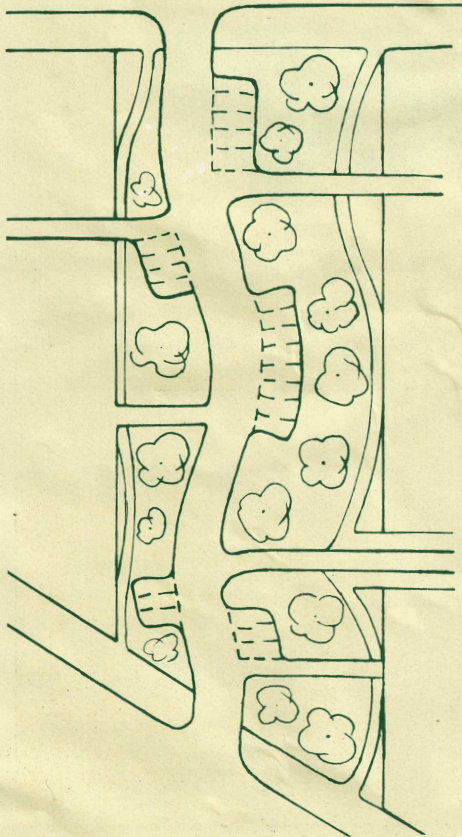
10.



8-11. This very wide street in South Melbourne had become a speedway for through traffic. While part of it remains untouched, one section has been transformed by narrowing the carriageway and curving its alignment, providing parking bays and space for trees. Through traffic not associated with the neighbourhood has been discouraged and the residential quality improved. The sketch plan shows how the area within the road reservation was rearranged.



11.



12. In Footscray, where old oaks grew in the road, the council extended the nature strip to incorporate the trees, planted grass, and varied the alignment of the roadway.

13.

Pointers for Drainage

A gently-sloping grassed table drain (or swale) adjacent to the roadway can sometimes be used as an appropriate alternative to kerbing and guttering. It absorbs water, and reduces peak flows. A base of crushed rock or other permeable material makes the swale firm enough for cars to drive on. Old-fashioned bluestone, set in sand to form a table drain, allows water to soak into the ground and reach tree roots.

Depending on soil and terrain, the drainage system doesn't always have to embody underground pipes. A well engineered system of grassed swales can be considerably cheaper. It looks good, helps to reduce stream runoff and erosion, lowers pollution and is usually cheaper.

Porous road pavements — brick, cobblestone or asphalt (specially mixed so as to be porous) — are designed to allow rainfall to soak through without the pavement being damaged by traffic usage. Again, runoff is reduced, groundwater is made available for vegetation and the cost of road drainage is avoided.



14.



15.



Watch the Kerb

If a table drain is not appropriate and kerb and channel is required, rollover kerbs or their even more relaxed cousins, layback kerbs, get away from the hard-edged look of conventional kerbing. Vehicles can park or pass by driving on to the verge over a rollover kerb.

Moreover, rollover kerbs do not have to be broken for driveway construction. There is room for plenty of ingenuity in design; bluestone blocks or even old railway sleepers provide alternatives to concrete kerbs in suitable locations.

13. A concrete kerb sprayed with asphalt in Lorne, together with the use of an old tree trunk as a retainer, show how imagination can produce an original and functional result.

14. A flush kerb can reinforce the edge of the paved roadway, thus avoiding maintenance problems.

15. A swale is a continuation of the nature strip; it slopes gradually to the edge of the roadway and is easy to mow.

16. Rollover kerb — a step away from formality on the street scene.

16.



Services

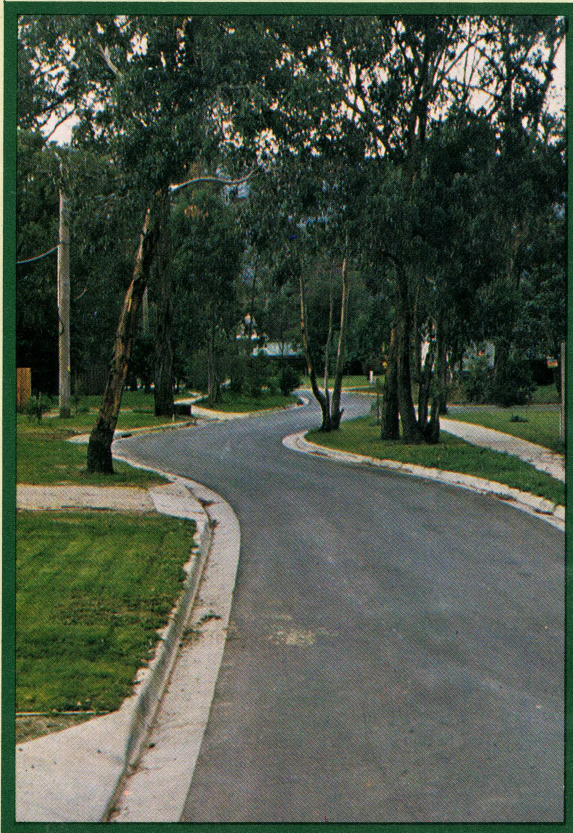
The system of common trenching is followed overseas and in some parts of Australia; several councils in Victoria are also implementing it. If services such as gas, water, electricity and telephone can be incorporated in a common trench, there is less disturbance to the road reservation. There may be difficulties in co-ordinating the work of several public authorities, but the savings to be achieved in both cost and space make it well worthwhile to aim for. In some cases service mains are laid beneath the road pavement.

**Footpaths?**

Where streets carry only small volumes of low speed traffic, and especially in courts, it is often practicable for pedestrians to use the roadway, or walk on the verge. More scope is then provided for effective landscaping.



19.



17. A Melton garden merges with the nature strip, uninterrupted by boundary fence or footpath, to give a more spacious effect.

18. The 'bellbird' streets in Blackburn are the only purely residential streets in the State to be classified by the National Trust as "essential to the heritage of Australia". The citation says that "These private streets have resisted the pressures of normal street-making requirements and retain a quiet, almost rural character unique in Melbourne. They demonstrate an excellent integration between the natural and man-made environments."

19. A footpath on only one side of the street can be a sensible compromise — it can even 'change sides' at intervals. In many situations a narrow footpath is adequate.

20. Co-operate with Nature. Allow the footpaths to meander a little and the result is charming, as this example in Ferntree Gully shows.

20.



Tree Thinking

Trees are best treated as an integral part of the street design, not merely as a decoration applied when everything else is done. Where native trees are already growing, the area's character can often be protected by carefully designing the roadworks to avoid them. The natural effect can be reinforced by planting more native trees. Besides attracting native birds, native trees and shrubs require less watering, pruning and spraying than exotic species. Clumps of trees avoid the look of tree 'sentries', one stationed in front of every house. But remember that if planting is too low and shrubby it may present a traffic hazard for vehicles backing out of driveways. In many formal urban areas, introduced trees (perhaps deciduous), will be more in keeping with the style and scale of the architecture than natives. Harmony is achieved if only one or two species are used in a street. Besides having aesthetic value, trees make a contribution to the environment of the street by providing shade, protection from wind and a cleaner atmosphere. They also filter dust particles from the air. Street planting provides a valuable habitat for bird life both for nesting and for food.

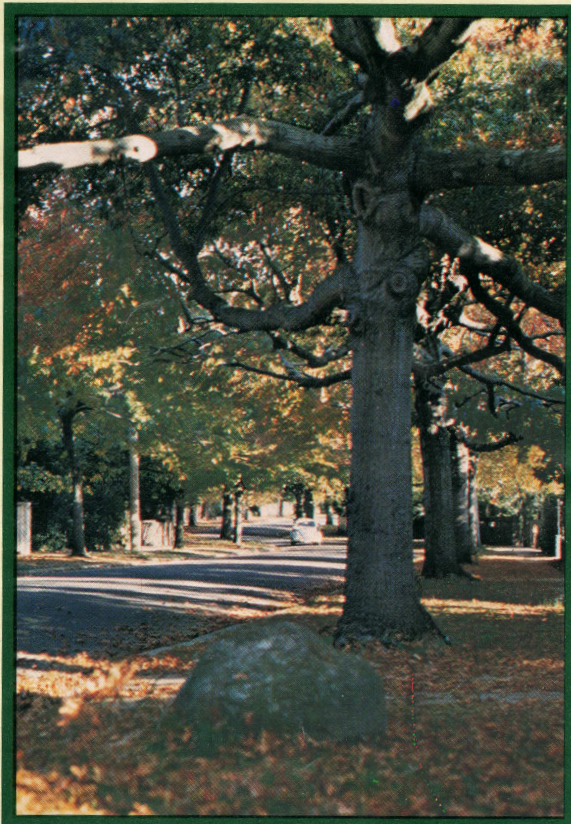
22.



21-22. Residents of this peaceful court in Ivanhoe jointly own the title for the actual street, and maintain it themselves. It's a perfect example of the individuality possible in a small court. Very tall rose bushes, red and white, and flowering cherry trees provide colour for much of the year in the nature strip.

23. Some people are lucky to inherit a legacy of natural beauty through the foresight of early planners and planters. The use of only one species of tree in a street gives a sense of unity, ties together an assortment of architectural styles, and reduces the dominant effect of the roadway. Tall trees forming a canopy raise the landscape quality of a residential street and give a feeling of seclusion.

23.



In some locations, small streets and especially culs-de-sac lend themselves to street planting that is productive as well as decorative. With trees such as almonds, citrus fruit, feijoas, olives or pomegranates, there could be a community garden enhancing the special neighbourliness that small residential precincts often engender.

24.



24. Residents of this Melton court enjoy a streetscape free of ugly poles and wires. Melton Shire has required developers to put electricity underground in many similar situations within the past nine years. Despite the cost, more councils are adopting this policy for reasons of appearance.

25.



25. Besides enhancing the street scene in Middle Park, these plane trees growing in the pavement provide useful shade for parked cars. Street trees should be in scale with their surroundings.

26. Poles and wires can appear much less prominent with the softening effect of appropriate street planting. The railway cutting and lines adjacent to this Croydon Street are virtually concealed by trees.

26.



27.



28.



27. BG (Beton Glas) slabs of perforated concrete provide one form of hard standing surface. Shown here at Sale, they have a good appearance but their cost is a drawback. Several councils are looking into cheaper ways of fabrication.

28. Buttercups — letting nature take its course with an appealing roadside garden.

Planning with People

Many councils arrange displays and invite public comment on proposed street designs so that residents can be informed and involved. Sherbrooke Shire Council, for example, has a highly developed system of consultation. Engineers prepare plans and cost estimates for a number of schemes, ranging from one with conventional sealed street with kerbs and footpaths to the other end of the scale — a narrow roadway without footpaths.

Public meetings are held and a questionnaire sent to all concerned, to choose a design. A residents' liaison committee is also appointed to work with the designers and provide feedback. In this way, there is every chance of producing a scheme which meets with general approval, and is less costly because numerous changes are avoided.

Sherbrooke Council has also begun a survey of undeveloped land — a landscape register you could call it — so that when the time comes for streets and houses to be built, the special environmental characteristics of a subdivision have already been recorded. In this way, valuable features will be retained and there will be a requirement for people to conform to an outline development for the street, including a tree planting plan.

Maintenance

Local councils, which bear maintenance costs once streets are built, are sometimes concerned that alternative street design might result in higher upkeep. This is not necessarily so, when it is a good design taking account of topography and soil type, drainage and alignment. In cases where there is uncertainty about increased maintenance costs as a result of adopting a different form of street construction, it is possible for the abutting landowners to be charged for maintenance. Rather than paying a larger sum for conventional street construction, a smaller initial outlay plus a nominal annual maintenance charge may be better in the long run. As an example, construction could be done through a Temporary Street Scheme, whereby residents are responsible for the maintenance.

Why Change?

There are a number of good reasons why a different approach to street design should be considered. The major ones are:

- * Streets designed to discourage speeding cars are safer, quieter and more pleasant places to live, and they then fulfil the needs of people as well as cars.
- * Alternative designs often cost less to build. For example, narrow roadways require less materials for their construction; grass swales don't need pipes and concrete gutters.
- * More space will be available for landscaping and there is less rainfall runoff (to the advantage of street trees), when the area of asphalt is reduced.

Certainly there is no uniform solution, and what is appropriate in one situation won't be suitable everywhere.

A textbook approach to street construction requires less thinking time. Variations cost money in terms of the time it takes to work them out, but they can often be justified by the end result. As one shire planner put it, "We can see merit in an alternative approach. We like to be innovative and come up with things people will appreciate".

Over to you

If you'd like to explore further the subject of alternative streetscape design, please contact The Director, Ministry for Conservation, 250 Victoria Parade, East Melbourne Vic. 3002. Telephone 651 4011.

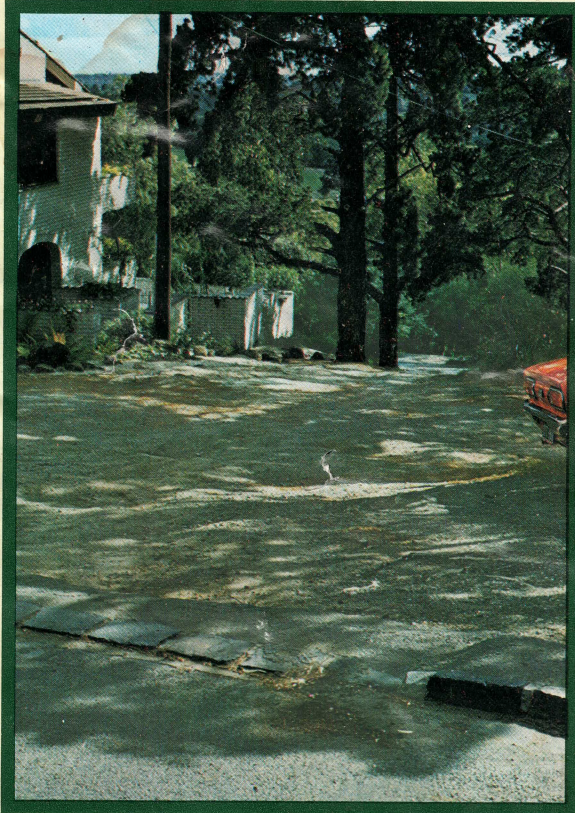


The Ministry acknowledges the co-operation of engineers, planners, landscape architects and 'street dwellers' in the preparation of this brochure.

29.



30.



29. A design employing low technology often produces high environmental quality, as this Hawthorn cul-de-sac proves. Real estate agents testify that such residential pockets are now greatly sought after, although it used to present a poor public image to live on an unmade street.

30. Motorists entering this cul-de-sac are given a warning to slow down by the bluestone 'cue' which also serves for drainage.

Some residents' views on 'alternative street living'....

"It is important that there should be more alternatives. In the past, people have been regulated into one form. This is a way people can express themselves."

"You'd have to be off your head to drive fast. The whole atmosphere of the area inspires you to take things easy."

"For any decision that affects the street, we hold street meetings. It's like a family, so of course you get personal annoyances, but that's how the street works... that's its survival. We have great strength because of our close relationship."

"We knew that conventional road-making would remove a lot of the trees, so we wanted an alternative scheme for environmental reasons. The lower cost was a bonus."



Ministry for Conservation, Victoria

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