Fences and bollards have many uses other than as strict security measures. For instance, they can serve to delineate boundaries, provide interesting seating, act as enclosures, direct the flow of traffic, and limit people and traffic in designated being cost, safety, durability and attractiveness.

## Bollards

In general, bollards can be used in place of fences and usually will be less intimidating. They are used in mews, greenways, malls, gardens and other open spaces. Bollards, which are freestanding or placed in rows analogous to fences, can be made of concrete, telephone poles, or metal obelisks set in concrete in the ground.

You may even wish to add another wrinkle, by setting the bollards into metal sleeves, which are permanently installed, in the ground; this will allow the removal of the bollards when necessary. A system like this at the garden entrance would allow you to get deliveries into the garden as needed, and yet impede entry when desire. This is especially
 useful if you want to stop traffic but retain the option of emerging vehicle areas.

Bollards may serve as fences, traffic obstructive devices, and furniture - they may even have lighting recessed inside. In general, a bollard is two - thirds underground (metal sleeve in cement) and one-third above ground, e.g., 5 feet below and $21 / 2$ feet above - although half and half may be acceptable.

Before placing the bollards in position permanently, it is necessary to have a design, keeping in mind the shape and flow of the garden or mews. This is important so that the bollards will not be obstructive, unless intended, in which case they may be set in a row as a fence. Otherwise they will be intended to serve as gentle reminders of which way the open space flows. If carefully considered before placement, they will become an interesting and attractive part of the garden scheme, having both functional and aesthetic uses. They can also serve other function, e.g., bicycle storage, seating, wharf or pier tie-ups, truck or car barriers, or a combination of these. The height of the bollards would, of course, depend on their function.


Bollards can be constructed of almost any material such as concrete, telephone poles, or metal obelisks - the major considerations again being safety, cost, durability and attractiveness. Pressure-preserved. Douglas fir timber bollards can be ordered from: Columbia/Cascade Timber Form, 1975 W.S. Fifth Avenue, Portland, OR 97201

## Fences

Fences are usually constructed in a straight line up to 8 feet or more for security reasons. Since this is the case, they require posts to give them the desired height, rails on the top and bottom to add strength and rigidity, and fasteners to attach the fence to the posts and rails. Fences shut out unwanted views, offer privacy, act as wind breaks, as well as deterring intruders, serving as a back drop for interesting shrubs, and providing support for climbing roses and vines.

Fences can be constructed of almost any suitable material such as cedar posts, split rail, wrought iron, pickets and even living materials such as shrubs or young fruit trees (Belgian Fences) or almost any combination of two or the above.

Depending on how much security is required, it may not be necessary to install tall, harsh chain link barriers; the more major considerations will be cost, safety, durability and attractiveness.

Generally fence posts are of a heavier material than the fencing (4" X 4" or better for wooden fence posts) and are two feet taller than the actual fence, in order that they may be set one to one and a half feet into the ground. Depending on the height of the fence and the kind of material selected the posts may need to be set into cement, 6 - 10 feet apart. When cementing wooden posts into place always remember to shape the upper surface of the cement so that it slopes away from the post in all directions. This will prevent rainwater from settling at the base of the posts causing them to rot. It is also a good idea to dip the last foot or so of these posts into tar before setting in cement as a further protection against rotting. You must then wait until the post have set securely in the cement at least 48 hours before attaching the rest of the fence.


The rails provide a surface to which the fencing can be attached, as well as adding rigidity and structural strength to the fence.

When installing a fence remember to consider very carefully what king of gate you want to install. It is the most important part of the fence because it is the entrance to your garden space and can make or break the feeling of the garden. Other considerations would be its width; you must make sure that it can accommodate deliveries. Remember that the wider the gates are - the heavier they are and therefore the fence posts which support the gate must be extra strong - heavier and sturdier than the rest of the fence posts. For example, if you have a 4foot tall picket fence with the usual 30" wide gate everything will hold together well. But if you made the gate on this fence 5 or 6 feet wide the posts would be under an additional strain of $100 \%$ because while a 30 -inch gate weight only 50 pounds, 5 feet gate would weight 100 pounds. Therefore, the fence post would have to be reinforced sufficiently for this additional weight.


Picket Fence


Post \& Rail Fence


