

CHAPTER V.

design principles



# 05 design principles

## 5.1 Squares & Plazas

The Main Square or plaza is the most recognisable civic form of public space. If you think of the main squares of our towns and cities, they are usually situated in front of municipal buildings, along main roads or at business hubs and mark city centres. Nick Corbett in his book *Revival of the Square* notes the important and complex role of these spaces still fulfil: "The city square can provide visual relief and the recreational open space within a densely developed area, and can also serve to promote standards in public behaviour. If people are to be aware of the complexity and variety of the society they are part of, and if they are to appreciate notions of civic identity and respect for others, there must be a place where they can occasionally see and experience a diverse cross section of that society..... By simply standing in a lively public square, where different age groups and different members of society are gathered together, there is a share experience that evokes a positive sense of participation." The creation of new squares and plazas now come with this complex agenda: creating a space that is active and busy and one that the public will want to linger in and enjoy in a variety of ways.

## 5.2 Designing the Plaza

Like a successful building, a plaza requires a program of use and a strong concept. Therefore, careful thought should be given to a plaza's principal functions and to its relationship with the adjacent public realm (i.e. streets, pedestrian routes, and other open spaces), activities and architecture. While some plazas may act primarily as pedestrian nodes, others function best as important viewpoints or enhance the setting for a building.

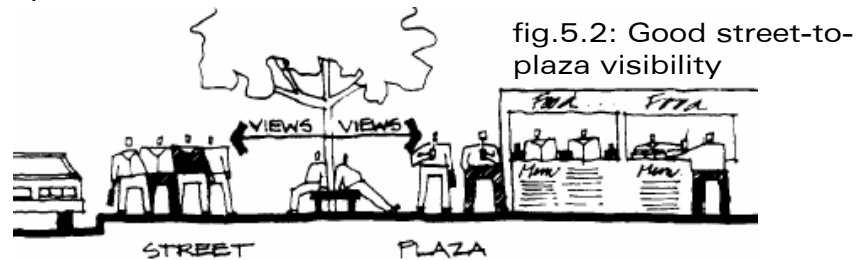
A plaza should also reflect and reinforce the character of its location. Within an area of the city, an individual plaza may function best as part of a hierarchy of open spaces, some small, others grand, others as links within an open space network. Therefore, an understanding of area objectives, existing plazas and pedestrian movement, building and street scale, materials and circulation patterns are all essential in developing a use program and overall concept.



fig.5.1: This fig indicates how hierarchy of open spaces can form one grand green island in a urban environment. In this scenario the green spaces are linked by means of the Apies River. It gives the opportunity to plant and animal species to migrate from one spot to another.

### 5.2.1 Visibility and Views

Good street-to-plaza visibility announces the plaza's internal attractions. It signifies that it is a public space, it permits users to watch street activity and it makes the space safer.



Good visibility can be achieved by arranging any walls and planting to not screen or block off the plaza from the street and locating the plaza at or as close as possible to street level, preferably no more than 1.0 m above or below street level. The plaza should also take advantage of distant views to the mountains, rivers and other landmarks wherever possible.



fig.5.3: Dania Park, Malmö, Sweden. (Asensio)

In Dania Park (fig.5.2) you find a good example of visibility in and out of the park. The park is situated alongside the ocean and lively streets. The park is completely visible from the streets and when you're in the park you have excellent views over the ocean and surrounding streetscape. There are numerous spaces that function as observation points, this makes the park safe for its users and easy to find people you're looking for.

### 5.2.2 Linkages

The plaza should be linked to other surrounding open spaces, as well as interior spaces such as lobbies, to create a dynamic pedestrian network. Such links will make the plaza more useful and provide a more dynamic, coherent urban environment.

Linkages can be achieved or reinforced using the following devices:

- passages;
- bridges;
- steps/ramps;
- paving patterns;
- planting;
- and other structures.



fig.5.4: Piccadilly Gardens, Manchester, UK (Asensio)

A good example of a Plaza with proper linkages to its surrounding spaces and buildings is the Piccadilly Gardens in Manchester, UK (fig5.4). The Plaza was designed using the movement patterns of its users, as well as the street and surrounding infrastructure.

### 5.2.3 Safety

The plaza will be unsuccessful if it is not well used because of a perception of unsafeness. The design of the plaza should provide safety. Regard should be given to principles of designing for safety such as defensible space, clear sightlines, good lighting and provision of alternate "escape" paths.

The differences in usage, ownership and responsibilities among commercial, commercial/residential and residential plazas should be recognized, so that the different approaches to their design relative to urban safety is addressed at the initial planning stages. For example, zones of responsibility should be established and delineated in the design of these plaza types, taking into account their respective use patterns.



fig.5.5: Passeig Garcia Faria, Barcelona, Spain. (Asensio)

Visibility makes up a huge part of safety in a plaza. If you look at Passeig Garcia Faria, a shoreline landscape, it is clear how good open visibility makes the landscape safer. Openness and good visibility does not only make the landscape physically safer, it also makes the user more comfortable when walking around at day time and at night.

The plaza should provide good visual surveillance opportunities both from within the space and along the edges. People need to feel secure and will usually avoid dark hidden corners and vacant places. (see fig 5.5)

The plaza should be designed to maximize opportunities for casual monitoring from its perimeter and adjoining developments. Surveillance and overview from adjacent sidewalks, windows and decks are necessary components that contribute to the safety of the plaza.

### 5.2.4 Accessibility

The plaza should provide easy and direct access particularly for the elderly, disabled and young children. Ramp slopes should not exceed 10 to 12 percent and handrails should be incorporated. Selection of surface materials should result in easy access for the elderly and disabled, and also discourage incompatible plaza activities such as skateboarders in relaxing areas and motor vehicles taking shortcuts throe the plaza. Placement of planters, nonmoveable seating and handrails should further encourage easy wheelchair and pedestrian access and ease movement throe and around the plaza.

### 5.2.5 Lighting and Public Features

Good night time generalized lighting is important to enhance safety of the plaza, particularly if it functions as a shortcut or as a through route for pedestrians. Appropriate lighting can extend the usage time of the plaza and may encourage night life around the square.

A big problem in South Africa is loitering and with appropriately located and designed lighting it can be discouraged.

In autumn and winter, darkness occurs in early afternoon, coinciding with rush hours. This is generally a time of maximum plaza pedestrian flow, generated from office and retail buildings so lighting should be on timers to account for seasonal changes and promote the safety and ease movement of pedestrian's throe the plaza after dark.



fig.5.6: Cufar Square, Jesenice, Slovenia (Asensio)

Lighting doesn't just add to the safety and ease of use for users in the plaza. Lighting can easily change the image of the park at night and use of the park at night. Coloured lights can indicate places of interest and enhance the existing features in the plaza.

## 5.3 User Comfort

The sole reason for the existence of a plaza is to serve the needs of its users. Therefore user comfort is of the utmost importance. There are a couple of elements that has influence on user comfort.

### 5.3.1 Sunlight

In South Africa, exposure to direct sunlight in the summer can be very hot and uncomfortable. Open spaces can become a major attraction for pedestrians that seek shelter against the very hot summer conditions. It is therefore very important to provide forms

of shelter against the warmth and other natural elements.

Sun paths, sun altitudes and shadow patterns in the plaza should be examined for all seasons, to ensure that there is sufficient shade in the summer and sun spots in the winter. Sunlight is particularly valued at lunch time in commercial business areas when workers escape to take in sum fresh air and sunlight. It's thus important to consider the land use around the plaza to situate specific plaza features in the right areas. The Sunlight can be controlled by locating specific areas where seating is accessible in sunlight and in shade.



fig.5.7: Sun and rain shelters can be sculptural elements that you place throe out the plaza. This example is situated in Georg Freundorfer Plaza, Munich, Germany. (Asensio)

The Plaza can easily become uncomfortably hot due to the large amount of hard surfaces. The comfort level can be increased by channelling wind throe the plaza, the greening of areas with vegetation and making use of some form of evaporative cooling.

### 5.3.2 Wind

Drafts from surrounding buildings and large structures can cause user discomfort and should be prevented or reduced through specific design measures. Protection against strong winds is mostly important where retail buildings live out into the plaza.

Wind reduction can be achieved by the following measures:

- avoid large, open, unprotected areas;
- avoid wind funnels: narrow openings between buildings where the wind will pick up speed can and blow into the plaza;
- utilize planting, low walls and canopies for wind deflection and situate them so that they protect areas where is mostly needed.

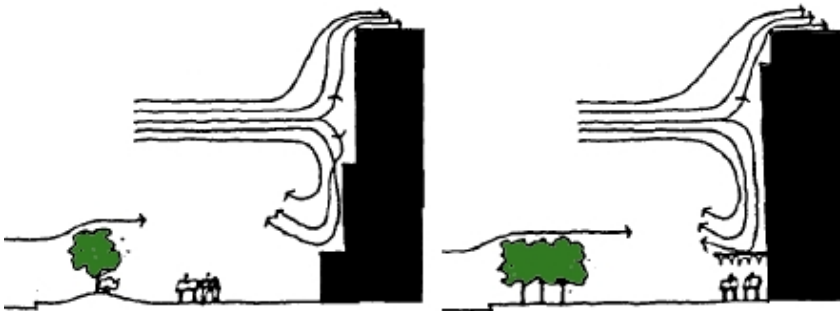


fig.5.8: Plaza users should be protected from harsh winds with planting and canopies.

### 5.3.3 Noise

High levels of traffic, industrial and other ambient noises detract from the enjoyment of a plaza. Noise can be partially mitigated by detracting attention from the noise source through the introduction of such elements as fountains or waterfalls. It is best if the elements are situated between the user and the source of noise.

### 5.3.4 Hard and Soft Balance

Landscape design today must recognize a new reality in environmental awareness. For example, wherever possible, permeable surfaces should be considered. Use of drought resistant plants may lessen dependency on automatic irrigation. Selection of plant materials should be done with a mind to reduce use of chemical laden maintenance. Perhaps plantings can be more productive by providing a habitat for birds, insects and other animals.

A changing landscape keeps the user interested, seasonal change can be achieved by selecting a variety of flowering or colourful shrubs and perennials instead of largely relying on annuals which are put to waste several times during the year. A tree becomes the roof of the plaza and therefore the choice of tree specie becomes utterly important. In some areas an evergreen tree provides a buffer to screen unwanted views and a deciduous tree gives shade in the hot summer and lets throe warming sun in the winter.

In most plazas the entire plaza is covered in a paved surface. It is important to note that if the plaza becomes too big that there is a need for soft or vegetated areas. If the plaza is shaped in the right way then these areas can help drain storm water in case of a large rain storm. By having large manicured lawn areas and shading trees inside the plaza you soften the plaza and provide space for picnics and children to play.



fig.5.9: Barrel Warehouse Park, Waterloo, Canada. Good balance between hard and soft landscape. (Asensio)

## 5.4 Plaza Essentials

### 5.4.1 Seating

Good seating is important to plaza users. Without it, fewer people will stop to use a space. There are some major points to remember when planning and placing seating:

- Plentiful Seating, maximize opportunities for sitting with different forms of structures for example; walls, steps, planters, water feature edges, and lawns.
- Locating the seats throe out the plaza must include seating towards the street, orientated to a view, near building entrances, alongside walkways, next to attractions/amenities, in shade, and in the sun.
- The use of a variety of seating types is very important. There should be seating in groups, for couples and alone. Fixed seats are preferred above moveable seats due to the fact that moveable seats have higher maintenance and are targets for vandalism. There should also be seating for children and disabled people.
- Seating is there for the comfort of the plaza user and therefore should be comfortable. The form and material used is very important. Generally wood is preferred to stone, concrete or metal however stone and concrete are more durable and can be shaped into almost any form.

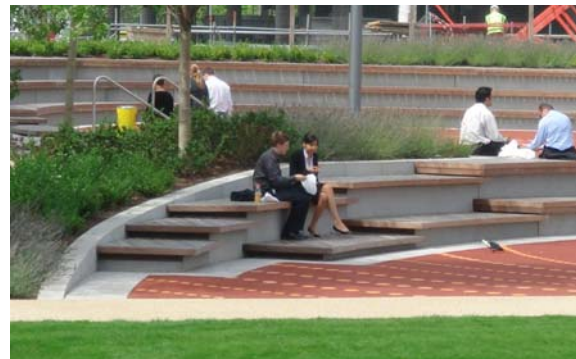


fig.5.10: A Plaza seat can have any form and be maid of many materials. The seat can also have more than on function.

### 5.4.2 Activity Generators

Successful plazas are generally characterized by several activity generators. Examples of such activity generators include food and retail outlets, as well as entertainment, which attract users and encourage socializing, relaxation and festivities. Good plaza management can include groups of people to activate the space, such as street theatre musicians, street markets and art. Providing the infrastructure for some of these events can help maintain the order and neatness of the plaza. Such infrastructure can be electrical outlets, water supply, lighting and shade structures.

### 5.4.3 Amenities

A plaza which is furnished with a variety of amenity features encourages general public usage and creates a sense of liveliness and excitement. Art work should provide a focal point for the plaza or become an integral component of the overall design of the plaza. Bike racks, drinking fountains and waste receptacles are practical, essential amenities.

Some others are:

- game tables;
- kiosks for information and posters;
- open air cafes;
- children's play equipment (where appropriate).

These amenities should be well maintained to not decrease the overall perception of the plaza. Choosing the right durable materials can minimise the maintenance on these amenities.



fig.5.11: Possible park and plaza features



#### 5.4.4 Weather Protection

The plaza will be used mostly in good weather conditions. If this good conditions change rapidly then there must be some form of shelter against rain and other forms of bad weather. Such protection should be provided at waiting points and along major pedestrian routes.

Protection can be achieved with the following devices:

- Canopies;
- Awnings;
- Shelters;

#### 5.4.5 Natural Elements

Natural elements which reflect seasonal change should be provided, such as water and trees, shrubs and groundcovers in a variety of colours and textures. Vegetation should never create substantial enclosures from the street for safety reasons.

Plantings should reinforce the basic structure of the plaza, positively shape open space areas, and be functional in defining and unifying streets, paths and open spaces. The natural elements should provide distinct visual identity to key open space elements such as gateways to the plaza, views to amenities and create an atmosphere where the users will want to pass throe.

Plants used in the plaza should be of the highest quality and in sufficient quantity and of sufficient scale to make an impact. Plantings should be selected and located so that their functional and aesthetic qualities can be maximized. Incorporation of irrigation and adequate drainage will help to assure their survival and best possible appearance over time.

#### 5.4.6 Spatial Variety

Unless there is a specific symbolic or functional desire to accommodate large scale activities, large open spaces should be spatially defined into smaller, more easily identifiable and relatable areas. These smaller areas

facilitate orientation and territory definition. People commonly gather at articulated edges in or around a plaza. A distinct sense of place can be achieved, in part, by defining edges and establishing a sense of enclosure through the use of canopies, trees, arcades and trellises.

The spaces inside the plaza should not be designed to accommodate only one use. The success of these spaces will be measured on how many functions the same space can accommodate.

#### 5.4.7 Detailing and Materials

For this plaza to be successful it has to be built of high quality durable materials, which reflect throe out the entire design. The detailing must be consistent or compatible with the surrounding development's architectural language. The plaza design must acknowledge the practical considerations of drainage, non-slip paving, disabled access, easy maintenance and all the above mentioned qualities. Only then will the plaza have a good chance of being successful and surviving time.

### 5.5 Conclusion

The aim is to create an environment that could function on its own, while still being linked to the greater urban fabric. The plaza must support all the surrounding urban fabric by incorporating the right functions into the plaza. There must be integration and overlapping in these of all the above mentioned elements. These integrative social services and public amenities can accommodate a range of demands. The range of opportunities and choices within the plaza are enhanced by creating a place that embraces the user and user's needs. It is thus important to create a place that is environmentally conscious and usable by all types of people.