OPEN SPACES
INTRODUCTION
In this section we analyze design components of parks and other recreational open space that serve to beautify a development. First, we define the different scales of open space. Second, we examine how design components should accommodate different uses of open space and address problems with use. We also look at basic considerations for designing open space, including comfort, visual quality, safety, and access. We will use a variety of case studies throughout our analysis to illustrate our main points. In the fourth section we analyze Holiday Town as an example of open space and address successful and unsuccessful features of open spaces in the development. Much of our work is based on Western data and case studies, because this was the richest information available. We hope to discern the more culturally specific issues of open space in China during our visit in January.

Why have open space?
A Singapore case study of three housing developments (Hee, Tsou, Ooi, and Lam) demonstrates a variety of perceived reasons for having open space in public housing, summarized in Chart 1. Because the most important reason was the improvement of the physical environment, design of open space should be attractive. However, this is not enough. Open spaces can fulfill a number of needs; for example, it is also important for open space to offer safe spaces for solitary time, social interactions, and physical activity. Designers of open space have the ability to facilitate certain kinds of uses.

![Chart 1. Reasons for Using Open Space (Chinese)](chart1)

**Source:** Design, Use & Social Significance of Public Space in Public Housing: Case studies of Singapore and Hong Kong

The Design of open space must also consider convenience, proximity, and level of access. Chart 2 (Hee, Tsou, Ooi, and Lam) demonstrates the frequency of use of public spaces. This study found that residents in Singapore tend to use public space associated with a purpose and nearer to commercial areas most frequently, but parks near the home are more frequently used than central community public space.
While cultural values differ around the world, we may be able to apply Singapore residents’ reasons for not using public space to residents in other countries such as China (see Chart 3). However, these reasons will not only vary according to culture but also according to the intended use of a specific site.

Open space is a necessary component of housing developments, but poor design of open space can lead to unused areas, undesirable behavior, strain on management, and other difficulties. In the following sections, we will attempt to outline methods of creating successful open spaces that are attractive, comfortable, and useful for a variety of residents, appropriate to the scale of the space. In particular, we support what we consider a sustainable version of recreational open space, which includes open space that:

1. is reasonable to manage and upkeep;
2. adds to the value of the development;
3. is flexible in use and therefore adaptable;
4. fosters a sense of ownership so that residents become involved in maintaining the space;
5. and has a positive impact on the surrounding natural resources.
In terms of scale, open space is divided into urban public open space, community public open space, semi-private open space and private open space. In this chapter, we only analyze the first three kinds of open space.

**Urban Public Open Space**

**Size:**
40 feet- 450 feet or 70-100 M
(M Maximum distance for being able to see facial expressions: 20-25 m)

**Service area:**
900 feet or 4- minute walk

**Location:**
Corner location, mid-block location, a widened sidewalk. Mixed use, closed to retail stores & restaurants. Connect to pedestrian system

**Uses and activities:**
Almost all, group and individual use

**Main features:**
Central, equal access, variety of elements

**Case study:**
First National Bank Plaza

**Community Public open space**

**Size:**
various

**2 factors affect the design:**
The overall surrounding housing density & income

**Uses and activities:**
Smaller gatherings and play spaces, multi-purpose but for fewer uses

**Main Features:**
Supplements to public spaces, smaller, quieter, closer to home

**Case study:**
Gore Street Park, Cambridge, MA
Golden gate heights park, SF
Mission dolores park, SF
Boeddeker park, SF
Sidney Walton square, SF

**Semi-private open space**

**Size:**
One house lot wide

**Location:**
Corner lots, mid-block lots, through-the-block lots

**Site selection:**
Four-block radius walking without major streets

**Uses and activities:**
Gardens, visual enjoyment only, circulation

**Main features:**
Near/between buildings, number and location of building entrances determines type and frequency of use. Often separated with fences or landscaping

**Case study:**
Charlie Dorr minipark, Berkeley, California
Urban public open space case study:
First National Bank Plaza, Chicago

Location and context:
cover half block, next to high rise
commercial buildings and small
restaurant building. Access to main
streets and the high rise building.

Size:
100*55 M

Facilities:
Fountain, seatings, large wall of
painting, three levels consist of
squares one upon another.

Activities:
multi-purpose public space for
multi-users, adaptable for special
events such as exhibits and
entertainment programs.

Source: CLIP: Contemporary Landscape Inquiry Project
SUSTAINABLE RESIDENTIAL DEVELOPMENT HANDBOOK

Mission dolores park, SF
Golden gate heights park, SF
Boeddeker park, SF
Sidney Walton Square, SF

Community open space comparison

<table>
<thead>
<tr>
<th>Neighborhood</th>
<th>Density:</th>
<th>Income:</th>
<th>Activities:</th>
<th>Facilities:</th>
<th>Users:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Medium</td>
<td>Medium</td>
<td>More depend on the site</td>
<td>Sports courts, children's playground</td>
<td>Single parents, young professionals, elderly</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>High</td>
<td>Less depend on the site</td>
<td>Sports courts, planting, Benches</td>
<td>Dogs and fairly wealthy couples</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>Medium</td>
<td>More depend on the site</td>
<td>Small sports facilities, children's playground</td>
<td>All ethnic and age groups</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>High</td>
<td>Less depend on the site</td>
<td>Seating, fountain, sculpture, planting</td>
<td>Office workers and families</td>
</tr>
</tbody>
</table>
Case study: Charlie Dorr minipark, Berkeley, California

Location and context:
In a largely black, low to moderate income residential neighborhood. It’s located on a narrow, quiet, tree-lined street of neat single-family houses.

Size:
0.22 acre, Through block lot

Serve area:
Users walk or bike to this park from a 3-4 block radius.

Uses and facilities:
play structure with swings, playfield for children, climbing structure, sand play area, picnic tables, bench and drinking fountain.

Six-to twelve-year-olds form the largest group. Teenagers and young adult amales use the arbor area for hanging out. Relatively few parents come here with their children.

Successful feature:
Good use made of a very small site variety of surfaces, textures, materials, and levels.

From the view of the back, looking toward the entrance.
OVERVIEW OF OPEN SPACE DESIGN
In the following section we will analyze the design of open space according to different categories, including:
1. Use
2. Comfort
3. Visual Quality
4. Safety
5. Convenience/Access

DESIGN ACCORDING TO USE
Parks can designed to accommodate a number of uses. In the following section we analyze use of open space and corresponding design features. Attention to use can prevent conflicts between intended use and actual use, and between adjacent or overlapping uses.

Gore Street Park in Cambridge, Massachusetts will serve to illustrate various aspects of use. Because it is large-scale, it accommodates a large number of uses.
- Scale: Urban public
- Size: 11,770 square meters
- Location: Situated between a Cambridge neighborhood and an outdoor mall (large grocery store, drug store, clothing stores, beauty store, movie rental store, fast food restaurants, and other businesses)
- Uses: Baseball and basketball, ice hockey and skating in an indoor rink, play on two different playgrounds, dog walking, picnicking, studying, socializing, circulation between neighborhood and shopping area

Gore Street Park, Cambridge, Massachusetts, USA
Source: Google Earth
Use: Children 1-5
Children of different age groups require different playgrounds. As Vanke has experienced, cultural standards of play may vary, so equipment built in one country may not be appropriate for the intended age group in another country.

Recommended design elements for children ages one through five include (Marcus and Francis):
- Separated by hedges or fences low enough that parents can watch
- Visible from apartments or from benches beside the play area for supervision
- Located away from busy streets
- Easily accessible restrooms with diaper changing facilities
- Smooth surfaces leading to play area
- Manipulable water space for play (stream bed, fountain)
- Play equipment strong enough for some adult use
- Provide water source for drinking and cleaning

Gore Street Park Playground
(Picture 2, outlined in red in picture one)
Successful features:
- Surrounded by a chain link fence.
- Easy observation by parents
- Near a simple fountain (Picture 3) and hopscotch area (both outlined in blue in Picture 1)

Challenge:
- Located near a busy secondary street
Use: Children 6-12
Children ages six through 12 may require more interactive, exploratory environments.

Recommended design elements for this age group include (Marcus and Francis):
Undesigned component(s)
Varied topography: undulating and flat
Water play: natural streambeds are attractive and interactive
Hardy, low branching trees away from fences and incorporation of other natural elements
Play equipment that require physical exertion and challenge
Loose props: anything from loose boards to actual toys

Gore Street Park Playground
(Picture 2, outlined in red in Picture 1)
Successful features:
Larger playground separated by a fence
Composed of more complex equipment providing greater physical challenge

Challenges:
Close to busy street (Picture 2)
Fountain in park too simple and controlled for optimal play
Does not incorporate many natural elements for play
Simple topography
Use: Teenagers
Teenagers also require accommodation for play and other activities, but often interact in larger groups.

Recommended design elements for spaces accommodating teen uses are (Marcus and Francis):
  Separated or distinguished from other spaces, with ample room for group activity
  Located near busy parts of the park so teens can see and be seen by others
  Near a parking lot so those with other cars can pull in (this may not be relevant in China unless many teens drive)

Spaces for teenagers can also include isolated spots for small groups or couples, but there is a risk that undesirable behavior will be encouraged.

Gore Street Park Teen Use
Successful Features:
  Basketball field, outlined in red in Picture 1, separate from other areas of the park (Picture 2)
  Baseball field, outlined in blue in Picture 2, with places from which to watch games (Picture 3)
  Ice skating rink in front, outlined in purple in Picture 1, in front of which teenagers lounge (Picture 4)
Challenges (Teen Use):
Teenagers’ group size and behavior can lead to conflict of use with other groups. One way to avoid undesirable activity in inappropriate places is to allow for the same activity in controlled environment.

For example, many cities in the U.S. have built skate boarding parks where teenagers can gather in groups and skateboard in a safe environment. Ideally, this prevents damage to city property and prevents illicit behavior by teenagers in groups in unmonitored environments. Parks like this can also be commercialized. For example, a snowboarding store in Boston, Massachusetts offers a skate ramp where young people of all ages can pay a suggested $2 donation each use or a yearly $25 membership.
**Use: Young Adults/Adults**
Adults may use open space for a variety of reasons. As noted in the introduction to this section, common reasons include (Hee, Tsou, Ooi, and Lam): proximity to shopping; to experience a more natural environment; social group activities (eating, chatting, friends, family); small group games; to spend time as couples; to supervise children; and for solitary time.

**Relevant design components** include (Marcus and Francis):
- Easily describable spots for meeting
- Variable seating arrangements, including moveable seats
- Knolls and other more natural spots for sitting and gathering
- Visually attractive walkthroughs and strolling paths
- Design allowing certain areas to be claimed by regulars

**Gore Street Park Young Adult/Adult Use**

Gore Street Park does not offer a wide variety of uses for adults beyond supervising children and dog walking.

**Successful features:**
- A grassy knoll, outlined in red in Picture 1, where adults can read or study (Picture 2)
- Paths and open grassy areas for dog walking (Picture 3)
- Direct pathways to the shopping area

**Challenges:**
- Lacks separate spaces for adult use
- Secondary paths lack privacy or interesting vegetation
- Walkthrough paths are simple and unattractive
- Little variety of features for various group activities
1. Gore St. Park  
*Source: Google Earth*

**Use: Elderly**
Elderly have greater requirements for resting and shade than other age groups. Elderly people may use open space for group gatherings, activities such as tai chi, public solitary time, small group games, and walking alone and in small groups.

**Relevant design components** include (Marcus and Francis):
- Drinking fountains and other nearby facilities
- Limited inclines and stairs with rails
- Benches on pathways, especially at tops of inclines for resting
- Game tables in shelter

**Gore Street Park Elderly Use**
Gore Street Park does not accommodate very much elderly use.  
**Successful features:**
- Pathways are flat and easy to navigate (Picture 2)  
- Small picnic or game tables (Picture 3, outlined in red in Picture 1)

**Challenges:**
- Few benches along pathways  
- Tables are located near children’s playgrounds  
- Few open spaces away from younger, louder users for quieter group activities

2. Flat, even pathways with few benches

3. Group Tables
Use: Circulation
An open space can allow for passage directly through or more leisurely strolling within the park. For safety reasons, it should be decided if bicycles will be allowed to access these paths and whether separate paths should be made for such use.

There should be a hierarchy of pathways in an open space (Marcus and Francis):
1. Main Circulation Routes: Direct but attractive pathways with benches for resting and people watching
2. Secondary Circulation Routes: Meandering paths with different grades moving away from main circulation routes

Bicycle locks (or parking for other personal transport devices) should be placed in open spaces where people might stop to enjoy various activities.

Gore Street Park Circulation and Use
Successful features:
- Straight, flat, direct pathways are provided between the neighborhood and shopping area (Picture 2)
- Various access points allow for more direct circulation
- Bicycle locks (Picture 3)

Challenges:
- Meandering paths could be more complex, private, and interesting
Use: Miscellaneous
There are additional uses for all age groups that may require specific design elements (Marcus and Francis).

Picnicking:
- Group tables
- Communal barbeque located away from apartments to avoid smell
- Spaces to spread out on ground
- Trash receptacle
- Drinking water source
- Bathroom facilities
- Knolls for sitting on the ground
- Good irrigation for the grass

Art Appreciation:
- Sculptures
- Fountains
- Interactive art
- Community art

Gore Street Park Miscellaneous Use
Gore Street Park is currently not well suited for these additional uses.

Picnicking:
Gore Street Park does have ample open green space on which people could have picnics, but there is noticeable waste from dog walking. Communal barbeque facilities also could be provided.

Art Appreciation:
Picture 4 illustrates the only kind of art in Gore Street Park, created by community members on unattractive electrical boxes. Community art could be a way to increase ownership and appreciation of a space.
**Problems with Use:**
When designing an open space, problems with use should be considered. There are various ways in which these problems can arise (Marcus and Francis).

1. **Unintended use**
People may use space in a way that is unintended. In Picture 1, an adult is hanging on the children’s play equipment. As previously stated, young people may engage in sports or activities that were not accommodated in design such as skateboarding, cycling, and roller skating.

2. **Antisocial use**
People may engage in antisocial use such as littering, vandalism, and crime. In Picture 2, a teenager is writing graffiti on a lamp post.

3. **Conflicts between uses**
There may be conflicts between different uses, such as competition for territory or incompatible groups using space nearby each other. This is likely to occur, for example, between teenagers, who may be noisy and gather in large groups, and elderly, who may prefer quieter spaces and may not understand the kinds of activity teenagers engage in.

**Management**
After considering design elements, problems with use can be dealt with through appropriate management. Reasonable rules can be established, such as limited times of use and prohibition of the placement of household garbage in trash barrels. If such rules are to be established, however, they must be enforced. However, while presence of uniformed police may increase feelings of security, it may also limit residents sense of ownership and freedom to use an open space.
Plan for the redesign of Gore Street Park

Source: City of Cambridge Community Development Department
Solutions: Gore Street Park Redesign
Recently, the City of Cambridge decided to redesign Gore Street Park. The Community Development Department drafted a plan and gave residents the opportunity to provide feedback on, revise, and finalize it in three community meetings. Some of the changes driven both by the planning department and the residents who use the park are below.

Landscaping/Beautification:
In redesigning the landscaping, planners were careful not to detract from the sense of openness in the park, highlighting the tension between a desire for a natural, private environment and a safe, open, public area. They decided on the following changes:
- Add ornamental and shading trees
- Remove trees blocking views at access points
- Plant trees as buffer wall between basketball courts and nearby residences
- Consider art or graphic design on the upper panels of the wall of the ice skating rink adjacent to the main path to the shopping area

Sports:
The plan looks at diversifying use of the two sports fields and enabling more spectators though the following changes:
- Split one basketball court into two half courts to allow for more variety of use
- Lower some baskets for younger children's use
- Install drinking fountain at courts
- Enlarge bleachers and install safety rails near baseball field

Use for adults/elderly:
The plan recognizes that not enough uses for adults and elderly people are currently accommodated. The plan includes the following changes:
- Convert the grassy knoll into a garden with nearby game tables
- Create more strolling pathways
- Construct more direct routes to the shopping district and nearby highway

Safety:
The plan attempts to increase the sense of safety, which is especially important because this is a urban public scale park. Changes include:
- Increase visibility near entrances
- Install fence along mall side of the park
- Install two emergency phones
Playgrounds:
Considering the popularity of this park with families with children, much attention was paid to the existing playgrounds. The plan includes updated play areas with the following changes:

- Make playgrounds accessible to persons with disabilities
- Enlarge playground for one to five year olds
- Move playgrounds closer together for easier supervision
- Introduce natural climbing rock with tunnel
- Incorporate more natural materials in general
- Create circular bike learning and riding area at the edge of the playground

Plan for the redesign of Gore Street Park Playgrounds

Source: City of Cambridge Community Development Department