



Creating Accessible Parks and Play Spaces

A How - to Guide for Indian Cities

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Government of India

MESSAGE

'Playing' is an important activity for a healthy and happy childhood. I remember my childhood very fondly as there was lesser traffic on roads and all the children of a locality got together to play cricket in the maidan and even on the streets sometimes - we climbed trees, we fell, we got up and ran again. We had no worries.

I sometimes feel that playing outdoors has reduced considerably for today's children. Not only do they have multiple choices of recreation such as the television and internet, there is always a consideration of safety if children leave their homes. It is essential that our cities provide parks and play areas close to residential colonies so that children and families can access them easily without the worry of traffic and accidents. These spaces are used by children as well as adults and serve as a place for socializing, morning walk, yoga etc.

In India, cities have started prioritising placemaking, walkability and safe streets. The importance of urban design is being acknowledged widely in creating safe, accessible and fun neighbourhoods for families. I cannot stress enough on the significance of well-designed and accessible parks and play spaces. In providing children diverse experiences through physically and mentally stimulating spaces, wide range of opportunities to interact with nature and move around freely, we are nurturing their curiosity and creativity, taking the first step towards a healthier, productive and fulfilling future for our youngest stakeholders.

I am delighted that the National Institute of Urban Affairs (NIUA) has published "Creating Accessible Parks and Play Spaces: A How-to Guide for Indian Cities." Accessible public parks and play zones foster the development of child-friendly environments. I convey my appreciation for the team that worked on this handbook.

I think our cities can learn a lot from this publication and urge NIUA to disseminate it widely. Children need to play, exercise and have a healthy lifestyle, be fit and have fun. We have a responsibility to provide them this freedom and these opportunities.


(Kaushal Kishore)

New Delhi
22 June, 2023

Foreword

Play is at the centre of children's everyday lives. More than just fun and games, play is closely linked to how children learn and grow. Play allows children to develop a sense of well-being, improves their interpersonal skills, and cognitive abilities. It is through play that children learn to explore the world and take responsibility of their own choices. Outdoor play is particularly valuable as it allows children to play in natural environments, engage with other children and different members of the community, and develop social linkages.

Well-designed parks and play spaces are crucial elements in cities to ensure that children have a healthy balance of structured and unstructured play in their daily routine. Irrespective of where they live, children should be able to play freely in their local areas. The opportunities to do so, however, need to be enhanced with high quality design. Poorly designed, unimaginative spaces fail to attract children and communities, and eventually fall into disuse. Sensitive street design, accessible and inclusive parks and play spaces for children of all ages and abilities, which incorporate the needs of their caregivers, would go a long way in creating play and learning opportunities for young children and ensuring usage.

The effort needs interventions at multiple levels. "Creating Accessible Parks and Play Spaces" is a step towards supporting good practice in the development and improvement of public play spaces in Indian cities. It presents guiding principles and suggests approaches to inspire innovative ideas in design of play spaces, which do justice to children's endless capacity of adventure, imagination, and innate sense of fun. The handbook is well timed with the ongoing urban missions such as AMRUT Mission, focusing on enhancing the amenities in cities by creating and upgrading green spaces, parks and recreation centers, especially for all children. We look forward to seeing the guide inspire policy makers, local governments, NGOs, designers and other stakeholders as they work with communities to transform their local play areas.

Rushda Majeed

India Representative

Bernard van Leer Foundation

Preface

With growing urban stresses and hurried everyday lifestyles, play becomes a critical way for children to develop their imagination, dexterity, and physical, cognitive, and emotional strength. Very young children start engaging actively with the built environment in places where they live, learn and play as well as when they move from one place to other. Parks play spaces and open areas make an important place in the early years and development of young children. As these places, actively promote children's play, and support them in developing their motor skills, learn to socialise beyond the setting of their homes and most importantly help them become an active part of the built environment.

In addition to being a critical indicator of overall development and growth, play in the early years of a child, is also a key indicator of an inclusive, equitable and healthy urban ecosystem. The Ministry of Housing and Urban Affairs is actively taking steps through its ongoing urban missions such as Smart Cities Mission & AMRUT Mission ensuring inclusions towards including parks, green spaces, and recreation areas by assuring at least 1 park in each ULB with focused intervention for developing facilities for children of all age groups and abilities.

Creating Accessible Parks and Play Spaces, A How-to guide for Indian Cities comes as a well-timed handbook, for all the mission cities and development agencies, NGOs, architects and planners to take better cognizance of how to design play spaces for children of very young age. Through this handbook prepared under the Child Friendly Smart Cities project at NIUA by Gudgudee and CFSC team, it is hoped that an engaging discourse is initiated, encouraging cities themselves to become catalysts in mainstreaming the needs of children, and contribute to a new form of playable urbanism.

We are thankful to Bernard van Leer Foundation for supporting this study. Kanak Tiwari led the toolkit study with her team: Divya Jindal, Ishleen Kaur Ananta Ganjoo and Mehak Bakshi at NIUA and supported by Gudgudee design studio. We are thankful to NIUA graphics team and Gudgudee design studio for their support with graphics and illustrations.

Hitesh Vaidya

Director

National Institute of Urban Affairs

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Introduction

The Child Friendly Smart Cities (CFSC) initiative at National Institute of Urban Affairs (NIUA) partnered with Gudgudee, a design studio for preparing this handbook, "Creating Accessible Parks and Play Spaces". The handbook draws on knowledge gained from research on early childhood, best practices in creation of play spaces for children, and lessons from Indian culture to create a toolkit of possible interventions for making play spaces accessible, inclusive and fun for all children. The objective of the handbook is to provide a ready reference for Indian cities and local governance to undertake creation of new or regeneration of existing play areas for children and their caregivers. The aim is to provide a resource for decision makers, elected representatives, park designers, communities including parents, teachers and caregivers easy communication of design ideas. I would like to take this opportunity to thank the Director, NIUA, BvLF, and all my wonderful colleagues who helped in bringing this idea to life...

Kanak Tiwari
Team Lead, Child Friendly Smart Cities, NIUA.



Importance of play and play spaces

Play is fundamental to children's happiness and well-being. Active play is not only integral for developing a child's motor skills but also is an important tool for her or his cognitive and emotional development. It is an essential, communicative and engaging method for children in early years to help them understand their environment. While playing, children experience real emotions, learn to adapt to situations, create their own uncertainty, access circumstances, make discoveries and take their own decisions. Play enables children to form friendships and bonds, allowing for the development of familiarity and intimacy. It can provide opportunities for independent learning and building confidence, tolerance, sensitivity, responsiveness and self-esteem. If children's opportunities for play are restricted there are likely to be profound effects on their life experience in general and more specifically on their physical and mental health. Play spaces therefore become vital spaces for a city to ensure that their youngest citizens have long, healthy and happy lives.

Parks, green areas, playgrounds, public plazas, courtyards and liminal spaces in neighbourhoods are shared public assets in cities, which foster community ties and offer opportunities for children, families and caregivers to connect. Play environment in these spaces has a direct link to how children feel, act and behave. While a standard run-of-the-mill park does not add as much value to a child's experience, a vibrant and creative play setting will help stimulate her or his senses, nurture curiosity and encourage greater use of imagination. Similarly, parks and play spaces designed keeping in mind the needs of children of all age groups, social backgrounds and abilities will help build social cohesion and inclusivity in society.

Parks and play spaces in India

India has 472 million children (0-18 years), making it home to the largest number of children in the world. Of this, nearly 128.5 million children (nearly 34% of the urban population) live in urban areas. Although cities present great opportunities for children to live, learn and thrive, the lack of engaging, inclusive and safe outdoor play spaces in these cities has contributed immensely to a rise in passive modes of recreation such as digital games, watching television, etc. This has led to an increase in lifestyle issues among children. Experts have linked the lack of active play to childhood health problems like obesity, rickets and Attention Deficit Disorder, among others.

Most Indian cities are also struggling with per-capita open space availability owing to rampant construction. Delhi has made it mandatory to provide for earmarked green areas at the neighbourhood, community, district and city scale. In these cities, the presence of bylaws and norms have made sure that there is ample designated space in the city for children to play. However, there is not enough information on how these spaces should be designed and built and many of these end up being misused or remain unused. Moreover, while most cities in developed nations have tried to include the needs of children in their planning framework, India has just begun to think about these. In an urban setting where pavements are full of tripping hazards, drains are often left uncovered, and streets are without lighting, important things like street furniture and crosswalks and safe and easy access to parks and play areas are imperative.

Play areas should allow children of all abilities to interact, bond and seek out adventure, irrespective of socioeconomic background and physical or mental ability. However, prevalent norms on parks and open spaces in city master plans do not elaborate on the facilities or design aspects of these spaces.

As a result, most of our parks are mere green or bald patches of land, and lack heterogeneous play environments that enable fun, healthy and brain-simulating interactions among children. They are not universally accessible and lack age-appropriate play equipment and zones where caregivers can sit and keep an eye on children. Sometimes, children and women feel threatened when entering public parks, because these are often seen as under-utilised, unmaintained spaces frequented by anti social activities. As these potentially vital community assets get rejected by a majority of people, parks lose out to parking lots and other encroachments.

Changing this mind-set is critical. Effective design of parks and play spaces can result in creation of

a public realm that is vibrant and inclusive for a variety of groups, including persons with disabilities and senior citizens. The current urban development agenda for India takes this into consideration and provides for the creation and upgradation of green spaces, parks and recreation centres, especially for children, under the Atal Mission for Urban Rejuvenation and Transformation (AMRUT). The reforms, milestones and timelines for AMRUT cities specify the development of at least one children's park every year. With a step already being taken towards making our cities more child-friendly, it becomes crucial to fill the gap between the policies which facilitate the creation of parks and its actual design and implementation so as to make sure that the fruits of good planning get translated on ground and reach all sections of society.



What does this guide do ?

Creating Accessible Parks and Play Spaces- a How-To Guide for Indian Cities tries to bridge the gap between standards, bylaws and on-ground interventions made in parks and play spaces today. While the master plans of a few cities do highlight the space standards for parks at different scales, they are not clear about what these spaces should be like. This toolkit is primarily an idea handbook, and proposes a step-by-step framework to approach the design of parks and play spaces in a more informed manner, from the point of view of children as well as the environment.

Focus Areas

- Aiming at promoting high quality, age-appropriate play spaces for children in a variety of settings.
- The toolkit lists various components (landscape, materials, play equipment, street furniture etc.) which when combined with other components, relevant guidelines or details can lead to spatial interventions focused on various types of play, formal or informal. The interventions may be citizen, community, NGO or government driven and design ideas could be tailor-made to suit the conditions on site, available funding, scale etc.
- The tool-kit could be used as an evaluation handbook to assess what elements of child-friendly environments are present, needed or even absent in play areas today.



Getting Started

This section illustrates the steps to be taken before starting to build/design a play area. They are the basic measures that will shape the design decisions for the playspace and make it more holistic and context-specific.

Types of Parks

This document deals only with play areas within the following categories of designated parks in the city. The categories mentioned here are referenced from the URDPFI Guidelines and the Draft Masterplan of Delhi 2041. Size and specification norms might vary according to different cities. However, the standard categories remain valid for most parts of the country.

*URDPFI- Urban and Regional Development Plans Formulation and Implementation.



**Tot Lots
125 Sqm**

Tot lots are small parks in the middle of the neighbourhood, or small parking spaces, left over spaces turned into play areas for children within 0-5 year age group. Tot lots should be easily accessible (not more than a 10-minute walk away), so they can be an important part of everyday children's play.



**Housing Area
Parks
5000 sqm**

A cluster of play spaces catering to the population of 5000. The housing area parks must be located around the inner streets. There can be upto 2 housing area parks with a total area of 5000 sqm in a neighbourhood.



**Neighbourhood
Park
10000 sqm**

A broad category catering to a population of 10,000 under which following are the two kinds of parks that are included:
a). Neighbourhood park 10,000 sqm
b). Neighbourhood playground – 5000 – 10,000 sqm



**Community
Park
50000 sqm**

The community park caters to a population of 100,000 with a space of around 50,000 sqm. Additionally, it also has a multipurpose area of 20,000sqm that could be used for community gatherings and cultural events. It has a provision for a play area as well.



**District Park
250000 sqm**

The district park caters to a population of about 5,00,000 people. This must include a park of about 2,50,000 sqm and a multipurpose ground of 40,000 sqm.



**City Park
10,00,000 sqm**

The city parks include city forests, ecological reserves, historical sights etc. These parks cater to a population of 10,00,000 people and are assigned an area of 10,00,000 sqm. These parks generally include a multipurpose ground and a play area of 80,000 sqm.



**Specialised
Park**

These parks include historical monuments, museums, biodiversity parks etc. Their sizes vary and are usually close to a district or a city park. These parks include identified play spaces for children within their boundaries.

Location and Context

From the lens of city planning, the location of parks and play spaces holds immense significance in ensuring accessibility and creating child-friendly environments. By carefully selecting the placement of these areas, we can directly influence the ease and frequency with which children, toddlers, and caregivers can access and utilize these spaces. The proximity of parks and play spaces to residential areas, schools, and community centers are pivotal in minimizing travel barriers and promoting inclusivity, enabling children from all backgrounds to engage in outdoor activities and play. Moreover, equitable distribution of these spaces throughout the city is paramount to prevent disparities, ensuring that every neighborhood has fair access to these vital community resources. By considering the specific needs and preferences of different communities and prioritizing safety in the selection process, we can design and establish parks and play spaces that truly cater to the well-being and developmental needs of children, fostering vibrant and child-friendly cities

Why is a Location and context important ?

- Conducting a survey helps in understanding the existing services and resources at the site which can influence the design.
- It helps take an informed decision and develop an area-sensitive programme which is more sustainable. This allows different stakeholders to ensure that the subsequent design of the play space and the play equipment is apt for the specific area allocated.
- Understanding the context with the site survey helps create a matrix of elements that are required for the creation of a successful park.

Things to consider:

1. Site Assessment

The location of a playspace determines its purpose. If a play area is close to a residential community, a lot of families are likely to frequent the space. But if it is near a monument, tourists and children coming for school picnics will be using the space. Every park needs to be designed keeping in mind the user group.

For example - Tot-lots which are often in the community spaces, are small safe play enclosures for babies and young children. Therefore, for selecting a new space for a tot-lot, an area with more trees and less traffic can be chosen.



2. Access

Providing parks within walking distance of homes has long been a basic principle of city planning. However, a play area might be close to a residential community but still not be accessible for children due to busy roads, lack of pavements, pedestrian crossings, or the presence of obstructions. Therefore, an assessment of elements in the neighbourhood that can contribute/hinder access to the play area is essential.



3. Size

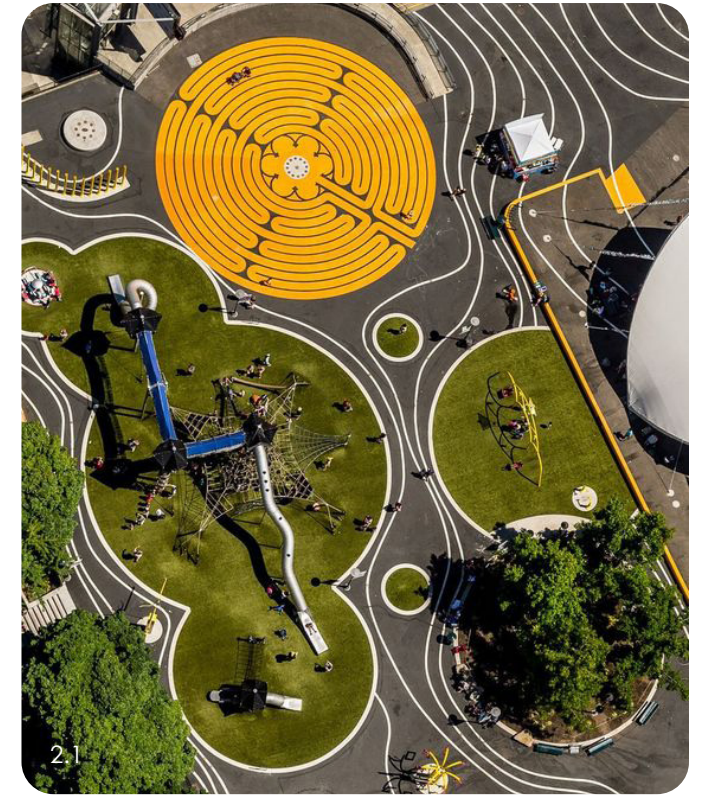
A small area, of under 100 sq.m. in size, may only have space for a few play elements, but it can be creatively designed to make up for the limited room. Meanwhile, a larger area can have zones demarcated informally for different age groups and activities, this will help them play side by side and yet interact with mixed age groups.

For example - In the case of community parks, which cover larger areas, zones can be created for different events/activities. Out of these specific zones can be earmarked for play. In case of smaller parks like tot lots, overlapping zones can be created informally for different play activities like - sensory, cognitive etc (ref- pg25 for more details). Specialised parks such as those around historic monuments can have some interesting contextual play elements that engage adults and children alike.

4. Assessment of geographical aspects

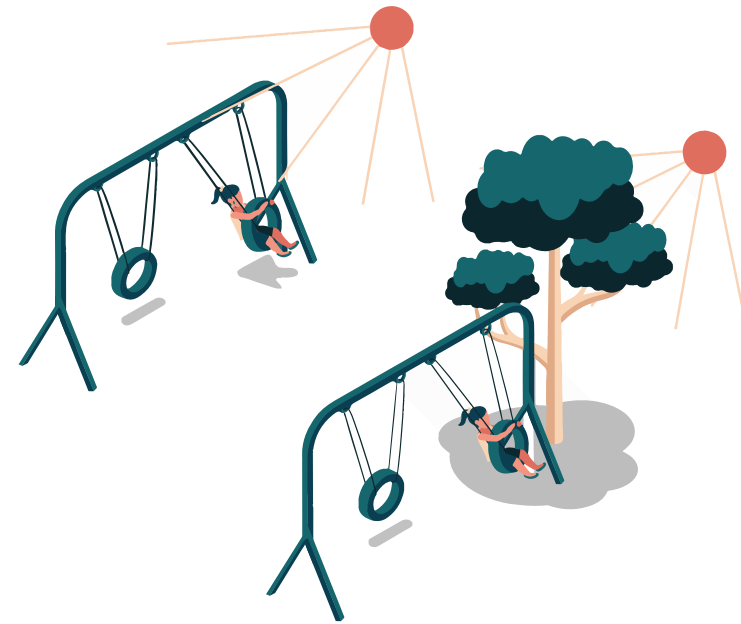
a. Terrain

All play spaces do not need to be levelled. In some cases, they can follow the natural contours of the terrain to make them more interesting and fun. The natural terrain can also help us understand water flow, drainage and other crucial elements.



b. Sun direction

Some play areas are used in the afternoon, while others are used in the morning and evening. By accounting for sun direction and context of the play area, we can ensure that users find it comfortable to play there at different times of the day. Foliage/ shading structures can be planned accordingly.



c. Water Bodies

The presence of a water body in the vicinity adds to the play experience immensely. Care needs to be taken that the water is not deep and does not have a strong current. And if it does, fencing needs to be planned and a security person/lifeguard needs to be appointed.

5. Existing and potential resources

a. Flora and fauna

Assessment of existing trees and vegetation should be done in terms of species, girth, height, canopy size, type (fruit/flower-bearing), etc. Thorny and poisonous species should be removed from the site to avoid potential hazards to children.

b. Services

Take cognizance of existing electricity, water supply and sewage lines while planning the space in order to avoid mishaps.



Zoning

Zoning is the foremost challenge while designing or developing a play area. It can be done based on age groups or activities in the play space. Zoning involves the division of the entire space into simpler portions to make the best and most efficient use of a given area.

Why is zoning important ?

- Zoning the play area avoids conflicts that may happen among age groups due to different interest points.
- It also makes it easier for children to navigate the space.
- Zoning helps utilise the space effectively and incorporate activities and elements for all age groups.

Zones :

- Based on Age Groups
- Based on Activity

Things to Consider:

1. Zones based on Age groups

Any play area in a public space is frequented by children of different age groups. Zoning the play area according to age group helps avoid conflicts that may happen due to different interest points. Creating age-appropriate zones help in setting up the right equipment and space based on the anthropometric dimensions of that particular age.

Mixed age play

Children of different age groups playing together is beneficial for both younger and older children in terms of developing skills of negotiation, team spirit, responsibility and caring. Play areas should also have common spaces where children of all ages can gather and play together.



Infants
(0 - 2 yrs)



Toddlers
(2 - 4 yrs)



Young Children
(4 - 12 yrs)



Teenagers
(13 - 18 yrs)



Adults
(18+ yrs)

2. Zones based on intensity of activity

The play area can be divided into zones based on intensity of movement and type of activity. This reduces instances of injury and provides space for children who prefer quieter, less intensity play activities. These divisions will work great for a neighbourhood parks which have sufficient space and are frequented by children of all age groups.

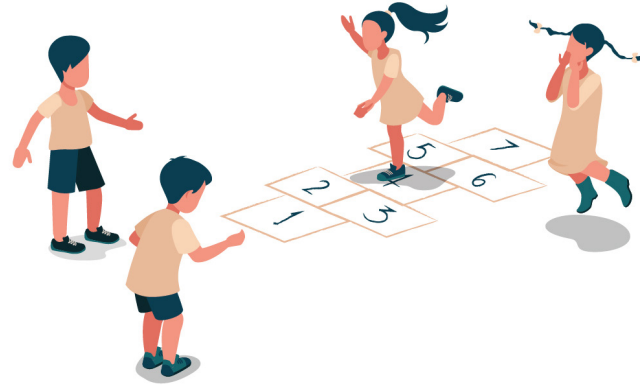
A. Low Velocity

Equipment/activities that involve less physical movement, such as sand pits for toddlers, gazebos for seating, etc.



B. Moderate

Equipment like climbers, sound equipment or open spaces where children can play floor games, etc.



C. High Velocity

Dynamic play equipment like swings, spinners, etc. or open grounds where children run around, skate or play sports like cricket or football.

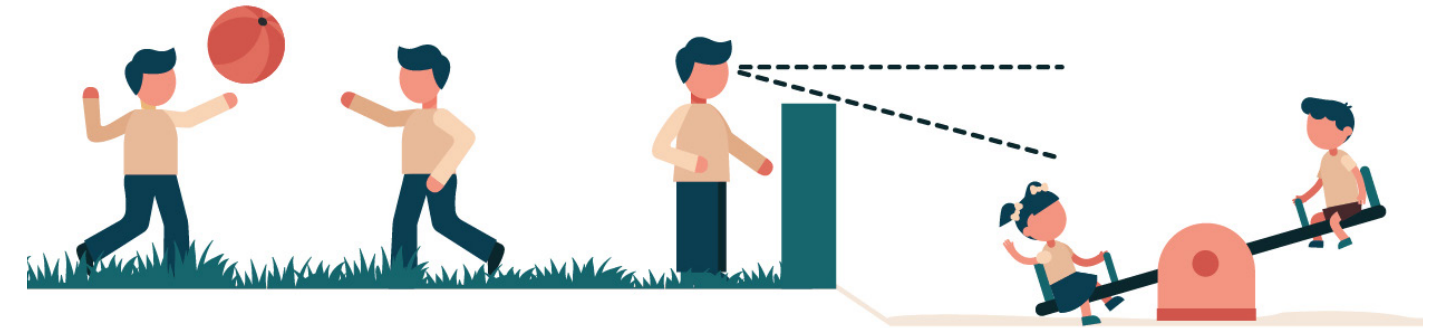


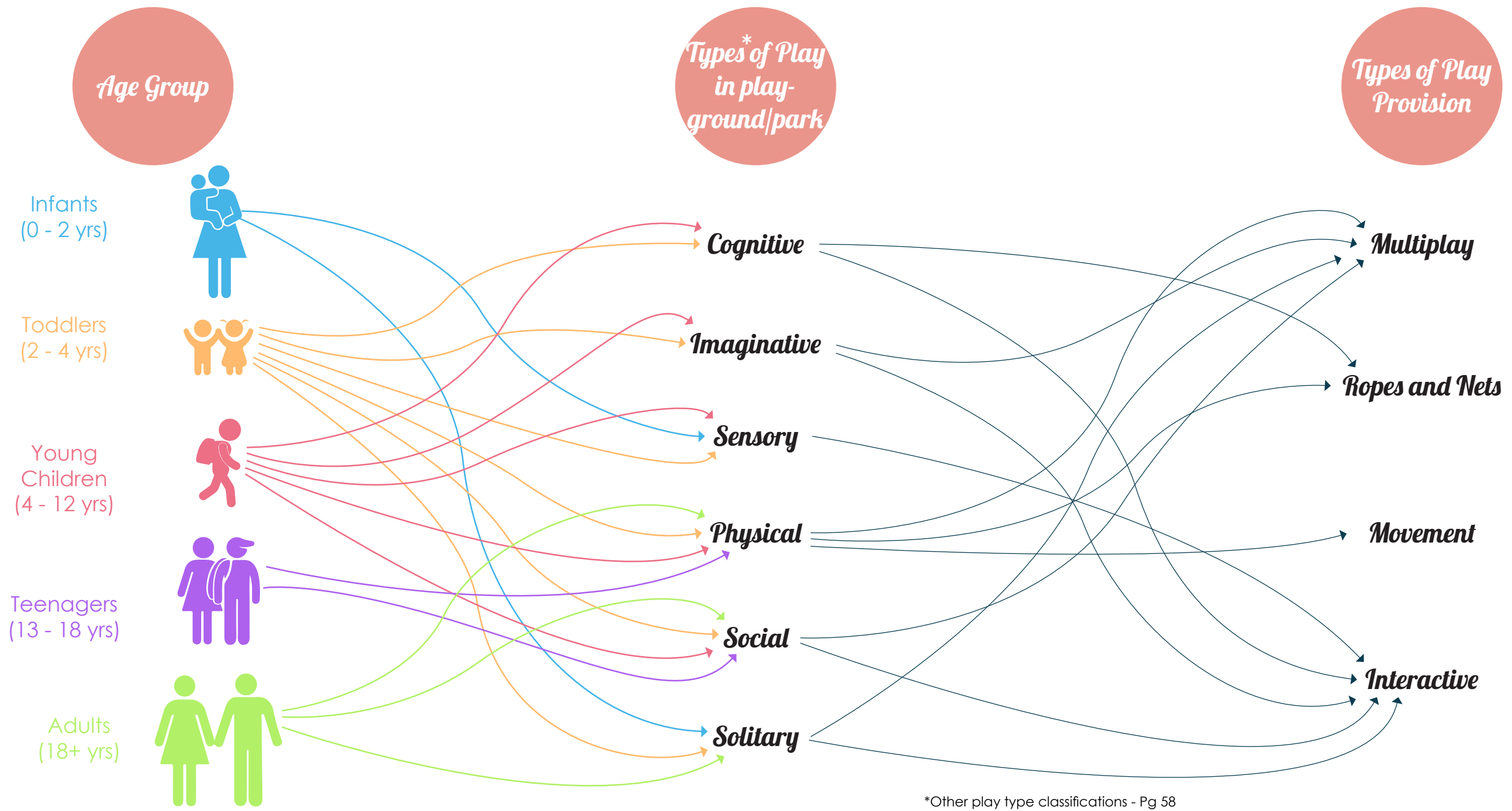
3. Demarcating Zones

Creation of zones in the playspace can be done effectively through small interventions. There are 3 ways to demarcate the zones:

- Through planting of shrubs and plants
- Subtle level differences
- Surface treatments
- Using play equipment
- Design features such as water elements
- Placement in relation to building

The visual connectivity between different zones should be maintained.





*Other play type classifications - Pg 58

Cognitive

Age Group :

Toddlers (2 - 4 yrs)
Young Children (4 - 12 yrs)

Types of Play Equipment :

Ropes and Nets
Interactive

Drums to play music are a great way to develop and exercise your neurons.

Social

Age Group :

Toddlers (2 - 4 yrs)
Young Children (4 - 12 yrs)
Teenagers (13 - 18 yrs)
Adults (18+ yrs)

Types of Play Equipment :

Multiplay
Interactive

Telephone pipes are a great way to encourage making friends as it needs a person to talk to.

* Other Classifications to understand types of play-

Mildred Parten Newhall's ; Bob Hughes'

Imaginative

Age Group :

Toddlers (2 - 4 yrs)
Young Children (4 - 12 yrs)

Types of Play Equipment :

Multiplay
Interactive

Multiplay equipment with suggestive elements can trigger stories for pretend play activities.

Solitary

Age Group :

Infants (0 - 2 yrs)
Toddlers (2 - 4 yrs)
Adults (18+ yrs)

Types of Play Equipment :

Movement
Interactive

Sand pits are usually a great hit with children who want to explore on their own for some duration.

Sensory

Age Group :

Infant (0 - 2 yrs)
Toddlers (2 - 4 yrs)
Young Children (4 - 12 yrs)

Types of Play Equipment :

Interactive

Interactive walls with tactile and visual elements can be really fun sensory elements.

Physical

Age Group :

Toddlers (2 - 4 yrs)
Young Children (4 - 12 yrs)
Teenagers (13 - 18 yrs)
Adults (18+ yrs)

Types of Play Equipment :

Multiplay
Ropes and Nets
Movement

Spinners that allow children to spin themselves are not only great fun but also helps build vestibular and balancing skills.



Landscaping

Landscaping is comprised of two parts:

- Softscape
- Hardscape

When used effectively, both can expand the area of play beyond just the play equipment. Landscaping helps make the play experience more holistic and user-friendly.

Connection with nature is an essential element for children's holistic development. Apart from designated parks, cities can facilitate interaction with nature in spaces such as botanical gardens, urban farms, biodiversity parks and nature trails.

Softscape

Softscape includes the design and planning of plants and trees and their locations. This brings children closer to nature and sensitizes them to local flora and fauna. Children are the future, and they should understand that being close to nature is the first step towards sustainable living.



Things to Consider:

1. Type of vegetation

Identify local species of plants and trees that can be planted in the play space. Steer clear of thorny and poisonous varieties while doing so. It is ideal to plant both fruit-bearing and flowering species. Ensure visual variety, with leaves, fruits and flowers of different sizes, shapes and colours. Having different-smelling plants can also be an interesting addition.



All the plants, shrubs and trees shown in the following pages are labelled based on the below mentioned 8 categories.

- | | | | |
|---|--------------------------|-----------------|------------------------|
| CO Colour - Sight (flowering plants) | TX Texture | SC Scent | SH Shade loving |
| BB Attracts Bees & Birds | W Water resistant | T Taste | F Form |

A. Plants, Shrubs & Herbs

Angelonia



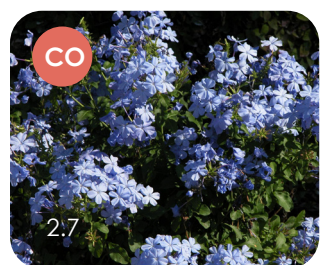
Stachytar



Ipomea Rubra Caerula



Plumbago Capensis



Rain Lilies



Bottle Brush



Cana Red



Wedalia Trilobata



Bamboo Grass



Sadaphuli



Pedilanthus



Syngonium



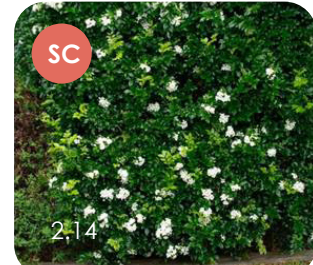
Double Mogra



Garlic Creeper



Kamini



Lemon Grass



B. Trees

Queen of Night



Ajwain



Mint



Calathea



Neem



Gulmohur



Banyan



Calathea



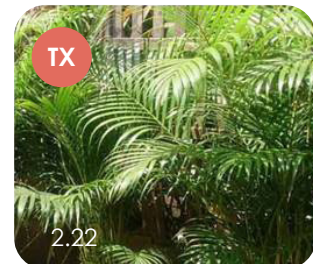
Chlorophytum Cosmosum



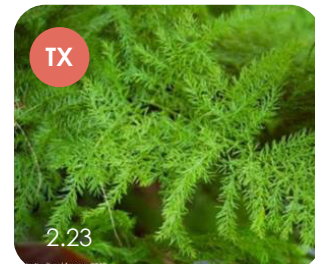
Peace Lily



Areca Palms



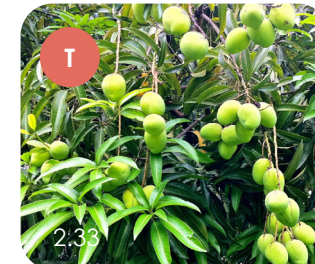
Asparagus



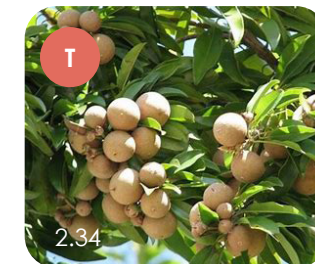
Champa



Mango



Chickoo



-In consultation with Anushree Chitnis (Landscape Architect)



Colour - Sight (flowering plants)



Texture



Scent



Shade loving



Attracts Bees & Birds



Water resistant



Taste



Form



Colour - Sight (flowering plants)



Texture



Scent



Shade loving



Attracts Bees & Birds



Water resistant



Taste



Form

2. Spatial qualities and location of different types of vegetation



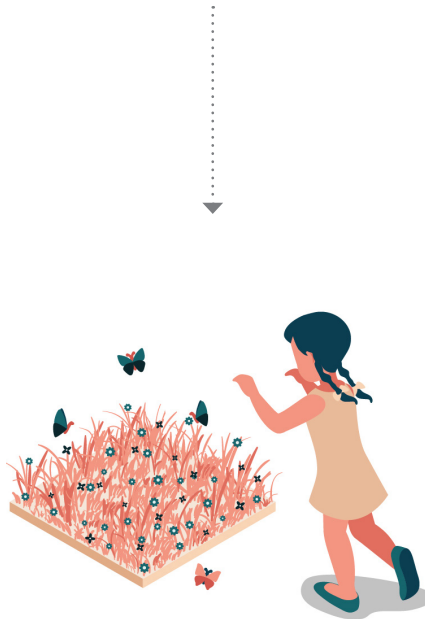
Grass

Provide ground cover for play areas in low velocity and moderate movement zones



Flowering Plants & Herbs

Can be used in the play area near low velocity play zones or along pathways.



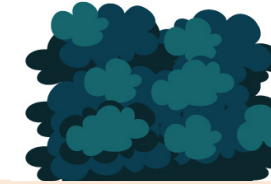
Small Shrubs

Are ideally placed near walking paths and for dividing zones to maintain visual connection while physically segregating the spaces.



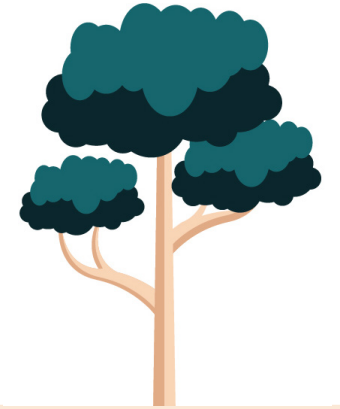
Creepers

Can be used on fences and boundaries to make them look more pleasant.



Tall Shrubs

Can be used along the boundary walls or fences to visually block off the road side



Trees

Trees shade the space to make it user friendly on hot sunny days. Large shady trees can be planted near play and seating areas.



Hardscape

Hardscape includes the design and planning of pathways, pavements, fences and other civil work. This is required to access play areas.

Things to consider:

1. Pathways

- Use stone or pavers which are low-maintenance, age well and are permeable to absorb rain water.
- Use paving that enables access for wheelchair/ baby carriage use.
- Use different textured materials to enhance the playfulness.
- Demarcate the edges of pathways with differently textured materials to help the visually-limited access the space better.

Shown below are some of the types of stones/pavers that can be used for pathways.



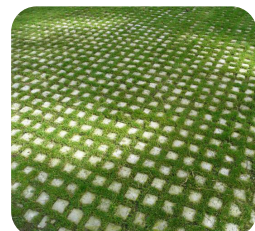
Uneven pieces of local stone with gravel in between



Paver Blocks



Cobble Stones



Concrete grass pavers



Pebbles

2. Decks & Gazebos

- Create adequately large spaces with seating where groups of people can gather.
- Decks can be placed near lakes or water bodies or any other location with a view.
- Both these hardscape elements can be creatively designed to attract users.



Water Features

Parts of the area's natural landscape can be dedicated to water features. The experience of playing with water and being closer to nature boosts children's creativity and immunity. The addition of fish and ducks to the water body can help maintain the natural ecology.

Things to consider:

- Identify existing water catchment areas to channelise water for play.
- Water features can be temporary and not perennial (i.e. lasting through the year). Some may exist only during the rains.

The following water features can be utilised both naturally occurring as well artificially created:

1. lakes
2. nallah/canals
3. swales- shallow water channels
4. waterfalls
5. lotus ponds
6. duck and fish pond
7. fountains
8. splash pools
9. water channels



2.42

Imperatives

This section talks about the basic building blocks that are indispensable to every play space, irrespective of its geographical or cultural context. These aspects, if taken into consideration, can make the play area relevant to a larger audience.

Inclusive

As public spaces, play areas should be accessible to people from different walks of life. Everyone, especially children should be able to enjoy such spaces to the fullest. It is really important to design Inclusive play areas where all children can engage, play together and have fun irrespective of their age, class, gender, socio-economic backgrounds or abilities to ensure that there are no prejudices in their minds as they grow up.

- When children with different social and cultural backgrounds play together from a young age, it instils values of tolerance and empathy.
- Inclusive public spaces encourage mutual understanding and friendships and create a true feeling of community.
- Public parks should not have any religious or caste based props, rules, symbols to make sure people from all social groups feel welcome.



Accessible

The idea of accessibility goes beyond the provision of gates and paths or even access to wheelchairs. Inclusive and accessible play areas are multi-sensory spaces designed to give every child, age-appropriate opportunity to have fun, learn and grow through play.

- Every child, irrespective of physical and mental ability, has the right to play and should be able to access play spaces.
- It is important to ensure accessibility of caregivers of children to these play areas and ensure facilities for the same.
- Entry fee to play areas excludes people from lower economic backgrounds to access the space as they can not pay for it.



Things to Consider:

1. Equipment

Play equipment should be chosen keeping in mind wheelchair users and children with multiple disabilities. When we choose sensory play, we ensure that all children can play together. Even if a child is limited in one faculty, he or she can play using the other ones.

Examples -

1. Basket swings and basket spinners that allow children with low motor control to enjoy themselves. The basket ensures that they feel safe while enjoying the movement.
2. Wheelchair-accessible spinner, which is at floor height.
3. Sensory equipment for different senses: hearing, smell, touch and sight.

- Referenced from Breaking Barriers through play by Kavitha Krishnamurthy at Kilikilli



3.3 Basket Swings



3.4 Wheel chair Accessible Spinner



3.5 Sound Play Equipment - Telephone Pipes, Bamboo Chimes



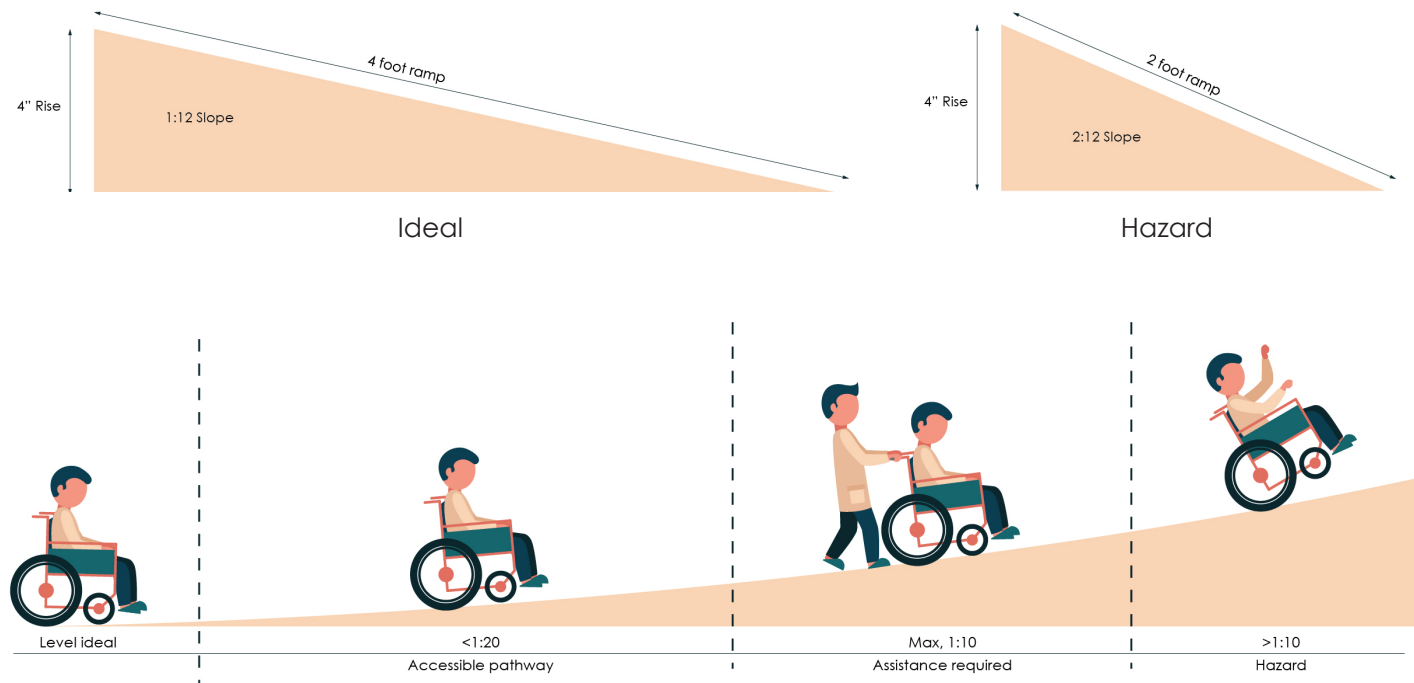
3.7 Park in Madurai



3.8 Wheel chair Accessible Trampoline

2. Access

- Entrances and pathway should be wheelchair accessible and at least 4 ft. wide. The appropriate angles for ramps are shown below.
- This will also ensure that mothers with prams and older people can navigate the park easily.



- Data and numbers referenced from ADA (Americans with Disabilities Act)

3. Maps and Signage

- Signage in the park should be in simple font so that people with vision-related challenges can understand them.
- It is ideal to make the signage also available in Braille.
- The signage should be positioned so that it is free from any visual obstruction at a height from which it is easily visible to children.
- The design and graphics of the maps and signages should be such that they can be understood by the children as well.



4. Facilities

- Facilities like drinking water and toilets need to be accessible with appropriate ramps, railing and heights.
- Such facilities should be available for children as well as their caregivers.
- Seating for adults in close proximity to where children are playing is also seen as a good way to help young children feel independent while being visible to parents/ caregivers.
- While children play, parents/caregivers also need to engage themselves otherwise they may want to leave even though the children may want to stay. Jogging tracks or outdoor gyms can be a useful addition in parks.



Safe

Safety of children is of utmost importance. Play areas need to be challenging and fun but at the same time, they have to be safe and there must be no compromise with the well-being, health or safety of any child.

In the interest of public safety - all products that are installed in public parks must be tested and certified to meet prevalent international safety standards from the specified notified international certifying body.

Managed Risk

Children both need, and want to, take risks in order to explore their limits and venture into new experiences. Any injury is distressing for children and those who care for them, but the experience of minor injuries is a universal part of childhood and has a positive role in a child's development. While no play space can be free of injuries, it is important to ensure that the injuries are only limited to minor nicks and scratches and do not turn into life-threatening hazards.

Safety Standards

All products installed in public parks including children's playground equipment, outdoor gyms etc must be tested and certified to meet prevalent international safety standards such as -
ASTM or EN1176 for playground equipment
EN16630 with GS test mark.

Such certificates must be issued by a reputed notified international certifying body such as IPEMA, TUV, CPSC, SGS only.

These certificates must be clearly displayed on the notified certifying bodies website as online verification is mandatory to verify authenticity during opening technical bids.



Things to consider:

1. Flooring

A playground should be a space where children are free to explore. In the process, they may also fall down and have accidents. It is important to use appropriate flooring material based on the zone to prevent major accidents.

Impact attenuated surfacing is a critical aspect under the safety purview. Safety flooring should be installed in playgrounds which satisfies the criteria listed in the international safety standards EN 1177. A specific test method would be required by which the impact attenuation of the surfacing can be determined. The test will give a critical fall height for the surfacing, representing the upper limit of its effectiveness in reducing head injury.

Shown below are some of the flooring materials that can be used:



Rubber Tiles

- Available in a standard size
- 4 to 5 colour options
- Requires a concrete base for installation.
- Cost effective as compared to EPDM.



E.P.D.M

- Available in a pellet form and can be used to create patterns on the floor.
- 10 to 15 colour options
- Requires a concrete base for installation.



Grass

- The right species needs to be selected based on the soil type and availability of sun light.
- Will need regular removal of weeds.



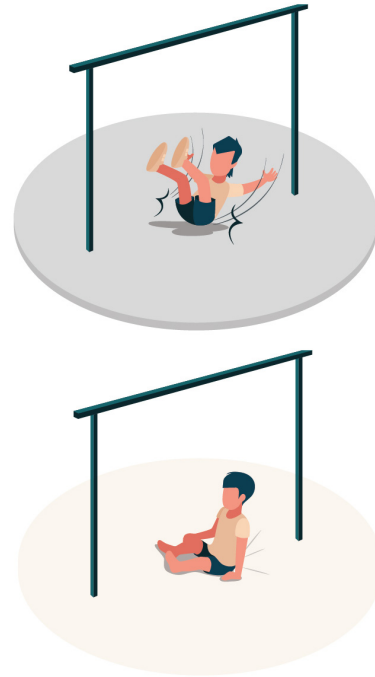
Sand

- Needs to be cleaned regularly.
- High on maintenance and is not suited for windy or areas with very heavy perineal rainfall



Compacted soil

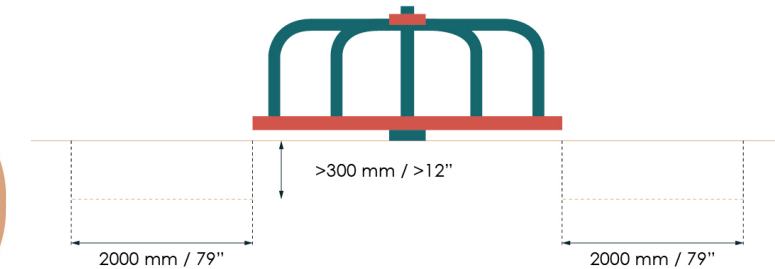
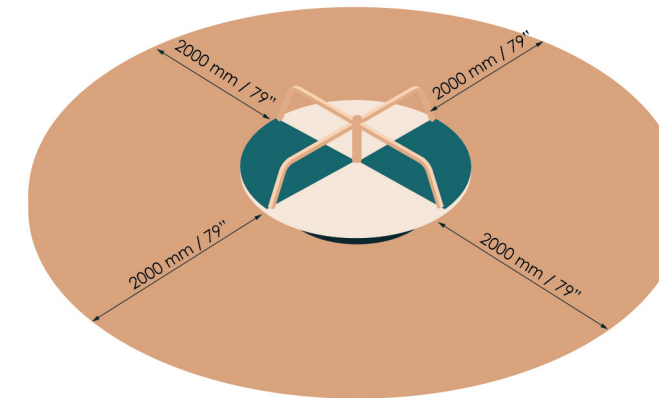
- Drainage and slopes need to be planned properly to prevent water logging or erosion.



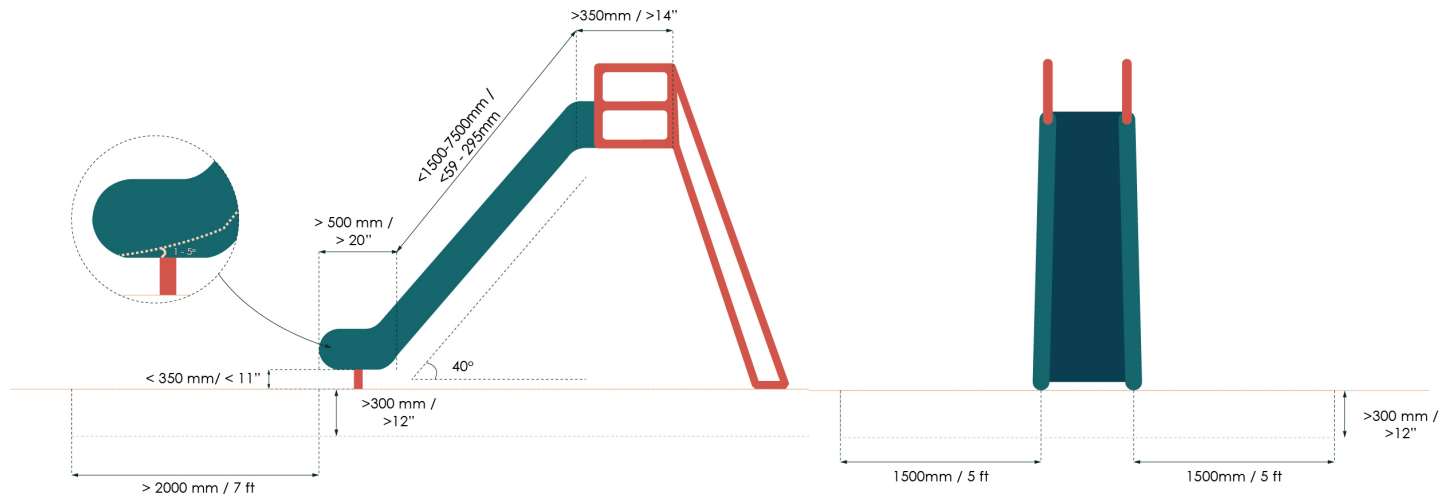
2. Buffer Zones

Buffer zones are safe spaces required between two play equipments, or play equipments and other areas like pathways or seating. Buffer zones are necessary to prevent accidents.

- Leave around 2 metres space around spinners to avoid accidents caused by children crashing into neighbouring objects while spinning.
- Slide landing area should have a buffer zone of at least 1.5 metres.
- There has to be at least a 2 metre-gap between two climbing structures to have a safe fall zone.
- Swings should be spaced at least 1 metre apart and 0.6 metres away from the support frame.



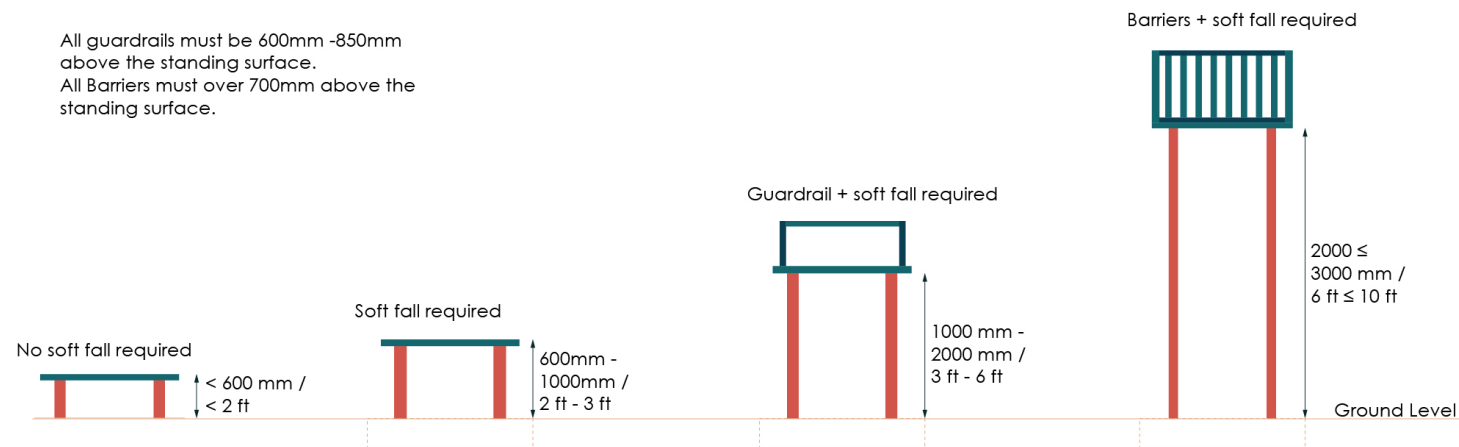
- Referred from the 'Playground safety handbook' by Playground Ideas, Australia.



- Taken from the 'Playground safety handbook' by Playground Ideas, Australia.

3. Heights

All guardrails must be 600mm -850mm above the standing surface.
All Barriers must over 700mm above the standing surface.



- Referred from the 'Playground safety handbook' by Playground Ideas, Australia.

5. Correct Installation

- Installing equipment correctly can add to the life/durability of the equipment and is also necessary for the safety of the children.
- Ensure that all bolts are fastened and covered properly to avoid any kind of vandalism.
- The ground should be levelled to be able to install the play equipment properly.
- For concrete bases and concrete-based elements, adequate curing time should be given.



6. Lighting

A dim, dark space is always perceived as unsafe. Therefore, to create a sense of security and safety for women and children using the park in the evenings, it is important to have sufficient lighting.

7. Pathways

Pathways for movement in the park need to be clear of obstruction and be at least 4 ft. wide for easy wheelchair movement.

Gender Neutral

Both girls and boys should be given equal opportunities and space to play. As young children their likes and interests do not fall neatly into "boy" and "girl" categories. Therefore, playground element design must be devoid of such differences.

Why is this important?

- Gender roles can feel limiting to children.
- Play defines/affects behavioural patterns in children.
- Creating a play environment where girls and boys can play together instills values of equality and empathy.



Things to consider:

1. Activities

- Defining play activities by gender roles should also be avoided. For example, making doll houses only for girls, and offering adventure sports only to boys is not a great idea.
- Every child should be given the opportunity to select the equipment or activity based on her or his individual interest.



2. Colour

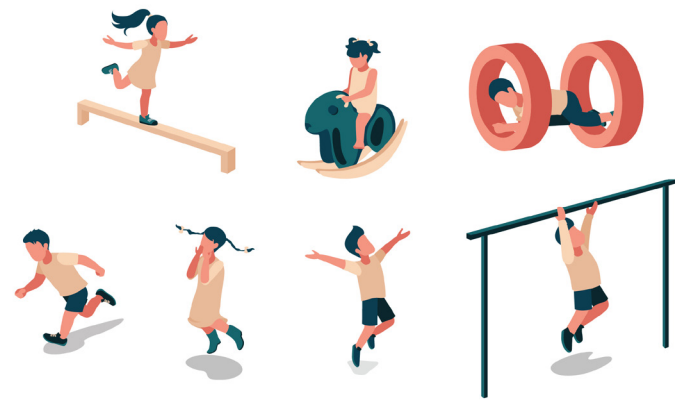
- Avoid using pink for girls and blue for boys. It instils unnecessary gender stereotypes that stay for a lifetime.

Design for Play

This section helps to think of a playspace beyond just the typical swings and slides. It illustrates the different types of play and how these change with age, providing a perspective into the possibilities available while designing for play.

Types of Play

Play is more than just physical exercise. Playgrounds should create an environment for a child's overall development. In fact, play is so crucial that it is often referred to as 'children's work'. Play is important for children's social, emotional, cognitive and physical development. In this section, we discuss the different types of play that can be integrated in playground design.



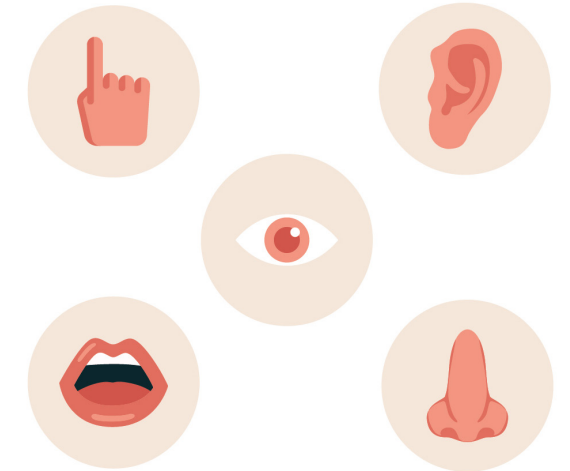
Physical

Playgrounds often serve as unrestricted spaces where children can channelise their energies and feel free to get involved in any physical activity. Play equipments should be able to provide for different kinds of physical movements like running, jumping, balancing, climbing, crawling, stretching, spinning, etc.



Cognitive

Different studies in neuroscience have proven that the maximum amount of brain development happens by the age of six. Therefore it is essential that play spaces also include activities that encourage children to explore, think and ask questions.



Sensory

Sensory play is related to the 5 senses: hearing, smell, touch, sight and taste. Sensory equipment is also inclusive as it helps children who are limited in one sense to play using the other.



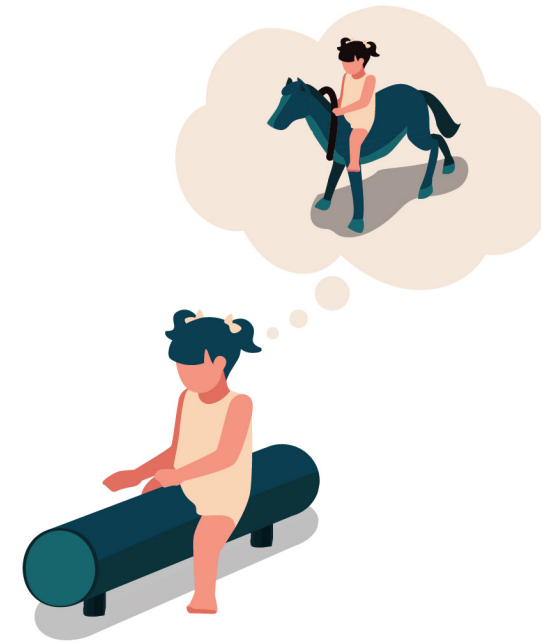
Social

Important social skills like communication, co-operation, sharing, taking turns, etc. can also be learnt on the playground. These social skills are essential for the healthy overall development of a child and remains with her/him for a lifetime.



Solitary

Along with opportunities to play with others, playgrounds should also have activities/spaces where a child can play alone. This gives shy children, or those with sensory issues, a safe space to withdraw to.



Imaginative

Children have good imagination. Giving them the opportunity to interact with abstract forms that they can interpret on their own boosts their creativity and imagination.

Other Play Classifications:

Mildred Parten Newhall's - six types.

1. Unoccupied Play
2. Solitary Play
3. Onlooker Play
4. Parallel Play
5. Associative Play
6. Cooperative Play

Bob Hughes' - sixteen types.

1. Symbolic Play
2. Socio-Dramatic Play
3. Creative Play
4. Communication Play
5. Deep Play
6. Dramatic Play
7. Exploratory Play
8. Fantasy Play
9. Locomotor Play
10. Mastery Play
11. Object Play
12. Recapitulative Play
13. Role Play
14. Rough and Tumble Play
15. Social Play
16. Storytelling/Narrative Play

Play for different age groups

Play is nature's way of developing a child's brain. Children have different play requirements at different ages. Their skills develop gradually, and enhancing these values and skills at the right age is necessary. For infants, toddlers and young children, provision of proper seating space for caregivers is essential as their presence is a source of feeling of security and re-assurance for the child.



Infants
(0 - 2 yrs)

Play for infants constitutes movement of hands and legs, crawling, learning to sit, stand, walk and finding wonder in everything around them



Toddlers
(2 - 4 yrs)

Toddlers play with toys, mud, objects and make more complex movements. As they are in the stage of learning languages, they also talk and scream and express .



Young Children
(4 - 12 yrs)

After age 4, children start to play in groups and have simple, organised games. They develop the skill to define rules and organise play.



Teenagers
(13 - 18 yrs)

Teenagers are inclined towards organised sports that may require infrastructure like badminton courts, skating rinks, etc. They generally enjoy playing in groups with friends.



Adults
(18+ yrs)

For adults, playing helps them release stress. Accompanying children to parks and laughing at their antics builds bonds and instills a sense of family and community.



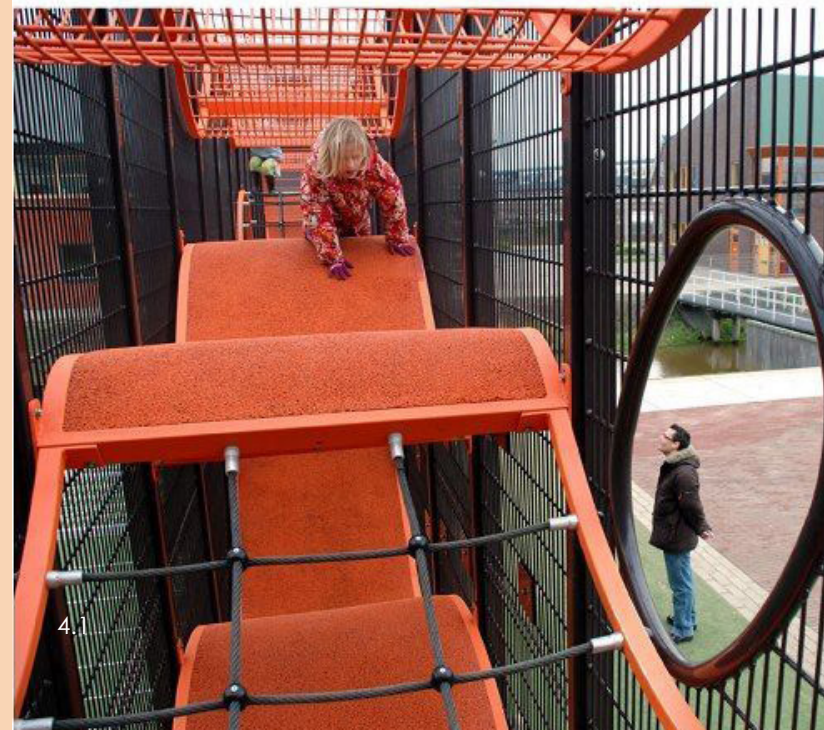
Elderly
(60+ yrs)

The elderly form groups that meet regularly in parks for morning/ evening walks, yoga and other activities. Many of them may have restrictions in movement and may need to rest often.



Types of Play Equipment

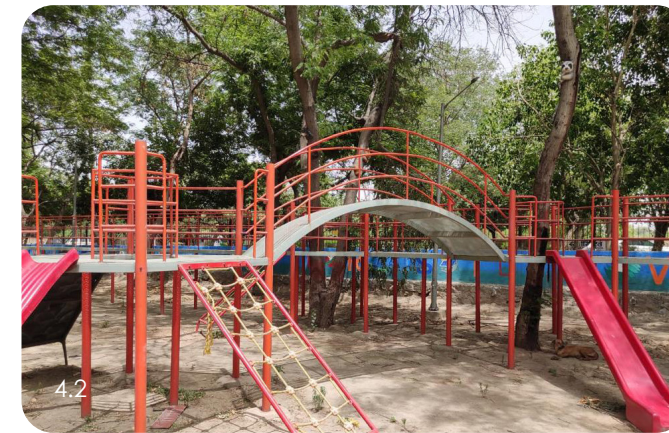
While thinking of play equipment, we sometimes limit our imagination to swings and slides. Including a varied set of play elements can make the play area more engaging and relevant for different age groups of children.



Things to consider:

1. Multiplay

Multi-play equipment allows children to play together as a group. It also incorporates many different play elements within one single equipment.



2. Rope & Net Structures

The flexibility of ropes and nets make them great for creating complex climbing structures. It also caters to the idea of adventure playground within a safe environment of play spaces.



3. Movement

Equipments that allow movement like spinning, swinging, sliding, etc. help children develop motor skills. Skating and skateboarding arenas are also interesting additions for the park.



4.11

Swings for parent and child



4.10

Slides



4.12

Swing



4.13

Stepping Stones



4.15

Basket Spinner



4.14

Group Spinner



4.16

Trampolines that wheelchair users can also use

4. Interactive

Interactive play involves and engages the child with the equipment and enables them to use their senses of hearing, smell, touch and sight.



4.18
Drums



4.17
Shades with colourful shadows



4.19
Xylophone & Tembos



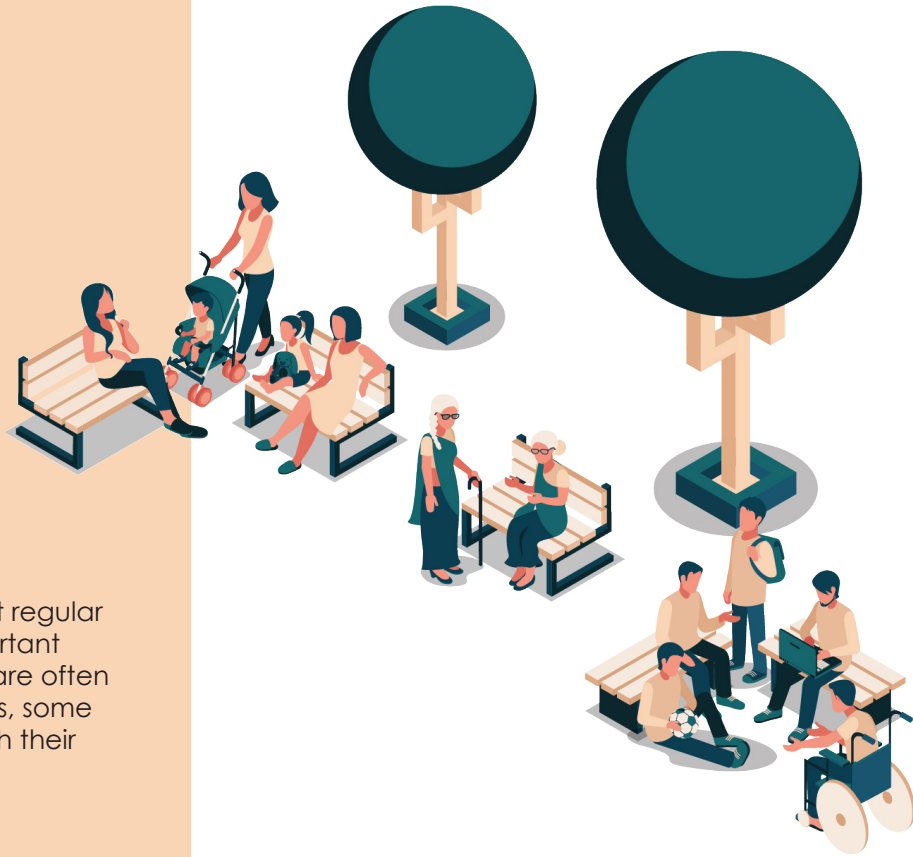
4.20

Beyond Play

Play areas are essentially public spaces that are used by people of all age groups for various activities. This section talks about the elements that need to go into the space besides the play elements, to make it a successful community area.

Seating

While playing, children require rest at regular intervals. This makes seating an important aspect of the playground. Children are often accompanied by parents/caregivers, some of whom might want to sit and watch their children play or simply just relax.



Things to consider:

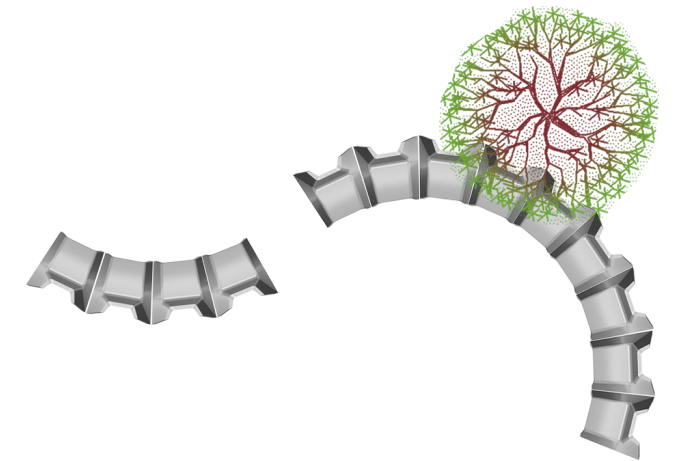
1. Location

- Seating can be created under trees for shade and fresh air.
- Seating should be provided in the vicinity of the toddler's play area so that the parents/caregivers can keep an eye on their ward(s) and provide assistance when required by the children.



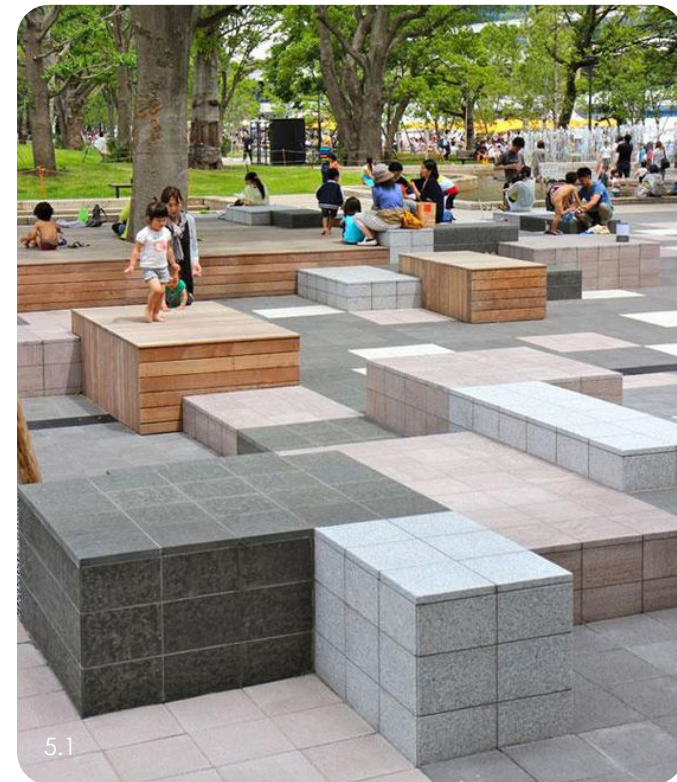
2. Arrangement

- Instead of linear seating arrangements, opt for more radial arrangements that allow groups of people to sit facing each other.
- Being public spaces, play areas should encourage interaction.
- A certain amount of distance needs to be maintained between seats to avoid uncomfortable situations.



4. Type

- Every park should have different kinds of seating: some with backrests and armrests, and some more informal and sculptural.
- Comfortable benches with hand rests and backrests should be provided for senior citizens and people with special needs.
- Some of the seating should also be at the height of children so younger kids can easily access them.



Signage & Maps

Every park/playground should have signages. This helps the users to understand and navigate the space with ease.



Things to consider for Signage:

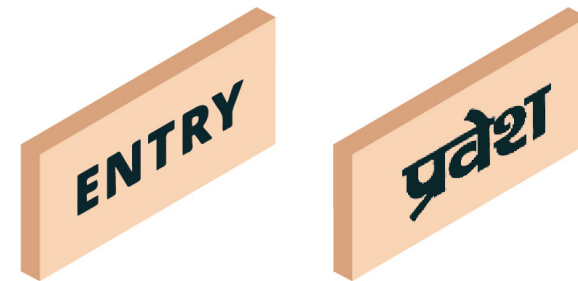
1. Play equipment in parks is often misused because there is no clear information mentioning the age group it is designed for. Signage regarding appropriate usage should be placed close to the equipment to ensure that the users are aware of the information.

2. The signage should indicate the entry and exit points, washrooms, drinking water and other features. This may need to be often repeated across the park at multiple locations for easy understanding.

3. Signages at the entry and exit should provide contact details of persons/agencies managing the play space to enable people to repair and replace broken equipment and handle other issues.

4. Parks and playgrounds are visited by people of all ages and abilities. The signage must be designed to cater to them all.

- Every sign should also cater to people with visual limitations. The signs should use legible fonts and appropriate font sizes on a material that doesn't glare.
- It is ideal that the signage is also in Braille
- The colours used should have high contrast, i.e. a lighter background must have brighter text on it, and vice versa.
- Creating signage in local languages and an official language also makes it relevant for a larger audience.



Things to consider for Maps:

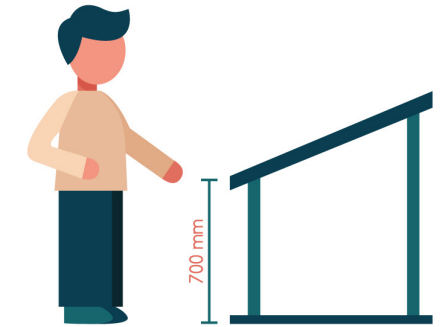
1. Having an overall map of the park at the entrance helps the users navigate the space, easily identify exits, entries, washrooms and other features of the park.

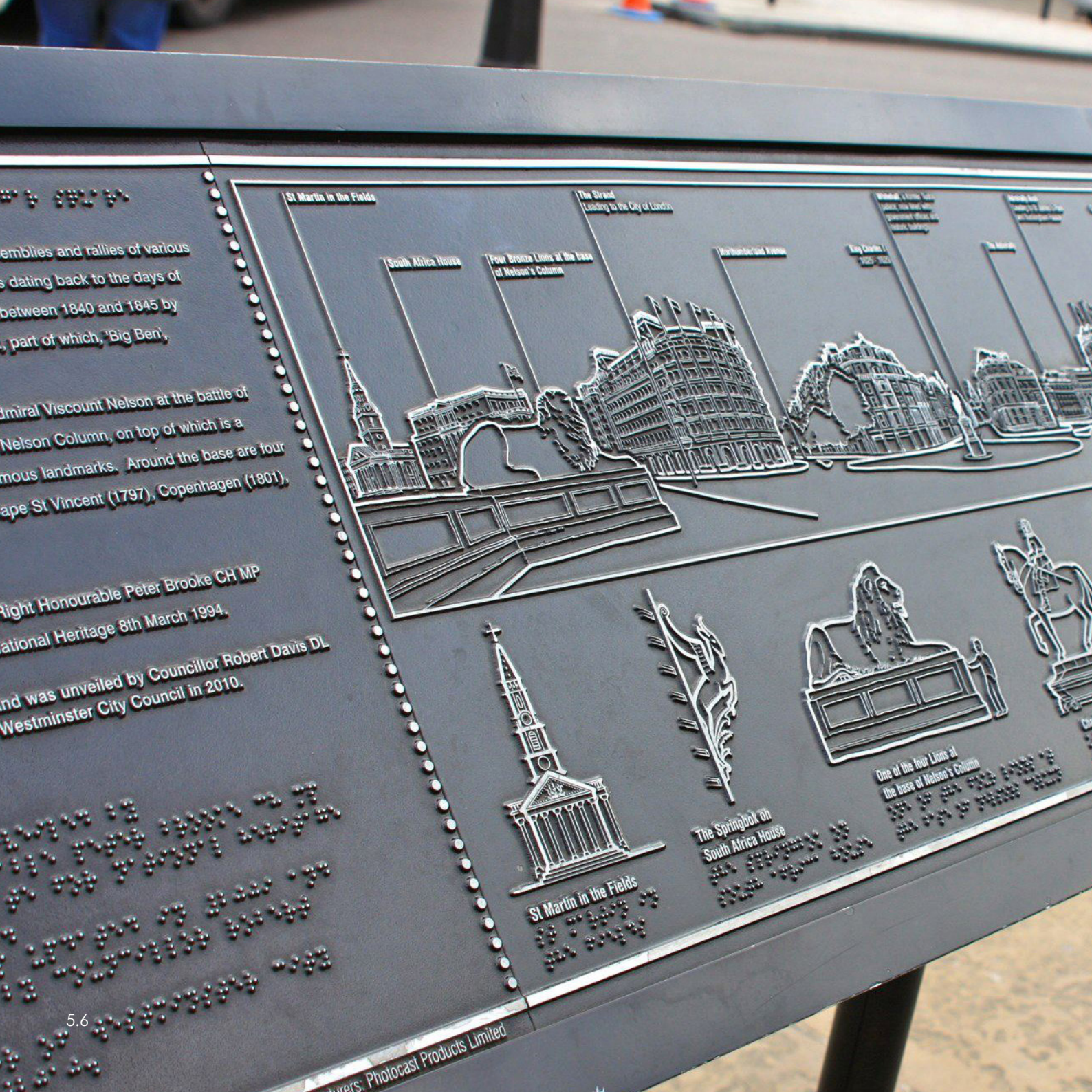
2. The height of the map should be such that young children and people on wheelchairs can also view it.

3. The map should be tactile in order to help visually-impaired people navigate.

4. The layout should be simple and readable by children.

5. It should mention the park's timings, if any.





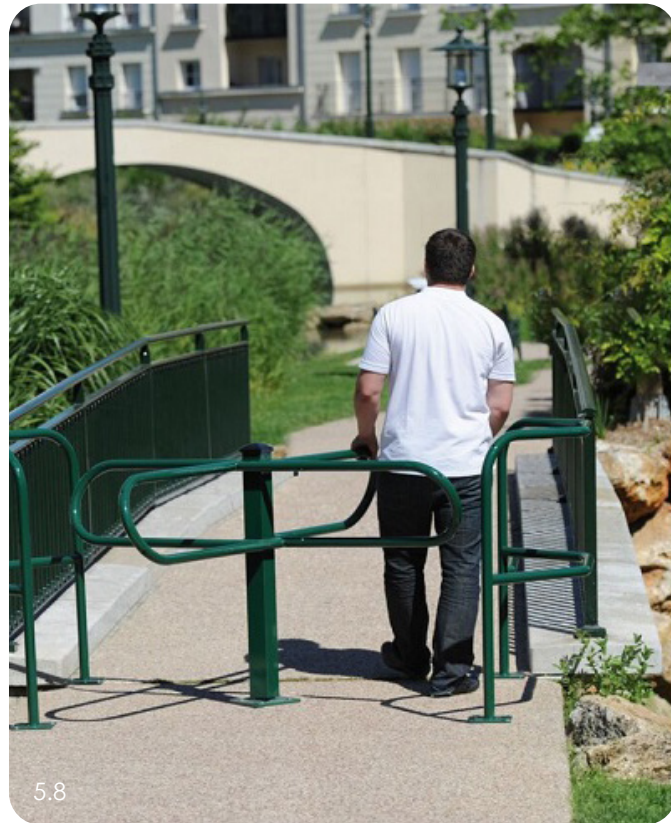
Entrances & Fences

Entrances and fences are important parts of a play area, as they are interaction points with the rest of the city. Fences create a boundary and allocate space, whilst providing safety and security to the users.



Things to consider for entrances:

- All entrances and exits should be wheelchair accessible. This also makes it convenient for mothers with prams and strollers, senior citizens and young children.
- Rotating gates and push gates discourage animals like cattle from entering as well.



Things to consider for fences:

- Having an enclosure with fences prevents vehicular traffic and vandalism in the parks.
- It also restricts the movement of children into other areas while playing.
- Care needs to be taken that there is visual connect between the park and the outside area, even if the fence is high.



Melodic fence



Fence with seating



Colourful fence

Facilities

Any playground is incomplete without the proper amenities. Facilities like clean, accessible toilets, safe drinking water, and options for food ensure that the public space is used to the maximum. While designing a park, space needs to be demarcated for these facilities.

Why should a park have other facilities?

- Parks are visited by people of ages and abilities, from senior citizens to children, pregnant women and lactating mothers.
- Having basic amenities like clean toilets and drinking water will create a welcoming, comfortable community space for everyone.

Things to consider:

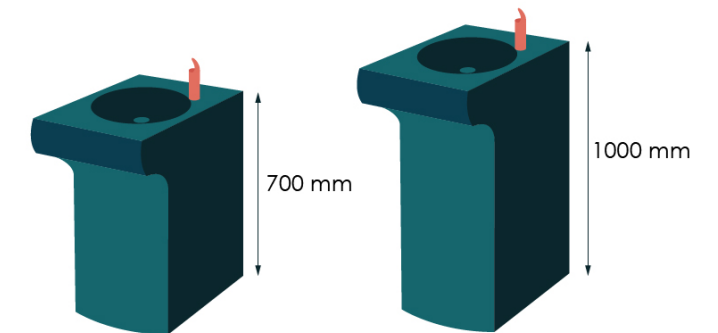
1. Toilets

- Toilets have to be accessible for people with special needs
- Ramps and doors should be at least 4 ft. wide.
- Ramp slopes should not be steeper than 7 degrees.
- Handrails should be fixed near the WC and basin.
- Since many parents and caregivers visit parks with infants, diaper-changing facility is also a must in both gender toilets.
- The WC and basin heights should be kept low for children to access them.



2. Drinking Water

- Availability of drinking water fountains helps people spend more time at the park and also reduces plastic waste due to plastic bottles.
- The water spout should be accessible to wheelchair users and young children.



Lighting

Good use of various types of lighting in different areas of the park will add to the usability and visual appeal of the park.

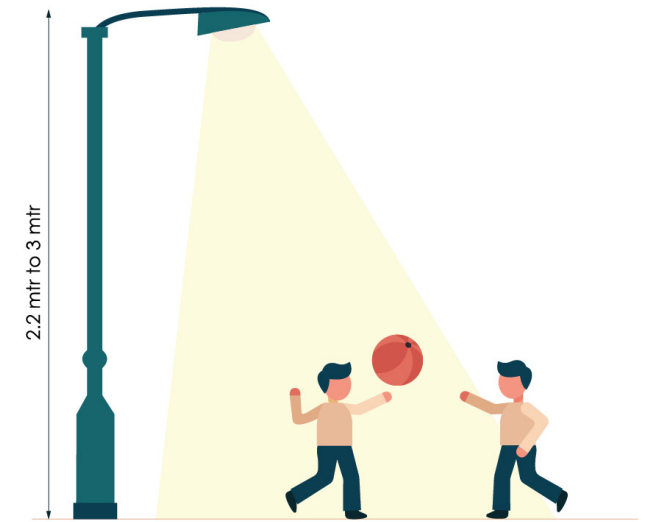
Why do parks need lighting?

- Lighting adds both functional and aesthetic value to a park.
- Most public parks are used till late evenings. A well-lit park provides a sense of safety for women and children.
- Lighting is also a great medium to accentuate key design features in the park.

Types of Light fixtures to consider:

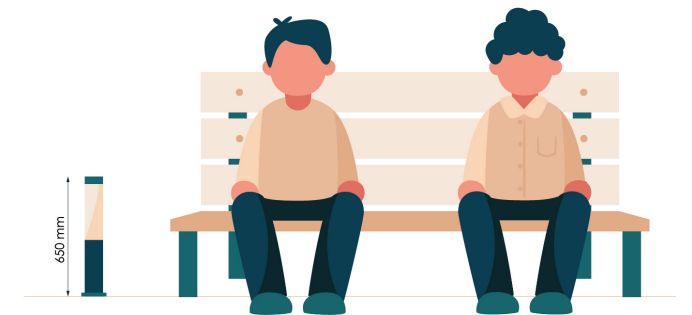
1. Pole Lights

- Pole lights are available in a range of different heights, from 1.8 mtr to 3 mtr.
- Typically, the distance between two pole lights is between 20 mtr to 50 mtr, depending on the height and design of the pole and light source being used.
- They are ideal for use near play areas, pathways, and badminton/football/basketball courts.



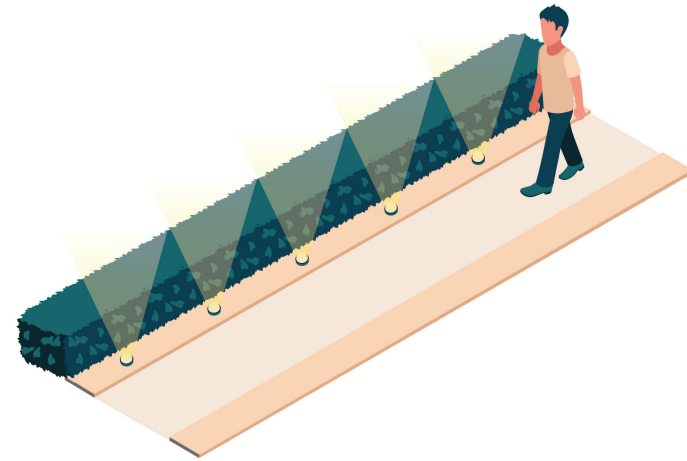
2. Bollard Lights

- Bollard light fixtures should ideally be used along pathways or near seating areas.
- They can also be used inside shrubs or plant beds to highlight certain plant species.
- They are available in different heights ranging from 250 mm to 650 mm.



3. Floor Lights

- Floor lights can be used along pathways, on decks or in amphitheatres where the floor pattern or path needs to be highlighted.



4. Wall mounted

- These lights can be used along the boundary walls or near the entrances/exits of the park.
- Wall-mounted fixtures can either be down-lighters or up-lighters. Either of these can be selected, based on the design feature that needs to be highlighted.



Materials

This involves selection of materials of everything in the park, from the equipment to landscape, signage, lighting, etc. While there is a number of materials available in the market, when designing a playground, we should be mindful of the choices we make.

Why is material selection important ?

- The materials used will determine the aesthetics, durability, safety, playability and build cost of the playground.
- Selecting the right materials can ensure the durability of the park and significantly bring down maintenance costs.
- Materials are a great way to give the park local context and character.

Things to consider:

1. Selecting the right material

- Mild steel and stainless steel are the two most commonly-used materials in outdoor play equipment. Metal gets very hot in summers and cold in winters, but at the same time, is sturdy and can withstand a fair amount of wear and tear and vandalism. Mild steel needs to be properly coated with anti-rust primer and painted in good-quality paint to prevent rusting.
- Wood is a great material. It is susceptible to termites and vandalism but is also easier to fix / replace unlike plastics. Any wooden products used should be properly chemically treated.
- Fiber reinforced plastic is generally used to make play equipment like slides and tunnels. Although it is a very cost-effective material with a lot of possibilities for customisation, it is not very durable. The colour fades over time and it is very easily broken in case of vandalism.



2. Using Local Materials

- Using local materials will ensure that any wear and tear/maintenance issues can easily be fixed with local help.
- It also gives the park a cultural context and a strong local identity.
- Identify the local skills in the region and try integrate those in the building of the play area. For example, Kutchi mud paintings can be used for depicting graphics and textures in a play area located in Gujarat or Madhubani paintings can be used in a play area in Bihar.



Colours

Proper selection of colours goes a long way in inspiring children's imagination. When used correctly, colours can encourage children to play for longer without the visual fatigue.

Judicious use of Colours

- Designing a space for children does not mean one has to go overboard with primary or multiple colours. Too many colours also cause clutter and confuse children.
- Use of fewer colours is sometimes better. Use of two main colours with other accent colours can work well to highlight some areas/equipment.



Things to Consider:

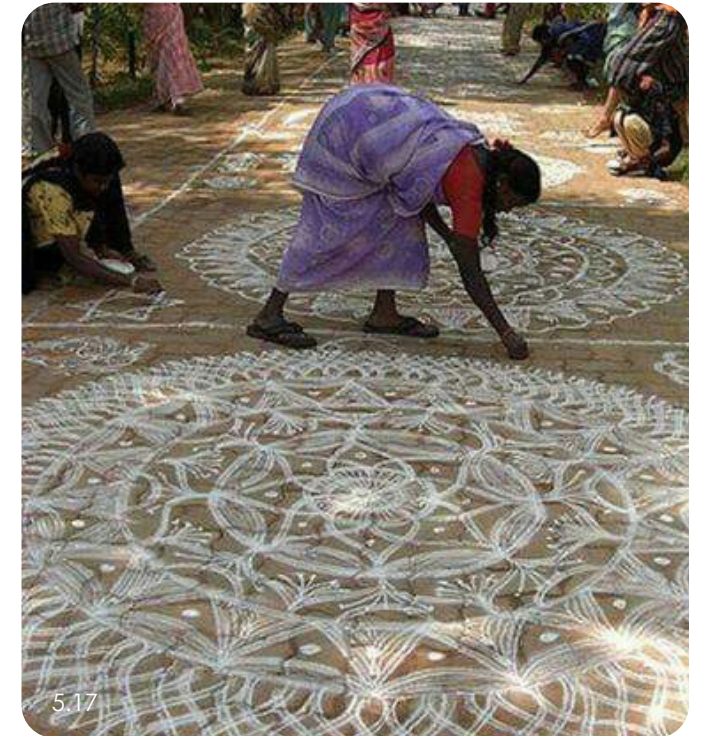
1. Appropriate Colour Scheme

- Developing a colour scheme for every project is sometimes not feasible. These tried and tested colour schemes will ensure that your space looks bright and happy, while simultaneously being inclusive, with good contrast.
- High colour contrast increases the legibility for people with low vision.



2. Graphics

- Graphics, when used effectively on walls and floors, can make a play area more playful and interactive.
- Local contexts and stories in graphic elements help people identify and associate with the space better. Adding textures to the graphics can make them interesting for visually-limited users too.
- Use local art and artists to create graphics for the play area. Different materials like textured tiles, textured paint and mosaic can be used to lend character and texture to the graphics.





5.20



5.21

Graphics at Madhubani Railway Station

The Madhubani Railway Station is a perfect example of how local art can be used to enhance the beauty and add character to public spaces.

Other Aspects

The act of creating a successful play area does not end with its design and deployment. This section talks about the factors to be kept in mind in order to increase a play area's usability and longevity.

Maintenance

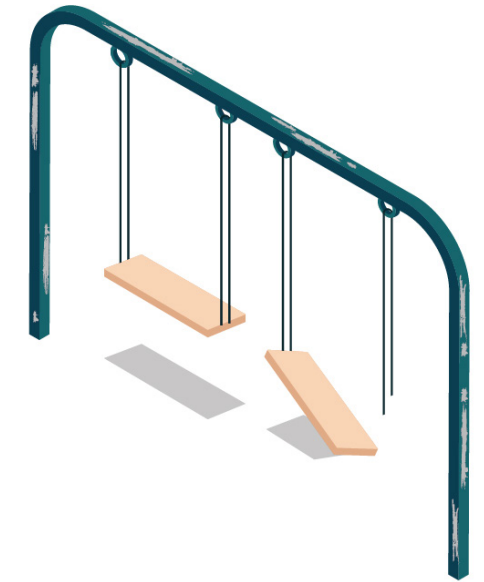
Maintenance of the play space is an important aspect, and should be kept in mind during the designing process.

Things to consider:

1. Play Equipment

Play equipment and seating undergo natural wear and tear due to weather conditions and vandalism. If not inspected and fixed at the right time, play equipment can become a safety hazard. Therefore, from a safety point of view, it is important to ensure the equipment is inspected and maintained regularly to prevent any such issues.

- A fresh coat of paint must be applied to equipment/space every two years.
- A bi-annual inspection should be conducted to check for wear and tear of equipment.



2. Landscape

- All plants and shrubs need regular trimming.
- Lawns need to be mowed regularly. Weeds need to be removed from time to time.



3. Safety

Playground equipment must be tested and certified:

- ASTM or EN1176 for playground equipment, EN16630 with GS test mark.
- Notified from international certifying body such as IPEMA, TUV, CPSC, SGS

Cleanliness

Health and hygiene are of utmost importance, especially in outdoor play spaces where diseases can get transmitted very easily. Therefore, cleanliness and proper disposal of waste are critical when designing a park.

Things to consider:

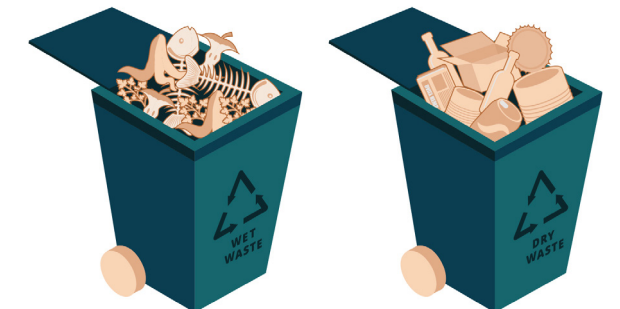
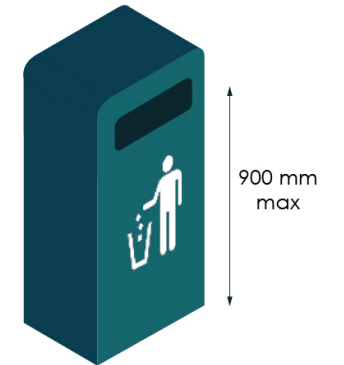
1. Day to Day Upkeep

- Day-to-day upkeep will ensure that the park is clean and will attract more visitors.
- Hire one or two cleaners (depending on the size of the park) and ensure that the park is cleaned daily.
- Involve the local Resident Welfare Association (RWA) and citizen's groups to make them stakeholders in the process and ensure regular cleanliness.



2. Dustbins

- There should be separate dustbins for wet and dry waste.
- They should be placed at convenient heights for children, adults and wheelchair users.
- Small dustbins lead to overflowing waste. In the case of very large dustbins, if waste is not emptied for days, it can cause the entire area to stink.





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