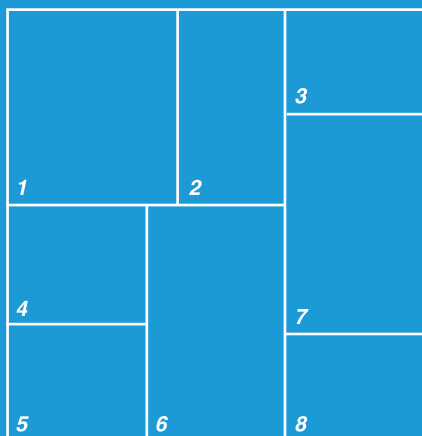


# INCLUSIVE PLAY SPACE GUIDE

Championing better and more inclusive play spaces in Hong Kong



Supported by



1 Colourful mounds encircling a plaza in Always Dream Play Park, Fremont Central Park, California, USA. (Photo courtesy of MIG, Inc. and Susan M. Goltsman)

2 Wheel chair accessible carousel, Blueball SEN School, UK. (Photo courtesy of Sutcliffe Play and Dave Brady)

3 Grizzly Bear Lodge, Kinsmen Park, City of Edmonton, Canada. (Photo courtesy of Kim Sanderson and Peter Kells)

4 Water play in Darling Harbour, Sydney, Australia. (Photo courtesy of KOMPAN and Jeanette Fich Jespersen)

5 Wavy boardwalk in rooftop garden of DOMAIN, Yau Tong, Hong Kong.

6 Stage setting in Paignton Green Playground, Torbay, UK. (Photo courtesy of KOMPAN and Jeanette Fich Jespersen)

7 Bird net swing in Ballard Park Imagination Station Playground, Connecticut, USA. (Photo courtesy of KOMPAN and Jeanette Fich Jespersen)

8 Universally designed sand play setting in Friendship Place, Berlin, Connecticut, USA. (Photo courtesy of Antonio Malkusak and Ken Kutska)

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*Trickle away, Bonnyrigg, Scotland.  
(Photo courtesy of Theresa Casey)*



*Always Dream Play Park, Fremont  
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(Photo courtesy of MIG, Inc. and  
Susan M. Goltsman)*

# PREFACE



## Theresa Casey

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This Guide begins by asking why we need inclusive play spaces. For all the benefits they bring to children, families and communities, the real and potential value of space for play is not widely or deeply understood.

Play has been described as a vital dimension of the pleasure of childhood<sup>1</sup> and indeed all children have a need and right to play – it is fundamental to their health, development and happiness. A responsibility is therefore placed in the hands of adults to respect, protect and fulfil the right to play for all of our children.

One of the most important ways we can do that is to ensure children have space to play.

Children can and do find ways to play even when the spaces available to them are boring or uninviting. But the focus in this Guide is on the steps towards making spaces that feed children's imaginations, stimulate their minds, nurture social contact, exercise their bodies, challenge their abilities and cultivate a sense of belonging.

The social value of play space has been emphasised throughout the Guide, informed by the many experts, parents and professionals who commented on the drafts. Public play spaces are a place to meet and make friends, to interact with peers and to figure out how to get along together. In making inclusive play spaces, we are taking an important step to ensuring all children have those opportunities equally whatever their abilities, impairment or background.

On a local and neighbourhood level, inclusive play spaces have an enormous potential value as hubs for a community. Let's make them pleasant places to chat with friends, read a book or simply stop to think. And on a wider level, we might want to think about how inclusive spaces contribute to a vision of the society we live in: reducing health and social inequalities, promoting familiarity and acceptance, giving children a good start in life, fostering community connectedness.

The Guide begins to draw together a framework which can help to make this wider change. Agencies that provide and have responsibility for play spaces have an especially important role. Designers have the chance to use their creativity fully to design inclusive play spaces that support children of all abilities to play together as they choose rather than separating them. And children have a lot to teach us about how we can approach the creation of spaces that give them opportunities that are fun, spontaneous, challenging, silly, flexible, messy and for everyone.

<sup>1</sup> *Committee on the Rights of the Child, 2013*



**Susan M. Goltsman,**  
**FASLA (1949-2016)**

**Principal**

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## Public Play Spaces in Hong Kong

Over the past few years, Playright in association with UNICEF HK and the City of Hong Kong has been building awareness, delivering trainings and creating the tools needed to bring the public play spaces in Hong Kong up to modern standards. These state of the art standards recognize the importance of these urban play spaces for children’s healthy development, the integration of healthy children with and without disabilities and the value these places add to the quality of life in the community.

This Guide represents the culmination of years of research, training and best practices from around the world. This information will help all who want to create innovative and appropriate spaces for children of all abilities to play and live and grow in an urban environment. This Guide is to be used and added to as each new play space is built. The goal is to build on the knowledge and information to create better and better play opportunities in Hong Kong.

## Current Trends in Play Areas

### Ecological Perspective

Children suffer from a lack of access to the natural world. In response, ecological considerations have become important factors in the design, construction and maintenance for play areas. “Play Area Naturalization” advocates multifaceted play areas planted with trees and vegetation. In addition, designers can improve ecological sustainability by locating play areas within walking distance of residences, schools and commercial areas as well as using renewable products and incorporating natural features in ways that enhance green infrastructure.

### Context-Driven and Place Based Approach

Innovative play areas provide opportunities to incorporate art and custom features that reflect local history, culture and the natural environment. Art in this context is not limited to freestanding sculpture; just about any element in a play area can and should be designed in an artful way. Play areas can benefit adults as well as children by becoming social spaces where families and neighbors connect and build community in a beautiful and visually pleasing setting.

### Health Considerations

Different play opportunities provide dynamic settings to improve both children’s and adults’ health. Young asthma sufferers benefit from the lung muscle strengthening that physical exercise on play areas can provide. Play areas and regular exercise are also an important part of the fight against obesity and associated health outcomes such as Type 2 Diabetes, heart disease and cancer. Since one of the root causes of obesity is low levels of physical activity, play areas are an essential part of the solution to this growing epidemic. Play areas offer a safe, community setting for enjoyable physical activity.



# FOREWORD



**Kathy K. H. Wong**

**Executive Director**  
Playright Children's Play  
Association



*1 Play opportunities for children with disabilities in Quarry Bay Park, Hong Kong.*

*2 Focus group to collect views from parents on inclusive play environments in Hong Kong.*

*3 Press conference to launch the qualitative and quantitative research.*

*4 Focus group to collect views from stakeholders on the design, safety and management of inclusive play spaces in Hong Kong.*

## Playright and the Inclusive Play Project

Playright Children's Play Association (Playright) is a charity that advocates the child's right to play. Established since 1987, Playright has worked to help people in all sectors appreciate the value of play. Our very first project was a collaboration with the then Urban Council to build an accessible playground at King's Park. Throughout the years, we have learnt that a well-designed and well-managed play environment that puts children first will provide the essential play experiences that are fundamental to a happy and healthy childhood, and benefit the family and community at large.

We were delighted to collaborate with the Hong Kong Committee for UNICEF to continue our advocacy for inclusive play through the Playright UNICEF Inclusive Play Project in 2012 and the UNICEF Playgrounds for All project in 2014. Both projects successfully initiated a movement for Better Playgrounds in Hong Kong. It is a movement of partnership among NGOs, professional and government bodies to work collaboratively for children; it is a movement of widening the concept of equal opportunities in playground development by understanding the needs of all children and playground users; it is a movement of advancement of playground design by progressing forward from safe and accessible playgrounds to playgrounds of diversity, enriching the play experiences for all.

All children need to play. All children have the right to play. It has been our vision to build a society that respects, protects and fulfills a Child's Right to Play, where children can enjoy their childhood. We will continue to advocate the value of play and seek societal commitment to meet the play needs of every child at policy, planning and provision level.

This Inclusive Play Space Guide has been created to build professional and public awareness on the importance of play space development. We hope that it will be the cornerstone for sustainable development of more inclusive playgrounds in Hong Kong.



**Jane Lau**

**Chief Executive**  
Hong Kong Committee for  
UNICEF



- 1 *Family Inclusive Play Day – Sensory Experience.*
- 2 *Design of Children’s Play Environments Seminar for Professionals by MIG.*
- 3 *Inclusive Play Space Ideas Competition – Jury Evaluation.*
- 4 *Inclusive Play Space Ideas Competition – Exhibition.*
- 5 *Family Inclusive Play Day – Physical Experience.*

## UNICEF HK and the Inclusive Play Project

The United Nations Children’s Fund (UNICEF) is the world’s leading United Nations organization working specially for children in more than 190 countries and territories. Founded in 1946, UNICEF has been joining forces with other United Nations organizations, governments and non-governmental organizations to champion children’s right to survival, protection, development and participation. The Hong Kong Committee for UNICEF (UNICEF HK), one of the 34 National Committees of UNICEF, was founded in 1986 to raise funds to support UNICEF’s work worldwide in various ways such as public donations, partnership with corporations and foundations and fundraising activities.

UNICEF HK launched ‘Unite for Children. Unite for Hong Kong’s Child Rights Advocacy Project’ in 2011, aiming to promote and realize children’s rights by partnering with non-governmental organizations (NGOs) in Hong Kong. To date, over 30,000 marginalized children and families have benefited from the Project. UNICEF HK has funded and collaborated with Playright Children’s Play Association through its Child Rights Advocacy Project since 2012 to advocate inclusive play. Play is not just for fun. It builds a solid foundation for better health and development of a child. We hope that every child, regardless of his/her abilities, can enjoy their right to play and attain all-round development.

The primary focus of this Guide is good inclusive play space where the needs of all children are considered, including those with different abilities. This Guide paves the way for a good start for the continuous advancement of Hong Kong children’s rights to play and development. UNICEF HK continues to strive for the creation of better and more inclusive play space in Hong Kong.

# EXECUTIVE SUMMARY



Numerous authors, academics and children’s rights groups have recognised the wide-ranging value of children’s play.

The UN Committee on the Rights of the Child emphasised that play is a fundamental and vital dimension of the pleasure of childhood, as well as an essential component of physical, social, cognitive, emotional and spiritual development.

*Children’s play is any behaviour, activity or process initiated, controlled and structured by children themselves; it takes place whenever and wherever opportunities arise. Play itself is non-compulsory, and undertaken for its own sake, rather than as a means to an end. The key characteristics of play are fun, uncertainty, challenge, flexibility and non-productivity.*

*(Committee on the Rights of the Child, 2013)*

Creating space for play is critical to ensure children have sufficient everyday opportunities to play throughout their childhood, helping them to have the best possible start in life.

The aim of this Guide is to give advice and inspiration for designing accessible and inclusive play spaces in Hong Kong. The Executive Summary highlights the key areas

which are elaborated in the Guide.

The primary focus of the Guide is on creating inclusive play spaces in which the needs of all children are considered. It gives information and describes steps to creating play spaces that enable children of all abilities to play together, along with friends, families and care-givers.

It seeks to assist designers, play providers and operators of unsupervised play spaces in Hong Kong so that we achieve more accessible, inclusive play spaces with greater play value in the long-run.

Better and more inclusive play spaces are needed in Hong Kong for children and communities. Inclusive places to play

- should be accessible and playful for children of all abilities
- encourage parents and carers to bring their children to play
- encourage children of all abilities to play together
- enable children to experience the fun, friendship and benefits that come with playing
- create a social hub for all the community.

## The Guide

- is mainly concerned with unsupervised outdoor play spaces
- is not a technical guide
- does not focus exclusively on children with disabilities
- promotes **Universal Design** principles
- highlights **choice** and **diversity** as key success factors
- proposes designers pay particular attention to the **physical, sensory** and **social** dimensions of play
- recognises the broader social value of inclusive play spaces
- sets these ideas within a Framework for planning and developing more inclusive play spaces in Hong Kong.

## Audiences

This Guide is applicable to those involved in the design, specification, provision and management of play environments:

- planners and design professionals
- park and playground operators
- playground owners and play providers
- political leaders and administrators
- principals or head teachers
- health professionals and therapists
- play practitioners.

## Understanding the issues of Hong Kong

Qualitative and quantitative research was carried out by Playright (2012-13) and The University of Hong Kong's Social Sciences Research Centre (2013), respectively in order to start to understand the perspectives of children, families and other stakeholders.

Reported more fully in the Guide, the key recommendation to encourage children with disabilities to carry out outdoor activities in a suitable playground, was that there should be **more** and **better** playgrounds, and specifically:

- to put more effort into the design of inclusive playgrounds to ensure they are fit for all types of users especially children with disabilities and their families and carers
- to reduce the travelling times for children with disabilities by increasing the number of playgrounds in residential areas

- 30 minutes is the maximum travelling time to reach a playground accepted by most parents.

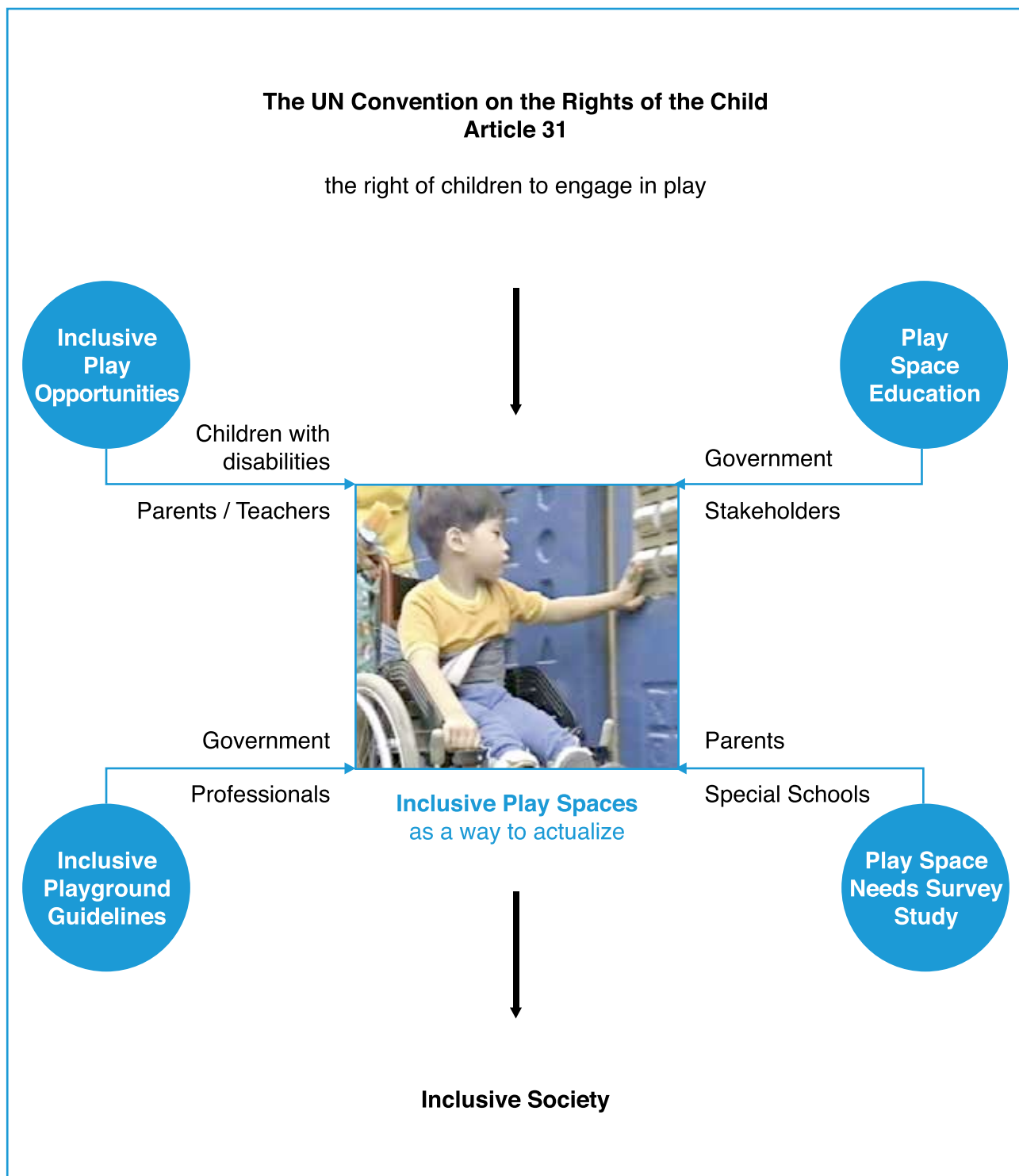
The background work with stakeholders brought a range of issues to the fore which are explored more thoroughly in the Guide. These include social inclusion, population trends and density, and risk management.

## Our mandate to promote Equal Opportunities for Play

Children with physical, mental, emotional or social disabilities have an equal right with all other children to opportunities to play throughout their childhood. Accessible and inclusive environments and facilities must be made available to children with disabilities to enable them to enjoy their rights under Article 31 of the

Convention on the Rights of the Child (*Committee on the Rights of the Child, 2013*). Choice and diversity are considered key success factors in providing the physical environment for children with disabilities (*Moore et al, 1992*).

## Inclusive Play Spaces are the First Step



## Framework: Developing more Inclusive Play Spaces in Hong Kong

The framework developed in the Guide is intended for all those with a concern for the development of more inclusive play spaces in Hong Kong.

The key elements of the framework are to:

- apply Universal Design principles to sustain inclusive playground development
- provide diversified play spaces and play opportunities across a community
- rethink play space for social inclusion
- engage with communities about inclusive play spaces
- take a positive approach to managing risk in play
- formulate a Play Space Policy, Strategy and Standards.

In order to create Inclusive Play Spaces in Hong Kong, the Guide proposes that principles of Universal Design should be adopted and applied and has elaborated on this throughout the Guide. Designing Inclusive Play Spaces in this way provides an opportunity to make better playgrounds for all and goes beyond accessible design (minimum compliance with building and design standards).

The principles of Universal Design should be applied to design of Play Spaces with recognition that all children are different, that there is no right and wrong way to play and that children's needs in relation to play and access vary.

## Celebrating the right to play through 31 Inclusive Play Space Indicators

Children's right to play is asserted in Article 31 of the UN Convention on the Rights of the Child. The Guide celebrates the right to play with 31 Inclusive Play Space Indicators. These have been drawn together as an audit tool to assess designs, whether those are new play

spaces, existing playgrounds or play equipment in need to improvement. The indicators consider the needs of children with different abilities and how the space offers inclusive play opportunities.



*Touch walls at King's Park designed by Playright to cater for the needs of children with visual impairment. (First accessible playground in Hong Kong completed in 1989)*



1



2

1 *Family Inclusive Play Day of UNICEF Playgrounds for All project organized by Playright shows a well-designed play setting can provide accessible and appropriate levels of challenge and promotes a sense of adventure.*

2 *Social Experience in Family Inclusive Play Day of UNICEF Playgrounds for All project organized by Playright.*

## In conclusion

A well-designed play space encourages physical, sensory and social play, provides access to appropriate levels of challenge and promotes a sense of adventure. It allows children, families and communities to enjoy the social experience of playing together.

Through application of the Guide, a product of the *Playright UNICEF Inclusive Play Project*,

we hope to see better and more inclusive play spaces in Hong Kong. We hope that the Guide will be a cornerstone for sustainable development of more inclusive playgrounds and that it will help to ensure all children are able to exercise their right to play and development.

# NOTES ON TERMINOLOGY FOR INCLUSIVE PLAY SPACES



*A well-designed playground will encourage physical, sensory and social play. It allows children, families and communities to enjoy the social experience of playing together. (Water playground in Bishan-Ang Mo Kio Park Pond Gardens, Singapore)*

Various terms arise regarding the provision of space for play. Some of these have quite specific meanings, while others are more ambiguous. Particularly in relation to inclusion, we have found that internationally and between disciplines there can be strong but differing preferences for one term over another. We have tried to use the most appropriate term for the context but are aware that others may have made different choices. When in doubt, we

have looked to the most recent UN Committee on the Rights of the Child (UNCRC) document on play – General Comment no. 17 (2013) – to follow their usage. Where we have used a direct quote we have not changed the terms used in the original text.

For the purpose of this Guide we are using the following definitions.

## Accessible Play Space

A play space designed to ensure there are no environmental/physical barriers to participation including entrance to the space, movement around the space and ease of access to the features or opportunities within the space.

Types of surfaces used, width of gates and paths, steepness of inclines, ease of access to play equipment, location and access to and from the site may be considered to respond to a wide range of access needs.

## Amenities

Supporting infrastructure found within play spaces that helps to promote a comfortable and accessible environment, for example:

lighting, toilets, parking, open space for ball games, seating, shade structures, barbecues, drinking water fountains etc.



## Children

By 'children' we mean children of all ages, stages, backgrounds and abilities. Many children face attitudinal, environmental and institutional barriers to accessing play opportunities and provision, among these are children with disabilities. We have used the term 'children with disabilities' in the text following the usage of the UNCRC. In doing so we acknowledge that readers may

stronger prefer or commonly use other terms such as 'disabled children' which is argued to more clearly reflect a social model of disability. It is also recognized that children may have 'hidden disabilities' such as a communication disorders or may face barriers due to social or economic factors.

## Inclusive Design

The terms Inclusive Design and Universal Design carry similar meanings and are sometimes used interchangeably, however, the definition of Universal Design has very specific principles (see next page). Inclusive Design

implies attention has been paid both to accessibility and social factors so that both environmental and social barriers to inclusion are actively addressed.

## Inclusive Play Space

An inclusive play space aims to enable satisfying play opportunities for all children while accepting that it may not be possible for every child to access every feature or opportunity of the space. Measures are taken and creative design applied to ensure: accessibility to and within the playground,

opportunities for children to actively engage in play in their own way and plenty of variation to provide for high play value. Inclusive play spaces are places where children with and without disabilities or impairments can play together.

## Play

Children's play is any behaviour, activity or process initiated, controlled and structured by children themselves; it takes place whenever and wherever opportunities arise. Play itself is non-compulsory, and undertaken for its own

sake, rather than as a means to an end. The key characteristics of play are fun, uncertainty, challenge, flexibility and non-productivity.

*(See Committee on the Rights of the Child, 2013)*

## Playground

A site such as a park, reserve, small block of land or land adjoining other recreational or community-based facilities, specifically designated for play and including playground

equipment. Playgrounds may include traditional playground equipment, or alternatively, opportunities for play with natural features such as logs, rocks and water.

## Play Equipment

Equipment found in playgrounds such as swings, slides, climbing structures, etc., specifically designed for play.

## **Play for All**

Play for All is about providing for play opportunities in which all children can take part whatever their abilities; the opportunities are

not targeted at specific groups of children or segregated by age or ability.

## **Playgrounds for All**

A public playground that embraces Universal Design principles resulting in an inclusive play space accessible for all. A Playground for All is designed with recognition that all children are

different, that there is no right and wrong way to play and that children's needs in relation to play and access vary.

## **Play Opportunities**

An environment and/or period of time in which children find an opportunity to play, alone or with others, with or without the support of adults. The provision of play opportunities is

often the goal of play policies, strategies and programmes and may include playing with others in social contexts and/or interaction with the environment.

## **Play Space**

The entire site where play can occur, rather than just the site where play equipment or opportunities are located. A play space may include traditional playground equipment or

other natural features which can be used for play, such as logs, rocks, sand, water features, etc. It may also contain a range of amenities e.g. seating, shelter, paths, shade, toilets, bins, etc.

## **Play Value**

The term 'play value' is used to describe the value an environment, object or piece of equipment brings to children's experience of play. Something may be described as having high play value if children are able to play with it in many different ways, integrate it into their

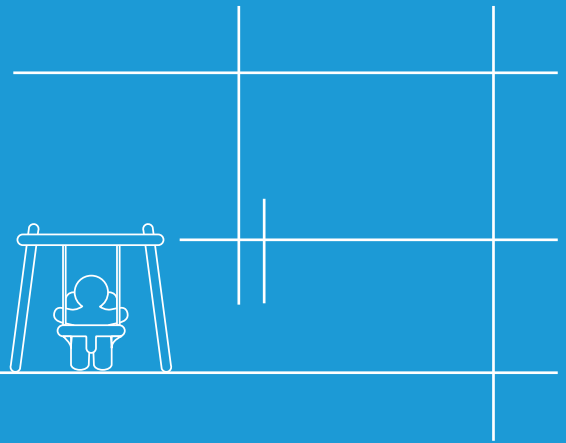
own play or use it to expand or elaborate on their own ideas and actions. Simple play things (e.g. sticks, balls, sand) and 'classic' toys or games often have higher play value than complex and expensive toys or equipment.

## **Universal Design**

The term Universal Design was coined by the late Ronald Mace to describe the concept of designing all products and the built environment to be aesthetic and usable to the greatest extent possible by everyone, regardless of their age, ability or status in life. Conventional

design caters for the 'average' person, while Universal Design recognises that people have a range of capabilities. Application of the principles of Universal Design aspires to improve the quality of life for everyone.

# 1. INTRODUCTION



# 1

## WHY DO WE NEED INCLUSIVE PLAY SPACES?

In this section we introduce the ideas that form the basis of this Guide, including the right of all children to play, an overview of the current situation in Hong Kong and what we mean by Inclusive Play Spaces.



*1 Design of children's play environments workshop for tertiary students of design by MIG. (UNICEF Playgrounds for All project organized by Playright in Hong Kong in 2014)*

### 1.1 About the Inclusive Play Space Guide

#### Aims

The aim of this Guide is to give advice and inspiration for designing accessible and inclusive play spaces in Hong Kong.

Good quality, inclusive play spaces do many things:

- they are accessible and playful for children of all abilities
- they encourage parents and carers to bring their children to play
- they encourage children of all abilities to play together
- they enable children to experience the fun, friendship and benefits that come with playing
- they create a social hub for all the community.

The Guide is mainly concerned with unsupervised outdoor play spaces. It is not a technical guide, nor does it focus exclusively on children with disabilities.

Rather, the primary focus of the Guide is on creating inclusive play spaces in which the needs of all children are considered. It gives information and describes steps to creating play spaces that enable children of all abilities to play together, along with friends, families and care-givers. This does not mean that all children will be able to use every feature of the play space in the same way.

## Audiences

This Guide is applicable to those involved in the design, specification, provision and management of play environments:

- planners and design professionals
- park and playground operators
- playground owners and play providers

## Developing this Guide

Since this is the first guide to inclusive play to be developed in Hong Kong, Playright invited related professionals, practitioners and organisations to share their concerns and opinions. Local focus groups were organised and an overseas expert group called upon for advice.

Qualitative and quantitative research was carried out by Playright (2012-13) and The University of Hong Kong's Social Sciences Research Centre (2013), respectively.

The Guide uses and promotes Universal Design principles. (See also Notes on Terminology for Inclusive Play Spaces at the front of this Guide).

It seeks to assist designers, play providers and operators of unsupervised play spaces in Hong Kong so that we achieve more accessible, inclusive play spaces with greater play value in the long-run.

- political leaders and administrators
- principals or head teachers
- health professionals and therapists
- play practitioners.

The Guide also draws on international design guidelines and standards for accessible and inclusive play spaces from Australia, Canada, Europe and USA.

Overall, the Guide aims to draw together the experience and the knowledge of play and playground experts in order to establish best practice in the design of inclusive play spaces.

Through application of the Guide, we hope to see better and more inclusive play spaces in Hong Kong.

## 1.2 The rights of all children

### Our mandate to promote Equal Opportunities for Play

Children with physical, mental, emotional or social disabilities have an equal right with all other children to opportunities to play throughout their childhood. Accessible and inclusive environments and facilities must be made available to children with disabilities to enable them to enjoy their rights under Article 31 of the UN Convention on the Rights of the Child (Committee on the Rights of the Child, 2013). Articles 7 and 30 of the UN Convention on the

Rights of Disabled Persons further encompass disabled children's play rights, ensuring that children with disabilities have equal access with other children to participation in play, recreation and leisure and sporting activities, including those activities in the school system (UN, 2006). Choice and diversity are considered key success factors in providing the physical environment for children with disabilities (Moore et al, 1992).

### United Nations Convention on the Rights of the Child (UNCRC)

#### Article 2 (Non-discrimination)

The Convention applies to all children, whatever their race, religion or ability; whatever they think or say, whatever type of family they come from. It doesn't matter where children live, what language they speak, what their parents do, whether they are boys or girls, what their culture is, whether they have a disability or whether they are rich or poor. No child should be treated unfairly on any basis.

#### Article 23 (The rights of children with disabilities)

Children with disabilities should enjoy a full and decent life, in conditions which ensure dignity, promote self-reliance and facilitate the child's active participation in the community. Disabled children should have access to services and opportunities which are conducive to the fullest possible social integration and individual development.

#### Article 30 (Children of minorities/indigenous groups)

Minority or indigenous children have the right to learn about and practise their own culture, language and religion.

#### Article 31 (Leisure, play and culture)

Children have the right to relax and play, and to join in a wide range of cultural, artistic and other recreational activities.

## 1.3 Understanding the issues in Hong Kong

### 1.3.1 Background

Over 700 children's outdoor playgrounds are managed by Hong Kong's Leisure and Cultural Services Department (LCSD), Hong Kong Housing Authority provides and operates many outdoor play spaces in over 170 public housing estates as do private owners and developers. The provision of playground and open space is governed under Chapter 4.1 of Hong Kong Planning Standard and Guidelines.

The results of the qualitative (2012-13) and quantitative research (2013) carried out indicated that the current play equipment and support amenities in local public playgrounds should be modified to suit the needs of children with different abilities.

In support of the development of the Guide, the objectives of the Social Sciences Research Centre study were:

- to determine what settings in a playground offer the greatest play value for the children with disability as well as the able-bodied;
- and to assist in the provision of a quality play environment and play opportunities to children with disability.

Invitations to participate were sent to parents/guardians of children with disabilities via 10 schools and 9 centres. 245 self-administered questionnaires sent to schools and centres and 163 completed questionnaires were returned.

### Experience of playing in a playground

- over 60% of children with disabilities played in playgrounds less than once a week in the previous three months;
- nearly half of the parents considered suitable playground facilities were insufficient in the community;
- nevertheless, 84% of parents/guardians of children with disabilities believed that it was important that their children could carry out outdoor activities in a suitable playground.

### Recommendations

According to the report by the Social Sciences Research Centre, in order to encourage children with disabilities to carry out outdoor activities in a suitable playground, there should be **more** and **better** playgrounds, specifically:

- It is necessary to put more effort into the design of inclusive playgrounds to ensure they are fit for all types of users especially children with disabilities and their families and carers.
- The number of playgrounds should be increased in residential areas to reduce the travelling times for children with disabilities.
- 30 minutes is the maximum travelling time to reach a playground accepted by most parents.

*The report from the Social Sciences Research Centre of The University of Hong Kong can be found from Playright. (See section 7.2 Web Resources)*

### 1.3.2 Overview of Hong Kong's Playgrounds

It was felt that opportunities should be taken to improve playground facilities in Hong Kong so that all children can better exercise their right to play.

In the qualitative research, parents expressed concern over insufficient playground facilities. They commented that playgrounds should be improved to meet the needs of children of different ages, and especially the needs of children with disabilities, and to be made more attractive places to spend time. 20 per cent of parents pointed out that there is no suitable playground located near where they live.

The research results showed that nearly 80 per cent of parents of children with disabilities agreed playgrounds were important for the physical, sensory and social development of their children. However, examples given by parents described playgrounds where there was only one kind of slide or swing, and no grassland, sand and water or facilities to enrich the sensory and social experience of children. As these are experiences which are essential for children's all-round development, this points to areas in need of improvement.



1 Parents and their children with disabilities were invited to experience the playing in Quarry Bay Park with inclusive play provisions, e.g. slide that carries two people side-by-side.

2 Participants enjoyed the adaptive swing with harmless.

“

Play is beneficial to children. Since 2012, UNICEF HK has been collaborating with Playright through its Child Rights Advocacy Project to advocate inclusive play. We believe that all children, regardless of their abilities, should have access to quality play in suitable environments. We look forward to joining hands with the business sector and non-governmental organizations to create a better playground for all children and protect their right to play.”

Miss Au King-chi, Chairman of Advocacy and Public Relations Committee, UNICEF HK



#### **Space limitations**

Hong Kong is one of the most densely populated places in the world. While inclusive play spaces do not necessarily need a bigger footprint than conventional ones, space is a real issue. Creative solutions are needed to ensure, to the greatest extent possible, equal access to play spaces and equitable use within

them. Consideration of the range of opportunities and spaces available across local, district and regional levels can help to widen the choice available to children and families.

*(See also section 2.2)*

#### **Quantitative or qualitative approach**

When it comes to reviewing existing or developing and planning new public facilities, quality must matter as much as quantity. Planning for inclusive play space across local,

district and regional levels is also a factor in reducing social inequalities.

*(See also section 2.2)*

#### **Restricted budget**

Providing inclusive play spaces is regarded as a cost issue, however good design can be seen as a longer term investment. Providing accessible and inclusive play experiences

when done well does not have to cost that much more than the traditional play areas that are boring and do not attract the children who need them the most.

#### **Risk and risk-management**

Worries about liability for playground accidents limits provision of more challenging play equipment. Supported by play policies, suitable

levels of safety, accessibility and play value can co-exist.

*(See also sections 2.5 and 4.2)*

#### **A good design brief**

The complexity – and benefit – of designing for children is often underestimated, leading to over-reliance on familiar items of play equipment. Engaging with playground users

(children and families, health professionals and others) and looking for inspiration from best practice and innovations elsewhere can help in drawing up a more innovative design brief.

#### **Lack of play value in playgrounds**

Playgrounds which do not offer good play value – challenge, sensory experiences, choice, diversity etc. – can easily become underused and devalued as community spaces.

A playground is more than a collection of play equipment and inclusive equipment for use by children of different ages, sizes and abilities.

#### **Play spaces are not just for children**

Play spaces can be valuable community hubs. Designers often underestimate the value that a playground has as a place where

people will return over and over again to hang out, find fellowship and gain a sense of community.

## 1.4 Benefits of Play and Inclusive Play Spaces



“  
Children’s play is any behaviour, activity or process initiated, controlled and structured by children themselves; it takes place whenever and wherever opportunities arise. Play itself is non-compulsory, and undertaken for its own sake, rather than as a means to an end. The key characteristics of play are fun, uncertainty, challenge, flexibility and non-productivity.”

*Committee on the Rights of the Child, 2013*

1 Children’s play takes place whenever and wherever opportunities arise. (Photo courtesy of Antonio Malkusak and Ken Kutska)

2 Playing outdoors confers particular benefits to children. Playing together is also an important social experience. Through play, children test themselves and seek out risk and challenge. (Photo courtesy of MIG, Inc. and Susan M. Goltsman)

3 The opportunity to play creatively in high-quality environments is essential to the development of children. Designers should take into account the physical, sensory and social dimensions of play. (Fuwa Fuwa Dome in Showa Kinen Park, Tokyo, Japan)



### 1.4.1 What is Play?

Numerous authors, academics and children's rights groups have recognised the value of children's play.

For children, playing is all about fun, friendship and simply the pleasure of being a child. Playing is the means by which they discover and understand the world in which they live. Through adult eyes, we can see that play is vital to all aspects of children's development - physical, social, intellectual, creative, spiritual and emotional. Child development experts agree that unstructured, free play is critical to the development of all children.

Neuroscience has shown us that especially in early childhood, play is a vitally important aspect of the development of the brain. Children continue to need to play however – and they still love playing – as they grow up.

Through play, children test themselves and seek out risk and challenge. In doing so, they are developing their own ability to assess and manage risk for themselves. Through encountering manageable risk and challenge in play, they discover and expand their own limits, confidence and resilience.

Playing together is an important social experience. Family, intergenerational and community bonds are strengthened through the shared experience of playing.

Playing outdoors confers particular benefits to children. Outdoors, they can make more noise, move more freely and experience nature and the physical environment. Spending time outdoors in sympathetic environments is associated with reduced risk of myopia, reductions in obesity and helps children to maintain a sense of emotional equilibrium.

We know that playing is a great way for children to be physically active for sustained periods of time which uses calories, raises heart rates, develops physical literacy and forms habits of lifelong physical activity. Physical activity has also been associated with psychological benefits in young people by improving their control over symptoms of anxiety and depression. (*World Health Organization, 2010*)

Play spaces should provide play opportunities for all ages, abilities and backgrounds in order to meet children's needs and satisfy their desire for fun, satisfying and challenging play.

## 1.4.2 Inclusive Play Space benefits all children



All children are different, and a good play space is one that will offer high play value for children with or without disabilities. Play spaces that have taken into account accessibility, equity, sensory qualities, play value, risk and challenge etc. will be better spaces for all children.

Parents, grandparents and other adults with a disability should also be able to access Inclusive Play Spaces and have the pleasure of engaging with their children as they play.

Children's developing sense of the world takes in diversity and what they have in common with others. When children and families of different abilities, backgrounds and interests can play and socialise together, it creates opportunities for understanding difference, appreciation of others, empathy and tolerance.

“ I hope we can reclaim a happy childhood for every child by providing an inclusive playground as soon as possible, so that the next generation can have a chance to interact with each other at an early age, and get to know the true meaning of inclusion. ”

*Mr. Aaron Tong Cho-wing,  
father of Tung Tung, who has autism.*

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1 Parents with or without a disability should be able to access Inclusive Play Space and have the pleasure of engaging with their children as they play. (Photo courtesy of MIG, Inc. and Susan M. Goltsman)

2 Play spaces that have taken into account accessibility, equity, sensory qualities, play value, risk and challenge etc. will be better for all children. (First accessible playground in Hong Kong designed by Playright in 1989)



### 1.4.3 Inclusive Play Space benefits the whole community



Play spaces can enhance the quality of neighbourhood life, as comfortable gathering places and an asset for all members of the community. Children do not generally go to public places alone, rather they visit with parents, grandparents, carers, friends and neighbours. With a projection that by the year 2041, 30% of the population will be aged over 65, age-friendliness is an important dimension of inclusive spaces.

Design, location, management and use can create, in combination, friendly and welcoming public spaces that generate a sense of belonging.

An inclusive play space aims to enable satisfying play opportunities for all children while accepting that it may not be possible for every child to access every feature or opportunity of the playground in the same way. Measures are taken and creative design applied to ensure:

- accessibility to and within the playground
- opportunities for children to actively engage in play in their own way
- plenty of variation to provide for high play value.

The activities on the play space should provide stimulation and this is helpful not only in enhancing the intellectual and physical but also the social development of children. Inclusive playgrounds are places where children with and without disabilities or impairments can play together. The goal of an inclusive playground is that all children can enjoy using it whatever their ability or impairment.

An Inclusive Play Space goes beyond accessible design and age-appropriate play activities. It embraces Universal Design principles. They should be designed with recognition that all children are different, that there is no right and wrong way to play and that children's needs in relation to play and access vary.

## 1.5 The physical, sensory and social dimensions of play space

This Guide recommends that designers pay particular attention to the **physical, sensory** and **social** dimensions of play in order to improve the quality of play spaces for children in Hong Kong.

As previously noted, **choice and diversity**, are key success factors in providing the physical environment for children with disabilities; attention to the **physical, sensory** and **social dimensions** of play will help to achieve that in ways that are inclusive for all.

Of course children's play is multi-faceted – it can be creative, funny, spontaneous, quiet, noisy, intellectually demanding, restful, apparently aimless, exhausting, energising and everything in between!

The **physical, sensory** and **social dimensions** of playing are also intertwined; for example, it would be impossible to separate out the physical action of running through water, from the sounds of splashing, the sparkling water droplets or the sensations on the skin.

By asking designers and providers of play space to focus on **physical, sensory** and **social** dimensions, the Guide aims to provide a way into a richer experience for children playing. And, by working towards spaces that meet the needs of children with disabilities, the suggestions in this Guide aim to increase the play value for all children.



*1 The physical, sensory and social dimensions of playing are intertwined. Attention to these three dimensions of play will help to achieve that in ways that are inclusive for all. (Photo courtesy of MIG, Inc. and Susan M. Goltsman)*

*2 Children's play is multi-faceted. Choice and diversity are key success factors in providing the physical environment for children with disabilities. (Photo courtesy of MIG, Inc. and Susan M. Goltsman)*



## Physical dimensions

This includes movement in and through space, swinging, balancing, spinning, jumping, climbing etc. As trends demonstrate increasing problems around obesity and sedentary behaviour, play spaces are hugely important in encouraging physical movement. It's valuable for the sheer fun and exhilaration, as well as challenge, increasing physical activity levels, developing physical literacy, and is essential to the development of the vestibular system and proprioception in children (relating to the sense of body position, movement, acceleration and balance).

1 *Play spaces are hugely important in encouraging physical movement. (Photo courtesy of KOMPAN and Jeanette Fich Jespersen)*

2 *Inclusive playgrounds are places where children with and without disabilities or impairments can play together. (Photo courtesy of Antonio Malkusak and Ken Kutska)*

## Sensory dimensions

This includes all the senses, sight, sound, touch, smell and even taste. The sensory environment can have both positive and negative impacts. Noise levels, wind, confusing visual signals can be a barrier to play improved by interventions such as dampening traffic noise, wind breaks, creating quiet corners, etc. Play value can be hugely increased by greater attention to designing for the sensory environment - the approach can include both the bold and the nuanced and subtle, introducing texture, contrast, intrigue and 'invitations' to play. Planting and use of natural features are particularly useful.



3 *Inclusive Design enables everyone to participate equally, confidently and independently in everyday activities. (Photo courtesy of Antonio Malkusak and Ken Kutska)*

## Social dimensions

The Guide emphasises that play spaces are social spaces, a hub for a community and of value across generations. Play spaces serve many important functions, a place to spend time with friends and family, to meet others from our own or other communities, to learn about social values such as tolerance and cooperation etc. In designing a play space, the Guide advocates attention to social aspects of play including creation of cosy corners, comfortable places to sit or perch, space to be an onlooker (some children like to be near others but not play directly with them), settings that support engagement in shared activity (such as sand play) and design which encourages play types such as role play, dramatic, fantasy and imaginative play.

(See sections 4.1.8 to 4.1.10 for illustrations and examples)



*Play space is a place to spend time with friends and family, to meet others from our own or other communities, to learn about social values such as tolerance and cooperation. (Photo courtesy of KOMPAN and Jeanette Fich Jespersen)*

“  
The opportunity to play creatively in high-quality environments is essential to the development of children. Through their play, they acquire skills and abilities which can be learnt in no other way. The quality of what we provide affects the quality of what children learn. The greater the complexity of that environment, the greater the quality of learning.”

*RoSPA Play Safety, undated*

## Global Recommendations on Physical Activity for Health

For children and young people, physical activity includes play, games, sports, transportation, chores, recreation, physical education, or planned exercise, in the context of family, school, and community activities. The recommendations to improve cardiorespiratory and muscular fitness, bone health, and cardiovascular and metabolic health biomarkers are:

1. Children and youth aged 5-17 should accumulate at least 60 minutes of moderate to vigorous-intensity physical activity daily.
2. Amounts of physical activity greater than 60 minutes provide additional health benefits.

3. Most of the daily physical activity should be aerobic. Vigorous-intensity activities should be incorporated, including those that strengthen muscle and bone, at least 3 times per week.

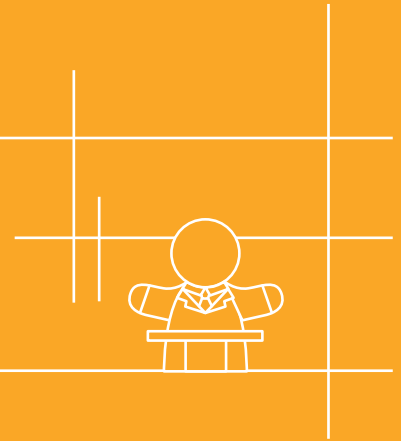
These recommendations are relevant to all healthy children aged 5–17 years, unless specific medical conditions indicate to the contrary, irrespective of gender, race, ethnicity, or income level. Whenever possible, children and youth with disabilities should meet these recommendations. However, they should work with their health care provider to understand the types and amounts of physical activity appropriate for them considering their disability.

*World Health Organization, 2010*



## 2. FRAMEWORK

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# 2 DEVELOPING MORE INCLUSIVE PLAY SPACES IN HONG KONG

In this section a framework is set out which will help us move towards more Inclusive Play Spaces in Hong Kong for the benefit of all children and communities. It suggests an overall perspective for planning and developing more inclusive play spaces.



1 Inclusive playground design workshop for children. (Photo courtesy of KWOK Jocelyn Clare and CreativeKids)

## Overview

The framework is intended for all those with a concern for the development of more inclusive play spaces in Hong Kong. The key elements of the framework are to:

- apply Universal Design principles to sustain inclusive playground development
- provide diversified play spaces and play opportunities across a community
- rethink play space for social inclusion
- engage with communities about inclusive play spaces

- take a positive approach to managing risk in play
- formulate a Play Space Policy, Strategy and Standards.

A well-designed play space encourages physical, sensory and social play, provides access to appropriate levels of challenge and promotes a sense of adventure. It allows children, families and communities to enjoy the social experience of playing together.

## 2.1 Apply Universal Design principles to sustain inclusive playground development

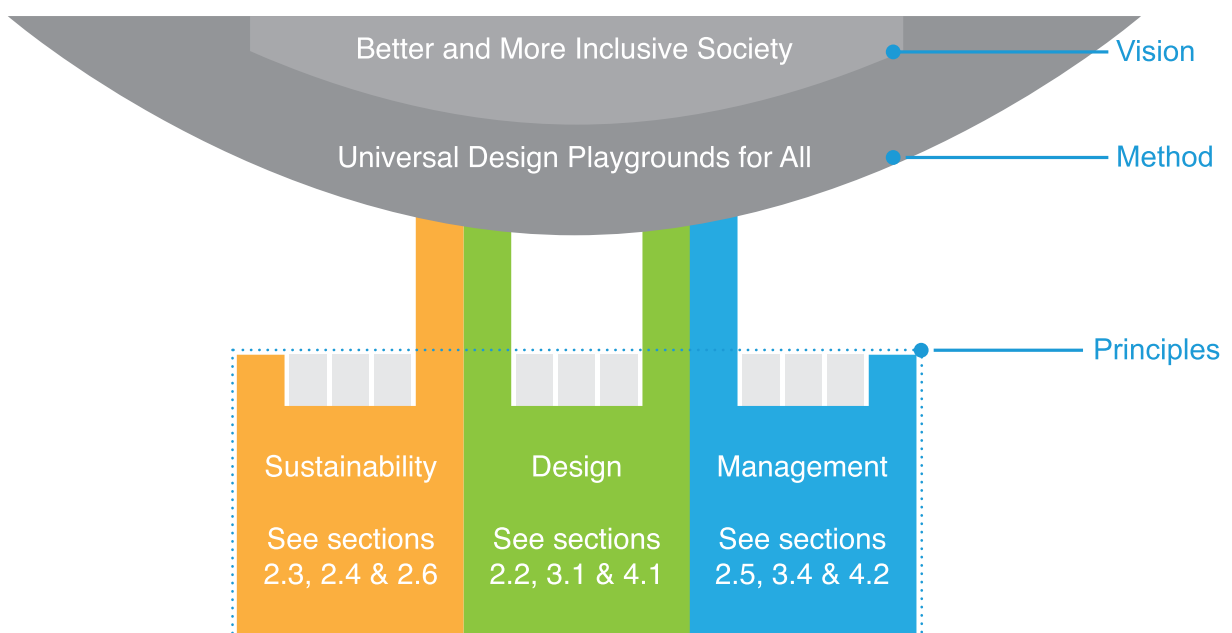
In order to create Inclusive Play Spaces in Hong Kong, this Guide proposes that principles of Universal Design should be adopted and applied.

The term Universal Design describes the concept of designing all products and the built environment to be aesthetic and usable to the greatest extent possible by everyone, regardless of their age, ability or status in life. Designing Inclusive Play Spaces in this way provides an opportunity to make better playgrounds for all and goes beyond accessible design (minimum compliance with building and design standards).

Application of Universal Design to play space is also beneficial to adults with disabilities using the space – parents and carers, guardians and others.

Play Space creates a special context for design – children’s play behaviour doesn’t follow expected paths; sometimes they choose a funny way to do something rather than the easiest or a challenge that is just beyond what they can comfortably manage; they may prefer being upside down to the right way up!

The principles of Universal Design should therefore be applied to designs of Play Spaces with recognition that all children are different, that there is no right and wrong way to play and that children’s needs in relation to play and access vary.



*“The Peak Tower” inclusive playground development model for Hong Kong – adopted from Play for All Design Pillars, The Designated Play Space in Edmonton: Play for All, Appendix p.26)*

## 2.2 Provide diversified play spaces and play opportunities across communities



Children and families like to be able to play in a range of spaces which offer varied experiences, challenges and aesthetic qualities. These spaces include communal areas, streets, and parks as well as traditional playgrounds and designed play spaces.

It may not be possible for every child to use every feature of a play space; for reasons of such as topography or location, it may not be possible for every site to be made fully accessible (for example adding extra parking to a local hillside site may not be feasible). If, however, play spaces are managed in such a way as to offer diversified features and experiences, then more children will be able to play more often.

In this context:

- A varied range of play opportunities should be offered across the community.
- There should be an equitable distribution of play spaces throughout the community.
- All children and families should be within everyday access to at least one play space they can use with ease.

- Inclusive and accessible features should be found across all play spaces but do not need to be the same in every one.
- Planning should consider availability of inclusive play spaces across local, district and regional levels.

The '31 Inclusive Play Space Indicators' in section 6 will help you assess the diversity of play opportunities available.

## 19 Play Area Settings

The concept of the play setting is a means of integrating behavioral needs and physical requirements into the design process. Play settings are defined by the grouping of activities and the physical environment that support them. Play settings are very flexible. Their type and number vary depending on

the type of park play area in which they are located. A pocket park play area might have 5 settings while a regional park play area would have many more. While in ideal circumstances most play areas could incorporate all play settings, not every play setting is appropriate for every site. *(MIG, Inc., 2014)*

1. Entrances
2. Pathway and Circulation
3. Manufactured Play Equipment Settings
4. Water Play
5. Sand Play
6. Multi-Purpose Game Areas
7. Gathering/ Meeting/ Working/ Picnicking Places
8. Garden Settings
9. Trees and Plants
10. Play Props and Manipulative Settings
11. Special Features/ Non-Manufactured Equipment
12. Landforms and Topography
13. Stage Settings
14. Ground Covers and Surfacing
15. Signage
16. Animal and Wildlife Settings
17. Storage
18. Fences and Enclosures
19. Support Settings

## 2.3 Rethink play space for social inclusion

It is recognized that playgrounds have a key role as community gathering places and need to cater for parents, carers and the general community as well as children.

A key function of play spaces is as a hub for social interaction between children and adults. It is critical that play spaces are designed to enable children, young people and adults of all backgrounds, ages and abilities to access them.

“  
Inclusive playgrounds are also designed to foster social inclusion by providing spaces and activities that create opportunities for interaction between children of varying abilities as well as their families and communities.”

“  
Inclusive Play Spaces further the mission of promoting social inclusion of children with disabilities by hosting activities and programmes that bring together children with and without disabilities and also involve their families and members of the surrounding community.”

*Srurhi Atmakur, undated,  
wrote the essay “Playgrounds of Inclusion” and presented in The State of the World’s Children 2013, Children with Disabilities, UNICEF*

1 It is critical that play equipment is designed to enable children, young people and adults of all backgrounds, ages and abilities to access them. (Photo courtesy of KOMPAN and Jeanette Fich Jespersen)

2 Gathering and meeting place in Paignton Green Playground, Torbay, UK. (Photo courtesy of KOMPAN and Jeanette Fich Jespersen)

3 Giant play house in The Magical Bridge Playground as the hub for social interaction in the community. (Photo courtesy of Kris Lee, parent of a 6-year-old in Hong Kong)

4 Play space is a hub for social interaction between children and adults. (Photo courtesy of KOMPAN and Jeanette Fich Jespersen)



1



2



3



4

(See also section 1.5 The physical, sensory and social dimensions of play space)

## 2.4 Engage with communities about Inclusive Play Spaces

In planning and design processes, it is important to engage with communities, playground operators and other stakeholders to determine how best to develop and manage the playgrounds.

This can help to ensure that Inclusive Play Spaces are maintained into the future.

Children with disabilities and their families and carers hold a great deal of knowledge about what makes a space feel usable, inclusive and welcoming. Talking to them at early stages and continuing to engage them as plans evolve is likely to result in designs which better meet needs.

- Plans for consultation and engagement should be drawn up at an early stage so that children and communities can have a real influence over plans.
- Creative child-friendly methods should be used and thought given to children's preferred means of communication.
- Linking up with schools, clubs or parents and others who already know the children well can be very fruitful.
- Link with health/rehabilitation professionals for specific knowledge and expertise.



“When engaging people, it is important to employ an effective mixture of techniques and activities that put people at ease, that are fun, and locations that are accessible. This will enable people who find conventional consultation processes threatening or exclusive to share their ideas and opinions about proposals. Involving local communities in projects is essential to ensure that projects are sustainable beyond the development phase.”

Sensory Trust, undated

Sharing drawings, making site visits, exploring positive and negative experiences of other spaces and reviewing plans together are all

beneficial approaches to engaging with children and other community members.

Some points to consider:

- Will users be able to get into the play space and move freely around?
- Will they be able to play with others?
- Will they find enjoyable, stimulating things they can do?
- Will there be amenities and facilities suited to their needs?
- Will accompanying adults feel comfortable and relaxed?
- Will they all feel welcome?
- Will they want to come back again?





## 2.5 Take a positive approach to managing risk and challenge in play

Risk and challenge are essential ingredients in children's play. Children naturally seek them out, creating new challenges for themselves, testing their limits, developing essential skills in judging risk for themselves and enjoying the thrill of uncertainty.

The degree of risk and challenge children seek through play, and in what form varies from child to child. Children with disabilities have an equal right as other children to play freely without being unduly overprotected (*IPA 2014*) and perhaps even greater need for opportunities to take risks in play, since they may be denied the freedom of choice enjoyed by their non-disabled peers (*Play Safety Forum, 2002*).

A balance should be sought between preventing life-threatening and debilitating injury and allowing children the opportunity to play in the ways that support their long-term health and development. (*This is now becoming known as the risk-benefit assessment approach, Ball et al, 2013*).

Risk management of play spaces is complex and involves the systematic application of management, policies, procedures and practices. Judgements should however be based on a clear play policy framework which set out the values, understandings, principles and criteria on managing risk in play provision.

**Risk:** combination of the probability of occurrence of harm and the severity of that harm.

**Tolerable or acceptable risk:** risk which is acceptable in a given context based on current values in society.

*ISO/TR20183:2015*



Children's Garden, Gardens by the Bay, Singapore.

## 2.6 Formulate a Play Space Policy, Strategy and Standards

Local government provides play spaces because the community values the benefits which come from play and recognises that in increasingly urban environments children's access to free play is rapidly shrinking.

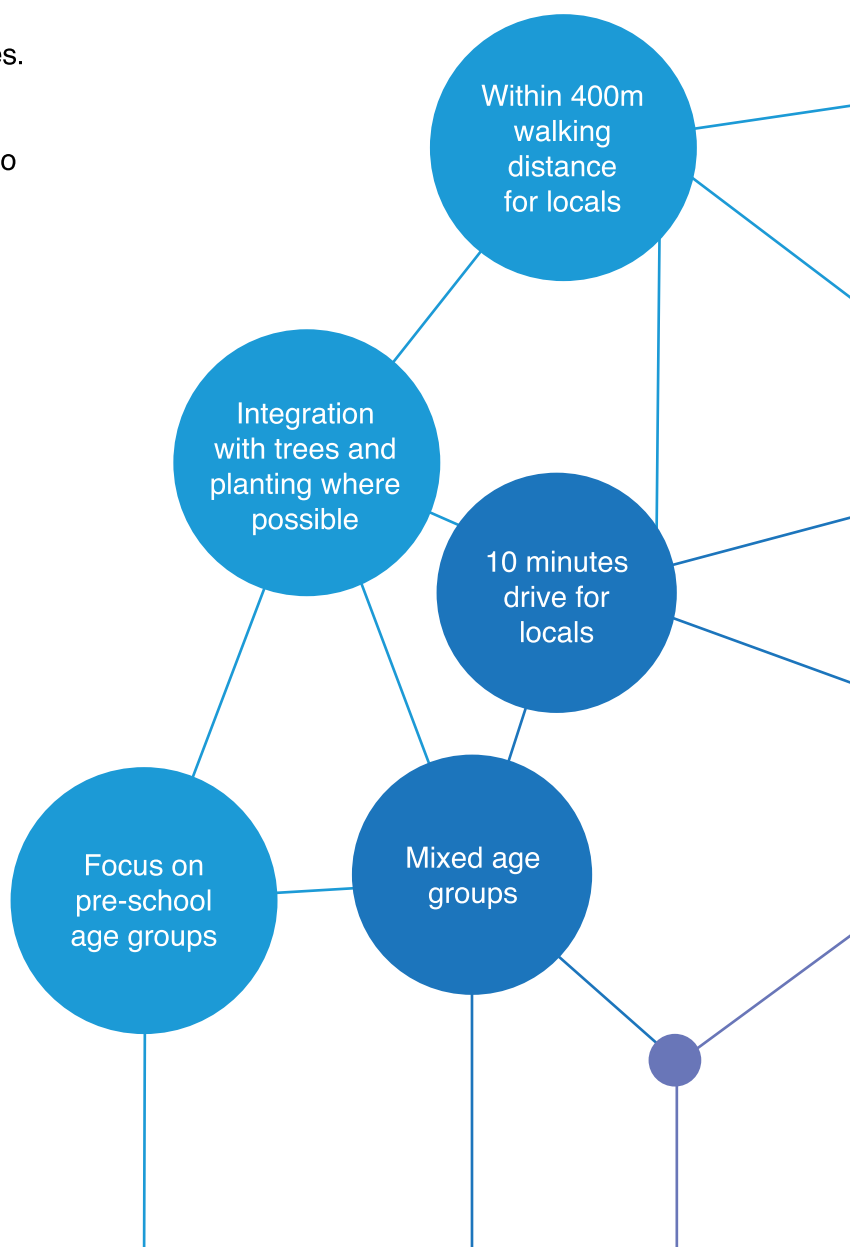
For many children, designed environments are their main opportunity for outdoor play. This provides an increased responsibility for local government to ensure they provide supportive play spaces which reflect the needs of all children.

The development of a Play Space Policy and Strategy would provide a framework for future development of play spaces that reflect the needs and desires of children, young people and adults of all backgrounds, ages and abilities.

A Play Space Policy and Strategy should set out the principles, framework and objectives to assist Hong Kong in determining its priorities for play and establishing mechanisms to achieve them addressing for example:

- children's right to play
- audits of existing play spaces including their distribution, adequacy, character, accessibility and inclusiveness
- equitable distribution of Inclusive Play Spaces in both existing and developing areas of Hong Kong
- participation of communities in decisions about play
- links with other policy areas such as transport, urban planning, health and education, for example, by making use of planning gain mechanisms for Inclusive Play Spaces for public use

- data collection and research
- a framework for future provision (i.e. find a balance between what is needed and what is manageable and affordable)
- and celebrating best practices and innovation in development of inclusive public play spaces in Hong Kong.



*Play Provision Model adopted from Play Space Strategy 2011, City of Port Philip, Australia*

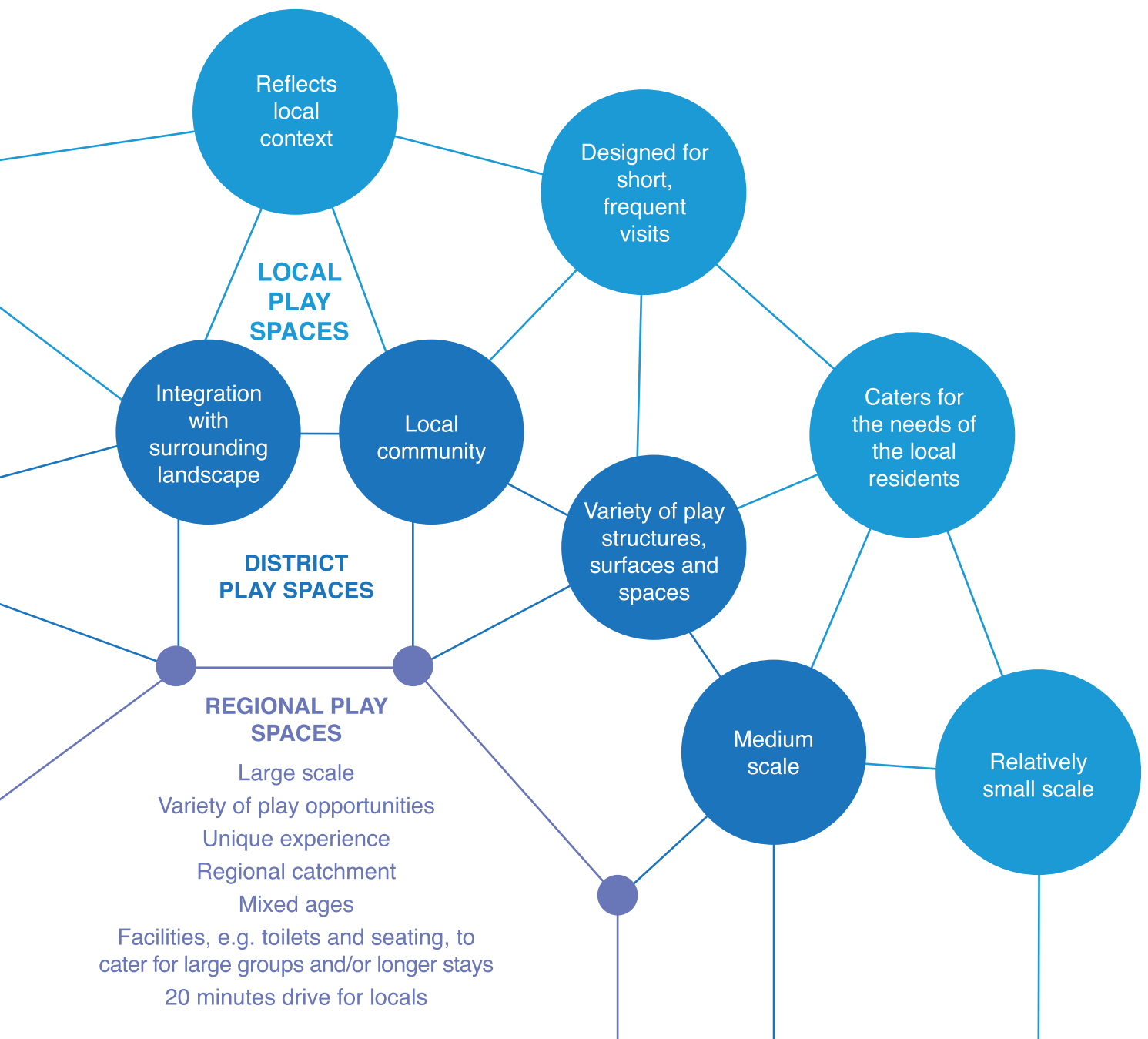
## 2.6.1 Vision for play space

It is important to identify the role of the play space within the surrounding network of parks and other facilities. This is best achieved through a Play Space Policy, Strategy and Standards.

The local community should be consulted to

develop a vision and objectives for the new or upgraded play space.

This vision will guide management once the play space is built and can be used as the basis for decision-making and future development.



## 2.6.2 Play space hierarchies

Play spaces can be categorised into a hierarchy of three different tiers, depending on their purpose, size, catchment and the opportunities available.

The hierarchy is as follows:

- **Local** – smallest play space, located close to homes, providing smaller range of play opportunities and amenities, with a catchment of 400m.



- 1 *Repulse Bay Road Playground, Hong Kong*
- 2 & 6 *Playgrounds in Special School, Hong Kong*
- 3 & 8 *Tung Wui Estate Playground, Hong Kong*
- 4 & 5 *Sham Shui Po Park Playground, Hong Kong*
- 7 *Sau Mau Ping (South) Estate Playground, Hong Kong*

• **District** – medium sized play space, providing a range of play opportunities and amenities, serves a number of neighbourhood areas, with a catchment of up to 2km.

1 Kowloon Park Playground, Hong Kong

2 Sensory Garden in Kwun Tong Promenade, Hong Kong

3 Fung Tak Park Playground, Hong Kong

4 Ping Shek Park Playground, Hong Kong



• **Regional** – largest play space, providing a broad range of play opportunities and amenities, with a catchment of 10km or more.

- 1 Po Hong Park Playground, Hong Kong
- 2 Tin Shui Wai Park Playground, Hong Kong
- 3 Victoria Park Playground, Hong Kong
- 4 Hong Kong Park Playground, Hong Kong



1



2



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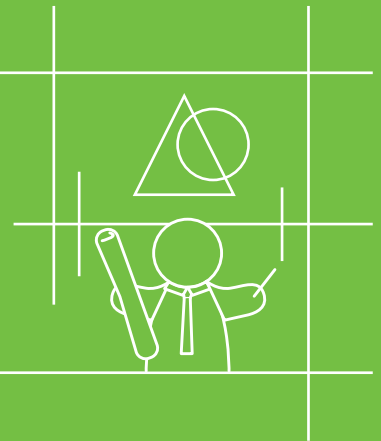


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(Adapted from *Play Space Strategy 2011*, City of Port Phillip)

# 3. DESIGN PRINCIPLES

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# 3 CREATING SUCCESSFUL INCLUSIVE PLAY SPACES

In this section we have drawn together principles for the design of play spaces and the steps to successfully achieve them.



1 Moose Country Natural Play Area, Rundle Park, City of Edmonton, Canada. (Photo courtesy of Kim Sanderson and Peter Kells)

## 3.1 Applying Universal Design principles to the site features and amenities

The seven Principles of Universal Design were developed in 1997 by a working group of architects, product designers, engineers and environmental design researchers. The purpose of the Principles is to guide the design of environments, products and communications.

According to the Center for Universal Design, the Principles may be applied to evaluate existing designs, guide the design process and educate both designers and consumers about the characteristics of more usable products and environments.

“*To make equal access to participation in play for children with disabilities a reality, inclusive play spaces draw upon the principles of universal design, which prompt designers of equipment and facilities to take into account the wide range of human physical and psychological abilities, so as to ensure equitable use by all people and obviate the need for additional, often costly, adaptations.*”

*Srurhi Atmakur, undated, wrote the essay “Playgrounds of Inclusion” and presented in The State of the World’s Children 2013, Children with Disabilities, UNICEF*





Faulkner Park, Perth, Australia. (Photo courtesy of KOMPAN and Jeanette Fich Jespersen)

## The 7 Principles of Universal Design

### 1. Equitable Use

The design is useful and marketable to people with diverse abilities.

### 2. Flexibility in Use

The design accommodates a wide range of individual preferences and abilities.

### 3. Simple and Intuitive Use

Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.

### 4. Perceptible Information

The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.

### 5. Tolerance for Use Error

The design minimizes hazards and the adverse consequences of accidental or unintended actions.

### 6. Low Physical Effort

The design can be used efficiently and comfortably and with a minimum of fatigue.

### 7. Size and Space for Approach and Use

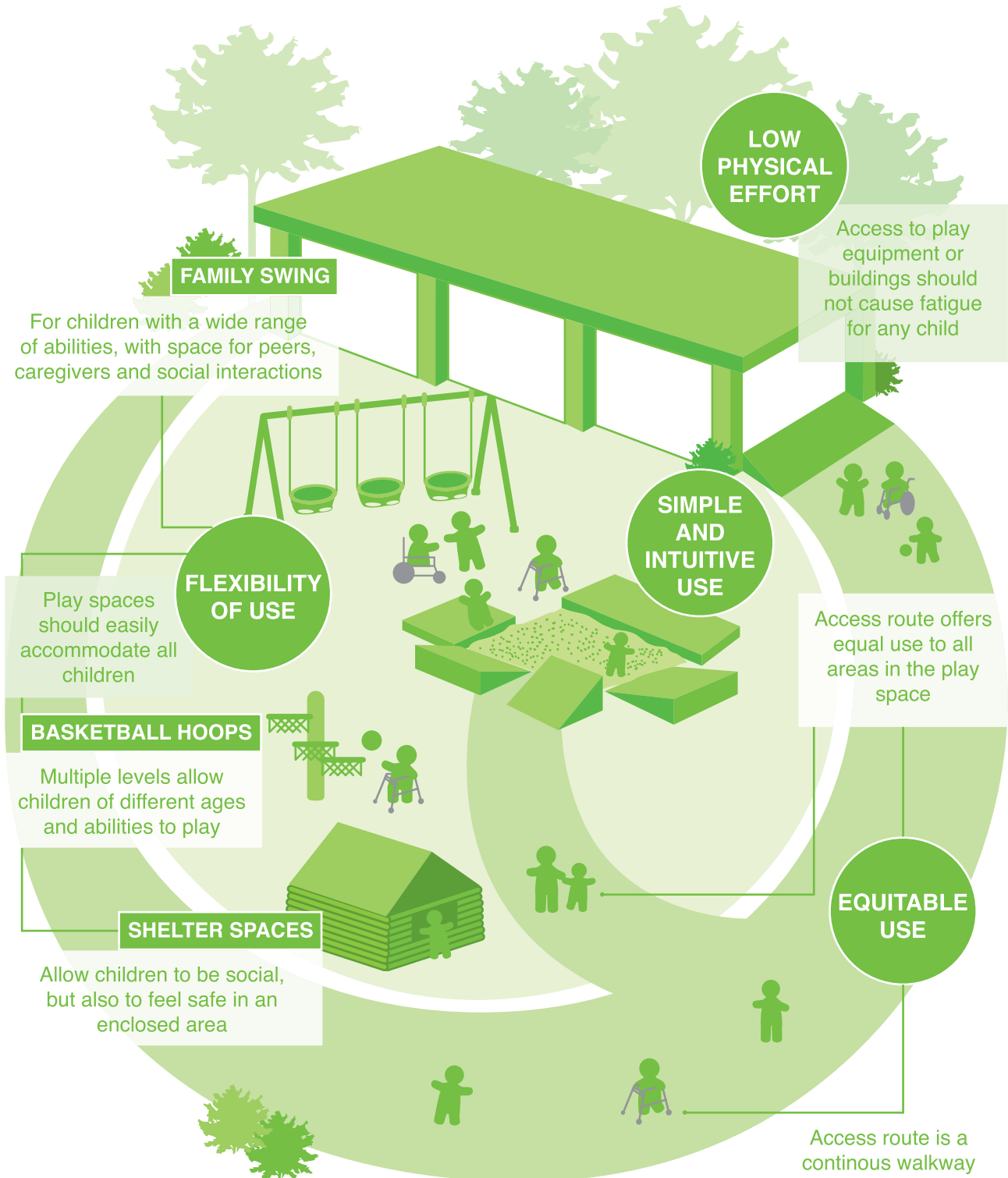
Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility.

*(See also section 5 for more on the application of the 7 Principles in play spaces)*

## Universal Design in the Playground

In Universal Design play spaces, the goal is that children of all abilities can play together, as independently as possible. Universal Design

should be integrated into the design process from the beginning. High play value is still the expected outcome.



Source: [http://www.unicef.org/sowc2013/universal\\_design.html](http://www.unicef.org/sowc2013/universal_design.html)

## 3.2 Designing playgrounds for inclusive play

Boundless Playgrounds, in operation from 1997 to 2014, inspired numerous inclusive playgrounds, particularly in North America. Boundless Playgrounds combines knowledge of children's play behaviours, removing the architectural barriers and applying the Universal Design principles. Their inclusive design philosophy accounts for the physical site and user needs. They provide useful touchstones in the design process through the following eight performance criteria.

- Absence of architectural barriers – a socially inviting, barrier-free environment
- Developmentally distinct play areas supporting predictable play behaviours of children
- Diversity of movement, sensations and experiences
- Many loose parts and natural materials in the playground for children to manipulate and use in their play
- Opportunities to play autonomously, alongside peers or with them
- Experience of height, being up high and viewing the world from an elevated vista
- Provision of semi-enclosed spaces
- Rigorous and challenging places to play.



1

1 Sand pit provided with accessible manufactured sand table and transfer steps. This sand play area is applying the Universal Design principle – Equitable Use. (Photo courtesy of Antonio Malkusak and Ken Kutska)

2 Inclusive playground in Siskin, Chattanooga, Tennessee, USA. (Photo courtesy of Antonio Malkusak and Ken Kutska)



2

(Adapted from *Access for ALL to Play Workshop in Hong Kong*, Playright and IPSI, 2013)

### 3.3 Following 8 steps to inclusive play area design

The Guide suggests a step-by-step approach to developing play space, which would include some or all of the following.

Each step requires planning. These steps assume that a budget (immediate and long-term costs) is established and a designer will be involved.



1 One challenging design requirement for “Artist at Play”, the outdoor playground at Seattle Centre, Seattle, Washington, USA, is engaging to children of all abilities and meets the needs of a wide spectrum of users. (Photo courtesy of Kris Lee, parent of a 6-year-old in Hong Kong)

2 The playground design was inspired by a drawing created by a little girl in 2008. (Source: <http://www.playgroundprofessionals.com/news/projects/art-play-seattle-center209>)

#### Step 1

Build a planning committee from community members (be clear about expectations of the process, limits of decision-making, time frames and exactly the opportunities for involvement).



#### Step 2

Organise consultation and engagement activities (as above, being careful not to raise expectations beyond what can be delivered).



#### Step 3

Carefully consider the location for ease of access, safety and maximum appeal.

#### Step 4

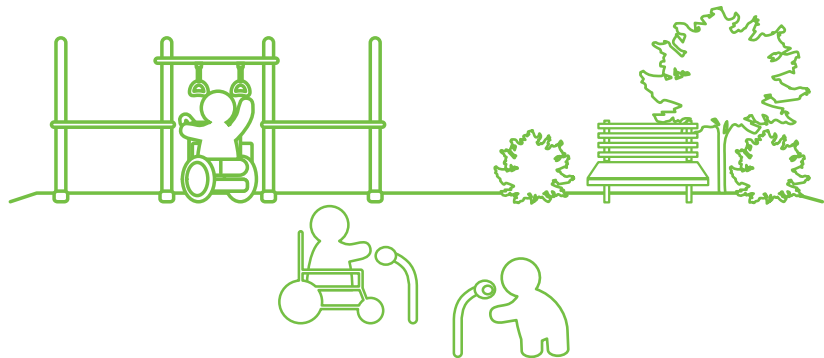
Layout the playground considering the character of the site, accessibility and topography.



#### Step 5

Create opportunities for a variety of PHYSICAL, SENSORY and SOCIAL play experiences:

- physical activities
- sensory stimulation
- cognitive stimulation
- natural features
- risk and challenge
- open spaces
- quiet spaces
- social spaces.



#### Step 6

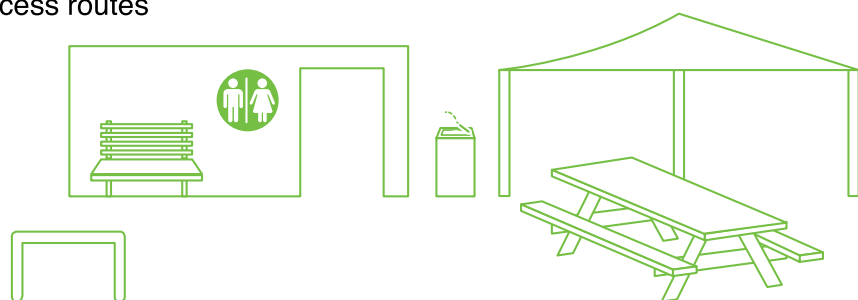
Consider both elevated and ground level play, the 'cool' piece and major play features.



#### Step 7

Include support amenities to make the play space enjoyable and inclusive:

- parking and exterior access routes
- toilets
- seating
- picnic tables
- drinking fountains
- shade areas
- bike racks.



#### Step 8

Maintain, review and improve.

(Adapted from Access for ALL to Play Workshop in Hong Kong, Playright and IPSI, 2013)

### 3.4 Moving beyond accessibility



Accessibility should be designed into the play space and maintained as an ongoing commitment.

Accessibility includes:

- approach, entry and use
- entrances, gates and access routes
- seamless paths of travel in and around the play space
- surfaces around and through the space
- inclusive play features/equipment
- access to social spaces and experiences
- support features and amenities
- signage and communication
- the sensory environment (acoustics, visual and tactile qualities).



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1 Entrance gate with signage of wheelchair accessible merry-go-round.

2 Accessibility includes “Approach”, “Enter” and “Use” (Photo courtesy of Antonio Malkusak and Ken Kutska)

3 Access routes/path need to be wide enough to accommodate those using mobility aids, the widest of which are motorized buggies. (Photo courtesy of Antonio Malkusak and Ken Kutska)

4 A level access from the nearest public access path to and into the play area is advantageous for wheelchair users and anyone who has difficulty walking or is unsteady on their feet. (Photo courtesy of Antonio Malkusak and Ken Kutska)

A level access from the nearest public access path to and into the play area is advantageous for wheelchair users and also parents with pushchairs, users of other mobility aids, people with sight impairments or anyone who has difficulty walking or is unsteady on their feet.

Any entrances, gates and access routes/paths need to be wide enough to accommodate those using mobility aids, the widest of which are motorised buggies.

Access routes/paths need to be of materials and construction that can be used throughout the year. Choice of construction and materials for the paths should consider intensity of use, climate, ground profile and ground soil/ conditions, etc.

Universal Design begins with accessibility and barrier-free design. Barrier-free design does not however guarantee Universal Design – designers are set the challenge of bringing together Universal Design and play value to create Inclusive Play Space.

*(See also section 4.2.5 Surfacing)*

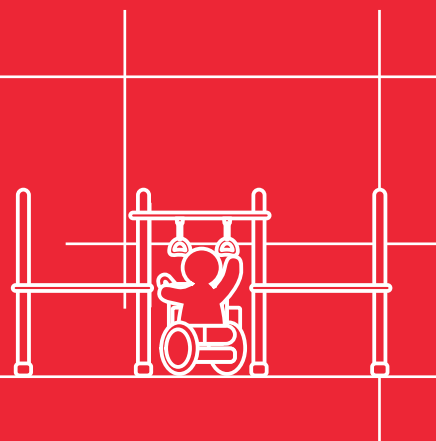


*Accessibility includes “Approach”, “Enter”, “Use”, “Entrances”, “Gates”, “Access Routes”, “Signage and Communication”, etc. Access routes need to be of materials and construction that can be used throughout the year. (Photo courtesy of Antonio Malkusak and Ken Kutska)*



## 4. GOOD PRACTICE

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# 4

## DESIGN, SAFETY & MANAGEMENT OF INCLUSIVE PLAY SPACES

In this section you will find a practical set of suggestions which will assist you in developing Inclusive Play Spaces irrespective of your own starting point or the type of space you have available.



1 Water Playground in AMBUCS, Danville, Illinois, USA. (Photo courtesy of Antonio Malkusak and Ken Kutska)

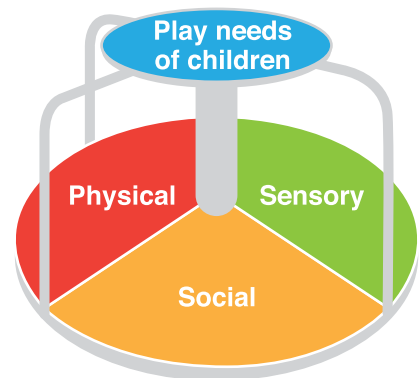
2 Accessible Merry-go-round in Baer School, Baltimore, Maryland, USA. (Photo courtesy of Antonio Malkusak and Ken Kutska)

## 4.1 Design

### 4.1.1 Play experiences

**Question:** How to create well-designed and developmentally appropriate outdoor play spaces that can successfully integrate the needs of all children?

**Answer:** The key is to offer choice and provide diverse physical, sensory and social environments, so that children with disabilities are a part of the overall play experience.



*Sand Play Area in Kochville Township, Saginaw, Michigan, USA. (Photo courtesy of Antonio Malkusak and Ken Kutska)*

(See also section 1.5 *The physical, sensory and social dimensions of play space and examples later in this section 4.1.8 – 4.1.10*)

## 4.1.2 Layout and environment

In laying out the play space, consideration should be given to a number of dimensions related to access, orientation and navigation, all contributing to an inclusive experience.

These dimensions should take into account the needs of children and families including those with:

- mobility impairments, using wheelchairs or mobility aids or with health conditions that result in low strength and stamina
- sensory (vision and hearing) impairments
- learning difficulties
- mental health problems
- family groups, parents and siblings with disabilities.



Playworld Systems (2012) define layout as:

‘The placement and relationship of events on the playground and the surrounding environment in order to maximize inclusion.’

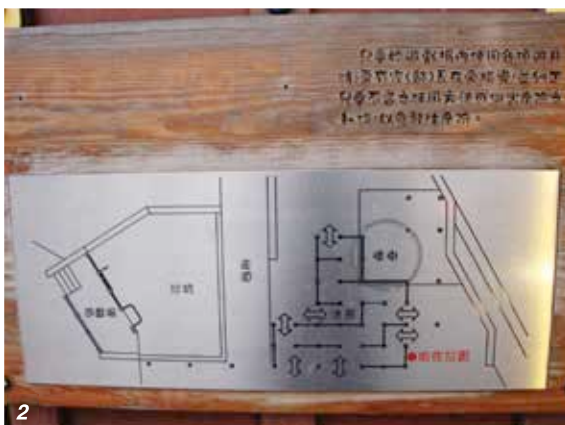
Their definition incorporates:

- General layout
- Entry and orientation
- Wayfinding
- Perimeter containment
- Orientation path
- Pods, rooms and zones
- Colour as a safety and wayfinding tool
- Gathering spaces
- Line of sight
- Landscaping

1 In laying out the play space, consideration should be given to a number of dimensions related to access, orientation and navigation, all contributing to an inclusive experience. These dimensions should take into account the needs of children and families.

2 Layout plan of the play maze provided underneath a tree house play structure.

3 Wenying Children Park in Taichung, Taiwan.



### 4.1.3 Accompanying adults

Most children, especially young children and children with disabilities, are accompanied by an adult when they visit a play space. Often the choice of the visit is made by an adult.

Adults like to be involved in play spaces in a variety of ways - actively supporting children's play, encouraging them and joining in or supervising from a safe and comfortable position. They may assist the child with personal needs and generally ensure the child is safe and happy.

Play spaces also provide a good opportunity for adults to relax and socialise with others. Poor or inconvenient design places an unnecessary burden on adults and carers.

- Have you consulted with children and families?
- Is there plenty of seating and shelter for children and for family groups?
- Will adults be able to look out over the play space and easily see their children?
- Are there gathering spots and informal seating/resting spaces throughout the play space?

1 & 2 Most children, especially young children and children with disabilities, are accompanied by an adult when they visit a play space. (Photo courtesy of MIG, Inc. and Susan M. Goltsman)

3 Inclusive Play Spaces provide a good opportunity for adults to relax and socialise with others. (Photo courtesy of KOMPAN and Jeanette Fich Jespersen)



#### 4.1.4 Considerations for an equal quality of experience

The Sensory Trust advises that responses to design briefs should demonstrate that the following groups and activities have been considered. The list they provide is not intended to be exhaustive but should be seen as a starting point. The overall aim is to ensure that all children have access to an equal quality of experience.



1 & 3 Children using a manual wheelchair or a powered mobility vehicle take part in the play activities. Consider the space whether they play alongside non-disabled children. (Photo courtesy of Antonio Malkusak and Ken Kutska)

2 Children with reduced mobility who might use walking aids rather than wheelchairs need to get to the play area. (Photo courtesy of Antonio Malkusak and Ken Kutska)

#### Children with mobility impairments

- Children using wheelchairs who wish to engage in physical activities
- Children who might use a wheelchair for some of the time but be able to engage in physical activities
- Children with reduced mobility who might use walking aids rather than wheelchairs
- Will also benefit children with health conditions that result in low strength and stamina

#### Common issues and things to consider

- **Children can get there**  
Can a child using a manual wheelchair or a powered mobility vehicle get to the play area? Are there any potential barriers on the approach or around the play area such as kerbs, narrow paths, steep slopes, gutters etc.?
- **Children can take part**  
Can a child using a manual wheelchair or a powered mobility vehicle take part in the play activities (climbing opportunities, swings, slides etc.)? Can disabled children play alongside non-disabled children? Are the path surfaces and routes in and around the play area suitable for wheelchairs and children using walking aids? Are they level? Are there viable alternatives to areas of loose sand, gravel, or wood chip? Is there enough space in the play area and around the play equipment so that a wheelchair user would not feel “in the way”? Do the activities challenge children with mobility impairments, e.g. by creating physical activities that focus more on upper body motor skills?
- **Opportunities to rest and observe**  
Does the seating provide spaces for wheelchair users? Have you thought about the needs of parents who are wheelchair users? Is there any shade/ shelter to protect from strong sunlight and exposure to inclement weather? Not all play activities need to be physically demanding. Are there opportunities for creative and exploratory activities?



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## Children with sensory impairments

- Children with no vision
- Children with low vision who can distinguish colour, contrast, patterns
- Children with hearing impairments

### Common issues and things to consider

- **Encourage exploration through all the senses**  
Does the play opportunity appeal to the senses including sight, hearing and touch, exploring colour, pattern, texture, sound through the different senses? Will it engage a child with no vision? Will it engage a child with low vision, for example, by providing things to explore through touch, reflected light or strong colours and contrast? Do materials offer a mix of interesting textures, shapes, solidity, weight, flexibility and temperatures to touch? Do they offer interest through sound and vibration?
- **Provide a range of activities**  
Do activities encourage children to develop cognitive skills like cause-and-effect, co-ordination, dexterity and agility? Does the play area include planting that stimulates the sense of smell, hearing and touch?



1 & 3 *Sensory play equipment in Westgate Wonderland, Singapore.*

2, 4 & 5 *Sensory play equipment in Artists at Play Playground, Seattle Center, Seattle, Washington, USA. (Source: <http://www.playgroundprofessionals.com/news/projects/art-play-seattle-center209>)*

6 *Provide play opportunities to appeal to the senses including sight, hearing and touch. Exploring colour, pattern, texture, sound through the different senses. These activities should also encourage children to develop cognitive skills like cause-and-effect, co-ordination, dexterity and agility. (Musical flower in Westgate Wonderland, Singapore)*







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## Children with learning difficulties

- Children with learning disabilities
- Children with specific learning difficulties like dyslexia
- Children with behavioural issues
- Will also benefit children speaking different languages

### Common issues and things to consider

- **Accessible information**  
Is there a way of avoiding using signage? If not, do signs include symbols and/or pictorial images to make them accessible to children who cannot access text? Does the space use symbols in its information and interpretation?
- **Adults can join in**  
Are there activities that adults with learning disabilities can join in with? Is the design easy to understand in terms of getting around and using it?
- **Provide a range of opportunities**  
Will children have a choice of busier, more active areas and quieter spaces? Is there scope for including natural boundaries that help reduce the tendency for young children and some children with behavioural issues to wander off?

1 & 2 Provide signs with pictorial images to make them accessible to adult and children who cannot access text.

3 Provide quieter space for children to prevent wandering off.

4 Provide a range of activities that adults with learning disabilities can also join in. (Photo courtesy of Kris Lee, parent of a 6-year-old in Hong Kong)



## Children with mental health problems

### Common issues and things to consider

- **Provide a range of play activity**  
Is there a choice of different types of activity and space, for example, quieter vs active, enclosed vs open spaces?  
Does the space offer 'time out' opportunities?

1 & 2 Provide a range of play activity with both enclosed and open spaces. (Photo courtesy of MIG, Inc. and Susan M. Goltsman)

3 Provide enclosed space to offer 'time out' opportunities. (Photo courtesy of MIG, Inc. and Susan M. Goltsman)



## Family groups, parents and siblings with disabilities

### Common issues and things to consider

- **Family groups are able to access play areas, to support their children**

Can disabled and non-disabled siblings play together? Can all family members access, understand and enjoy the opportunities on offer? Can a parent using a manual wheelchair or a powered mobility vehicle access the play area? Can they get alongside activities and equipment to support their children? Is there accessible space where parents can watch over their children? Does the play equipment allow mixed-ability siblings to play together and be engaged through a variety of activities?

1 & 3 Family groups, parents and siblings with disabilities should be able to access play areas, to support their children. (Photo courtesy of Antonio Malkusak and Ken Kutska)

2 & 4 Provide play equipment to allow families groups, parents and siblings with disabilities to play together and be engaged through a variety of activities. (Photo courtesy of MIG, Inc. and Susan M. Goltsman)



Reproduced from 'Inclusive Play' The Sensory Trust [www.sensorytrust.org.uk](http://www.sensorytrust.org.uk)

#### 4.1.5 Play area settings

Settings allow the designer to create areas with different character which support different types of activity, while maintaining an overall design. Setting shouldn't be prescriptive but should open up the range of choice and diversity of experience, for example by separating quiet areas from areas for very vigorous activity.

Settings should assist with children's ability to orient themselves and make choices about

where they play, how they play and for how long. Many children like to have the opportunity to observe first so that they can decide whether to enter or stay on the side-lines. They may wish to dip in and out or make a choice to play depending on the level of activity.

Settings should allow for adult sight lines so that parents and carers can safely observe their children at play.



1 Sand play setting in Always Dream Park in Fremont, California, USA. (Photo courtesy of MIG, Inc. and Susan M. Goltsman)

2 Adventure Trail in Children's Garden, Gardens by the Bay, Singapore.





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*Inclusive Play Space Design Ideas Competition organized by Playright in Hong Kong in 2015*

- 1 & 2 Reptile Fun – Student Category 1<sup>st</sup> Prize
- 3 & 4 Lostland – Student Category 3<sup>rd</sup> Prize
- 5 Water-Lily Park – Professional Category 1<sup>st</sup> Prize
- 6 JOINT – Student Category Honourable mention
- 7 Kidsleidoscope – Professional Category 2<sup>nd</sup> Prize
- 8 Open up Boundary – Professional Category Honourable mention



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- 1 Play Park of Jacksonville Zoological Gardens, Florida, USA. (Photo courtesy of MIG, Inc. and Susan M. Goltsman)
- 2 Play Park Entrance. (Photo courtesy of MIG, Inc. and Susan M. Goltsman)





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- 1 Faulkner Playground, Perth, Australia. (Photo courtesy of KOMPAN and Jeanette Fich Jespersen)
- 2 Play Volcano in Faulkner Playground, City of Belmont, Australia. (Source: <http://www.kids-around-perth.com/faulkner-volcano-park-belmont.html>)



1 Seating in Grizzly Bear Lodge, Kinsmen Park, City of Edmonton, Canada. (Photo courtesy of Kim Sanderson and Peter Kells)

2 Grizzly Bear Lodge, Kinsmen Park, City of Edmonton, Canada. (Photo courtesy of Kim Sanderson and Peter Kells)



2

#### 4.1.6 Natural features

“

*It doesn't have to be all about equipment. It can be about the surrounding area, the landscape, how you get to the equipment, what happens below the equipment and also the emotional effects of water, timber, metal and planting.”*

*Equipment Manufacturer in Dunn et al. 2003*

Using natural features as design elements gives the designer greater scope to produce an inclusive and attractive space for all.

- Planting creates opportunities for sensory stimulation and aesthetic appeal.
- Planting can also provide for play opportunities such as exploring and hiding.
- A play space with natural features changes with the seasons, evolves and grows.
- Natural features can be used to assist with wayfinding and orientation.
- Topography, contours, and combinations such as water, sand, equipment, plants enrich the palette available to the designer.
- If possible, endeavor to preserve mature trees on site and other existing landscape features to strengthen desirable site characters.
- Passive solar aspects can be utilized, for example, winter sun and direct sunlight for sanitization of soil, sand and water play elements.



*Natural feature in Tuen Mun Park Playground, Hong Kong.*

**Natural resources**, such as logs, can be used to create play opportunities.

**Scented plants** or those which make interesting sounds when grouped together offer access to play experiences for children with sensory impairments.



**Water play equipment** involving no standing water offers safe opportunities for widening disabled children’s access to play in open public spaces.

“.....water jets that kids of all ages go in and out of in the summer, and then play in the little streams of water.....older people can watch it, adults can watch it, but also for children with complex impairments and high support needs who don't want to take part in these activities, it's fantastic to watch and they can participate simply by being there.”

*Community Organisation Representative in Dunn et al., 2003*

1 & 2 Using natural features as design elements gives the designer greater scope to produce an inclusive and attractive space for all. (Photo courtesy of MIG, Inc. and Susan M. Goltsman)

3 - 8 For children with complex impairments and high support needs who don't want to take part in water play activities, it's fantastic for them to watch and they can participate simply by being there.



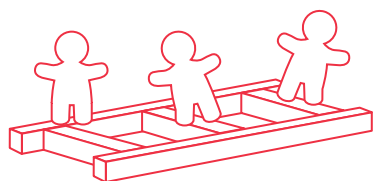
### Nature Play and Learning Places

A designated, managed area in an existing or modified outdoor environment where children of all ages and abilities play and learn by engaging with and manipulating diverse natural elements, materials, organisms, and habitats, through sensory, fine motor and gross motor experiences.

*Moore, R. (2014) Natural Play & Learning Places: Creating and managing places where children engage with Nature, National Wildlife Federation*

## 4.1.7 Play equipment selection

The following categories are useful as a basis for choosing equipment that will provide opportunities for a range of play experiences:



### Agility

Traverse walls and nets, wobble board



### Balancing

Beam, pole, step posts



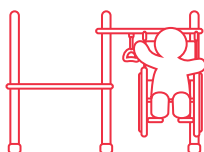
### Climbing

Frame, wall, net, rope



### Crawling

Tunnel, narrow bridge



### Hanging

Overhead hoops/ bars



### Jumping

Low or high height, close or far distance



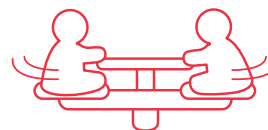
### Meeting

Seat, boulders, shelter, tunnel



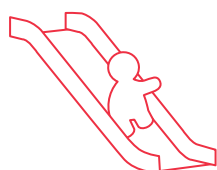
### Rocking

See saw, springer



### Rotating

Carousels, roundabouts, spinning poles, disks



### Sliding

Traditional slide, fire pole, runway/zip wire



### Speed

Sliding, swing



### Swinging

Single user, multiple user



### Tactile

Water, sound, sand, mud, grass

“

*Play is not a clean activity. Children need to get dirty, be able to manipulate and build things. Playgrounds are not about safety and rules, but about providing the right activity for children.*”

”

Susan M. Goltsman,

Design Expert shared in a feature story of South China Morning Post

#### 4.1.8 Physical experience



*Play spaces are hugely important in encouraging physical movement. (Photo courtesy of Antonio Malkusak and Ken Kutska)*

#### **Physical dimensions**

This includes movement in and through space, swinging, balancing, spinning, jumping, climbing etc. As trends demonstrate increasing problems around obesity and sedentary behaviour, play spaces are hugely important in encouraging physical movement. It's valuable for the sheer fun and exhilaration, as well as challenge, increasing physical activity levels, developing physical literacy, and is essential to the development of the vestibular system and proprioception in children (relating to the sense of body position, movement, acceleration and balance).

In line with World Health Organization Physical Activity Recommendations, play spaces can provide opportunities for:

- Motor skills: developing agility, balance, cross-coordination (as found in for instance ball games, spinning activities and climbing)
- Muscle strength: arms push and pull (as found in for instance crawling, hoisting, pushing, pulling and climbing); legs push (as found in for instance crawling/climbing); core muscles (trained in for instance rising, somersaulting etc.)
- Building bone density: found in weight bearing activity such as crawling, walking, jumping
- Cardio health - found in moderate to high intensity physical activity, such as crawling, running, jumping, climbing.

*(See also section 1.5 The physical, sensory and social dimensions of play space)*

## Physical experience illustration

### Spinning and rotating in overseas' and Hong Kong's playgrounds

1 Accessible Merry-go-round in Bluebell SEN School, UK. (Photo courtesy of Sutcliffe Play and Dave Brady)

2 Accessible Merry-go-round in Special School, UK.

3 Spinning Zone in Magical Bridge Playground, City of Palo Alto, California, USA. (Photo courtesy of Kris Lee, parent of a 6-year-old in Hong Kong)

4 Merry-go-round in Children's Play Area of Pak Tin Estate, Hong Kong.



## Sliding in overseas' and Hong Kong's playgrounds

1 Embankment slide in Linwood, Scotland. (Photo courtesy of KOMPAN and Jeanette Fich Jespersen)

2 Embankment slide in Zahra Bake Playground, North Carolina, USA. (Photo courtesy of Rose Communications for PlayWorld Systems, Magali Blanc and Tracey Cassidy)

3 Inclusive designed slide in Children's Play Area of Kowloon Park, Hong Kong.



## Rocking in overseas' and Hong Kong's playgrounds

4 Rocking play equipment in Hamamatsu Children's Plaza, Tokyo, Japan.

5 Rocking play equipment in the Children's Play Area of Tuen Mun Park, Hong Kong.



## Swinging in overseas' and Hong Kong's playgrounds

1 Inclusive designed swing in Artist at Play, Seattle Center, Seattle, Washington, USA. (Photo courtesy of Kris Lee, parent of a 6-year-old in Hong Kong)



2 Accessible swing in Children's Play Area of Sham Shui Po Park, Hong Kong.



## Climbing in overseas' and Hong Kong's playgrounds

3 Spatial Network in Darling Harbour, Sydney, Australia. (Photo courtesy of KOMPAN and Jeanette Fich Jespersen)

4 & 5 Climbers in the Children's Play Area of Fu Cheong Estate and Lai On Estate, Hong Kong



## Balancing in overseas' and Hong Kong's playgrounds

- 1 *Balancing play equipment in Stonebridge Gardens, London, UK.*
- 2 *Balancing play equipment in Children's Play Area of Fung Tak Park, Hong Kong.*



## Jumping in overseas' and Hong Kong's playgrounds

- 3 *Jumping play equipment in Jardin Les Halles, Paris, France. (Photo courtesy of KOMPAN and Jeanette Fich Jespersen)*
- 4 *Jumping play equipment in Children's Play Area of Fu Cheong Estate, Hong Kong.*



#### 4.1.9 Sensory experience



*Provide opportunity for a child to have his full body involved in the activity where the entire body gets mist. (Photo courtesy of MIG, Inc. and Susan M. Goltsman)*

### Sensory dimensions

This includes all the senses, sight, sound, touch, smell and even taste. The sensory environment can have both positive and negative impacts. Noise levels, wind, confusing visual signals can be a barrier to play improved by interventions such as dampening traffic

noise, wind breaks, creating quiet corners, etc. Play value can be hugely increased by greater attention to designing for the sensory environment - the approach can include both the bold and the nuanced and subtle, introducing texture, contrast, intrigue and 'invitations' to play.

*(See also section 1.5 The physical, sensory and social dimensions of play space and section 4.1.6 Natural features)*

## Sensory experience illustration

### Visual sensory system in overseas' and Hong Kong's playgrounds

- 1 Visual play equipment in Siskin, Chattanooga, Tennessee, USA. (Photo courtesy of Antonio Malkusak and Ken Kutska)
- 2 Visual play equipment in Children's Play Area of Quarry Bay Park, Hong Kong.
- 3 Visual sensory system in Rooftop Garden of Westgate, Singapore.



### Tactile experience in overseas' and Hong Kong's playgrounds

- 4 Tactile play in Chase Palm Park, Santa Barbara, California, USA. (Photo courtesy of MIG, Inc. and Susan M. Goltsman)
- 5 Tactile play equipment in Wai Man Road Playground, Sai Kung, Hong Kong.



## Auditory in overseas' and Hong Kong's playgrounds

- 1 Auditory play equipment in *Together We Play*, St. Louis, Missouri, USA. (Photo courtesy of Antonio Malkusak and Ken Kutska)
- 2 Auditory play equipment in the Children's Play Area of Kowloon Park, Hong Kong
- 3 Auditory play equipment in *Always Dream Play Park*, Fremont Central Park, California, USA. (Photo courtesy of MIG, Inc. and Susan M. Goltsman)



## Cozy places in overseas' and Hong Kong's playgrounds

- 4 Cozy Place in *The Valley Children's Zoo*, Oakland, California, USA. (Photo courtesy of MIG, Inc. and Susan M. Goltsman)
- 5 Cozy Place in the Children's Play Area of Quarry Bay Park, Hong Kong.



#### 4.1.10 Social experience

**Social dimensions:** The Guide emphasises that play spaces are social spaces, a hub for a community and of value across generations. Play space serves many important functions: a place to spend time with friends and family, to meet others from our own or other communities, to learn about social values such as tolerance and cooperation etc. In designing a play space, the Guide advocates attention to social aspects of play including:

- creation of cosy corners
- comfortable places to sit or perch

- space to be an onlooker (some children like to be near others but not play directly with them)
- settings that support engaging in shared activity such as sand and 'loose parts' play (loose materials for children to build with and manipulate)
- design which encourages play types such as role play, dramatic, fantasy and imaginative play.

*(See also section 1.5 The physical, sensory and social dimensions of play space)*



*Play space serves as a place to spend time with friends and family, to meet others from own or other communities.*

#### Cooperative play in overseas' and Hong Kong's playgrounds

1 Cooperative play on a spinning disc. (Photo courtesy of Antonio Malkusak and Ken Kutska)

2 Cooperative play on a spinning maze in Children's Play Area of Kwai Shing East Estate, Hong Kong.





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## Dramatic and imaginative play in overseas' and Hong Kong's playgrounds

1 Dramatic and imaginative play in the Children's Play Area of Tin Shui Wai Park, Hong Kong.

2 Dramatic and imaginative play in Always Dream Play Park, Fremont Central Park, California, USA. (Photo courtesy of MIG, Inc. and Susan M. Goltsman)



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## Social interaction in overseas' and Hong Kong's playgrounds

3 Social interaction playing a chessboard in Taipei American School. (Photo courtesy of MIG, Inc. and Susan M. Goltsman)

4 Social interaction through a board game surface in the Children's Play Area of Nam Shan Estate, Hong Kong.



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## Loose parts in overseas' and Hong Kong's playgrounds

5 Loose parts play on an Imagination Playground in UK.

6 Loose parts play with toys on the play equipment in Hong Kong.



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## 4.2 Management

### 4.2.1 Risk and challenge in Inclusive Play Spaces

Children need and want to take risks when they play. Play provision aims to respond to these needs and wishes by offering children stimulating, challenging environments for exploring and developing their abilities. In doing this, play provision aims to manage the level of risk so that children are not exposed to unacceptable risks of death or serious injury. *(Play Safety Forum, 2002)*

Providing challenge for all children, including those with impairments, is important in good play environments. When developing an open

access play space, the widest possible range of abilities needs to be considered, as it is vital to retain different levels of challenge for all. *(British Standards Institution, 2013)*

During play, children are often driven by the challenge to do things that takes them to their limits, which in turn, leads to a better knowledge of themselves through experience. This challenge often corresponds to a sense of risk as there are chances for success or failure, even when the probability of an injury is minimal. *(British Standards Institution, 2013)*



“ .....safety must be considered at all stages of play provision but, inevitably, there will be a risk of injury when children play as there is a risk of injury in life generally. We must not lose sight of the important developmental role of play for children in pursuit of the unachievable goal of absolute safety. ”

*Health and Safety Executive in Play Safety Forum, 2002*

1 Providing challenge for all children, including those with impairments, is important in good play environments. *(Photo courtesy of KOMPAN and Jeanette Fich Jespersen)*

2 When developing an open access play space, it is vital to retain different levels of challenge for all children. *(Photo courtesy of Antonio Malkusak and Ken Kutska)*



## 4.2.2 Accidents in playgrounds

Playground injuries are a concern for both parents and providers and there must be freedom from unacceptable risk of life-threatening or permanently disabling injury.

It is not possible to erase all potential risk from play when designing playgrounds without

eliminating the play value from which children benefit.

Many, if not most, playground injuries can be prevented or reduced in severity through careful planning, design and maintenance of playgrounds and play equipment.



Accident statistics (in the UK) show that injuries as a result of accidents in children's playgrounds occur for several reasons:

### Management Causes

- poor equipment design or failure to comply to standards
- poor design and layout
- unsuitable equipment for the intended age group
- incorrect installation
- poor inspection
- poor maintenance

### User Causes

- lack of supervision
- 'misuse' of equipment
- unsuitable clothes
- weather conditions

As few as 40% of these accidents are related to the equipment and playing in a playground is a relatively low-risk activity.

(Source: <http://www.rospa.com/play-safety/advice/playground-accidents/>)

### 4.2.3 Management responsibility

A number of organizations offer advice on providing for children's right to play in safe but challenging play environments.

The Royal Society for the Prevention of Accidents provides the following advice to playground providers:

1. Obtain professional design and layout advice.
2. Select equipment and surfacing which meets the (*relevant*) Standards.
3. Ensure it is installed by a competent person in accordance with EN1176 (*in Europe or other relevant standards elsewhere*).
4. Have a post-installation inspection carried out by an independent body.
5. Inspect the playground and equipment regularly:
  - Weekly
  - Quarterly
  - Annually
6. If you are carrying out inspections, find a training course. The annual inspection should be carried out by an independent specialist.
7. Have an effective maintenance programme which repairs faults quickly.
8. Have a programme for improving and up-dating playgrounds.



Accidents in children's playgrounds occur for either 'Management' or 'User' causes. (Children's Play Area of Un Chau Estate, Hong Kong)

(Source: <http://www.rosipa.com/play-safety/advice/playground-accidents/>)

## 4.2.4 Surfacing

Surfaces should be selected carefully and can be used to both aid and restrict access to an item. Various surfaces found in playgrounds have advantages and disadvantages depending on where and how they are used and what is required of them.

A number of publications from local, overseas and commercial organizations provide descriptions of the pros and cons of various types of surface.



1 A suitable surface should extend right up to the access point of each item of equipment or play feature. (Photo courtesy of KOMPAN and Jeanette Fich Jespersen)

2 Good design and providing complementary play opportunities can create a wide diversity of experience for all. Wavy surface provides challenges and fun for wheelchair users. (Photo courtesy of Antonio Malkusak and Ken Kutska)

3 Surfaces in playgrounds can provide the function of 'Play', 'Aesthetic' and 'Sensory Value'. (Photo courtesy of Antonio Malkusak and Ken Kutska)

Surfaces in playgrounds provide three main functions:

- Impact absorption in a fall zone under and around play equipment.
- Accessible path of travel that will help people to access the space and play activities.
- Play, aesthetic and sensory value.



It is unlikely one surface will meet all requirements so more than one type of surface is usually required (for example, synthetic, sand, timber, turf, earth, cobbled, grit and paved surfaces).

Some points to consider:

- a suitable surface should extend right up to the access point of each item of equipment/ play feature.
- the surface might have to change to comply with any impact absorbing surfacing requirements across the play equipment's impact area.
- loose fill surfaces may add play value for some children while restricting access for others.
- more stable surfaces can be used to create paths to permit access through loose fill surfaces.
- gradients should be taken into account when choosing surface materials.
- good design and providing complementary play opportunities can create a wider diversity of experience for all.
- bear in mind that surfaces that become hot have the potential to cause harm especially to users who lack sensitivity in parts or all of the body. Plastic, rubber and metal surfaces can heat up and retain heat on a sunny day.

*(See also section 3.4 Moving beyond accessibility)*

## 4.2.5 Signage

Signage is always a secondary form of protection for children and where safety is an issue this should be addressed by the design of the item or area rather than by reliance upon a notice.

In cases where signage is necessary, it should be aimed at adults rather than children and provided at the entrances to the play area so that the information is available from the outset.

Although the wording of the sign should be aimed at adults, as the play area is specifically focused on children, it is the needs of the child rather than the adult that take priority when considering what information should be provided to users or to those accompanying them.

It is also important to bear in mind that signs or notices frequently have little effect on behaviour and might actually encourage the prohibited activity.

Signs will also have little effect on children if they are unable to read the information, do not understand the information or fail to appreciate the consequences of not following the instruction.

Whilst pictograms can help, they are not necessarily always a suitable solution and only properly evaluated standard symbols should be used.

The use of a coding system, for example, animal symbols or colour to indicate the suitability of an item of equipment for a specific age or ability can be adopted but this can also be counter-productive as the abilities of individual children can be very variable.

In most cases, the child's carer will know more about their child's ability to use an item of equipment and so they, and the child, are best placed to make choices.



1 Signage is always a secondary form of protection for children and where safety is an issue, this should be addressed by the design of the item or area rather than by reliance upon a notice. (Children's Garden, Gardens by the Bay, Singapore)

2 The use of a coding system and colour to indicate the suitability of play equipment for a specific age and prohibited activity. (Playground in Tokyo Midtown, Japan)

(Reproduced with reference to *Playground equipment accessible for all children*, Chapter 6 Play area / layout, p.11, BSI 2013)

## 4.2.6 Maintenance

Ongoing maintenance is critical to the success of play spaces.

Playgrounds must be maintained to the highest quality to ensure the safety of the children and other users and there must be plans for regular inspections.

There should be a straightforward way for users of the play space to report problems or make suggestions to management.

Important factors are:

- the attitude of staff

- ongoing training opportunities for staff
- cleanliness of facilities
- provision of amenities
- inclusive approaches to events and programming
- good record-keeping in relation to installation, inspections, repair and maintenance.

Getting maintenance right will enhance the sense of safety, wellbeing and belonging for children and other community members.



The Playground Maintenance Diamond of Care provides the basis for and direction to low risk and prevent injuries on playgrounds. The model can be used to identify, evaluate, and act upon the maintenance issues of inclusive playgrounds.

**Knowledge** – knowing what needs to be done

**Inspection** – identify what is wrong

**Corrective Action** – fixing or replacing a defective part

**Documentation** – written verification of your actions

*(Maintaining Child's Play: A Comprehensive Guide for Maintaining Safe Playgrounds, 2010-2011 PDRMA)*

- 1 *Playgrounds must be maintained to the highest quality to ensure the safety of children and other users and there must be plans for regular inspections. (Stonebridge Gardens, London, UK)*
- 2 & 3 *Sand table and sand pit in Inclusive Playground, Bishan-Ang Mo Kio Park River Plains, Singapore.*
- 4 *Ongoing maintenance is critical to the success of play spaces. (Sand table in Battery Park, New York City, New York, USA)*

## 4.2.7 Amenities

One of the main reasons children with disabilities do not access play areas is because the child's carers do not bring them. Providing facilities within or adjacent to a play area can make a visit to the playground a much easier and more enjoyable experience.

The availability of car parking close to the play area, ample space for mobility devices and infant buggies and strollers, and the provision of toilets with changing facilities will encourage regular visits.

The time a child spends at the play area is mostly determined by how long the adult accompanying them is prepared to stay rather than by the excitement offered by the play equipment.

The provision of accessible adult seating, shelter from sun or rain, picnic tables to encourage family groupings and other such facilities will benefit all users and extend the time children spend playing.



1 - 3 Providing facilities within or adjacent to a play area can make a visit to the playground much easier. The provision of accessible adult seating, shelter from sun or rain, picnic tables to encourage family groupings and other such facilities will benefit all users. (Photo courtesy of Antonio Malkusak and Ken Kutska)

4 Shelter in Grizzly Bear Lodge, Kinsmen Park, City of Edmonton, Canada. (Photo courtesy of Kim Sanderson and Peter Kells)

Inclusive design is about:

**Access with dignity** – getting to, and into places, and using them. It is about physical access to places and services, including access to appropriate technology

**Treatment with respect** – how people are dealt with, talked to and looked after; whether their needs are considered and whether they are respected and welcomed

**Relevant services** – do places meet people’s particular needs? Are they designed with users in mind? Do they give people a sense that they have a right to be there?

*(Commission for Architecture and the Built Environment, 2008)*



1 - 9 The availability of car parking close to the play area, ample space for mobility devices and infant buggies and strollers, and the provision of toilets with changing facilities will encourage regular visits.



# 5. PLAYGROUNDS FOR ALL

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# 5 UNIVERSAL DESIGN AND INCLUSIVE PLAY SPACES

This section offers a straightforward way to understand the difference between basic requirements of a play space and further considerations for more inclusive spaces.

Examples illustrate the application of the Universal Design principles in Inclusive Play Spaces. There is no prescription to create the perfectly universal experience and certain ideas work better in some places and situations than others. It is a case of thinking through how the principles can be applied for the particular space to achieve the overall purpose of an inclusive experience with great play value.

This section is reproduced from Access for ALL to Play Workshop presented by Ken Kutska, International Playground Safety Institute, in Hong Kong, July 2013, with the addition of Equally Playful by Design examples for this Guide.

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1 Paignton Green Playground, Torbay, UK. (Photo courtesy of KOMPAN and Jeanette Fich Jespersen)



## 5.1 Equitable use

The design is useful and marketable to people with diverse abilities.

### Basic requirements

- Play space design needs to provide one access route into the play area and make it accessible to all people with diverse abilities
- All users can access the playground and play equipment from various locations at the park and open areas
- Elevated access route to central focal point of play space

### Playgrounds for all

- Two access points to the play equipment
- Entire perimeter of the playground is flush level with the playground surface
- Elevated access to the highest focal point on the play equipment

2 & 3 *Play space design in Magical Bridge Playground, City of Palo Alto, California, USA, provides more than two access points to the play equipment. (Source: <http://magicalbridge.org/palo-alto/>)*





### Equally playful by design

All children who come to play should feel that they can be part of the realm of play activity – they may use the space in different ways but are not segregated by ability. Natural features, local character, artwork, inviting paths and entrances create a sense of welcome and appeal. Items of play equipment which have proven to be very inclusive – ‘bird’s nest’ swings, for example – and are chosen to provide play value to all children, appeal not solely to children with disabilities. Creative design solutions are applied to create access to the experience of play: using topography and contours to create sweeping access to higher levels; opportunities to play via choices of scrambling, steps, climbing, gentle inclines etc.



1 - 4 Play space design in Magical Bridge Playground, City of Palo Alto, California, USA, allows all users to access different embankment slides from various locations. It provides elevated access to the highest focal point on the playground. (Source: <http://magicalbridge.org/palo-alto/>)

## 5.2 Flexibility in use

The design accommodates a wide range of individual preferences and abilities.

### Basic requirements

- Play space design can accommodate a wide range of individual preferences and abilities
- Play equipment should be designed with flexibility and can be used the way it works best for each individual

### Playgrounds for all

- Play area or play equipment design should be of equitable non-exclusive use with many options
- Provide different means of access to the elevated composite play structures, for example, climbers, ladders, stairs, transfer systems and ramps

1 Provide different means of access to the sand tables in McDade Park, Pennsylvania, USA. (Photo courtesy of Antonio Malkusak)

2 Sand play area design in John Prince Park, Florida, USA, is equitable non-exclusive use with many options. (Photo courtesy of Antonio Malkusak)

### Equally playful by design

Flexibility is a key characteristic of play and therefore a natural component of designing for play spaces. It is the nature of play that children do it in their own way, at their own pace and for as long as they are interested, stimulated or content. Building flexibility of use into play space could include, for example: sand and earth provided at ground level, on tiers and raised table levels; in combination with water play flow systems, 'streams' and waterfalls or run-through fountains; spaces which stimulate rather than prescribe play such as dens, play houses, ambiguous structures and evocative art work.



## 5.3 Simple and intuitive use

Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.

### Basic requirements

- Play space design adopts the human-centred approach and respect for all people that will use the play component
- Play equipment is easy to understand regardless of the user's experience, knowledge, skills or concentration level

### Playgrounds for all

- Provide attention to the play area design to eliminate unnecessary complexity. Play component should be more than the standard design and used by children of all ages and cognitive levels
- Give creative new meaning, new shape and form to the play equipment design that may facilitate imaginative play. It may include the transfer system built into popular play components, for example, spring rockers and accessible climber

1 Water play equipment design in Darling Harbour facilitates imaginative play. It is used by children of all ages and cognitive levels. (Photo courtesy of KOMPAN and Jeanette Fich Jespersen)

2 Play space design in the Westgate Wonderland, Singapore, adopts the human centred approach and respect for all people that will use the water play component.

### Equally playful by design

Play spaces shouldn't leave the users puzzled – am I allowed to do this? Is it ok for me to use this? Rather they should be full of subtle 'invitations' to play – colour, texture, ambience etc. should be conveying a message that 'you are welcome and safe to play here'. Observation of a design in use will provide feedback on the success or otherwise of the design – are features used to their full potential or are users hesitant?



## 5.4 Perceptible information

The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.

### Basic requirements

- Play space design can communicate necessary information to the user regardless of ambient conditions or user's sensory abilities
- Play area or play equipment should be designed to provide information in multiple formats that will benefit all people either through visual, auditory or experiential learning

### Playgrounds for all

- Play area or play equipment design should use different modes such as pictorial, verbal, tactile to communicate essential information with maximum legibility
- Creatively use colour schemes to differentiate play equipment
- Creatively use colour options for surfacing to provide safety and orientation information



1 & 2 Music zone design in Magical Bridge Playground, City of Palo Alto, California, USA, uses pictorial, verbal, tactile to communicate essential information with maximum legibility. (Source: <http://magicalbridge.org/palo-alto/>)



## Equally playful by design

Play spaces may need to provide information such as location of toilets and changing areas, how to make contact with supervisors or management, opening hours, directions etc. Information should be presented in different modes such as pictorial, verbal or tactile.



1



2

1 Play area designed in Artist at Play, Seattle Centre, Seattle, Washington, USA, provides information in multiple formats that benefit all people. (Photo courtesy of Kris Lee, parent of a 6-year-old in Hong Kong)

2 - 4 Signage should be designed to communicate necessary information to all the user regardless of ambient conditions. (Showa Kinen Park, Tokyo, Japan)



3

5 & 6 Creatively use colour options or patterns for surfacing to provide safety and orientation information. (Ping Shek Playground, Hong Kong)



4



6



5



## 5.5 Tolerance for use error

The design minimizes hazards and the adverse consequences of accidental or unintended actions.

### Basic requirements

- Play space design needs to minimize hazards and provide warnings of errors or fail safe features
- High play value equipment is designed for challenge and with safety as a top priority

### Playgrounds for all

- Play area should be purposely designed to provide opportunities for all children to try something new, encouraging a range of play behaviours and taking into account safety considerations
- Play equipment should be arranged to minimize hazards and errors

1 *Play equipment in Hamamatsu Children's Plaza, Tokyo, Japan, are designed to minimize hazards and errors.*

2 & 3 *Sensory play system in Westgate Wonderland, Singapore, is purposely designed to provide play opportunities for all the user to try something new.*



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2

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1



2

### Equally playful by design

Another characteristic of children’s use of play space is their desire to use it to challenge themselves, test their limits and experiment (“what else can I do with this?”) This is a natural and desirable element of play. Designers should take into account this inclination and not be surprised when play spaces are used in unintended ways. Design can help to promote or restrict flow, facilitate or slow down access, create incremental levels of challenge etc. Genuine hazards should be minimized. Some play spaces employ playworkers some or all of the time to support and facilitate play. The presence of trained playworkers can significantly increase access to inclusive, challenging and diverse play opportunities while monitoring for unintended hazards.



3

1 - 3 *Play space design can help to promote flow, facilitate access, create incremental levels of challenge etc. Some play spaces can employ playworkers to facilitate play and minimize the unintended hazards. (Photo courtesy of Antonio Malkusak and Ken Kutska)*

## 5.6 Low physical effort

The design can be used efficiently and comfortably and with a minimum of fatigue.

### Basic requirements

- Play space design contains equipment and spaces that all people can use efficiently and comfortably and with a minimum of fatigue.
- Play equipment can require extra physical effort but the play area surface should not be designed so that it requires extra effort to move and traverse

### Playgrounds for all

- Provide an accessible route through the play area and to the play components designed with a playground surface that is level and easy to manoeuvre
- Provide play equipment that uses reasonable operating forces. Emphasis on play equipment design that can help children to receive myriad benefits

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1 Provide accessible route to the swing play components designed with a playground surface that is easy to manoeuvre. (Photo courtesy of Kim Sanderson and Peter Kells)



1

## Equally playful by design

Application of the principle of low physical effort is again about the interplay between the principles of universal design and play value. Take swinging as an example, creating momentum requires physical effort and the more momentum the higher the child flies or swooshes through the air. Swinging is valuable for the development of the proprioception and vestibular systems (relating to balance and spatial orientation), however, traditional swing seats are unusable for many children with disabilities. Play space users can still have the thrill and benefit of swinging if alternatives to traditional swing seats are provided: swings which have been ergonomically designed so that excessive physical effort isn't required to maintain grip and balance; deep or wider seats to accommodate people of different shapes and sizes individually or together.



1



2



3



5



4

1 & 2 Accessible and Biggo Duo swings. (Photo courtesy of MIG, Inc. and Susan M. Goltsman)

3 Play space users can still enjoy the thrill and benefit of swinging if alternatives to traditional swing seats are provided. (Photo courtesy of Cathy Kiss)

4 & 5 Bird nest and adaptive swings in Magical Bridge Playground, City of Palo Alto, California, USA. (Source: <http://magicalbridge.org/palo-alto/>)

## 5.7 Size and space for approach and use

Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility.

### Basic requirements

- Play space design needs to consider the appropriate size with enough space for all people to approach, reach, manipulate and use
- Adequate play space for the use of assistive devices or personal assistance
- Play area or play equipment design accommodates the wide variety of user body shapes, size and abilities

### Playgrounds for all

- Play area should provide a clear line of sight to important elements for any seated or standing users
- Provide routes on the composite play structures that make reach to all components comfortable for any seated or standing users
- Provide play equipment that accommodates variations in hand and grip size

1 & 2 *Play area design in Magical Bridge Playground, City of Palo Alto, California, USA, accommodates the wide variety of user body shapes, size and abilities. (Source: <http://magicalbridge.org/palo-alto/>)*

### Equally playful by design

The benefits of ensuring appropriate size and space through the play space including support amenities and access are clear. This can be achieved through an inclusive mind-set from the outset and considering the site holistically. The concept of designing for the whole range of users – youngest to oldest, smallest to biggest – rather than the 'average' is a useful reminder.





1



3



2

1 *Tot Zone in Magical Bridge Playground, City of Palo Alto, California, USA. (Photo courtesy of Kris Lee, parent of a 6-year-old in Hong Kong)*

2 & 3 *Artist at Play playground, Seattle Centre, Seattle, Washington, USA, is designed for the whole range of users by considering the appropriate size with enough space all people to approach, reach, manipulate and use. (Photo courtesy of Kris Lee, parent of a 6-year-old in Hong Kong)*

4 *The slide hill in Magical Bridge Playground, City of Palo Alto, California, USA, considered the appropriate size with enough space for all people. (Source: <http://magicalbridge.org/palo-alto/>)*



4

# 6. ASSESS YOUR DESIGN

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# 6

## 31 INCLUSIVE PLAY SPACE INDICATORS

In this section we have drawn together indicators as an audit tool to quickly assess the design, whether those are new play spaces, existing playgrounds or play equipment in need of improvement. The indicators consider the needs of children with different abilities and offer inclusive play opportunities.



1 Play spaces in Australia - Variety of surfaces to wheel over creates interest and fun. (Photo courtesy of Cathy Kiss)

2 Sand play area in Bishan-Ang Mo Kio Park River Plains, Singapore.

3 Water play area at Children's Zoo at Jacksonville Zoological Gardens, Florida, USA. (Photo courtesy of MIG, Inc. and Susan M. Goltsman)

### 6.1 Criteria for designing good play environment

The followings are the criteria\* adopted by Playright for assessing the submissions in Inclusive Play Space Design Ideas Competition in Hong Kong.

\* Moore R.C., Goltsman S.M. and laofano D.S. *PLAY FOR ALL Guidelines Planning, Design and Management of Outdoor Play Settings for All Children* (ed., 1992), p. 9 - 26



## Accessibility

Good places must be accessible to the intended users, especially children with disabilities. Children can get to the playground safely and the play space is integrated into their daily life. It is not

only “barrier free” but also “psychologically accessible” and understandable to the children who will use it.

## Diversity and clarity

A good play environment should be novel and complex. It stimulates children’s curiosity and exploration. Some aspects should change continually and other aspects can be predictable to foster feelings of security. Diverse play settings

can liberate creative energy from children. Novelty and predictability should be balanced in the play environment that presents a clear overall image to the user.

## Graduated challenge

Good play settings should provide activities with a broad range of challenges and graduated levels of safe risk-taking to children of different ages and abilities. Children should be able to

reach, jump, climb, or slide to the level of their ability without frustration. They should be invited to test their skills and build self-confidence.

## Flexibility

Good play spaces should allow children to develop continuously as their needs change when they learn and grow. Play spaces must have the ability to change and provide with physical elements that can change and move

around. The needs of children with disabilities develop as do the needs of children without disabilities. The physical environment for all children to play must be well planned with present and future adaptations in mind.

## Multi-sensory stimulation and multi-sensory cues

Good play settings should expose users to the greatest range of colours, smells, textures, shapes, sizes, sounds, objects, materials, interactions, people, climate, time, space, movement, and change. Multi-sensory settings provide important cues for orientation and wayfinding for children with a variety of needs, especially for children

with sensory disabilities. Playgrounds should be planned and settings designed to stimulate the development of all the senses: taste, touch, sight, smell, and hearing. The repetition or pairing of multi-sensory cues reinforces information for all children.

## Design for ALL ages

Good play areas should be designed for users of all age groups. Some separation could be necessary because of incompatible activities.

Conventional children’s play areas lack facilities

or accommodation for preschool, teenagers and parents. Providing facilities and accommodation for adults will encourage family use. Barrier free design and a well maintained site will encourage use by everyone.

## People-plant interaction

A variety of settings are needed where users can make close contact with vegetation, including

groundcovers, shrubs, and trees.

## Mix of people-made and natural elements

Children need exposure to the full range of settings and objects that represent contemporary

culture and our biological inheritance.

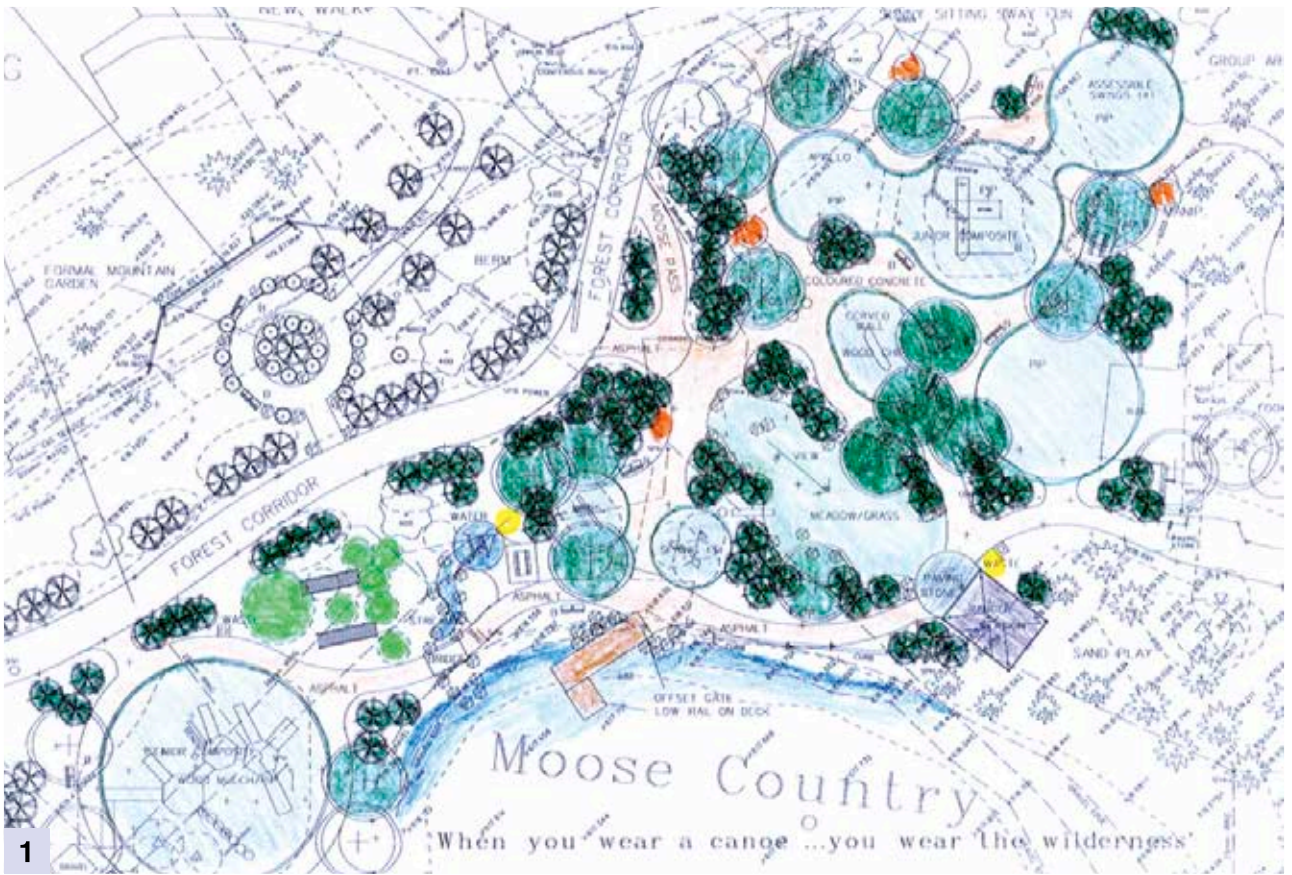
## 6.2 Quickly assess your design for Hong Kong

The check boxes denoted with “☺” are the common options and recommendations consolidated from the Focus Group Participants (see p.121-122) and the parents who participated in the qualitative research (see p.123) from October 2012 to June 2013 after visiting the shortlisted public playgrounds with inclusive play provisions (see p.124). The check boxes denoted with “🧑” are recommendations from Playright by referencing the criteria for designing good play environment and the design principles for creating successful Inclusive Play Space in section 3.

31 Inclusive Play Space Indicators	Play Spaces*		
	Local	District	Regional
1. Play spaces as part of a large park master plan			
2. Inviting, welcoming and stimulating play spaces			
3. Diversity and choice i.e. variety of play experiences			
4. Interaction with nature			
5. Appreciation of heritage and culture			
6. Connectedness to homes, public transport and roadways			
7. Link to a walking/cycling path network			
8. Accessible compacted or sealed paths to and within a play space			
9. Natural shade and trees			
10. Custom-made or individualised equipment that reflects local needs			
11. Create sense of place by artwork and sculptures			
12. Accessible and creative use of surfacing			
13. Physical play experiences			
14. Sensory play experiences			
15. Social play experiences			
16. Include interpretive components within play spaces			

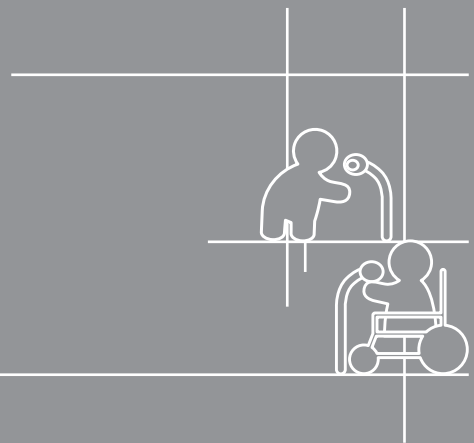
31 Inclusive Play Space Indicators (continued)	Play Spaces*		
	Local	District	Regional
17. Incorporates multiple levels, intimate spaces, creative entry and exit points and imaginative interiors			
18. Incorporates natural materials, indigenous vegetation and pre-existing landforms with environmentally inspired structures			
19. Universally accessible play spaces which incorporate items such as ramps that go to the top of a structure, sand boxes raised to table height, swings with high backs, etc.			
20. Incorporates opportunities for risk and challenge			
21. Incorporates opportunities for ball games and running games			
22. Sand areas and playable water features		 	 
23. Incorporates play opportunities for very young children	 	 	 
24. Incorporates activities and social spaces for young adults	 	 	
25. Provides supporting amenities, e.g. shaded seating, drinking fountain, litter bin, family toilet and designated car parking		 	 
26. Fixed outdoor fitness equipment in parks or along linear trails	 	 	
27. Employment of playworkers			 
28. Disability-equality training for all staff			
29. Site specific design working with the environment			 
30. Sustainability – environmentally friendly practices and materials that can be sourced locally; easy to maintain			
31. Involving communities in the design and management of play spaces			

\*See also section 2.6.2 Play Space Hierarchies for more information



# 7. RESOURCES

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# 7

## RESOURCES AND ADDITIONAL INFORMATION

### 7.1 Standards and Guidelines

1 - 4 *Bishan-Ang Mo Kio Park  
River Plains and Water  
Pond Gardens, Singapore.*

#### 7.1.1 Accessibility and management

The following is an overview of international recognised playground accessibility standards and guidelines. The standards and guidelines in Hong Kong relevant to the Inclusive Play Space development are included.

*(See section 2.1 Framework)*



## Australia

- AS1428 Australian Standards for Access and Mobility

## Canada

- CAN/CSA-Z614 Annex H: Children's Play Spaces that are Accessible to Persons with Disabilities

## Europe (UK)

- BS 7000-6, Design management systems – Managing inclusive design – Guide
- PD CEN/TR 16467: 2013 Playground Equipment Accessible for All Children, British Standard Institute (BSI)

This is a guidance document focused on unsupervised play provision. It aims to provide play spaces that are more accessible for children with disabilities, and encourage children of all abilities to play together. By adopting the information provided, the play spaces in some way will be more inclusive. This guidance document recognizes that not every play facility will be suitable for every child and carers bringing users to the facility will need to make judgments on the appropriateness of the play provision. This document does not focus on “impairment specific” issues but will follow the Design For All principles. It helps identifying obstacles to play for any child who might wish to access the play space and thinking about ways to circumvent them. It is intended to highlight any conflicts between the accessibility issue and the actual requirements of EN 1176.



## Hong Kong

- Design Manual: Barrier Free Access 2008, Buildings Department

2008 Design Manual introduces the design considerations and sets out the recommended design requirements of providing proper access to and appropriate facilities in a building for persons with a disability and other sectors of the population including the elderly, who at times require the same provisions as persons

with a disability. This Design Manual aims to facilitate greater independence of not only persons with a disability and the elderly but also people with other forms of physical infirmities or limitations such as pregnant women or families with young children.

- Hong Kong Planning Standards and Guidelines, Chapter 4 Recreation, Open Space and Greening, Buildings Department, Planning Department

- Universal Accessibility for External Areas, Open Spaces and Green Spaces, Architectural Services Department

Further to the study on “*Universal Accessibility – Best Practices and Guidelines*” which was completed in 2004, the Architectural Services Department has continued to develop Universal Accessibility with respect to external areas. This study, “*Universal Accessibility for External Areas, Open Spaces and Green*

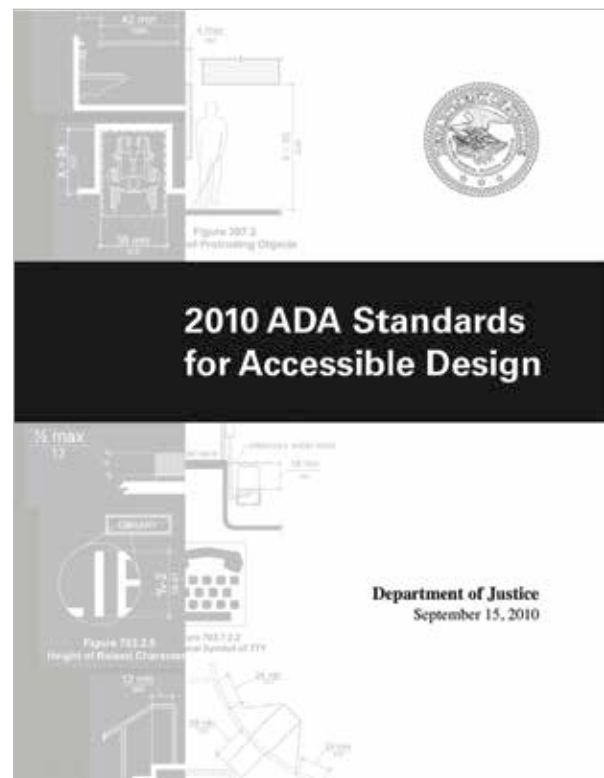
*Spaces*” explores holistic and innovative design approaches to improve accessibility in the built environment of Hong Kong. It aims to promote best practices with the goal of enhancing mobility for all sectors of the society and creating a sustainable and harmonious environment.

(See Chapter 3 Best Practices and Guidelines “3.3.7 Sensory Gardens in Landscaped Spaces” and 3.9 Safety for particular information on public playgrounds)

## USA

- DOJ 2010 American with Disabilities (ADA) Standard for Accessibility Design

In 2000, the U.S. Access Board published its final rule on accessibility guidelines for play areas. These guidelines establish a minimum level of accessibility in newly constructed and altered play areas for children with disabilities. On 15 September 2010, the Department of Justice (DOJ) published revised regulations for Titles II and III of ADA in the Federal Register. These regulations adopted revised, enforceable accessibility standards called the 2010 ADA Standards for Accessible Design.



(See Chapter 2: Scoping Requirements “240 Play Areas” and Chapter 10: Recreation Facilities “1008 Play Areas” for technical information)

- ASTM F1951 Determination of Accessibility of Surface Systems Under or Around Playground Equipment
- U.S. Access Board Summary on Accessibility Guidelines for Play Areas
- Surfacing the accessible Playground: 7 Things every Playground Owner Should Know about the Accessibility of Their Playground Surfaces



## 7.1.2 Playground safety

Facilities need to be in compliance with relevant standards and requirements throughout all phases of the design and construction process. The following is an overview of international recognised playground safety standards and guidelines. They can be adopted for the Inclusive Play Space development in Hong Kong.

*(See section 2.1 Framework)*

Currently, ASTM and European (EN) standards are usually selected as the reference materials for certifying and inspecting either manufactured play equipment or non-manufactured play equipment for safety compliance in Hong Kong.



### Australia

- AS/NZS 4486.1 (2015) Playgrounds and Playground Equipment

Australia's standard AS 4685: 2014 for playground equipment is based on the European Standard and brings it in line with many other countries. The Standard takes account of specific Australian safety and design requirements relating to UV factors, moveable equipment and the height

regulations for upper body equipment. The standard provides playground owners and designers with greater flexibility and equipment choices. Disability Discrimination Act (DDA) requirements in form of AS 1428 (Design for access and mobility) and the "Safer Design Guidelines" need to be met.

- AS/NZS 4422: 1996 Playground Surfacing – Specifications, Requirements and Test Method

### Canada

- CAN/CSA-Z614 (2007): Children's Play Spaces and Equipment

The Canadian Standards Association (CSA) released an updated version of its CAN/CSA Z614-07 Children's Play Spaces and Equipment Standard (CAN/CSA-Z614) in 2007. This document contains a new accessibility guideline called Annex H Children's Play Spaces and equipment that

are accessible to persons with disabilities (Annex H). To support awareness and encourage use of Annex H, promotional resources have been prepared and can be found on Canada Leisure Information Network web site (LIN.ca).

### Europe (UK)

- DIN 33942, Barrier-free accessible playground equipment – Safety requirements and test methods
- CEN/CENELEC Guide 14, Child safety – Guidance for its inclusion in standards

- EN 1176 (2008) Playground equipment and surfacing

EN 1176: 2008 is a hazard approach standard, where requirements have been set to achieve tolerable injury risk, taking into account the value and the need of play for child development. The purpose of all parts of EN 1176 is to ensure a proper level of safety when playing in, on or around playground equipment, and at the same time to promote activities and features known to benefit children because they provide valuable experiences that will enable them to cope with situations outside the playground.

EN1176-1: 2008 covers playground equipment for all children. It is prepared with full recognition of the less able or less competent children. EN1176-11 is applicable to playground equipment intended for individual and collective use by children. It is also applicable to equipment and units installed as children's play equipment although they are not manufactured.

- EN 1177 (2008) Impact attenuating playground surfacing – Determination of critical fall height
- ISO/IEC Guide 50, Safety aspects – Guidelines for child safety
- ISO/IEC Guide 51, Safety aspects – Guidelines for their inclusion in standards

## Singapore

- SS 457 (2007) Specification for Playground Equipment for Public Use
- SS 495 (2001) Specification for Impact Attenuation of Surfacing Systems Under or Around Playground Equipment

## USA

- ASTM F1487-11 Standard Consumer Safety Performance Specification for Playground Equipment for Public Use

ASTM F1487-11 is a consumer safety performance specification that provides safety and performance standards for various types of public playground equipment. Its purpose is to make playgrounds safer for children and reduce life-threatening and debilitating injuries. See also: ASTM F1292

Surfacing Impact Attenuation, ASTM F2049 Fencing Requirements, F2479 Poured-In-Place Rubber surfacing, ASTM F2461 Aquatic Water Play, ASTM F2223 Playground Surfacing Guide; DOJ 2010 Standard for Accessible Design (Free online)

- ASTM F1292-13 Standard Specification for Impact Attenuation of Surfacing Materials Within the Use Zone of Playground Equipment
- CPSC (Publication #325 November 2010), Handbook for Public Playground Safety. Washington DC: Consumer Product Safety Commission

The Consumer Product Safety Commission (CPSC) is also committed to protecting children from sustaining injuries on the playground. The CPSC wrote a Handbook for Public Playground Safety that contains safety

information for those who purchase, install and maintain public playground equipment. CPSC Handbook is free online at [www.cpsc.gov](http://www.cpsc.gov)

## 7.2 Web Resources

### Australia

Play Australia

[www.playaustralia.org.au](http://www.playaustralia.org.au)

Access for All Abilities Program

[www.sport.vic.gov.au](http://www.sport.vic.gov.au)

Australian Research Alliance for Children and Youth

[www.aracy.org.au](http://www.aracy.org.au)

Kidsafe Australia

[www.kidsafe.com.au](http://www.kidsafe.com.au)

### Canada

Leisure Information Network

<http://lin.ca/collections/accessible-play-spaces-canca-z614-annex-h>

<http://lin.ca/resources/playability-tool-kit-building-inclusive-playspaces>

### Europe (UK)

British Standards Institution

[www.bis.org.uk](http://www.bis.org.uk)

Centre for Accessible Environments

[www.ace.org.uk](http://www.ace.org.uk)

Design Council

[www.designcouncil.org.uk](http://www.designcouncil.org.uk)

Free Play Network UK

[www.freeplaynetwork.org.uk](http://www.freeplaynetwork.org.uk)

I CAN

[www.ican.org.uk](http://www.ican.org.uk)

Inclusive Play

[www.inclusiveplay.com](http://www.inclusiveplay.com)

KIDS

[www.kids.org.uk](http://www.kids.org.uk)

Learning Through Landscapes

[www.ltl.org.uk](http://www.ltl.org.uk)

National Children's Bureau

[www.ncb.org.uk](http://www.ncb.org.uk)

PLAYLINK, Places for Play

[www.playlink.org.uk](http://www.playlink.org.uk)

Play England, Planning for Play

[www.playengland.org.uk](http://www.playengland.org.uk)

Sustrans

[www.sustrans.org.uk](http://www.sustrans.org.uk)

### Hong Kong

Playright Children's Play Association

[www.playright.org.hk](http://www.playright.org.hk)

Playgrounds for All

[www.playgroundsforall.hk](http://www.playgroundsforall.hk)

(developed for UNICEF Inclusive Play Space Design Ideas Competition)

### International

Convention on the Rights of Persons with Disabilities, United Nations 2007

[www.un.org/disabilities](http://www.un.org/disabilities)

International Play Association: Promoting the Child's Right to Play

[www.ipaworld.org](http://www.ipaworld.org)

International classification of Functioning, Disability and Health,

[www.who.int/classifications/icf/en/](http://www.who.int/classifications/icf/en/)

World Health Organisation 2001

Inclusive Play Space

[www.inclusiveplayspace.com](http://www.inclusiveplayspace.com)

### USA

American Society for Testing and Materials

[www.astm.org](http://www.astm.org)

National Centre on Accessibility

[www.ncaonline.org/playgrounds](http://www.ncaonline.org/playgrounds)

KaBOOM!

[www.kaboom.org/accessibility](http://www.kaboom.org/accessibility)

Playground Professionals

[www.playgroundprofessionals.com](http://www.playgroundprofessionals.com)

Natural Learning Initiative

[www.naturallearning.org](http://www.naturallearning.org)

National Recreation and Park Association

[www.nrpa.org](http://www.nrpa.org)

Consumer Product Safety Commission

[www.cpsc.gov/CPSC/PUBS/325.pdf](http://www.cpsc.gov/CPSC/PUBS/325.pdf)

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Playright is grateful to the following international experts who provided advice, references and playground photos in the course of developing the Guide.

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Playright would like to sincerely thank the children and adults who participated in the Focus Groups which contributed to the thinking behind this Guide.



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Playright would like to sincerely thank the parents from the schools/child care centres/ kindergartens mentioned below who participated in the needs survey for the quality play environments and play opportunities for children with disabilities which contributed to the thinking behind this Guide.

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Haven of Hope Sunnyside Enabling Centre 靈實恩光成長中心

Heep Hong Society Healthy Kids Nursery School 協康會康苗幼兒園

Heep Hong Society Wan Tsui Centre 協康會環翠中心

H.K.C.S. Choi Wan Early Education & Training Centre 香港基督教服務處彩雲早期教育及訓練中心

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The Hong Kong Society for the Deaf Bradbury Child Care Centre 香港聾人福利促進會白普理特殊幼兒中心

The Hong Kong Society for the Deaf Sheung Tak Child Care Centre 香港聾人福利促進會尚德幼兒中心

## Public Playgrounds with Inclusive Play Provisions that Visited by Parents

- 1 Hong Kong Park 香港公園
- 2 Kowloon Park 九龍公園
- 3 Lai Chi Kok Park 荔枝角公園
- 4 Po Hong Park 寶康公園
- 5 Quarry Bay Park 鰂魚涌公園



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