

# SMARTER PLAY

Your guide to a smarter play environment





Playgrounds and their environments play an important part in the development of all young people. Urbanisation has claimed much of the open space for kids.

Playgrounds have an important role in the physical, mental and psychological development of children and young people.

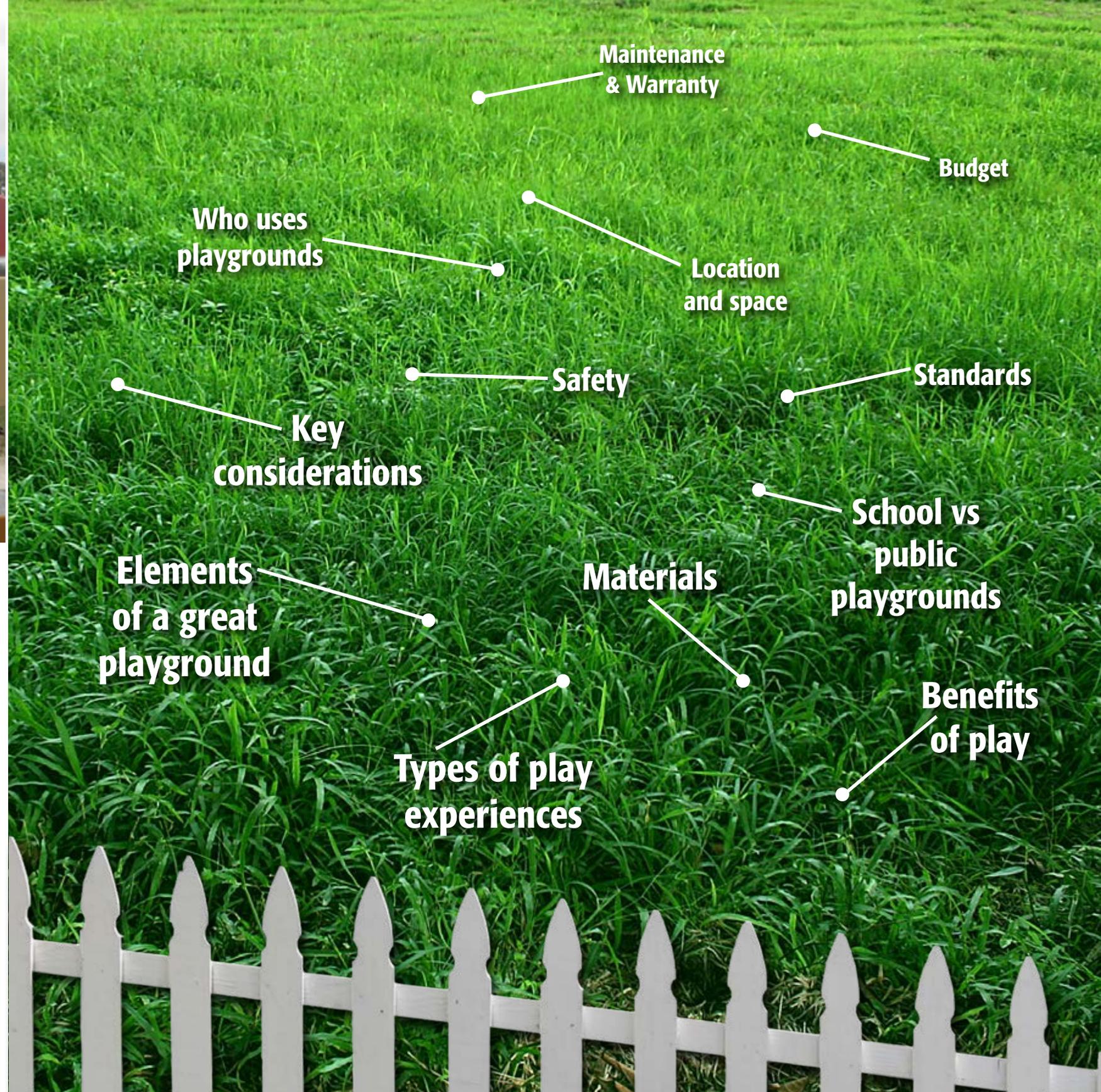
A playground is where they can let off steam and have fun in an entirely positive way.

Every playground environment needs to maximise its benefits, play value, safety and longevity.

This guide will help you to make the best possible decisions about your playground and ensure children get a rich play environment that will challenge and reward them.

Why  
**Smarter**  
Playgrounds





What things do we need to **think** about

This book is designed to help anyone interested and involved in building a **smarter** play environment.



Smart playgrounds  
**stimulate**  
and  
**encourage...**

**Imagination**  
Creative thinking  
Social interaction  
Physical fitness  
Co-ordination  
Strength

**Fun!**



What are the

**benefits** of  
**play**

It's all about **risk** and **reward** ~

Playgrounds let kids take on physical challenges and risks in a controlled environment.

A well designed playground encourages outdoor physical activity with all its benefits, including improved fitness, health, and a sense of achievement.



A play environment that children enjoy using time and time again.

Provides risk and challenges appropriate to the age group of the user and suitable for the location.

Invites all children into the playspace regardless of their abilities/special needs.

Allows children to extend themselves physically and mentally, improves their balance, co-ordination, upper-body strength and interaction with others.

No impossible transitions or gridlock points that stop the flow of play.

Adequate rest and waiting areas.

Most importantly be safe and free of hazards.

## What Makes a **Great** Playground?

There's no **single factor** that makes  
a playground **great** ...

but the **best** have the following in common:





It is important to know the **age** of the play areas intended users, as the equipment needs to be age appropriate.

This is not only to create a play environment that suits the children's developmental stages but also for safety reasons. What might be challenging for older and more capable children could be too difficult for younger kids.

### **Schools and Public playgrounds**

There are some fundamental differences that need to be considered depending on whether the playground is for a school or public environment. This will be discussed in detail later in this book.

**Who** is the  
playground  
**for**



# Where to Start

A **smarter** playground  
offers **risk, challenges** and  
**excitement...**

It stimulates the senses and builds physical prowess.

To ensure your play environment has these qualities you need to come up with an outline of what you hope to achieve.

The equation starts with **location, space** and **budget** and there are many different options and solutions available.



## Location and Environment

To make the most of your available space, you need to decide where you are going to put your play area. Consider the following:

Ideally you need to select an area that has plenty of space to allow for good flow to maximise play value. Safety fall zones take up a lot of space and need to be allowed for.

Is there existing equipment, trees, paving or other obstacles?

Are there underground services that need to be identified and accounted for?

Is the playground accessible for installation and ongoing maintenance?

Is the location free-draining?

If the site gets soggy after rain this may have an effect on your safety under-surfacing.

Is the site level or undulating?

Sometimes these environments provide the best results, but this has the potential to add cost to installation.





# Space and Experiences

Before looking at specific plans or items of equipment (as tempting as it may be) consider the type of play experience you want the children to have.

Here is a comprehensive list of experiences. You may want to try and include them all, but often space or budget won't allow, however there are many solutions to achieve a smarter play environment that meets your specific needs.

Remember to **ask the kids** what kind of experiences they want! Your playground designer should be able to assist with this process.

## Play experiences



The act of trying to keep the body's centre of gravity directly over the base.



A rapid descent, generally as a vertical movement that utilises the force of gravity.



A horizontal movement that can be backwards, forwards, sideways etc



A rhythmic movement training the body's sense of balance at high speed.



A rapid turning movement.

Climbing or crawling involves a child using both arms and legs, creating a cross movement.



The act of stimulating imagination and allowing a child to 'be what I want to be'.



The process of consciously practising a skill or particular movement.



The act of meeting socially. It can be a place for observing, telling stories, talking etc



A process of constructing, discovering and manipulating different materials or objects.





## Safety is Paramount

Safety is paramount and it is imperative that your playground is certified to be compliant with the Playground Safety Standards NZS5828:2004.

It should carry a comprehensive guarantee.

Your designer will advise on this as part of the process.

**Safety**  
should not be  
**compromised**  
by **Budget**



## Budget

Whatever the budget,  
consider the following:

How much money is available to spend?

What are the key elements that your playground must have?

Will the design provide longevity and value for money?

Remember to think of any maintenance costs as part of the overall expenditure.

Just like buying a new car there is a huge range of quality available.  
This will impact on the ongoing maintenance of the asset.



## Functionality

Safety surfacing

Existing equipment

Restricted areas

Resource consent

Maintenance

Location-specific conditions

Warranty

## What are the Key Considerations

As each play area is different, just picking a design or products out of a catalogue will not deliver a smarter play environment that satisfies the children's needs.

To get the best possible result, you will have to take a number of issues in to consideration in order to achieve maximum play value.



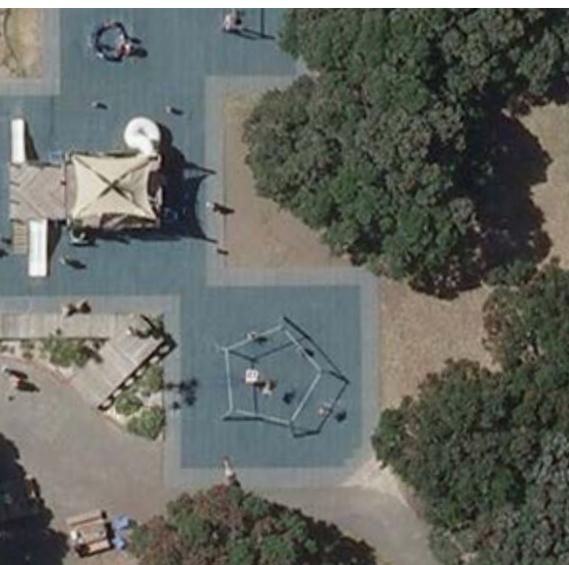


**Functionality** ~ Choose complimentary equipment and combine it in ways that enhance good flow to maximise the enjoyment factor and utilisation of the space available. When planning a design or proposal consider how children will actually use it – how do they get from point A to point B? Are there any impossible transitions or gridlock points that stop the flow of play? Is there plenty of variety or does it simply have multiple items that repeat the same function?

Be wary of glossy pictures; ask to view installed examples.

**Safety surfacing** ~ In order to be compliant with the playground safety standards almost all playground equipment will require compliant safety surfacing.

There are many different options and you will need to weigh up the pros and cons, such as purchase price vs ongoing maintenance to determine which best suits your playground location.



**Existing Equipment** ~ Consider the age of the previous installation, and the type of existing equipment and the play experiences they present.

What was successful about the previous environment? What didn't work well? What hazards were identified? Were there any criticisms from users about any missing facilities? For example: 'I wish we had swings', or 'Why aren't there seats for adults?'

Can some of the existing equipment be retained?

**Restricted Areas** ~ When there is a shortage of room available for your play space it is tempting to reduce the size/lengths of the components in a playground to fit more in. However, reducing the size of components can diminish the challenge available, e.g: reducing a 4m monkey bar down to 2m will reduce the challenge significantly for older, larger children.

Quality of the play experience provides greater play value than volume of equipment.



**Resource consent** ~ While most local authorities no longer require building consents for playground structures, resource consents may still be needed, particularly when the play area is in close proximity to neighbouring properties.

It pays to talk to neighbours at the planning stage rather than the installation stage.



**Maintenance** ~ There is no such thing as a maintenance-free playground. If your play area is successful it will be well used, meaning it will require on-going maintenance and inspection.

Playground suppliers must provide you with maintenance programs as part of the Safety Standards compliance. You need to consider the cost of long term maintenance and the availability of spare parts, including specialist servicing.

**Location Specific Conditions** ~ Think about environmental or social conditions which could be specific to your site.

For example, if your play environment is near the coast it may be subjected to salt spray and require stainless steel fastenings, or if your playground is in an area where vandalism is a possibility your equipment will need to withstand extra abuse, eg: no flammable materials.



**Warranty** ~ What warranty is offered and does the supplier have the ability to honour this?

Materials should be fit for purpose and be able to withstand 'wear and tear' for at least the duration of the warranty period.



There are several fundamental differences between school and public playgrounds which will be detailed in this section.

Public playgrounds often have the benefit of being designed by play specialists who can draw on previous experience and experimentation with different equipment and materials. They may be designing several playgrounds within the space of one year.

School playgrounds tend to be a once-per-generation purchase. It can take several years and a lot of effort for the necessary funds to be raised for the play area and often the staff and parents involved with the purchase of one playground will have moved on when it comes to purchasing a new playground. In essence schools often only have one chance to get it right.

Whether for a school or public area, a smarter play environment will be a testament to those who made it happen.

# Key Considerations for **School** and **Public** playground environments



# Specific considerations for School Playgrounds

**Larger numbers of children at one time** ~ The main difference between school and public playgrounds is that school playgrounds are used heavily by large numbers of children during break time five days per week. This means that your playground will need to accommodate this heavy use.



**Location** ~ Points to think about:

- \* Can the playground be placed within sight of the staff room? This allows for easy supervision by teachers.
- \* Is the school planning to add classrooms in the future? Avoid shifting your playground as it can be expensive to do.
- \* Areas to the sides or ends of school playing fields can often be large flat spaces suitable for playground installation, however you may want to consider paved accessways to avoid mud and grass being walked into classrooms during winter.
- \* Ideally you need to select an area that has plenty of space to allow for good flow to maximise play value. Safety fall-zones take up a lot of space and need to be allowed for.

**Single user items** ~ Swings, flying foxes and the like are popular wherever they are installed, but these items can only be used by one or two children so they're not always practical in a school environment when the equipment is in high demand for relatively short spaces of time.

**Age appropriateness** ~ The difference in ability between new entrants and kids heading to secondary school next year is vast. This necessitates some form of separation between junior and senior pupils whether it is two separate playgrounds or one playground with junior activities at one end and senior challenges at the other.



## Specific considerations for Public Playgrounds

**Age Groups** ~ By their very nature, most public play areas are open to everyone at all times. This means that there is often an expectation that a broader range of age groups will be catered for, i.e pre schoolers up to teenagers. Ideally, there should be clearly defined areas for the different age groups.



**Fencing** ~ Fencing of play areas is a contentious issue in public parks. It is worth thinking about a physical barrier if the playground is to be situated near a water-way or busy road. This will give visiting parents of younger children peace-of-mind.

**Swings** ~ This is the one item of equipment that you must have in a public play environment, the higher the better. Lack of swings will lead to complaints.

**Parking** ~ Are people going to be travelling to the playspace by vehicle? If so, the playground should be located near to convenient parking; this helps adults bringing several children to the playground especially when they need to unpack prams, bikes etc.

**Seating** ~ Well-placed seating provides an excellent supervision point so adults can supervise young ones playing or resting, as the case may be.

**Toilets** ~ While not essential, clean and accessible toilets nearby are appreciated by parents and children.



**Accessibility** ~ One small way of making playgrounds more accessible for disabled users is to make sure the play area can be entered easily. This can be achieved by allowing for wide paving up to and around the play area and the means for getting over raised timber surrounds etc.



**Ease of casual supervision** ~ A play environment that is open and easily visible to for all to see will naturally feel safer for children and parents to use than one that is tucked away out of sight of passers by.

It will also experience less vandalism/graffiti and make it easier for the local community to keep an eye on.

# What Materials Are Best

When considering your play equipment options you need to take into account the materials the equipment is constructed out of.

Smarter playgrounds are made using materials that will withstand the rigorous long-term use you should expect your play area to encounter.



**Posts**  
Moulded plastic climbers  
Plastic/rubber covering on chain  
**Ropes**  
Safety surfacing

Quality  
Durability

**Posts** ~ There is little difference in the longevity or structural integrity of metal and H5 treated timber posts. Metal posts have an advantage in areas where vandalism or graffiti is likely to occur as they can't be set on fire and graffiti is easier to remove from a smooth metal surface.

**Moulded plastic climbers** ~ These are slippery when wet, making them unsuitable climbing surfaces. Plastic is excellent where slipperiness is an advantage, which is why slides are made of plastic.



**Safety-surfacing** ~ In order to be compliant with the playground safety standards, almost all playground equipment requires compliant safety-surfacing. Specialist play surfacing providers will supply you with certification showing their products provide the necessary impact attenuation for the critical fall heights in your play area.

There are many different options for safety-surfacing, you will need to weigh up the pros and cons when choosing one that best suits your playground location.



**Plastic/rubber covering on chain** ~ Covering of compliant chain is not a requirement of the Playground Safety Standards. Hosing used to cover chain can deteriorate quickly, is easily vandalised and is expensive and time consuming to replace.

Hosing can also hide wear that is potentially dangerous, making maintenance inspections difficult. It's also slippery to climb when wet.

~ **Loose fill** e.g Wood fibre, sand, bark, pea gravel.

**Pros:**

- More cost effective... your dollar will go much further allowing you to concentrate on the fun stuff.
- Provide a more natural aesthetic for your play space
- Loose fill particularly sand has inherent play value particularly for younger kids
- Some Loose fills e.g. reharvested wood fibre offer the best impact attenuation
- Difficult to vandalise

**Cons:**

- Will require topping up over time
- Will need more maintaining, loose fill needs to be raked back into high use areas such as the end of slides and under swings.
- Can be more messy, wind can be a problem, kids throw the material around.

**Ropes** ~ Rope offers flexibility in playground design but you need to be aware of the quality variance of different ropes. Ropes can be easily vandalised and will wear faster than chain and steel pipe so you need to be sure the rope used in your play space will stand up to rigorous use.

Ropes should have a steel core; ropes made with polyamide yarn are more hard-wearing and higher quality than other varieties of synthetic rope - the higher the quality the lower the maintenance costs. Be aware that single ropes which make up part of a larger rope net (e.g: cargo nets) will usually require specialist servicing to repair.



~ **Synthetic surfaces** e.g. Artificial turf, rubber/plastic matting, wet-pour rubber

**Pros:**

- Lower ongoing maintenance
- Adds colour and overall appeal to a play area
- Much harder wearing for high scuff areas – under swings and around spinning equipment

**Cons:**

- Considerably more expensive, can more than double the cost of your play space
- Requires specialist repair when damaged or vandalised
- Quality can vary significantly – ask to see examples of sites that have been in use for a few years.

# Want more Information

Special thanks to the **Kompan Play Institute**.

Visit [www.kompan.com/KOMPAN-play-institute](http://www.kompan.com/KOMPAN-play-institute) for a **wealth** of play information.

The aim of this book is to help anyone involved in the development of a smarter play environment. Below are some other suggested websites for further reference.

**International Play Association:**  
[ipaworld.org](http://ipaworld.org)

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

**Standards NZ:**  
[www.standards.co.nz](http://www.standards.co.nz)



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