

Suggestions brochure

2nd impression

**Guidelines for
fully accessible play facilities**

Colophon

Guidelines for fully accessible playgrounds

1st edition 1 May 1997
1st impression 1 January 2001
2nd impression 1 January 2008

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This impression was achieved with the initiative of and financial support of:

- Stichting Kinderpostzegels Nederland
- Revalidatiefonds
- CliëntenBelang Utrecht
- NUSO

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Introduction

A lot of playgrounds are not accessible and hardly suitable for children with a handicap. When playgrounds are equipped and managed no attention is paid to the fact that they are children and that playing is important for them as well. On the contrary to public buildings, the law does not enforce that playgrounds have to be designed in way that they are accessible for disabled people as well.

This suggestions brochure describes which measures have to be taken to make a playground suitable for children with a handicap. These measures do not have to be expensive or radical. The time that we thought that wheelchair swings and wheelchair merry-go-rounds were the solution is over.

We aim at changes that make the existing playground function for a bigger group of children with a handicap. In addition, the playground, equipped according to these guidelines is also very suitable for children without a handicap.

This suggestions brochure clarifies the required measures for realizing a fully accessible playground. This clarity was necessary because there were a lot of insecurities about which measures are minimally required. This suggestions brochure is a tool that gives a standard meant for every person concerned with including people with a disability.

The organisations involved are:

- NUSO, Speelruimte Nederland,
- Stichting Kinderpostzegels Nederland,
- Revalidatie Fonds,
- Jantje Beton,
- Nederlandse Stichting voor het Gehandicapte Kind,
- VSB Fonds.

The five separate foundations are part of the 'Samenwerkende Fondsen Buitenspelen' (cooperative foundations for outside playing). The suggestions brochure should be used especially big rearrangements are made.

In the international classification of functioning, disability and health is described what someone's disability can be, what hinder someone may have from this and what handicap someone has because of that. With this, a detailed description of what changes a particular person might need in his/her surroundings to function better and to reduce the handicap.

This individual approach is based on the fact that every person with a handicap is unique and needs their own adaptation.

From a social prospective, it impossible to adapt a public area in a way that suits the needs of every individual with a disability.

In this suggestions brochure, categories of disabilities are used such as locomotor disability, visually impairment, blind, deaf or intellectual disability.

Usually, only general adaptations are needed, such as a wider door, a wheelchair friendly entrance or special guiding lines for blind people.

A playground is usually a public place and should be accessible for people with a disability just as other public places. At the same time, a playground is usually in a living area where also children with a handicap live. A list and analysis of the hindrance, made together with parents and children, can be used to make specific changes to make a playground accessible and suitable to play for everyone.

Natural playgrounds are characterized by the use of natural elements such as sand, water, pebbles, poles, bushes and trees. Usually no common play equipment is used to stimulate a child's fantasy. By making hills, bridges, pools and bumpy paths a natural space is created. In some cases this is combined with educative activities in the area of environmental education. Another example are play woods. These playing woods are characterized by rough areas with a lot of challenges and adventure.

This diversity of playgrounds asks a directed approach. Too many measures can change the character of an adventurous and challenging playground. The given guidelines are still recommendations and can never be enforced. It deserves the recommendation that when new natural playgrounds are building, an analysis is made of the target group and the surrounding area. Depending on the results, choices can be made in what measures are taken in relation to accessibility.

Terms and definitions

Reachability	The characteristics of the public road that are created to make sure that everyone can reach the play facility in an equal way.
Accessibility	The characteristics of a play facility that are created to make sure that visitors can reach and use the play equipment and the buildings that are meant for them.
Playability	The extent to which a child can include a certain object in their game.
Fully accessible	Every facility is equally reachable and usable for every visitor and user.
Play area	A specially designed space for children to play which is specifically reserved, organized and looked after by adults.
Public playground	A play facility that is freely accessible for everyone.
Natural playground	A play facility where natural elements such as: sand, water, pebbles, poles, bushes and trees are used.
Playground	A play facility with a fence around it that can be closed for the public.
Schoolyard playground or institutional playground	A play facility controlled by a school or an institution for children.
International symbol of access (ISA)	A protective symbol that is attached to facilities that can also be used and accessed by people with a physical handicap. It is necessary to apply for this symbol
Disabled parking space	A parking space where the people can park that drive in a disabled car and who have a special parking licence.
Walking route	The route that has to be suitable for children with a physical handicap.
'natural' guiding line	A 'natural' guiding line that is formed by things that can be found on the same ground as the play facility and that is continuous. The requirements are; <ul style="list-style-type: none"> • It can be followed with the feet while walking and, • It can be recognized with a sensing stick. This can be for example stones, grass edges etc.
'Artificial' Guiding line	An 'artificial' guiding line that is specially made.
Playing ramp	A ramp that is used as an element to play on.
Play equipment	An appliance on which children can play and that consists of several play elements.
Experiencing the space	Experiencing the feeling of the different spaces around you. Experiencing your own body in relation to the space around you.
Experiencing difference in level	Experiencing the different heights, to bridge different heights and to look down on something.
Experiencing movement when the child and the element moves	To experience moving yourself together with (a part of) equipment. For example by using a swing.
Experiencing movement when only the child moves	To experience moving yourself on (a part of) equipment. For example sliding down a slide.
Experiencing sensorial stimuli	Experiencing stimulus through senses such as; feeling, seeing, hearing, smelling and feeling temperatures.
Value of playing	The value of playing indicates how a child experiences the game and is a balance between the challenge that the game gives a child and the skills that a child has.
Service area	The area around a playing facility where the visitors live or where they spend their days.
Practical value	The practical value indicates to what extent a playing appliance fits into the functions and skills of a child.

2. Procedures

The guidelines are separated into:

Basic guidelines: That will lead to reachable and accessible play facilities for a large group of children with a handicap.

Additional guidelines that will lead to the playability of the play facilities for a specific group of children with a disability.

2.1 **Basic guidelines**

A fully accessible play facility should always meet the basic guidelines described in chapter 3 *Basic guidelines*.

2.2 **Additional guidelines**

2.2.1 **Service area**

It should be determined for which service area the play facility is meant.

2.2.2 **Target Group analyses**

Besides applying the basic guidelines there should also be looked at which additional guidelines are necessary.

To decide on these additional guidelines it is necessary to make an inventory of which children and with what disability live inside the service area of the play facility.

Remark

How do you get this data?

Ask the local authorities. Due to the privacy law they will not always give you this information.

Sometimes it is possible to get the data through parents' associations, clubs for disabled sports, daycares, schools, contacts or by asking the parents of a disabled child that lives in the service area.

After this target group analysis it should be clear if there are children with a disability in the service area, how many there are and which disability they have.

The disabilities are divided in this suggestions brochure as follows;

- *children with a visual impairment*
- *children with hearing loss*
- *children with a restricted arm and hand movement or walking function*
- *children who are dependent on a wheelchair, bike, tricycle etc.*
- *children with an intellectual disability*
- *adults with an intellectual disability*

2.2.3 **Adjustments**

Together with these children, their parents / caretakers and possibly experts, should be determined which additional guidelines in chapter 4 to 9 are necessary to make this play facility accessible and suitable for everyone.

When the target group analysis is done and there are no children with a disability living or spending their day in the service area only the basic guideline in this suggestions magazine can be used.

Remark

With the help of the additional guidelines in this suggestions magazine it is possible to determine which adjustments are desirable. This can be done together with the parents / caretakers and possibly with experts.

2.3 **Evaluation**

After the play facility is realized, together with these children, their parents / caretakers and possibly the experts it should be checked if the adjustments function as they should.

2.4 **Annual check-up**

After putting the play facility into use there should be a regular, at least an annual thorough check-up of the basic guidelines, done by the manager. Extra attention should be paid to the subsidence and overgrowth of walking route, the absence of protection and the wear of parts of the equipment.

At play facilities in a natural environment constant attention should be paid to subsidence and overgrowth. More inspections per year will be necessary.

3. Basic guidelines

A fully accessible play facility should meet the criteria named in this chapter.
Such as:

- is the play facility reachable,
- the accessibility of the walking route (75% of the appliance should be reachable),
- the accessibility of the building (should meet the ISA criteria),
- and the playability of the appliances (At least 50% of every type of appliance).

Reachability.....

3.1 **Parking spaces**

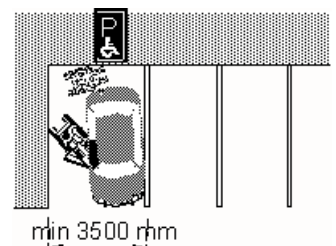
3.1.1 **General**

It is desirable to have a disabled parking space at the playground, the schoolyard or at an institutional playground.

3.1.2 **Size and arrangement of a disabled parking space**

Make sure that the walking distance from the disabled parking space to the entrance of the play facility is no longer than 50 meter.

- If the disabled parking space is in between right angles parking spaces, the space should be at least 3500mm wide.
- If the disabled parking space is in between parallel parking spaces, the space should be at least 6000mm long.



3.1.3 **Transverse ramp**

A transverse ramp of a disabled parking space should not be steeper than 1:50.

3.1.4 **Finishing touch**

The disabled parking space should be constructed in a material that makes a horizontal, flat, rough, and continuous surface.

When the disabled parking space is situated on public ground it should be indicated with a road sign E6; indicated next to this text.



3.1.5 **Road crossings**

In the area around the playground or with every road close to the playground there should be a possibility to cross the road safely. Important is that:

- Pavement and street should be at the same level.
- There is a free view of at least 50 meter to every side.
- The speed of the traffic can be reduced by using speed ramps.
- In the whole area there should be a transparent view between the pavement and the road.

It would be most ideal if the entrance to a play facility connects to a network of ways that is accessible for pedestrians, wheelchairs and cyclists.

3.2 **Walking route to the play facility**

3.2.1 **General**

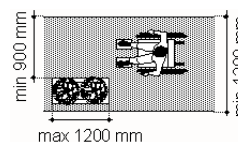
Children with a disability, who would like to make use of the play facility, should be able to access it. The desired walking route should be determined with someone who knows from experience. Get in contact with a local board for disabled people or with children/parents/caretakers (from the target-group analysis) to look for an appropriate walking route together. It is up to the board for disabled people and the children/parents/caretakers (from the target-group analysis) to indicate the things that are missing in the area around the facility. The play facility or the board for disabled people should ask the local council to place the missing facilities.

Remark

- If there is no board for disabled people and there are no children, parents or caretakers prepared to cooperate it is not possible to carry out these guidelines.

3.2.2 **Size**

The walking route should be at least 1200mm wide.
When there is a narrow point, the route should still be a least 900mm wide over a distance of at the most 1200mm.

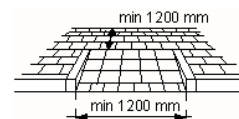


3.2.3 **Finishing touch**

The walking route should be constructed in a material that makes a flat, rough and continuous surface.

3.2.4 **Differences in heights in the walking route**

- **General**
Abrupt differences in height up to 20 mm are permitted.
Abrupt differences in height of more than 20 mm should be bridged with a ramp or lift.
Realize that a ramp that bridges more than 500 mm could be a huge obstacle for a child in a wheelchair moved by hand.
- **Access ramps and lowering the sidewalk**
the gradient of an access ramp can not be more than 1: 10.
The free access of a lowered sidewalk should be at least 1200 mm.



3.2.5 **Ramps**

Children and parents with walking aids such as a wheelchair which is moved by hand, a wheeled walker or a tricycle often have difficulties with ramps.

- **Gradient**
The gradient of ramps in the walking route should not be too steep and should meet the following criteria:
 - A difference in height up 100 mm should not be steeper than 1:10
 - A difference in height from 100 to 150 mm should not be steeper than 1:16
 - A difference in height from 500 to 1000mm should not be steeper than 1:20



The next table should be used

Height (mm)	50 mm	100 mm	150 mm	200 mm	250 mm	300 mm	350 mm	400 mm	450 mm	500 mm	550 mm	600 mm	650 mm	700 mm	750 mm	800 mm	850 mm	900 mm	950 mm	1000 mm
Length (m)	0,50 m	1,00 m	1,60 m	2,20 m	2,90 m	3,70 m	4,50 m	5,30 m	6,20 m	7,20 m	8,20 m	9,30 m	10,50 m	11,70 m	12,90 m	14,20 m	15,60 m	17,00 m	18,50 m	20,00 m

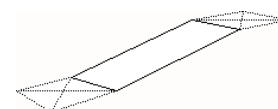
- **Transverse ramp**
Ramps that are transverse should not be steeper than 1 : 50.
For a good drainage some footpaths are made transverse. When these ramps are 50 wheelchairs and buggies might drive off the footpath.



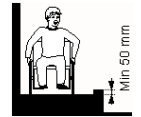
- **Free width**
The free access of the ramp should be at least 1200mm wide.



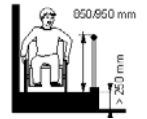
- **Turning space**
At the beginning and the end of every ramp there should be a 'horizontal' flat area of 1500 x 1500 mm.



- *Security on the side*
When the ramp is open on one side, this side should be secured with a Raised edge of at least 50 mm high.



- *Hand rail*
A ramp that bridges a difference in height of more than 250 mm, should have a handrail on one side.



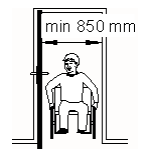
3.3 *The entrance to the play facility*

3.3.1 *Visibility*

The entrance to the play facility should be clearly visible, for example by using bright colours.

3.3.2 *Entrance Gates and doors*

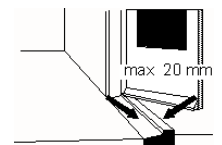
- *Free passageway*
The free passageway should be at least 850 mm wide.



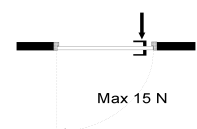
When there are double gates or doors the free passageway of one of the doors should be at least 850 mm wide.



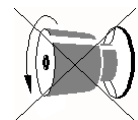
- *Threshold*
Make sure that abrupt differences in height and threshold at the entrance gates and doors are no higher than 20 mm.
Try to avoid abrupt difference in height at doors and gates because this is very inconvenient for wheelchair users and people with other walking aids.



- *The power that is needed to open a door*
When there is a door-closer on the entrance gate or doors, the power that is needed to open the door can not be more than 15 Newton or 1,5 kilo. People with a walking aid (wheelchair, wheeled walker, etc.) are not capable to open a door with a door-closer.



- *Operation of doors and fences*
Make sure that the handles on doors and fences are also suitable for people with a restricted hand function.
To operate a round handle you need strong fingers and not everyone will be able to do that.



Accessibility.....

3.4 Walking route to the buildings

From the entrance of the playing facility to the buildings that are meant for visitors there should a wheelchair friendly walking route ~see 3.2~

3.5 Walking route along the play equipment

3.5.1 Determining the walking route

At least 75 percent of all the play equipment should be reachable from the entrance by a paved path (wheelchair friendly walking route). The distance of this paved path to the place where you get on the concerning play equipment can be no more than 5 m.

The distance between the paved path and the place where you get on the play equipment can be bridged with a semi-paved path unless this is also passable for wheelchairs. Rubber, grass, decowood etc. can be suitable materials.

Loose materials such as sand, gravel or woodland are not suitable.

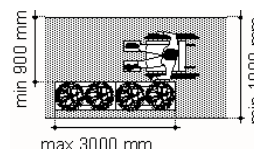
Remark

On every terrain there are places where more children play than other places (play equipment with a great force of attraction). To promote interaction, these places deserve extra attention and should be reachable.

3.5.2 Size

Different to ~see3.2~ the minimum width of the walking route to the play equipment should be 1000 mm.

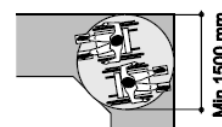
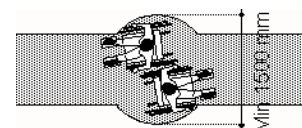
When there is a narrow point in the walking route, the route should still be 900 mm wide and different to ~see3.2~ can be 3000 mm long.



3.5.4 Turning and passing possibilities

The walking route described before should include turning and passing possibilities for wheelchairs.

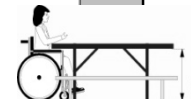
This can be a widening somewhere in the path (when there is a corner the space will automatically be there).



3.5.5 seating possibilities

Spread around the grounds there should be several benches that are also accessible for people with a wheeled walker or another walking aid.

Make sure that picnic tables are accessible for wheelchairs and that a wheelchair fits under the table.



3.5.6 Walking route in a natural play environment

The walking route in a natural play environment should meet the criteria 3.5.1

A natural play environment consists of wood-paths, sand-paths, loam-paths and grass-paths. These unpaved paths are usually not suitable for children that depend on walking aids (a wheelchair, a buggy etc.) the wheels will sink in the paths and the aid is out of control or the path is extremely bumpy. It is not necessary to make all paths in a natural play environment suitable for everyone. The play environment will then lose a lot of its value.

However, it should not be the case that children or parents that depend on a walking aid are fully excluded. It is often possible to realize one or more accessible circuit paths so that a wheelchair user can get a representative image of the play environment. We named the circuit path because it is not as nice to take the same path back as where you came from. Children in a wheelchair often experience the path as play equipment. Therefore, when the path is built it is nice to add obstacles to make it more difficult and to provide a challenge. The level of challenge will have to depend on the target group of the play environment. Perception and play paths are suitable to realize and with minor changes the practical value will be raised. When realizing these paths it is necessary include the target group and to test it with the children afterwards.

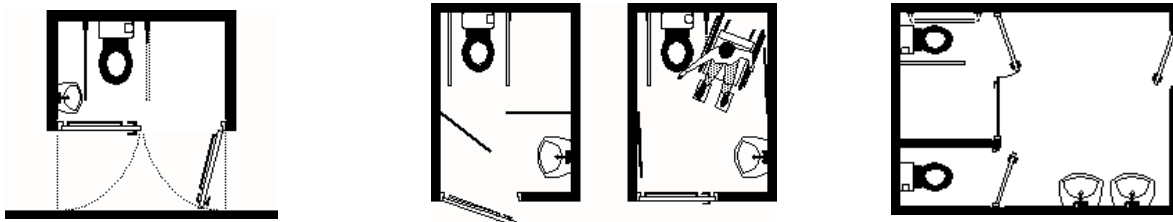
3.6 International symbol of access

The buildings that belong to the play facility and that are used by its visitors should meet the criteria that are necessary for the international symbol of access (ISA). Different to the ISA, the lavatory pan in an adapted toilet should be 400 mm high. A lavatory pan at that height is suitable for children and adults. For toddlers a loose step can be placed.



Remark

To qualify for the ISA there should be a wheelchair friendly toilet. A toilet like that can be used by everyone and should not take up more space than a normal toilet. Sometimes it is possible to realize a normal toilet that can be adapted when necessary.



3 examples of 'adapted' toilets.

Playability

3.7 Playability of play equipment

When purchasing play equipment it should be assumed that at least 50% of the equipment is suitable for children with a disability.

Things that have to be given extra attention can be found in a table in the back of this suggestions magazine 'additional guidelines per play equipment'. Bringing these attention points into practice can lead to a lazy stairs, extra leaning points on climbing equipment, seating possibilities on play equipment. It can also lead to that high play equipment is also playable at ground level.

Watch out:

Expensive equipment such as wheelchair swings or wheelchair merry-go-rounds are only necessary when there is a real need for this.

3.8 Play facilities in a natural environment.

Every play environment has its own features with and its own character. To experience the character of a play environment play facilities should also be reachable and partly usable for children with disabilities. This means that the paths that are suitable for children and parents with a walking aid are situated so that the facilities that are characteristic for natural play environment are reachable. This does not mean that every tree house and play area with water has to be reachable and accessible.

When there are tree houses it should be considered whether it is possible to make one tree house accessible. When there are play areas with water it might be possible that children and parents with a walking aid can at least stand close to the play area with water so that they can experience the game. It is important to mark the characteristic play facilities on a map and to indicate the accessible route to these facilities for children and parents with a walking aid.

3.9 Play ramps

In contrast to 3.2.5 'play ramps' can be steeper.

A play ramp with an open side that is suitable for movable vehicles such as bikes, tricycles and a wheelchairs should have a drive down safety and a handrail or handles.

Play ramps should be outside the walking route named in 3.5.1

There are no measures for a play ramps. Play ramps that are steeper than 1 : 10 are generally not suitable for vehicles such as bike, tricycle and wheelchairs.



4. Additional guidelines for children with a visual impairment

If someone's eyesight is hindered or when there is no eyesight at all we say that someone has a visual impairment, is visually disabled or blind. There are several types of visual impairments: Having one eye, tunnel vision, strong sensitivity for light or an unclear sight are examples of this.

Children with a visual impairment experience the world around them with their other, still working senses. They orientate themselves mainly by using their ears (sounds), nose (smells) and by their sense of touch (touching).

Play equipment that challenge using their still working senses are very suitable for these children.

Every game is in possible. However, special attention should be paid to movement games and the construction games.

Not being able to overlook the space and the objects van cause fear to move. This can be prevented by:

- Letting children experience movement in a safe environment. For example; by equipment that moves and where the child can sit down such as a seesaw, a swing or a merry-go-round;
- Marking the the zone where the equipment moves and which is clearly visible or feelable;
- Constructing a continuing, 'natural' guiding line. For example a hand rail;
- Making the play equipment only playable from one side.

In addition, the fact that the playability is also dependent on the light should be held into account.

Therefore, put some op the play equipment in the sun and some in the shade on purpose.

Reachability.....

4.1 **Walking route to the play facility**

For children with a visual impairment that visit the facility independently, the walking route on the grounds of the play facility should be provided with sufficient (natural) guiding lines and maybe also new (artificial) guiding lines are added. Together with the children can be seen where the natural guiding lines should be improved and where artificial guiding lines should be installed.

Remark

Natural guidelines could be things like walls, edges of grass, etc.

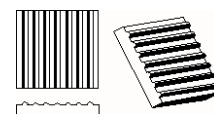
Children with a visual impairment can walk past the walls and feel the wall with their sensing stick



Children with a visual impairment can follow a paved path that is laid past a field of grass, by ticking on the grass with their sensing stick, they can hear where the path is.



'Artificial' guidelines consist of ribbed tiles with a contrasting colour (usually white). These tiles form a 600 mm wide line that children with a visual impairment can hear (by scraping) and can feel with their feet.



4.2 Walking route to the play equipment, buildings and terraces.

For children with a visual impairment who go to the play facility regularly, guiding lines from the entrance of the play facility to the play equipment, building and terraces are important. These children and/or carers of these children should be consulted where the (natural) guiding lines should be improved and where the new (artificial) guiding lines should be installed.

Try to design the footpaths so that the visitors will be guided to the facilities in a natural way. Do think about the visibility and the tangibility.

4.3 Obstacles in the walking route

Provide a safe environment; when children have the feeling that they can bump into or fall off something their enthusiasm and the challenge to discover things independently will disappear. Together with the children and/or the carers of the children should be looked at the obstacles in the walking route. Make sure that these obstacles have a warning mark (e.g. fences, poles, rubbish bins etc.).

A warning mark is a change that a child can feel with the sensing stick or the feet. A warning mark can be an upstanding edge around the object

or a strip of rubber- or a tile around the object. This can be felt with the sensing stick or with the feet.



4.4 Orientation inside the play facility

There should be a sufficient amount of reference points around the play facility that point in the direction of the entrance of the facility, play equipment and the buildings. Together with the children with a visual impairment that go to the play facility regularly and/or their carers should be looked if there are sufficient reference points or if extra points necessary.

- *People with a visual impairment are also able to orientate themselves on sounds, ground, smells and often also on contrasting colours.*
- *Sources of sounds can be really good reference points. For example an aviary, fountain, wind gong or bells attached to a swing. Be carefull not to use too many sounds.*
- *Different types of grounds can be ideal points of reference, just as smells of woodcock, wood soil and plants with particular smell.*
- *The space that play equipment needs to move around can be marked with a different type of soil. The space that a swing needs, woodcock and sand could be used unless the ground of the facility has a different type of soil. Differences in soil types should be felt.*

4.6 Visibility of the play equipment.

For children with a bad eye sight play equipment and the way they are set up should be visible. The place of the equipment in the daylight and the colours that contrast with the environment are very important.

Try to place play equipment in a way that children can find places in the sun as well as places in the shade.

- *Hand rails, seats and handles are also elements of the equipment and should therefore also be clearly visible.*

4.7 Experiencing space

- *A child should be able to discover the play equipment while touching with their hands, feet and sensing stick.*
- *There should not be low obstacles where one can fall over nor should there be hanging or sticking out parts where one can hurt themselves.*

- *Extra attention should be paid to make sure that a child with a visual impairment feels safe and is challenged to discover. Think about a smooth finishing of the hand rails, walls and the finishing of constructional elements.*

4.8 Experiencing difference in levels

- *Make sure that children can orientate themselves on the equipments and that they always know how to leave the equipment safely. This can be done for example by attaching a handrail that leads to the entrance of the equipment.*
- *Make sure that the walking route in the equipment is free of obstacles that children can bump into.*
- *A continuing hand rail all around the play equipment can function as a natural guideline and it makes sure that children feel safe and dare to move more freely.*

4.9 Experiencing movement, when the child and the element move

- *Make sure there are sufficient handles to hold on to and points to support on.*
- *Make sure that legs cannot be squeezed.*
- *Make sure that children cannot hurt themselves on something during the movement.*
- *Make sure that children can orientate themselves when getting off the equipment.*
- *Children can hardly perceive dangerous situations in and outside the moving equipment. Moving play equipment can therefore be provided with a sound, so that the area where the equipment is moving can be heard.*

4.10 Experiencing the movement, when only the child moves

- *Make sure there are sufficient handles to hold on to and points to support on.*
- *Make sure that legs cannot be squeezed.*
- *Make sure that children cannot hurt themselves on something during the movement.*

4.11 Experiencing sensorial stimuli

- *Make sure that there are sufficient handles to hold on to and points to support (think of water equipments and levelled sand equipment) on equipment that children stand up or sit down on*
- *Children with a bad eye sight can use objects with outstanding contrasting colour as a point of reference.*

5. Additional guidelines for children with hearing loss

This concerns every disorder that hinders the perception of sounds. Because the organ of balance is in the ear, these children often also have difficulties with their balance. A disability in the perception of sound leads to difficulties in communication. This is certainly the case when this cannot be compensated with hearing aids. Difficulties with the balance can reveal itself in dizziness, tendency of falling over, seeing black and not having a feeling of contact with the ground.

Special attention should be paid to the abandonment of speech. The so called; lip-reading. Children communicate by looking at the lips and the facial expression of the speaker. Make sure that there is enough light on the faces of the children that play in and around the play equipment (also think of places where it can be expected that people give explanations).

Every game is possible. However, it is important to know that things that happen out of the eye sight of the child, for example upcoming playing children from behind, can lead to an unsafe feeling

This unsafe feeling can be prevented by:

- giving a good view of the play facility;
- marking the area that play equipment needs to move;
- giving the children backing, by this is meant that equipment should be positioned in a way that children can only be approached from one for them visible side;
- a lot of set support and grapping points in the surroundings;
- adding bright colours into the equipment is important;
- limiting the number of children around.

Accessibility.....

5.1 Orientation

On the ground of the play facility should be clearly visible points of reference that point to the entrance of the play facility, the play equipment and the buildings.

Together with the children with a hearing loss that visit the play facility regularly and/or the carers of the child, should be decided if there is enough overview or if there should be other points of reference installed.

remark

- *When children can see the entrance to the play facility from play equipment and the buildings there are probably enough points of reference.*
- *Make sure that all the play equipment has enough space in between them.*
- *Applying extra points of reference is only necessary if the ground cannot be overseen from some points.*

Playability.....

5.2 Experiencing space

- *Make sure that a child can oversee the play equipment.*
- *Make sure there is enough backing.*

5.3 Experiencing difference in levels

- *Make sure a child can oversee te play equipmen.*
- *Make sure there is enough backing.*
- *Apply a continuing support from the entrance to the exit of the play equipment (a handrail for example).*

5.4 Experiencing movement, when the child and the element move.

- *Provide the Children will be more freely when they feel save. Protection and backing can increase a save feeling. Therefore, make sure there is enough backing on the play equipment. Backing can consist of a continuing wall in a playhouse or in a sandbox. Another example can be a fence around play equipment.*
- *Provide the surrounding of moving equipment with markings. In this way children will be warned for danger.*
- *Make sure there are enough support points on the play equipment.*

Experiencing movement when only the child moves

- *Children should be able to oversee a slide from top to bottom.*

Experiencing sensorial stimuli

- *Make sure there are enough support point on the play equipment*
- *Make sure that the child is able to oversee the play equipment or the situation.*
- *Children will be more freely when they feel save.*
- *Make sure there is enough backing (walls, sides of a playhouse or fences around an equipment).*

6. Additional guidelines for children with restricted arm and hand movements or walking function.

This involves a large group of children with different disabilities with different causes.

The children are limited in their movements.

Examples of this are children that miss a limp, have no or hardly any control over their muscles, have a deformation of the body, have different position of the body or parts of it, are missing muscular strength and the absence of reflexes. These disabilities can have big consequences.

As a consequence of restricted arm and hand movements or walking function, these children are restricted in performing activities with their arm, hand or legs or moving themselves by foot.

Some children with a walking restriction use walking aids such as crutches and a wheeled walker, to move forward.

Research has shown that children with a restricted arm and hand movement and/or walking function can play on normal, non adapted play equipment.

However, guidelines can be given so that the practical value for the equipment can be raised. A higher practical value makes sure that children have less trouble using the play equipment. Research has shown that the practical value and the play value are connected. When the practical value of an element of the play equipment is optimal, there is a chance that the play value is minimal. For example; a child is able to get on play equipment without too much trouble by using a very wide and almost flat ramp (optimal practical value). The possibility is there that the ramp is not very challenging anymore for the child (minimal play value). The play value should always be kept in mind.

Accessibility.....

6.1 Seating possibilities on the ground

For children with that can not walk very well there should be enough seating possibilities around the play facility.

Playability.....

6.2 Experiencing space

- *Play equipment that is suitable for children with a restricted walking function should be provided with continuing support (for example a hand rail) from the entrance to the exit of the equipment.*
- *Make sure there are enough support and gripping points to get in or to climb on elements of a play equipment .*

6.3 Experiencing difference in levels

- *Make sure that the distance in between support and gripping points are meant for children.*
- *Make sure that 'climbing elements' of the play equipment that consist of cables or chains are stiff. Limp rope ladders and limb climbing robes are not climbable.*
- *Make sure that a child can use several gripping and support points at the same time when climbing onto equipment.*
- *Make sure that on supporting points two feet can be put next to each other:*
 - *On a climbing wall one should think about supporting points for the feet together with gripping points for the hands.*
 - *On stairs one should think about support for the feet and gripping points for the hands.*
 - *The advice for stairs is to make the steps wide enough for two feet to fit next to each other.*

6.4 Experiencing movement, when the child and the element move

- *Make sure that there are support and gripping points on the play equipment.*
- *Moving play equipment should be provided with supported seats and with a backsupport.*
- *Make sure that the ground the moving play equipment is on, can not wear. Underneath swings there are often deep holes which makes using the swings independently for this group of children impossible. If the decision is made to do use a material that will wear the advice is to equalize the ground regularly.*

- *Makes sure that children on 'adapted' swings have enough space to move their upper body back and forward.*
- *Make sure that children on an 'adapted' seesaw can place their legs on one side of the seesaw.*

6.5 Experiencing movement, when only the child moves

- *Make sure that there enough support and gripping points on the play equipment, so that a child can get on the equipment and can use this idependently.*

6.6 Experiencing sensorial stimuli

- *Make sure that equipment on which one is stading or sitting, is provided with support and gripping points (for example water equipment and raised sand equipment).*

7. Additional guidelines for children who are dependent on a wheelchair, bike, tricycle, etc.

This involves a very large group of disabilities with different causes, that makes moving hard or impossible. Missing a body part, no or hardly any control over muscles, deformation of the body, different position of the body or parts of it, missing muscular strength and the absence of reflexes are examples of this. These disabilities have huge consequences. We will be talking about the problems with moving around; the mobility.

locomotor dysfunctions make standing up and walking around very difficult or sometimes even impossible. In that last case children often use aids to be able to move around, such as; a wheelchair, a bike, a tricycle or a wheeled walker.

Joining in on the different games and functions is for these children dependent on the possibilities to bridge distances and being able to sit down.

Experiencing movement and discovering the space the body is in are less natural for these children than for those without a locomotor dysfunction. That is why especially play equipment that challenges these things are recommended.

It should not be forgotten that:

- the child is able to sit down properly;
- the lack of energy of the child can be compensated by providing for sufficient places to rest and points to hold on to and footholds;
- the play equipment is accessible;
- the play equipment is reachable.

If the child moves around with aids such as sticks, wheeled walker, bike, tricycle or wheelchair then this should be taken into account. The specific requirements that are set, are corresponding with the guidelines of wheelchair accessibility.

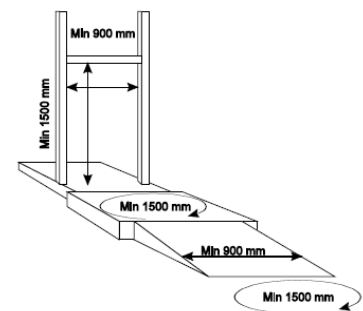
Accessibility.....

7.1 See basic guidelines, chapter 3.

Playability.....

7.2 Experiencing space

- Suitable play equipment have the following measurements:
- In front of the equipment should be a turning possibility of at least 1500mm.
- Thresholds and steps are a maximum of 20mm high.
- Differences in heights of more than 20mm should be bridged by a ramp ~see 3.2,5 ~
- Attention: in front of and behind every ramp should be a space for turning of 1500 x 1500mm.



- Passages in the equipments are at least 900 mm wide.
- The minimum height for wheelchairs is at least 1500 mm.
- Equipment that is suitable for vehicles with wheels should have an even, easy to ride on floor.

7.3 Experiencing differences in levels

- For children with a restricted walking function, big play equipment should be provided with a seating possibility at the height of 250 / 350 mm.
- Climbing equipment suitable for children who can not walk should be provided with a:

1. *Suitable ramp ~see 3.2.5 ~ or;*
 2. *A special stair with little space in between step and extra wide steps so that children can sit and crawl on them.*
- *Suitable climbing equipment should be provided with a continuing support (for example a handrail) from the entrance to the exit of the play equipment.*
 - *Differences in level should be visible through light and-or markings.*

7.4 Experiencing movement, when the child and the element move

- *Next to moving play equipment and outside the moving area of the equipment should be seating possibilities for waiting children*
- *Moving play equipment should have a seat with back and side support and/or the play equipment is wheelchair accessible itself.*
- *Play equipment should have a seat with good back and side support.*
- *Seats should have handles and supportings.*

7.5 Experiencing movement, when only the child moves

- *If desirable, make sure that the equipment is wheelchair accessible.*
- *Suitable moving equipment has a seat with back and side support and/or the play equipment is wheelchair accessible.*

7.6 Experiencing sensorial stimuli

- *If there is a sandbox, then this should be accessible for children that can only crawl.*
- *For this reason, the sandbox should have on at least one side an entrance wich is lower than 10 cm and which is accessible for wheelchairs. Dependend on the design, other solutions can be suitable as well*
- *If play equipment has a tabletop then this should be high enough for a child in a wheelchair to drive underneath it. The height of the bottom of the table should be 600/700 mm, depending on the seize of the wheelchair.*

8. Additional guidelines for interlectual disabled children.

Due to an interlectual disability the mental functioning and the behaviour of a person can be influenced. Examples of this are a below-normal global interlectual intelligence, no concentration, bad memory, slow line of thoughts, or wrong perception of the outside world. These disorders can be visible to different extends. Age and the level of development are very different.

Due to the lacking behind of the deveopment, these children really enjoy games that are based on basal experiences such as touching, being touched, moving and being moved around. Equipment that challenges these experiences are especially very suitable.

Although movement and touching experiences should be preferred, everything is possible for this group of children. Suitable is play equipment that:

- is operated, like starting and ending the game. They are simple and well-organized;
- Accomodate a slower pace of experiencing and reacting. Play equipment that have a long term effect.

Accessibility.....

8.1 **Signposting**

In addition to the signposts with texts there can be symbols added that these children will understand. These symbols should, for example, indicate where the toilets are.

8.2 **Buildings**

The buildings that are meant for visitors, should have a regocnizable entrance. For example by using contrasting colours and sufficient signposting / symbols

Playability.....

8.3 **Experiencing space**

- *The play equipment should be in a simple design in a way that is easy to overlook.*
- *The designed elements such as seats and handles should be well recognizable.*

8.4 **Experiencing difference in level**

- *The play equipment should be in a simple design and so that it easy to overlook.*
- *Make sure that differences in level a sufficiently recognizable by marking them and/or by using lights.*
- *Make sure that climbing equipment has a continuing support (for example a hand rail) from the entrance to the exit of the quipment..*

8.5 **Experiencing movement, when the child and the element move**

- *Moving play equipement should have enough space for an adult carer who guides and possibly supports the child concerned.*
- *Moving play equipment should also have some protection, so that children can not jump off.*
- *The environment of moving play equipments should have markings that warns children and parents in time of danger.*

8.6 **Experiencing movement, when only the child moves**

- *The environment of moving play equipment should be provided with markings that warns children in time of dangers.*
- *Children should be able to oversee a slide from top to bottom.*

8.7 **Experiencing sensorial stimulus**

- *If there is a sandbox then this should be suitable for children who can only crawl.*
- *Make sure that children can oversee the play equipment.*
- *A child will be unrestricted when it feels safe.*
- *Make sure there is sufficient back support by placing walls or fences.*

8.9 **Play facilities in a natural environment**

- *Make sure that the ground is designed so that carers can keep an eye on the children.*
- *When there is a cluttered play facility make sure that there is a reasonable sized playing area which is marked out and can be sufficiently overlooked.*
- *Make sure that the risks around play equipment in there marked zones can be overlooked and are limited.*

9. Additional guidelines for adults with an interlectual disability.

This concerns limitations that influences the mental functioning and the behaviour of a person. Examples of this are a below-normal global interlectual intelligence, no concentration, bad memory, slow line of thoughts, or wrong perception of the outside world. These disorders can be visible to different extends.

Age and the level of development are very different. Adults can have as much fun at the play facilities as children can.

Due to the lacking behind of the deveopment these adults really enjoy games that are based on basal experiences such as touching, being touched, moving and being moved around. Equipment that challenge these experiences are especially very suitable.

Although movement and touching experiences should be preferred, everything is possible for this group of adults. Suitable are play equipment that:

- is operated, like starting and ending the game. They are simple and well-organized;
- accomodate a slower pace of experiencing and reacting. Play equipment that have a long term effect.

Accessibility.....

9.1 **Signposting**

In addition to the signposting with texts there can be symbols added that these children will understand.

These symbols should, for example, indicate where the toilets are.

9.2 **Buildings**

The buildings that are meant for visitors, should have a regocnizable entrance.

Playability.....

9.3 **Experiencing space**

- *Make sure that the measures of the play equipment are suitable for adults.*
- *The play equipment should be in a simple design and easy to overlook.*
- *The designed elements should be clearly visible.*
- *Equipment that is not suitable for adults should be recognizable.*

9.4 **Experiencing difference in level**

- *Make sure that the measures of the play equipment is suitable for adults.*
- *The play equipment should be in a simple design and so that is easy to overlook.*
- *Make sure that the differences in levels are clearly recognisable.*
- *Equipment that is not suitable for adults should be recognizable.*

9.5 **Experiencing movement, when the child and the element move**

- *Moving play equipement should have enough space for an adult carer who guides and possibly supports the child concerned.*

9.6 **Experiencing movement when only the child moves**

- *Children should be able to oversee a slide from top to bottom.*

9.7 **Experiencing sensorial stimulus**

- *Make sure there is enough backsupport.*
- *A safe play environment gives the adult more freedom.*
- *The play equipment should always be clearly visible..*

10. Children with an attention disorder or hyperactivity

Children that have a hard time focussing or keeping their attention at moments that this is necessary have an attention disorder. This attention disorder often goes together with hyperactive behaviour. This abnormal behaviour is internationally indicated with the term ADHD. This stands for Attention Deficit Hyperactivity Disorder. This is an attention disorder because children with ADHD have problems with aiming and selecting their attention or concentration and keeping the attention and not getting distracted by impulses that are not relevant (impulsivity).

The measures that can be taken on and around the play facility are mainly the same as those for children with a hearing loss.

The play facility should be radiating a calm atmosphere by using simple elements and discreet colours. Too many distractions and stimulus should be avoided. Other play grounds should also be out of sight because this is too distracting.

In general the supervision on playing children should be well organized and this should be taken into account when designing the play ground.

11. Bibliography

11.1 **Handboek voor Toegankelijkheid**

Hulpmiddel bij het programmeren, ontwerpen, bouwen en beheren van voor iedereen toegankelijke buitenruimten, gebouwen en woningen.
Uitgave van Reed Business Information.

11.2 **NEN 1814**

Toegankelijkheid van buitenruimten, gebouwen en woningen.
Uitgave Nederlands Normalisatie Instituut.

11.3 **NEN 1176**

Speeltoestellen.
Uitgave Nederlands Normalisatie Instituut.

11.4 **NEN 1177**

Bodemoppervlak van speelplaatsen.
Uitgave Nederlands Normalisatie Instituut.

11.5 **Handboek Veiligheid van Speelgelegenheden**

Concrete richtlijnen voor het ontwerpen, aanleggen en beheren van veilige speelgelegenheden.
Uitgave Stichting Consument en veiligheid.

11.6 **Handboek Ontwerpen voor kinderen**

CROW-publicatie 153, "Handboek Ontwerpen voor kinderen"
Deze publicatie geeft aanbevelingen voor het veilig verplaatsen en verblijven van kinderen.
Aanbevelingen voor verschillende soorten routes worden tot op detailniveau uitgewerkt. Voor prettig verblijven wordt ingegaan op het creëren van ruimte en het aantrekkelijk inrichten ervan.
Kinderen horen op straat te spelen en moeten zich veilig en zelfstandig kunnen verplaatsen.
Uitgave CROW.

11.7 **Werk maken van Samenspelen**

Hoe kinderen met een fysieke beperking mee kunnen spelen.
Uitgave NUSO.

11.8 **Handboek "Speelruimtebeleid"**

Uitgave NUSO

11.9 **Spielbereiche und spielgeräte für behinderte Menschen**

Günter Beltzig

11.10 **"Samen op de wip-1" september 2001, Afstudeerproject Hogeschool van Amsterdam Mirjam van der Heide, Ilse van den Hoek, Anouk Zeilstra**

11.11 **"Samen op de wip-2" juni 2002, Afstudeerproject Hogeschool van Amsterdam Mirjam Bus, Wendy Neve, Meta Stilleboer, Ilon Wolbers, Suzanne Zeggelaar**

11.12 **"Voetpaden voor iedereen"**

Uitgave CliëntenBelang Utrecht

Deze richtlijn geeft aan welke voorzieningen nodig zijn voor het realiseren van toegankelijke en duurzame voetpaden. Deze richtlijn is gratis te downloaden www.clientenbelangutrecht.nl

11.13 **De straat, toegankelijk voor iedereen, ook voor mensen met een functiebeperking**

Uitgave van Veilig Verkeer Nederland

12. Table 'basic guidelines'

Reachability How do I get to the play facility?	Accessibility How do I move around the play facility	Playability (general)	Safety
<ul style="list-style-type: none"> • There should be a disabled parking space when there is a playground, Schoolyard playground or an institutional playground. • Wheelchair friendly walking routes in the area around the play facility. • Entrance should be clearly visible. • Suitable entrance gates and doors. 	<ul style="list-style-type: none"> • Wheelchair friendly walking routes to the buildings that are meant for visitors. • A paved path to at least 75% of the play equipment (minimal distance of 5 m). • Entrance of the play equipment should be accessible. • Turn and pass possibilities (wheelchair) in the walking route. • Suitable ramps in walking route. • Seating possibilities spread across the facility. • Areas inside the buildings have to meet the requirements of the ITS. 	<ul style="list-style-type: none"> • When buying equipment, it should be held into account that 50% should be playable by children with a disability. • Play ramps outside the walking route as described earlier, can be steeper. • There should be a rail to prevent children from falling off. 	

13. Table 'additional guidelines' (Only necessary when there are disabled visitors that need these requirements)

	Accessibility How do I move around the play facility	Playability On which equipment can I play?	Safety
Visual impairment	<ul style="list-style-type: none"> • Together with the children and/or carers it should be decided to improve or add guiding lines from the entrance to the play equipment, buildings and terraces. • Obstacles in the walking route should be marked. • Points of reference should be improved or added and should be pointed towards the entrance, play equipment and buildings. This can be done together with the children and/or carers 	<ul style="list-style-type: none"> • Movement in safe body positions (e.g sitting down). • Play equipment only playable from one side. • Some equipment in the sun and some in the shade. 	<ul style="list-style-type: none"> • Mark area of movement. • Equipment that moves should not squeeze limbs
Hearing loss and balance problems	<ul style="list-style-type: none"> • Points of reference should be improved or added and should be pointed towards the entrance, play equipment and buildings. This can be done together with the children and/or carers 	<ul style="list-style-type: none"> • The facility can be overlooked. • Movement area is marked visually and tangibly • Backing, children can only be approached from one, for them, visible side. • A lot of support and gripping points. 	<ul style="list-style-type: none"> • Mark area of movement.
Restricted arm and hand movement and walking restriction.	<ul style="list-style-type: none"> • Make seating possibilities around the facility. 	<ul style="list-style-type: none"> • Make seating possibilities around the facility . • A lot of support and gripping points. • Do not use soil that will wear. 	<ul style="list-style-type: none"> • Equipment that moves should not squeeze limbs.
Dependent on a wheelchair, bike, tricycle etc.		<ul style="list-style-type: none"> • Thresholds max. 20 mm high. • Passage way wider than 900 mm (inside the play equipment). • Passage way wider than 1000 mm (outside the play equipment). • Turning possibilities inside and outside the equipment (turning circle minimal 1500 mm wide). • Minimum height of doors and entrances: 1500 mm. 	
Children with an intellectual disability	<ul style="list-style-type: none"> • Signpost with texts and symbols. • Buildings meant for visitors have a clearly recognizable entrance 	<ul style="list-style-type: none"> • Simple and well-organized, starting and ending play. • Slow reaction, observation and tempo should be taken into account (Equipment that has a long term effect). 	<ul style="list-style-type: none"> • Around Equipment that moves there should be space for an adults that guides the child.
Adults with an intellectual disability	<ul style="list-style-type: none"> • Signpost with texts and symbols. • Buildings meant for visitors have a clearly recognizable entrance • Paths to suitable play equipment are a minimum of 1200mm wide (According to the requirements of the ITSI). 	<ul style="list-style-type: none"> • Simple and well-organized, Starting and ending play. • Slow reaction, observation and tempo should be taken into account (Equipment that has a long term effect). 	<ul style="list-style-type: none"> • Equipment that is suitable for adults. • Around moving equipment there should be space for an adults that guides the adults

14. Table 'attention points for the different types of equipment'

	Experiencing space	Experiencing differences in levels	Experiencing movement (equipment moves)	Experiencing movement (Child moves)	Experiencing sensorial stimuli	
	Huts Houses Hiding places	Flat areas Towers Bridge Suspension bridge Bridging parts Natural entrances	Ramps Stairs Ladders Robeladders Nets Blimbing walls	Springy equipment Swings Merry-go-rounds Seesaw	Cale-lift Hoops Balancing elements Hammock	Slides Vertical bars Horizontal bars Equipment with sand Crane Water and mud games Whispering horn Telescope
Visual impairment	<i>Playability</i>	<ul style="list-style-type: none"> Discover space with hands Equipment is clearly visible. No obstacles. 	<ul style="list-style-type: none"> Route, space en hand rails are clearly visible and can be discovered with hand and sensing stick No obstacles 	<ul style="list-style-type: none"> A seat with handles and if possible back support. Clearly visible seat. 	<ul style="list-style-type: none"> Route, space en hand rails are clearly visible and can be discovered with hand and sensing stick 	<ul style="list-style-type: none"> Equipment can be discovered with hands
	<i>Safety</i>		<ul style="list-style-type: none"> Safety through a continuing support (e.g. handrail from entrance to exit). 	<ul style="list-style-type: none"> Make sure it does not squeeze. Movement area safety (e.g with a fence) and markings (e.g. a different type of soil). 	<ul style="list-style-type: none"> Movement area of the end of slide should be marked (e.g. with different type of soil) 	<ul style="list-style-type: none"> Movement are should be marked visibly and tangibly.
Hearing loss	<i>bespeelbaarheid</i>	<ul style="list-style-type: none"> Spaces inside are well lit. Backing. 	<ul style="list-style-type: none"> Spaces inside are well lit. Backing A lot of support and gripping points. 	<ul style="list-style-type: none"> Support and gripping points. 	<ul style="list-style-type: none"> Support and gripping points. 	<ul style="list-style-type: none"> Support and gripping points.
	<i>Veiligheid</i>		<ul style="list-style-type: none"> Safety through a continuing support (e.g. handrail from entrance to exit). 	<ul style="list-style-type: none"> Mark movement area (e.g. with different soil) 	<ul style="list-style-type: none"> Children should be able to oversee a slide from top to bottom. Movement area of the end of slide should be marked (e.g. with different type of soil) 	<ul style="list-style-type: none"> Mark movement area of equipment.
Restricted arm and hand movement and walking restriction	<i>Playability</i>	<ul style="list-style-type: none"> Seating possibilities. Supporting points. 	<ul style="list-style-type: none"> Ramp with a lot of support and gripping points and in combination with a speacial stair with close and wide steps. Climbing robes and ladders always tightened Seating possibilities. A lot of gripping and supporting points. 	<ul style="list-style-type: none"> Support and gripping points. Ground underneath should not wear. Space to move upper body on swing. It should be possible to place legs on both sides of a seesaw. Seating possibilities for waiting children. 	<ul style="list-style-type: none"> Support and gripping points Stair and entrance to a slide should also be suitable for a guiding adult. 	<ul style="list-style-type: none"> Seating possibilities. Support and gripping points.
	<i>Safety</i>		<ul style="list-style-type: none"> Safety through a continuing support (e.g. handrail from entrance to exit). 			

Experiencing space	Experiencing differences in levels	Experiencing movement (equipment moves)	Experiencing movement (Child moves)	Experiencing sensorial stimuli		
Huts Houses Hiding places	Flat areas Towers Bridge Suspension bridge Bridging parts Natural entrances	Ramps Stairs Ladders Robeladders Nets Blimbing walls	Springy equipment Swings Merry-go-rounds Seesaw	Cale-lift Hoops Balancing elements Hammock	Slides Vertical bars Horizontal bars	Equipment with sand Crane Water and mud games Wispering horn Telscope

<p>Movement disability Dependent on a wheelchair, bike, tricycle etc.</p>	<p><i>Playability</i></p> <ul style="list-style-type: none"> • Suitable ramps. • Thresholds < 20 mm. • passage > 900 mm (binnen). • Flat floor. • Passage height > 1500 mm. • Turning possibility Inside of outside the equipment > 1500 mm. 	<ul style="list-style-type: none"> • Suitable ramps. • Thresholds < 20 mm. • passage > 900 mm (binnen). • Flat floor. • Passage height > 1500 mm. • Turning possibility Inside of outside the equipment > 1500 mm. 	<ul style="list-style-type: none"> • Seat with back supprt and handles • Wheelchair friendly equipment; <ul style="list-style-type: none"> • drempels < 20 mm, • doorgang > 900 mm, • Flat floor 	<ul style="list-style-type: none"> • Children in a wheelchair should be able to reach the entrance and the exit of a slide. • Special stair with small and wide steps. 	<ul style="list-style-type: none"> • Suitable walking route to equipment • Tables are suitable for wheelchairs (height of 500 and 700 mm). • Turning point at equipments > 1500 mm.
	<p><i>Safety</i></p>	<ul style="list-style-type: none"> • Play ramps have support and gripping points. 	<ul style="list-style-type: none"> • Wheelchair friendly equipment should have a system to prehend wheelchairs from roling away. • Squeezing safety. 		
<p>Children with an intellectual disability</p>	<p><i>Playability</i></p> <ul style="list-style-type: none"> • Space inside is simple and easy to oversee • Equipment is clearly visible 	<ul style="list-style-type: none"> • Space inside is simple and easy to oversee 			<ul style="list-style-type: none"> • Only simple equipment is suitable.
	<p><i>Safety</i></p>	<ul style="list-style-type: none"> • Safety by a continuing support (e.g. handrail from entrance to exit) • Extra support and gripping points. • Slack nets are often not suitable. 	<ul style="list-style-type: none"> • Protected movement area (with a fence or a rail). • Enough space for an extra adult. 	<ul style="list-style-type: none"> • Able to see beginning and end of slide. • Movement area of the end of a slide should be markt (e.g. with a different type of soil). 	<ul style="list-style-type: none"> • Safe mark Movement area (with a fence of rail).
<p>Adults with and intellectual disability</p>	<p><i>Playability</i></p> <ul style="list-style-type: none"> • Space inside is simple and easy to oversee. • Equipment is clearly visible. • Seizes are suitable for adults. 	<ul style="list-style-type: none"> • Space inside is simple and easy to oversee. • Seizes are suitable for adults. 	<ul style="list-style-type: none"> • Equipment suitable for adults. 	<ul style="list-style-type: none"> • Equipment suirable for adults. 	<ul style="list-style-type: none"> • Only simple equipment is suitable. • Equipment suitable for adults.
	<p><i>Safety</i></p>	<ul style="list-style-type: none"> • Safety by a continuing support (e.g. handrail for entrance to exit). • Extra support and gripping points. • Slack nets are often not suitable. 	<ul style="list-style-type: none"> • Mark movement area . • Strong contructions. • Safety of swings should be tested. 	<ul style="list-style-type: none"> • Able to see beginning and end of slide. • Slide with hogh edges. • Movement area of the end of a slide should be markt (e.g. with a different type of soil). • Strong construction. 	<ul style="list-style-type: none"> • Mark Movement area (with a fence of rail).