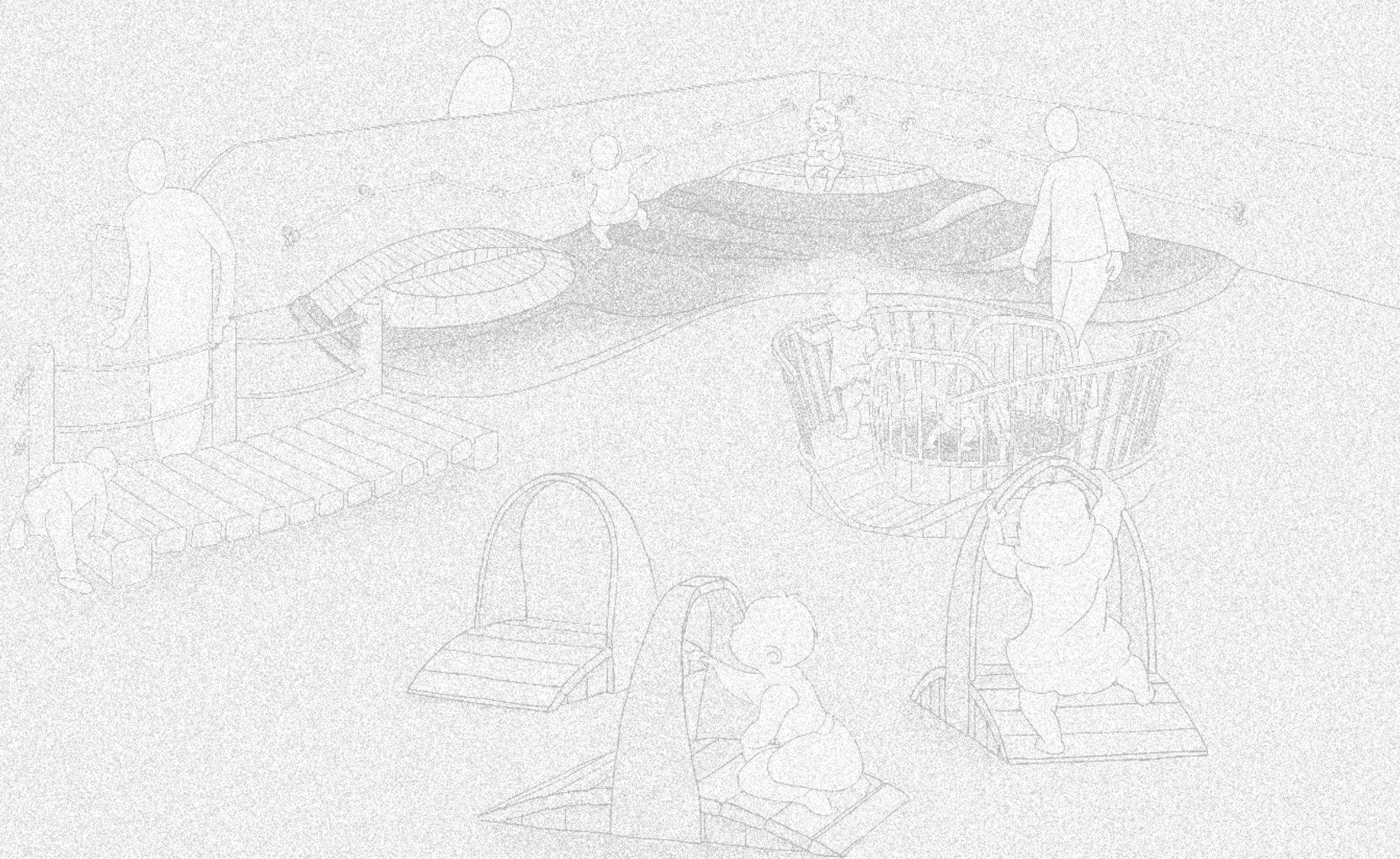


BABY GARDEN



PREFACE

Imagine you have a baby (Note: For the purpose of this publication the term “baby” is used for children of age 0 to 18 months) who have just learned to crawl, entering the phase of pulling up on objects, or already making her first insecure steps. She is mobile now for the first time in her life and she is eager to discover this whole new world unfolding in front of her. You want to offer her that world, you want her to listen to the birds, feel the wind, touch the grass, smell the flowers, move the pebbles, and explore new textures while freely crawling around. You want to let her experience the motion of swinging, sliding, or walking up a hill.

If you live in the city, you would probably go to a park or a playground near your home. And there you will need to face some unexpected difficulties. City parks and common playgrounds are normally not adjusted to the needs of smaller babies. You can find traces of dog faeces, pigeon and duck droppings, cigarette butts, glass and plastic pieces, as well as

all kinds of “treasures” that your baby won’t miss. She has just learned how to move and reach the attractive objects in sight and her way to explore and understand at that stage is... by tasting them. Your first challenge would be to protect her from that. Leaking a wooden stick or eating a bit of earth might be good for the immune system, but some objects, like sharp glass, plastic pieces, or dog excrements, are quite dangerous for the baby’s health. You need to be behind her every second but even if you explore and clean the area around her, she will not stay within that perimeter. She would chase the duck towards the water, she would try to pull up a bike parked nearby, she would try to leak, touch, or just uncover as much as possible.

You won’t feel more comfortable if you go to a common playground, where none of the equipment is appropriate for babies under one year and very few for toddlers under the age of two. You again need to be behind her and constantly assist and

protect her because she can’t crawl on the slide on her own and neither can she enter the sandpit surrounded by a 25 cm high concrete border. Everything is too big and too high for her to safely reach out and explore. Until the age of three kids do not understand heights. Neither do they know how to protect themselves from an older child on a bike or from a speeding swing. They would just wander around trying to sense and experience as much as possible because they have just entered the phase of the absorbent mind in which you need to be their guardian in every step of that amazing journey.

.03
PREFACE

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statement

VISION

From the very beginning of life, it is indispensable to maintain the link between the child and nature. Children need to be outdoors, in a natural site, and to interact with it, as this is crucial for their physical and emotional development. Think about the natural movement of the leaves as a mobile object that will help the child develop its vision. Think about the music in nature to stimulate the child's sense of hearing, the songs of the birds, the crunching dry leaves under the steps, the crickets. Think of the smell of the soil after a summer rain, the scent of basil or mint when you gently rub it between your fingers. Now think about overcrowded indoor playgrounds and screen time at home.

The human brain develops up to 80% of its capacity in the first three years of life and having in mind the crucial impact of nature on both mental and physical health, it is very surprising how little attention is paid to babies when it comes to urban planning. These first years are not only a fundamental period

for lifelong health and well-being, but for the formation of the world-view and the approach towards it. We are designing outdoor fitness for adults, along with BBQ areas, water parks, and various playgrounds for children aged 3+. We even have dog parks, but we somehow neglected the need of the youngest human beings who are growing and learning every minute to enjoy nature in a safe way. And they are still quite small and don't even need much space.

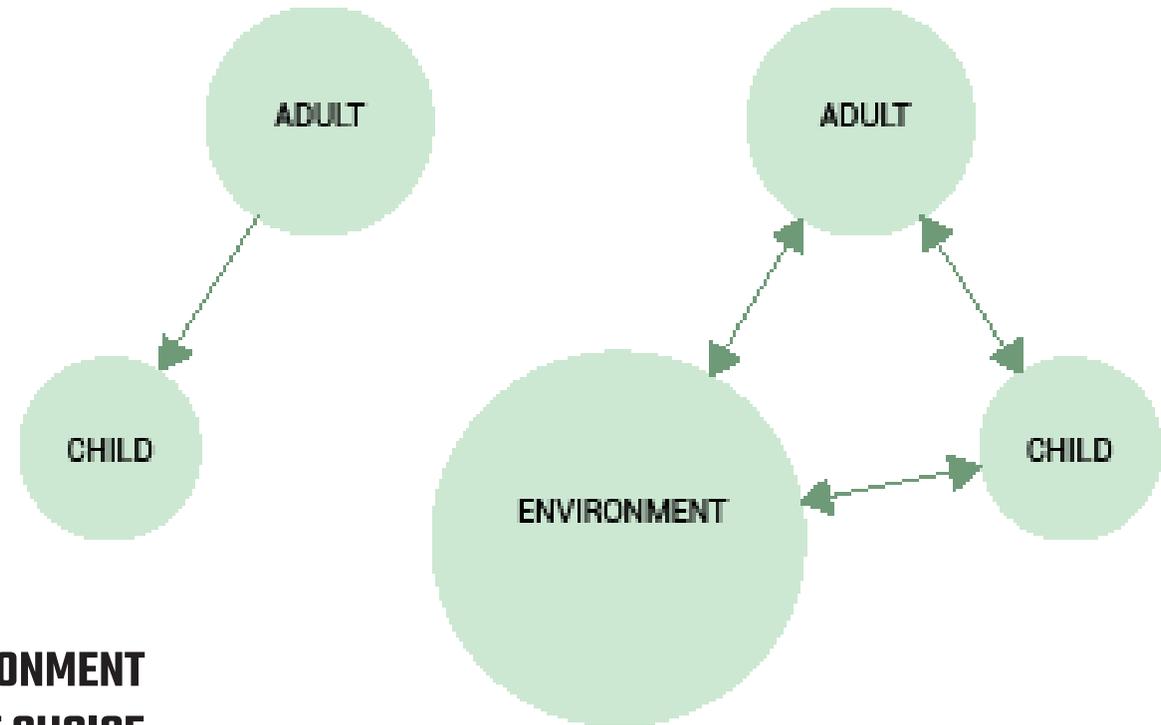
In 2011 the city of Rotterdam won a national prize for the Child-Friendly Rotterdam (Rotterdam Kindvriendelijk) program, which in just 3 years /2007to 2010/ managed to turn an abstract idea into a tangible result. Following this bright example and the urban planning vision ("Building Blocks for a Child-Friendly Rotterdam"), today the city of Rotterdam offers a rich network of diverse playgrounds, unfortunately, none of them is specially adapted and designed for babies.

"We never educate directly,
but indirectly by means of
the environment".

John Dewey

“Only through freedom and environmental experience is it practically possible for human development to occur.”

Dr. Maria Montessori



PREPARED ENVIRONMENT & FREEDOM OF CHOICE

In her book “The absorbent mind” Dr. Maria Montessori, an Italian physician, educator, and innovator, talks about “the phase of the absorbent mind” – when very young children experience intense mental activity that allows them to “absorb” learning from their environment without conscious effort, spontaneously. She is worldwide known for her educational method that builds on the way children learn naturally, a child-centred education – shaped according to their actual brain and body. In her education philosophy, she adds a third element to the relation adult-child – the environment, the so-called “prepared environment”, specially arranged so that

children could have free access and move freely within their own independent space. This approach has already been applied in a variety of ways – child care, schools, and homes around the world, and it gives remarkable results. Unfortunately, so far this practice is mostly applied to indoor spaces and a few private day-care backyards.

It is surprising that although nature provides endless opportunities for experiential learning, there is still a big scarcity of outdoor spaces designed to meet the needs of small children under the age of two. Urban parks and playgrounds are not adapted for toddlers or infants, the equipment is not accessible and safe and at the same time, it requires the constant assistance of an adult. Instead of letting a child follow its

untamed imagination and unrestrained desire to explore, parents are forced to become their “shadows” and to repeat the big NO message over and over again. This is not only exhausting for the caregivers but is seriously distracting and affects in a negative way the child’s focus.

Many parents point out safety concerns about hygiene and convenient equipment as the main reasons to keep their children in the stroller and indoors. And all of them confirm that the existence of appropriate green areas within the city would be a great stimulus for them to spend more time outdoors with their children.

baby development

DEVELOPMENTAL STAGES

All children need to move. Even a few months old babies would try to move themselves towards an interesting object. And once they learn to crawl they will not sit still for long. They want to keep mastering movement. Once standing, they move on to climbing and walking. Once walking they want to run and move around heavy objects. At that age, they are moved by a great curiosity and they want to reach, touch and taste everything. They need to explore and discover and that helps them grow as curious learners, who experience things, make discoveries, and feel they have control over themselves. The best we can offer them is a prepared environment, where they can explore without hurting themselves.

GROSS MOTOR SKILL

Gross motor skill development helps children to build strength and confidence in their bodies. Developing gross motor skills helps a child grow in the ability to do more complex skills, such as navigating

a new playground environment. The required muscles are generally found in the arms, legs, back, abdomen, and torso.

THREE DIFFERENT TYPES OF GROSS MOTOR MOVEMENT

1. Locomotion (movement): Anything a child does to get from one spot to another is locomotion. Examples of gross motor skills in the locomotion category can include rolling, belly crawling, crawling on hands and knees, scooting, walking, running, climbing, leaping, jumping, and hopping.
2. Stationary skills: Movement in a stationary place includes head control, sitting balance, standing on one or both legs, rising, falling, bending, stretching, pushing, pulling, swinging, swaying, twisting, and turning.
3. Manipulation: Moving objects in a variety of ways - for example everything a child can do with a ball - they can roll, throw, catch, kick, stop, or bat a ball. All of these actions are manipulative gross motor skills.

FINE MOTOR SKILLS

Fine motor skills build on gross motor skills and represent the ability to make sophisticated movements using the small muscles of the body (e.g. fingers and wrists), in order to accomplish various activities of fine handling, such as writing. Fine motor skills start developing at around 9 – 12 months with the “pincer grip”. Generally thought of as the movement and use of hands and upper extremities, fine motor skills include reaching, grasping, and manipulating objects with your hands. They also involve vision, often referred to as hand-eye coordination. Visual-motor skills are needed to coordinate hands, legs, and the rest of the body.



PINCER GRASP

The pincer grasp is the grasp that uses the index finger and the thumb to pick up items. This is an important fine motor skill which is foundational in handwriting. (approx 9-12 months).

MAXIMUM EFFORT

There's nothing a new walker loves more than to add a level of intensity to her walk: carrying heavy objects while walking is a classic observed behaviour of this age group. They want to meet and exceed their limits to see what they are capable of. The best we can do is to present the appropriate level of challenge to stretch their skills, not so little that they are bored, and not so much that they give up. Research shows that children thrive in this zone.



ABILITIES

0-1: Lying on tummy, pushes up on arms.
 1-2: Lying on tummy, lifts and holds head up.
 2-3: Moves legs and arms off a surface when excited.



1 month

2 months

3 months

MOTIVATION

Observing, listening, trying to grasp a low arc with flowers, leaves, noisy objects.

Practicing tummy-time trying to move and roll. Can hold objects for a short time. Brings toys and objects to mouth.



4 months

5 months

6 months

Objects on the ground, within close distance : Flowers, grass, grass bolls, bark .



7 months

8 months

9 months



10 months

11 months

12-18 months

7-10: Sits alone, stands with support. Moves from tummy to sitting position. Pulls on furniture to stand up.
 10-12: Walks sideways while holding onto furniture. Briefly stands without support. Takes steps with hands held.

Crawling, learning to walk, balancing, walking, running, climbing. Hills, stairs, pull-up bars and ropes, climbing structures;

play affordances

PLAY AFFORDANCES & DESIGN

An affordance is a feature in the physical environment that makes an offer to a person, or that allows a possible use or activity. For example, a flat hard surface about 30–60cm of the ground affords sitting.

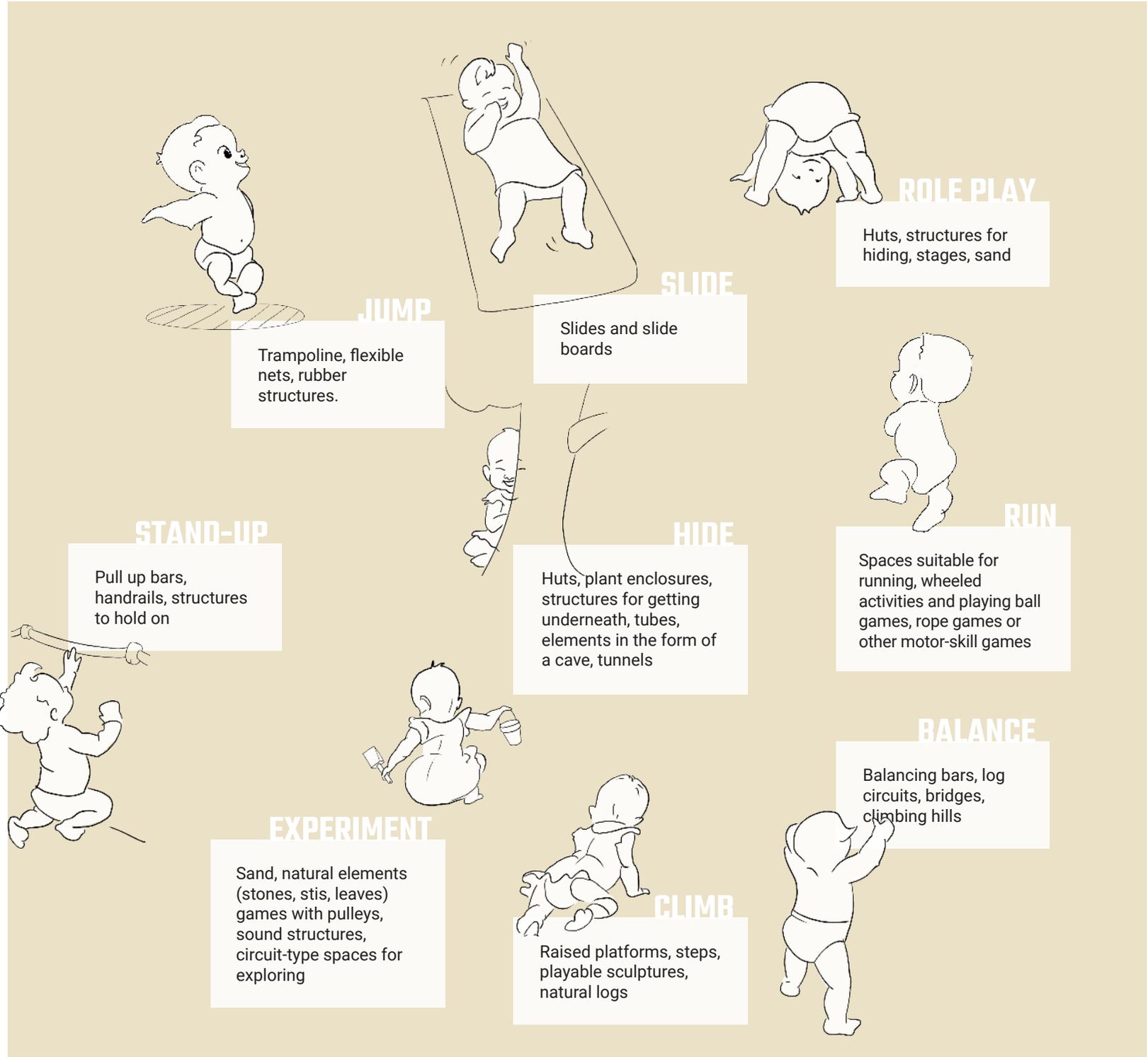
PRINCIPLES OF AFFORDANCES:

- Make use of natural elements: grassy mounds, trees, robust planting, logs, boulders, sand and other loose materials, and water all expand the play experiences on offer, adding complexity, texture, seasonality and richness, stimulating all the senses and building hands-on connections with nature. Long grass, plant debris, twigs and dirt can create play experiences of their own.

- Provide a wide range of play affordances: not only inspired by equipment (swinging, climbing, sliding, spinning) but also ones that are less tied to equipment, including construction play (sand and water).
- Make spaces equally appealing to disabled and nondisabled children by looking at the space as a whole, and considering what experiences it offers to children with a range of abilities and disabilities, including sensory impairments and hidden disabilities as well as mobility and physical disabilities.
- Allow children of different ages to play together. Play spaces should appeal to a wide age range. The same equipment or feature can appeal to children of widely varying ages.
- Build in opportunities to experience risk and challenge: exploring, experimentation, excitement and thrill-seeking are central to play for children of all ages.

LANDSCAPE-LED PLAY DESIGN OBJECTIVES

- Get the location right: the more central and well connected, the better.
- Ensure entry points and signs are attractive, clear and well-located.
- Think carefully about boundaries around the space and between sub-spaces, and avoid rigid fencing.
- Provide generous seating and social space suitable for children and adults.
- Provide shade, shelter and lighting that is adapted for the local climate.
- Create a distinctive, welcoming ambiance that encourages people to linger.
- Design for effective management/maintenance.
- Use sustainable materials.
- Allow for change and evolution of the baby's skills.
- Maximise the range and inclusivity of play affordances.



THE CHILD AND THE NATURE

Outdoor play fosters children's intellectual, emotional, social, and physical development. By being outside and surrounded by nature, children experience an ever-changing and free-flowing environment that stimulates all the senses. The child builds concepts of the things in his surroundings based on the sensorial experience they get from them. To name something, we need to know it; to know it for the child is to use all their senses to recognize the object. The sensory experiences provided by nature give the child the opportunity to connect their inner world with the external world. Nature gives the child the opportunity to fulfil their need for belonging, which goes farther than belonging to their specific environment. For this to happen, nature has to be more than an exceptional event in a child's life. It must be a part of everyday life. The door to nature needs to be opened to the child little by little. It is the responsibility of the adult to prepare activities in such a way that they are beneficial for the child; their relationship with the whole environment

during the first three years of life will lay foundations for their self-construction. When the outdoor environment is well prepared, the child becomes free to move about and interact with nature. They will be able to develop their voluntary movements, They will be able to develop their sense of sight, hearing, and smell, they will be able to learn the names of all these experiences if an adult can name them for them. In time, other activities will benefit the child and will deepen their relationship with nature. First, watering plants and caring for them. Later, feeding and caring for animals and their environment. Through these activities, the love the child has for their surroundings grows deeper and they become filled with feelings of kindness and tenderness and their self-esteem and self-image continue to develop. Let's take the hands of children and allow them to guide us in the path of rediscovery of nature, in the path of rediscovery of the world through their eyes.



BEYOND THE BABY, THE PARENT

Being a parent of a young child is an incomparable stage of life. Time is flowing faster and priorities change. For many, these first years of parenting are incredibly complicated and challenging. The everyday routine, the gain of new responsibilities, and the change of focus can easily make them lose themselves in the spin of life. Studies show that around a third of parents experience some form of loneliness and social isolation.

Nuclear families have become the more predominant family structure and with increasingly weaker regional connections, information pertaining to childrearing is often sparse and difficult to come by, which significantly increases the levels of insecurity and loneliness among young parents. Mothers who experience a high degree of loneliness are likely to be depressed, which in turn leads to decreased self-esteem and poor health, and consequently the poor health of their children and, in some cases, even child abuse.

18% of parents whose youngest child is under one often feel left out, rising to 41% of parents whose youngest is two, and falling to 8% of parents whose youngest is eight. Young parents often feel guilty about doing activities purely for themselves. They prefer activities that benefit their children and if possible combine them with socialising.

Offering a space where parents and especially young mothers can meet, talk and share experiences while benefiting from the relaxing atmosphere is one of the main missions of the Baby Garden. Even more, creating such an environment within community spaces like het Wijkpaleis will indirectly make young parents and families familiar with the rich cultural and social life of the neighbourhood community and invite them to become part of it.

ROTTERDAM



BABY GARDEN AT HET WIJKPALEIS

‘Het Wijkpaeis’ means “The Neighborhood Palace”. It is a community space located in the Middelland neighborhood of Rotterdam. The Wijkpaleis was created in 2015 as an organically grown residents’ initiative, that started with lots of ideas, enthusiasm and voluntary commitment and it has grown into a healthy neighborhood enterprise.

“The Wijkpaleis is the place where people from the neighborhood gather together to learn from each other. Because of its diversity of residents, Rotterdam-West is a “social library”, from which – if you get to know each other – you can draw endless knowledge and expertise”, says Marieke Hillen, the founder of the space. On the first two floors, eighteen affordable workshops offer space to professional makers from West Rotterdam and a few of those working spaces are open for everyone. On the ground floor, multiple cultural and social events take place almost every day – film projections, workshops, book presentations, concerts

and delicious lunches and dinners bring the people of the neighbourhood together. Everyone is welcome to participate, cooperate and experience het Wijkpaleis! The Wijkpaleis is happy to welcome Baby garden and give an opportunity for young families to enjoy the spacious backyard and to join the lively community. The volunteers from the Garden club are excited to start the transformation of the garden and can’t wait to see all the sweet babies playing around.

site analysis





1.

Surrounded by a playground, residential buildings and a lot of greenery, isolated from road traffic and noise the backyard of the Wijkpaleis feels pleasant and safe to be. The site of approximately 170 m² is already present as a separate area and takes about 1/4 of the total of the backyard. An old Catalpa tree in the middle and two yonder apple trees provide shade in the summer. Three and plant beds, as well as the green view to the south side, turn the place into a nice oasis hidden in the city. The already existing playground makes the area especially suitable for parents with babies and older siblings, providing them the opportunity to safely play within a close distance. Low fencing would allow



2.

undisturbed eye contact. Access to the garden is via the main building entrance facing the street. Walking through the building would be an indirect invitation for the garden visitors to get familiar with the rich cultural and social life of the community. A great advantage of the location is the present changing facilities and restrooms in the building. Warm lunch and dinner are served most days of the week which is another great opportunity for parents and caregivers to rest and socialise. Having the backup opportunity to warm up inside of the building during the colder days would give an extra stimulus to visitors to come with their babies.



3.

- 1. Entrance
- 2. Playground
- 3. Vegetation
- 4. Storage



4.

baby garden



- 1 Net Nest
- 2 Stepping platform
- 3 Relaxation area
- 4 Arches
- 5 Grass hill
- 6 Balancing beams
- 7 Dividing Bench
- 8 Steel garden bed
- 9 Water source

-  Oregano, chives, lavender
-  Rosemary, summer lilac
-  Layered vegetation
-  Sandpit
-  Stonepit
-  Sloping grass mound
-  Site outline

DESIGN NARRATIVE

The Baby garden is the answer to the hopes of many young parents to have access to outdoor areas in the city which are safe and adjusted for the needs of their babies. The design of the Baby Garden applies the concepts of free movement in a prepared environment. By implementing the main principles of affordances and the play-following-landscape design, the space offers appropriate play equipment to babies in a green natural surrounding. At the same time, the garden gives their caregivers opportunities to relax and socialise. In collaboration with Het Weijkpaleis, we hope that Baby Garden will be the first among many more to come! The design concept follows 3 main principles:

1. Closer to nature
2. Balance between age and needs
3. Adults friendly environment

«Never leave a baby unattended! Before you let a child play, walk the area and check for obstacles, chocking hazard objects or anything else that might endanger a child.»

CLOSER TO NATURE

- Natural grass surface for the entire area of the garden
- Climbing plants and evergreen shrubs along the existing fence
- Sloping grass mound (50 cm height) for the southern barrier
- Area of 30 m² for plants and herbs
- Existing trees embraced in the design
- Enduring harmless plants.

BALANCE BETWEEN AGE AND NEEDS

- Safe fencing
- 3 separate areas for relaxation, activity and sensorial development.

Relaxation area:

- Shaded area with an enclosed bench structure provides space for feeding, calm play and naps

Active area:

- Easy to reach and safe play equipment
- Fall height of a maximum of 10 cm
- Climbing structures surrounded by barriers
- Pull up bars and rope handles
- Climbing and descending equipment
- Diverse textures and fine motor skill development games.

Sensorial area:

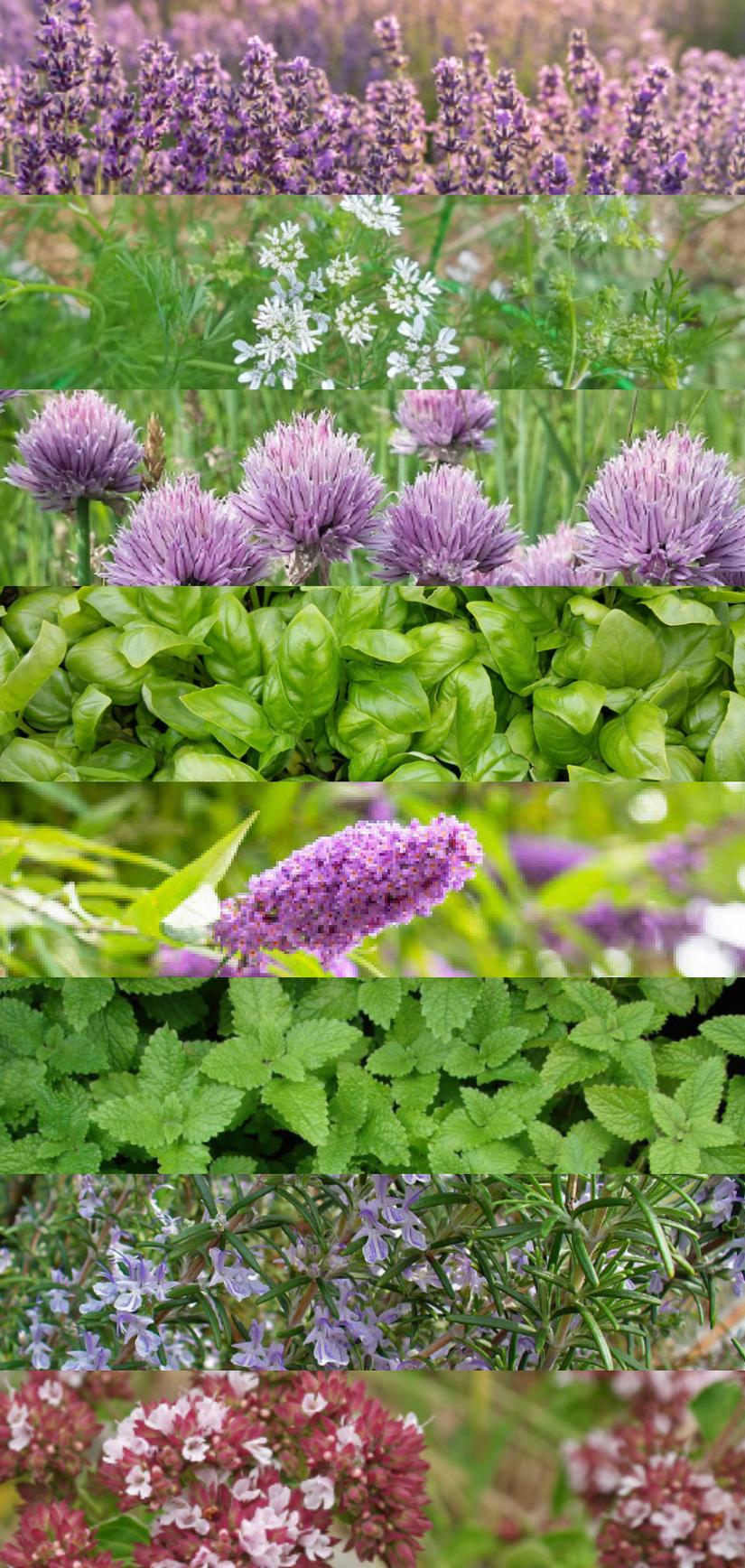
- Easy access to a stone or sandpit
- Water play
- Reachable vegetation
- Objects for touching
- Contrasting lights and colors

ADULTS FRIENDLY ENVIRONMENT

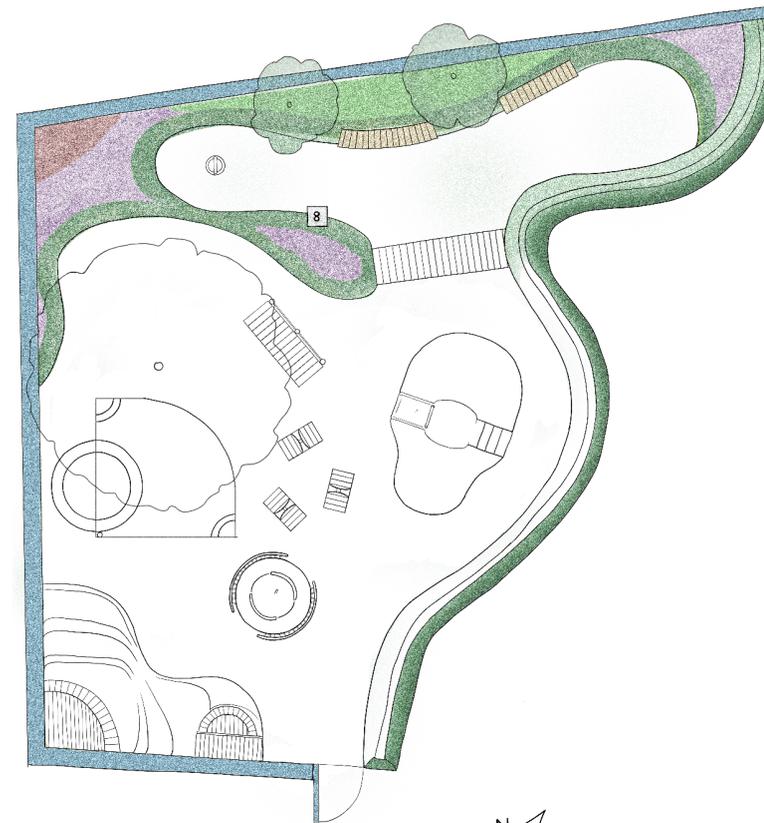
- Safe fencing surrounds the garden
- Babies can be transferred from one area to another by their parents
- Easy visual contact with children
- Water play under parent supervision
- Easy overview of the backyard in case of older siblings playing around
- Multiple seating options
- Relaxing area for babies and adults

Independence and access:

- Accessible facilities
- Suitable equipment for older children with additional support needs
- Accessible seating
- Toilet and changing facilities.



vegetation



- N 
-  Steel garden bed
 -  Oregano, chives, lavender
 -  Rosemary, summer lilac
 -  Layered vegetation
 -  Sloping grass mound
 -  Site outline

The design proposal offers naturalistic play space by including plants, trees, grass lawn, sloping grass mound, grass hill, shrubs and climbing plants along the fence, as well as making use of changes in levels to establish a strong connection to nature.

PLANT SECTION:

- Engaging sensory experience. Plants that engage children's senses have been chosen to encourage their interaction with nature. The contrast between the evergreen plants and the existing Catalpa tree's bright yellow foliage will impress and delight children, providing them with a visual record of the changing seasons.
- The front line of the planted beds is covered with aromatic herbs – *Ocimum basilicum*, *Coriandrum sativum* and *Melissa officinalis* (mint).
- The secondary line plants are chosen using a cohesive purple colour palette while providing variety through an assortment of textural and smell experiences. Enhancing wildlife habitat will give children sensory experiences and increase biodiversity at the site.

- Some plants such as *Rosmarinus officinalis*, *Lavandula* spp. and *Allium-schoenoprasum* attract hummingbirds and more than 20 species of butterflies as well as wild bees.

- *Allium-schoenoprasum*, *Lavandula angustifolia*, *Rosmarinus officinalis*, *Buddleja davidii* are chosen because of their purple flowering.

- *Allium-schoenoprasum* is a perennial flowering plant that produces edible leaves and flowers. *Lavandula angustifolia* is a strongly aromatic shrub, with evergreen leaves. *Rosmarinus officinalis* is an ever-blooming shrub with colourful flowers.

SUSTAINABLE LANDSCAPE:

One of the key elements of sustainable community landscapes is installing plants that require a low-maintenance regime. Therefore, the chosen plants would respond well to the existing site conditions. The south-facing orientation limits the planting palette to species that would perform well in compacted soil, full sun, and low to moderate water requirements, reducing the need for irrigation even during dry summers.

«Nature enhances a sense of peace and often brings nurturing qualities in children.»

Safety:

Safety concerns are thoroughly considered. Poisonous, thorny, or sharp plants, also plants that produce fruits, berries, or acorns, are avoided. Bee attracting plants are located further behind other layers of non-blooming plants. Nature enhances a sense of peace and often brings out nurturing qualities in children. Many energetic children slow down to dig a hole in sand, watch a ladybug crawl, or spend focused time playing with a stick in a mud puddle. Several studies have found that exposure to nature can reduce symptoms of ADHD and anxiety.

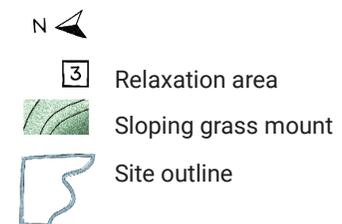
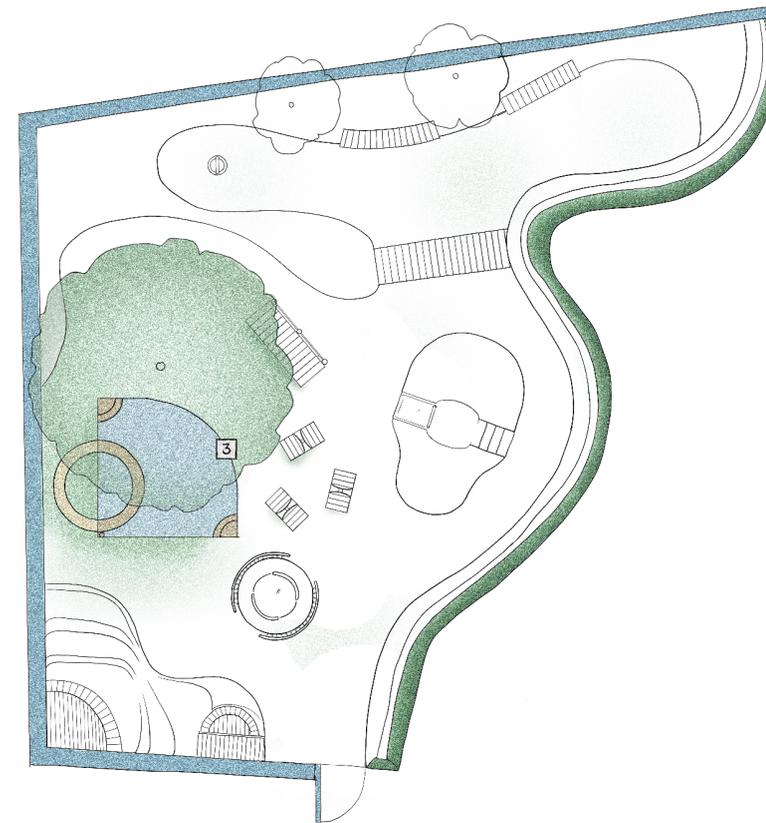
relaxation area

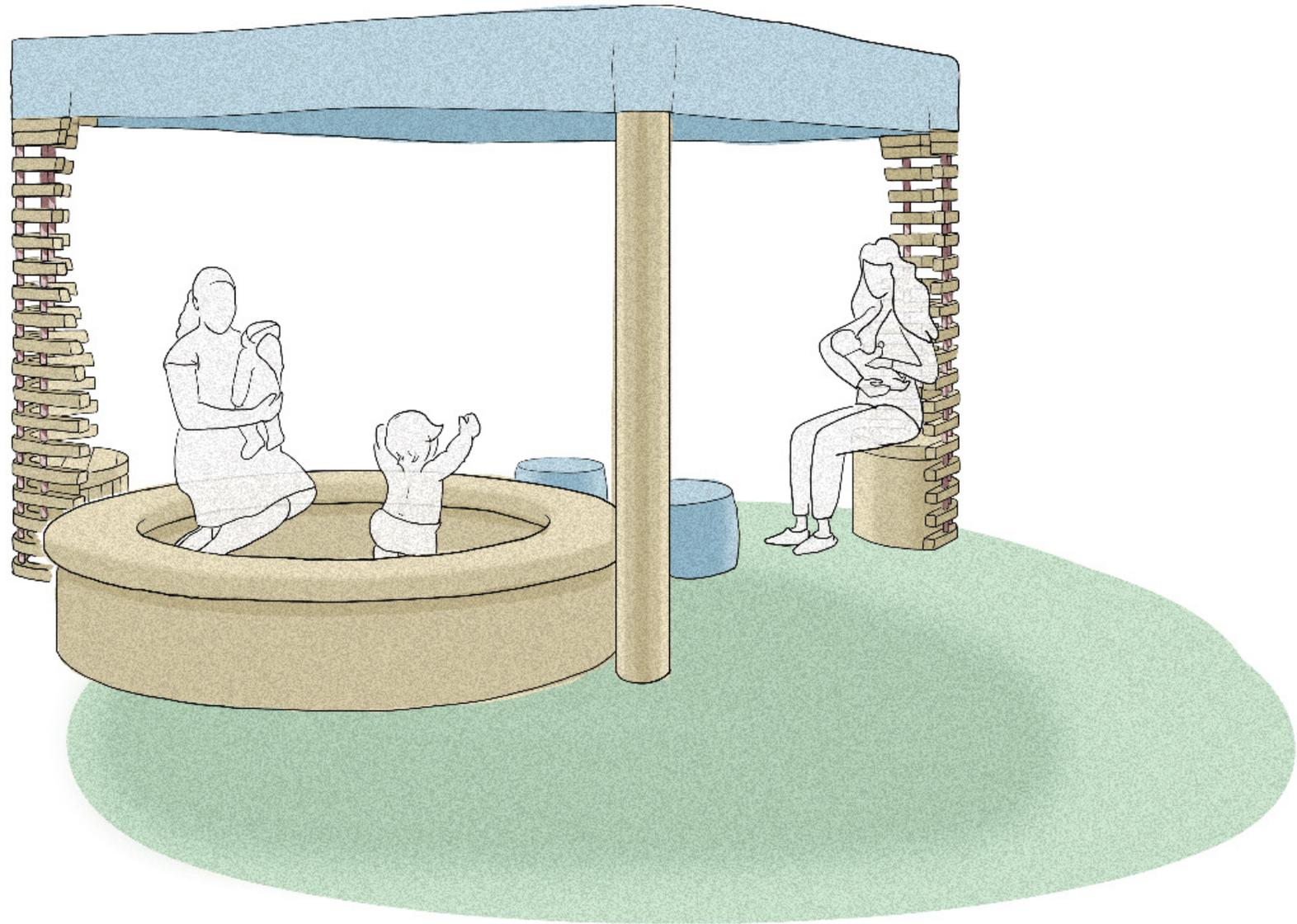
SHADING STRUCTURE

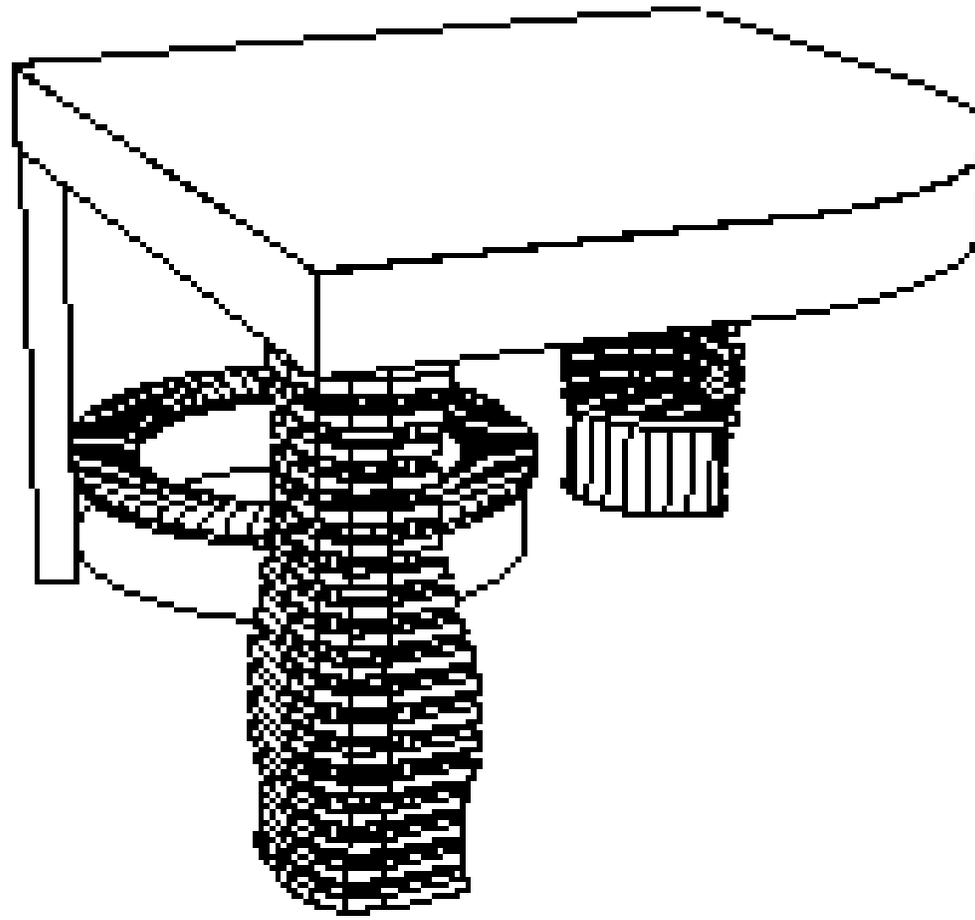
Young babies as well as their caregivers need a lot of rest. The time slots when young babies need to be breastfed/fed or nap vary depending on the age and it makes a great part of the planning of the day. A comfortable, shaded area meeting those essential needs would dramatically improve the experience of being outdoors with a young baby and would extend the hours spent in nature.

The shed structure (3/3m) would provide shelter from rain and sun. Two cosy seats in the two corners offer privacy for breastfeeding and gentle rocking before sleep.

The enclosed round bench has a second function of a baby playpen, which allows parents to keep their babies under the shade when too sunny or rainy. In the north east corner the fresh smell of mint from the herb garden is inviting for a delicious lunch in the picnic area.

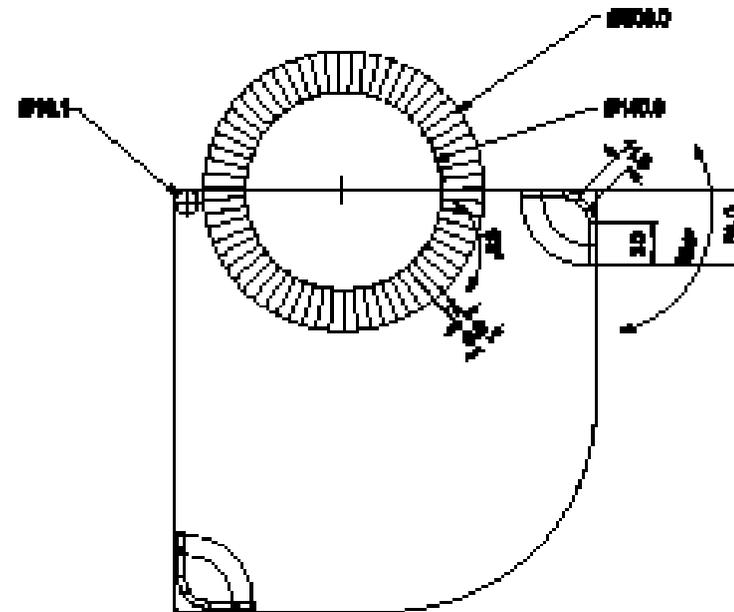
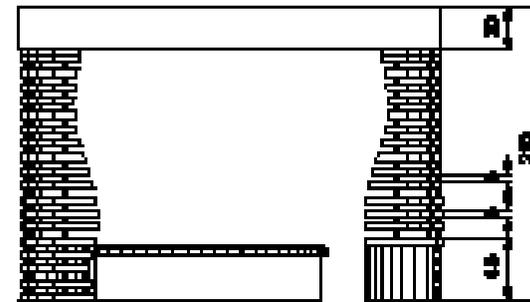
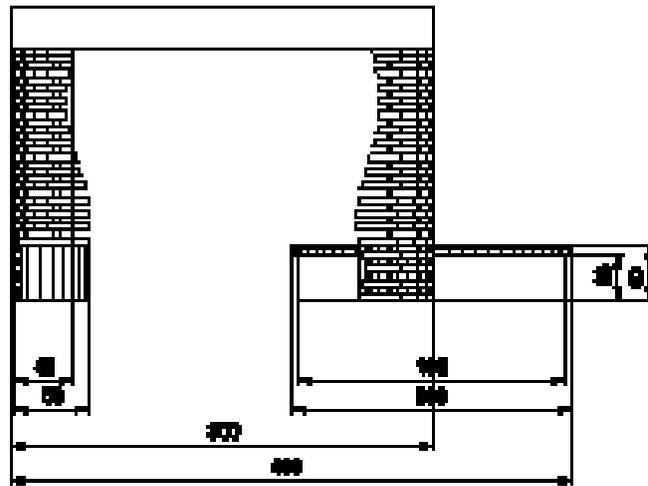






A
B
C
D

1 2 3 4 5 6 7



A

B

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D

1:50	BABY GARDEN PROJECT	VIKTORIYA GOTSEVA
HARDWOOD	"SHADE STRUCTURE"	15.06.2022
IRON TUBES		
RAINPROOF FABRIC	ALL DIMENSIONS IN CM	VERSION 1

1

2

3

4

5

6

7

Sensorial area

Sensory development relates to our senses (vision, hearing, touch, taste, smell) Children use their senses to explore and try to make sense of the world around them. They do this by touching, tasting, smelling, seeing, moving, and hearing. According to research studies, sensory play supports the development of the brain that leads to language skills, cognitive growth, fine and gross motor skills, problem-solving skills, and social interaction. Attention and conversations during play enhances social skills and encourages the child to understand, analyse and verbalise what they are doing. Sand, stone and other loose materials, and water all expand the play experiences on offer, adding complexity, texture, seasonality and richness, stimulating all the senses and building hands-on connections with nature.

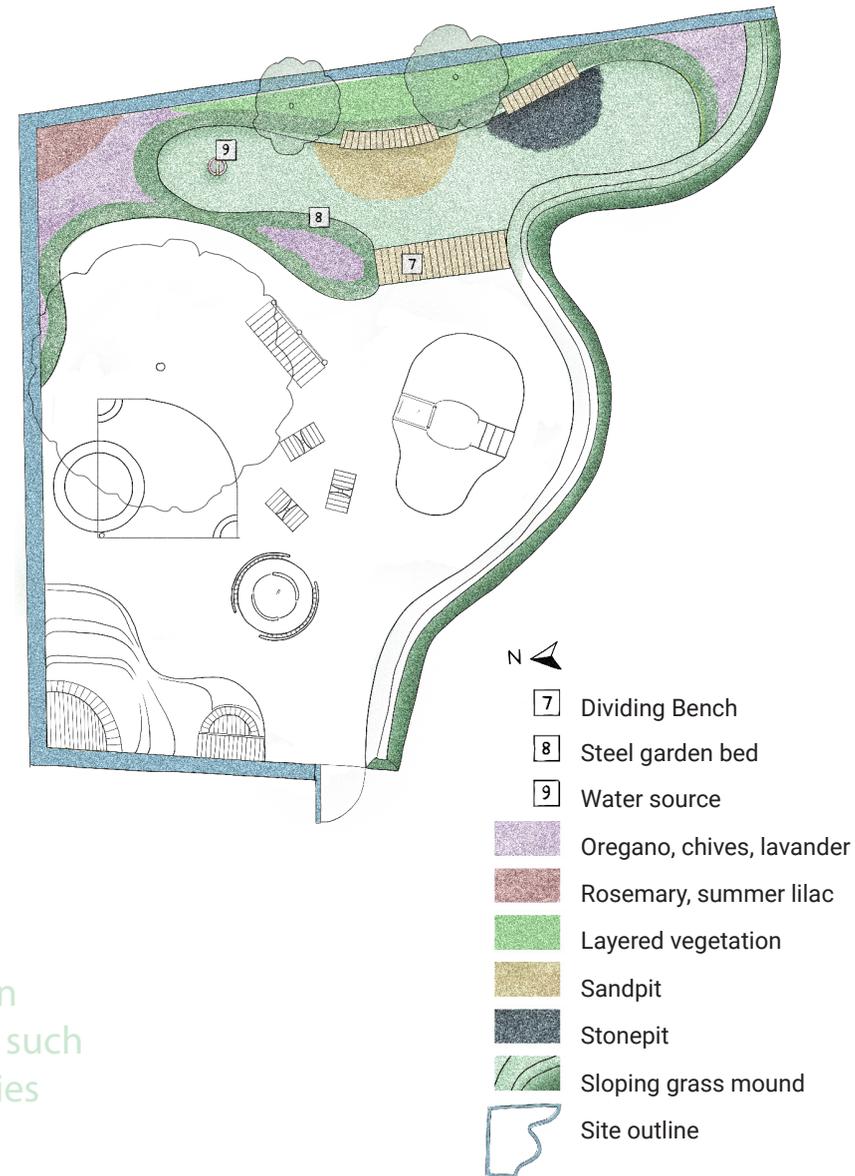
The baby garden sensorial area is designed to be a "Yes Zone", where babies can get messy, explore different textures, develop skills for distinction, order and broaden and refine their senses. The area offers 25m² of play surface and is located along the East side of the garden. Surrounded by elevated vegetation and edible herbs at a reachable distance, the area provides opportunities for texture, smell and visual exploration in a close and safe connection with nature.

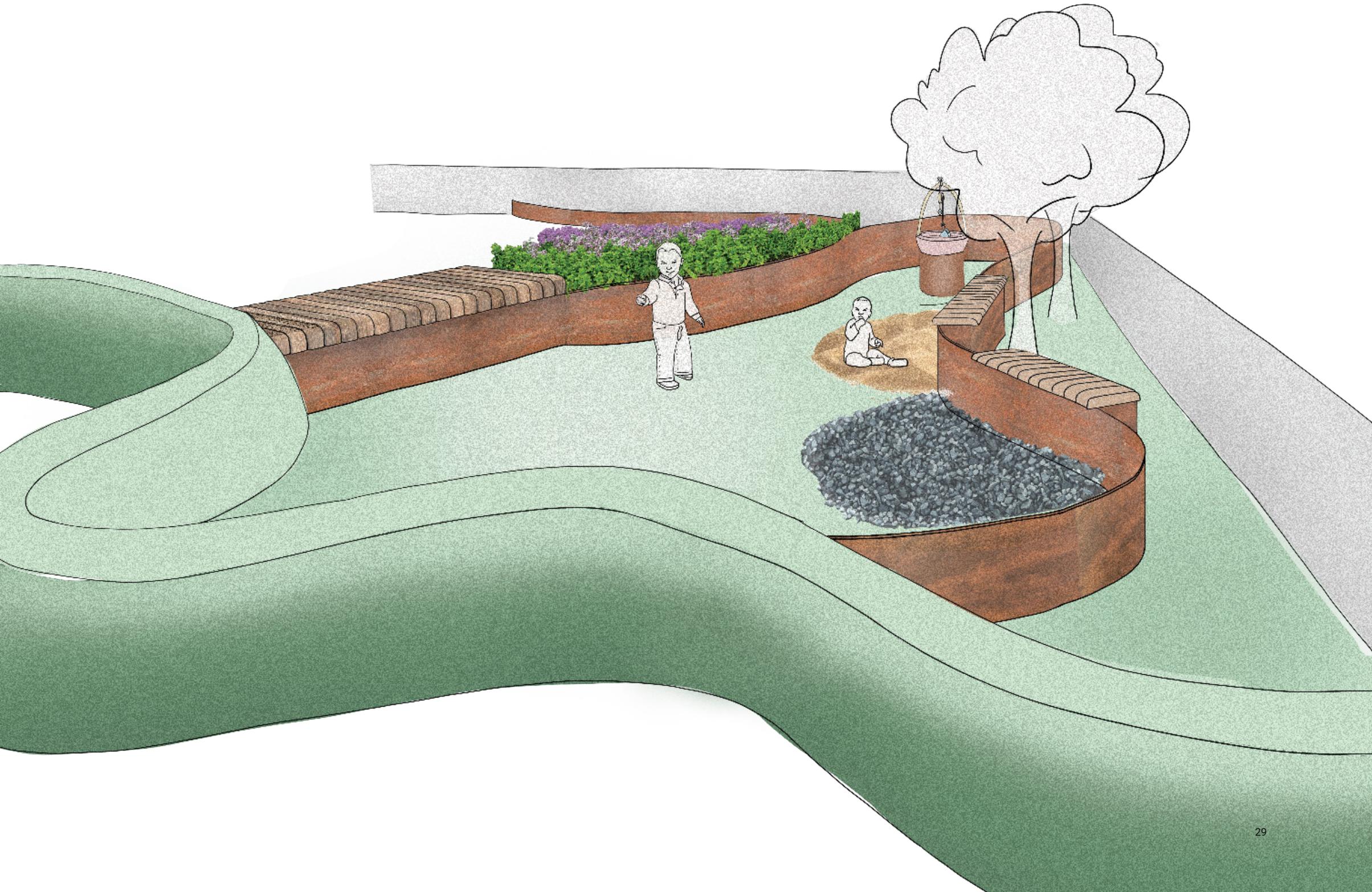
The compact sandbox (5 m²) and stone pit (4m²) are aligned at the ground level for easy access and smooth transition with the fresh grass. Two benches offer a seating for adults allowing observation from a close distance. A water source with an option for water play is situated in the North-East corner. The sensorial area is delicately separated from the rest of the garden through elevated garden beds and a dividing bench, allowing parents to transfer babies from one area to another, while older children can access in a playful and challenging way. The low separation allows parents to have eye contact with older siblings who are playing in the garden.

SAFETY REQUIREMENTS

Projection of the wooden bench seats should be a maximum of 2 cm to prevent babies from hitting their heads
Stones and other loose parts should not be smaller than 4 cm in diameter to avoid choking incidents.

"Never leave a baby unattended, especially in areas with small objects such as stones and sand. Babies need close supervision."



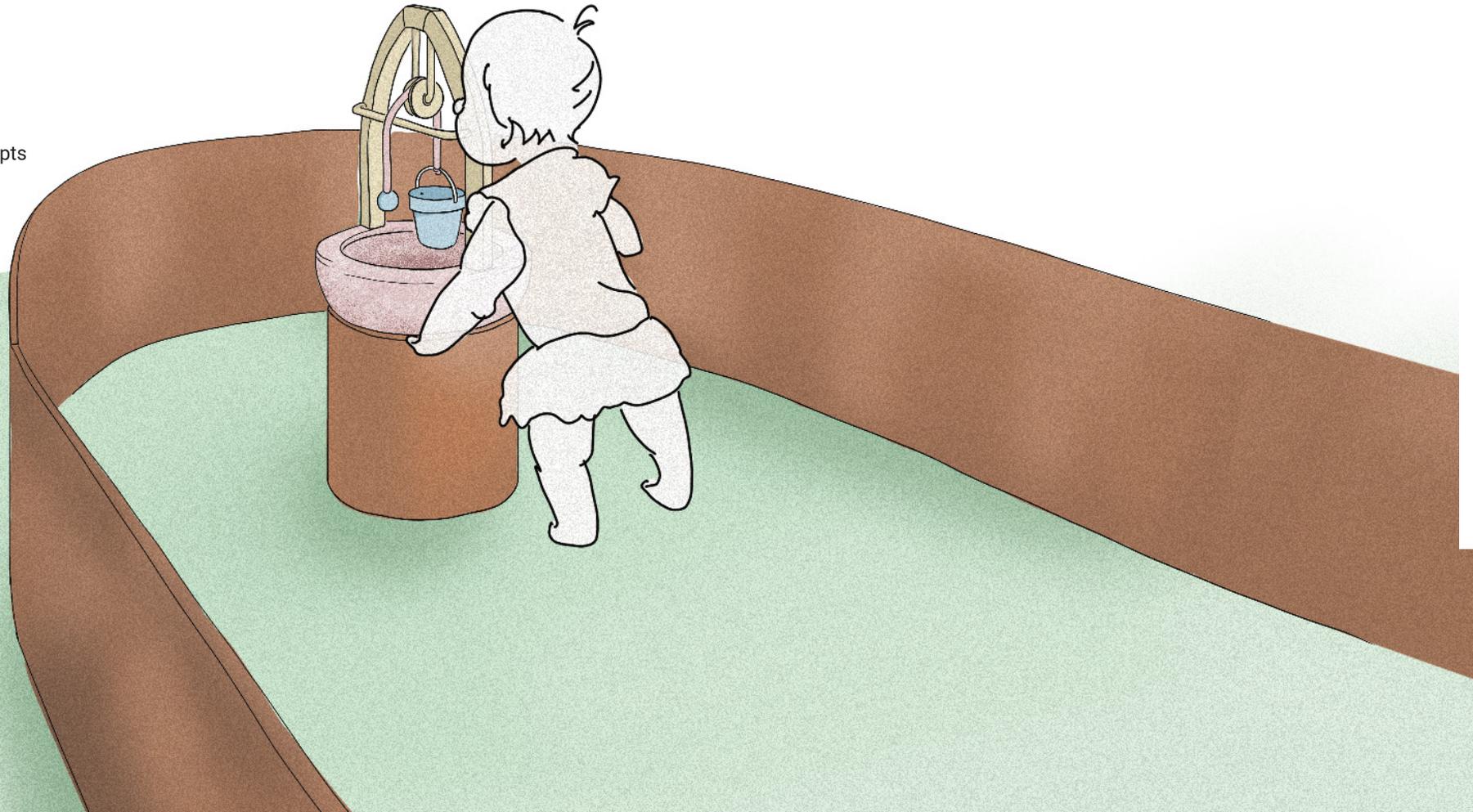


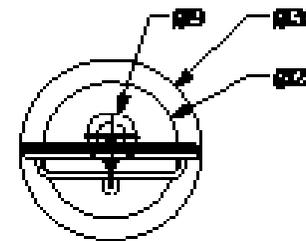
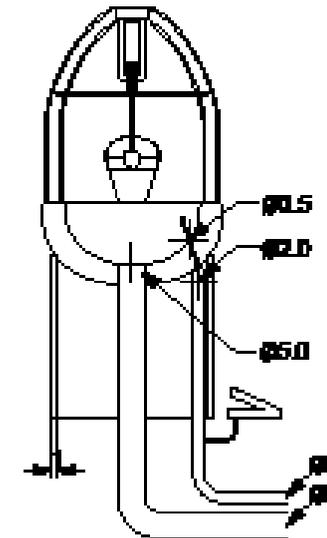
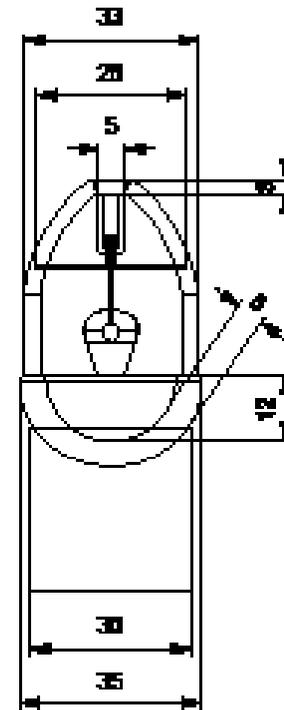
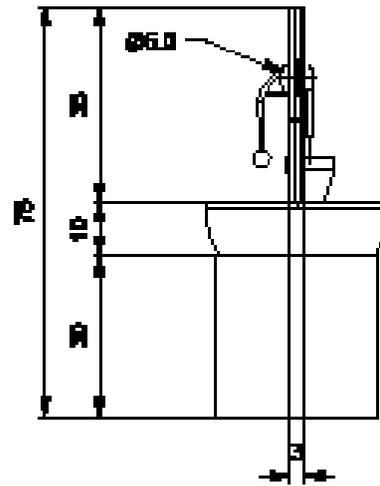
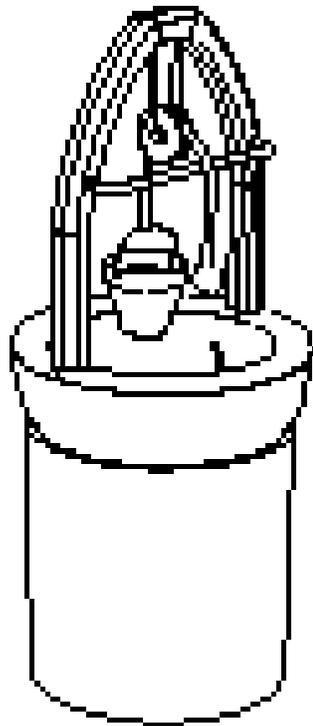
WATER SOURCE

Water play develops both motor skills and sensory exploration, by allowing children to investigate a substance and make discoveries about it. It introduces them to various textures (slimy, slippy) and temperatures, while increasing the hand-eye coordination through actions like pouring, squirting, stirring, etc.

DEVELOPING SKILLS

- Problem-solving: Playing with water encourages children to use their imagination to discover how and why things happen; this plays an important role in problem-solving, and understanding various scientific concepts (for example full, empty, flow, motion).
- Mood-handling: Water play is relaxing and calming by releasing the energy of the children.





1:15	BABY GARDEN PROJECT	VIKTORIYA GOTSEVA
WOOD	"WATER SOURCE"	15.06.2022
CONCRETE		
CORTEN STEEL	ALL DIMENSIONS IN CM	VERSION 1
MANILA ROPE		

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SAND, STONES AND PLANTS

SAND

Similar to water play, playing with sand stimulates the child's senses: touch, smell, sight, taste, movement, hearing. This activity invites children to investigate naturally and start early introductions of science and experimentation.

Motor skills

Allowing the child to play in the sand by themselves and with others helps them to develop fine motor skills like those necessary to use a small shovel, pull a truck, and build a castle.

Proprioceptive sense

By burying themselves in sand and feeling their body position within the sand, children are engaging their proprioceptive sense (the sense of their body relative to space).

Sensorial development

Sand play is particularly beneficial for developing a sense of textures, especially by creating a contrast with water,

concrete, grass, dirt, and wood, which will emphasise the sensation of each surface.

Trust and independence

In the case of a sandbox, the contained space allows the caregiver to supervise from a distance and create an independent play experience. Such a separation can build trust and confidence, as long as the child continues to feel safe and not left behind. Brief independent play opportunities can decrease separation anxiety and promote healthy parent-child attachment.

STONES

Babies have a great fascination for stones. Stone play encourages kids to better understand shape, weight, textures. Developing skills:

Pincer grasp

Pincer grasp is the ability to hold something between the thumb and first finger. This skill usually develops in babies around 9 to 12 months old and it is an important fine-motor milestone

Object permanence

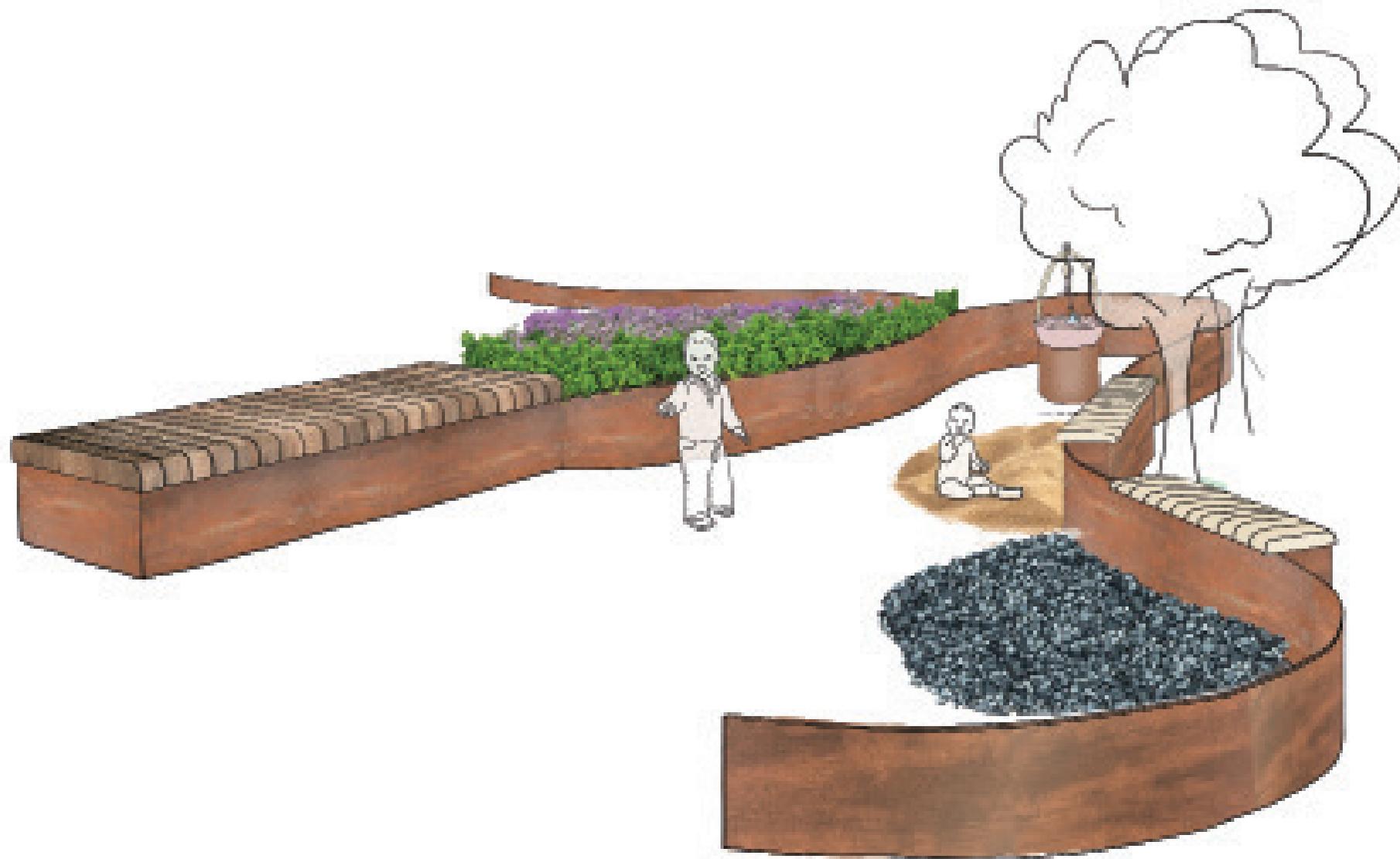
Hiding stones in your hand, in the sand, under a cloth will help a baby to develop the understanding that items and people still exist even when you can't see or hear them. Recent research shows that babies start to understand object permanence between 4 and 7 months of age.

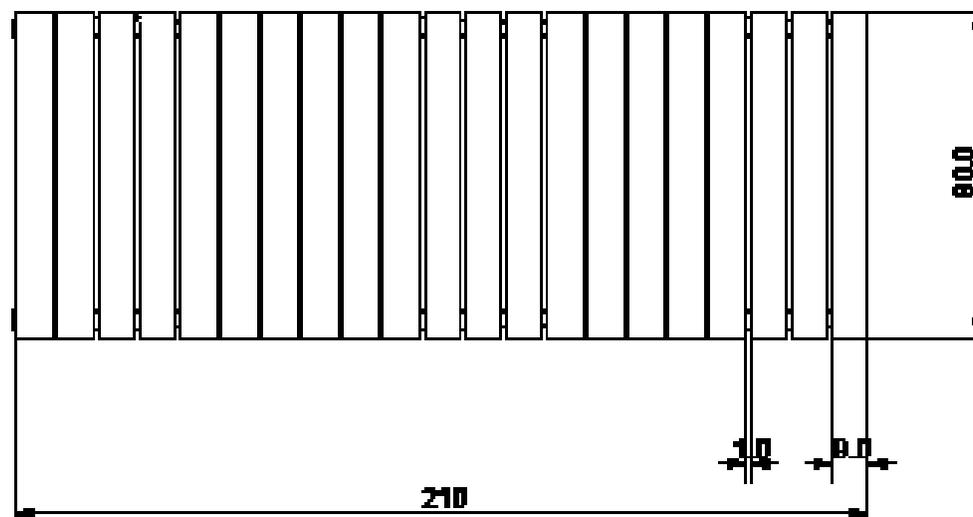
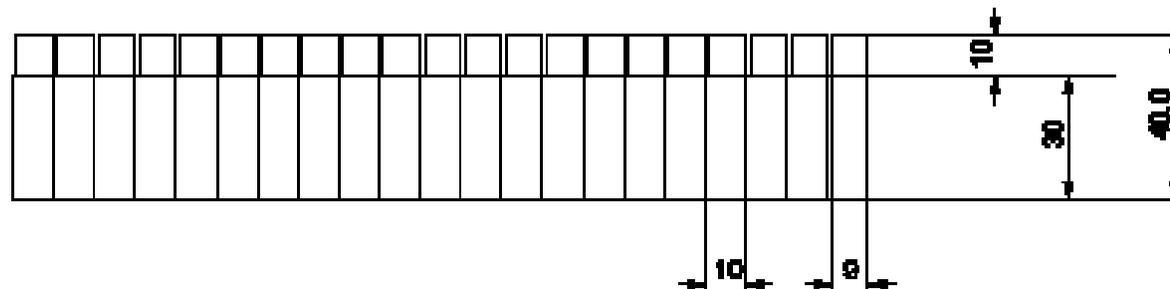
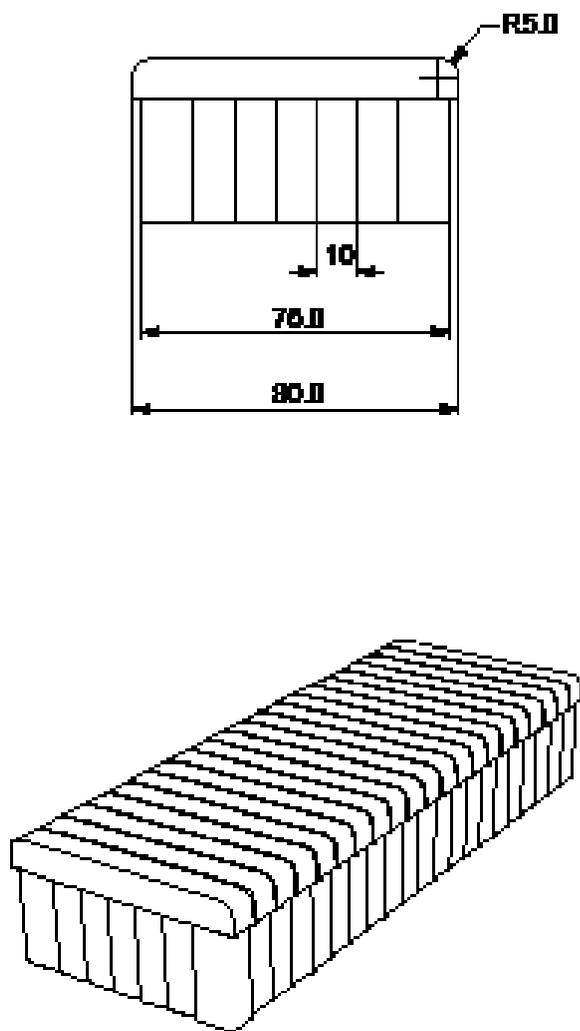
Balance and coordination

By the age of 16-18 months a baby might be able to stack two stones on top of each other. In addition to improving motor skills, playing with stones also enhances problem-solving abilities and cause and effect understanding.

PLANTS

The garden has endless opportunities for hands-on experiences to foster learning and encourage children to process their world through touching, feeling, comparing, and observing. Kids can be engaged through watering, harvesting, digging, and exploring vegetation, insects and birds.

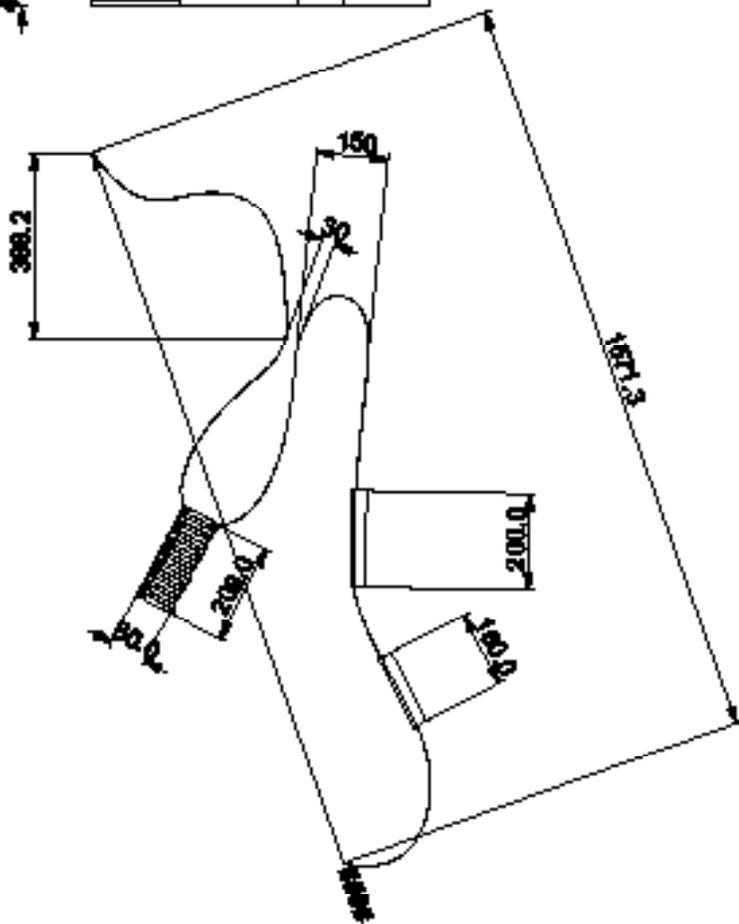
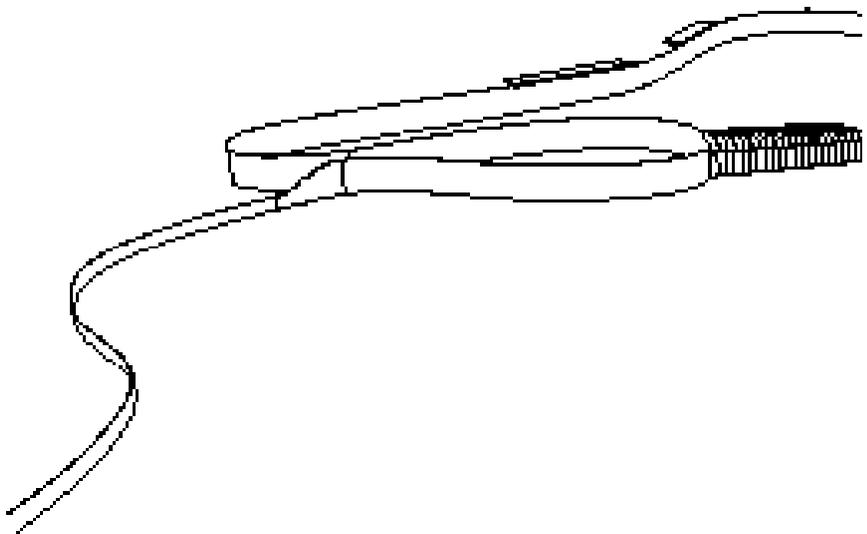
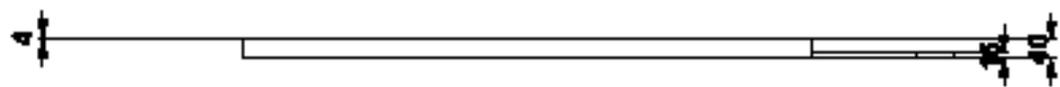




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1:20	BABY GARDEN PROJECT	VIKTORIYA GOTSEVA
WOOD	"DIVIDING BENCH"	15.06.2022
-	ALL DIMENSIONS IN CM	VERSION 1

1 2 3 4 5 6 7



1:160	BABY GARDEN PROJECT	VIKTORIYA GOTSEVA
CORTEN STEEL	"STEEL GARDEN"	15.06.2022
HARDWOOD		
-	ALL DIMENSIONS IN CM	VERSION 1
-		

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Active area

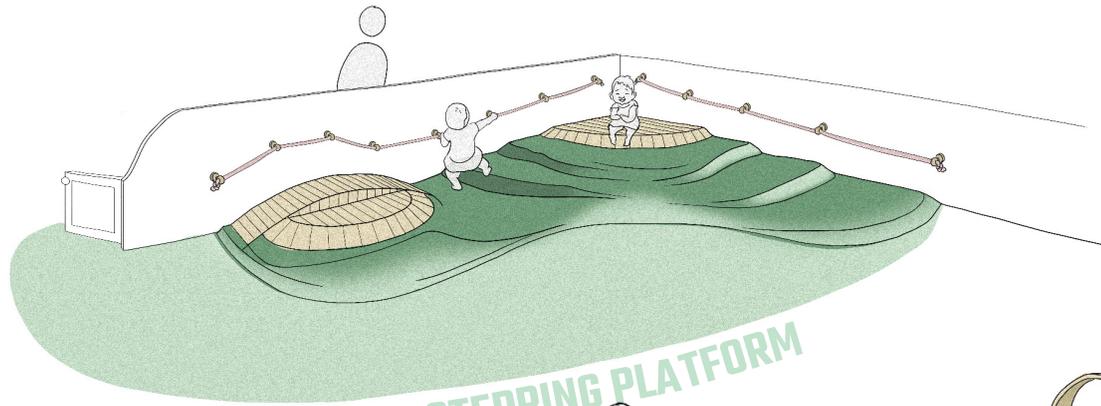
ACTIVE PLAY

This play area is designed to stimulate babies and encourage them to develop new skills, by offering play equipment in scale to their sizes, abilities, and developmental levels. The garden will provide a series of graduated challenges, appropriate for age-related abilities and perceived as possible to undertake by the children. The equipment is accessible to children with disabilities and encourages integration within the playground. Low accessible structures with a maximum fall height of 15 cm., wide platforms to ensure babies' free movement, supporting handrails, and protective barriers will provide a safe play and encourage the little ones to do by themselves and gain self-confidence. Depending on the age and abilities of each baby, a little help from an adult might be needed, but the design of equipment brings that need to a minimum in comparison with common playgrounds. This would give a chance for the caregivers to sit back and relax, while proudly observing their children's accomplishments.

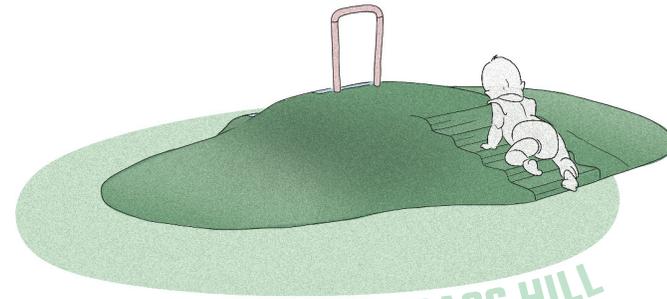
“Setting up an optimal level of challenge and offering help only when needed cultivates a child’s perseverance and problem-solving skills.”



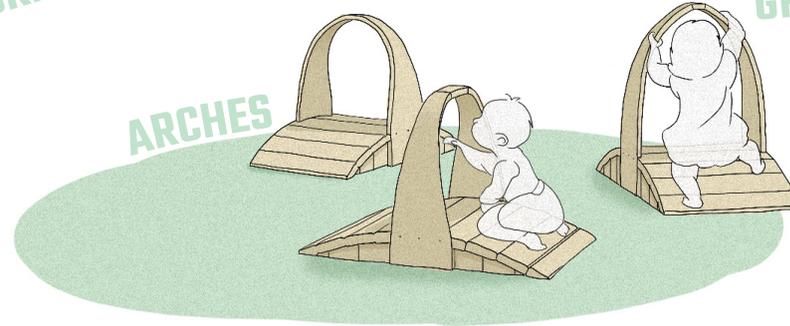
-  N
-  1 Net Nest
-  2 Stepping platform
-  4 Arches
-  5 Grass hill
-  6 Balancing beams
-  Sloping grass mound
-  Site outline



STEPPING PLATFORM



GRASS HILL



ARCHES



NET NEST



BALANCE BEAMS

NET NEST

This net nest is an exciting object to explore, allowing babies to reach the centre from two different accesses: stairs or slope. The slightly elastic fine net would allow the little ones to gently bounce and explore the different movements of their bodies in a safe way. A walk around the barrier, both from in and outside can be especially intriguing and satisfying for those who are still learning to walk without any support. If needed, parents can quickly and easily reach their children by bending over the platform or walking in.

BENEFITS

Gentle bouncing encourages balance, coordination, and strength. The unstable surface is great for developing the muscles in children's feet and stimulates micro-movements that encourage overall postural stability. It increases the proprioceptive and vestibular function, which help achieve smooth movements in the daily activities, such as running to kick a ball, climbing on a playground, getting dressed.

PROPRIOCEPTIVE SYSTEM

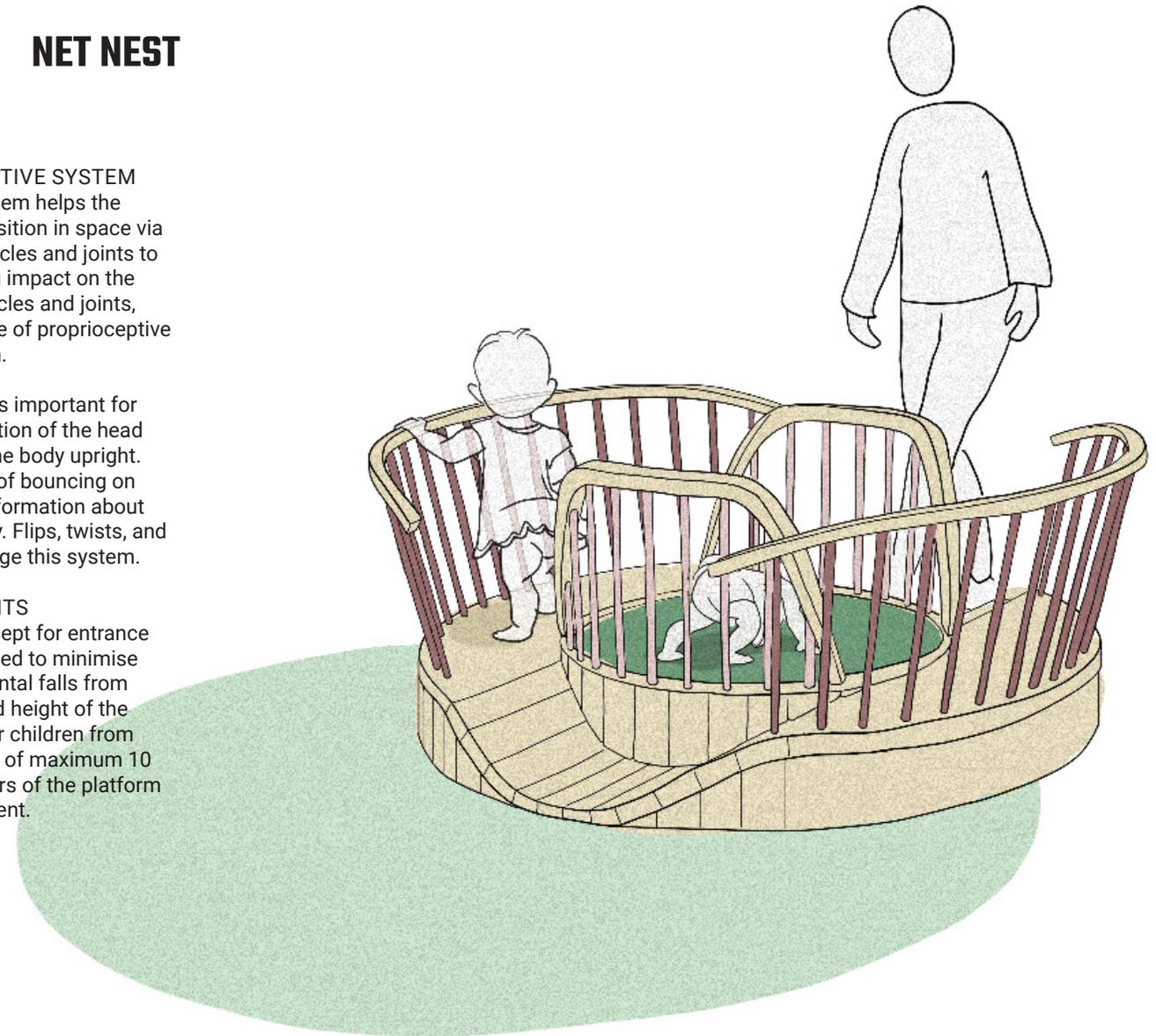
The proprioceptive system helps the body understand its position in space via feedback from the muscles and joints to the brain. The bouncing impact on the net stimulates the muscles and joints, providing a great source of proprioceptive information to the brain.

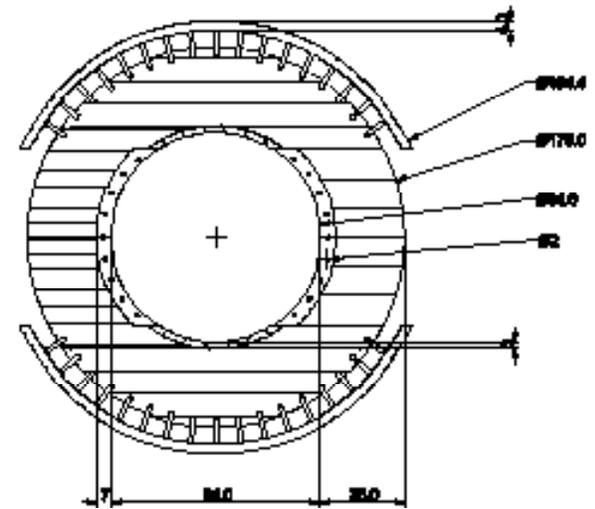
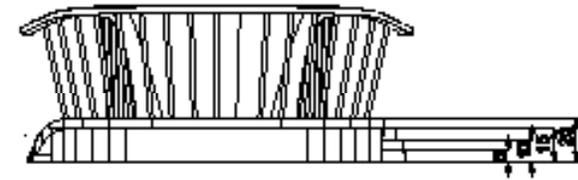
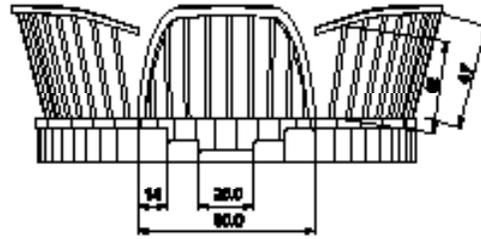
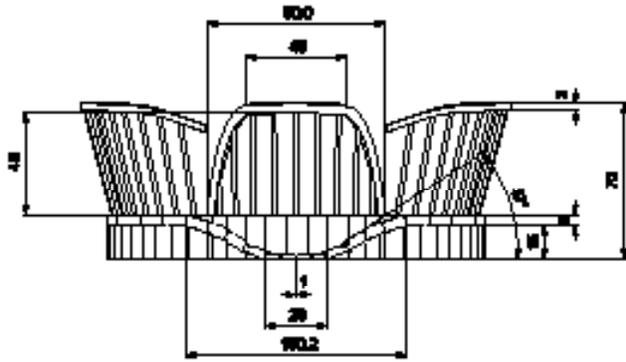
The vestibular system

The vestibular system is important for understanding the position of the head in space and keeping the body upright. The anti-gravity nature of bouncing on the net provides rich information about the position of the body. Flips, twists, and tumbles further challenge this system.

REQUIREMENTS

A protective barrier, except for entrance and exit openings, is used to minimise the likelihood of accidental falls from the edge. The angle and height of the barrier discourage older children from climbing over. Distance of maximum 10 cm between vertical bars of the platform prevents from entrapment.





1:35	BABY GARDEN PROJECT	VIKTORIYA GOTSEVA
HARDWOOD	"NET NEST"	15.06.2022
METAL TUBES		
FLEXIBLE FABRIC	ALL DIMENSIONS IN CM	VERSION 1

STEPPED PLATFORM

This stepped grass platform provides smooth height transitions in combination with wooden bridge, wooden podium and rope handrail. It offers multiple options for crawling, walking, and sliding via a combination of four modules: bridge, stairs, slope, and a podium. The minimal height distance between the levels ensures safety in case of fall. The enlarged width of the elements allows babies to comfortably turn around, study the surface and support themselves in case of losing balance.

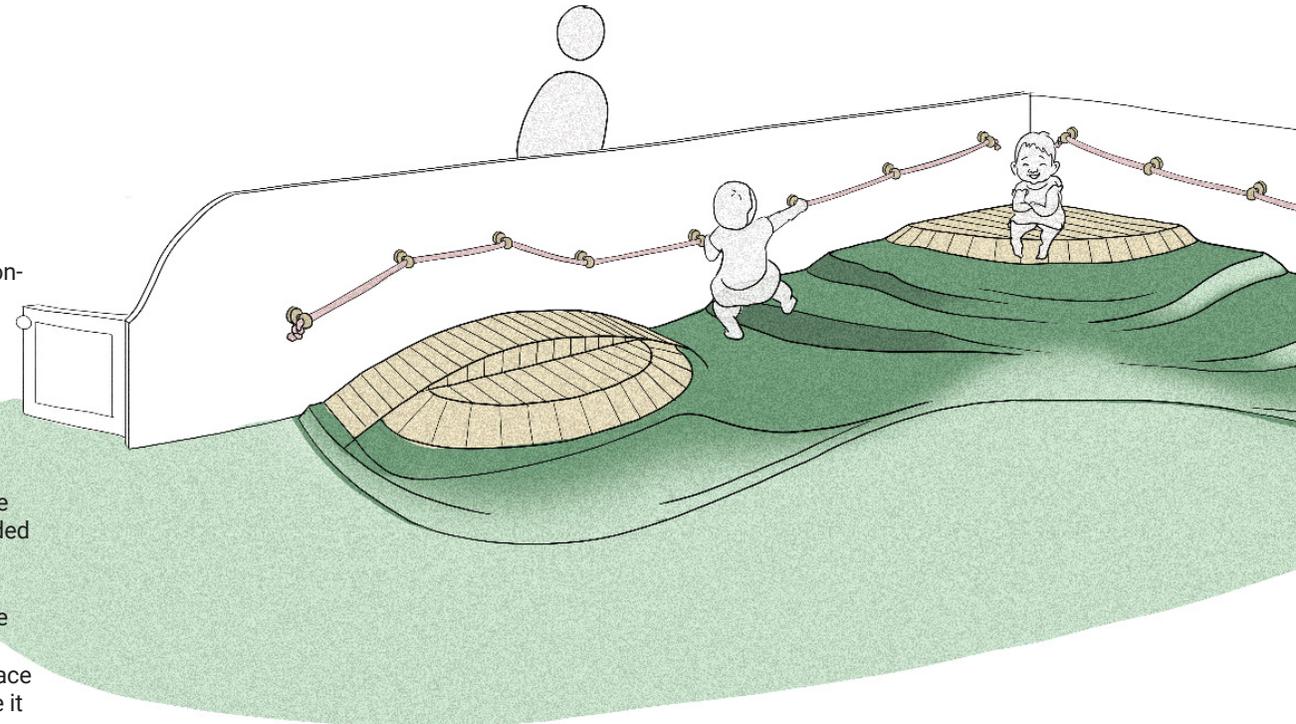
In their first weeks of crawling and walking, infants march straight over the edge of impossibly steep slopes, requiring rescue by a caregiver. Over weeks of everyday experience, responses become increasingly adaptive, and experienced crawling/walking babies would select actions adaptively based on the degree of slope relative to their current abilities. The stepped platform provides a different level of difficulties and therefore stimulates the process of learning to select the appropriate action (i.e., deciding whether to crawl, walk, slide, or avoid in accordance with the degree of slope/height of stairs)

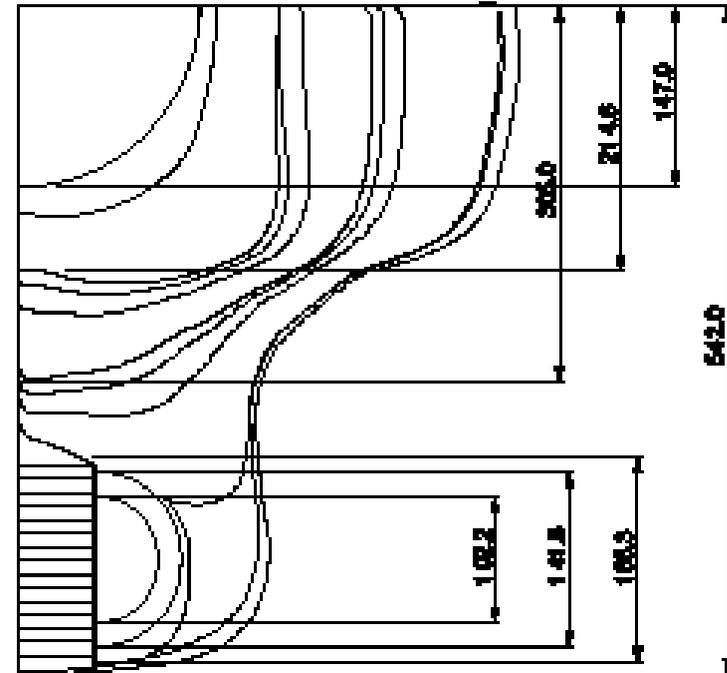
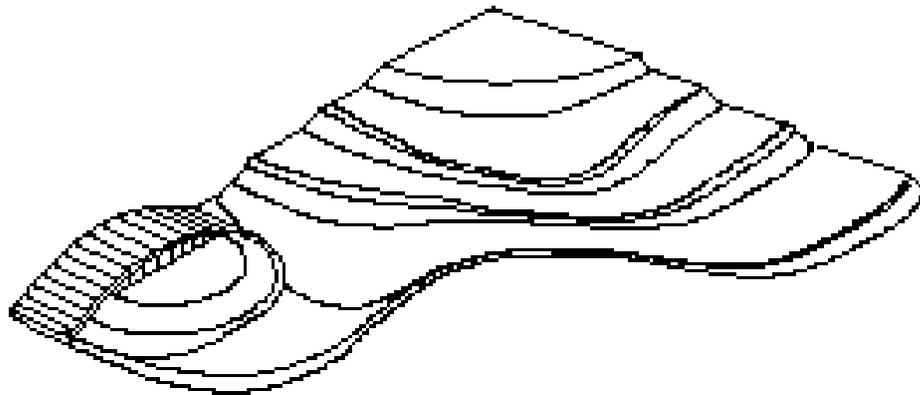
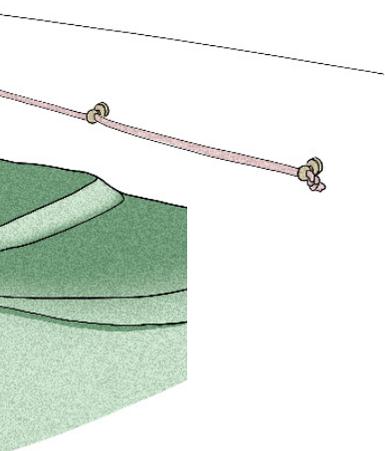
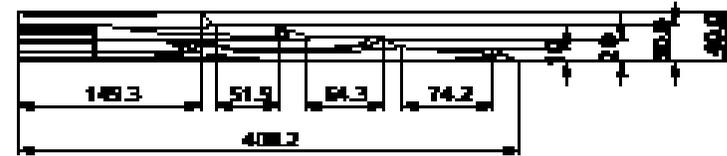
BENEFITS

- Adapt motor actions to variations in environmental conditions.
- Developing perception-action modifying and fine-tuning the selected motor actions.
- Balance and decision making, perception-action coupling, prospective planning.

REQUIREMENTS

- Platforms should be layered so that the fall height is 10 cm or less.
- Slope angle should not extend 30 degrees.
- Continuous handrails extending over the full length of the access should be provided for hand support and steady the user.
- Handrails should be available for use at the appropriate height, beginning with the first step. The vertical distance between the top front edge of a step or ramp surface and the top surface of the handrail above it should be between 40 and 50 cm
- Minimum depth of the stairs should be 30 cm. To prevent falls and to cover the turning radius of a baby: 60 cm
- Distance from another object for active play - 150cm





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1:60	BABY GARDEN PROJECT	VIKTORIYA GOTSEVA
GRASS	"STEPPED PLATFORM"	15.06.2022
HARDWOOD		
MANILA ROPE	ALL DIMENSIONS IN CM	VERSION 1
-		

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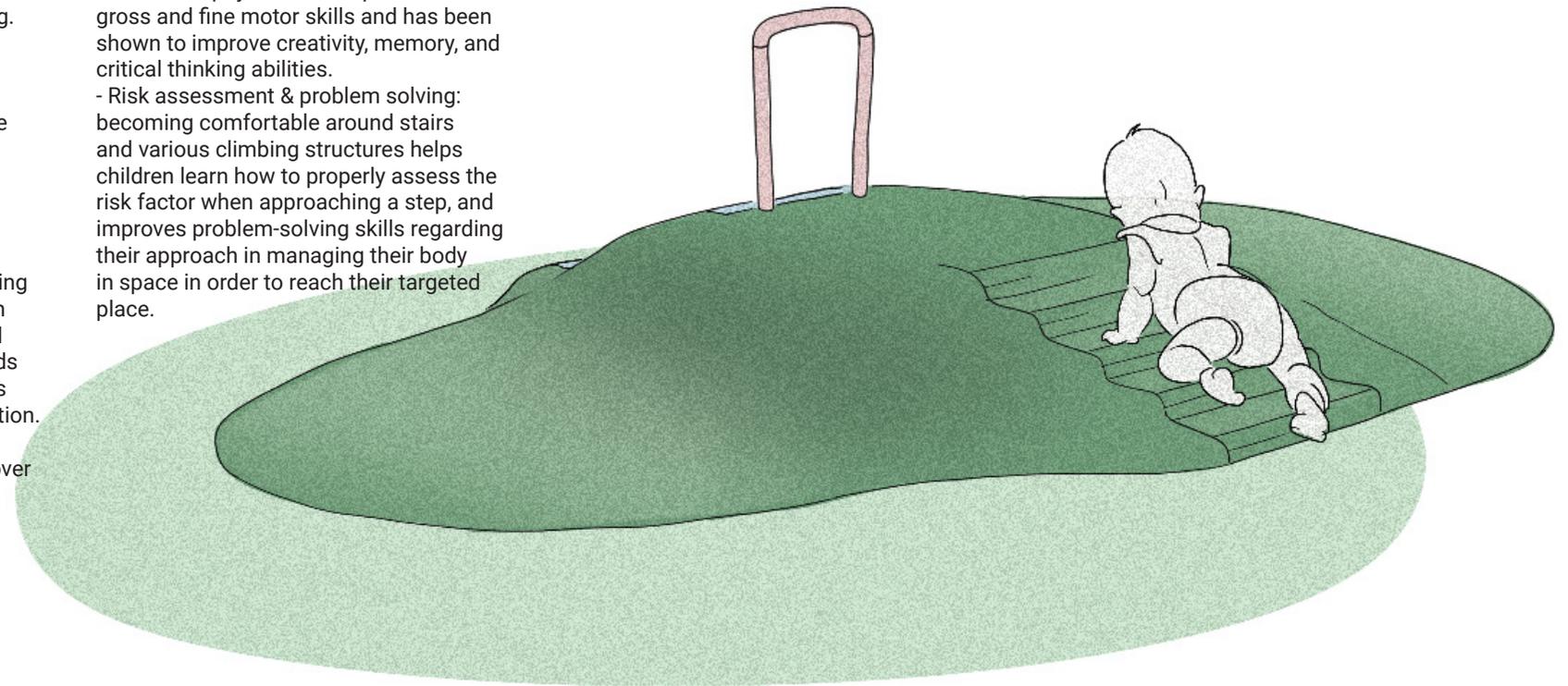
GRASS HILL

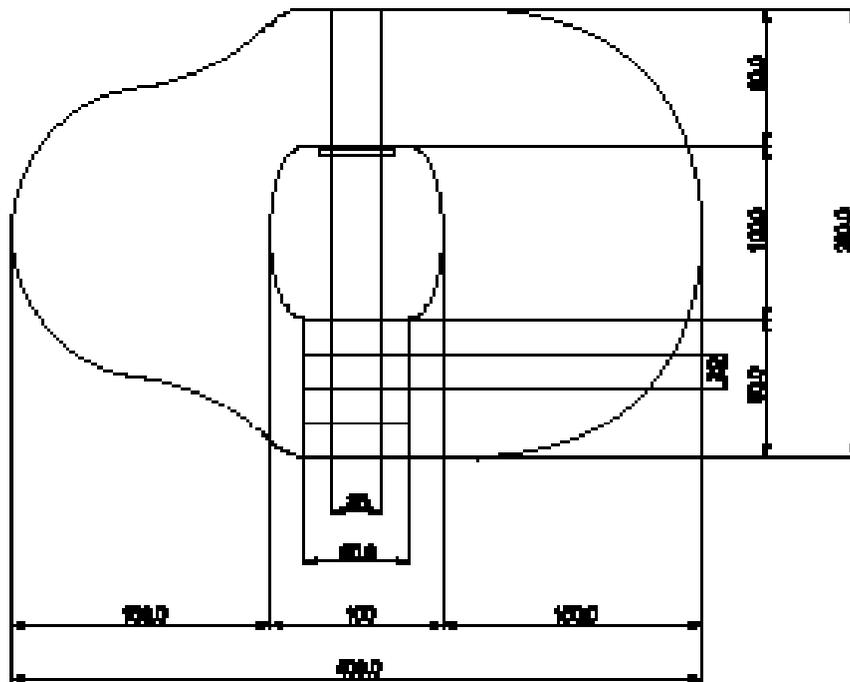
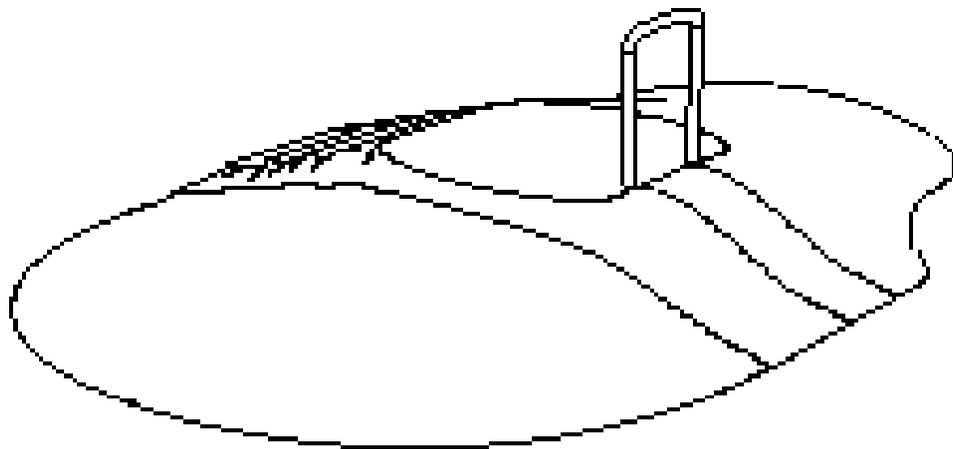
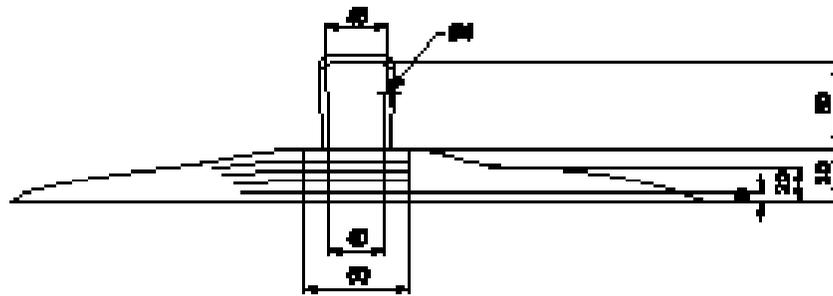
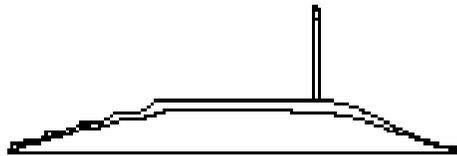
This tiny natural grass hill of only 30 cm height is combined with an easy-to-access baby slide and soft grass steps. The gentle carpet of grass will paddle any falls letting kids roll and tumble around. Playgrounds that feature contrasting levels and contours for children to explore bring a new dimension to outdoor play and learning. They offer a far richer developmental landscape, providing a high play value and encourages them to explore their adventurous side. The new perspective and vertical interest that climbing hills offer encourages children to climb, and younger children in particular love to race up and roll down them. These are seemingly simple movements and activities, but they're great for developing gross motor skills, lower body strength and coordination. Climbing, rolling and sliding up and down ramps and mounds helps children to build body awareness and is good for developing proprioception. Navigating ramps and mounds allows them to test themselves out and discover

what they can do. With practice, younger children will find themselves starting to learn and fully understanding positional language and concepts as they play.

BENEFITS

- Mind & body: climbing aids in children's mental and physical development of both gross and fine motor skills and has been shown to improve creativity, memory, and critical thinking abilities.
- Risk assessment & problem solving: becoming comfortable around stairs and various climbing structures helps children learn how to properly assess the risk factor when approaching a step, and improves problem-solving skills regarding their approach in managing their body in space in order to reach their targeted place.





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1:40	BABY GARDEN PROJECT	VIKTORIYA GOTSEVA
GRASS	"GRASS HILL"	15.06.2022
COATED STEEL		
-	ALL DIMENSIONS IN CM	VERSION 1
-		

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BALANCE & PULL-UP

BALANCE BEAMS

This balancing beam has a deviation from horizontal position with only a few centimetres, which allows babies to safely work on their balance by climbing, crawling and walking on it. With a maximum height of 15 cm and placed on the soft grass lawn, even in case of fall the little users won't hurt themselves. A width of 70 cm additionally minimises the risk of falling, by providing enough space for turning around freely. The pull up bars provide support while walking the path and at the same time might be used on the other side but those who still feel insecure to walk on the beam.

BENEFITS

- Body awareness: For young children, being on balance simply means not falling over. Walking on a beam is considered dynamic balance—being on balance while moving.
- Encourages balance and body awareness. When a child walks slowly across a balance beam, their body is developing balance and learning where it is in space. It requires concentration, hand eye coordination, muscular strength, endurance, maintaining posture. This skill also leads to understanding one's own left and right. Being on balance means having an even distribution of weight on each side of a vertical axis. The centre of gravity is over the base of support.

REQUIREMENTS

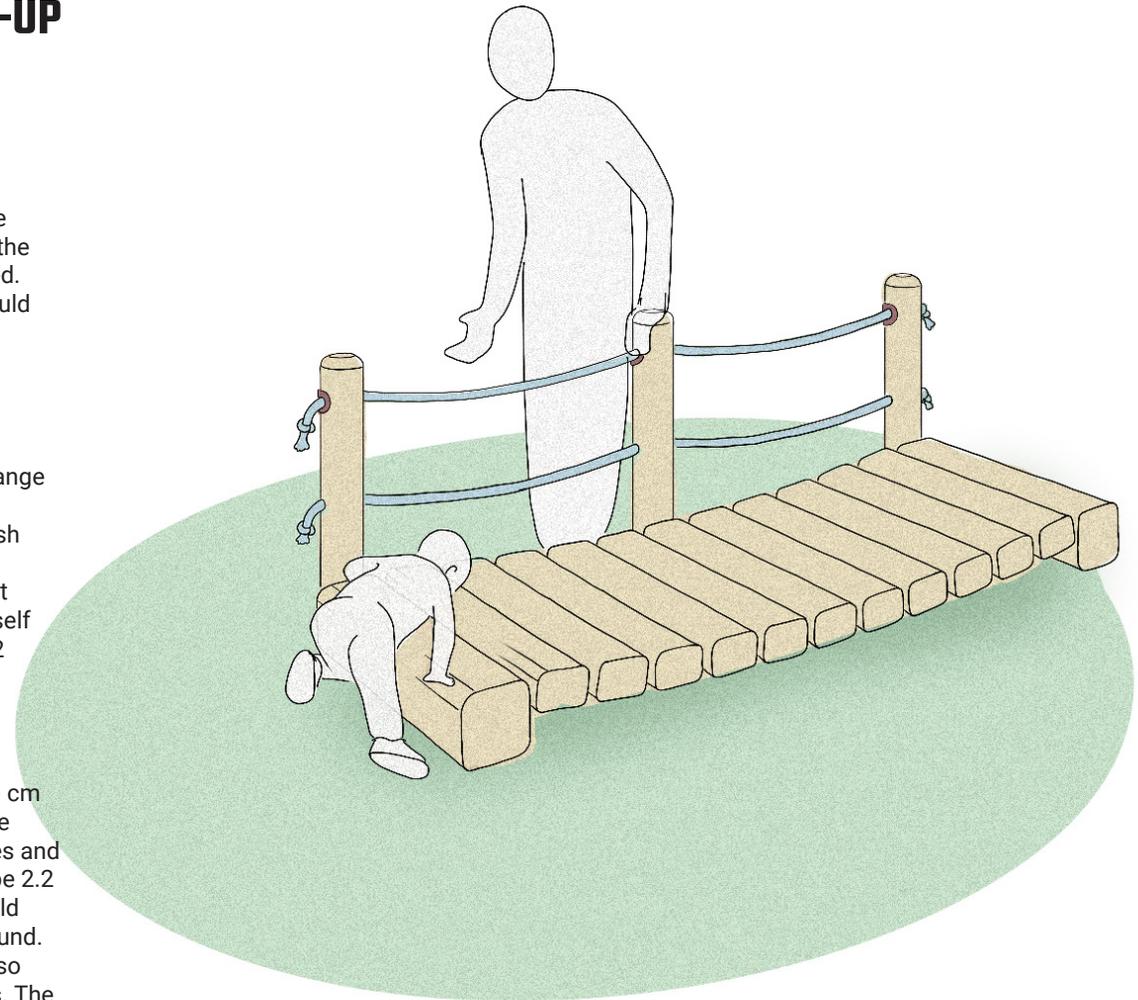
Fall height should not be higher than 15 cm. Shock absorbing surfaces like soft grass should be provided under the structure. A width of 70 cm is required. Space in between the loose bars should be 2 cm to prevent entrapment.

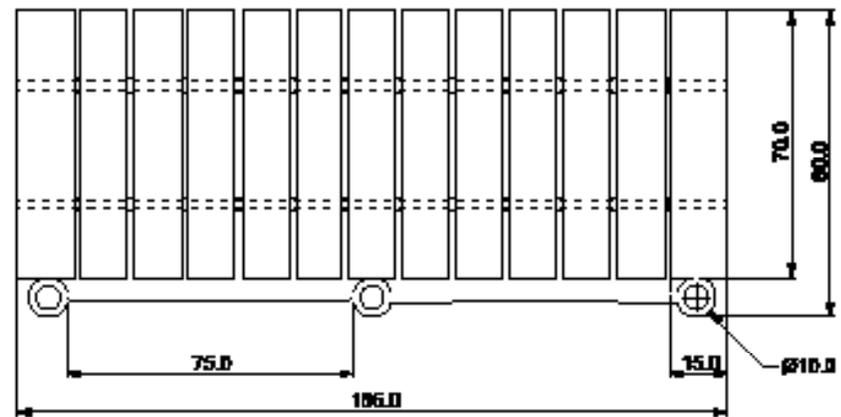
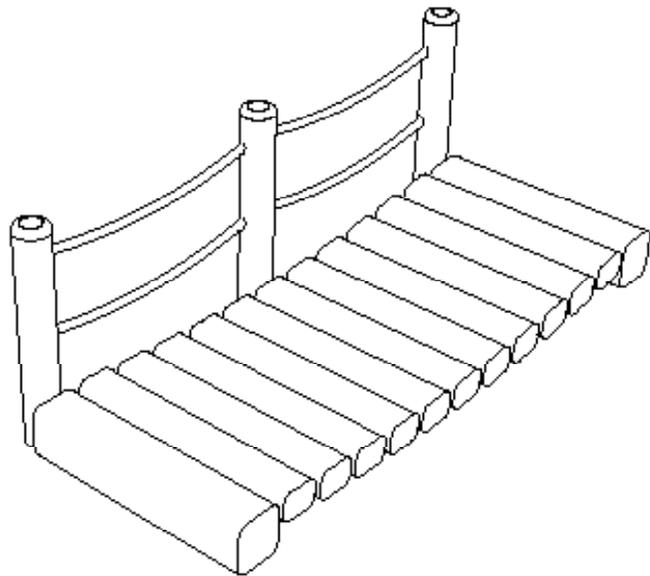
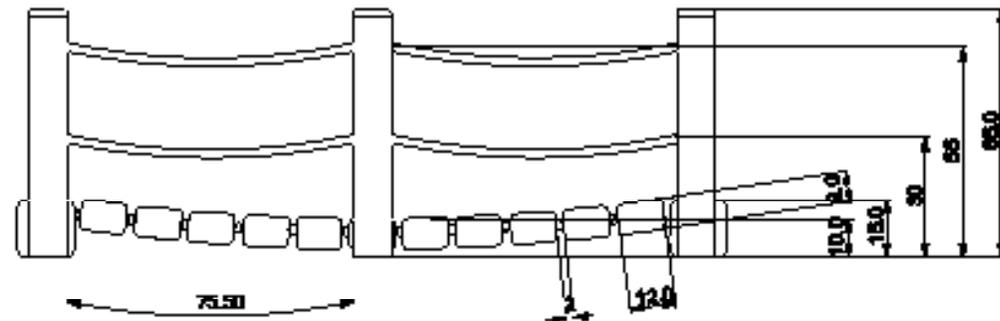
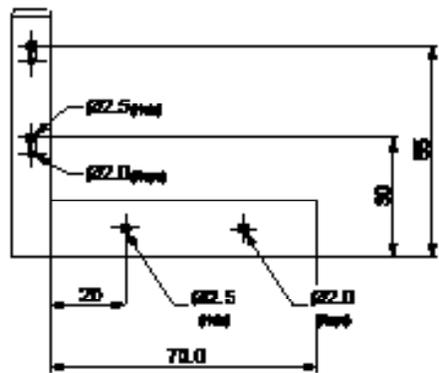
PULL-UP ROPES

Self confidence and body control
Usually by the seventh month many babies are beginning to make the change to stand by pulling up onto furniture and people. By eight months their wish to be upright is very strong. The pull up bars will help them to practise that new skill gaining independence and self confidence. With a length of almost 2 metres, babies can take a good walk, working on their first wobbly steps.

REQUIREMENTS

Two different heights of the rope - 30 cm and 55 cm from the ground to provide support for babies from different ages and height. Diameter of the rope should be 2.2 cm for the best grasp. The rope should be taut and fix so it does not turn around. Walking on two feet gives your child so many opportunities for new activities. The most obvious is simply to walk.





1:20

		VIKTORIYA GOTSEVA
HARDWOOD	"BALANCE BEAMS"	15.06.2022
MANILA ROPE		
-	ALL DIMENSIONS IN CM	VERSION 1
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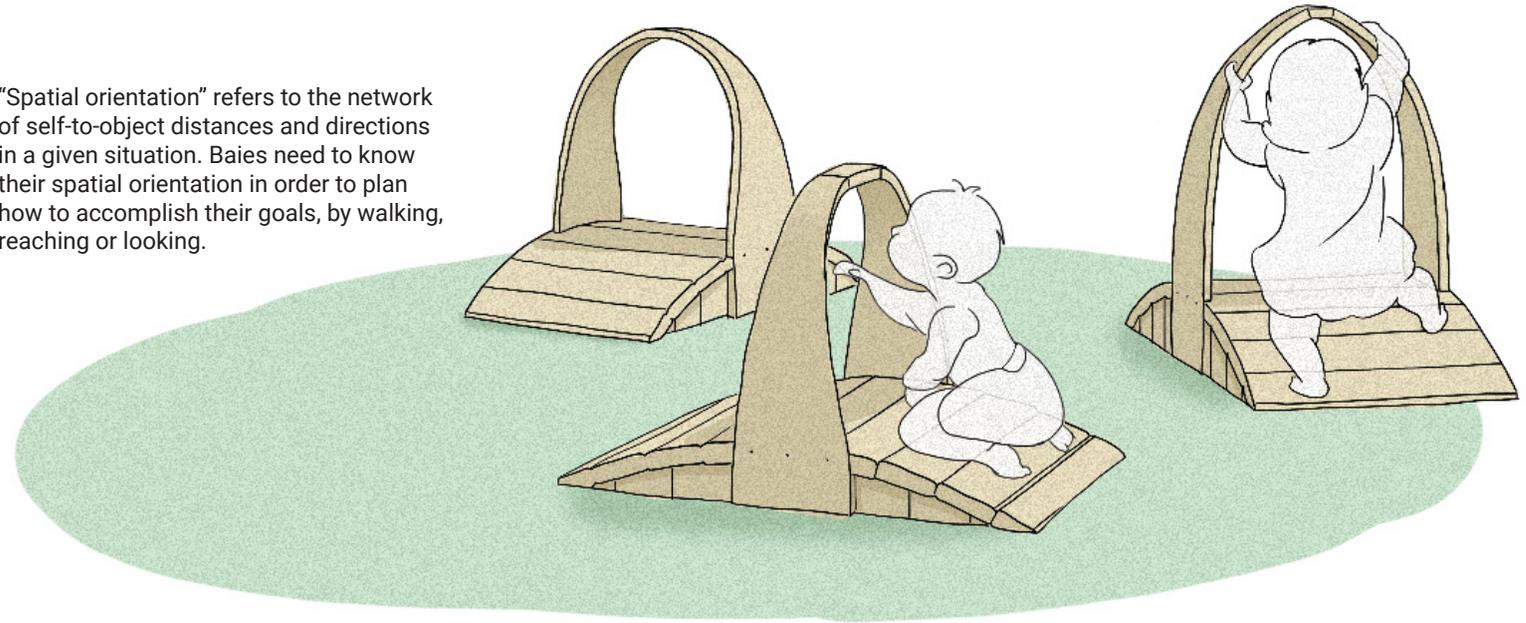
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THE 3 ARCHES

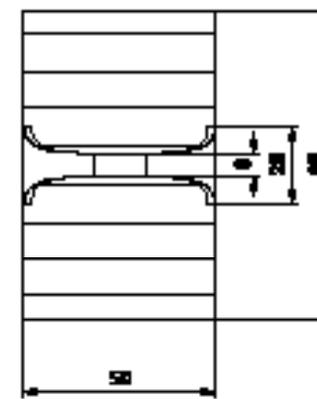
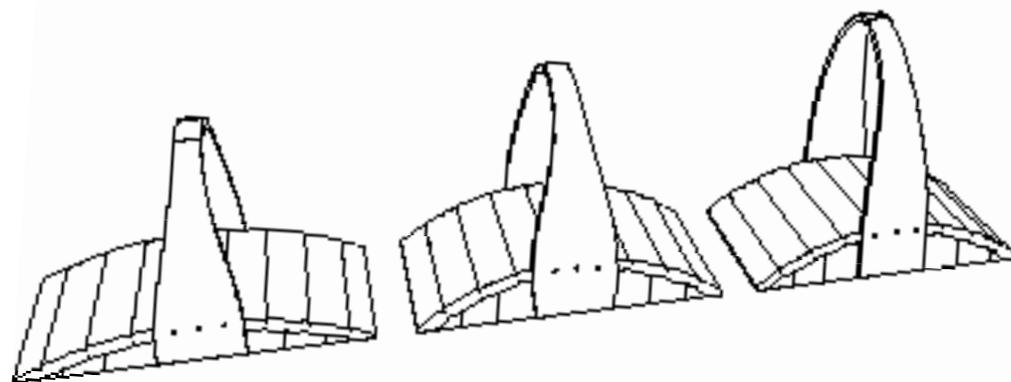
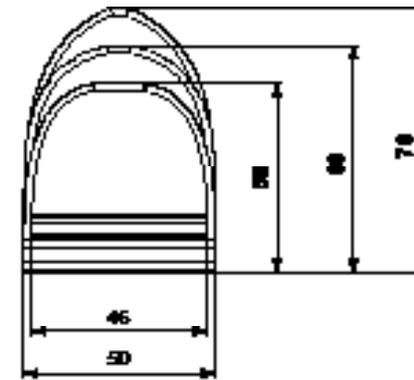
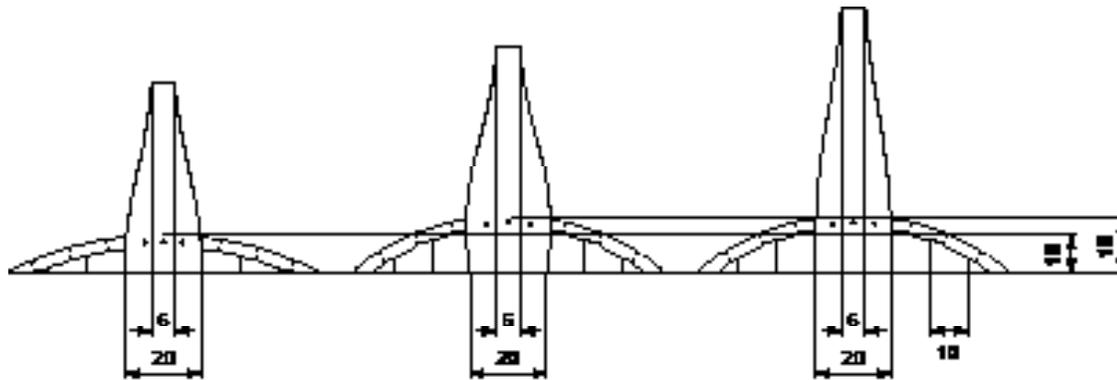
Each of these three items are equipped with an arch and a bridge underneath, with variations of the height. Oriented in a circular composition, the arches allow the kids to play in a fun and interactive way. The semi enclosed space they form can be used for games as peekaboo and hide and sick. For younger babies, the combination of crawling up the bridge and under the arch at the same time is a great exercise for developing spatial orientation and body awareness. The different height of the arches and the bridges provides diverse experiences and levels of challenge.

“Peekaboo” is a game that develops the baby’s inability to understand the concept of object permanence. Babies as young as 6 months already have expectations about the identity and location of a returning person.

“Spatial orientation” refers to the network of self-to-object distances and directions in a given situation. Babies need to know their spatial orientation in order to plan how to accomplish their goals, by walking, reaching or looking.



“When time and safety permit it, allow your baby to walk instead of riding in a stroller or baby carrier.”



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1:20	BABY GARDEN PROJECT	VIKTORIYA GOTSEVA
HARDWOOD	"ARCHES"	15.06.2022
-	ALL DIMENSIONS IN CM	VERSION 1

1 2 3 4 5 6 7

SELECTING A SITE

Nearby accessible hazards such as roads with traffic, lakes, ponds, streams, drop-offs/cliffs, etc, Sun exposure.

SHADING CONSIDERATIONS

Designing play structures as a means for providing shading (e.g., man-made structures) are potential ways to design a playground to help protect children's skin from the sun. When trees are used for shade, additional maintenance issues arise, such as the need for cleaning up debris and trimming limbs.

PLAYGROUND LAYOUT

Accessibility • Age separation • Conflicting activities • Sight lines • Signage and/or labelling • Supervision

Accessibility:

special consideration should be given to providing accessible surfaces in a play area to ensure the opportunity for children with disabilities to play on the playground.

Age separation:

For playgrounds intended to serve children of all ages, the layout of pathways and the landscaping of the playground should show the distinct areas for the different age groups. The areas should be separated at least by a buffer zone, which could be an area with shrubs or benches. This separation and buffer zone will reduce the chance of injury from older, more active children running through areas filled with younger children with generally slower movement and reaction time

Age group:

In areas where access to the playground is unlimited or enforced only by signage, the playground designer should recognize that since child development is fluid, parents and caregivers may select a playground slightly above or slightly below their child's abilities, especially for children at or near a cut-off age (e.g., 2-years old and 5-years old).

Conflicting activities:

The play area should be organised into different sections to prevent injuries caused by conflicting activities and children running between activities. Active, physical activities should be separate from more passive or quiet activities. Areas for playground equipment, open fields, and sand boxes should be located in different sections of the playground.

Sight lines:

Playgrounds that are designed, installed, and maintained in accordance with safety guidelines and standards can still present hazards to children. Playgrounds should be laid out to allow parents or caregivers to keep track of children as they move throughout the playground environment. Visual barriers should be minimised as much as possible. For example, in a park situation, playground equipment should be as visible as possible from park benches. In playgrounds with areas for different ages, the older children's

GENERAL PLAYGROUND REQUIREMENT

area should be visible from the younger children's area to ensure that caregivers of multiple children can see older children while they are engaged in interactive play with younger ones.

Signage and/or labelling:

Although the intended user group should be obvious from the design and scale of equipment, signs and/or labels posted in the playground area or on the equipment should give some guidance to supervisors as to the age appropriateness of the equipment.

Supervision:

The quality of the supervision depends on the quality of the supervisor's knowledge of safe play behaviour. Playground designers should be aware of the type of supervision most likely for their given playground. Supervisors should understand the basics of playground safety such as:

- Checking for broken equipment and making sure children don't play on it.

- Checking for and removing unsafe modifications, especially ropes tied to equipment, before letting children play.
- Checking for properly maintained protective surfacing.
- Making sure children are wearing foot wear
- Watching for and stopping children from wandering away from the play area.

SELECTING EQUIPMENT

When selecting playground equipment, it is important to know the age range of the children who will be using the playground. Children at different ages and stages of development have different needs and abilities. Playgrounds should be designed to stimulate children and encourage them to develop new skills, but should be in scale with their sizes, abilities, and developmental levels. Consideration should also be given to providing play equipment that is accessible to children with disabilities and encourages integration within the playground.

SURFACING

The surfacing under and around playground equipment is one of the most important factors in reducing the likelihood of life-threatening head injuries. A fall onto a shock absorbing surface is less likely to cause a serious head injury than a fall onto a hard surface.

EQUIPMENT MATERIALS

Durability and finish - Use equipment that is manufactured and constructed only of materials that have a demonstrated record of durability in a playground or similar setting.

- Metals: avoid using bare metal for platforms, slides, or steps. When exposed to direct sunlight they may reach temperatures high enough to cause serious contact burn injuries in a matter of seconds. Use other materials that may reduce the surface temperature, such as but not limited to wood, plastic, or coated metal. If bare or painted metal surfaces are used on platforms, steps, and slide beds, they should be oriented so that the

surface is not exposed to direct sun year round.

- Wood: wood should be either naturally rot- and insect-resistant or should be treated to avoid such deterioration.
- Creosote-treated wood (e.g., railroad ties, telephone poles, etc) and coatings that contain pesticides, as well pressure-treated wood should not be used.

ASSEMBLY AND INSTALLATION

Strictly follow all instructions from the manufacturer when assembling and installing equipment. After assembly and before its first use, equipment should be thoroughly inspected by a person qualified to inspect playgrounds for safety. The manufacturer's assembly and installation instructions, and all other materials collected concerning the equipment, should be kept in a permanent file. Secure anchoring is a key factor to stable installation, and the anchoring process should be completed in strict accordance with the manufacturer's specifications.

PLAYGROUND HAZARDS

CRUSH AND SHEARING POINTS

Anything that could crush or shear limbs should not be accessible to children on a playground. Crush and shear points can be caused by parts moving relative to each other or to a fixed part during a normal use cycle, such as a seesaw.

STRINGS AND ROPES

Drawstrings on the hoods of jackets, sweatshirts, and other upper body clothing can become entangled in playground equipment, and can cause death by strangulation.

ENTANGLEMENT&IMPALEMENT

Projections on playground equipment should not be able to entangle children's clothing nor should they be large enough to impale.

ENTRAPMENT

Head entrapment is a serious concern on playgrounds, since it could lead to strangulation and death. A child's head may become entrapped if the child enters an opening either feet first or head first.

CORNERS & EDGES

Sharp points, corners, or edges on any part of the playground or playground equipment may cut or puncture a child's skin. Sharp edges can cause serious lacerations if protective measures are not taken

TRIPPING HAZARDS

Play areas should be free of tripping hazards (i.e., sudden change in elevations) to children who are using a playground. Two common causes of tripping are anchoring devices for playground equipment and containment walls for loose-fill surfacing materials.

DEFINITIONS

BARRIER: an enclosing device around an elevated platform that is intended to prevent both inadvertent and deliberate attempts to pass through the device.

COMPOSITE STRUCTURE: two or more play structures attached or functionally linked, to create one integral unit that provides more than one play activity.

CRITICAL HEIGHT: the fall height below which a life-threatening head injury would not be expected to occur.

EMBANKMENT SLIDE: a slide that follows the contour of the ground and at no point is the bottom of the chute greater than 12 inches above the surrounding ground.

ENTANGLEMENT: a condition in which the user's clothes or something around the user's neck becomes caught or entwined on a component of playground equipment.

ENTRAPMENT: any condition that impedes withdrawal of a body or body part that has penetrated an opening.

FALL HEIGHT: the vertical distance between the highest designated play surface on a piece of equipment and the protective surfacing beneath it.

FOOTING: a means for anchoring playground equipment to the ground.

GUARDRAIL: an enclosing device around an elevated platform that is intended to prevent inadvertent falls from the elevated surface.

INFILL: material(s) used in a protective barrier or between decks to prevent a user from passing through the barrier (e.g., vertical bars, lattice, solid panel, etc.).

PROJECTION: anything that extends outward from a surface of the playground equipment and must be tested to determine whether it is a protrusion or entanglement hazard, or both.

PROTECTIVE SURFACING: shock absorbing (i.e., impact attenuating) surfacing material in the use zone that conforms to the recommendations.

PROTRUSION: a projection which, when tested, is found to be a hazard having the potential to cause bodily injury to a user who impacts it

SLIDE CHUTE: the inclined sliding surface of a slide.

STATIONARY PLAY EQUIPMENT: any play structure that has a fixed base and does not move.

SUPERVISOR: any person tasked with watching children on a playground.

USE ZONE: the surface under and around a piece of equipment onto which a child falling from or exiting from the equipment would be expected to land. These areas are also designated for unrestricted circulation around the equipment.

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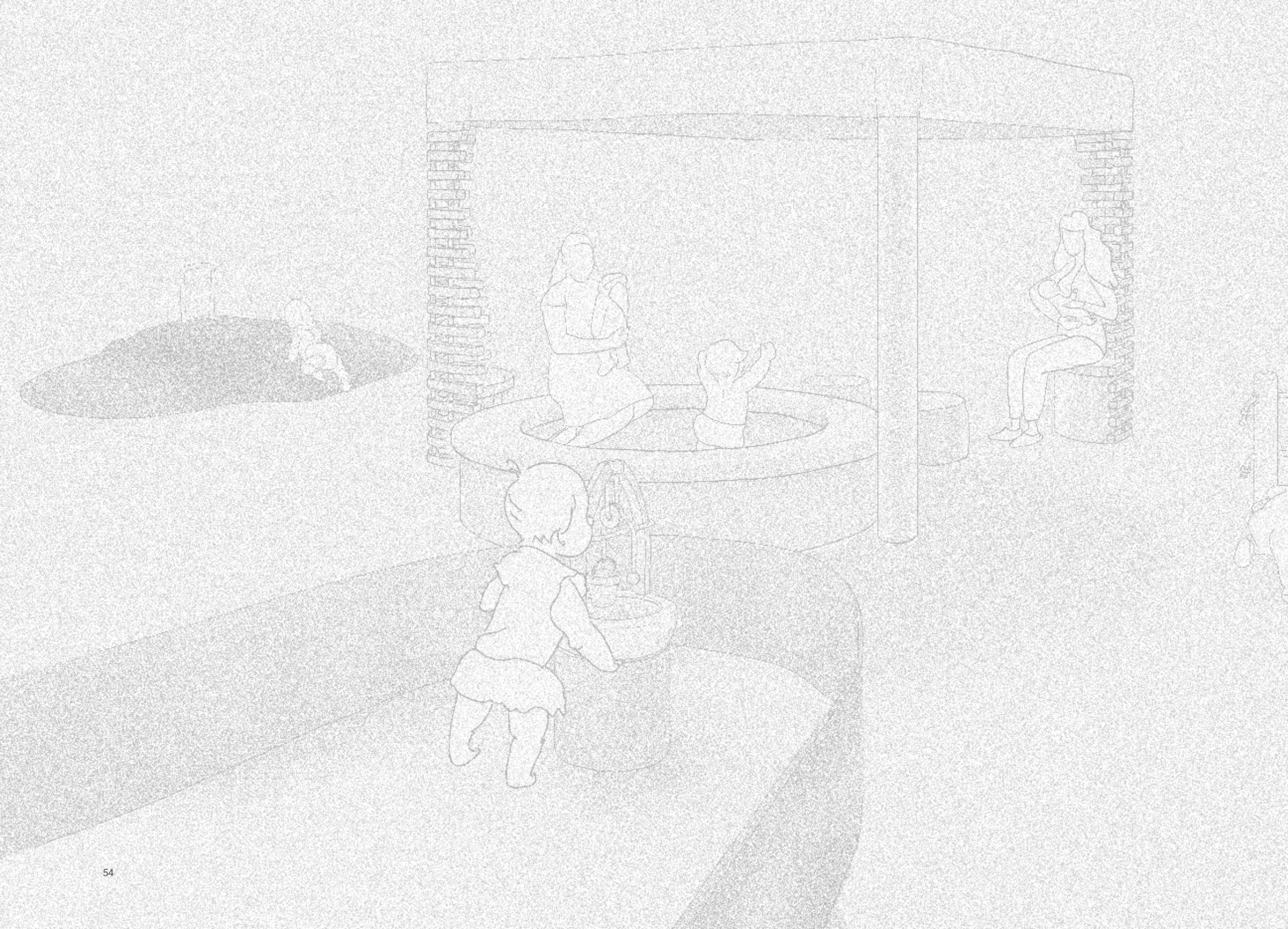
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