

האוניברסיטה העברית בירושלים דאוניברסיטה העברית בירושלים דאוניברסיטה אוניברסיטה העברית בירושלים





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### Introduction Planning neighborhoods for small children – what does that mean?

We tend to think that if a city is good for everyone, it will be good for children too. But small children can differ strongly from adults, and even older children, in how they see, feel and experience their environment. The quality of an urban environment can significantly impact young children's physical, cognitive and emotional development. Therefore, though urban planning that allocates spaces for public and educational use may take the needs of children into account, there are additional important issues pertaining to toddlers that must be addressed in neighborhood planning.

This booklet offers a series of guidelines for planning neighborhoods for young children, based on the excellent manual developed by the Municipality of Toronto, "Growing Up – Planning for Children in New Vertical Communities" (see Appendix). The Toronto manual was designed to encourage families with small children to live in a city that is growing vertically. There are several significant differences between Israel and Toronto – in Israel the climate is milder, the rate of childbirth is higher, and the predominant culture is Mediterranean. Nevertheless, this manual was a useful source of inspiration through which to open the subject for discussion, and present issues in urban planning for young children that are relevant to Israel as well.

The document presented here describes four key issues associated with planning for young children in both newly built and renovated neighborhoods in Israel. The discussion of each issue includes its underlying rationale and its importance for young children, as well as concrete examples of problems and ideas for solving them. These examples constitute the heart of the document, showing how these issues might be implemented in the planning world.

Note: The size of spaces in this document is rendered in meters, and in another unit commonly used in Israel, the "dunam." Readers should therefore keep in mind that one dunam is equal to 1000 square meters, or to 0.1 hectares.



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# **Background: Opportunities and challenges** specific to children in high density neighborhoods

The primary goal when planning high density neighborhoods is, on the one hand, to take advantage of the potential and the opportunities inherent in high density, while, on the other hand, addressing the challenges that arise from the increased demands that this density places on the inhabited space.

#### **Opportunities**

- Walking: Compact planning facilitates travel by foot for small children and their companions.
- Services: Access to a variety of commercial, public, cultural and community services.
- · Proximity to friends: Children from different communities, with varied ethnic and cultural backgrounds, live in close proximity and are able to meet with ease close to their homes.
- Chance meetings: Playgrounds and public spaces bustling with activity.



How can proper planning help generate a child-friendly small children?

density suitable for

#### **Challenges**

- Pollution: Small children are more strongly affected by air and noise pollution.
- Nature: Urban density displaces the trees, plant life and other natural stimuli that are a necessary part of small children's cognitive, emotional and motoric development.
- Safety: The dense motor vehicle traffic in cities obstructs and limits small children's freedom of mobility.
- Security: An increase in population (i.e., in the number of nearby strangers) corresponds to a decreased sense of personal security.

# Planning on the neighborhood scale means focusing on connections

Small children must travel between a variety of different places as part of their daily routine. The most important task when planning a neighborhood is therefore to connect these regular destinations, taking account the guality of travel experience and the public space.



Small children also visit many places that provide services for their adult companions (e.g., shops, the post office, the hairdresser).

Questions to consider when planning neighborhoods for children:



What sort of experience is the neighborhood creating for small children while they travel with their adult companions between these destinations? What will they see on the way? Is the children's residential area healthy and safe? Have we reduced their exposure to air and noise pollution? To sources of anxiety? To the blazing sunlight?

Does the neighborhood encourage a healthy lifestyle and foot traffic? Is the distance small children would have to walk to their various services short enough to allow their adult companions to comfortably take them on foot?

### **Density patterns in Israel:** Which residential areas are best suited for small children?

Take note! The same population density can be achieved using a number of different designs, which will have differing effects on the development of the country's children. How should we be planning the new and renewed neighborhoods to best serve our children's development?



Ramat Werber (old)

#### **Neighborhood density** 8 units per dunam

18 residents per dunam (down from 22 in 2008) 9% children under the age of four **Neighborhood density** 

#### 6 units per dunam

17 residents per dunam (down from 20 in 2008) 12.5% children under the age of four

The number of children and the population density of a neighborhood varies throughout its life cycle. Therefore, though the density of the new neighborhood appears relatively high at 26 residents per dunam, the density in the older neighborhood had also been as high as 22 in 2008.



Hadar Hamoshavot (approx. 10 yrs. old)



Em Hamoshavot (partially populated)

#### **Neighborhood density** 8 units per dunam

26 residents per dunam 17 % children under the age of four

#### Now is the time!

The state of Israel is in the midst of a planning and construction boom, with thousands of new residential units on the way. This burst of activity is defining the future appearance and character of hundreds of neighborhoods throughout the country, and raising a range of pertinent issues, such as:

#### Density and building height:

- New areas are being built more densely and to greater heights than ever before;
- The land crisis is focusing the discussion on the need to use space more efficiently;
- Quantitative concerns are dominating the decision making process at the expense of considerations about quality.

#### Balancing crisis mentality with urban density and quality

- The housing crisis is increasing pressure to approve housing quickly and in large numbers.
- Urban renewal neighborhoods are planned at very high densities (12-30 units per dunam).
- While density in new neighborhoods is lower (4-8 units per dunam), there is a sense of planning in a time of crisis that makes it difficult to assess and implement considerations of quality.

These issues give rise to the following questions regarding planning for young children:

- Is it still possible to meet the developmental needs that are so crucial to our children? If so, how?
- How will increased density and neighborhoods designed in a time of crisis impact the next generation of Israeli citizens and the future character of Israeli society?

# Important issues in planning child-friendly neighborhoods in Israel

There are four central issues that, considered from the child's perspective, can help us think about planning better and more child-friendly neighborhoods. The examples that follow are divided according to the issues of:



The walking experience

to different destinations in the neighborhood?

# Exposure to nature and the outdoors



What opportunities are there for exposure to nature and the outdoor stimuli that are so important to my development?

These issues are relevant to multiple planning stages:



# Distribution of services for small children



Where can I go? What services do I and my adult companions require? How should these be positioned?

# The home's immediate environment



What is the space under the house like? Is there a safe and inviting place there for me to play and meet friends?







# The walking experience

How do I get around the neighborhood on foot? Is it pleasant and convenient to walk to different destinations in the neighborhood?

This section offers examples of the specific considerations involved in planning neighborhoods in which small children (and their adult companions) can comfortably travel on foot.

- **1.1** Shade and street trees: Allocating space and funding for tree trenches.
- 1.2 Reducing walking distances: Planning a dense network of streets so that multiple destinations are within short walking distance.
- 1.3 Crossing streets: Planning traffic arrangements and junction geometry to allow for short crossing distances.
- 1.4 Continuous public space: Planning a safe space between buildings.
- 1.5 Connections: Preserving and formalizing preexisting informal passages.





Urban planning can encourage children and parents to travel more often on foot, and to spend more time outdoors - factors that contribute to a healthy lifestyle and help prevent obesity.

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### Planning neighborhoods for walking with small children

The experience of walking with small children differs from that of walking with adults in various important ways. It is important to understand these differences and plan the neighborhood so that it can be comfortably and effectively traversed on foot with a child.

	Child	Adult
Easy and effective walking distance	*150-200 m	350-500 m
Walking pattern	Intermittent, meandering, multiple stops	Continuous
Exposure to stimuli High	Continually playing and investigating the environment (could extend the duration of the walk)	Low: destination-oriented
Cognitive and physical impact	Contributes to development of physical, emotional and cognitive abilit	Physical exercise
Sensitivity to noise and pollution	High: exposure affects physical, emotional and cognitive development	Medium-low

\* Planning for walking distances of 200 meters requires us to think of neighborhoods on a different scale from that to which we currently tend to plan.

# Issues and goals associated with encouraging child pedestrians

#### Primary planning issues for the promotion of pedestrian children

Walking

distances

Planning optimal

walking distances

allows small children

to travel between

on foot.





#### Shady, tree-lined streets

Reduces exposure to bad weather: generates a pleasant and controlled environment in which primary destinations small children can spend a great deal of time.

#### Continuous public space

Neighborhoods should include a continuous walking space where the child can travel on foot between an attractive variety of events and activities.







**Encouraging a** healthy lifestyle

Avoiding child obesity, reducing noise and air pollution.



Security and safety of children in the street

Encouraging young children's independence, awareness and self-efficacy.

Rationale

#### The importance of trees to small children

atmosphere – aesthetically

and emotionally.

Street trees are central to the city landscape, making up the bulk of its overall greenery. They are particularly important to small children for a number of reasons:



focal points for curiosity and

learning (e.g., about ecology,

changing seasons etc.).

air pollution.

# Why is the character of streets so important for small children?

When it comes to the child pedestrian, streets and their character are key. Streets are the building blocks of the public space, connecting the neighborhood's various playgrounds, gardens, public walkways, shortcuts and informal passages.



#### The street as a potential meeting place

Streets are often thought of merely as a means of getting from one place to another, but in practice they are much, much 18-40% (!) of a neighborhood's available land is taken up by more. They are a place for human interaction, for the exchange streets and parking. of goods and for the consumption of various services. As such, The character of these spaces therefore has a direct and they are not only the underlying "bone structure" that defines powerful impact on the quality of life in a city. In addition to the form of the public space, but also the beating heart that determining how residents will move around in that city, they energizes city life. are also places in which residents will spend time and interact with one another.

sensitive than adults to heat

and sun exposure.

#### The amount of land generally designated for streets and parking

Due to the extensive space that is set aside for streets in cities, lining them liberally with trees can dramatically shape the quality and character of the urban landscape.



#### 1.1 | Shade and street trees: The problem

Some of our streets are shady, some are not. What does planning more streets that are shady and pleasant to walk in entail?



**Example A:** A pleasant street for walking, shaded throughout its full length.



**Example B:** A street approximately 20 years old, still largely exposed to sunlight. Though trees have been planted along it, they are failing to thrive, or to create a protective canopy of shade over passersby.

#### **Suggested solutions**

**The challenge:** Strict policies regarding the compacting of the soil beneath streets are preventing trees from thriving on new streets.

**The solution:** Allocating space and funding for tree trenches as a necessary prerequisite for providing shade and comfort in the Israeli climate.

For each street section, landscape, infrastructure and transportation planners must coordinate land allocation both above and below ground to allow space for a tree habitat and structural soil.

**Implementation:** The Ministry of Housing and Construction has been examining and developing the proper specifications based on solutions that have already been implemented in Europe for the past 20-30 years. Urban runoff from the road flows into the trench.



The trees evaporate water from the trench while providing shade and beatifying the street.

A perforated pipe distributes the water in the conditioned soil, which is at once a habitat for the tree and a medium for collecting and storing runoff.

#### The tree trench – managing urban surface runoff

An image of the soil conditioners and structural soils that would allow street trees to develop.

Source: Landscape architect Shachar Zur

# **1.2** | Reducing walking distances

The problem: Streets are often planned with too few crosswalks, without reference to formal and informal pedestrian traffic. This forces pedestrians to walk long distances that are unsuited to walking with small children, which encourages unsafe crossing practices.



Suggested solution: Adding more frequent crosswalks, planned according to the routes of through streets and pathways, and the location of bus stations and public/commercial focal points.



#### **1.3 | Crossing streets:** Issues to consider when planning junctions for small children

Roundabouts are products of a worldview that prioritizes the convenience of drivers. Planning for small children means taking walking distances and the convenience of pedestrians with small children into account as well.

#### The walking distance required to cross different junctions in the same city:



Relevance to small children: The detour necessary to cross this junction is relevant to pedestrians of all ages. But when your easy walking distance is limited to 150 meters, a detour of 67 meters – just to cross the street - is especially problematic.

activity.



Crossing at a shorter crosswalk with a traffic light is easier, and allows for a short pause in the middle to rest.

The space allotted to the road in a junction like the one presented in example B above is smaller than that of a roundabout, leaving more space available for human





## 1.4 | A continuous public space: The problem

Planners often surround buildings with parking spaces, so that small children, upon leaving the house, are immediately confronted by parking lots.



A typical residential area in newly planned Israeli neighborhoods: Extensive spaces are devoted to parking and the requirements of private vehicle traffic (in red), while the public space that is left safe and available for young children (white) is small and isolated.

#### **Importance:** Small children are not yet aware of the dangers posed by motor vehicle traffic (unlike children aged 5-6, who generally know to stay away from roads and parking lots). In an isolated public space surrounded by cars, accompanying adults cannot allow small children to roam freely.

**The problem:** In such residential areas, where can small children go to move about freely, wander 10-20 meters away from their parents, and begin to develop a sense of confidence and independence?

What must we do to ensure that such children can use the public space near their houses? How can we plan a public space that makes this possible?

# **Continuous public space: A solution**



**The problem:** For years, the planning of neighborhoods for children has been based on the principle of creating a "safe space", in which children can walk without crossing a street. Many Israeli neighborhoods are influenced by this planning philosophy, which has many charms and advantages, as evidenced by several wonderful examples from the 1950s. But have we considered how such an idea might work 60 years later, in the motor vehicle saturated reality in which new neighborhoods are being planned?

The figure above presents one developer's proposal for an urban renewal program that seeks to create a "safe space" for children. The needs of private vehicles, however, have encroached upon this space and reduced it to an isolated island between the buildings. How does such an isolated, fenced-off environment impact small children's freedom of movement? Where is the continuity? How can we create a space that allows children's freedom of movement to grow along with them?

The goal of the alternative we suggest is to reduce the size of parking areas and generate a continuous public space. This was made possible by the intervention of the local council, which decided to reduce the allotted parking spaces and the number of apartments in the plan, and to move the parking into underground lots.

### **1.5** | Preserving and formalizing informal passages

Pathways and shortcuts are important when walking with small children. They can turn a long and difficult walk into a practical, reasonable task.



**The problem:** The planning process often does not consider footpaths important, and neglects to plan such pathways clearly.

Plans can therefore block off important shortcuts – be they formal or informal – just because they do not appear on the plan or map.

**The solution:** When planning neighborhoods or public spaces, it is important to map existing pathways (even informal ones), and identify opportunities to create additional shortcuts.



**A "Pathway Map"** is a useful tool for planning easy foot traffic systems for small children. The map offers a comprehensive representation of the system, with an emphasis on informal pathways and shortcuts, clearly marking those that exist (in orange and black). These markings allow planners to:

A. Know what must be preserved in future developments and how to connect new neighborhoods to old ones.

B. Identify places in which the walking distance between junctions is too great and add recommended passages (in blue) to reduce the distance and improve foot traffic systems for children and their adult companions.

Such maps are already being used in a number of plans – as a means of adding and formalizing important pathways at the planning stage, and as a record of the pathways that must be implemented during the construction and development stage.

Implementation



# **Z** Services for small children

#### Where do I go? What services do my companions and I require? How should they be distributed?

This section addresses the task of positioning services for small children and their adult companions so that they can be easily, pleasantly and conveniently accessed on foot from their users' homes. The services to be considered are divided into two groups: those that serve children directly (e.g., daycare), and other services used by adults on a daily basis.

#### Daycare services:

2.1	Distribution that increases pedestrian access and encour			
2.2	Planning convenient pathways to reduce walking distance			
Other services:				
2.3	Planning a variety of services (public and commercial) in			
2.4	Reinforcing pedestrian routes that provide access to mult			
2.5	Planning small lots and varied land uses in close proximit			
2.6	Leveraging topography in hilly areas for layered land use			



ages arrival on foot (i.e., 200 meters)

ce to the center

close proximity

tiple services

ty

#### The importance of daycare distribution



Daycare and preschool facilities are a regular destination in the lives of younger children. The journey there and back is an opportunity to develop healthy walking habits, to encounter stimuli, to learn, and to experience the varied activity that abounds in the public spaces on the way.

However, many young children are driven to daycare or preschool by car. Instead of enjoying the benefits of walking, they begin their day with heavy traffic and the attendant tension - even conflict - over use of the road.

Children who walk to daycare are also impacted by road traffic. Sidewalks and crosswalks designed to provide a safe space for children and their adult companions can become overrun with cars, obstructing the view of small children on their way to daycare. The aggregation of cars during pickup and drop-off times can block traffic lanes, and even sidewalks when cars are parked upon them, inconveniencing nearby residents and obstructing traffic in the area.

It is therefore recommended, when planning a neighborhood, to include shortcuts, carefully distribute daycare facilities, and design the facility's environment to encourage arrival on foot.

# Connection between various services and activities



Commercial services that have emerged spontaneously near a public service buildina.

Education services are not the only needs that must be accounted for in planning for young children. Every day, children and their adult companions go to a wide range of destinations: the grocery store, the doctor's office, the bakery, the clothing store etc.

Planning a variety of such services in close proximity to one another makes it possible to move easily between the daycare, the playground, and various other necessary errands. This is especially convenient for the adults who are caring for the young children.

The adults' ability to access all of their daily needs in a single place is also important to the children, since the duration and quality of the time that they spend in the public space is dependent on their adult companions. This arrangement allows children to spend more of their time in the stimulating outdoor environment of the public space, encountering other children, adults or animals instead of moving from place to place in the relative isolation of a car.

Rationale

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# The problem: Small children arriving by car rather than on foot



The problem: Many children are brought to daycare by car rather than on foot. This results in children walking less, increased car traffic, and a daycare space surrounded by motor vehicles.

# 2.1 | Daycare facilities: **Distribution that increases pedestrian access**



The current situation: The tendency to concentrate daycare facilities in groups of 3-6 classes per facility (in turquoise and black respectively) leaves many residential buildings (in white) outside the recommended walking distance.

**The problem:** In the past few decades, the common practice has been to concentrate daycare facilities in groups of three or six, in order to maximize the efficiency of land use and management (with one person generally managing at least three classes).

However, this clustered concentration leaves many of the children in the daycare outside the recommended walking radius, especially in neighborhoods where population density is relatively low.

In the example on the right, fewer than 40% of the children live within easy walking distance of their daycare (yellow), which increases the chances that the rest of the children (over 60%) will arrive at their daycare by car.

#### The solution

Daycare facilities should be distributed more broadly, to give more children the option of arriving on foot. This will reduce their dependence on cars, and the traffic and air pollution problems it entails.

Current situation:

#### Suggested situation:





- Daycare location recommended by program Residential lots within range
- Residential lots beyond range
- Lots for public buildings
- Aerial radius of 200m

If we make lot use more effective by combining several different types of educational and public facilities (rather than multiple facilities of the same type), we could significantly improve access to various public institutions for everyone - including small children.

Such a distribution would, among other things, make it possible for families with a small child to ask that child's older brothers and sisters to take the child to and from the daycare.

#### Suggested situation: Distributing

daycare facilities and the number of classes they contain according to the number of small children living within walking distance (200m). This could significantly increase pedestrian access to these facilities.

# 2.2 | Planning convenient pathways to reduce walking distance to the center

The recommended walking distance when planning destinations for small children (150-200m) is strongly influenced by the layout of local streets and paths. This is due to the difference between the theoretical aerial distance and the actual distance a pedestrian would have to travel along planned streets and pathways.

**The problem:** Many residential structures are located near the proposed daycare, but are not at a convenient walking distance.



# A complex with 3 daycare facilities (serves approx. 480 households):

190 households are within reasonablewalking distance of the daycare complex.40% are households from which it is possibleto arrive on foot.

60% are households that will likely bring the child by car.

Advance thought should be devoted to creating passageways that will reduce the walking distance to the daycare (in turquoise): The image on the previous page shows (in orange) the residential buildings that are within a 200m walking radius of the daycare. The image below shows (in orange) the buildings from which it would be possible to arrive on foot if a pedestrian walkway were added at the back of the lot.

**Solution:** Planning pedestrian walkways to the daycare in advance would reduce walking distances and almost double the number of households within reasonable walking distance of the daycare.



The buildings marked in orange in this image would be within the 200m walking radius if a pedestrian walkway had been added at the rear of the lot.

The actual walking distance required without the shortcut.

Adding shortcuts (white arrows) will reduce walking distance from approx. 350m to approx. 150m for seven (!) residential buildings. It will increase the number of households within easy walking distance from approx. 190 to approx. 360.

About 75% of the daycare's children would be within recommended walking distance, and the percentage of those likely to be car-dependent would therefore drop from 60% to 25%.

# 2.3 | Planning a variety of services (public and commercial) in close proximity

The problem: Many neighborhoods geared toward young couples are taken up almost entirely by housing and educational facilities. Commercial services, if they exist, are generally concentrated away from the houses, educational institutions and playgrounds, so that the walk from one destination to the other is relatively long for small children.

> 200n . . . . .



Commercial areas are designed to be easily accessible by car.

Planning commercial areas (purple) as separate from public services (brown), playgrounds (green) and residences (beige) makes it necessary to walk up to 200m between one destination and another. This makes walking from place to place with small children a long, protracted task.

The distribution of services in new neighborhoods, so that they are far away and not conveniently connected to any other, nearby neighborhoods, makes these services even less accessible to children from older neighborhoods located nearby.

Though attempts are being made to make commercial areas more easily accessible to pedestrians, the reliance on cars generates large spaces that are not small child friendly. Moreover, the fences that surround the parking lots prevent the possibility of a continuous walking space.

# Solution: Planning multiple activities and day-to-day services in close proximity

For example: Planning should incorporate multiple uses within close walking distance from one another, made easy and convenient by a network of streets and pathways, and by convenient connections between adjacent neighborhoods.



Older neighborhoods often contain a network of streets and pathways that are convenient for pedestrians. Their renewal is therefore an opportunity to strengthen, solidify and develop the connections between different services and arrive at a system that is very accessibe to young children.

In this example: A variety of public destinations (brown) and a commercial level (purple) within a radius of less than 150m. Commercial destinations can also be similarly incorporated on the ground level of the public buildings.

Advantage for children: When the children leave daycare, they can remain in the nearby garden/ playground, where they might meet with a senior citizen emerging from a class in the nearby senior center, or stay for an afterschool activity at the community center. Adult companions wishing to run errands or go shopping can do so in the nearby shops, only a short walking distance away.

In this example, the key to the change is the removal of a public building that was blocking a footpath (see next page). 35

# 2.4 | Reinforcing pedestrian routes that that provide access to multiple services

A shady, well-tended pedestrian route should offer easy pedestrian access to the city's main thoroughfare.





that connect neighborhoods to one blocked by a public building another serve to increase the scope and became circuitous, dark and and variety of the services that are neglected. easily accessible to young children.

Pleasant, guiet pedestrian routes **The problem:** A route was



The solution: Demolishing the offending structure and reorganizing the public and commercial structures around the pedestrian route to enable easy access to the variety of services distributed along its length.

# 2.5 | Planning small lots and a variety of land uses side by side

The number of destinations that are accessible within a 200m walking radius is affected not only by the distribution of land use, but also by the size of the lots and the density of the street network.



Solution: Smaller lots and a denser network of streets and **The problem:** The planning of road networks and parcelization on a large scale has made it difficult to concentrate services pathways make it possible to locate a variety of destinations within easy walking distance for small children. within short distances of one another.

Implementation

#### 2.6 | Leveraging topography in hilly areas for layered land use



The problem: Planning in hilly areas tends to generate topographical divisions between adjacent land uses, and requires the use of many blank supporting walls. The resulting pedestrian routes are inconvenient and unpleasant, especially for small children. It is also difficult to build quality gardens and playgrounds on steep slopes.

**Solution:** Leveraging the topographical , gap would make it possible to replace the blank wall on the ground floor (which is unpleasant to walk by) with a commercial service that would also provide income for the city.



Instead of a sloping garden divided into multiple disjointed fragments, we can plan an effective, cohesive, high quality public space.

> By layering different services on top of one another, we have an opportunity to integrate an elevator, to bridge the topographical gap and offer entry from multiple streets on the slope.

> Integrating occupational and commercial services under public services can be especially helpful to people with small children, who will be able to meet all their needs in one convenient location.

Implementation



# **Exposure to nature**

What opportunities are there for exposure to nature and the outdoor stimuli that are so important to small children's development?

Small children's connection to nature is an important element in their emotional and motoric development, to the reduction of their exposure to air pollution, etc. However, intensive urban development is encroaching on the space allotted for trees and nature in small children's immediate living environment, while simultaneously increasing noise and air pollution. Preserving our children's contact with nature within increasingly dense urban environments means ensuring that space is being allotted for trees and nature at every planning stage: from the view that small children see from their apartment window, to the local playgrounds where they play, and up to the larger city parks.

3.1	An open place to play in the apartment
3.2	Planting trees outside the window and under the house
3.3	Public parks/playgrounds where children can "get dirty
3.4	Exposure to nature in educational institutions
3.5	Easy access to neighborhood and city parks
3.6	Allocating and protecting space for nature in the city





### 3.1 | An open place to play in the apartment

The problem: Small children cannot go outside alone and unsupervised, but they need sunlight and time to play outside.



What will small children see when they look outside the window of their house? Will they be able to see trees? Human activity? The activity of animals (dogs, cats, birds, insects)?



Solution 1: Planning a private patio or garden, visible from the central area of the apartment, in which a small child can "play outside."

**Solution 2:** Planning accessible, safe playgrounds near the house, to which small children can go with a sibling or neighbor and play while remaining visible from the apartment.

#### 3.2 | Planting trees outside the window and under the house





The problem: In the last few decades, the tendency to allocate space for parking and private gardens/yards has depleted the number of trees and shared gardens in residential buildings.

The solution: Planning the "bones" of the neighborhood, its structures, its parking and its landscaping in a way that makes it possible to plant trees and significantly increase small children's exposure to nature and its attendant stimuli (both in and under the house).

Under what conditions will we sacrifice other needs (e.g., parking, a large apartment) to divert resources to environmental conditions that contribute to small children's development?







# 3.3 | Public parks/playgrounds where children can "get dirty"

When planning the layout of the neighborhood, it is important to arrange parks (and the construction around them) to allow for winter sunlight exposure, easy access, and space for planting trees.

**The problem:** Playgrounds are being planned as safe, uniform, and too clean.



- **The solution:** Planning parks/playgrounds with a variety of materials and sensations a park in which children can get dirty.
- A variety of natural materials should be used, such as water, sand, mud, stone, leaves and twigs – materials that encourage children to touch, feel and get dirty.
- It is important that plans should provide shade, and various areas in which to meet and play.



In the example: Two public parks planned on two spaces of similar size, which offer children access to a completely different range of materials, stimuli and shared interaction.

# A tool for the assessment of parks and playgrounds

The following link leads to a useful tool for the assessment and planning of playgrounds for small children. The tool can help plan playgrounds that meet the particular needs that are crucial to a young child's development.



#### The importance of various types of play

Freedom of movement

Sensory exploration and manipulation To offer our children the best possible opportunities for development through play, we must be familiar with the richness and the diversity of its various types.

The blanket term "play" can be applied to any free and spontaneous activity in which children may choose to engage. It therefore includes various actions that differ significantly from one another: playing with dolls is not generally similar to climbing a tree or running a race, which are in turn different from building sculptures in a junkyard. Each type of play requires a different set of optimal physical and environmental conditions, each is expressed at different rates in different children of different ages, and each offers its own set of developmental advantages.

To assess the quality of playgrounds and other play spaces we must ask: What types of play are we allowing and encouraging in this space? To what types of play does it not lend itself? Which developmental advantages are we gaining, and which are we losing here?

In the following pages, we review four types of play and the particular contributions each of them makes to child development. These pages can help those who must make these assessments to identify the full range and diversity of possible play types in a playground, and the places and conditions in which each type can thrive.

# 3.4 | Exposure to nature in educational institutions

**The problem:** Small children spend most of the day's early hours in educational institutions. However, due to the pressures of development, lack of funding and tight schedules that define the construction of such institutions, many of these do not offer sufficient exposure to trees or nature.



Before planning a building (see the picture above), public spaces must be strategically planned, by marking important urban connections and setting aside places to plant trees that will be accessible to small children.



Connections must also be planned between educational institutions and nearby natural spaces.

# 3.5 | Easy access to neighborhood and city parks

**The problem:** Many cities plan neighborhood and city parks in areas that are surrounded by busy streets, or by fences.

Solution: Planning parks that blend into the urban fabric, and can be entered and exited with ease.



Many cities are blessed with natural spaces close enough to touch, but surrounded by a light fence.

A beautifully kept (95 dunam!) urban park in the heart of a residential area in central Israel. Removing the fence would reduce walking distance by hundreds of meters, making it much easier for small children to reach the park and play in it.





#### 3.6 | Allocating and protecting space for nature in the city

**The problem:** The pressures of development seek to turn natural and agricultural spaces into residential and commercial ones. Moreover, open spaces within cities are often intensively planned in a manner that not only erases natural and national resources, but is also costly to create and maintain.

In this example, a development plan threatens to remove the natural and agricultural "fingers" that are reaching into the city and providing an opportunity for encounters with nature.

**Solution:** Strategic planning that redirects the pressures of development and protects this rare natural presence by increasing the density and efficiency of already planned or built areas.

Strengthening the connection to the natural spaces by means of a system of convenient walking trails, and by planning the points of contact between the urban boundary and the open space (the red dots).



The plans for the city of Harish (in the image above) are an example of the rare potential for exposure to nature offered by these natural and agricultural "fingers" that are "poking" into the fabric of the city. The challenge is to protect these resources from being replaced by construction or intensive landscaping.

**Solution:** We can – and should – provide some of the required open space by identifying natural resources and maintaining them in a form that does not require intensive care.



An open, natural neighborhood space that changes with the seasons provides a space for play and an exposure to stimuli that intensively planned gardens/playgrounds do not.





Employing a combination of landscaped (intensive) areas on the one hand, and natural (extensive) areas on the other, creates a varied, rich and instructional environment that is crucial to child development.



# The home's immediate environment

#### What is the space under the house like? Is there a safe and inviting place there for me to play and meet friends?

The world of small children revolves primarily around the area near their homes. They know this area and how to get around in it. In a geographical and cultural climate like Israel's, the area under the house can be an excellent place for children to spend time other children, and it is therefore important to make sure that such places exist.

4.1 Setting aside places for small children to meet and play in the area under the house 4.2 Utilizing the ground floor area as a meeting place **4.3** Integrating shared play spaces into high density areas **4.4** Creating a space that is safe and familiar





# 4.1 | Setting aside places for small children to meet and play in the area under the house

The problem: In new neighborhoods, the space under the house is taken up primarily by parking and private gardens.



Planning a place where small children can spend time and play: On the right is a residential building in a (dense) older neighborhood, with a safe and well-tended courtyard in which the building's resident children can meet. On the left, residential structures in a new (and less dense) neighborhood, in which all the adjacent ground-floor space is devoted to parking and private gardens.

**Solution:** Planning small playgrounds/parks (200-300 square m) for each apartment cluster, which are visible from the apartments and integrated with a road or a pedestrian path.



Adding a simple gate will allow part of the parking area to be closed off during part of the day to increase the safe playing space available to children.

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Shared courtyards are especially important in populations where the culture of siblings babysitting is highly developed, and the space available in the house is limited (i.e., high density residences).

Implementation

#### 4.2 | Utilizing the ground floor area as a meeting place

The potential of the ground floor (an area that must be built anyway) can be leveraged to plan a child-friendly place that invites children to spend time in it.



A richly appointed luxury lobby, part of the luxury marketing approach, which in practice serves only as a passage and does not encourage neighbors to meet or spend time in it.



Utilization of the ground floor area: Even a simple open space under columns, which is not at all luxurious, can be used by small children as a place to meet and play.

# 4.3 | Integrating shared play spaces into high density areas

In high density areas, safe and intimate spaces for small children are especially difficult to create. It is therefore important to find new and creative solutions, including leveraging the connections between different spaces, which requires the existence of a decent management and maintenance system.

A spacious and pleasant upper floor balcony, in a visible and accessible place, can be a safe place for the children on that floor, and adjacent floors, to meet.

Playrooms can guite easily be planned in a prominent place, with natural light and a small, protected garden. This is a solution for towers, which are less suited to providing the type of shared yard that is commonly found in low and mid-rise Israeli housing.

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The above cross-section shows how to plan meeting places for small children in high density housing. On the ground floor is a residents' common room with an exit to a shared garden in which children can play. On the fourth floor is a shared balcony, which can be a safe place for young children in the building to meet and play.

Implementatio

### 4.4 | Creating a safe and familiar space for young children

The problem: At what age would you let a small child go downstairs with an older sibling to play alone in a neighborhood like this?

The character of the construction in a neighborhood significantly impacts residents' management of their small children.

Building structures for dozens or even hundreds of families around one large public space means that playing in the park under the house will almost certainly entail encounters between children and unfamiliar adults.

Moreover, the chances of sibling supervision being deemed sufficient grow smaller as the distance between the buildings and the open spaces grows (see solid arrow), and when parents cannot rely on children being within vocal or visual range of the apartment while they are outside (dotted arrow).

Solution: Promoting planning that includes fewer residential units per entrance. In the example: The transition from buildings with 35-45 apartments to buildings with 8-20 apartments significantly increases the chances of knowing one's neighbors, which in turn increases the security of allowing young children to wander alone in the stairwell and shared yard.



In the 12 structures of 10 stories option, approximately 650 households are sharing one large, central park.



# No. of apartments per entrance: up to 10 11-20 21-30 over 30

In the option that spreads construction over about 35 **structures,** there are three public playgrounds, and shared courtyards at the center of each building cluster.

Summary of recommendations for planning child-friendly neighborhoods



How will I, as a child, get around the neighborhood on foot?

Is it pleasant and convenient to walk to different destinations in the neighborhood?

- **1.1** Shade and street trees: allocating space and funding for tree trenches
- **1.2** Reducing walking distances: planning a dense network of streets so that multiple destinations are within short walking distance
- **1.3** Crossing streets: Planning traffic arrangements and junction geometry to allow for short crossing distances
- **1.4** Continuous public space: planning a safe space between buildings
- **1.5** Connections: Preserving and formalizing preexisting informal passages





#### Distribution of services for small children

Where can I go? What services do I and my adult companions require? How should these be positioned?

#### **Daycare services:**

- 2.1 Distribution that increases pedestrian access and encourages arrival on foot (200m)
- **2.2** Planning convenient pathways to reduce the walking distance to the daycare

#### **Other services:**

- 2.3 Planning a variety of services (public and commercial) in close proximity
- 2.4 Reinforcing pedestrian routes that provide access to multiple services
- 2.5 | Planning small lots and varied land uses in close proximity
- 2.6 | Leveraging topography in hilly areas for layered land use



# Exposure to nature and the outdoors

#### What opportunities are there for exposure to nature and the outdoor stimuli that are so important to my development?

- 3.1 An open space to play in the apartment (increases duration of exposure to nature)
- **3.2** Planting trees outside the window and under the house
- 3.3 Public parks/playgrounds where children can "get dirty"
- 3.4 | Exposure to nature in educational institutions
- 3.5 | Easy access to neighborhood and city parks
- 3.6 | Allocating and protecting space for nature in the city



#### The home's immediate environment

What is the space under the house like? Is there a safe and inviting place there for me to play and meet friends?

- **4.1** Setting aside a place for children to meet and play in the area under the house
- 4.2 Utilizing the ground floor area as a meeting place
- **4.3** Integrating shared play spaces into high density areas
- **4.4** | Creating a space that is safe and familiar



#### **Conclusion: The expected contribution to child development**

#### **Planning issue**

#### Why is it beneficial?

- Physical and motor development
- An increased sense of capability and responsibility



 Increased freedom of movement and an opportunity to develop confidence and independence



#### **Exposure** to nature and the outdoors

**Planning issue** 

#### Why is it beneficial?

- Sensory exploration of different objects and materials
- Fine motor development: grasping objects and materials
- Emotional development: Testing abilities, managing feelings of danger and fear, fostering independence

- Physical motoric development through challenging play



**Pedestrian** 

mobility and

accessibility

- Encourages travelling on foot rather than by car
- Exposure to sensory, mental and social stimuli
- Reduces disruptive car traffic in the vicinity of the daycare
- Reduces stress level of arrival at daycare
- Increases exposure to outdoor and public environments
- Allows parents/older companions to more easily meet other daily needs



The home nvironment

- others' feelings
- Creating and expanding social circles and skills
- Increased sense of personal and communal security

- Ability to create change (building, dismantling, collecting)
- Free movement reduces tension and increases concentration

 Social imagination games, practicing interaction with children and adults, strengthening self-regulation and awareness of





### **Appendix:** What does planning neighborhoods for small children mean?

The pamphlet shown below was developed in Toronto, Canada. It was designed to provide guidelines for the integration of small children's needs into the planning of high density urban and "vertical" communities. The guide is organized into three levels: neighborhood, building and unit. The document presented here has focused on the neighborhood level. For a slideshow of examples from the guide, click on this link.





Growing UP – Planning for Children in New Vertical Communities, 2017

For additional information about **Urban95's strategy** and its Knowledge Network Program: https://urbanclinic.huji.ac.il The Urban Clinic, Hebrew University of Jerusalem, Mount Scopus Campus

f The Urban Clinic

The Bernard van Leer Foundation: https://bernardvanleer.org/he/country/israel/

