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Illustration: Helena Bergendahl.

BUILDING CITIES FOR CHILDREN AND YOUNG PEOPLE

NATIONAL GUIDANCE, INSPIRATION AND GENERAL ADVICE IN SWEDEN

All outdoor settings including schools and pre-schools have never been more important than today for: play, experiencing nature, learning and everyday mobility for children and young people. For this reason the Swedish Government has asked for national guidance, inspiration and general advice for professionals engaged with planning, designing and managing outdoor environments aimed at serving children's and young people's needs. Presented here is an extract of these recommendations based on different national political goals, useable even for educators who use the public outdoor space.

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Engaging outdoor environments for young people

Children need room to test their bodies, their courage and their social abilities. They seek outdoor environments which offer physical challenges and contact with friends, which arouse their interest and curiosity. Urban planning must satisfy these requirements.

Sweden has a long tradition of child friendly city planning with housing areas, parks and school grounds designed for play, social interaction and child mobility. However the trend of the dense city is gaining dominance in Sweden. There are several reasons why those in urban planning should focus more strongly on outdoor environments which function on children's and young people's terms:

- Good outdoor environments encourage physical activity. Children and adolescents need at least 60 minutes of moderate physical activity per day. Where children have access to an ample outdoor environment in direct connection to the school and pre-school it has been shown that this can provide a third of their daily requirement for movement of body and soul.

- Physical activity has health promoting effects such as increased fitness, increased muscle strength, reinforced immune system, better cardiovascular health and mental well-being.

- An hour of physical activity per day has also been shown to result in better school results, such as increased reading comprehension.

Environmental economic calculations show that increased physical activity contributes to fewer students leaving school with inadequate grades. Satisfactory grades are an important prerequisite for continuing education and working life and therefore also for good health throughout life.

- Play has a large and important significance for children's development throughout childhood and creates good conditions for better self-esteem, self-confidence and social skills. It is better when the physical environment allows children and young people to experience high speeds, to explore high heights, to work with materials and tools, but also opportunities for them to withdraw out of sight together with friends or alone.

- Outdoor play in green environments provides improved sleep at night, wellness, weight control



Outdoor play in green environments has beneficial effects for health. Photo: Parvin Mazandarani.

and concentration capacity, as well as fewer sick children and staff.

- The outdoor environment can provide children and young people with a valuable free space which they themselves can control and arrange. It is important for them to be seen, needed and respected, to be allowed to leave their footprints and gain an understanding of their existence.

Building with children's perspective

A child-friendly city is built both with a child perspective and with the knowledge of the child's own perspective on life.

By taking children and young people's knowledge, interests and wishes seriously in urban planning the chances of creating a good environment to grow up in are improved. This also gives greater opportunities for children and

FACT BOX 1

Summary of the General Advice on open space for play and outdoor stay

The Swedish National Board of Housing, Building and Planning's general advice for open space for play and outdoor stay at after-school centres, pre-schools, schools and similar establishments (Boverkets allmänna råd 2015:1 FRI) contains general recommendations about the application of Chapter 8 in the Planning and Building Act. They highlight the qualities which should characterize children's and young people's outdoor environments at schools, pre-schools and after-school centres as well as where open spaces should be placed in relation to the establishment.

Placement and provision of open space on undeveloped land

When open spaces for play and outdoor stay are being placed and arranged one should take into account the open space's size, design, accessibility and security as well as prospects for conducting intended activities.

Intended activities refers to the open space being able to be used for play and recreation as well as physical and pedagogical activity as determined by those the open space is intended for.

Open space should:

- be ample enough that it is possible to provide varying terrain and vegetation conditions without difficulty or risk of extensive wear and tear.
- be characterised by good sun and shade conditions, good air quality, as well as sound quality.
- be placed in direct connection to the buildings containing the premises for the pre-school (0–5 year olds), pre-school class (6 year olds) and school grades one to six (children aged 7–12) and associated after-school centres so that students themselves can go between the building and the open space.

- be placed in direct connection or close to buildings containing premises for school grades seven to nine (children aged 13–15), so that the students themselves can go between the building and the open space.
- be placed in a way that is reasonable with regards to the students' and establishment's needs for secondary schools.

The advice should be applied when examining planning permission and during inspection for new pre-schools, schools and after-school centres and can also be applied during the planning of the above.

Open space should not later be able to be appropriated for another purpose without being replaced with open space that offers equal possibilities for varied play and outdoor stay.

Regarding open space on developed land

When placing and arranging open space on a developed plot, the general advice above applies to a reasonable extent. With regards to assessment of reasonableness, the following should be taken into account:

- preconditions to undertake appropriate activities on the open space.
- the open space should be positioned so that children and students can independently go there from the building.

The advice should be applied when:

- examining building permission for pre-schools, schools and after-school centres in existing buildings (change of use).
- planning and examining building permission for the expansion of existing pre-schools, schools and after-school facilities.

FACT BOX 2

What does open space mean?

Open space for play and outdoor play is space which children can use on their own when outside. An open space is space which can be played in and which is available for children mainly during school hours, but also to some extent in their free time. Storage rooms, car and bicycle parking areas and spaces for loading and unloading are not counted as open space. Roof terraces have limited accessibility and are therefore considered just as complementary outdoor environments.

young people to establish a healthy lifestyle and social network. If one is respected when young, then this in turn instils respect and faith in our democratic values.

Today's urban planning is defined by the inward and upward growth of cities. When the spaces in-between shrink, school grounds become smaller, playgrounds disappear and parks are exploited. The challenge is to build a city that is child-friendly through, for example, creating spaces for play and sports, social meeting places and independent mobility despite densification.

Guidance, general advice and inspiration

An important challenge for society is the planning, designing and management of the built environment in order to promote children's development.

To help us, Boverket (National Board of Housing, Building and Planning) and Movium Think Tank have published the national guidance *Gör plats för barn och unga!* ("Make room for children and young people!") which aims to show how conditions can be improved so



In the national guidance help is provided in interpreting the concept of open space for play and outdoor stay.
Photo: Ulrika Åkerlund.

that all children and young people have access to well-functioning outdoor environments through spatial planning, design and management.

Boverket has also published national general advice for the application of the Planning and Building Act (PBA) about the provision of sufficient open space which is suitable for playing and outdoor stay (see fact box 1).

The general advice functions as a recommendation: you do not need to follow a general advice, but if you do not follow the general advice you should show that you still follow the law. It is like advice on how to act in order to follow a law, ordinance or regulation.

The general advice provides interpretation help and should always be applied in matters concerning the building permit process connected to new construction, reconstruction and extension of schools and pre-schools.

The starting point for both the guidance and general advice is the legal requirement for “sufficient open space for play and outdoor stay” (Chapter 8 in PBA) and how this should be interpreted (see fact box 2).

Guiding questions have been: What impact do open spaces have on children’s and young people’s development?

What characterizes good open spaces for children and young people?

How can open spaces be planned, designed and further developed to meet children’s best interests according to the UN Convention on the Rights of the Child (CRC)?

Developing existing grounds

Many cities are currently facing the substantial refurbishment of existing schools through remodelling, renovation and new construction.

Sveriges Kommuner och Landsting (Swedish Association of Local Authorities and Regions) has therefore published a book that highlights key challenges for property organisations, including competition for land, cooperation across administrative boundaries, co-usage of land, instruments and responsibilities, and for the benefit of dialogue with children and young people. Six good examples from municipalities around the country are presented and the book ends with conclusions and factors for successful school ground development.

A cross-administrative responsibility

Development of the outdoor environment in schools and pre-schools concerns multiple administrations’ areas of responsibility. Besides the planning administrations handling building permits, school buildings and the management of the outdoor environment, school administrators also have a responsibility in urban development. School administrations should, for example, ensure that new schools and pre-schools are located in places where it is possible to have a varied and appropriate outdoor environment suitable for educational activities. This can be done by ensuring that existing greenery and nature are utilized and that there are sufficiently large areas for activity without overcrowding.

The outdoor environment as a mirror for Swedish national objectives

In Sweden, the inclusion of the urban outdoor environment as part of a good built environment has been a political aim at national level for several decades. The outdoor environment is an arena for realising several national objectives. The UN Convention on the Rights of the Child (CRC) provides the framework. The environmental objective of a good built environment comprises good school grounds and pre-school grounds.

The national public health objective is based on a social requirement for good health on equal terms for the entire population. Physical activity is a key factor in health promotion, but participation and co-determination are in themselves health-promoting factors, both possible to promote in outdoor school contexts.

With support in the Education Act and the National Curricula, the outdoor environment can be used to motivate students’ schoolwork, provide sensory experiences and develop healthy lifestyles. This helps students obtain influence over their own environment and provides experience of democratic rules. The school’s main mission is to *promote every child’s development and learning and a lifelong desire to learn* (Swedish Education Act chapter 1, section 4).

Architects and planners should therefore focus on creating physical, social and suitable pedagogical conditions aimed to fulfill this and include the outdoor environment as a room for education.

Local preconditions determine spatial planning and design

In planning, according to the Swedish Planning and Building Act (PBA), access to open spaces for play and outdoor stay is of public interest. In order to ensure children's access to good outdoor environments, it is important that the questions are included in spatial planning at all levels; from the comprehensive plan's more strategic position down to local plans, planning permits and actual implementation.

Knowledge about service needs and qualities for children, such as natural areas, creates conditions for the allocation of sufficiently sized open spaces suitable for play and outdoor stay. Boverket's General Advice specifies which characteristics such an open space should have (see fact box 3).

By reflecting in advance, you increase the possibilities of including children's own perspectives and needs early in the planning process. Important key questions are:

- How should children and young people's outdoor environments be developed in order to help achieve the public health and environmental quality objective *a good built environment*?
- What location principles should you follow?

- What strategies should you choose to cater for other public interests such as the public interest in open space for play and outdoor stay?
- What consequences does your planning have for children's and young people's free movement, play, development, health and well-being?

Local guidelines are important

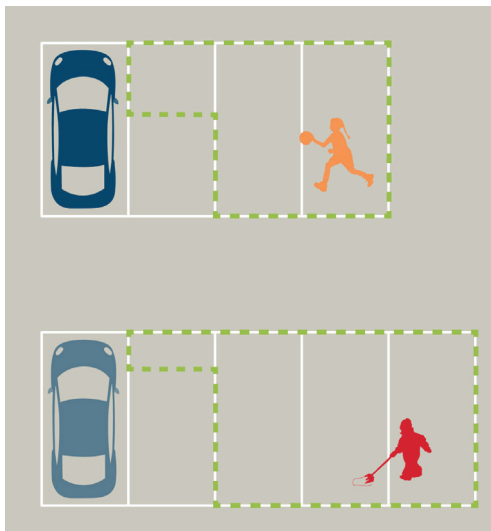
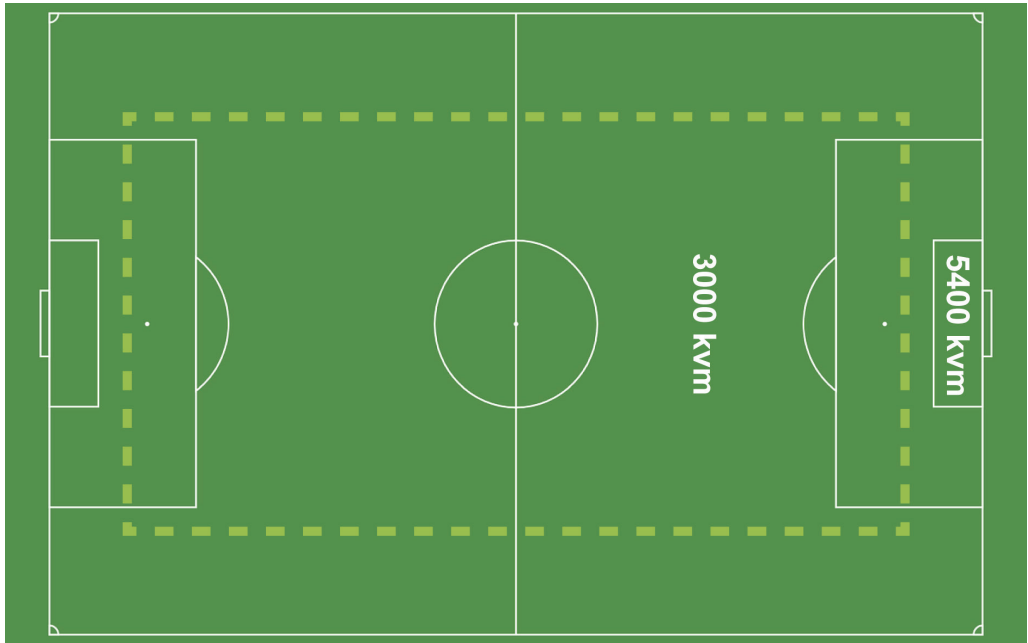
In accordance with the PBA, it is the municipality who determine what is deemed "sufficient open space." As support for their assessment of individual plans or building permits, municipalities can adopt their own guidelines. Here one can compile principles for how the municipality should cater for the need for open space in different types of urban and sub-urban areas, solve the joint use of open spaces, the need for three-dimensional property registration and factual material. This is to facilitate detailed planning and the planning permission process.

Documents of this type can be linked to the comprehensive planning process and thus discussed and highlighted in the broader context of municipal development, whilst also being clarified through its position in the comprehensive plan. Local guidelines can also define the division of

FACT BOX 3

To think about when planning and locating schools and pre-schools:

- Identify the best geographical and existing preconditions for children's development in the environment which is to be developed.
- Locate schools and pre-schools close to parks and natural areas that can contribute with qualities that are not needed or do not fit in the schoolyard.
- Plan for good and safe routes for walking and cycling so that children can easily and independently get to school on their own.
- Both noise and air pollution values should be kept as low as possible; children are much more sensitive than adults.
- Early in the planning phase take into account traffic volumes and place schools/pre-schools as far as possible from traffic routes and noisy operations.
- Ensure open space is so spacious that diverse terrain and vegetation conditions can be provided without difficulty or risk of extensive wear.
- Make sure open space is directly adjacent to the building so that the students can independently go between buildings and open space.
- Ensure the schoolyard has good sun and shade conditions to reduce the risk of damage from ultraviolet radiation. Trees and the organisation of play places in shrubbery reduce UV exposure by roughly half.
- Consider the possibility of the joint-use of open space after school hours for spontaneous sport, other organisations, play or in other ways where open spaces can serve as a neighbourhood resource.



responsibility between administrations in the municipality, strategies for intersectoral collaboration and which physical conditions should be sought in order to be able to conduct pedagogical activities.

Principles for design

When designing school and pre-school grounds it is important to know who the outdoor environment is for and the demands placed on it by the establishment. The outdoor environment

Boverket's General Advice contains no requirements for open space's size. The guidance recommends 30 m² per child for schools and 40 m² per child for pre-schools as appropriate dimensions for municipalities who want to develop local guidelines, and a minimum recommended total area of 3,000 m². Illustration: Helena Eriksson/5land.

needs to stimulate play and fantasy, activity and recovery, curiosity and learning. A good outdoor environment should work for all children. A good outdoor environment should be appropriate for the activities undertaken on the site. In all designs one needs to solve the functional, technical, biological, aesthetic and social problems. It is fitting to start from the site's preconditions and take advantage of the qualities that already exist on the site the school shall be built, modified or expanded.

The school ground's design establishes the framework for where in the school ground children can find and create their own places and activities. The main recommendations are:

- Base the design process on the quality requirements in Boverket's General Advice BFS 2015:1.
- Take advantage of existing terrain, topography and vegetation instead of levelling. Save individual trees with low-positioned branches for climbing. Moreover, plan for varied terrain with vegetation that can withstand wear and tear (not just rubber surfaces).
- Connection to natural areas and parks should

be taken into account so that school grounds and pre-school centers can become part of the green structure.

- A good architectural and functional interaction between indoor and outdoor environments makes it easier for the establishment to use the whole school environment.
- Plan for both open and closed spaces, both for wild play and for restorative places.
- For pre-schools, between half and two thirds of the outdoor environment needs to be hilly and overgrown. It promotes physical activity and gives adequate protection from the sun.
- Develop space for outdoor teaching, such as farming and other ecosystem services (storm water ponds and biodiversity), experimental plots/outdoor laboratories.
- Accessibility and security; strive for *maximum* play value and *sufficient* security.
- Do not let adult aesthetics go too far; accept wild borders and create conditions for mess and disorder and access to loose material.

Example: Glömsta skola

The “Glömsta school” in Huddinge is an excellent example of a design process which has taken advantage of the site’s existing preconditions. It is a school for 700 children from the pre-school class up to grade 9 (6–15 years old). The school’s surface area is 20,000m², of which 14,000m² are the schoolyard. In 2010 an interdepartmental collaboration was started in order to produce an appropriate municipal legal plan (completed in 2013). Work began in 2014. The location chosen for the school is situated beside a natural forest rich in ancient monuments. This makes it an educational resource for pupils’ own explorations, learning, playing and outdoor stay. Technical demands on transportation routes, land-use and stormwater systems have been coordinated with the actual design of the school and schoolyard. The ambitions of the schoolyard have been driven by the municipal education authority in collaboration with landscape architects and with inspiration from other school



Glömsta skola in Huddinge. Illustration: Maria Hernberg/WSP.

projects in the country. The goal is that the schoolyard will encourage outdoor stay, movement, play and learning. From inside the school building there is good visual contact with the schoolyard and natural forest. The environment should encourage physical activity. There is traditional play equipment for the younger children. In addition, there is a parkour facility and a

smaller multisport facility, instead of a traditional larger ball field. The idea behind it is to encourage boys and girls to play together. Existing vegetation is saved to the maximum, but there are also new tree plantations to achieve good sun and shade conditions. It has been important to plan for a schoolyard that can also be used as a neighborhood resource outside of school hours.

Maintenance promotes qualities of the outdoor environment

Children's and young people's views on a usable and attractive environment are different from adults' views of how a well-run schoolyard should be. Outdoor environments with many children and young people are exposed to rough treatment, where play and socialising wears on vegetation, equipment and surfaces.

By capturing children's views on the places and spaces that attract them, care and maintenance can be more easily focused on developing and nurturing qualities that inspire imagination,

curiosity and challenges in play and learning. This can lead to new ways of building and managing, where adult aesthetics are subordinate to play function. It could also lead to new ways of trying out sustainable technological solutions with regards to plant choice, plant beds, and establishment of vegetation, surfaces and durable materials.

Think of the following:

- Management at the child's eye level: where an adult might experience that a branch is in the way, there is a risk that poorly thought through



Newly constructed larger playgrounds should be designed to withstand rough use. Here at Mariehällsskolan, Stockholm, the schoolyard has been designed and integrated as a part of the public park Annedalsparken, and is used by both schoolchildren and local residents. It is important to plan for good sun and shade conditions; at least half the schoolyard should be shaded. It takes time before newly planted trees provide the sought shade and the schoolyard should meanwhile be supplemented with other types of UV-protection. Photo: Petter Åkerblom.

management may destroy opportunities for children, for example, to climb or pick fruit. It is appropriate to leave the low-positioned branches and adapt management under the branches after this.

- Let children and young people take responsibility and be involved in the schoolyard's maintenance and development.
- Accept and inspire them to leave their own footprints on the environment.
- Respect messy environments. This is made easier if the children are allowed to be in the bushes where they also receive just the right amount of solar radiation.
- Establish cooperation with the school/pre-school staff in order to make use of their wishes for a suitable environment.

Promoting necessary risk-taking

The outdoor environment is children's and young people's living environment and the place where conditions are established for their future health, well-being and commitment to the social and physical world that surrounds them.

In step with age, they go farther and farther away, and that's how it should be. Through play, children are preparing themselves to become

more attentive and aware of their abilities and limitations, whilst at the same time strengthening their confidence and determination.

Only by testing their boundaries can they become a "whole" person. The challenge is to allow children and young people to live and develop with sufficiently little adult supervision. Responsibility for children's play, learning and health in school and pre-school is a complex issue that requires both knowledge of child development and common sense. The responsibility does not stop at preventing accidents.

We both have and must take responsibility for the child's right to play (Article 31 CRC). It means allowing and encouraging children and young people to challenge their mental, social and motor skills, even if it may be difficult to put reasonable limits on their risk-taking. Calculated risk-taking is part of life, a fully developed brain requires one or two mistakes and is the reason we should not bypass "children's right to scrapes." Many playgrounds are lavish facilities with high security in focus. Of course playgrounds should be safe and secure, but a safe play area involves more than minimal risk of injury. A safe environment allows the child to take risks, to challenge themselves and their physical and social abilities.



It is important to encourage children to challenge their motor skills. Photo: Uteförsolan Vinden, Lund.



Through conscious management children can be inspired to create their own places. Photo: Lena Jungmark.

Behind this fact sheet

This fact sheet is based on National Board of Housing, Building and Planning's General Advice (BFS 2015: 1 FRI) and the national guidance *Gör plats för barn och unga!* ("Make room for children and young people!"). Also on the book from *Sveriges Kommuner och Landsting* (Swedish Association of Local Authorities and Regions) about management and development of pre-school and school grounds. Also on ongoing work related to the planning, design and management of outdoor environments for children and young people.

Movium Think Tank is part of the Swedish University of Agricultural Sciences, SLU. Established in 1980 the think tank's mission is to develop and disseminate knowledge on outdoor urban environments in order to contribute to a sustainable societal development from the point of view of urban life and culture. Movium

has a governmental assignment to monitor the conditions in children's outdoor environment.

www.movium.slu.se

Boverket (National Board of Housing, Building and Planning) is the national agency for planning, the management of land and water resources, urban development, building and housing. Boverket monitors the function of the legislative system under the Planning and Building Act and related legislation and proposes regulatory changes.

www.boverket.se

Sveriges Kommuner och Landsting (Swedish Association of Local Authorities and Regions) represents the governmental, professional and employer-related interests of Sweden's 290 municipalities and 20 county councils/regions.

www.skl.se



All outdoor settings have never been more important than today for: play, experiencing nature, learning and everyday mobility for children and young people. Photo: Ulrika Åkerlund.

Risk-taking is necessary

One way to manage risk assessment is to document the purpose of the outdoor environment in pre-schools and primary schools. A policy that describes why the outdoor environment should promote children's opportunity to take risks as part of their personal development is helpful for head teachers and pre-school managers in meeting parents. Such a documented common understanding of this issue is also important in the event of serious injury. A documented mission statement, based on knowledge of the conditions for children's all-round development, makes the risk of legal sanctions unlikely.

Necessary risk-taking can be managed within the school's policy for health and education planning. If there is an accident with a child falling down from a tree, the solution is not to take the tree down, but rather to review the policy.

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