



**GUIDE TO IMPROVING PLAYGROUNDS
IN THE BRUSSELS REGION**

REVAMPING PLAYGROUNDS

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INTRODUCTION

A place of play, learning, discoveries, encounters, expression, release and revitalisation, playgrounds are an integral part of life at school for students and teachers. They offer the opportunity to express oneself and engage the senses. The quality of playground design therefore has an undeniable impact on the well-being of students.

Nevertheless, today in the Brussels–Capital Region, school playgrounds are often not very varied, paved with concrete, confined within an urban block, generating social frustration and noise disturbance, and they often become excessively hot during heat waves. In this sense, school playgrounds are not all that favourable to students' development and contribute to the problem, commonly found in cities, of a lack of greenery.

As part of the regional policy declaration and the GO4Brussels 2030 strategy, the Schools Service of perspective.brussels and Brussels Environment have been commissioned by the Brussels Government to work on improving playgrounds in the Brussels–Capital Region. To achieve this ambitious objective, the first step was to produce a case study, the main findings of which are included in this educational guide.

In effect, this guide was elaborated through a participatory process: the playgrounds of nine Brussels schools were analysed to record the expectations and needs of users, and solutions were then tested on site.

This guide provides answers to three objectives:

- Firstly, **to improve the well-being of our students and teaching staff** by proposing concrete ways of structuring playgrounds to encourage social interaction, personal development, varied physical activity and learning based around the senses, expression, water and nature.
- Secondly, **to contribute to the Region's environmental objectives**, by **bringing nature into playgrounds**, transforming them into veritable islands of coolness. Biodiversity, plant and landscape quality and climate resilience will all be enhanced.
- Thirdly, **to improve the connection between schools and the city**, by offering facilities that open up playgrounds outside school hours, as well as **increasing the number of areas for play, relaxation and green spaces for the people of Brussels**.

Without aiming to replace the various regulations, tools and services existing within the Communities and networks, this guide attempts to bring together in a single document the references and resources available (legislation, recommendations, etc.) to work towards improving playgrounds in Brussels. The guide therefore provides a helping hand to local stakeholders and managers of school infrastructure in implementing projects aimed at improving the quality of school facilities or the urban environment in which schools are situated.

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Brussels Environment

FRAMEWORK FOR THE GUIDE

CONTEXT

The school environment in Brussels is different from that in the rest of Belgium. The Brussels–Capital Region is a metropolis, with large social and cultural diversity. No fewer than 848 schools are spread across the territory. School infrastructure in Brussels has a wide variety of characteristics in terms of buildings, outdoor spaces and relationships with the neighbourhood.

The Brussels–Capital Region is characterised by high population and building density. Some of its neighbourhoods do not offer green spaces or play areas that meet current demands. Playgrounds are therefore often one of the few areas in the Brussels region where children can play freely outdoors, an essential element in the well-being of children and young people.

The pressure on the city's open spaces makes school playground spaces interesting: these locations can offer creative solutions with more opportunities for students, local residents via sharing space with outside stakeholders.

In a context of an ever denser urban environment, this kind of **co-use of playgrounds** will be an opportunity to change local residents' perceptions of school infrastructure. By sharing their facilities, schools will be seen as extensions of the public space, benefiting as many people as possible. In this way, the fact there are schools in a neighbourhood – with all their negative aspects due to ever-increasing density – will be all the more appreciated by local residents.

The metropolis also confers a responsibility on the school: the school's reception area – which is often the playground – is an important place of transition from the urban public space to the school. The playground must offer parents and children from all backgrounds the same sense of welcome, and provide a quality interface between school life and the outside world.

FOR WHO?

This guide is aimed at **all those involved in school infrastructure in the Brussels–Capital Region**: school headmasters/mistresses, organising bodies, departments responsible for school property in the various networks, departments of the Wallonia–Brussels Federation, the Vlaamse Gemeenschap and the Vlaamse Gemeenschapscommissie, regional services involved in supporting school projects, architects in charge of transformations or renovations and also the users of this infrastructure (students, teachers and parents) likely to be involved in the transformations. The recommendations in this guide are targeted primarily at existing playgrounds, but they are also a source of inspiration and information for new buildings.

WHY?

This guide aims to provide answers to three objectives of the Brussels–Capital Region:

WELL-BEING

Have a positive impact on the well-being of students and teaching staff by creating **play areas that are enjoyable for all**, with the aim of reducing tensions in the playground.

BIODIVERSITY

Enhance the connection with nature in the city, giving students the opportunity to play in nature and observe it in their own playground. Adding greenery to concreted areas also helps to cool playgrounds during heatwaves, a phenomenon that will become increasingly frequent in the years to come. Playgrounds are the ideal place to raise awareness among young people of environmental issues, take action in terms of soil permeability, diversify the greenery, put in place different habitats for wildlife, etc.

OPENING UP TO THE NEIGHBOURHOOD

Open up schools to the neighbourhood outside school hours, thereby broadening the range of green and recreational spaces available to the people of Brussels.

HOW TO USE THIS GUIDE

APPROACHES

Throughout this guide, you will find various approaches to designing playgrounds:



PARTICIPATORY APPROACH

This approach invites all playground stakeholders to work together around a common project. They will be involved at every stage in the development of the project, from the initial assessment to the action plan and implementation phase.

CROSS-CUTTING APPROACH

The cross-cutting approach emphasises **the possible links between the different ambitions** presented in this guide. One standard design could achieve a number of objectives and ambitions.

Creating a seating area around a tree not only creates a gathering place for a small group of students, but also ensures the healthy development of the tree. It provides shade for the roots and prevents the soil at the base from compacting, thus ensuring water supply to the tree.

Installing a canopy in the playground can both protect students from inclement weather and act as a sound-absorbing structure for nearby residents.

Building a podium can provide storage space, while offering students a pleasant place to chat and a space to hold classes outside.

INTEGRAL APPROACH

The integral approach implies a long-term, ambitious and innovative vision, to be implemented in phases, taking into account available budgets. The concrete examples provided for each ambition show that it is not necessarily difficult or costly to make changes to the available space. The guide also prompts reflection on diversifying the uses of playgrounds for the school, the neighbourhood and the Brussels Region.

APPROACH BY EXAMPLE

The references collected and analysed for each ambition and sheet in this guide are all applicable to the Brussels context. They represent a toolbox to inspire you in developing your project.

The name and author of each reference are given at the end of the guide. This information will enable you to find more complete explanations of the examples provided, on the Internet.

The digital version of the guide contains hyperlinks to various sources of information, enabling you to delve deeper into the references mentioned.

FURTHER INFORMATION

The guide can be downloaded from the perspective.brussels website:

→ [BEECOLE.BRUSSELS > OUR PUBLICATIONS](https://www.perspective.brussels/en/our-publications)



1

STRUCTURE

This guide offers a method to follow, a set of ambitions and practical information for renovating and improving a playground. It is structured into three interconnected parts:

The first part of the guide describes the four **STAGES** involved in developing a playground renovation and improvement project. The approach is intended to be participatory. It begins with an assessment of the playground and an inventory of the school's needs. This diagnosis of needs is based on the ambitions of the guide set out in the second part.

On the back of the poster attached to this guide, you will find a Roadmap outlining these four stages.



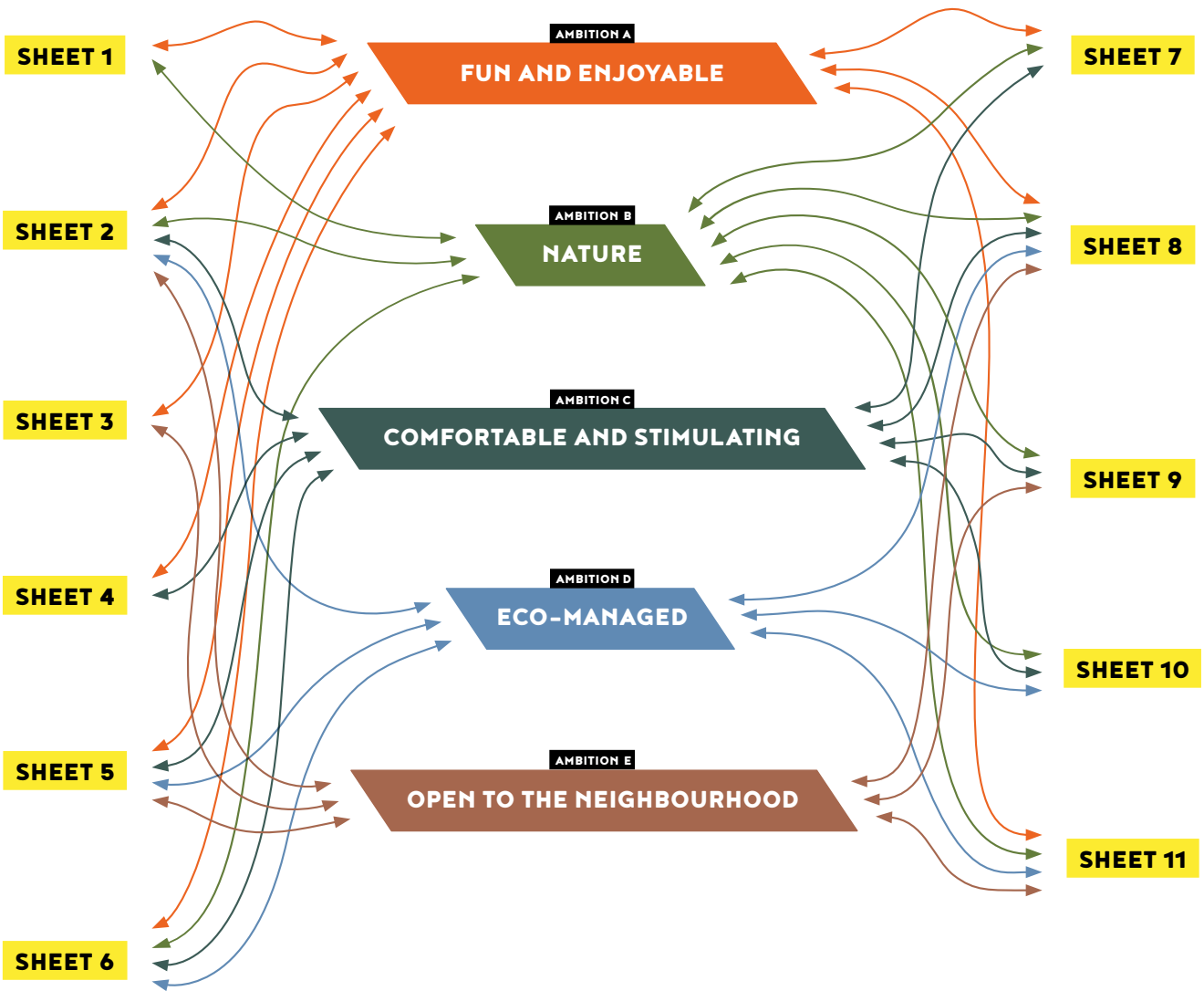
The second part of the guide describes five **AMBITIONS** for a quality playground. Each of these ambitions is broken down into objectives, diagnostic questions, recommendations and inspirations, presented in the form of references and a case study.

The third part of the guide provides more practical, technical information on regulations and the different types of intervention proposed to improve playgrounds. This information, set out in eleven **SHEETS**, provides a decision-making tool and ideas for successful playground design. Each sheet covers the scope of several ambitions.



Five ambitions for playground design

Each sheet is interconnected with several ambitions.



- SHEET 1** → Standards and recommendations
- SHEET 2** → Games
- SHEET 3** → Sports
- SHEET 4** → Organising activities
- SHEET 5** → Furniture
- SHEET 6** → Ground coverings

- SHEET 7** → Use of built elements
- SHEET 8** → Facilities to support biodiversity
- SHEET 9** → Shelters
- SHEET 10** → Rainwater management
- SHEET 11** → Co-use agreement and access control

FINDING INSPIRATION

A poster illustrating the five ambitions for a quality playground is available to support the development of the project.



The poster does not represent the "ideal playground", but shows the context of many design possibilities, which will help you to think and find inspiration!

The poster can also be used as a teaching aid and as a participation tool. A colour version and a black-and-white A3 version are available for download.

You can also use the case study projects produced by AAC - OMGEVING and presented at the end of each ambition for inspiration.

LEGEND

The following symbols are used throughout the guide:



Quick win

A quick, low-budget intervention that's already making an impact.



Participation

Realisations involving a group of volunteers, students and/or other partners, for which the technical level is within their reach, working autonomously.



Climate transition

Realisations that help create islands of coolness and restore natural cycles.

AMBITION

→ Ambition

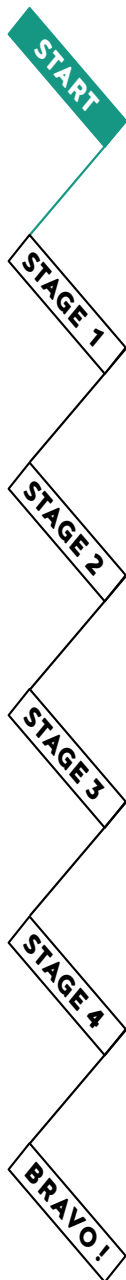
Reference to another ambition in the guide providing further information.

SHEET

→ Sheet

Reference to another sheet in the guide providing further information.

FOUR STAGES TO DESIGNING A PLAYGROUND IN THE BRUSSELS REGION



DESIGN A COMMON PROJECT, CREATE A SHARED VISION

The playground is a constantly evolving project, just like the people who use it. That is why the playground project needs to be defined collectively, with a long-term vision. It is essential to take into account all the constraints and needs of the people concerned, so that together you can build a playground in line with future ambitions.

INVOLVEMENT OF THE DIFFERENT STAKEHOLDERS

Right from the start of the project, from diagnosis to implementation and evaluation, **consult all those connected with the playground**: maintenance staff, teaching team, physical education teachers, reception team, management, organising authority (PO in French), students from nursery school to high school, parents' associations, active citizens from the neighbourhood, and so on. **Each playground user has their own experience and added value to contribute.** You never start from a blank page. What's special about the school and the people involved? Have precedents left their mark on people's minds? What factors are likely to prevent the project from running smoothly? Laying down the framework of what already exists allows you to capitalise on successes, but also to avoid unpleasant surprises.

By including everyone in the playground, you reinforce cohesion and trust between people. This lays the foundations for creating a high level of support for the project from all stakeholders, and for ensuring that the facilities are put to good use in the long term. What's more, **it will give you a global view of everyone's needs.** Consensus isn't necessarily the goal, but divergent points of view will be a source of enrichment for your playground improvement project.

Students, the primary users of the playground, can be actively consulted both during the diagnostic phase and in defining the objectives.



A methodology is provided to help you develop a collective project to redevelop your playground.

There are four **STAGES** →

COMMUNICATION

It's important to establish **clear, transparent communication** throughout the process, explaining the reasons for the choices made and the timeframes involved, in order to **ensure** that the project is **understood**, and to ensure there is **support and respect for the project** once it's up and running. In the classroom, this exercise can be used as a teaching aid.

Open, interactive communication with neighbours, the community or the association network can also offer perspectives and help to reflect on and broaden the contribution to building or maintaining the playground.



You'll find a Roadmap on the back of the poster, which will guide you through your own diagnosis and project.

STAGE 1 OBSERVE AND ANALYSE THE PLAYGROUND

The first stage is to assess the existing situation by observing and analysing the playground with all users, in order to identify its strengths and weaknesses.

OBSERVATION OF THE STATE OF THE PLAYGROUND 🖐️

A complete observation and diagnosis allows you to take stock of the situation and list the strengths and weaknesses of your playground. You can start with a map of your playground.

On this plan, **draw** or **mark** the following elements of the playground perimeter:



- access to the playground and the number of students per entrance;
- the areas surrounding or within the perimeter of the playground (classrooms, gym rooms, refectories, toilets, etc.);
- all other fixed infrastructure: water fountains, canopies, furniture, benches, etc.;
- games and fixed sports areas;
- trees and planted areas;
- different floor coverings, with their demarcations;
- any differences in level (stairs, uneven ground, etc.);
- planted areas and trees.

FURTHER INFORMATION

Get a map of your playground by entering the school's address at :

→ BRUGIS

→ GOOGLE MAPS

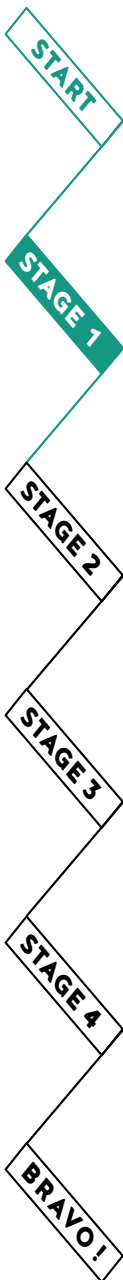
ANALYSIS OF THE PLAYGROUND 🖐️

Based on this plan, you can organise a tour of the playground with all its users, pointing out its strengths and weaknesses, what works and what doesn't, according to your needs and uses of the playground.

With these same people, we then invite you to analyse the playground in terms of the five ambitions that structure this guide:

- **AMBITION A** fun and enjoyable
- **AMBITION B** nature
- **AMBITION C** comfortable and stimulating
- **AMBITION D** eco-managed
- **AMBITION E** open to the neighbourhood

Consult the Roadmap, which will guide you through the diagnostics for each ambition, in order to carry out an in-depth analysis of your playground.



STAGE 2 FIND INSPIRATION TO DEFINE OBJECTIVES

Once you've written down the existing situation and identified the strengths and weaknesses, take the time to reflect with ALL the users of the playground. Leave room for imagination before defining your redevelopment objectives and action plan.

FINDING INSPIRATION 🖐️

Find out what exists elsewhere, consult books, image banks and the poster in this guide, and imagine new layouts, new spaces, a new way of using and moving around the playground. Inspiration will enable you to open up your vision and move beyond what you know.

Plan a time of inspiration with playground users to share your insights and knowledge. For a few moments, put aside the constraints of space and budget to have fun and put all your ideas on the table. Open up new avenues that will build a project which is potentially unimaginable within a strict framework.



For sources of inspiration (photos, videos, experience stories, etc.), think:

- about the poster;
- about creating a suggestion box open to all (school and neighbourhood users, associations, etc.);
- about visiting other playgrounds;
- about the innovative and ambitious reference projects you'll find in each ambition and sheet of this guide.

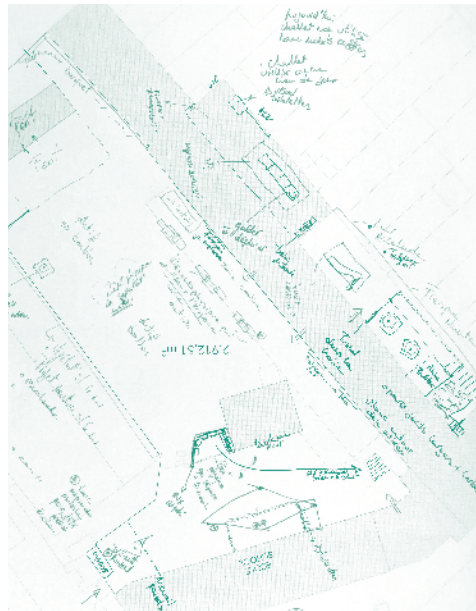
It's also a time to discover new partners in the neighbourhood or in the school network, and forge new collaborations. → **AMBITION E**

DEFINE YOUR OBJECTIVES 🖐️

We then invite you to **define the objectives you wish to work on, starting with the basic question: "What are your needs for your school playground?"**.

Based on the diagnosis, define the elements you want to focus on and the efforts you need to make to improve your playground.

The five ambitions in this guide each have their own objectives, which can help you find your bearings for your own project. Depending on your situation and objectives, you can work on the recommendations of all five ambitions, or prioritise one or the other.



FURTHER INFORMATION

All the images in the guide can be downloaded from :

→ [BEECOLE.BRUSSELS > OUR PUBLICATIONS](https://beecole.brussels/our-publications)

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STAGE 3 IDENTIFY THE FRAMEWORK AND RESOURCES

Once you've defined your objectives, it's time to identify your specific regulatory, planning, economic and time framework, as well as the resources at your disposal.



REGULATORY FRAMEWORK

Playgrounds are subject to regulatory standards. It is therefore essential that the playground **complies with accessibility and fire safety regulations and standards**.

Other standards apply to playgrounds, such as the framework set by communities, acoustic criteria for school buildings and physical safety standards for playgrounds. → **SHEET 1**

URBAN PLANNING FRAMEWORK

The redevelopment of the playground must take into account any obstacles from utilities (pipes, cables, etc.), soil conditions, distance from the neighbourhood, flood risk, exposure to urban noise and mobility. The thematic maps of Brussels provide easy access to this information.

Once you plan to make structural changes to the volume of the building or facades, you need to apply for planning permission. For more information on the steps to be taken, you can consult an architect, a design office or the urban planning department of your municipality or region.

→ **SHEET 6, 8, 10**

FURTHER INFORMATION

- Thematic maps of Brussels
- Brussels Environment maps
- Information from the Region on regulations to be observed in school facilities

ECONOMIC FRAMEWORK

The budget available will determine how achievable your ambitions are. That's why it's **important to set out a long-term vision that allows for incremental progress**. To set out strategic priorities, you can **map out the various financing options**. Deploying human rather than financial resources can also help guide your project. Creative solutions and the search for added value in financing offer interesting possibilities.

FURTHER INFORMATION

- Inventory of financing available to school stakeholders

HUMAN INTERVENTIONS 🧤🧤

Parents have skills that are sometimes useful for the school: DIY, landscaping, etc. Invite them to participate in the design or implementation of your project.



Co-construction of a playground with parents, Rivierspeelplaats, Kleuterschool de Tovertuin, Lokeren, Groenman 2019

Contact School Facilitator
beecole-beschool@perspective.brussels

By enlisting the help of students and parents, neighbours and neighbourhood associations, you may be able to reduce costs and come up with creative solutions.

STRUCTURAL INTERVENTIONS

As a school, you are eligible for **EU funding for new construction, renovation and infrastructure maintenance**. Communities are subject to guidelines regarding the number of square metres they can finance. → **SHEET 1**

ONE-OFF INTERVENTIONS

Various project grants can be used to finance playground improvements. **Check for any support for projects underway in your neighbourhood**, such as a Sustainable Neighborhood contract, a School Contract or a municipal provision.

There are also specific calls for projects that include playgrounds, particularly at regional level.

TEMPORAL FRAMEWORK

QUICK WINS 🏆

Sometimes it's possible to implement **quick-win solutions that can dramatically improve your playground** without the need for major work or a lot of money.

While you're waiting to plant new trees, you can place them strategically in pots in the playground to test out their location, new circulations and the zones they'll create!



Temporary intervention in a vegetable garden. Collectif Basurama, San Juan de Avila, Madrid.

SCHOOL CALENDAR

As the playground is a central area of the school, it should remain accessible throughout the school year.

In the absence of an alternative playground, major development work will mainly have to take place during the school holidays. On the contrary, actions with students, parents and teachers are best planned during the school year, when communication can take place through school channels.

DEFINING THE PHASING OF WORK

In parallel with the development of the project and the choice of interventions that you will carry out in stage 4, you will define the phasing of the interventions. This must **take into account the ongoing use of the playground** and the financial resources available. You'll logically start with the most structural work, bearing in mind that major structural work such as decontamination, new flooring, the construction of a canopy or a large structure can be costly, and it takes time to obtain the necessary permits.

By phasing the work, you can carry out an ambitious project while staggering a large investment.

The aim of planning the work is to carry out the playground improvements with as little disruption to school life as possible, but also to avoid having to cancel out an intervention when a subsequent phase of work is carried out.

For each project, we need to determine how long it will take to complete, who will be responsible for carrying it out, and what the budget will be.



STAGE 4 DRAW UP THE ACTION PLAN AND ENSURE ITS IMPLEMENTATION

This brings you to the final stage of the methodology, where together you will define the action plan for your playground, not forgetting to put in place a management system that will ensure the project's sustainability over time.

CO-DESIGN OF A PROJECT AND IMPLEMENTATION OF THE WORKS 🤝

The aim of the action plan is to **identify the improvements to be made to meet the needs identified in the diagnosis and the improvement objectives for your playground**, while staying within the available budget. It is now time to determine how this new space, an integral part of the school and neighbourhood, will be managed and maintained.

Depending on the scale of the work, ask your PO for information on construction procedures and public procurement. You can then identify the quick wins you can realise by yourself.

What can we achieve together? A fresco with the students? Pallet benches with parents and neighbours? Put your trust in users and the collaboration, and your project will be all the better for it!



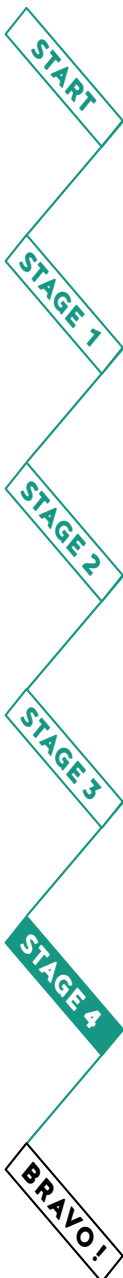
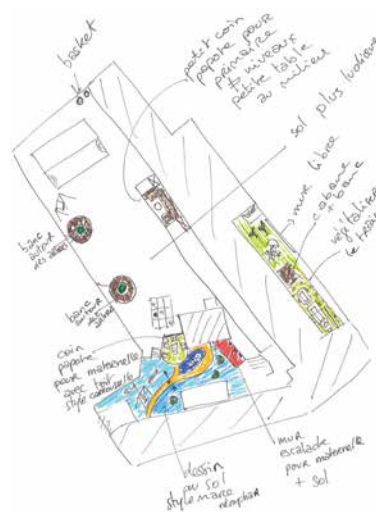
Co-creation of the action plan with the various stakeholders is important. Invite them all to participate in the project (POs, headmasters/mistresses, design offices, teachers, educators, students, parents, etc.). Designate a moderator and present the information from the previous stages for discussion and co-construction of your future playground on the basis of a plan.



We need a new canopy to protect students on rainy days. This is an opportunity to optimise rainwater management.

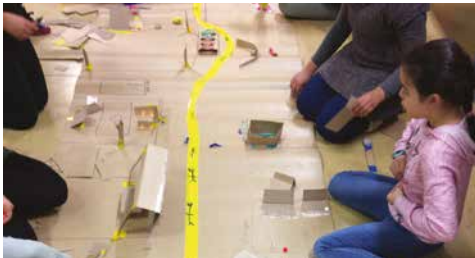
We need to invest in other play equipment adapted to the playground's morphology.

What we lack is a greenery project that integrates our pedagogical vision and ensures cool zones during hot spells.



What can be done with the resources (human, material, financial) already at the school's disposal? Is technical assistance or additional financing needed?

In order to ensure that future developments are well chosen and successful, the master plan must include all planned interventions in the playground, to show how the playground will evolve over time. You'll avoid unnecessary modifications that might be destroyed in the short term by other work already planned.



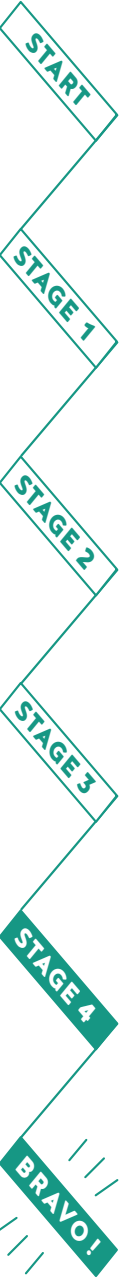
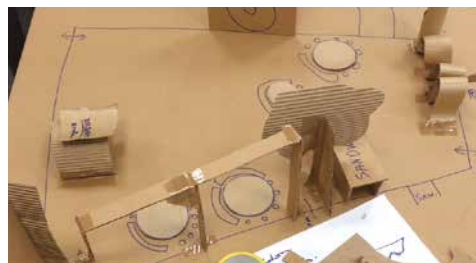
Once the project has been drawn up on the basis of all the information gathered, it's time to organise the start of the work!

LONG-TERM MANAGEMENT AND MONITORING 🧤🧤

Once you have defined your project, **lay down the rules for use, both with outsiders and with people inside the school**. Each stakeholder must have a clearly defined role (janitor, maintenance). Defining these roles and their scope of intervention will be facilitated by consulting these people throughout the project.

With the school's in-house staff and students, the co-drafting of a charter of rules for use and living together in the new playground will ensure that more people comply with it. Explaining the ins and outs of the rules helps people understand their meaning and comply with them.

Evaluating interventions one year after they have been implemented makes it possible to see whether certain interventions have been successful, so that they can be re-implemented in other projects, and to adjust the management or implementation of those that have been less successful, so that they can be improved in the future.





FIVE AMBITIONS TO DESIGN A PLAYGROUND IN THE BRUSSELS- CAPITAL REGION

In this chapter, we present five ambitions from which you can draw up a project for your playground. These ambitions are closely linked to the three regional objectives for playgrounds: well-being, biodiversity and openness to the neighbourhood. —> [INTRODUCTION](#)

Each **AMBITION** aims to achieve a series of objectives. For each objective, an analysis will be carried out based on questions that will allow you to evaluate the qualities and shortcomings of your playground. To find out which ambitions you should work on based on your current playground situation, we encourage you to follow the methodology described in **STAGE 1**: "Observe and analyse the playground".

Let the recommendations and references to exemplary projects corresponding to each objective help you come up with your own. The references, which provide answers to different objectives, represent a wide range of large-scale structural proposals for temporary, mobile or self-built interventions.



FIVE AMBITIONS TO DESIGN A PLAYGROUND

WHICH IS FUN AND ENJOYABLE

A fun, enjoyable playground is designed to be welcoming, inclusive and diverse. Each student finds their place in a space that meets their different needs and encourages creativity and inventiveness. Free play and spaces for discovery are also essential to building students' identities.

A fun, friendly playground helps reduce violence by releasing tension and developing collaborative and social skills. Through play, children and young people also acquire cognitive skills.



OBJECTIVES

● PROMOTE LEARNING THROUGH PLAY

- See the playground as a source of academic learning, by promoting games that cultivate students' social, cognitive and motor skills. → **AMBITION C**
- Make room for free play, regulated play and art/creative activities.
- Design nature-based playgrounds that teach children to respect the environment. → **AMBITION B**

▲ PLAN A VARIETY OF ACTIVITIES

- Organise a variety of different activities in the playground, with something for everyone, and a balance between quiet and active areas.
- **Diversify and balance the activities** by providing areas for play and sport in the playground, and increasing the space given over to meeting areas and exchanges between students.
- Promote the **use of buildings around the playground** as a medium for children's creativity and expression, as well as for play and communication. → **AMBITION C**

■ MAKE A RANGE OF EQUIPMENT AVAILABLE

- Adapt **furniture** to the specific needs of the playground and the students.
- Provide **storage space** in the playground for games, outerwear and tools.
- Improve playground comfort by providing facilities such as drinking water fountains, lighting, outdoor electrical outlets and nearby toilets. → **AMBITION D**
- Encourage the introduction of **innovative elements** in the playground, and do so harmoniously.
- **Use the buildings, covered areas and furniture to integrate other functions**, such as bicycle parking, toilets, waste bins and play areas.

* FOSTER INCLUSION AND COHESION

- Implement **equal gender representation** in redesigning the playground.
- Integrate into the project the principle of **co-construction** with the entire school community, with the aim of reinforcing the sense of group and appropriation of the various playground areas by the students and others. → **AMBITION D**
- Implement **internal policies** aimed at strengthening the bond between students and maintaining student well-being in the playground.

ANALYSIS

To assess the fun and friendly aspect of the playground, we recommend that you observe how it works for a week: record your observations on a map, distinguishing between strong and weak points. Point out the location and nature of any conflicts in the playground (spatial, gender, noise, social, etc.). Don't hesitate to ask students for their opinion, as they'll have plenty of experience on the matter. The following considerations and questions will guide you in your evaluation.

● PROMOTE LEARNING THROUGH PLAY

- Are there any **informal games** in the playground, or objects that can be used for play activities?
- Are there any **specific architectural** or topographical features in the playground that encourage the development of free play (low walls, different levels, steps, etc.)?
- Are there any games that support the development of students' **motor skills** (pyramids, climbing elements, elements to climb on, slide on, swing on, etc.)?
- Are there games that **reproduce processes or professions** (water cycle, vegetable gardening, cooking, recycling, construction)?

▲ PLAN A VARIETY OF ACTIVITIES

- Do the students play **different team sports** in their playground? If so, do these take place at the same time? Are the majority of recreational areas used for sports, with or without boundaries? Are these activities central to the playground?
- Are there dedicated areas for **individual sports** (calisthenics bars, athletics tracks, etc.)? Are these areas used by one or more groups of students (girls, boys, academic year or class)?
- Does your playground have **active, semi-active and quiet zones**? Are they adapted to their function in terms of play equipment, furniture and coverings?
- Are playground activities arranged taking into account the nature of the **areas bordering the playground** (quiet areas near classrooms or surrounding housing, noisy areas along the street or blind walls, etc.)?
- Are there any activities organised in the playground **outside playtime** (classes, gym classes, workshops, etc.)?



■ MAKE A RANGE OF EQUIPMENT AVAILABLE

- Are the various areas properly **equipped for the activities** taking place there?
- Is your playground furniture **varied** enough? Is it adapted to students' needs? Is it adapted to the students' size? Is there furniture to encourage quiet play? Does it support the development of students' social skills (circular benches, etc.)?
- Is there room to store playground maintenance equipment, games, jackets or bags and reading materials in the playground?
- Does the playground contain any **communication systems** between the school and the students?
- Are walls and school canopies (or other built features) used as **play areas**?
- Can **school canopies** be used for other purposes (support for a play structure, climbing plants, storage)?

* FOSTER INCLUSION AND COHESION

- Do **conflicts** often occur in the same areas?
- Are there any measures in place to **combat violence** and conflict at breaktime?
- Have you observed, or has a survey among students revealed, a **gender imbalance** between the activities and games that occupy the central and peripheral areas of the playground?
- Do students of different ages share the same playground? Are they there at the same time? Is breaktime staggered?
- Is **supervision** complicated in the playground? Does the teaching and educational staff have too much to do during breaktime?



RECOMMENDATIONS

● PROMOTE LEARNING THROUGH PLAY




- Arrange **fixed and mobile games**, regulated and free play. Play equipment must be adapted to the size and age of the students occupying the playground. → **SHEET 1, 2**
- Use **differences in level**, low walls and floor patterns to integrate new games or play areas. → **SHEET 2** 🏆
- Encourage the use of small **paths as shortcuts** from one place to another. Paths can be lined with elements that welcome greenery and invite children to play: low walls or bars to balance on, posts to jump from one to another and different materials to discover. → **SHEET 4**
- Build **stands or a pergola** that can be used as an outdoor classroom or open-air theatre. → **SHEET 9**
- Install games that develop **gross motor skills**: balance and coordination (stepping logs, monkey bars, balance beams) and **fine motor skills**: precise, meticulous movements (maze, everyday structures). → **SHEET 2** 🏆

▲ PLAN A VARIETY OF ACTIVITIES



- **Limit** (in space and time) **team activities**, especially ball games, so as not to impede movement in the playground and leave room for other activities. → **SHEET 4**
- Overlap the **markings of different pitches or games** on the same surface to allow different sports and activities to be played. → **SHEET 3** 🧤🧤
- Make sports games available **to students which do not take up too much space**. → **SHEET 3** 🏆
- In small playgrounds, set up a **system of zones** with drawings on the floor that allow several activities to take place at the same time. In larger areas, use the **structural elements** of the playground (differences in level, embankments, canopies, light constructions, etc.) or furniture to separate the different zones. → **SHEET 7**
- Set up a play structure in a central area, with **no predefined rules**, to change the dynamics of the activities in the playground. → **SHEET 2** 🏆 🧤🧤



■ MAKE A RANGE OF EQUIPMENT AVAILABLE

- **Adapt furniture to the playground's morphology,** activities and established zones. A single piece of furniture can incorporate several functions (bench, storage space, play area and herb container). → **SHEET 5**
- Orient the benches towards each other to **encourage social contact.** This may encourage shy students to explore other places. → **SHEET 5**

- Create **visual communication structures** for students. These structures blend in better with furniture or buildings. → **SHEET 7** 
- Place **quiet zones slightly higher** or in a recessed area to differentiate them. You can also border them with greenery, trees or cover them with soft materials like wood. → **SHEET 4** 

* FOSTER INCLUSION AND COHESION

- Involve students, parents and teachers in playground design, to help them make the playground their own and respect the rules. Announcing the new features put in place at the school, via a website or school blog, can help get them involved. → **SHEET 11**
- Communicate (via an inauguration or exchange) and clearly display fair **rules of use** to all users, especially when introducing a new game to the playground. → **SHEET 2, 4** 
- Encourage activities that promote **gender diversity.** Green spaces, for example, encourage gender-neutral activities. Eliminating lines and shapes avoids associating spaces with a specific game or sport. → **SHEET 8**
- Establish the role of **mediator** (assigned to a group of children recognised by their peers as capable of helping them when necessary). Take turns with recognised students and encourage others to follow. 
- Set **specific guidelines** to prevent more intensive activities from invading quieter play areas.
- Identify whether conflicts always occur in the same areas, and intervene on the layout, boundaries or rules of use of this area.



REFERENCES

Project references and photo credits → p. 94-95

● PROMOTE LEARNING THROUGH PLAY

Some games help to develop children's imagination and creativity, thanks to their abstract shapes that open up the field of possibilities: children can climb, hide, rest and invent games with their own rules. This can also be achieved with simple elements such as a large stone or a steep relief. 🖐️



■ MAKE A RANGE OF EQUIPMENT AVAILABLE

There are several good practices in this project: on the one hand, the school's walls are used as a graphic medium for several games; on the other, a large ditch in the ground of the playground is used as a medium for informal games and demarcates different zones around it. 🏆 🖐️



▲ PLAN A VARIETY OF ACTIVITIES

Softly surfaced, slightly elevated areas are placed close to the classrooms and on a surface large enough to take over the centrality of the playground. These areas have abundant symbolic games and different furniture, leaving room for ball games on the side of the playground further away from the school buildings. 🏆 🌳



* FOSTER INCLUSION AND COHESION

An outdoor stand or a teepee creates a neutral zone away from other activities, to encourage communication between children or restore calm. 🏆



CASE STUDY

This design proposal, the result of participatory analysis and research for this guide, shows how strategically placing different zones and play elements can amplify the diversity of uses in the playground.

CURRENT STATUS

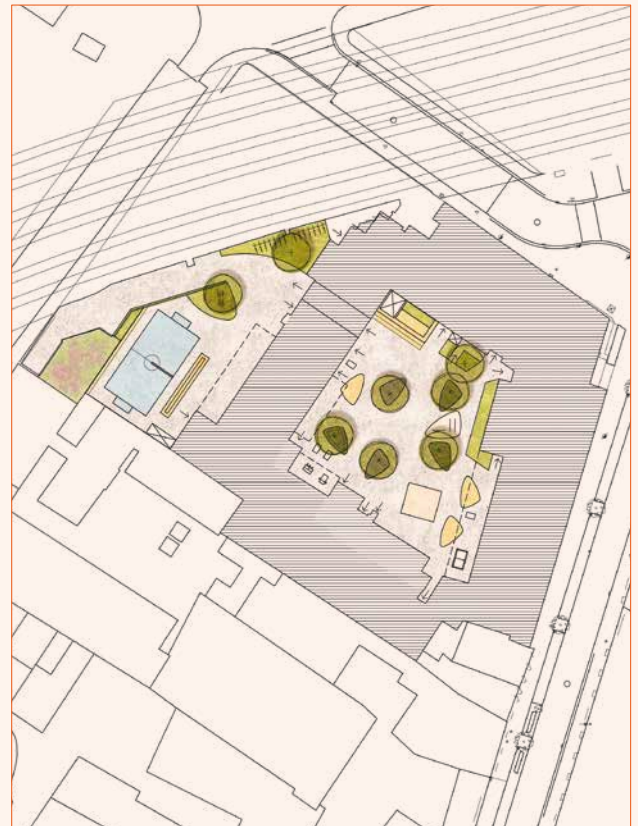
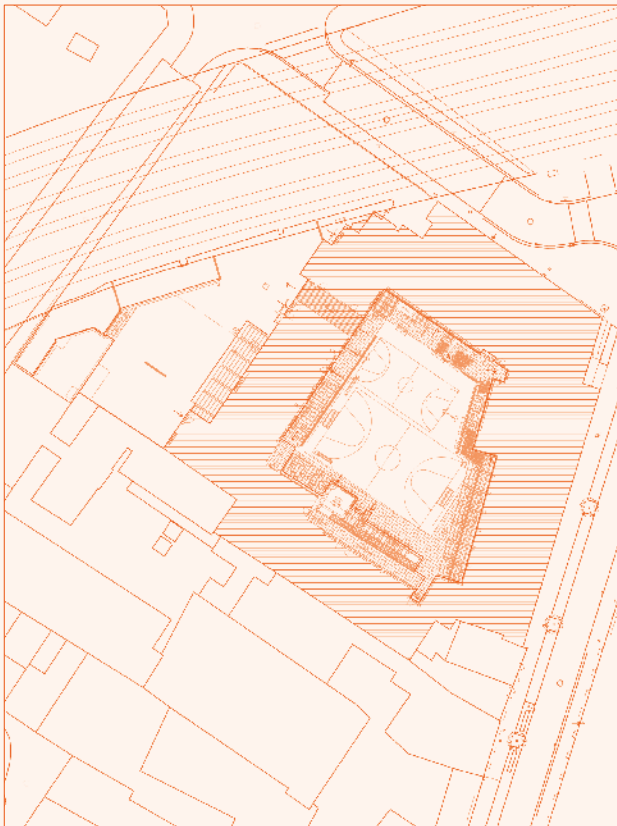
The school has two separate playgrounds for different age groups. The largest playground is in the centre of the school. It consists exclusively of a concrete floor surface, with a football pitch and a basketball court. Grates, canopies and benches surround two sports fields. Opportunities for alternative activities, such as table football, are limited. The abundance of sports fields and grates means that the spatial potential of the playground is not used to the full.

The small playground for younger students is overlooked by the railway. It offers no sports or fun facilities. Some greenery has been planted in containers, but on a very small scale.

PROPOSED PROJECT

The large playground project involves removing the sports fields from the central playground and defining different areas of similar size, so that students can gather in small groups. Each space is bordered by large seating areas (on the plan in beige, or in dark green under the trees). Between the seats, a variety of activities are on offer, thanks to fitness elements, a dance floor, a ping-pong table and a stand for quiet conversation.

In the small playground, a sports field is proposed along a large seating area. A herb garden has been designed along the playground boundary.



DESIGN A PLAYGROUND

IN NATURE

A more natural playground has many benefits: it has a beneficial effect on students' well-being and provides a learning tool for the school. A playground with greenery also plays an essential role in regulating the school's climate, and even that of the entire block or neighbourhood. Playgrounds are a veritable asset for the Brussels Region in the fight against climate change. Finally, the playground can serve as a refuge or stop-off point for local wildlife.



OBJECTIVES

● BRING NATURE INTO THE PLAYGROUND

- Create **islands of coolness** by increasing the amount of greenery in the playground.
- Incorporate **different types of natural landscaping**: in the ground, above ground, on walls, on roofs, various species with different heights, etc.
- Make greenery a **resource, a means of** demarcating zones, linking different spaces and channelling movement, rather than an element encroaching on the surface of the playground. → **AMBITION A**

▲ IMPROVE STUDENTS' WELL-BEING THROUGH CONTACT WITH NATURE

- Encourage students' **physical and socio-emotional** development through direct contact with nature. Playing and learning with and in nature develops their problem-solving skills, stimulates their imagination, enhances their mental faculties, creativity, language and communication skills. Contact with nature improves concentration, self-esteem and mood in the classroom. → **AMBITION C**
- Create an environment conducive to a **peaceful school climate**. Nature develops students' social skills and cooperation within the classroom. It has a positive impact on their well-being, as well as that of adults: reduced anxiety, less hyperactivity, improved control, better sleep, stronger immune system, etc.
- Improve the **perception of space** by orienting views, creating perspectives thanks to the presence of nature, and creating distance from less interesting contextual elements, such as a street with a lot of traffic.

■ USE NATURE AS A LEARNING MEDIUM

- Provide students with a **field for experimentation**, to develop their powers of observation and their knowledge of biology and botany.
- Use nature's facilities (ponds, vegetable gardens, aromatic plants) to help students **discover** the cycles of nature, the animals and insects that live there, and to stimulate their senses. → **AMBITION C**
- **Involve** students in working the land, planting, maintaining and harvesting.

* CREATE HABITATS FOR WILDLIFE

- Create a **variety of ecosystems in the urban environment**: living spaces for insects and animals ("hotels") and places offering food resources (e.g. bird feeders in winter).
- Integrate the playground into the **ecological network of the Brussels Region** by creating or preserving specific habitats for certain species, enabling them to shelter and/or move from one green space to another. → **AMBITION E**

ANALYSIS

To choose the right plants for your playground, it's important to know the context, as well as the existing spatial and technical constraints. In addition to these elements, think about the use you want to make of the space.

● BRING NATURE INTO THE PLAYGROUND

- How does the **playground fit into the local and regional biodiversity network**?
- What is the **school's immediate environment** (green spaces, wetlands, forest, etc.)?
- What is the **configuration of obstructing utilities** (pipes, electrical cables, etc.)?
- What is the **nature of the subsoil**?
- How does **rainwater run off** (slopes, gullies, etc.)?

IF THERE ARE ALREADY NATURAL FEATURES IN THE PLAYGROUND

- What types of **natural features** are already present (copses, isolated trees, vegetable gardens, hedges, flowerbeds, weeds, etc.)?
- If there are **trees, are they listed** as monuments and sites?
- What **plant species are present** in the playground?
- **Are the species present indigenous** or exotic? If there are exotic species, are they invasive and harmful to biodiversity?
- How are **green spaces maintained** (with what products, how often and by whom)?

▲ IMPROVE STUDENTS' WELL-BEING THROUGH CONTACT WITH NATURE

- Do students have the **opportunity to come into contact with nature** (at breaktime or during class)? During breaktime, do they have **access to a green area** of the playground?
- Can children **touch, feel and climb** on natural elements?
- Are the **boundaries of any zones** in the playground planted with greenery?

■ USE NATURE AS A LEARNING MEDIUM

- Do students have the **opportunity to observe** natural phenomena (changes of season, flowering cycles)?
- Are there any **natural areas in the playground for educational purposes** (vegetable garden, fruit garden, pond)?
- Are students **involved in the upkeep** of these areas?
- Are natural spaces used as **teaching tools** in the classroom?

* CREATE HABITATS FOR WILDLIFE

- What is the playground's **potential for accommodating people**, according to its position in the local and regional biodiversity network?
- **What species** of birds, insects, mammals, invertebrates or even reptiles and amphibians are already present in the vicinity of the school (having already been observed or recorded in the ecological network or on Brussels Environment maps)?
- **What types of habitat** are already present (nesting boxes, wood or stone piles, insect hotels, ivy, hedges, groves, ponds, trees, stumps, etc.)?

FURTHER INFORMATION

→ [Classified trees](#)

Consult the resources available from Brussels Environment to gather this information:

→ [Ecological network and maps](#)

→ [List of exotic species and biodiversity](#)

6

Contact Brussels Environment's Water, Nature or Soil Facilitators free of charge to help you diagnose your playground.

RECOMMENDATIONS

● BRING NATURE INTO THE PLAYGROUND

SYSTEMATICALLY ESTABLISH A LINK WITH THE PRESENCE OF WATER

- For any modification using greenery, it's important to identify its **location in relation to the path of the water**, and to try to optimise the relationship between water and greenery. → SHEET 10

TREES

- Retain **old, dead trees** if they are not a safety risk, as they enrich the biotope. 🍷 🧤 🌳
- Plant **ornamental trees or fruit trees**. Trees bring shade and coolness to the playground, and are an essential part of the city's climate transition. 🍷 🧤 🌳

When planting in the open ground, beware of underground pipes. Trees need a sufficient volume of nutrient-rich soil to thrive in the long term.

- Protect the foot of the trees with copes, low greenery or planting. 🍷 🧤 → SHEET 5

Tree grates, for example, protect roots and prevent soil compaction. Other options, such as hedge planting or constructing permeable seats, ensure water supply and aeration for roots close to the ground.

- If planting in the ground is not possible, **trees can be planted in containers**. 🍷 🧤 🌳

For planting in containers, remember to drain off excess water.

- If the nature of the subsoil does not allow trees to be planted, install **vertical structures** such as a pergola and plant climbing plants to create a canopy or plant screen. 🍷 🧤 🌳

GREEN SURFACES

- Use **greenery to structure the playground space, creating connections, boundaries, screens, etc.** 🍷 🧤 🌳 → SHEET 4
- Remove paving stones** in the playground to enhance permeability, and plant flowers, hedges, perennials and bushes. 🍷 🧤 🌳
- Set aside a **patch of unmowed lawn** or clear a part of the playground and let the weeds grow. Spontaneous flora can then take root, preserving and enriching the playground's biodiversity. 🍷 🧤 🌳 → SHEET 6
- Create **plant walls** by dressing bare walls with climbing plants such as ivy or honeysuckle. Climbing plants have a positive visual impact with a limited spatial footprint. Ivy, for example, reduces heat loss in winter and cuts down on sunlight in summer. 🍷 🧤 🌳 → SHEET 7
- Create a **green roof**. Green roofs contribute to the development of nature in the city, help combat the creation of heat islands and enable sustainable management of rainwater. 🍷 🧤 🌳 → SHEET 9

Make sure the supporting structure is strong enough! It is important to check the load-bearing capacity of the roof, and therefore whether it is feasible.

RECOMMENDATIONS

- Use **tubs, pots and planters** when planting in the ground is not possible (due to soil pollution, insufficient depth or degree of infiltration).



High planters make gardening more comfortable, but require more maintenance (more frequent watering, as the soil dries out more quickly).

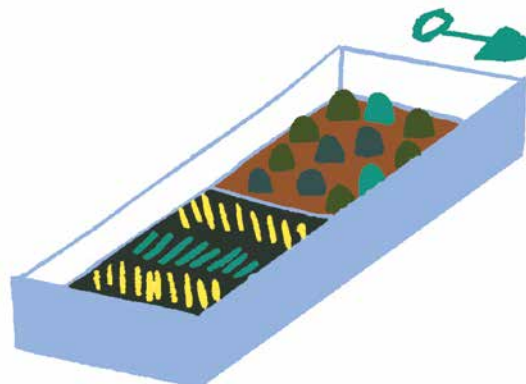
→ SHEET 5

WET AREAS

- Create a **wet area**, such as an open area for water infiltration. This type of water retention and infiltration basin creates an ideal environment for developing wetland flora. → SHEET 10
- **Create a pond.** Thanks to water evaporation, ponds help prevent the formation of heat islands. Combined with greenery, which evaporates water more efficiently, the area is cooled even more. This is also a great participatory project to carry out with students, giving them the chance to observe a whole ecosystem!

▲ IMPROVE STUDENTS' WELL-BEING THROUGH CONTACT WITH NATURE

- Create **planted sub-areas** at the students' level (a tunnel or hut made of living willow, hazelnut or wicker). These areas then become refuges for children of all ages, who may wish to be alone, to find peace and tranquillity. They also provide shelter from the sun and heat. → SHEETS 1, 4
- Create a **planted area with seating** to provide a calm zone in contrast to the dynamic play areas.
- Set up an **outdoor classroom** in the playground with benches, stands, tree trunks, a pergola, a canopy, etc., and opt for a nature-based learning programme with a set frequency.
- Use planted areas to **demarcate and/or link different spaces**. As well as offering an advantage in terms of rainwater management, this alternative to grids and other enclosures reinforces contact with nature for schoolchildren and enables them to observe it.



■ USE NATURE AS A LEARNING MEDIUM

- Demarcate a **quiet area**, separate from the active playground, for observing and learning about the world of flora and fauna, possibly in the form of a pond. Allow access to this area during breaktime or class time. 🏆👐🌿
- Co-create a **vegetable garden** with students, in the ground or off the ground in tubs. They will produce local foods and discover their life cycles. Water the vegetable garden with recovered rainwater. 🏆👐👐 → SHEET 4
- Work with students to create **information sheets** describing the properties of plants, and place them in the playground. 🏆👐👐

● CREATE HABITATS FOR WILDLIFE

- Opt for **habitats where the species is already present in the vicinity of the school**. In effect, there is no point in installing sparrow boxes if there are no sparrows around. 🏆👐👐
- In addition to weeds, plant locally-sourced **nectar-producing plants** to attract pollinating insects. Plant these in a flowerbed or transform a shrubbery by planting flowers between existing shrubs. 🏆👐👐🌿
- Install **nest boxes** on trees, walls, ledges, etc. 🏆👐👐
- Building an **insect spiral** or a dry-stone wall is an excellent project for students. 🏆👐👐 → SHEET 4
- Create a **wet area** with greenery suitable for this environment. There's no need to introduce fauna - it will come by itself! 🏆👐👐🌿 → SHEET 10
- Create **enclosures to help wildlife pass through**. 🏆👐👐 → SHEET 4
- Renovate the **attic space of buildings** to encourage bats to nest there. 🏆👐👐
- Lay out **piles of branches and dead wood** for hedgehogs to shelter in. 🏆👐👐
- Make **bundles** of stems, pierced logs and earwig pots to welcome insects. 🏆👐👐
- Plant a **grove of shrubs** or a flowering hedge for birds and insects. 🏆👐👐🌿
- A **variety of native species**, preferably planted in the ground, will provide an ideal refuge for wildlife. A **network of hedges** on a larger scale also creates green corridors for animals. 🏆👐👐🌿



REFERENCES

Project references and photo credits → p. 94-95

● BRING NATURE INTO THE PLAYGROUND

Playful nature is perfect for playgrounds in the city. Students play and work both indoors and outdoors. The green playground is part of the learning environment.



▲ IMPROVE STUDENTS' WELL-BEING THROUGH CONTACT WITH NATURE

Windroos School has developed an edible, local garden to create a fun space as a living laboratory and a rich context for exploring art, craft, science, maths, language and more. This "Kingdom of Plants" stimulates children's creativity and openness to the world, giving them the opportunity to shape their own future.



■ USE NATURE AS A LEARNING MEDIUM

At "Les Servites de Marie", each class maintains a plot in the vegetable garden. A different vegetable is worked on each year, and learning activities are organised in the vegetable garden. The students also tend an orchard, and each class provides a recipe for apples, which are sold at the annual apple market. Twice a week, the vegetable garden is opened for maintenance by parents and grandparents.



● CREATE HABITATS FOR WILDLIFE

This school has created a vegetable garden with biodiversity in mind. In addition to a henhouse, the students planted both in the ground and in containers, and also built this aromatic spiral.



CASE STUDY

This design proposal, the result of research for this guide, uses greenery to articulate visual links between the school's interior and exterior.

CURRENT STATUS

The school site is characterised by a vast grassed area with beautiful trees, but no intermediate plant strata (bushes, shrubs or tall grasses).

The playground is bordered by high metal railings. The high visibility of the playground from the street makes the playground less convivial.

Problems with puddles and rainwater drainage have been observed.

PROPOSED PROJECT

The project calls for a greater variation in plant types and differentiated management to enhance biodiversity and limit the volume of green space maintenance. The proposed denser greenery will diminish the visual relationship between the playgrounds and the public space, resulting in a calmer, more protected environment, with a beneficial effect for the children. A surface infiltration system for rainwater, such as the planted water basin, will not only solve the problem of water drainage, but will also allow users to observe the biodiversity of this wet-land environment.



DESIGN A PLAYGROUND

WHICH IS COMFORTABLE AND STIMULATING

Every child has their own playground experience. All their senses are stimulated, but not always in a pleasant way. This third ambition aims to positively stimulate users' senses and ensure thermal comfort and acoustics. The playground also offers students the opportunity to express themselves, whether through speech, movement or artistic creativity.



OBJECTIVES

● IMPROVE SOUND COMFORT

- **Reduce noise** from inside the playground and **reduce noise** from outside. → **AMBITION B**
- **Limit noise spreading** from noisy activities or installations (football pitch, fans, bells, etc.). → **AMBITION A**
- Create **zones of calm and rest**, conducive to resourcing, concentration and learning. → **AMBITION A**
- Combat **stress and psychological fatigue** among students, teachers and educators, and safeguard the hearing of users. → **AMBITION A**
- Develop **students' listening skills** and promote an environment conducive to exchanges and learning to respect others. → **AMBITION A**
- **Reduce potential noise pollution** for neighbouring homes. → **AMBITION B**

▲ PROMOTE EXPRESSION, CREATIVITY AND IMAGINATION

- Create **welcoming** playgrounds where students can express themselves. → **AMBITION A**
- Integrate games, surfaces and materials that create a **variety of experiences** in the playground and encourage experimentation. Artistic activities stimulate both the child and the group. → **AMBITION A**

■ ENHANCE THERMAL COMFORT

- Provide sufficient covered, shaded and cool areas. → **AMBITION B**
- Introduce water-related spaces, planted areas and **absorbent surfaces** that help create islands of coolness. → **AMBITION B, D**
- Help **create islands of cool** by using light-coloured materials.
- Introduce **flexible use of space**. For example, create a sheltered area for students to use during breaktime, in case of rain or hot weather, and hold classes outside in nice weather. → **AMBITION E**

* ENCOURAGE SENSORY STIMULATION

- **Visually differentiate** between calm and dynamic spaces.
- Use **colours** in a well-considered way.
- Incorporate games and activities that stimulate all the students' senses. → **AMBITION A**
- Integrate **greenery** as an element of sensory experience (fragrance, colours, textures, etc.).
- Introduce local **aromatic or medicinal** plant species. Studying this greenery could serve as a support for the educational programme. → **AMBITION B**

ANALYSIS

● IMPROVE SOUND COMFORT

- Carry out a **sound assessment** with students and supervisory staff to locate noisy areas, identify specific noises and ascertain their source: take inspiration from the activity included in the "The acoustic environment in schools" educational pack from Brussels Environment.
- What are the **main sources of noise**, and where and when do they occur (children playing in the school canopy, balls on the wall, nursery pupils, the heat pump against the facade, street traffic, the train passing overhead, etc.)?
- What do **students think of the noise levels** in the playground? It is interesting to compare objective measurements with user feedback.
- How is the **acoustic space** of the playground organised, and how does noise spread (in an enclosed space with enclosing walls, with reverberating glass walls, in an open park, etc.)?
- What sensitive functions or **activities need to be protected** or created (playground-facing classrooms, vegetable garden, reading corner, neighbouring houses, etc.)?
- Are there enough quiet areas in the playground?

▲ PROMOTE EXPRESSION, CREATIVITY AND IMAGINATION

- Are there areas dedicated to **student expression** (blackboards, walls, floors, posters, sound games, etc.)?
- Are there places where students can exchange ideas and encourage interaction?
- Have you noticed that some features **encourage imagination and creativity** more than others?
- Do you have any games or processes that involve **learning to cooperate**?

■ ENHANCE THERMAL COMFORT

- Is there a **school canopy** or canopies to offer protection from the rain?
- Does the playground have enough **sheltered areas in the event of rain**?
- Are there **shaded areas** in the playground to offer protection from the sun?
- Are there any trees to **provide shade and reduce** playground temperatures in hot weather?
- Do you have a pond or fountains to cool the playground and students in **hot weather**?
- Is part of the ground surface made of **heat-absorbing materials** (bark, planted earth, etc.)?

* ENCOURAGE SENSORY STIMULATION

- Are there any games and activities to **stimulate the students' senses** (sensory path, plant teepee, sound games, etc.)?
- Are **different materials and textures** used in play equipment, furniture and playground boundaries?
- Is there a wide range of **flooring materials** (grass, earth, concrete, rubber, sand, etc.)?
- Can a **variety of colours** be seen in the play equipment, furniture and boundaries of the playground?
- Are there **aromatic plants**, fruit trees or flowers that students can access?



RECOMMENDATIONS

● IMPROVE SOUND COMFORT

- **Replacing the noisy school bell with music** can change the atmosphere at the start and end of breaktime. For the duration of the music, students have time to regroup and calm down. 🏆
- Locate quiet areas of the playground close to classrooms and/or neighbouring homes, and **noisier areas close to the refectory**, gym or public areas. → **SHEET 4**
- Demarcate **zones with specific conditions of use**: no-running zone, board game zone, expression zone, etc., to regulate the intensity of noise during playtime. → **SHEET 4**
- Use **absorbent floor coverings**, such as wood chips, earth, grass, soft materials like rubber or cork, to reduce impact noise in both **active and quiet areas**. 🌳 → **SHEET 6**
- **Cover walls and facades with absorbent cladding**: greenery, batten or open-joint cladding, perforated plates, acoustic panels or "home-made" absorbent cassettes, to reduce the reverberation effects of vertical walls such as glass surfaces, smooth concrete, varnished wood and metal cladding. Vegetation doesn't stop sound waves, but it does increase the wall's absorption coefficient, improving visual and acoustic perception. 🏆 🌳 → **SHEET 6**
- **Limit the transparency between the school and the hustle and bustle of the city** (cars, people, etc.) by installing a hedge made up of a variety of plants and shrubs. Conversely, even if trees have a limited acoustic noise-reducing effect, creating a visual screen from the neighbourhood can have a beneficial effect on the perception of the playground as a noise nuisance. 🌳
- Replace a fence with a solid wall to isolate the playground from outside street noise.
- Place **absorbent furniture** in strategic locations to "break" the spread of noise. 🏆 🧤 → **SHEET 5**
- Use canopies to **demarcate areas in the playground**, and in particular to create quiet spaces below or above them. → **SHEET 4**
- In a playground that is used intensively and causes a nuisance for the neighbourhood, it may be worthwhile to **stagger breaktimes**, so that each student can enjoy more space during the break. This will have a beneficial impact on the noise level in the playground. However, bear in mind that staggering breaktimes increases the amount of time during which there is noise in the playground.



CONTAINING NOISE The wall prevents the spread of noise outside, but may increase noise inside the playground due to echoing.



NOISE ABSORPTION The wall surface absorbs noise, preventing it from spreading or echoing.

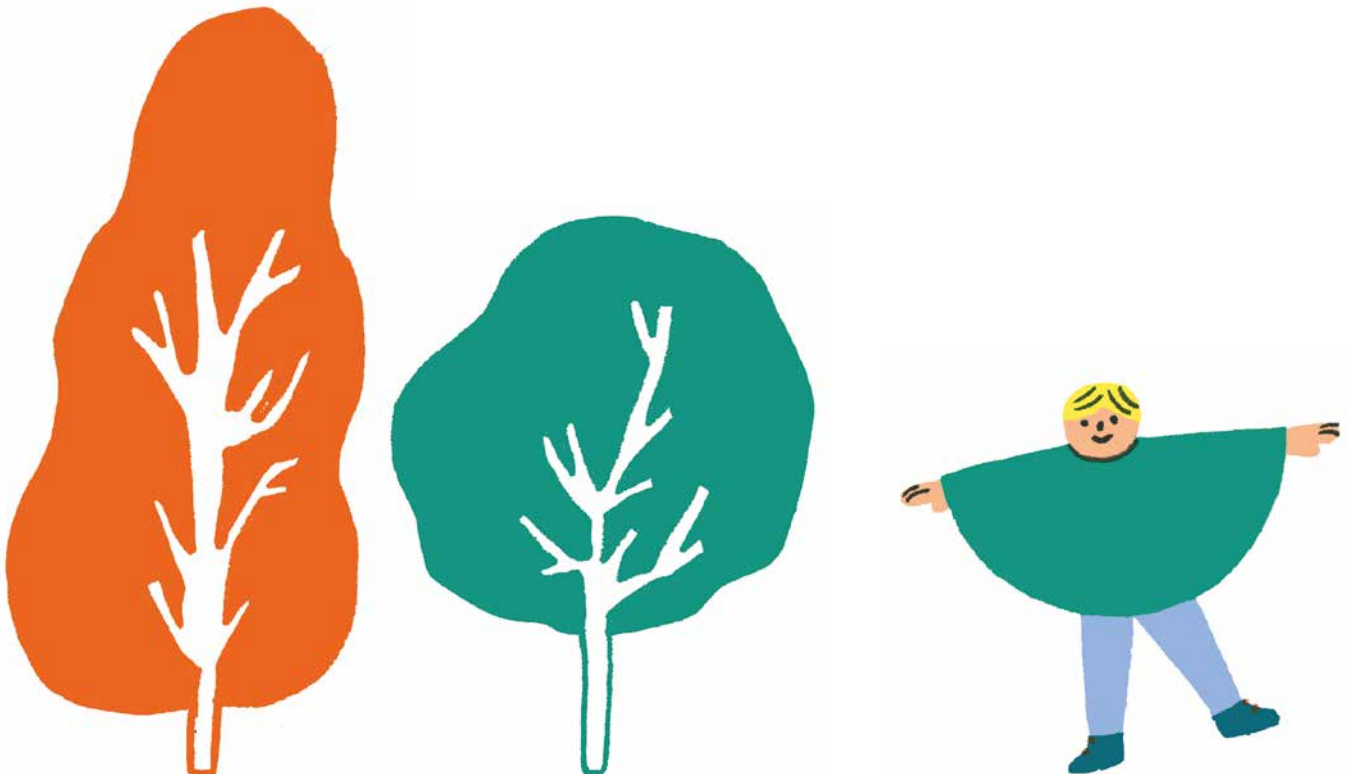


COMBINED SYSTEMS A wall that acts as a barrier to spreading noise and an absorbent roof or a greenery wall that increases its sound absorption coefficient by making it less smooth.




RECOMMENDATIONS

▲ PROMOTE EXPRESSION, CREATIVITY AND IMAGINATION




- Using **different** materials on walls and floors provides a basis for inventing games. → SHEETS 4, 6
- Give students a **space for self-expression**, encouraging interaction between academic years and generations. → SHEET 7
- Incorporate **games that stimulate the imagination**, in particular: music, optical illusions, salvaged objects (old computers, pots and pans, teapots, etc.). 🏆 → SHEET 2
- At least one **area should be set aside for students' free expression** (drawings, texts, podiums, etc.). This surface can be marked out on the floor or walls. 🏆 🖐️ → SHEET 7
- Incorporate **floor designs** that evoke different games. 🏆 🖐️ → SHEET 2
- Set up games and structures that enable children to acquire **risk-taking skills**. → SHEET 1
- Don't hesitate to include **elements with no explicit fun value**. Children will need to stimulate their imagination to play. 🏆 → SHEET 2
- **Envisage play elements** on the walls or floor: lines so that children can see how tall they are, a surface with stickers for imaginative games, land art drawings, etc. → SHEET 2



■ ENHANCE THERMAL COMFORT

- **Add greenery to as many surfaces as possible**, replacing paved areas with planted zones or wetlands. Plant foliage catches light energy, preventing it from being reflected or absorbed by a surface likely to release it as heat.  → SHEETS 7, 8, 10
- **Pay particular attention to the material used to cover your school canopy** or covered play area, depending on the needs identified in the playground (protection from sun, rain, wind and/or noise). → SHEET 9
- Add greenery to provide shade. Deciduous trees (or climbing plants on structures) will provide shade from spring to summer, and allow light into the playground in autumn and winter.  → SHEET 8
- Choose **light colours and floor coverings** that reflect light and warmth to help create an island of coolness in the playground.  → SHEET 6

* PROMOTE SENSORY STIMULATION

- Play with colours, materials, greenery and furniture to help distinguish zones. → SHEETS 5, 6, 8
- Stimulate students' senses with elements in the playground that promote **biodiversity**: vegetable garden, urban agriculture, water features, flower beds, herb garden, planted areas, etc.  → SHEETS 8, 10
- Consider playing **music** in the background during, or at the beginning and end of playtime. 
- Provide **stimulating areas** such as an audiovisual zone, a music wall, a dance floor, etc.  → SHEET 2



REFERENCES

Project references and photo credits → p. 94-95

● IMPROVE SOUND COMFORT

The absorbent properties of the materials reduce both the formation of puddles and reverberated noise. In this school, a noise-absorbing floor material was combined with a noise-absorbing stretched fabric to improve the sound comfort of a quiet area. 🏆 🖐️



■ ENHANCE THERMAL COMFORT

This school has created a quiet, thermally comfortable corner with absorbent flooring, light wall paint and a large, shady tree. This creates an island of coolness. These improvements have also reduced acoustic nuisance by reducing reverberation. 🌳



▲ PROMOTE EXPRESSION, CREATIVITY AND IMAGINATION

Frescoes are an affordable and fun way to change the playground with your students. They can be permanent or experimental, and change over time. This fresco is the result of a participatory process involving the school's students. The children first painted the wall in a workshop. The Boamistura collective then painted the negative of a phrase chosen by the students. 🏆 🖐️



* PROMOTE SENSORY STIMULATION

This school made its own musical game with the help of old saucepans and wooden shuffles. It allows children to express themselves both individually and in groups. 🏆

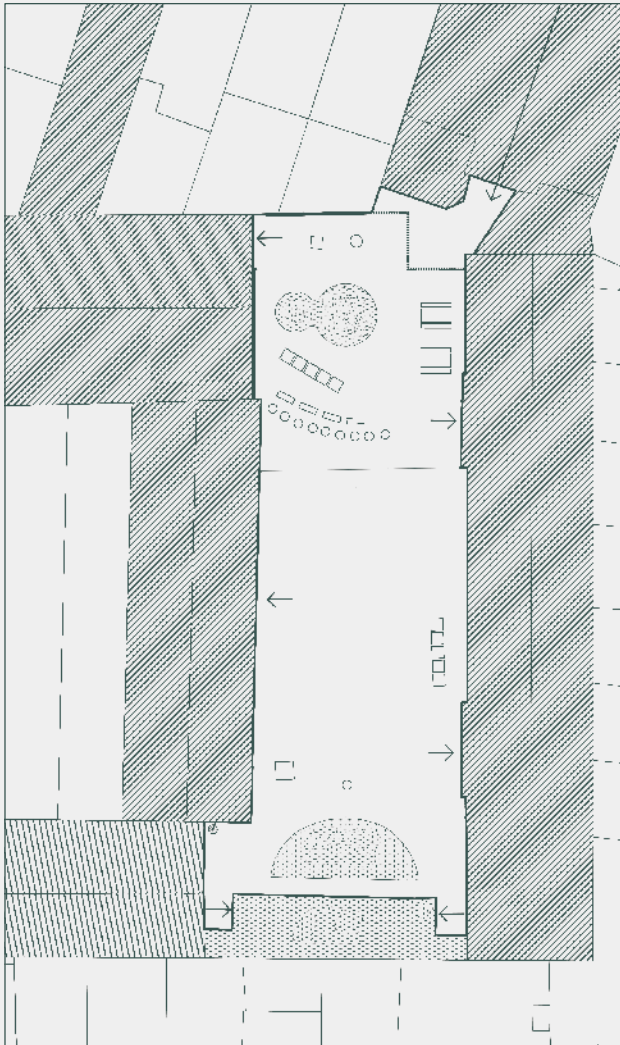


CASE STUDY

This design proposal, the result of research for this guide, shows an example of how to redesign a playground by changing the ground surface and improving sensory stimulation for children.

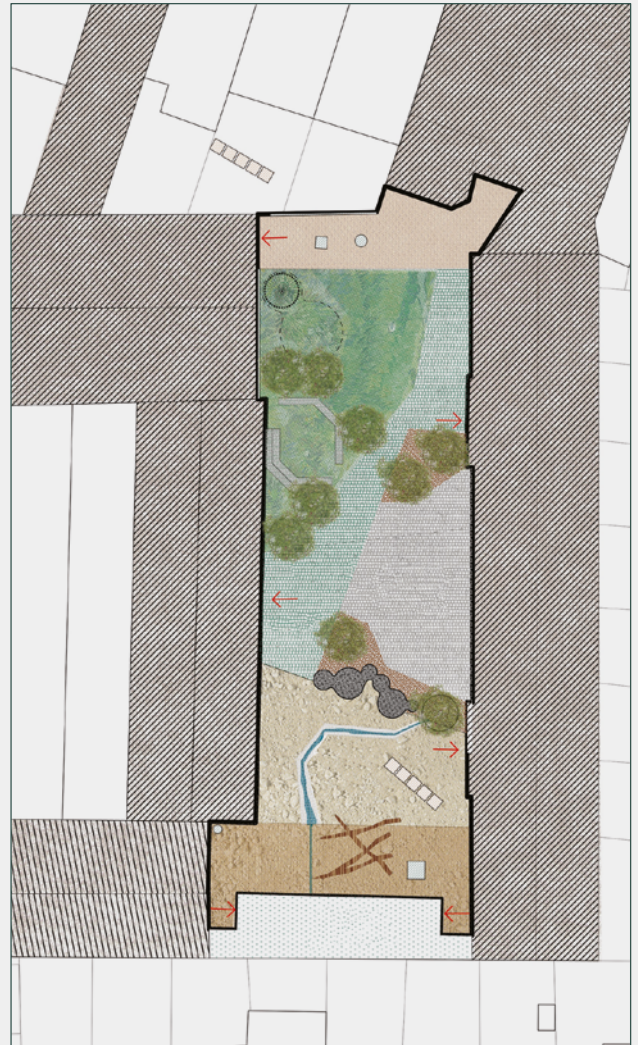
CURRENT STATUS

This small playground is located in the inner part of a block in a densely built-up area of Brussels. These conditions, together with the continuous built edge around the playground, limit air circulation and help generate a considerable state of overheating during the warmer months of the year.



PROPOSED PROJECT

The project calls for different zones marked by a variation of floor coverings and tree planting. Floor coverings are absorbent and permeable: wood chips, open-joint paving, grass and soil. These surfaces, together with the new planted areas, will improve the acoustic and thermal comfort of the new playground, and solve the current problems of puddles forming in the playground.



DESIGN A PLAYGROUND

WHICH IS ECO-MANAGED

In the context of a project to redevelop a playground and its subsequent use, the importance of ecological playground management translates into a conscientious choice of materials, use of available resources, responsible waste management, rational use of water and the promotion of active modes of transport.



OBJECTIVES

● USE THE PRINCIPLES OF THE CIRCULAR ECONOMY

- **Making the most of what's already there:** what's already in place and on site doesn't require the production of raw materials, transportation, landfill disposal, and so on.
- Rationalise the use of **raw materials**.
- Promote the **reuse, repair and sharing** of materials, furniture, games, etc. Repairing or making items with recycled materials can be done as an activity in the presence of students and parents.
- **Avoid wasting** resources.
- Extend the **working life** of products.

▲ IMPROVE WATER MANAGEMENT IN THE PLAYGROUND

- **Recover rainwater** for uses that do not require drinking water (sanitary facilities, watering green spaces and vegetable gardens, etc.).
- **Limit the sealing of surfaces** and the compaction of open ground to reduce the concentration of water and avoid the formation of puddles.
- Create permeable surfaces to facilitate the **retention and infiltration** of rainwater, thereby preserving this resource and counteracting flooding. → **AMBITION B**
- **Add greenery** to permeable surfaces wherever possible, as evapotranspiration not only improves water management, but also helps to create islands of coolness. The presence of water and greenery mitigates temperature peaks. → **AMBITION B**
- Create **calming environments** with water, which can have a soothing effect. → **AMBITION A**
- Make students aware of the **optimal use of a natural resource** and of the water cycle. By recovering rainwater to maintain the playground's green spaces, students will be able to interact with the water cycle. → **AMBITION B**

■ MANAGE WASTE SUSTAINABLY

- Improve **waste sorting** in the playground and keep it clean with an efficient waste bin system.
- Reduce organic waste by installing a **compost bin**.

* PROMOTE ACTIVE MOBILITY

- **Encourage and support** the use of active modes of mobility among students and parents.
- Provide **adequate storage space** for students' means of transport (bikes, scooters, skateboards, etc.).
- Raise students' awareness of the **Highway Code**.
- Use active modes of **transportation** for school activities.



ANALYSIS

● USE THE PRINCIPLES OF THE CIRCULAR ECONOMY

- Are there any existing facilities in the **playground** (play structures, furniture, etc.)?
- Are they in a **good state**?
- Can they be **moved**?
- Can certain materials be **reused** (slabs, wood, etc.)?



▲ IMPROVE WATER MANAGEMENT IN THE PLAYGROUND

- What is the **plan for obstructing utilities** (pipes, electrical cables, drainage system etc.)?
- Is the drainage system **connected to the sewer**? If not, does the school have its own water treatment system (phyto-purification or microstation)? Is it regularly inspected and maintained?
- What is the **nature of the subsoil**?
- What is the **topography of the playground** (low spots where infiltration systems can be installed, slopes, gullies, etc.)?
- How does the **water flow**?



Contact the Water Facilitator of Brussels Environment to help you with this analysis.

■ MANAGE WASTE SUSTAINABLY

- Are there **separate waste bins** in the playground?
- Are the waste bins **used**, and if so, are they used correctly?
- Are there **problems with waste** clogging toilets and/or drainage channels?
- Does the playground have a green area or vegetable garden that produces green waste?
- Is there any **organic waste** (leftover snacks, sandwiches or hot meals) in the school waste bins?
- Is there a **nearby** activity requiring composting products (shared garden, park, green space likely to use the school's compost)?

* PROMOTE ACTIVE MOBILITY

- Is there space for storing bicycles, scooters and pushchairs?
- Is bike storage designed for a multitude of **different vehicles**: cargo bikes, e-bike charging stations, trailers?
- Are there any facilities in the playground to teach students to respect the rules of the road?
- Does the school encourage the use of soft modes?



RECOMMENDATIONS

● USE THE PRINCIPLES OF THE CIRCULAR ECONOMY

- Design new layouts using **materials already present in the playground and that can be salvaged**. For example, if you remove the paving stones from part of the playground, you can then create seats or borders with the reclaimed paving stones. 🏆👐👐
 - For any new layout, **ask around the school community or a local organisation** (associations, stores) for furniture or equipment (such as pallets), borrow or rent tools, etc. Certain items of furniture or play equipment could be created from recycled materials. 🏆👐👐 → **SHEETS 2, 5, 11**
 - **Work with students, parents and teachers to develop suitable facilities**. 🏆👐👐 → **SHEET 3**
- Please note, wooden equipment will need to be treated to ensure they are weather resistant.
- When using recycled materials, be aware of the **potential pollution level** depending on their use. For example, crushed tyre residues are not recommended for filling a rainwater infiltration basin, as they are a contamination risk for surface water; on the other hand, a tyre can be reused to build a swing or other play structure. 🏆👐👐
 - Prioritise the use of long-lasting materials (like wood over plastic).
 - Prioritise the use of local materials such as native wood (chestnut, larch, oak), local stone, etc.
 - Use **environmentally-friendly and healthy materials** (FSC-certified wood, for example) and **avoid toxic paints, varnishes, glues and oils**.
 - Use **natural materials** such as tree trunks and rocks. Ask your local authority about the trunks used to maintain green spaces. 🏆👐👐 → **SHEET 8**
- If recovery is not possible, **purchase recycled materials** (recomposed plastic benches, wooden tables made from salvaged furniture, etc.). Not only are they interesting from an ecological perspective, their presence in the playground can also be a learning tool for students. → **SHEET 2, 5**



RECOMMENDATIONS

▲ IMPROVE WATER MANAGEMENT IN THE PLAYGROUND

A RAINWATER RECOVERY AND INFILTRATION SYSTEM → SHEET 10

- Install a **cistern** with a tap and overflow (preferably not connected to the sewer) for watering the vegetable garden. 🏆👐👐
- Divide the **gutters** positioned over green spaces into sections, and redirect rainwater towards them for infiltration. 🏆👐👐
- Install a **water tank** which is supplied by a rainwater downspout, for uses such as cleaning or providing water for sanitary facilities. 🏆👐👐
- Create a **surface infiltration volume** to receive the overflow from the rainwater recovery tank. 👐👐
- Use water in a fun way to **make an area dynamic**, for example with a pump connected to the rainwater collection tank. → SHEET 10



FLOOR SURFACES MADE OF PERMEABLE MATERIALS → SHEET 6

- Increase the proportion of **permeable surfaces** in the playground by creating areas of dense greenery. 🏆👐👐🌳
- Use **permeable materials** such as open-joint paving, porous concrete, draining asphalt or wood chips to cover playgrounds. 🏆👐👐

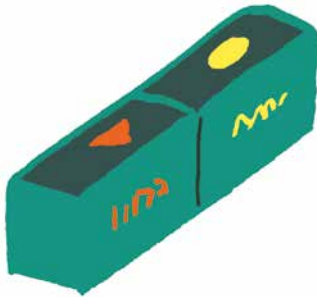
WATER STORAGE

- Slightly "**over-sink**" **green spaces** to temporarily store water (this will also attract animals). 🏆👐👐
- At **low points**, create storage facilities (basins, valleys, possibly with an infiltration bed to increase retention capacity, etc.). 🏆👐👐🌳
- Create a **buffer structure** (reservoir) under mineral soils to temporarily store water between the materials of which it is composed. Ideally make it shallow and infiltrating. If necessary, it can be fitted with an overflow connected to the sewer.

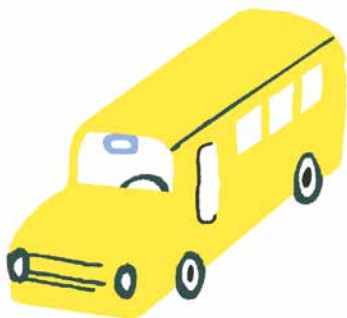


■ MANAGE WASTE SUSTAINABLY

- Install a sufficient number of clearly visible **separate waste bins**. The positioning of the bins needs to be carefully considered, taking into account the movements of the students and the different activity and recreation areas in the playground. Decorating them with students during an awareness campaign makes it more likely that the latter will sort waste and keep the area clean. 🏆 🧤 🧤



- Prominently display **drains** to distinguish them from waste bins (see the SPGE's "Ici commence la Mer" campaign) and put up a humorous poster in toilets to raise awareness of the need not to throw everything in (no wipes, plastics, cardboard rolls, cotton buds, medicines, sanitary pads, etc.). 🏆 🧤 🧤
- Put in place a **composting point**. You can assign a class to take care of this and collect the organic waste from snacks in each class, or you can turn it into a neighbourhood compost if it is accessible to the neighbourhood. 🏆 🧤 🧤



* PROMOTE ACTIVE MOBILITY

- Bicycles, tricycles, unicycles and other active means of transport can be made available during **breaktimes**. 🏆
- Make students aware of the **STOP principle**, which prioritises modes of transport (walking, cycling, public and private transport).
- Raise students' awareness of **road safety**, especially as pedestrians and cyclists, but also as users of scooters, hoverboards and other active means of transport.
- Provide a parking area for **vehicles of different sizes**: bicycles, scooters, roller skates, cargo bikes, trailers, etc. 🏆 🧤 🧤
- Where possible, provide **showers** in the school to encourage teachers to come by bike.



REFERENCES

Project references and photo credits → p. 94-95

● USE THE PRINCIPLES OF THE CIRCULAR ECONOMY

At the "De Piramide" school, a number of different structures have been made using slabs salvaged from the playground. They can be used as building materials to create seating areas, flower borders or outdoor classrooms. 🌱 🌿 🌳



▲ IMPROVE WATER MANAGEMENT IN THE PLAYGROUND

In the playground of the "À la croisée des Chemins" school in Neder-over-Heembeek, a river-like feature takes the form of a trickle of water that crisscrosses the playground. This fun feature is fed by a rainwater tank equipped with a pump that can be operated by the children. The water criss-crossing the artificial bed flows into a pond and the overflow into a ditch bordering the school. 🌱



■ MANAGE WASTE SUSTAINABLY

In this school playground, a compost point near the vegetable garden helps students learn about the waste and food cycle, while reducing the waste going into the school's bins. 🏆 🌱 🌿



● PROMOTE ACTIVE MOBILITY

In one part of the playground, lines have been drawn on the ground to introduce students to the principles of the highway code, particularly by taking into account the most vulnerable users in the public space. This part of the playground remains available for sports activities. 🏆 🌱 🌿



CASE STUDY

This planning proposal, the result of research carried out for the preparation of this guide, illustrates an intervention proposal based on the ambition of sustainability.

CURRENT STATUS

The school has three different playgrounds, some of which are primarily concrete. A playground features a row of trees all surrounded by concrete slabs. Another contains a green space where the ground is always muddy.

There are a few bicycle racks around the school, but they are not covered and there are not enough of them.

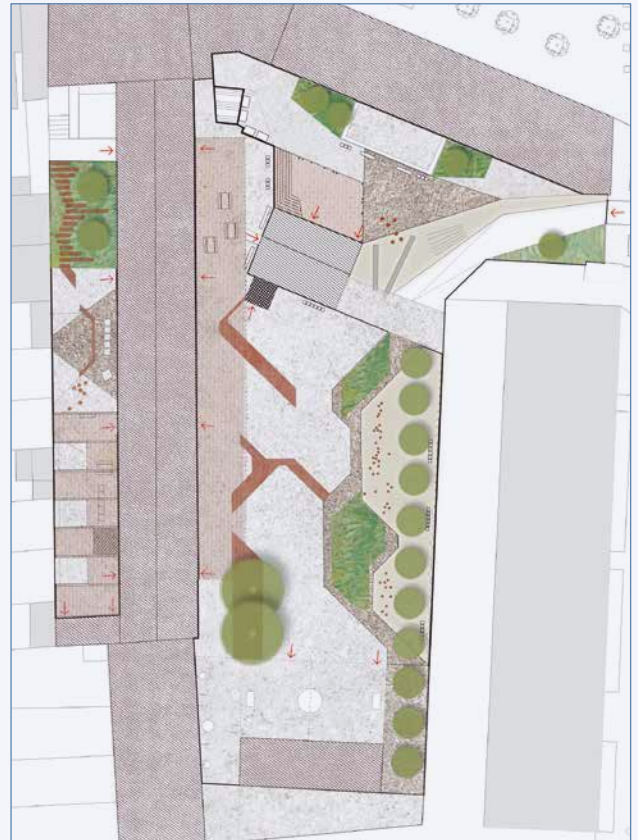
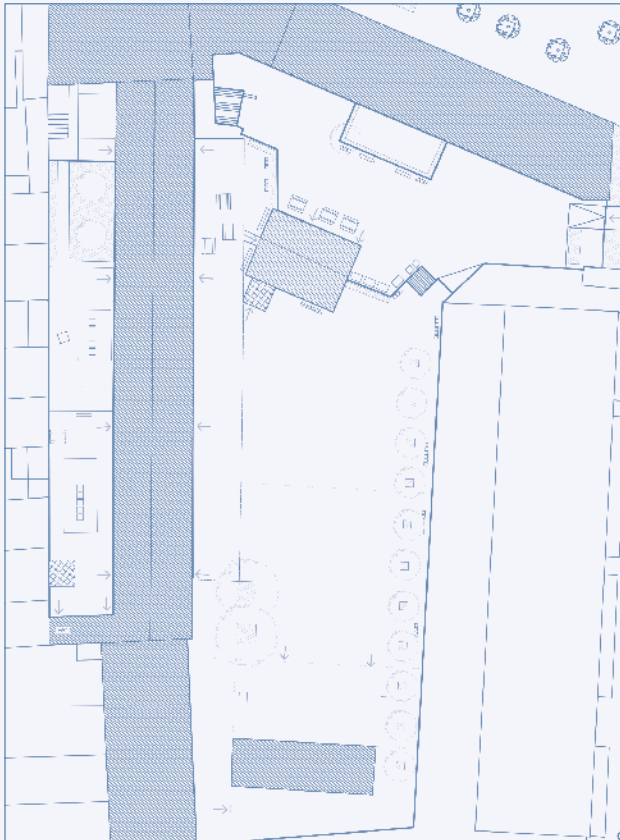
PROPOSED PROJECT

This project aims to increase the permeable surface area of playgrounds by planting areas, wood chips and semi-hard surfacing. The area around existing trees is enlarged to improve water infiltration.

A raised walkway will be installed in the existing green space to provide access and turn it into a quiet zone.

Rational rainwater management is also an integral part of the project. A new canopy will be installed next to the sanitary facilities, which will be supplied by rainwater collected by the canopy. The topography of the playground was taken into account to collect run-off water.

A covered area with bicycle racks will be provided near the school entrance.



DESIGN A PLAYGROUND

WHICH IS OPEN TO THE NEIGHBOURHOOD

The controlled sharing of certain spaces between the school and the community is an important factor in the school's successful integration into the neighbourhood. In this way, positive communication can be created between the school and the outside world.

A playground accessible to the neighbourhood offers a more fluid connection - visually and physically - between the inside and outside of the school. This reflects positively on the school among the local community.

Clear rules of use visible to all are necessary to guarantee the success of such a project. They will ensure that the playground continues to function smoothly for students and groups of people accessing it. It's essential to organise the management and maintenance of the space, define the responsibilities of each user, and set a schedule for who will use it and when.



OBJECTIVES

● OPTIMISE THE USE OF THE PLAYGROUND SPACE

The playground has a number of major advantages for students and residents alike:

- an **outdoor space, generally away from traffic**, which is particularly attractive in dense neighbourhoods;
- an **island of coolness** available outside school hours for local residents, if the playground is planted with greenery; → **AMBITION B**
- a **play area** for different age groups, equipped with a variety of facilities; → **AMBITION A**
- a **place for exchange with the neighbourhood** (contribution to the upkeep of green spaces by local residents, participation in a collective compost, shared management of the vegetable garden, etc.).

▲ MAKE THE SCHOOL AN ADDED VALUE FOR THE NEIGHBOURHOOD

Making the playground available - especially if it's planted, fun and eco-managed - helps to improve the school's image. This contributes to greater social cohesion between the school and the surrounding neighbourhood. A quality space accessible to local residents can become a **place for meeting and exchanging ideas**. → **AMBITION A**

While more intensive use of the playground may generate certain inconveniences for surrounding functions such as housing, this risk can be mitigated if the use of the playground is shared and managed with local residents.

■ FACILITATE THE USE OF THE PLAYGROUND BY PEOPLE OUTSIDE THE SCHOOL

To make use of the playground comfortable and safe for all, access points for "external" users must be kept to a minimum. Conversely, it must be ensured that the areas reserved for the exclusive use of the school are inaccessible for others. **Rules for use**, maintenance and repair must be explicit, displayed and understood by all. Clearly defined **responsibilities** make it easier to share space. → **AMBITION C**

* CLARIFY THE CONTINUITY BETWEEN THE PUBLIC SPACE AND THE PLAYGROUND SPACE

To encourage local residents to use the playground, it must be perceived as an **extension of the public space**. Where school architecture allows, a spatially open entrance will give **passers-by a pleasant feeling** and invite them in, which is not the case with an intransparent entrance such as a closed door.



ANALYSIS

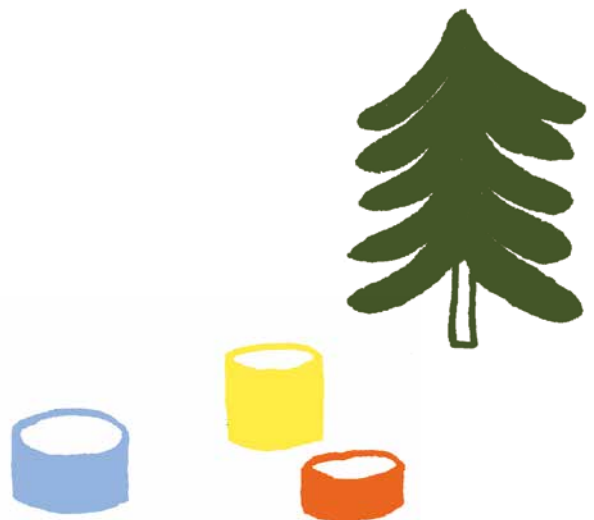
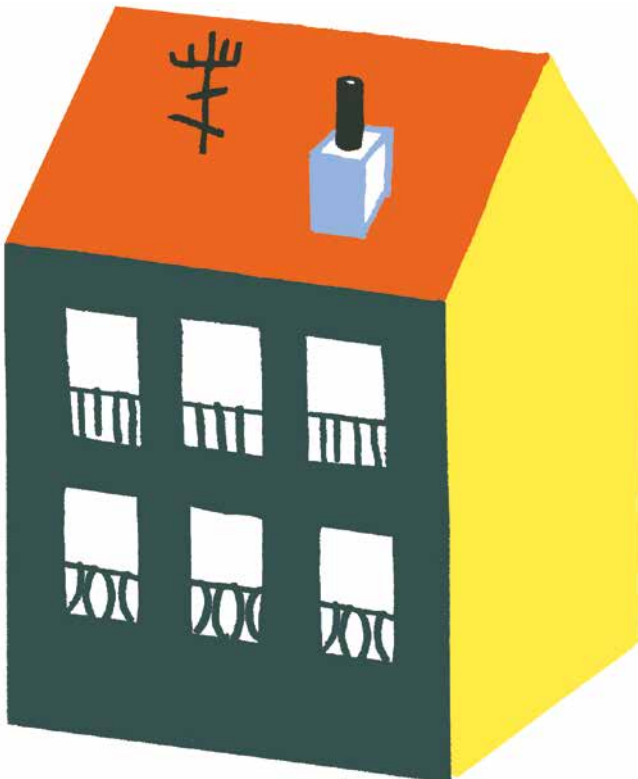
The principle of opening up the playground to the neighbourhood means checking whether the organisation of the playground and access to it allows people from outside the school to be there, and whether technical and/or human resources need to be put in place to limit the access of co-users to the areas made available.

● OPTIMISE THE USE OF PLAYGROUND SPACE

- Is the neighbourhood **densely populated**, with quality public spaces nearby?
- Could **organisations active** in the neighbourhood make use of the playground (youth centre, seniors' residence, youth movement unit, neighbourhood non-profit organisation, etc.)?
- What are the school's **needs** that could be met by opening up the playground (in the neighbourhood, lack of traffic-free space and/or lack of green spaces for relaxation)?
- Which **groups could be targeted** (parents of schoolchildren, elderly people living in the neighbourhood, neighbourhood committee members, etc.)?

▲ MAKE THE SCHOOL AN ADDED VALUE FOR THE NEIGHBOURHOOD

- Could sharing the playground **compensate** for neighbourhood needs (lack of green spaces or play areas accessible to the neighbourhood)?
- Does the school **interact with local residents**? If not, are there any associations in the neighbourhood looking for an outdoor space in which to work?
- Are the activities taking place in the playground a **potential nuisance** for local residents? If so, is there any way of limiting activities over time in order to reduce these nuisances?
- Can opening up the school to the neighbourhood benefit the school and its students (maintenance of green spaces, knowledge of market gardening, etc.)?

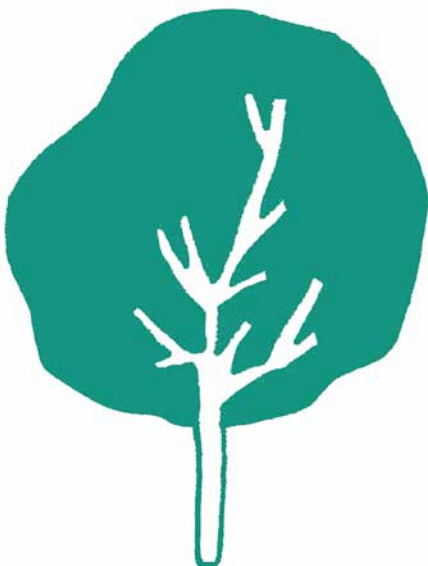


■ **FACILITATE THE USE OF THE PLAYGROUND BY PEOPLE OUTSIDE THE SCHOOL**

- Are there any **visual aids** in the playground to facilitate communication between users?
- Does the arrangement of **access points** to the school make it possible to enter the playground without having to pass through the corridors leading to the classrooms, or through the areas reserved for administration?
- Can the playground be accessed **directly** from the public space?
- Does your school's **architectural layout** and management allow for the playground to be shared?
- Are the **toilets** directly accessible from the playground?

* **CLARIFY THE CONTINUITY BETWEEN THE PUBLIC SPACE AND THE PLAYGROUND SPACE**

- Is the school perimeter **visible from the street**?
- Is there **continuity** between the design of the public space near the school and the playground (ground cover, alignments, greenery)?
- Is there any way of **intervening on the facade** overlooking the school street, to mark this opening to the neighbourhood?
- Do users of the surrounding public space easily identify that they are **in the presence of a school playground** (horizontal and vertical signage, information board, etc.)?



RECOMMENDATIONS

There's no single formula for opening schools up to the neighbourhood. Here we propose a basic structure for reaching a clear, formal agreement between the parties involved. Above all, it is a question of defining the issues relating to management of the facilities and their proper use.

● OPTIMISE THE USE OF THE PLAYGROUND SPACE

- Think about the many **potential uses** of a playground. These include being used for summer camps, being used by youth movements and associations for cultural activities (outdoor theatre, exhibitions) and sports, temporary use by local residents (family celebrations, birthdays, etc.), or simply being used as a garden, a freely accessible play area. 🏆 🤝 🌱

When making the playground available, it is important to consider the following points:

- The **status** of the playground must be clear to all concerned: it is not a public space, but an open-air area of private or semi-private property, shared by different, well-specified user groups. → **SHEET 11**
- The profile of "authorised" users must be **compatible** with the layout of the space made available: for example, a playground planted with greenery or equipped with games for younger children cannot be transformed into a football field at weekends. → **SHEET 11**
- The opening up of the playground can be designed to **evolve** over time. You can start by targeting students and their parents who are familiar with the place, the rules and the workings of the school. From this point on, the aim is to learn progressively, through experience, and to widen the target audience.
- Defining rules with a **participatory** approach ensures that all users of the playground adhere to them. It is preferable that the same rules apply during school hours as for evening and weekend use. These must be clearly visible and/or known to all. 🤝

▲ MAKE THE SCHOOL AN ADDED VALUE FOR THE NEIGHBOURHOOD

There are a number of possible strategies for opening up the playground to **improve the vibe** in the neighbourhood and bring about **greater social cohesion** between the school and the neighbourhood:

- Organise a **survey or poll** on the use of the playground by people from outside the school. This can be a competition or a call for projects that will result in a project or elements to be integrated into the playground. 🤝
- Open up the school to the neighbourhood on a **regular basis**, for example during a neighbourhood braderie, carnival or Christmas market. In this way, the playground will become a popular spot for local residents.
- Establish ongoing **involvement or use** of the playground space, e.g. for vegetable garden maintenance by local residents, or composting. 🤝 → **SHEET 8**
- When **considering the opening up of the playground**, it will be important to take into account the playground's exposure to the neighbourhood, and the possible nuisance that different activities could cause. 🤝



■ FACILITATE THE USE OF THE PLAYGROUND BY PEOPLE OUTSIDE THE SCHOOL

Use of the playground can be facilitated by **human** (janitor, municipal staff, etc.), **architectural** (reserved and direct access) or **technical** (badge, access codes, etc.) means.

STAKEHOLDERS

To **support and coordinate activities** organised outside school hours, you can call on various stakeholders, involved or affected, internal or external:

- **Internal stakeholders:** the janitor (the janitor's role can be extended to include coordination and management: the person in charge will no longer simply hold the key, but will become the "key person"), the parents' association, an internal educator (possibly with a new role assigned), the teaching staff, the after-school care team and the management.
- **External stakeholders:** the municipality, an external person responsible for external coordination/animation (possibly by opening a position), associations, neighbours.

So that everyone can benefit, be sure to **communicate** the fact that the playground is accessible, to external stakeholders and local residents.

PHYSICAL SPACE / EQUIPMENT

- **Organise access to the premises** using keys, access codes or badges.
- Use the **modularity of the school building** to make certain spaces available, while restricting access to other areas (by installing new gates, doors or partitions, for example). 🏆
- With regard to the materials used in the playground layout, take into account the **high stresses** placed on the equipment. That's why it's essential to envisage robust installations that limit maintenance and servicing costs. → SHEET 6

- If possible, use the **fire service access** as an entrance to the playground (for newer buildings). 🏆
- Make **sanitary facilities** accessible from the playground, unless the playground is made available to the neighbourhood as a play area.

* MAKE THE CONTINUITY BETWEEN THE PUBLIC SPACE AND THE PLAYGROUND SPACE VISIBLE

The following proposals will highlight the open character of the playground:

- Design fences to enhance **visual relationships** with the public space, while preserving the privacy of neighbours and encouraging the presence of greenery. → SHEET 7, 8
- Give school entrances a **visible, welcoming character** (frescoes, plants, road markings, etc.). → SHEET 6, 7, 8
- Create a shaded **waiting area** for people waiting for the doors to open. 🌳 → SHEETS 5, 6, 7, 8, 9.



REFERENCES

Project references and photo credits → p. 94-95

● OPTIMISE THE USE OF THE PLAYGROUND SPACE

Some schools remain open in the evenings and at weekends for families to enjoy the games and facilities on offer. 🙌🙌



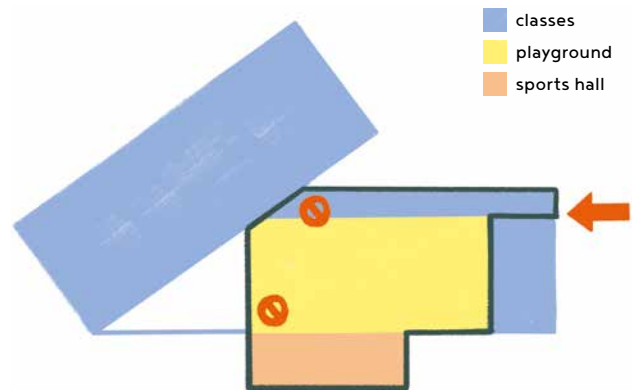
▲ MAKE THE SCHOOL AN ADDED VALUE FOR THE NEIGHBOURHOOD

In addition to creating islands of coolness in playgrounds, the 'Oasis playground' project in Paris aims to open up the playgrounds to residents, enabling them to enjoy a cool, shaded space during heatwaves. Activities open to the neighbourhood can also be offered to strengthen social ties and create meeting places. 🙌🙌



■ FACILITATE THE USE OF THE PLAYGROUND BY PEOPLE OUTSIDE THE SCHOOL

In some school playgrounds, accessibility to different functions can be ensured by simple systems. In the example below, outside school hours, it is possible to make the playground, gymnasium, internal sports hall and playground toilets accessible from the public space, while preventing access to the main part of the school (these accesses are marked with red lines in the illustration). 🙌🙌



* MAKE THE CONTINUITY BETWEEN THE PUBLIC SPACE AND THE PLAYGROUND SPACE VISIBLE

This project includes the creation of an outdoor "classroom" in the continuity of the public space. A fun space is structured by simple volumes serving as benches or planters. Green spaces are maintained by a local gardening club. 🏆🙌🙌



CASE STUDY

This design proposal, the result of research carried out for this guide, shows a project to open up a playground to the neighbourhood.

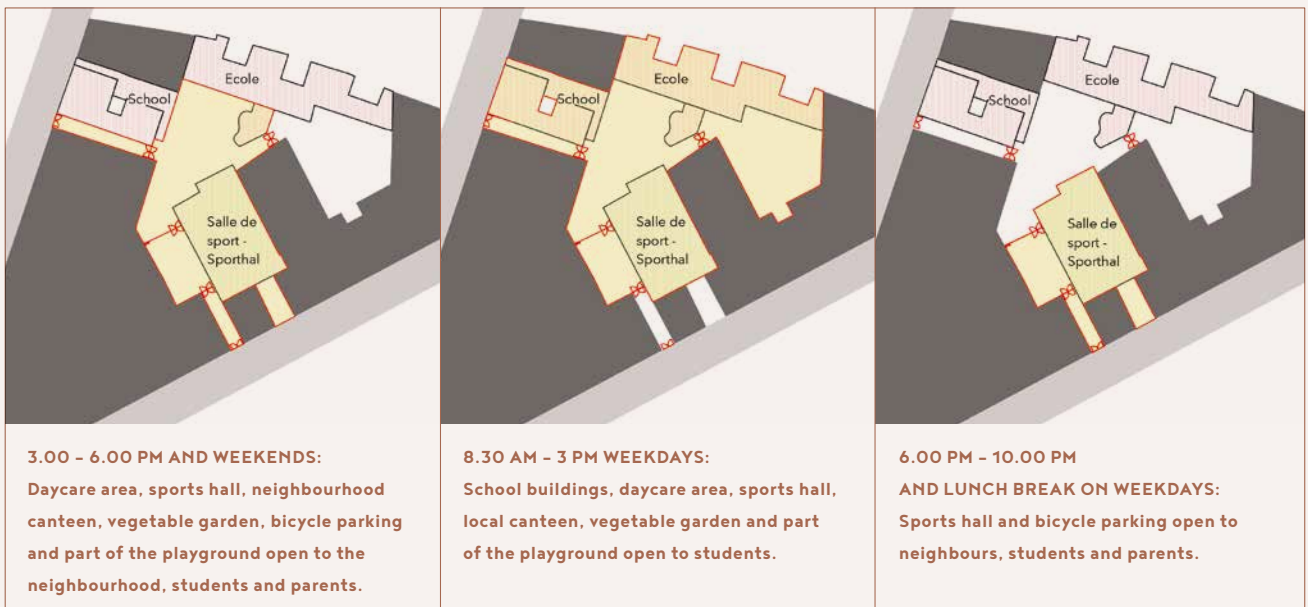
CURRENT STATUS

The concrete environment of the playground and the layout of the fences give an unwelcoming impression. It's also a playground shared by two schools and a crèche. The playground is accessible from two sides of the block. The school's spatial and urban configuration makes it possible to open up the site.

PROPOSED PROJECT

The project provides for different opening scenarios. A badge, code or key system will enable the school to be opened even in the absence of a responsible person on the premises. The opening of the playground will be the subject of several experiments and evaluations by the schools:

- Setting up a neighbourhood canteen in the central dining hall for parents and school-age children during the hours when the sports hall is open.
- Occasional opening of the gym during the lunch break for sports tournaments.
- Access to vegetable garden and collective compost.



STANDARDS AND RECOMMENDATIONS

Safety and other standards apply to all public buildings, including schools. This fact sheet brings together the most relevant standards and recommendations for renovating or building a playground.

FURTHER INFORMATION

- Standards of the Wallonia-Brussels Federation: Decree of the Government of the French Community establishing the rules that determine the need for new buildings or extensions and the physical and financial standards for school buildings, boarding schools and psycho-medico-social centres.
- Recommendations of the Wallonia-Brussels Federation: Identity sheet: playground
- Standards of the Flemish Community: Fysische en financiële normen (NL)

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AVAILABLE PLAYGROUND AREA PER STUDENT

Before you start renovating your playground, it's a good idea to know how much space you have per student:

SURFACE AREA OF OUTDOOR SPACES

TOTAL NUMBER OF STUDENTS (M² / S)

The resulting figure gives you an indication of your playground's occupancy rate and allows you to benchmark yourself against community standards.

If your playground doesn't meet the benchmark surface areas, you can start thinking about how to increase this surface area (with accessible canopies, for example). → **SHEET 8**

MAXIMUM SURFACE of the playground that can be subsidised (physical standards)

8 m² / student in basic education in the Flemish Community

4 m² / student in secondary and higher education in the Flemish Community

10 m² / student in extraordinary education in the Flemish Community

5 m² / student in basic education in the French-speaking Community

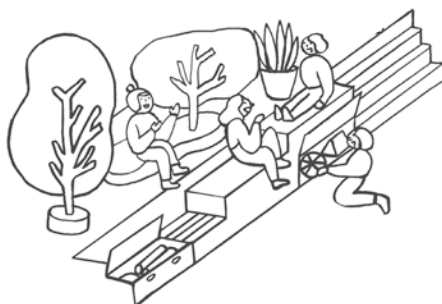
2 m² / student in secondary and higher education in the French-speaking Community

MINIMUM SURFACE of the playground that can be subsidised (physical standards)

250 m² in basic education in the Flemish Community

300 m² in extraordinary education in the Flemish Community

300 m² in the French-speaking Community



It should be noted that to determine the surface areas that can be subsidised, the physical standards only take into account hard-surfaced outdoor play areas.

ACCESSIBILITY OF PRM

Accessibility for all students must be guaranteed. **Spatial and physical modifications may be required to allow access to the playground for people with reduced mobility (PRM).**

If there is a difference in level to access the playground, you can, for example, install a ramp to replace the stairs. The incorporation of fun elements adapted to the needs of all students must also be taken into account.

FURTHER INFORMATION

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- Title IV of the Regional urban planning regulations (RRU in French): Accessibility of buildings by persons with reduced mobility
- Collectif Accessibilité Wallonie-Bruxelles: Guide to designing an accessible building
- Inter, accessibility consultant in Flanders: Inspiratiebundel Toegankelijkheid van voorzieningen voor gezinnen met kinderen (NL)
- Plain-Pied: Guide to good practice in welcoming students with disabilities to compulsory and higher education in the Brussels Region

ACTIVE MOBILITY

Cycling is gaining in importance in the Brussels-Capital Region. The Region's Mobility department (Bruxelles Mobilité) has drawn up a strategy for all public buildings, considering the **number of bicycle spaces required within the building.** → **AMBITION D**

Minimum number of bicycle spaces:

PRIMARY

- PARENTS → 1 for 20 students
- STUDENTS → 1 for 10 students

SECONDARY

- 2 for 10 students

FURTHER INFORMATION

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- STP: School travel plans
- Vademecum "Vélo Région Bruxelles": Bicycle parking
- Good Move: Good Move Brussels
- Bicycle, motorcycle, car and delivery parking requirements
- Pro Velo: Pro Velo Brussels

FIRE SAFETY

Depending on the location and architecture of the school, the playground may need to be accessible to fire trucks. **Accesses must be clearly identifiable and comply with the basic standards** published in the Royal Decree of 7 July 1994: "Basic standards for fire and explosion prevention".

The playground is also often the **place where students gather** in the event of a fire. You can send your playground project to the SIAMU to bring it into line with fire standards.

FURTHER INFORMATION

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- Royal Decree of 7 July 1994: Basic standards for fire and explosion prevention
- Download the request form on the SIAMU website



PHYSICAL SECURITY: RISK ANALYSIS

Seven out of ten school accidents occur during breaktime. This doesn't mean that the playground isn't a safe place; on the contrary, students are much less likely to have an accident there than at home. It goes without saying that student safety is paramount. However, it's sometimes the elements that seem the riskiest that cause the fewest accidents. **Risk prevention must be integrated into the design process, by defining clear rules of use and raising awareness of the need to respect others.** Properly identifying the different areas of the playground (quiet zone, space for ball games) can reduce the risk of accidents. Risks can be managed effectively and creatively.

In the absence of fixed rules concerning the physical safety of playgrounds, a risk assessment must be carried out to show that no unreasonable risk is involved.

A number of measures can be taken to limit the risks:

- ensure that railings and handrails comply with standards;
- avoid sharp objects and slippery surfaces;
- pay attention to the height of potential falls;
- pay attention to the cushioning properties of the floor. → **SHEET 6**

If your organisation does not have an in-house prevention department, you can call on the **services of a health and safety coordinator (CSS)**.

FURTHER INFORMATION

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The FPS Economy (responsible for inspecting playground safety) has developed several tools for carrying out a proper risk analysis:

- Safety of playgrounds and playground equipment (general website)
- Playground Safety Manual (practical guide with many examples and a methodology to follow to ensure the safety of your playground)
- Risk analysis tool (spreadsheet in XLS format)

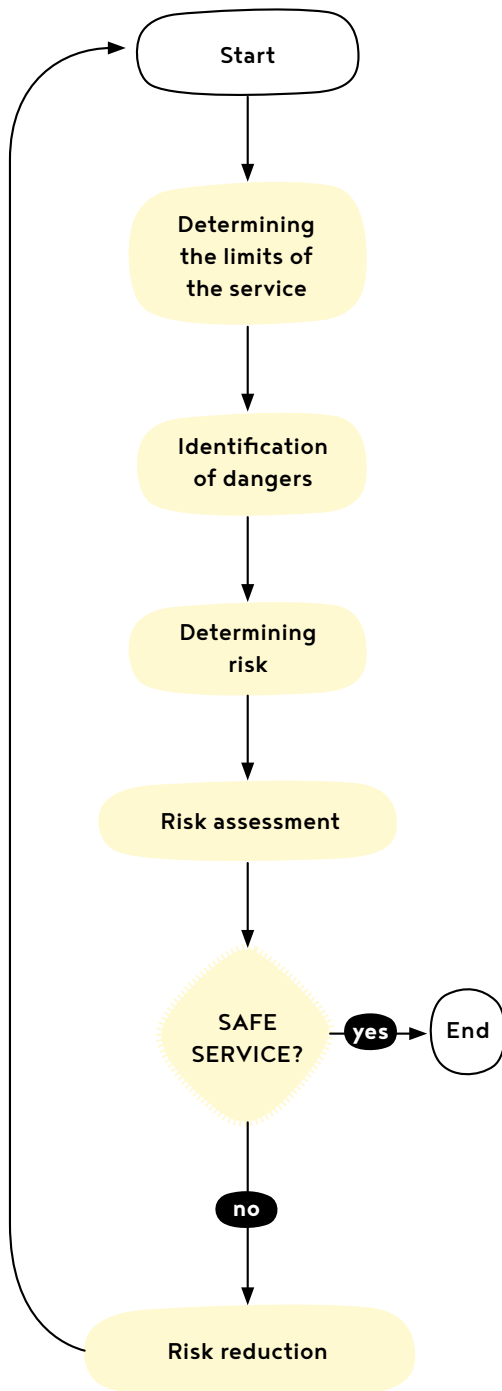
Here are some preventive measures against common risks:

- Adapt the play area, play access zone or flooring around climbing equipment with insufficient fall zone.
- Modify the location of certain play structures if they cause problems with pathways and circulation between play areas.
- Systematically explain the rules and actively supervise areas of play that may be more risky.
- Make sure the youngest children don't have access to games for older children.



RISK ANALYSIS IN ACCORDANCE WITH "EN 1050" STANDARD

This European standard sets out the principles for systematic and consistent risk assessment.



OPERATING A PLAYGROUND SAFELY MEANS:

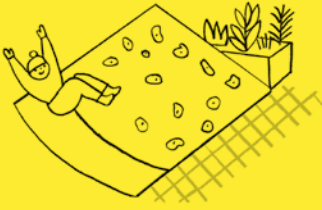
1. Carrying out a **risk analysis** when the play area is commissioned, and whenever major modifications are made: for each detail of the play area, check whether the risks present are acceptable or not.
2. Taking **preventive measures** where necessary: adaptations or other measures by which the nature and extent of an unacceptable risk is reduced to an acceptable level.
3. Bringing to the user's attention all necessary information, such as the operator's address, equipment identification and any **terms and conditions of use**.
4. Carrying out the necessary **checks, maintenance and controls** to guarantee the expected level of safety at all times.
5. **Maintaining records** showing how risk analysis, preventive measures, checks, maintenance and inspections are carried out.
6. **Mandatorily** reporting serious incidents and accidents to the authorities.

FURTHER INFORMATION

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To help you master risk prevention for your existing or planned play areas, here are a few practical guides on how to implement safety in green play areas:

- AGION: Veiligheid Speeltoestellen | AGION
- Risk-taking in play and learning | Call to action: "As safe as necessary", International School Grounds Alliance, 2017
- Is a green playground dangerous? The experts respond, Liesbet Van Houtte, 2017
- Ose le Vert: Ose le vert, recrée ta cour: Safety and risk education
- Springzaad: Richtlijnen Risicoanalyse: Uitdaging en Veiligheid



GAMES

It is through free play that children develop most effectively. Free play promotes autonomy, encourages sharing and the capacity to explore. It's therefore important to design your playground with games that stimulate imagination and creativity: a large stone or a mound has no predetermined use, but encourages free play without instructions, unlike a swing or hopscotch, where the use is predefined.

HOW CAN YOU INTRODUCE FREE PLAY AND LEARNING INTO YOUR PLAYGROUND?

Incorporate multifunctional, neutral or abstract elements that help develop the imagination, cognitive skills and motor play.

- Small scale: hoops, ropes, wheels, branches or crayons. 🏆
- Large scale: horizontal or vertical trunks, large stones.



These elements can be used for different purposes, depending on the age of the students. Large stones can be used as hiding places for younger children and as climbing elements for older children.

Exploit the spatial and morphological potential of the playground to integrate games

- Use the presence of an embankment to create steps and a planter. 🧤🧤
- Use sloping peripheral spaces or party walls to create an open-air stage or theatre. It can also be used for outdoor playgrounds. 🏆



- A retaining wall between two playgrounds at different levels allows fun movement between levels: slide through the wall, garden shed.

→ SHEET 7



- Monkey bars can link two structural columns or two embankments. 🏆

→ SHEET 7

Incorporate symbolic games

A symbol can be an object, an image, a written word, a sound or a particular mark that represents something else by association, resemblance or convention.

- Some ideas: incorporate elements for cooking, gardening, representing the water or waste cycle or management, a vegetable garden, or introduce fixed games into the layout. 🏆



Incorporate artistic and sensory expression into your playground

- Create a trail of the senses, use adjoining walls to support drawings or frescoes, create a blackboard on the floor.



Encourage the environmentally-friendly reuse of materials

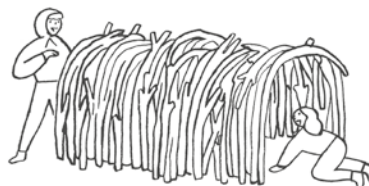
- Recovered utensils such as pans and bowls can be used to equip a kitchen, while salvaged items such as pipes and pieces of wooden planking stored in a trunk can stimulate students' imaginations. 🏆

- A game prototype can be installed while awaiting the installation of a definitive feature. 🏆



HOW TO MANAGE RISK-TAKING IN YOUR PLAYGROUND?

- Some hazards are caused by insufficient distance between the games and other elements in the environment.
- The value of a game structure must be assessed in terms of acceptable risk-taking. Enhancing safety sometimes means making the game less fun and reducing the cognitive development of the child or young person. So you need to find a balance in which a measured risk can help students know their limits and capabilities. → SHEET 1



SPORTS



The area dedicated to standardised sports, such as football or basketball, often takes up a large part of the playground. To ensure that sport is part of breaktime, but does not consume the entire surface area, it's a good idea to offer a varied and balanced range of physical activities, including non-standard sports (climbing, balancing, jumping, running), play areas and quiet zones. This will avoid the majority of the playground being monopolised by a small number of students, leaving the others, in search of peace and quiet, with smaller spaces in the playground.

HOW CAN YOU PROMOTE NON-STANDARDISED SPORTS IN YOUR PLAYGROUND?

Make different sports (basketball, football, volleyball, etc.) compatible with play areas that don't require a specific playing area. → **SHEET 2**

- Provide students with space-saving sports games (pétanque, table tennis, elastic bands, hopscotch markings, climbing elements on existing walls, etc.). 🏆



Work on the centrality and periphery of the playground. → **SHEET 4**

- Set up a play structure in the centre of the playground, with no predefined rules, to change the dynamic of your playground. 🏆



- Place team-play activities in areas considered peripheral, so as not to obstruct movement to other areas of the playground.



HOW CAN YOU MANAGE STANDARDISED SPORTS PLAYED IN YOUR PLAYGROUND?

Don't let any sport or activity dominate the playground. → **SHEET 4**

- Ensure that no sports field takes up more than half the playground's surface area.
- If the size of the playground doesn't allow for different zones, consider **alternating activities on different days**, for example: Monday ball games, Tuesday wheel activities (scooter, skateboard, etc.), Wednesday non-ball games, Thursday art games, etc.

Soften the boundaries of sports fields.

- Use a graphic motif or cover part of the ground.
- Erase the ground lines that demarcate sports surfaces. 🧤🧤



Reduce the space devoted to sports fields. → **SHEET 4**

- Have several overlapping sports fields on the same surface. 🏆



- Change the classic shape of the pitch, for example by creating a triangular area with three goals or three baskets. 🧤🧤



- Halve the size of the fields, so that two teams can share the same basket or goal.



ORGANISING ACTIVITIES

Demarcating activities in the playground helps to enhance sharing and the safety of the playground. By setting up divisions according to the type of activity, you'll integrate spaces for different types of play and create different dynamics in your playground. The principle of dividing the playground into zones has a positive effect on reducing violence and risk management, and ensures that all students feel comfortable at breaktime.

FOR MORE INFORMATION

→ Preventing school violence and harassment. Strand 1: Regulating playgrounds

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THE NEEDS

Start by determining the different spaces the playground needs.

Each playground, depending on its size, shape, the number of children occupying it at any one time, the school's pedagogy or the age of the children, will have different needs.

The most common zones are for **playing with a ball, without a ball and for quiet activities**. More specific zones could be a vegetable garden, a discussion or reading area, a variable-use zone, etc.

THE POSITION OF THE ZONES

A gradation in the organisation of activity areas helps prevent more intensive activities from invading quieter play areas: for example, it's not ideal to have to cross the football pitch to get to the reading corner.

It's also important to **take noise pollution into account**: for example, don't plan noisy activities next to classrooms, or in the vicinity of neighbouring homes. **Zoning will also depend on the age range of the students and the morphology of the playground.**



COMMUNICATION

It's important to **make clear the reasons for the zoning system in place**: why a ball game is allowed in one part of the playground and not another, for example. The **rules of use** for each zone can be highlighted and, if possible, posted in the playground, or presented when the zones are inaugurated or when new students arrive. → **AMBITION A**

MANAGEMENT





When there's not enough space available, spaces can be used in turn. For example, sports pitches could be made available every day of the week for groups of different school levels, to enable all students to use them in an equal and balanced way. → **AMBITION A**




METHODS OF DEMARCATING AREAS

Demarcating the zones is a simple operation, the aim being to make them recognisable so as to ensure **more respect for their use**. Transitions and breaks make the different uses more obvious, as well as the hierarchy of spaces, thereby protecting the adjacent spaces and making sure they are not invaded by another activity.

To create a physical separation between zones, you can:

- draw simple lines on the ground;  
- use furniture;  → **SHEET 5**
- use planted areas;  → **SHEET 8**
- work on the morphology with slopes, corners, etc.; → **SHEET 7**
- work with different ground surfaces; → **SHEET 6**
- work with differences in height, lower or higher areas, like a podium. → **SHEET 3**

You can also create **temporary zoning as a test**. This can be adjusted according to the results of the experiment. 



FURNITURE

To be qualitative, furniture must be adapted to the age and size of users, and allow for a variety of uses. This furniture can be designed and created in consultation with the students, for example through a co-construction activity organised with parents for the younger children, or during a workshop for the older ones. This fact sheet is designed to help you think about how to integrate innovative alternatives to standardised furniture into your playground.

MULTIFUNCTIONAL FURNITURE

Before installing or buying new furniture, ask yourself whether it's possible to combine several functions in a single element.

Here are a few ideas of the many functions that furniture can perform:



BASIC FUNCTION: stand
FUNCTION +: outdoor classroom and valorisation of existing materials



BASIC FUNCTION: stand
FUNCTION +: storage for games or containers



BASIC FUNCTION: benches and tables
FUNCTION +: covered area



BASIC FUNCTION: seating, raised bench
FUNCTION +: planted area protection and demarcation of zone

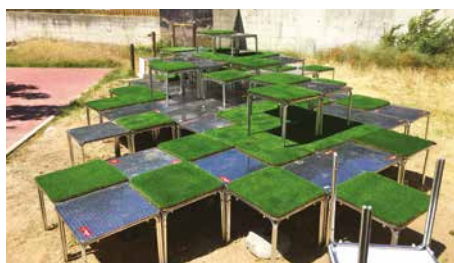


BASIC FUNCTION: seating and reading area
FUNCTION +: separation of zones and storage of equipment and games, planting





BASIC FUNCTION: podium
FUNCTION +: quiet area, outdoor classes



BASIC FUNCTION: stand
FUNCTION +: valorisation of existing materials, quiet area and games tables

SAFETY AND MAINTENANCE

→ SHEET 1

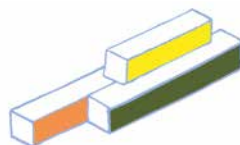
- Check that risks are controlled when using furniture (height of falls, shock-absorbing floors, corners, etc.).
- Make sure your furniture is well maintained, for example by repainting or applying woodstain regularly.
- Check that after rain, the wood dries without becoming slippery or degrading.
- Make sure light furniture is put away properly after each use.



OTHER CONSIDERATIONS

Co-construction

The furniture could be made with parents or a non-profit association, as part of an educational activity with students. 🤝



Durability of materials

- Prioritise the use of local, long-lasting materials, as well as recycled, environmentally-friendly and natural materials.
- If "homemade" furniture exposed to the elements is to be used for a relatively long period, it will need to be treated against wood-boring insects and fungi. 🏆 → **AMBITION D**

Storage

- Students will have access to a greater variety of games if most of the equipment is stored in containers or cupboards in the playground. Some storage units can also be used to store the bicycles of students who come to school this way. → **AMBITION D SHEET 2**

Accessibility for all

- Be sure to include furniture that takes into account the needs of students with reduced mobility, particularly when it comes to moving around the playground. → **SHEET 1**

Spatial aspect

- A raised surface allows different zones to be clearly demarcated, thus guaranteeing more respect for their respective uses. → **SHEET 4**



GROUND COVERINGS

Ground coverings influence the character and experience of the space: choose your coverings according to the activities carried out and the intensity of use. Other criteria such as durability, fall cushioning, water management, acoustics, maintenance, cost, service life and safety should also be taken into consideration.

A FEW QUESTIONS IN ADVANCE

Is the ground polluted?

For certain uses (an open-ground vegetable garden where you plan to eat the produce, for example), you need to make sure that the soil is not polluted. To find out where your playground stands, consult the Brussels soil map on the Brussels Environment website. On the same site, you'll find details of the **conditions for obtaining grants for soil surveys and treatment.**

FURTHER INFORMATION

→ [Check ground pollution - Brussels Environment](#)

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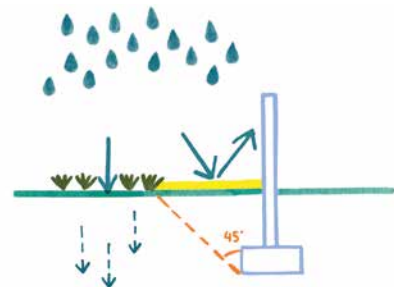
You can also contact the soil facilitator: soilfacilitator@environnement.brussels

Is the soil permeable?

Permeable soil is always preferable, as it contributes to sustainable urban water management and the fight against urban heat islands. → [SHEET 10](#)

However, if you want to green a playground built on an impermeable structure, you can always place a substrate, in the same way as a green roof. → [SHEET 7, 9](#)

To avoid damaging building foundations, infiltrating floor coverings should be placed at a distance from facades equal to the projection of 45° from the depth of building foundations.



FURTHER INFORMATION

→ [Tool | Permeable coverings - Guide to durable buildings](#)

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If in doubt, it's best to call on the Water Facilitator, an expert who can analyse the risks and advise you: facilitateur.eau@environnement.brussels

Does the floor reflect heat?

There are different ways of working with heat-reflecting floors that help **combat urban heat islands**. Thanks to plant evapotranspiration, soils with greenery don't store heat. For impermeable soils, the ideal solution is to shade them. If the floors are impermeable and can't be shaded, there's always the possibility of improving their albedo, for example, with light-colored paint.

Albedo Capacity of a surface to reflect solar radiation. Its size depends on the colour and the material on which the radiation reflects. This phenomenon partly explains the low temperatures in the polar regions.

How much sun does your playground get?

Sunlight must also be taken into account in the playground design plan, especially when it comes to placing open-ground areas or certain paving materials that cannot withstand shade.

Is it necessary to provide access for the fire service?

It's important to know that the access for the fire service doesn't necessarily have to have a paved surface: a honeycomb system or grassed gravel can be used. The continuity of a green space can therefore be ensured. → **SHEET 6, 8**

CHOOSE THE RIGHT MATERIAL FOR THE PLAYGROUND

In the table below, you'll find the main floor coverings and their different properties, to help you make a choice to suit your needs.

Don't forget to consider the following points:

- Maintain open spaces (and make sure children have boots!). 🌳 → **SHEET 8**
- Opt for natural ground surfaces. 🌳 → **SHEET 8**
- Take advantage of the existing ground surface. If the existing ground surface is in good condition, at least part of it should be preserved.
- Give priority to reuse: reclaim asphalt and paving slabs already on site to create seats, boundaries, playground equipment, etc. → **AMBITION D**
- Reserve lawns for areas that do not get much use or sufficiently large playgrounds. → **SHEET 8**
- Find a balance between permeable natural soils and concrete or impermeable soils.
- A permeable coating will have a positive impact on the absorption of impact noise.
- If your budget doesn't allow you to replace the entire floor covering, there are various alternatives for making your playground permeable. 🏆 🧤



To analyse the sound absorption of a covering, you can call on the Noise Facilitator:
facilitateur.bruit@environnement.brussels



	TYPE	INDICATIVE PRICE Without delivery or installation	PLANTED GREENERY	CUSHIONING AGAINST FALLS	PERMEABILITY	SOUND ABSORPTION
PERMEABLE	GREEN SURFACES ON SOLID GROUND	€100-200 / m ³	YES	GOOD	GOOD	GOOD
	SAND	€25-50 / m ³	YES	GOOD	GOOD	AVERAGE
SEMI-PERMEABLE	WOOD CHIPS	€60-160 / m ³	YES	GOOD	GOOD	GOOD
	GRAVEL	€80-150 / m ³	NO	AVERAGE	GOOD	AVERAGE
	SHELLS	€100-120 / m ³	NO	POOR	GOOD	AVERAGE
	OPEN-JOINT PAVING	€15-70 / m ²	YES	AVERAGE	AVERAGE	AVERAGE
	POROUS CONCRETE	€20-40 / m ³	NO	POOR	AVERAGE	POOR
	POROUS ASPHALT	€50-70 / m ³	NO	POOR	AVERAGE	POOR
	COMPOSITES: DOLOMITE AND CLAY	€20-30 / m ²	NO	POOR	AVERAGE	AVERAGE
	KOMEX	€50-100 / m ³	NO	AVERAGE	AVERAGE	AVERAGE
	EPDM, RUBBER, ASTROTURF	€60-160 / m ²	NO	GOOD	POOR	DEPENDS ON TYPE
	CLOSED-JOINT PAVING	€10-60 / m ²	NO	POOR	POOR	POOR
CONCRETE	€100-160 / m ³	NO	POOR	POOR	POOR	

POSSIBILITY OF RECOVERY	HEAT ABSORPTION	LIFETIME (in years)	MAINTENANCE	OTHER INFORMATION
YES	YES	10 +	AVERAGE → SHEET 8	<ul style="list-style-type: none"> To grow a vegetable garden in the ground, you first need to ensure that the land is not polluted and, if necessary, clean it up.
YES	YES	10 +	AVERAGE Regular levelling of the sand layer is required + sifting of the sand once a year	<ul style="list-style-type: none"> Needs a certain amount of sunshine to dry out after rain. Design the sandy area so that it can be covered to avoid inconvenience (litter, cat droppings, etc.).
YES	YES	10 +	AVERAGE Regular levelling of the chip layer is necessary.	<ul style="list-style-type: none"> Needs a certain amount of sunlight to avoid becoming wet and slippery. The best option for large surfaces. The ground covering under the chips must be permeable. Avoid having wood chips near building entrances.
YES	YES	30 +	AVERAGE Regular levelling of the gravel layer is necessary.	<ul style="list-style-type: none"> The surface on which the gravel is deposited must be permeable. Gravel can be recycled as aggregate.
YES	YES	30 +	AVERAGE Regular levelling of the shell layer is necessary.	<ul style="list-style-type: none"> Needs a certain amount of sunlight to avoid becoming wet and slippery. The surface on which the shells are deposited must be permeable.
YES	PARTIAL	50-100	LIGHT	<ul style="list-style-type: none"> The surface on which the paving is laid must be permeable.
PARTIAL	PARTIAL	20 +	AVERAGE Comprehensive cleaning of cavities twice a year	<ul style="list-style-type: none"> Permeability can reduce sharply over time as cavities become clogged. If the covering is uneven, it may be abrasive.
PARTIAL	PARTIAL	20 +	AVERAGE Comprehensive cleaning of cavities twice a year	<ul style="list-style-type: none"> Permeability can reduce sharply over time as cavities become clogged. If the covering is uneven, it may be abrasive.
NO	NO	30 +	LIGHT	<ul style="list-style-type: none"> New products under development. The surface on which the composites are laid must be permeable.
PARTIAL	PARTIAL	20 +	LIGHT	<ul style="list-style-type: none"> Good resistance to intense use. It produces very little dust.
NO	NO	5-10	AVERAGE Comprehensive cleaning twice a year	<ul style="list-style-type: none"> There is a porous EPDM that needs a lot of maintenance to remain functional. The aggregates which make up EPDM represent a potential risk to the environment when drained by run-off water.
YES	NO	50-100	LIGHT	<ul style="list-style-type: none"> An underlayer of sand must be carefully laid for the stands and paving.
PARTIAL	NO	50-100	LIGHT	<ul style="list-style-type: none"> Easily workable, to create slopes and reliefs, like skate parks, or one-off interventions: a round bench, a structure around a tree, etc. → SHEET 4



USE OF BUILT ELEMENTS

The boundaries of playgrounds are often defined by walls. But this generally dull boundary can easily be transformed into something more pleasant. Possible improvements depend on the existing configurations, but will also be the result of the imagination of future users! Don't forget to consider the other built elements in your playground: the canopies and facades of classrooms, refectories and the gym can be used as a medium for activities, games or furniture. Access to the playground can also be improved through work on the school's facades.

THE WALL

A wall can be used as a support for various functions, such as:

- Installation of an **acoustic** system to reduce noise pollution in the neighbourhood. → **AMBITION C SHEET 9**



- Installation of **sport accessories**, such as crossing climbing elements.

→ **AMBITION A SHEET 2**



- Installing objects for **wildlife** such as nesting boxes. → **AMBITION B SHEET 8**

- Creating a place to **relax**: in the illustration below, wood offers a more pleasant contact than the cold, rough original brick wall. It enhances the perception of the playground boundary and makes it less austere. Integrated lighting makes the stands usable at the end of the day. → **AMBITION A SHEET 4**



- Installing **communication media** (chalkboard paint, fresco, etc.) or games (sound games, touch games, storage hooks, etc.).
- Creation of a **musical wall** using recycled materials.

- Installation of **plant** elements (climbing plants, hanging pots, etc.).

→ SHEET 8



RETAINING WALLS AND DIFFERENCES IN LEVEL

Retaining walls have potential to be fun. The ground they border can be connected in different ways:

- The steps are complemented by a fun hut connecting the levels.



- Uneven reliefs are created against the wall to define **areas**, which can be quiet if necessary.



- A simple element can be installed to link top and bottom and create **opportunities for play**.

→ AMBITION A SHEET 2, 3, 5, 6

TECHNICAL RECOMMENDATIONS

- Minimum safety requirements.
- SHEET 1
- **Structure and stability:** when a structural element needs to be modified (earth retaining structure, wall, etc.), consult an architect or engineer. This is the case for the slide in the example opposite. If you don't want to modify the structures, you can simply place the new elements against the structures without modifying them (stands, basketball backboards, etc.).
 - When making changes to the playground, take care not to impede the flow of water from the playground.



FACILITIES TO SUPPORT BIODIVERSITY

Designing the playground to promote biodiversity helps to create islands of coolness, but it's not the only way: biodiversity can also be used to create play areas, demarcate different areas of the playground and/or improve the acoustic and visual perception of the playground.

PRIOR TO ANY MODIFICATIONS

The following points should be borne in mind before planning any installation:

- It's a good idea to study **water flow patterns** so as to position permeable green areas appropriately. → **SHEET 10**
- A careful study of the **amount of sunlight** in the playground will enable you to position any features that need sunlight (such as vegetable gardens) appropriately.
- The Nature facilitator can advise and support you in studying these elements and determining the **optimum locations** for your layout.

Nature facilitator contact:
nature@environnement.brussels

FURTHER INFORMATION

→ **The Nature facilitator for all professionals - Brussels Environment**

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REGULATORY CONSIDERATIONS

As regards plantings: civil code regulations and local bylaws must be respected. In general, the **minimum distance** from the property line is 2 m for tall trees and 1.5 m for other trees and hedges. **Fruit trees planted in espaliers** are exempt from this requirement. Please note that these rules vary from municipality to municipality.

FURTHER INFORMATION

→ **Nature regulation - Guide to durable buildings**

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It's also a good idea to anticipate the **future growth** of the trees once they've reached full size, the shade they'll provide for the surrounding area, and the branches that may protrude into the neighbours' yards.

You don't need a permit to dig a **pond**. On the other hand, check with your local municipality, as there may be local regulations for this type of layout.

With regard to **maintenance**, it is prohibited in the Brussels Region to cut or prune trees with motorised equipment between 1 April and 15 August, in order to protect **bird nesting**.



RECOMMENDED PLANT SPECIES

To enhance local biodiversity and avoid the invasion of exotic species, plant a variety of **native species**. These are adapted to our environment and climate and are more resistant to the diseases and parasites present in the region. There are several **lists of native or locally-adapted non-invasive species** that can be planted in urban and suburban environments, including climbers, hedges, trees, shade plants, aquatic plants and flowering **meadow plants**.

Most of these plants are indigenous. However, a number of **exotic** (but non-invasive) species are included, as they are of interest for biodiversity and help to broaden the choice of plantings.

Finally, planting plants in the **ground**, organised in different layers and composed of a variety of species, offers better development conditions for plants and less general maintenance.

FURTHER INFORMATION

18

- [List of recommended plant and native species - Brussels Environment](#)
- [List of indigenous plants useful for biodiversity - Brussels Environment](#)



LIGHTING DESIGNED ACCORDING TO THE FLORA AND FAUNA

If a lighting system is necessary, it is preferable to choose **lighting** that is less harmful to wildlife.

FURTHER INFORMATION

19

- [Reasoned lighting in green spaces - Brussels Environment](#)
- [All thematic fact sheets and technical recommendations - Brussels Environment](#)



STRAIGHTFORWARD MODIFICATIONS

Plant locally-sourced nectar-producing plants to attract pollinating insects.

Plant these in a flowerbed or transform a shrubbery by planting flowers between existing shrubs. 🏆 🌿 🌿 → **AMBITIONS B, C**



FURTHER INFORMATION

- List of plants for flower meadows - Brussels Environment
- List of shade plants - Natagora

20

Plant ivy and other climbing plants such as honeysuckle to dress up bare walls.

Climbing plants are of great benefit to biodiversity, and do not take up much space. Ivy, for example, insulates in winter and cools in heatwaves, protects the wall from humidity, reduces air pollution by capturing fine particles and reduces noise pollution; while providing nectar-producing flowers, berries for birds and a nesting place for many birds. 🏆 🌿 🌿 🌿 → **AMBITION B, D SHEET 7**

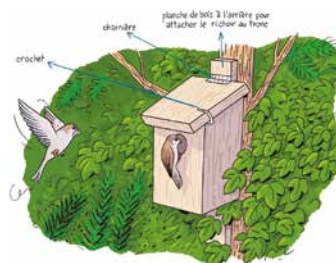


FURTHER INFORMATION

- Climbing ivy - Brussels Environment

21

Install bird nesting boxes, a hedgehog or squirrel nest, and a pile of dead branches and wood.

→ **AMBITION B, D SHEET 5, 7**

FURTHER INFORMATION

- Nesting boxes for birds and mammals - Brussels Environment

22

Modifying the attics of buildings.

Certain quiet areas of the school building could be used to encourage animals such as bats to nest there. 🏆 🌿 🌿 → **AMBITION B, D SHEET 7**

FURTHER INFORMATION

- Bat shelters - Guide to durable buildings

23

Install a tunnel or a hut made of willow. 🏆 🌿 🌿

→ **AMBITION A, B SHEET 2, 5**

Plant a grove of shrubs or a flowering hedge for birds and insects.

A variety of native species, preferably planted in the ground, will provide an ideal refuge for wildlife. Hedges form clearly visible natural boundaries for the different areas of the playground. 🏆 🌿 🌿

→ **AMBITION B, D**

FURTHER INFORMATION

- Plants for hedges - Brussels Environment

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MODIFICATIONS WITH AN AVERAGE DEGREE OF DIFFICULTY

Build an insect spiral or a low drystone wall lined with aromatic and nectar-producing herbs.

A great project for students to get involved in!  → **AMBITION A, B SHEET 5**





FURTHER INFORMATION

25

→ [Building an insect spiral - Brussels Environment](#)

Install a vegetable garden in the ground or "off the ground".

Thanks to the vegetable garden, students produce local food that enhances biodiversity in the city. It's an opportunity to raise awareness of the need to reduce the ecological impact of our agricultural production.   → **AMBITION B, D SHEET 4**



FURTHER INFORMATION

26

→ [A vegetable garden at school - Brussels Environment](#)


Choose enclosures to help wildlife pass through, where relevant. → **AMBITION A, B SHEET 4**

FURTHER INFORMATION

27

→ [Enclosures to help wildlife pass through - Brussels Environment](#)



MORE CHALLENGING MODIFICATIONS

Trees bring shade and coolness to the playground, and are an essential part of the city's climate transition.   → **AMBITION B, D**

Bear in mind: Trees need a sufficient volume of nutrient-rich soil to thrive. Other elements, such as grates, hedge planting or the construction of permeable bases, ensure water supply, and **protection and aeration for roots** close to the ground.

Create a tree-bench combination, with or without ground contact. → **AMBITION A, B SHEET 5**



Create a pond. Thanks to water evaporation, ponds help prevent the formation of heat islands. Combined with greenery, which evaporates water more efficiently, the area is cooled even more.   → **AMBITION B, C**

Bear in mind: the minimum size of the water feature is 3 m², and a **flat peripheral surface** should be envisaged. The ideal depth is 80 to 100 cm, and gently sloping banks are recommended for planting and to prevent falls.



FURTHER INFORMATION

28

→ [Creating a natural pond - Brussels Environment](#)

Create a wet area, such as an open area for water infiltration. This type of water retention and infiltration basin creates an ideal environment for developing wetland flora. 🌿

→ AMBITION B, D SHEET 10

Bear in mind: if the school has cellars, the water basin must be at least 3 m from the facades.

FURTHER INFORMATION

29

→ Tool | Water basins - Guide to durable buildings

Create a green roof. Green roofs contribute to the development of nature in the city, counteract the creation of heat islands and enable sustainable management of rainwater.



→ AMBITION B, D SHEET 6, 9

Bear in mind: make sure the supporting structure is strong enough! It is important to check the load-bearing capacity of the roof, and therefore whether it is feasible.



FURTHER INFORMATION

30

→ Tool | Extensive green roof - Guide to durable buildings

MAINTAINING YOUR MODIFICATIONS

Draw up a management plan for the modified planted areas, including:

- the evolution of what will be planted;
- frequency and person(s) in charge of **watering**, using rainwater collected in a cistern if possible; → SHEET 10

- the schedule and the person(s) in charge of **pruning** hedges, copses and fruit trees. Avoid pruning when birds are nesting (see regulations);

- schedule and person(s) in charge of late **mowing** (flowerbeds, unmowed lawns);

- the schedule and the person(s) in charge of maintaining certain **nesting boxes**, obviously outside nesting periods;

- the **schedule** for planting the vegetable garden, if necessary, harvesting, watering, what will be taken care of by which class and which students.

Communicate and share this management plan with all users of the spaces (municipal services, janitors, educational team, etc.). This will prevent over-watering or unwanted mowing.

Avoid the introduction of invasive plants. These tend to disrupt existing ecosystems and drive out other local species useful for biodiversity.

FURTHER INFORMATION

31

→ List of invasive alien species of concern for the European Union - Brussels Environment

Prohibit the use of herbicides or pesticides, and check with maintenance staff or the company that manages the school's outdoor spaces.

FURTHER INFORMATION

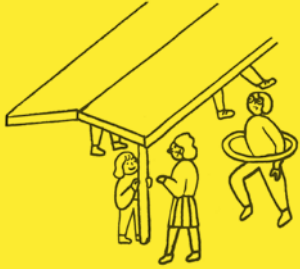
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→ Pesticides - Brussels Environment

In the management of green spaces, the need for intensive lawn maintenance should be re-considered: **less frequent mowing** will benefit biodiversity and free up time for other activities.



SHELTERS



It's important to ensure that the outdoor covered area is large enough to provide shelter during breaktime.

Shelters provide protection from rain, sun or wind. Creating shade is fundamental to reducing temperatures during periods of heatwave, an increasingly frequent problem in the highly paved environment in Brussels.

Rain protection is also essential, and some schools even require wind protection. They also play a complementary role in the acoustics of the premises.

Consider the following options for the needs to be met and the layout to be created beneath the canopy.

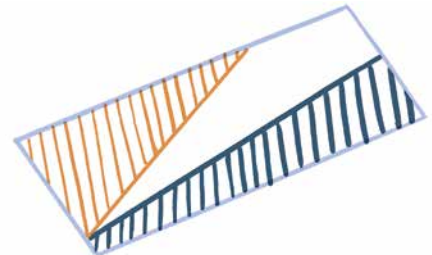
NEED PROTECTION FROM RAIN, SUN AND/OR WIND?

Depending on your needs, think about the right location in the playground:

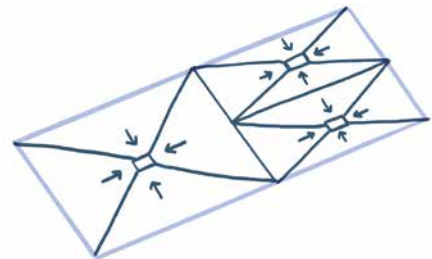
- As regards **sun protection**, the first thing to do is to survey the hottest spots in the playground and locate the shaded areas. This will help you identify areas that need shade, and measure the impact on sunlight and on the playground's neighbours and surrounding buildings.

A few ideas: the easiest way to **create shade** is to plant trees. Large-scale, well-situated playgrounds can meet certain needs.

- As regards **rain protection**, you will need to have a rainwater runoff analysis carried out, plan the route the new installation will take, and add a rainwater recovery system. → **SHEET 10**



Diagrams of hot and cold spots in the playground



Rainwater runoff analysis diagrams

NEED A FIXED OR MOBILE SHELTER?

The material choice for the shelter will be determined by your answer to this question.

Mobile shelters

You can make these in a workshop with the children: 🙌🙌

- You can change their location, and they can be removed according to the needs of the moment. 🌿
- These cost less than a fixed shelter. 🏆

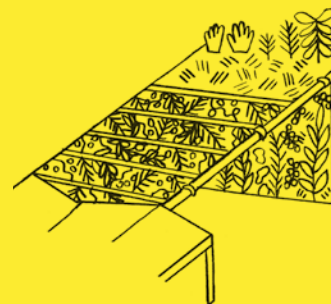
Some ideas: parasols, lightweight wooden structures or retractable hanging canvases. 🏆



Fixed shelters

- Planning permission is mandatory.
- The choice of location, materials and form must be carefully considered.
- The degree of weather protection is important.
- If it's an intransparent structure, you'll need to consider roof openings or openings along its edges to ensure that light can enter.

Some ideas: install a wooden or metal pergola with climbing plants to shade the playground, integrate photovoltaic panels or carefully choose a canopy shape to organise playground activities.



POSSIBILITY OF ADDING FUNCTIONS?

- Canopies with a roof that can be walked on. They must comply with railing standards, have a suitable structure, controlled views (with respect to neighbours) and preferably have a variety of access points: ramp, staircase, climbing wall, slide, etc. → **SHEET 2**
- Green roof For types of planting and substrates, and frequency of maintenance. → **SHEET 8**
- Collection of rainwater from the roof The collected water can be used to water the garden and flush toilets. → **SHEET 10**
- Improve the acoustics of the playground by preventing noise from spreading to the classrooms and by using a suitable (absorbent) lining. → **AMBITION C**

FURTHER INFORMATION

33

- Standard NBN B 03-004 Guardrails for buildings
- Green Roof Sheet - Brussels Environment



IS IT POSSIBLE TO APPLY FOR A SUBSIDY?

To determine whether your new school canopy can be subsidised, first calculate the school canopy area per student:

SCHOOL CANOPY AREA

TOTAL NUMBER OF STUDENTS (M²/S)

School canopy area This is the total area of covered outdoor spaces or equivalent indoor spaces.

Number of students The number of students counted is the number using these areas simultaneously.

The subsidy for the construction or modernisation of a school canopy cannot exceed €674.73 / m².

FURTHER INFORMATION

More information on subsidies is available on the websites of community infrastructure departments:

- WBF website
- AGION website (NL)
- VGC website (NL)

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The areas eligible for subsidies are the following:

MAXIMUM SURFACE of the school canopy that can be subsidised (physical standards)

1.2 m² / student in general education in the Flemish Community

1.8 m² / student with special education needs in the Flemish Community

2 m² / student in basic education in the French-speaking Community

1 m² / student in secondary and higher education in the French-speaking Community

MINIMUM SURFACE of school canopy eligible for subsidies (physical standards)

50 m² in general education in the Flemish Community

75 m² in education with needs in the Flemish Community

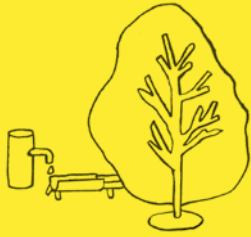
For bicycle and moped shelters, 1.2 m² can be allocated per student using this means of transport.

FURTHER INFORMATION

→ Decree of the Government of the French Community establishing the rules that determine the need for new buildings or extensions and the physical and financial standards for school buildings, boarding schools and psycho-medico-social centres.

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RAINWATER MANAGEMENT

Water is an important element in the playground. Making it visible and restoring the natural cycles of regulation has several advantages: the playground can be refreshed, puddles can be avoided, water games can be created, the school can reduce its consumption of drinking water... Water can then be seen as a resource rather than a nuisance.

Right from the design stage of a playground redevelopment project, it's essential to study the path of water, especially if planted areas are envisaged. Rainwater can be collected for watering these plantations or for cleaning exterior and interior surfaces.

REGULATORY CONSIDERATIONS

The Regional Planning Regulations (RRU) specify certain rules concerning soil permeability and **water recovery** on the plot. For example, water from all impervious surfaces must be collected in a cistern or spreading field. Otherwise, it will be discharged into the public sewer system.

FOR MORE INFORMATION

→ [Regulations and standards - Guide to durable buildings](#)

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General or specific local planning regulations (RCU) may supplement the RRU. Ask your local municipality for more information.

FOR MORE INFORMATION

→ [Municipal planning regulations - urban. brussels](#)

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PRIOR TO ANY MODIFICATIONS

You're not alone! The Water Facilitator can provide you with the expertise you need to **guide your school** through the choice of facilities, their feasibility and their chances of success:

Contact Water Facilitator:
Faciliteur.eau@
environnement.brussels

- Underground structures are a constraint. For example, it's complicated to infiltrate above a basement car park. You can identify these structures via plans or, failing that, surveys.
- To best size a rainwater management system, make sure the **soil is permeable**, using a permeability test and soil mapping. → [SHEET 6](#)

- To install point infiltration devices such as an infiltration channel, it may be useful to check the permeability and pollution status of the soil using a permeability test and soil mapping.

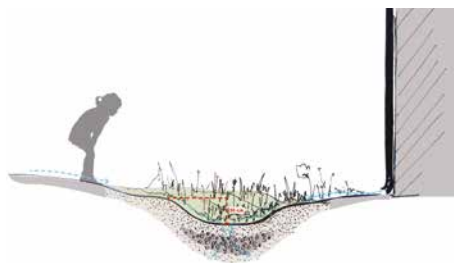
- For the creation of green roof storage systems, the **load-bearing capacity** of the existing structure should be verified by a stability engineer.

- In existing buildings, a conventional roof can be converted into a **storage roof** quite easily by installing a flow-controlled drainage system. In fact, water stored on the roof represents no additional load compared with a conventional design (which already takes account of the weight of snow). However, it is important to ensure that there is a watertight seal, and not to install the mechanism where there are electrical devices.

FOR MORE INFORMATION

→ Identifying the physical constraints of the plot - Guide to durable buildings

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RAINWATER COLLECTION SYSTEMS

- Install a **rainwater collector** with cover (barrel, cistern, can, tank, etc.) at the base of a gutter. You can install several collectors side by side, connected in series at the top to recover as much water as possible. In the absence of a nearby roof (equipment room, shelter, etc.), rainwater collectors can be placed in various locations, to which systems can concentrate the rainwater (fin system, funnels, simple stretched tarpaulins, etc.). The rainwater collector must be cleaned once a year to increase its storage capacity.

→ **AMBITION B SHEET 7**



- Create an **underground water collection tank**, with a flow regulator at the outlet if it is not possible to infiltrate the overflow. → **AMBITION D**

FOR MORE INFORMATION

→ Recovery tank - Guide to durable buildings

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- Create a **surface infiltration volume** to receive the overflow from the rainwater recovery tank. This type of modification, water basins, rain gardens or water retention basins, makes sustainable use of water by delaying the discharge to the sewer system. You can install a flow regulator at the outlet. If infiltration isn't possible, there are alternatives, such as creating an above-ground **rain garden** or a watertight valley. 🏆🌱 → **AMBITION B, D SHEET 8**



FOR MORE INFORMATION

- Water basins - Guide to durable buildings
- Rain gardens - Guide to durable buildings

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SYSTEMS FOR CREATING PERMEABLE ZONES

- Use ground coverings that allow infiltration. This involves either a specific **laying method**, such as slabs or paving with open joints, or choosing a material with a permeable **structure**, such as grass slabs. These permeable coverings not only allow water infiltration, but also the growth of **low-growing greenery**, while preserving areas that are still usable and robust. One alternative, albeit less favorable to nature, is to lay concrete or draining hydrocarbon pavements.



- Increase open-ground areas and maintain areas of **unmown lawn**, with gentle, uniform slopes. Dense greenery will increase the proportion of permeable surfaces in the playground and infiltration will be slow and diffuse. Combined with a water basin, this system will be all the more effective.

→ **AMBITION B, D SHEET 8**



- Cover play areas with **absorbent materials** such as wood chips. → **AMBITION C, D SHEET 2, 6**



- Use a **vegetable garden or rain garden** as a permeable surface. 🌱🌿

→ **AMBITION B, D SHEET 6, 8**

- Install **reservoir structures** or drainage massifs under the playground (under a concreted zone, vegetable garden, car park, pavement, etc.). These structures provide temporary water storage before infiltration. They have the advantage of leaving the **ground surface available** while allowing rainwater to be managed.

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FOR MORE INFORMATION

→ **Reservoir structures - Guide to durable buildings**

MAINTAINING YOUR MODIFICATIONS

- To **maintain** permeable surfaces, see the floor covering comparison chart. → **SHEET 6**
- Rainwater management systems must be regularly maintained. To do this, be sure to obtain their maintenance manuals. Make sure that the tasks and roles involved in device maintenance are clearly defined from the outset. In general, maintenance tasks are the responsibility of the **PO**, who delegates them to a janitor, an external service or a municipal department.
- Make sure you clean the rainwater collector once a year to increase its storage capacity.
- In the case of an external infiltration volume such as a valley or water retention basin, **safety** measures may be put in place if the slopes are steep (peripheral or horizontal gratings to prevent falls). However, these layouts are generally designed to create gentle slopes. Only in exceptional cases, such as heavy rainfall, does water stagnate at the bottom of the layout.



CO-USE AGREEMENT AND ACCESS CONTROL



Sometimes a playground is made available to people from outside the school (co-use). In this case, various means can be put in place to harmonise the use of the playground space by different users. On the one hand, an agreement can formalise the conditions of use of school facilities: defining the limits of the available area, tidying up after use, maintenance, what to do in the event of problems, etc. On the other hand, it can be useful to physically demarcate access to playground areas, which can be done in different ways.

CO-USE AGREEMENT

The following is a non-exhaustive list of topics that may appear in a co-use agreement.

Access to the areas

- Clearly **define** the areas made available in the agreement, and **inform** co-users of these boundaries (e.g. by signposting or displaying a map of the school). The space made available may vary according to the **request** of the third-party user and/or according to what the school authorises on specific occasions.
- If necessary, **physically demarcate** the accessible areas within the school grounds.

Timetables

- Determine for how long the **areas will be used** by the users and make a **schedule** updated by a designated person.

After use

- Clearly allocate responsibilities and **tasks** to be performed after use (maintenance, storage, cleaning, etc.).
- Establish a routine after the premises have been used, for example by **checking** the premises, equipment, cleanliness and locking accesses. A person in charge can be appointed to maintain a daily logbook with monitoring data.
- Define specific **procedures** to be followed in the event of damaged or stolen equipment. The procedure covers the steps to be taken from the time the damage is detected to the time the equipment is repaired or replaced.

Communication protocol

- Designate a single **contact person** within each party. Communication will take place via the contact persons for the renewal of the agreement, the provision of services to other users, or in the event of problems.

Note: it's a question of finding the right method of communication to explain the rules to be respected by external users. You could take advantage of an inauguration party or other event to present the principles of co-use and the person to contact. In this way, a sense of belonging to a community is fostered rather than a relationship of authority, which helps to empower the various user groups who will make the available space their own.

Insurance and legal aspects

- Consider bringing in **legal counsel**, possibly appointed by the PO, to draft the agreement as clearly as possible.
- Clarify how the **responsibilities** will be divided.
- Consult the **insurance policies** for all parties, guests and users.

Reciprocated service

- In the case of an agreement with a non-profit association, make the spaces available, for example in the form of an **exchange of services**, where the "user" association undertakes to provide services to the school in return for compensation (running workshops or activities for the children, repairs, administrative services, etc.).
- In some cases, consider charging a **rental fee** for the space, in order to finance the supervisory staff and/or expenses such as heating, electricity, etc.

ACCESS CONTROL

Access to the areas

There are a **number of ways** to control access to the areas of the school. They can be used individually or in combination:

- supervision by a person;
- closed via **technical means** (locks or badges);
- **physical limits**, which can take different forms. They can be co-constructed as play objects or multi-functional furniture (e.g. barriers, games or benches).

Material resources

Provide **storage space** for third-party users. Make clear agreements regarding their use. Put in place a simple means of ensuring that these storage areas are only accessible by the people for whom they are intended (padlocks, allocated space, etc.).



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SHEET 2

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- Sint-Ludgardis Merksem School, Groenman project. Antwerp, Belgium. © groenman.be (p. 70)
- Ivry Levassor School, "OASIS playgrounds" project. Paris, France. © AAC-OMGEVING-21 SOLUTIONS (p. 71)
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- Hut, Riblette public elementary school (16), "OASIS playgrounds" project. Paris, France, 2019. © AAC-OMGEVING-21 SOLUTIONS (p. 77)
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- Mare, Saint-Joseph de Saint-Servais school, "Ose le Vert, Recrée ta cour" project. Namur, Belgium, 2017. © Céline Henriet – GoodPlanand Belgium (p. 82)
- Green roof, Guide to durable buildings de Brussels Environment. © Bernard Boccara (p. 82)
- Illustration Chloé Perarnau (p. 85)

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- Les Grands Voisins, temporary occupancy project of the Saint-Vincent-de-Paul hospital. Paris, France, 2018. © AAC-OMGEVING-21 SOLUTIONS (p. 85)
- Retractable sail in elementary school playground. Echillais, France, 2016. © GrandVoile (p. 85)
- Pavillon Van Beuningenplein, Concrete architects. Amsterdam, Netherlands, 2011. © Ewout Huibers for concrete (p. 85)
- Westborough Primary School, Cottrell & Vermeulen architecture. Westcliff-on-sea, England, 2012. © Anthony Coleman (p. 85)
- Walkable school canopy at Prins Dies nursery school, designed by Agwa architects. Antwerp, Belgium, 2014. © Marie-Françoise Plissart (p. 85)

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- Water basin, Brussels Environment, Molenbeek-Saint-Jean, Belgium, 2015. © Elise Beke (p. 90)
- Open-joint paving, Alain Fournier school (14), "OASIS playground" project. Paris, France. © Ville de Paris-Laurent Bourgogne (p. 90)
- Permeable surface, Picard project. Guide to durable buildings de Brussels Environment. © Lode Saidane, Atlante (p. 90)
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perspective.brussels/fr/toolbox

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geobru.irisnet.be/fr/searchapp/maps
→ **Brussels Environment maps**
geodata.environnement.brussels/client/view
→ **TOOLBOX - Information from the Region on regulations to be observed in school facilities**
beecole.brussels/fr/toolbox/reglementations-respecter/urbanisme

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beecole.brussels/fr/toolbox/financements

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arbres-inventaire.irisnet.be
→ **Ecological network and maps**
geodata.environnement.brussels/client/view
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environnement.brussels/thematics/green-spaces-and-biodiversity/biodiversity

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infrastructures.cfwb.be/index.php?eID=tx_nawsecuredl&u=O&file=fileadmin/sites/agi/upload/agi_super_editor/agi_editor/documents/SGIPS/AR_6-02-2014.pdf&hash=94b092a3173021f07dda7391ec1874cb4d044d11

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→ **Recommendations of the Wallonia-Brussels Federation: Identity sheet - playground**
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→ **Standards of the Flemish Community: Fysische en financiële normen (NL)**
agion.be/fysische-en-financi%C3%A5le-normen

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→ **Title IV of the Regional urban planning regulations (RRU in French): Accessibility of buildings by persons with reduced mobility**
urbanisme.irisnet.be/pdf/RRU_Titre_4_FR.pdf
→ **Collectif Accessibilité Wallonie-Bruxelles: Guide to designing an accessible building**
urbanisme.irisnet.be/pdf/guide-daide-a-la-conception-dun-batiment-accessible
→ **Inter, accessibility consultant in Flanders: Inspiratiebundel Toegankelijkheid van voorzieningen voor gezinnen met kinderen (NL)**
inter.vlaanderen/sites/default/files/Inspiratiebundel%20toegankelijkheid%20van%20voorzieningen%20voor%20gezinnen%20met%20kinderen_2013_1.pdf
→ **Plain-Pied: Guide to good practice in welcoming students with disabilities to compulsory and higher education in the Brussels Region**
plain-pied.com/upload/brochures/55.pdf

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→ **STP: School travel plans**
mobilite-mobiliteit.brussels/fr/ecole/les-plans-de-deplacements-scolaires
→ **Vademecum "Vélo Région Bruxelles": Bicycle parking**
mobilite-mobiliteit.brussels/sites/default/files/vm_7-stationnement-velo-web.pdf
→ **Good Move: Good Move Brussels**
mobilite-mobiliteit.brussels/fr/good-move
→ **Bicycle, motorcycle, car and delivery parking requirements**
environnement.brussels/le-permis-denvironnement/les-conditions-generales-et-specifiques/les-conditions-generales-9
→ **Pro Velo: Pro Velo Brussels**
provelo.org

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→ **Royal Decree of 7 July 1994: Basic standards for fire and explosion prevention**
besafe.be/sites/default/files/2018-03/ar_fed_normesdebase.pdf
→ **Download the request form on the SIAMU website**
pompiers.brussels/fr/pr%C3%A9accord

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→ **Safety of playgrounds and playground equipment**
economie.fgov.be/fr/themes/qualite-securite/securite-des-produits-et/reglementations-specifiques/activites-de-loisir/securite-des-aires-de-jeux-et

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→ **Playground Safety Manual**

economie.fgov.be/fr/publications/manuel-securite-des-aires-de

→ **Risk assessment tool**

economie.fgov.be/sites/default/files/Files/Quality-and-Security/Analyse-de-risques-aires-de-jeux-Schemas-d-inspections.xls

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agion.be/veiligheid-speeltoestellen

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→ **Is a green playground dangerous?**

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→ **Ose le Vert: Safety and risk education**

oselevert.be/securete-et-education-au-risque.php

→ **Springzaad: Richtlijnen Risicoanalyse: Uitdaging en Veiligheid**

springzaad.be/aan-de-slag/uitdaging-en-veiligheid

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guidebatimentdurable.brussels/fr/revetements-permeables.html?IDC=10707#1

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environnement.brussels/thematiques/espaces-verts-et-biodiversite/action-de-la-region/faciliteateur-nature

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document.environnement.brussels/opac_css/elecfile/IF_2017_LIST_EspecesVegetales_indigenes_conseillees_fr

→ **List of indigenous plants useful for biodiversity - Brussels Environment**

environnement.brussels/thematiques/espaces-verts-et-biodiversite/mon-jardin/comment-choisir-mes-plantes

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→ **Reasoned lighting in green spaces - Brussels Environment**

document.environnement.brussels/opac_css/elecfile/RT_Eclairage_raisonne_FR.pdf

→ **All thematic fact sheets and technical recommendations - Brussels Environment**

environnement.brussels/node/22669

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→ **List of plants for flower meadows**

document.environnement.brussels/opac_css/elecfile/IF_Biodiv_LIST_Prairies_fleuries_DEF_FR.pdf

→ **List of shade plants - Natagora**

natureaujardin.natagora.be/fileadmin/Nature_au_Jardin/Fiche_conseil/fiche_NATAGORA_NAJ_liste_plantes_ombre_BIL_080509.pdf

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environnement.brussels/node/22669

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→ **Bat shelters - Guide to durable buildings**

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→ **Plants for hedges - Brussels Environment**

document.environnement.brussels/opac_css/elecfile/LIST_Plantes_haies_DEF_FR.pdf

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environnement.brussels/thematiques/alimentation/lecole-un-potager-lecole

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environnement.brussels/thematiques/espaces-verts-et-biodiversite/les-pesticides

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cstc.be/homepage/index.cfm?cat=publications&sub=bbri-contact&pag=Contact32&art=492&lang=fr

→ **Green Roof Sheet - Brussels Environment**

document.environnement.brussels/opac_css/elecfile/IF%20Eco%20construction%20TERO%20Part%20FR

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→ **WBF website**

infrastructures.cfwb.be/index.php?id=1367

→ **AGION website (NL)**

agion.be/subsidi%C3%ABring

→ **VGC website (NL)**

vgc.be/ondersteuning/subsidies/subsidies-onderwijs

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urbanisme.irisnet.be/lesreglesdujeu/les-reglements-durbanisme/les-reglements-communaux-durbanisme

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guidebatimentdurable.brussels/fr/1b-contraintes-physiques.html?IDC=9480#2

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guidebatimentdurable.brussels/fr/citerne-de-recuperation.html?IDC=10519

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guidebatimentdurable.brussels/fr/noues.html?IDC=9005

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guidebatimentdurable.brussels/fr/jardin-de-pluie.html?IDC=10708

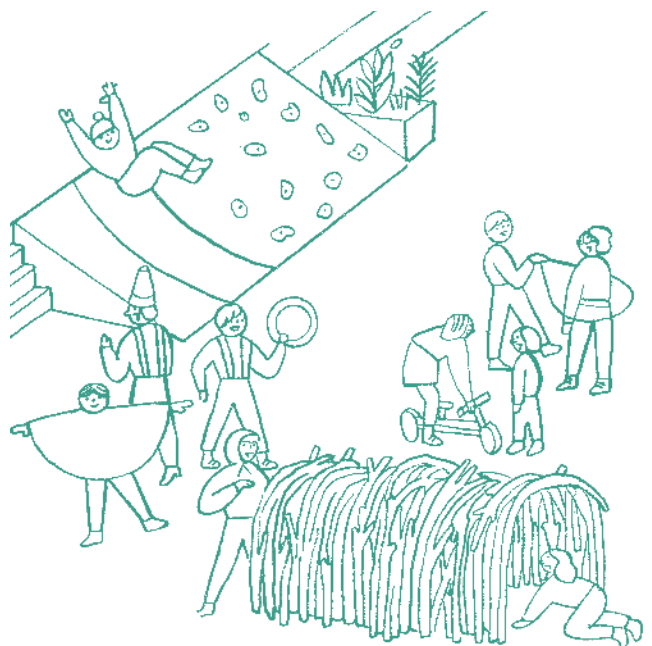
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→ **Reservoir structures - Guide to durable buildings**

guidebatimentdurable.brussels/fr/structures-reservoirs.html?IDC=10719

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TO FIND OUT MORE

In addition to the references contained in the guide, you'll find below some additional information (technical and educational documentation and literature) to help you delve deeper into certain aspects of the five ambitions.

AMBITION A — FUN AND ENJOYABLE

—> **Research project at the University of Mons (BE):**

Preventing violence in playgrounds

cips-bw.be/sante-et-bien-etre-a-l-ecole/plate-forme-amelioration-du-climat-scolaire-et-prevention-du-harcelement/sensibiliser/projet/decire-une-experience?experiencePk:152

—> **"Patios coeducativos" guide. Guía para la transformación feminista de los espacios educativos» (Mixed playgrounds. Guide for the feminist transformation of educational spaces) (ES), Col.lectiu Punt 6 y Coeducació, 2020**

issuu.com/patioscoeducativos/docs/libro-patioscoeducativos_09-04-2020_cast

—> **Guide "Cómo intervenir un patio escolar" (How to intervene in a school playground) (ES), Colectivo Basurama, La Aventura de Aprender, 2017. Creative Commons**

laaventuradeaprender.intef.es/documents/10184/67760/como-intervenir-un-patio-escolar

—> **Guide "El patio de la escuela en igualdad" (The egalitarian school playground) (ES), Equalsaree, 2017. Creative Commons**

ia803008.us.archive.org/11/items/elpatiodelaescuelaenigualdad_equalsaree/2019%2006%2011%20Gu%C3%ADa-%20CASTELLANO.pdf

—> **Project of the City of Geneva (CH): Playgrounds**

geneve.ch/fr/themes/structures-accueil-enfance-activites-extrascolaires/lieux-loisirs/places-jeux

—> **Research publications on child-oriented public space, kind & samenleving (BE)**

k-s.be/publicaties

AMBITION B — NATURE

—> **Tips for welcoming nature and encouraging biodiversity:**

Mon Jardin (BE) Brussels Environment

environnement.brussels/thematiques/espaces-verts-et-biodiversite/mon-jardin

—> **Maps of the Brussels ecological network, fauna observed in BCR, etc. (BE) Brussels Environment**

geodata.environnement.brussels/client/view

—> **Nature and biodiversity educational offering (BE) Brussels Environment**

environnement.brussels/thematiques/espaces-verts-et-biodiversite/lecole

—> **Connecting and learning in nature: Learning in nature (BE) Brussels Environment**

environnement.brussels/thematiques/espaces-verts-et-biodiversite/lecole/apprendre-dans-la-nature

—> **Educational tools on biodiversity and vegetable gardens (BE) Brussels Environment**

environnement.brussels/thematiques/espaces-verts-et-biodiversite/lecole/outils-pedagogiques-sur-le-theme-de-la-biodiversite

—> **Bubble training courses, on natural landscaping in the playground, market gardening at school, composting, learning outdoors, etc. (BE) Brussels Environment**

bubble.brussels/activities

—> **MICOS programme in Madrid: to improve the city's air and combat heat islands (ES) Madrid desarrollo urbano, Plan A and Ciudad de los cuidados**

arcgis.com/apps/MapJournal/index.html?appid=2c47dbdc7a7c4baeb12667a8d05c83eb#map

[html?appid=2c47dbdc7a7c4baeb12667a8d05c83eb#map](https://arcgis.com/apps/MapJournal/index.html?appid=2c47dbdc7a7c4baeb12667a8d05c83eb#map)

—> **Guide "Ose le vert": Recrée ta cour (BE)**

Goodplanet Belgium

goodplanet.be/docs/edu/Recree-ta-cour_web.pdf

AMBITION C — COMFORTABLE AND STIMULATING

- **Guide "Oasis playgrounds - Recommendations for transforming school playgrounds"** (FR), City of Paris, 2020
es.calameo.com/read/004055278574d74b1615a?page=1
- **Educational tools on noise at school "bilan sonore par les élèves"** (BE), Brussels Environment
document.environnement.brussels/opac_css/elecfile/BE_DP_bruit_FR.pdf
- **Acoustic comfort in schools** (BE), Brussels Environment
environnement.brussels/thematiques/bruit/lecole/confort-acoustique-dans-les-ecoles
- **Mapping of multi-exposure noise** (BE), Brussels Environment
environnement.brussels/thematiques/bruit/donnees-bruit/cartographie-et-exposition-de-la-population/cartographie-du-bruit
- **Dossier "Minimising the acoustic contribution of buildings to the neighbourhood"** (BE), Brussels Environment
guidebatimentdurable.brussels/fr/minimiser-la-contribution-acoustique-du-batiment-au-quartier.html?IDC=25&IDD=5648

AMBITION D — ECO-MANAGED

- **Guide for durable buildings: Managing rainwater** (BE) Brussels Environment
guidebatimentdurable.brussels/fr/gestion-de-l-eau-pluviale.html?IDC=9478
- **Composting** (BE) Brussels Environment
environnement.brussels/thematiques/zero-dechet/conseils/gerer-les-dechets/je-composte-mes-dechets-organiques
- **Educational tools on waste and composting** (BE) Brussels Environment
environnement.brussels/thematiques/dechets-ressources/lecole/outils-pedagogiques-sur-le-theme-des-dechets-des-ressources-et
- **Animation packs sorting and Cleanliness** (BE) Bruxelles Propreté
arp-gan.be/fr/pedagogie.html
- **Urban Green Blue Grid: Examples of projects (Urban Green Blue Grid: Examples of projects)** (NL) Atelier GROENBLAUW
urbangreenbluegrids.com/projects
- **Initiatives of 'Rues Scolaires': DIY - Rue scolaire** (BE) Brussels Mobility
mobilite-mobiliteit.brussels/en/node/846

AMBITION E — OPEN TO THE NEIGHBOURHOOD

- **Out-of-school activation network: VGC, Brede School in Brussel** (NL)
vgc.be/wat-biedt-n-brussel/stedelijk-beleid/brede-scholen
- **Sportwerk, an association that works with summer camps in schools: Sportwerk Vlaanderen - Maakt Werk van Sport** (NL)
sportwerk.be
- **Evaluation of the "Patis escolares oberts al barri" programme** (ES)
institutinfancia.cat/wp-content/uploads/2017/10/20171011_AvaluacioPatisOberts_informe.pdf
- **The Slimgedeeld.be guide and website make it easier for schools, local authorities and associations to open up their school facilities**>
slimgedeeld.be



Our sincere thanks go to the many people involved in the development of this guide:

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Soil Inventory Department

Noise Department

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Headmistress: Martine Samyn

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Headmistress: Laëtitia Malisoux

Paviljoen School in Schaerbeek. Headmaster: Sven Moens

Institut Charles Gheude in the City of Brussels.
Headmaster: Otman El Abdi

Institut des Ursulines in the City of Brussels.
Headmistress: Viviane Meys

GO! Technique Ateneum in Jette. Headmaster:
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Athénée Royal Sippelberg in Molenbeek-Saint-Jean. Headmistress of the primary school: Isabelle Yannart Headmaster of the secondary school: Philippe Nevraumont

PARTICIPANTS AT WORLD CAFÉ

"Réflexion sur l'ouverture de la cour de récréation et la co-gestion de celle-ci" held on 5 December 2019.

THE INDIVIDUALS AND DOCUMENTS CONSULTED DURING THE INVENTORY AND ANALYSIS PROCESS

Art Basics for Children. Contact: Wim de Graeve

Brede School Schaarbeek-Helmet.
Contact : Barbra Erhardt

À la Croisée des Chemins School. Contact: Olivier Vanderaspolden at the City of Brussels Author: B2Ai in collaboration with THV Thiers-Dujardin (landscape architect)

De Muziekladder primary school
Contact: Marinka Van Ingelgom

De Piramide primary school and Leefschool Toverbol nursery school. Kiel, Antwerp. Author: Manu Van Hove « Groenman »

Fris in het Landschapp / Pimp je Speelplaats.
Contact: Katrijn Gljssel

GoodPlanet Belgium. Contact: Kris Van Ingelghem

Kind & Samenleving. Contact: Wouter Vanderstede

Onderwijs Centrum Brussel.
Contact: Gudrun Isentrant & Fanny Lagae

Federal Public Service Economy, Directorate General Quality and Safety, Safety Regulations Department (ENSURE). Contact: Carine Renard

Ghent University, Department of Architecture and Urban Planning. Contact: Maarten Van Den Driessche

Vlaamse Dienst Speelpleinwerk.
Contact: Wouter Temmerman

Vlaamse Scholierenkoepel.
Contact: Eva Perremans and Lieselotte Deckers

Brussels-Paris exchange trip as part of the "Oasis playgrounds" project of the Council for Architecture, Town Planning and the Environment of the City of Paris Contact: Laurence Duffort and Raphaëlle Thiollier, CAUE of the City of Paris

"Avaluació de 'Patis escolars oberts al barri'" (Evaluation of the 'School playgrounds open to the neighbourhood' programme), Institute of Childhood and adolescence, Barcelona

"Como está el patio" (The state of the playground), Traza. Contact : Alba Navarrete Rodríguez

"Cómo intervenir un patio escolar" (How to intervene in a school playground) and "ReLabs_Laboratorio de residuos vivos" (ReLabs_Living waste laboratory), Basurama. Contact: Mónica Gutiérrez Herrero

"OASIS Playgrounds", Paris. Author: CAUE Paris Council for Architecture, Urban Planning and the Environment of the City of Paris

"El pati de l'escola en igualtat" (The egalitarian school playground), Equal saare. Contact: Julia Goula Mejón



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DESIGN: CUISTAX
GRAPHIC DESIGN: STATION MIR - ILLUSTRATION: CHLOÉ PERNAU



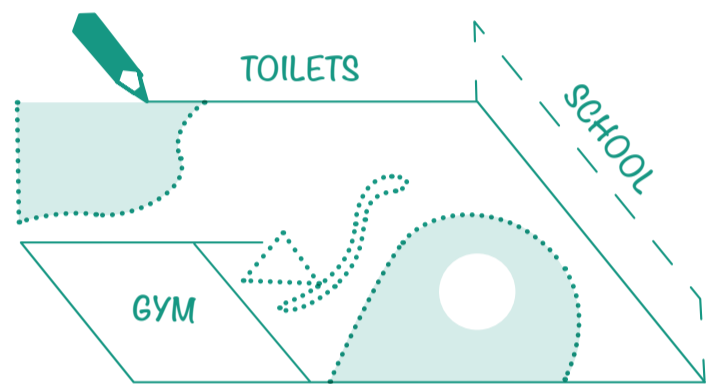
ROADMAP

To help you carry out the diagnosis **→ STAGE 1** (p. 12) of your playground and determine the objectives of your project **→ STAGE 2** (p. 13), here's a roadmap to guide you through your playground improvement project.

I. OBSERVATION **→ STAGE 1**

Draw the outline of your playground on a sheet of paper. Draw or mark the perimeter elements at their location:

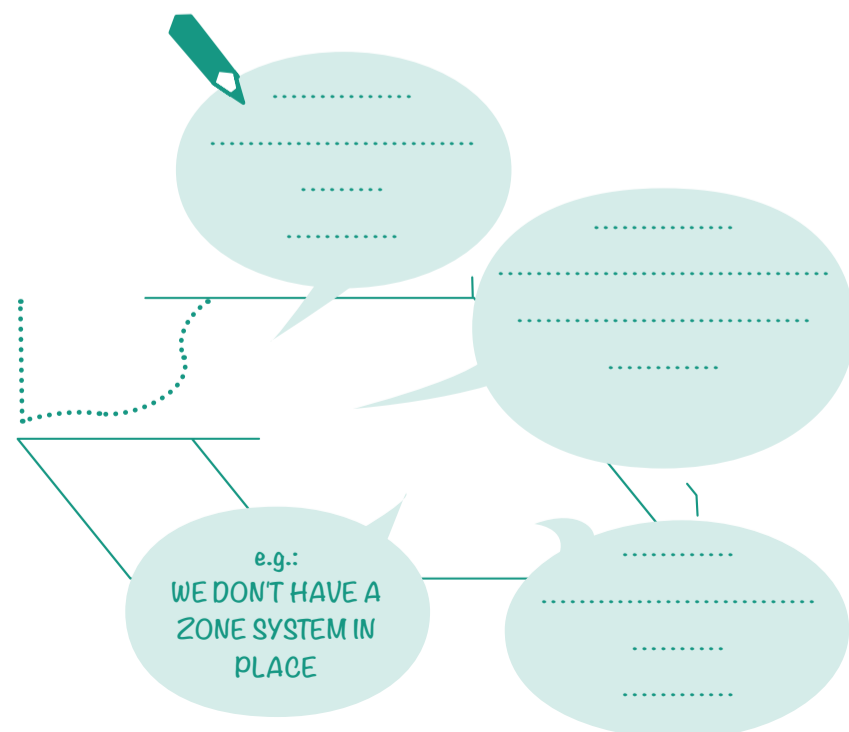
- Access to the playground and the number of students per entrance.
- Existing play areas.
- The areas surrounding or within the perimeter of the playground (classrooms, gym rooms, refectories, toilets, etc.);
- All other fixed infrastructure: water fountains, awnings or furniture available in your playground.
- Games and fixed sports areas, trees and planted areas.
- Different floor coverings, with their demarcations.
- Any differences in level (stairs, uneven ground, etc.);
- Planted areas and trees.



II. ANALYSIS **→ STAGE 1**

Review the diagnostics of the five goals that structure this guide, to find your playground's strengths and weaknesses:

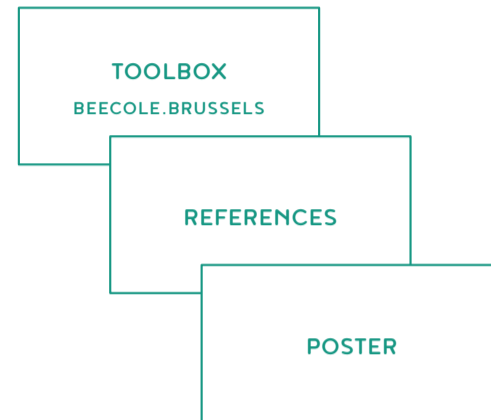
- A. FUN AND ENJOYABLE** **→** (p. 20)
- B. NATURE** **→** (p. 28)
- C. COMFORTABLE AND STIMULATING** **→** (p. 36)
- D. ECO-MANAGED** **→** (p. 44)
- E. OPEN TO THE NEIGHBOURHOOD** **→** (p. 52)



III. INSPIRATION **→ STAGE 2**

Plan a time of inspiration with all users to identify relevant benchmarks.

→ TOOLBOX BEECOLE.BRUSSELS → POSTER → SHEETS



IV. DEFINING THE OBJECTIVES **→ STAGE 2**

Based on your findings and the previous questions, what goals would you set yourself to improve your playground? Circle them.



- A. FUN AND ENJOYABLE** **→** (p. 21)
 - Promote learning through play
 - ▲ Plan a variety of activities
 - Make a range of equipment available
 - * Foster inclusion and cohesion
- B. NATURE** **→** (p. 29)
 - Bring nature into the playground
 - ▲ Improve well-being through contact with nature
 - Use nature as a learning medium
 - * Create habitats for wildlife
- C. COMFORTABLE AND STIMULATING** **→** (p. 37)
 - Improve sound comfort
 - ▲ Improve thermal comfort
 - Promote sensory stimulation
 - * Promote expression, creativity and imagination
- D. ECO-MANAGED** **→** (p. 45)
 - Use the principles of the circular economy
 - ▲ Improve water management in the playground
 - Manage waste sustainably
 - * Promote active mobility
- E. OPEN TO THE NEIGHBOURHOOD** **→** (p. 53)
 - Optimise the use of playground space
 - ▲ Make the school an added value for the neighbourhood
 - Facilitate the use of the playground by people outside the school
 - * Make the continuity between the public space and the playground space visible

V. IDENTIFYING THE LEGISLATIVE AND URBAN PLANNING FRAMEWORK **→ STAGE 3**

Review the applicable regulations in the context of your playground. **→ SHEET 1**

Identify the type of project for which you need planning permission. **→ TOOLBOX BEECOLE.BRUSSELS**



VI. IDENTIFICATION OF RESOURCES **→ STAGE 3**

Answer the following questions about economic resources:

What different financing options do you have at your disposal?

.....

.....

What is the budget for the short, medium and long term? Fill in this table to help you plan your long-term project. **Budget:**

SHORT TERM (1-2 YEARS)	MEDIUM TERM (3-5 YEARS)	LONG TERM (5-10 YEARS)
..... € € €

Don't forget to think about human resources:

Can you count on relatives or partners in the neighbourhood to carry out certain jobs? Which ones?

.....

.....

What can be done with the resources already available in the school?

.....

.....

What can you realise with the user of the school?

.....

.....

VII. DEFINING THE TIME FRAME **→ STAGE 3**

In line with financial possibilities, define the phasing of the work, with priority and secondary interventions. Also identify any quick-wins. 🏆

Check the requirements for structural interventions, to make sure you don't have to undo work done "in the meantime".

	SHORT TERM	MEDIUM TERM	LONG TERM
QUICK WIN 🏆	0 1 2	3 4 5	6 7 8 9 10
PRIORITY
SECONDARY

VIII. CO-DESIGN OF A PROJECT AND IMPLEMENTATION OF THE WORKS **→ STAGE 4**

Then identify the improvements to be implemented to meet the needs identified in the diagnosis and the improvement objectives for your playground.

Use this table to define the actions to be taken to fulfil the improvement objectives identified in IV. Take inspiration from the poster and recommendations presented for each goal.

OBJECTIVES	
E.g.: Promote learning through play	
1	
2	
3	
4	
5	
6 etc.	
ACTIONS	
E.g.: Build stands or a pergola that can be used as an outdoor classroom or open-air theatre.	
1	
2	
3	
4	
5	
6 etc.	
TYPE OF INTERVENTION	ECONOMIC RESOURCES
E.g. PRIORITY / SECONDARY / QW 🏆	e.g.: 5000_ €
1 PRIORITY / SECONDARY / QW 🏆	1 €
2 PRIORITY / SECONDARY / QW 🏆	2 €
3 PRIORITY / SECONDARY / QW 🏆	3 €
4 PRIORITY / SECONDARY / QW 🏆	4 €
5 PRIORITY / SECONDARY / QW 🏆	5 €
6 PRIORITY / SECONDARY / QW 🏆	6 €

IX. FOLLOW-UP OF THE PROJECT **→ STAGE 4**

Last but not least, lay down the rules for use, both with outsiders and with people inside the school. Don't forget to plan a grand opening party!

FURTHER INFORMATION

The complete guide can be downloaded from the website:

→ BEECOLE.BRUSSELS > OUR PUBLICATIONS

- Guide to improving playgrounds in the Brussels Region
- Roadmap
- Colour illustrated poster
- Black and white illustrated poster

REVAMPING PLAYGROUNDS
Guide to improving playgrounds in the Brussels Region