MY SCHOOL, A QUALITY SPACE

GUIDE TO BASIC EDUCATION

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MY SCHOOL, A QUALITY SPACE

GUIDE TO BASIC EDUCATION

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Since the early 2000s, growth in the basic school target demographic has created a significant need for new places in Brussels schools. The resulting increase in student numbers, coupled with ageing school buildings, is putting pressure on the quality of childcare in Brussels' basic education system.

The ambition of the Strategy 2025 Brussels Education Program is to offer a quality place to every student. The perspective.brussels School Service was therefore commissioned by the Government of the Brussels-Capital Region to work on the question of the quality of basic education infrastructure in the Brussels Region.

After carrying out a study in 2016 to assess the quality of existing school infrastructure for ordinary basic education in the region [1], the government commissioned the School Service to develop a guide to assess the quality of this school infrastructure, for the benefit of all school stakeholders in Brussels, across all networks.

The guide in your hands is the result of this work. It contains a series of recommendations and helps prioritise actions to be taken within schools and their environment to improve the quality of childcare.

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, subsidies, etc.) to work towards improving the quality of school spaces 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.

This guide, like the study that preceded it, is the fruit of a rich collaboration with numerous stakeholders: the members of the scientific and support committees who monitored and provided input throughout the process, and the resource persons from regional and community administrations who took part in the workshops organised to refine the indicators, the school headmasters/mistresses who took part in the analysis phase, as well as those who tested the guide in order to refine the criteria and improve its practical application, and the experts from the various administrations in charge of school infrastructure in the two Communities, the City of Brussels and the Vlaamse Gemeenschapscommissie (VGC), who carefully reviewed the final version of the guide.

Our ambition is to continue the dynamic dialogue and exchange between the various stakeholders in the Brussels education sector, and to make this guide a living tool.

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School Facilitator, perspective.brussels

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Directeur General of Perspective Brussels

[1] Study on the quality of school infrastructure for standard basic education in the Brussels-Capital Region. This study can be consulted on the perspective.brussels website.

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The guide and checklist can be downloaded from http://perspective.brussels/en/guide-to-basic-education

HOW TO USE THIS GUIDE

FOR WHOM?

This guide is aimed at all those involved in school infrastructure for ordinary basic education in the Brussels-Capital Region: school managements, organising bodies (PO in French), departments in charge of school property in the various networks, departments of the French and Flemish Communities, regional departments involved in supporting school projects, architects in charge of transformations or renovations, as well as users (school staff, students and parents).

FOR WHAT?

This guide is intended to help stakeholders assess the quality of school spaces, and analyse their needs and potential for improvement. It in no way replaces the regulatory evaluation and inspection tools that apply within the various educational networks. This guide focuses on existing infrastructure, although many of the criteria also apply to new buildings. Without attempting to be exhaustive, it covers a wide range of concerns, from the school building and site to the relationship between the school and the neighbourhood.

The guide prompts reflection on the right questions to ask in order to establish a complete diagnosis of your school's spaces, but it can also be used "à la carte" according to your needs and projects. For example, a school planning to renovate its playground, or wishing to resolve hygiene issues in the toilets, will find a set of questions and reference documents to help refine the diagnosis and consider courses of action on these issues.

Diagnosis helps to set priorities in terms of action and investment: it helps to identify the levers on which a school can act to improve the quality of its built and non-built spaces. It can also be used as a basis for discussion between school staff and external stakeholders (the municipality, neighbourhood associations, regional services, services of the French and Flemish Communities, etc.). As such, if the school has no direct control over the public spaces surrounding it, it can use the relevant criteria in the guide to interact with the relevant municipal and regional services.

HOW?

For a proper understanding of the guide

MORE THAN THE SUM OF ITS PARTS

The sum of the criteria proposed in this guide and the indicators that specify them is not enough to ascertain the quality of school infrastructure. Quality must be considered in a cross-cutting way, and depends on the link between the criteria. A generous entrance area within the school site can compensate for the lack of a quality public space in front of the school entrance. Or the luminosity and openness of a playground may compensate, to a certain extent, for its small size.

Furthermore, depending on the context of each school, a situation that generates difficulties may bring advantages in return: a school located in a dense central district will probably suffer from a lack of outdoor and planted spaces, but may benefit from the proximity of public amenities and good accessibility.

TOWARDS AN "IDEAL" SITUATION...

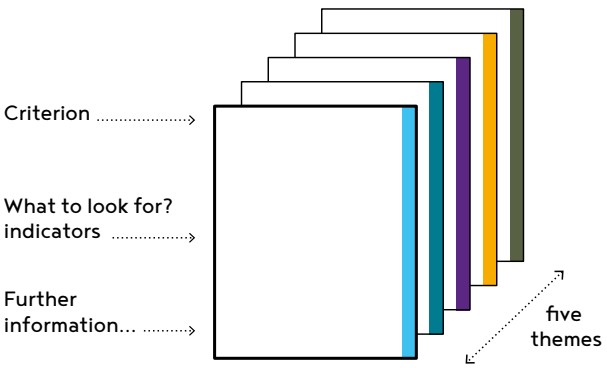
The indicators refer to an ideal situation, difficult to achieve for all criteria in an existing building. For example, it's not easy to extend a playground into the interior of a block. In this case, alternative solutions will have to be considered, such as the use of equipment outside the school. The aim for a school is not to meet all the criteria, but to work towards these quality objectives, taking into account the specific context and the means available for action.

THE EDUCATIONAL PROJECT AS A KEY

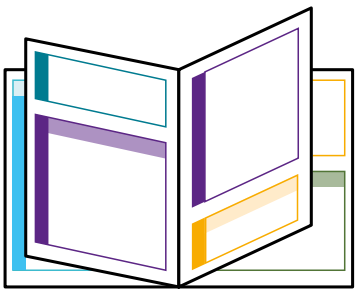
The concept of the quality of school spaces is not unequivocal or identical for all schools: it depends to a significant extent on their educational project. For example, a school that emphasises the value of working in age groups will pay particular attention to the diversity of room sizes, the possibilities for partitioning spaces and the relationships between them. Or a school that emphasises the development of creativity and expression will be more attentive to making assembly and exhibition areas available, the multi-functional aspect of the spaces, and displaying work.

Content

31 CRITERIA SHEETS



QUALITY CHECKLIST



FIVE THEMES TO DEFINE QUALITY

A FLEXIBLE AND ADAPTED SCHOOL

A SAFE SCHOOL

A SCHOOL WHICH IS HEALTHY AND COMFORTABLE FOR ALL

A SCHOOL WHICH RESPECTS THE ENVIRONMENT

A SCHOOL IN THE CITY

These five main themes are broken down into 31 criteria that characterise the quality of basic education infrastructure.

For each theme, we specify the school details we "need" to start the analysis.

CRITERIA SHEETS AND INDICATORS

Each criterion is the subject of a sheet providing background and definition, as well as a brief description of how it is assessed. An explanatory diagram and/or photos of good practice in Brussels schools also illustrate the criteria.

Each criterion is broken down into several indicators, themselves defined by a set of questions. These indicators refer to community, regional and federal standards and recommendations where they exist. Since the quality of a school's infrastructure depends to a large extent on the way in which the space is arranged, maintained and used over time, a series of indicators focus on the quality of the layout and the way in which the school's spaces are managed. In addition, some indicators involve a more subjective assessment, such as the educational potential of the spaces, or certain criteria linked to mobility or the quality of public spaces, for example.

The documents (legal texts, recommendation guides, etc.) used to construct the indicators, and which serve to clarify the diagnosis and inspire action, are referenced at the end of the sheets in the "Further information" section. References to this additional information are indicated in the sheets themselves by numbers in square brackets.

THE QUALITY CHECKLIST

A detachable, reproducible grid containing all the criteria and indicators enables users of the guide to ascertain the quality of the school spaces, while keeping the criteria sheets in front of them.

Indicators can be assessed on a five-level scale (fully satisfactory, satisfactory, acceptable, unsatisfactory and completely unsatisfactory). Not all indicators have the same weight, so it's up to the user to weight their value according to their priorities. For some indicators, a (completely) unsatisfactory situation always proves problematic and corresponds to "absolute" or obvious urgent cases, particularly when it comes to safety issues. In other cases, the importance of a criterion is more related to the mismatch between certain characteristics of the school infrastructure and the school's educational choices. For example, a school wishing to develop information and communication technologies for education (ICTE), but lacking the necessary technical ability, will consider this situation as a priority. The checklist and guide help to define priorities for action on school spaces, based on a diagnosis.

When an indicator reveals a not very satisfactory or unsatisfactory situation, the quality checklist suggests categories of intervention to help the user think about the actions that can be taken: awareness-raising and communication measures; management; maintenance and repair procedures; minor modifications or alterations; renovation or extension.

Taking action

In the light of the problems identified and the priorities established using this guide, it is possible to draw up an action plan comprising a range of projects, from simple awareness-raising measures to structural interventions. Implementing this action plan involves a number of stakeholders who are involved in some way with the school. It is therefore important for each school to have a good knowledge of the stakeholders involved in their school infrastructure, as well as of other possible stakeholders in this field. It is also important to know what tools are available to act overarchingly and/or specifically on the targeted priorities. The question of the human and material resources that can be mobilised in the short, medium and long term must be integrated into the planning of interventions. In this way, each stakeholder can target actions that fall within their sphere of competence and resources. School management will give priority to management measures, while an organising body will plan interventions in relation to financing plans, sometimes linked to other schools under its responsibility. Finally, criteria such as those concerning interactions between the school and the city, for example, systematically involve stakeholders other than the school, so the criteria in this theme are more a basis for interacting with them.

TYPES OF ACTION

The actions to be taken to remedy the problems fall into various categories. Some actions, such as awareness-raising or management measures, can be carried out at little or no cost, but involve a large number of school staff, while others, such as new construction (extension), conversion or major renovation work, require substantial budgets and take longer.

Awareness-raising and communication measures involve school stakeholders in the search for and implementation of solutions, through campaigns or projects relating to issues such as waste management, respecting hygiene rules in toilets or maintaining sound comfort, for example. In some cases, these measures can be part of an educational project.

Management measures involve the organisation of activities in time and space, and the use of staff. Good management often makes it possible to optimise the available infrastructure and compensate, up to a point, for certain shortcomings. For example, by modulating timetables, you can maximise the use of the same space, such as the refectory or playground, or avoid organising noisy activities next to classrooms. Management also involves the allocation of tasks within the staff. Appointing a heating manager, for example, can help prevent malfunctions and reduce consumption.

Maintenance and repair methods address problems linked to ageing, wear and tear caused by intensive use and/or lack of maintenance, as well as occasional defects. Proper maintenance ensures that you get the most out of your infrastructure. Quality is therefore strongly correlated to the staff available, but also to the nature and quality of the materials used to build and finish the infrastructure.

Minor modifications or alterations can provide a solution to problems due to use. Installing or modifying lightweight partitions or installing modular furniture, for example, can improve the flexibility and adaptability of the space.

Major renovations or extensions are generally aimed at resolving problems linked to the spatial inadequacy of the infrastructure: spaces that are too cramped, lack of light and comfort, spaces which are not easy to supervise, structural or dimensional problems, etc.

Most actions can act simultaneously on multiple problems, and conversely, several solutions can act on the same problem. It is therefore important to give priority to

projects that have a multiplier effect, i.e. those that can respond to several problems or whose benefits go beyond the solution to the problem at hand. For example, building insulation work or re-roofing can provide an opportunity to install sound-absorbing coverings to enhance acoustic comfort. Educational initiatives to raise awareness of energy consumption can also be linked to projects like this.

The action plan must be part of a realistic timetable and budget plan, taking into account the time and resources available to implement each action, and providing, where necessary, for provisional measures to alleviate the most urgent problems.

The stakeholders and governance

WHAT IS EVERYONE'S ROLE?

Various stakeholders may be involved in implementing the action plan. It's important to identify them clearly, and to know their roles and how they can intervene.

Users include all staff (management, teachers, administrative, educational and maintenance staff, etc.), students and, indirectly, parents. The users of school facilities outside school hours can also fall into this category. As day-to-day users of the school, these individuals are well placed to identify shortcomings and the resources, but they are also essential partners in devising and implementing solutions, especially when it comes to management measures and/or those directly linked to educational or extracurricular activities.

Decision-makers (organising bodies) play the role of project owner. As managers of the school infrastructure, they are responsible for making any decisions that affect it. These decisions must be prepared in conjunction with management, who are the main administrators of the activities and the intermediaries for users. In the case of larger projects, it's important that management is integrated into the project team (or 'bouwteam').

Subsidy-providing authorities provide the funds needed to implement the action plan. These are mainly the French-speaking Community (FWB), the Flemish Community (VG) and the Flemish Community Commission (VGC). Organising bodies (in the case of subsidised education) may also have their own funding (municipal funds or non-profit associations in the case of free education). The Brussels Region, for its part, grants subsidies for projects via specific programs or thematic calls for projects.

Institutional stakeholders (federal, community, regional and municipal) define the regulatory frameworks within which decisions concerning school infrastructure must be taken (e.g. fire regulations, urban planning rules, etc.). They do not intervene directly in the implementation of the action plan, but the regulations, conditions for granting subsidies and recommendations for which they are the guarantors determine the actions to a significant extent. In the case of schools, the communities act as guarantors of institutional frameworks, as funding institutions and, in the case of formal community education, directly as organising bodies: (WBE for FWB and GO! Onderwijs van de Vlaamse Gemeenschap for the VG). Communities also offer a range of support services [2].

Partners outside the school environment can be involved in implementing the action plan: municipal services in charge of public spaces (urban planning, environment, works, prevention and social cohesion departments, neighbourhood associations, etc.); regional services that provide guidance and support, such as the perspective. brussels School Service, the bouwmeester or master architect (BMA), as well as the departments of Brussels Environment (energy, acoustics or green spaces), Brussels Cleanliness, Brussels Mobility or a stakeholder such as STIB. These may be **associative stakeholders** or stakeholders from the social economy (social and professional integration companies, adapted work companies, etc.). Finally, partnerships with local residents are also possible, for example to manage a vegetable garden on the school grounds or a multi-functional hall open to the neighbourhood.

HOW ARE DECISIONS MADE?

In addition to the role played by each stakeholder, the success of an action plan depends largely on the way the stakeholders organise themselves. So it's important to set up forums where stakeholders can interact to cross-reference diagnostic findings and, above all, build solutions, each within their own area of expertise. Depending on the network, the resources and level of autonomy (and responsibility) of the management in matters relating to infrastructure, but also to personnel management (especially maintenance staff), vary greatly: consultation procedures (places and pace of exchanges, transfer of information, etc.) must therefore be adapted to the reality of each school.

The diagnosis and identification of priorities ideally involve staff, students and/or the parents' committee. Working together offers the opportunity to take advantage of the experiences, feelings and expertise of the various stakeholders to refine the diagnosis, and to draw on everyone's resources and creativity to build solutions. It also makes it possible to carry out a joint diagnosis that will give meaning to, and encourage support for, the action plan that should follow.

The tools

Depending on the priorities identified in the action plan, different categories of tools can be implemented.

The regulatory and subsidy frameworks [3] already mentioned above are the basic tools that condition and calibrate the planned interventions on school infrastructure. The main sources of funding are structural financing from the two communities, in the form of regular investment plans, priority or emergency intervention programs (concerning safety, hygiene or following an accident or breakdown, for example), specific subsidy programs such as the FWB and VGC's programs to create places, or programs to improve playgrounds such as the VGC's Buitenspel, or to encourage energy-saving measures, such as Energiezorg op school, launched by the VGC, or on this same theme as part of the FWB's priority works programs, some of which are temporary. Some financial assistance can take the form of loans.

Under certain conditions, school infrastructure projects can benefit from subsidies or additional funding, as in the case of heritage buildings, the Be.exemplary call for projects when the project meets a certain number of environmental criteria, or as part of neighbourhood contracts when school transformations represent a clear improvement for the neighbourhood.

Programs launched by other organisations or government departments may also be accompanied by a greater or lesser amount of funding. These are listed below in the thematic action programs and awareness-raising tools.

Masterplans can be developed to strategically plan interventions on a larger scale than the school itself. They can be applied on the scale of a single school comprising several sites and buildings, or on the scale of a group of schools belonging to the same network, as in the case of the Integraalplannen created for the various school groups (*scholengroepen*) in the GO! network. Onderwijs van de Vlaamse Gemeenschap or school cadastres produced by certain municipalities.

Thematic action programs and awareness-raising tools are offered by other administrations and organisations, in particular in the fields of mobility, acoustics, cleanliness and energy. In some cases, associative support is provided for the development and implementation of these projects. The School Travel Plans developed by Brussels Mobility, for example, offer schools a diagnosis, information and awareness-raising tools, and support for specific educational activities and organisational measures. There are also programs such as "Un potager dans mon école" (A vegetable garden in my school), launched by Brussels Environment, and "Pimp mijn speelplaats", a collaboration between MOS, ANB and GoodPlanet.

Support mechanisms or "facilitators", such as the Region's School Service, the federations of organising bodies or the advisors in charge of school buildings in the two communities mentioned above, support schools in their infrastructure projects and opening up to neighbourhoods. The 'bouwmeester maître architecte' of the Brussels Region (BMA) also supports school projects to promote architectural quality. The 'facilitators' are also made available by government departments to advise project developers on specific topics, such as the Brussels Environment "Sustainable Buildings" facilitator. Finally, programs such as the VGC's Brede School or the FWB's 'Accueil temps libre' help to improve relations between schools and neighbourhoods, thereby making the most of infrastructure potential.

Platforms and mechanisms for networking schools and sharing experiences are organised either around a single type of school (platforms and umbrella organisations in free education, for example), or around a theme (such as the Bubble network of innovative teaching initiatives in sustainable development).

[2] For the FWB, the Directorate-General for Infrastructure (DGI) and the General administration of education (AGE), as well as for Dutch-speaking schools: Agentschap voor Infrastructuur in het Onderwijs (AGION) and the infrastructure departments of the Vlaamse Gemeenschapscommissie.

[3] More information on subsidies is available on the websites of the communities' infrastructure departments: FWB website: www.infrastructure.cfwb.be-site de AGION: www.agion.be/subsidies; VGC website: www.vgc.be/ondersteuning/subsidies/subsidies-onderwijs. See also: the database of subsidies and grants to local authorities in Brussels, on the Brulocalis website of the Union des Villes et des Communes: www.avcb-vsgb.be/fr/subsides.html.

BACKGROUND

Demographic pressure and overcrowding

The demographic boom that the Brussels-Capital Region has been experiencing for over a decade has led to a shortage of places in basic schools. This situation has prompted many schools to adapt by sacrificing certain communal areas and specific areas (libraries, remedial classes, etc.) to create additional classrooms. In addition to the loss of communal spaces, the spaces "cobbled together" in this way often offer less comfortable conditions. In the event of overcrowding, the remaining indoor and outdoor communal spaces are often saturated, which also affects the quality of life at school. In some cases, however, synergies with local public facilities can partially compensate for this shortage. Overcrowding therefore often exacerbates the problems that hamper the quality of school spaces.

Evolving needs and requirements

The cultural mix that characterises Brussels also generates new needs to which the school infrastructure needs to adapt. Socio-cultural diversity, for example, calls for specific premises to encourage differentiated work in small groups and/or with students from special educational backgrounds (e.g. new arrivals).

Moreover, in Brussels as elsewhere, changes in teaching methods, in particular the development of active teaching methods and the introduction of new technologies, create new needs. Similarly, technical and environmental requirements, such as energy performance, impose new constraints.

The cohabitation of two communities

In Belgium, schools belong to different networks [4]: the stakeholders who can intervene regarding the quality of the school infrastructure are therefore not the same. As a result, not all schools in the region are governed by the same standards, have access to the same resources or enjoy the same room for manoeuvre. But what is most specific to Brussels is the cohabitation on the same territory of schools under the authority of the Flemish Community and the French-speaking Community, sometimes within the same organising body, or even on the same site, as in the case of certain municipal schools.

The heritage of Brussels' schools, between strength and constraint

The quality of a school's environment also depends on its architecture, which varies according to the era in which it was built, and which itself reflects specific cultural, aesthetic, educational and normative criteria and construction techniques. The architectural typology also influences the potential for improving school infrastructure, adapting it to changes in teaching methods, but also to current technical and environmental requirements (see timeline below).

History has left Brussels with a rich and diverse school building heritage. Numerous schools in the Brussels-Capital Region have heritage qualities, and some have been listed, fully or partly.

The quality of a school's heritage (whether listed or not) is obviously first and foremost an asset in terms of the quality of its living environment, its educational potential and its image. However, it's not always easy to adapt these schools to today's needs. Compliance with fire safety standards, accessibility for people with reduced mobility (PRM), and thermal or acoustic insulation, for example, require transformations that are sometimes difficult to combine with keeping the building's architectural qualities. In addition, the choice of materials or techniques for renovation or conversion dictated by heritage preservation is likely to generate significant additional costs. The situation is of course even more sensitive when the building is listed, since strictly respecting the heritage is no longer an option, but an obligation.

When it comes to preserving building heritage, we need to think on a case-by-case basis to find the best balance between respecting and enhancing architectural qualities and adapting to contemporary needs and requirements.

[4] In the Brussels-Capital Region, the three main networks are official education (education provided by the communities [in the Flemish community, the GO! Onderwijs van de Vlaamse Gemeeschap and, in the French-speaking community, those of the Wallonia-Brussels Federation, FWB]), official subsidised education (in the Brussels region, this is education provided by the municipalities and community commissions) and, finally, free subsidised education (denominational or non-denominational; in Brussels, mainly Catholic education).

Overview of the evolution of school building heritage in the Brussels-Capital Region


Modernist, brutalist, structuralist, eclectic and other schools.

NEW PEDAGOGIES

Teaching methods and school buildings have been modernised against a backdrop of industrial and commercial expansion and technological progress since the 1958 World Fair. These "new schools" reveal diverse styles with strong identities.

CONVERSIONS

The conversion of mansions is a recurrent practice in basic education as is, since the 2000s, that of industrial and office buildings in secondary education.

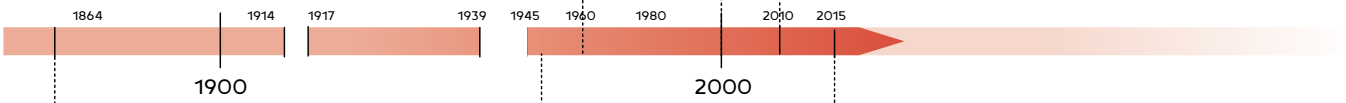

NEO-GOTHIC CATHOLIC SCHOOLS

From the 19th century until 1930, Catholic free schools occupied Neo-Gothic or Neoclassical buildings, generally belonging to the religious congregations that organised them.


Prefabricated wooden modules **Container type**

MODULAR SCHOOLS

The Region and the Communities have launched funding plans to respond rapidly to the demographic boom. These plans have made it possible to create new places using permanent or temporary modular constructions.




Art nouveau

FIRST MUNICIPAL SCHOOLS

The Ligue de l'enseignement, founded in 1864, follows hygienic principles and encourages a new form of pedagogy .Many official (often municipal) schools follow the model created by Ernest Hendrickx (Model School, 1875), inspired by the Italian or Flemish Neo-Renaissance style of the 19th century, and Art Nouveau and Art Deco in the 20th century.

SUSTAINABLE SCHOOLS

In response to European environmental concerns and objectives, the Brussels Region requires all buildings constructed since 2015 to meet "passive" architecture standards to limit energy consumption and achieve certain interior comfort conditions.

POST-WAR SCHOOLS

In a period of strong demographic and urban growth, during which economic resources are very limited, the school is no longer distinguishable from the office building, the industrial hangar or the residential villa. It no longer asserts its function and no longer expresses the symbolism of power or authority, whether secular or religious.

SCHOOL CAPACITY

Before considering the various quality criteria proposed in this guide, it may be useful for schools to get a rough idea of their occupancy rate. This can be analysed through the concept of "intake capacity", which connects the number of students to the surface area available. The calculation of capacity measures the difference between the school's surface area and a reference surface area (per student or total).

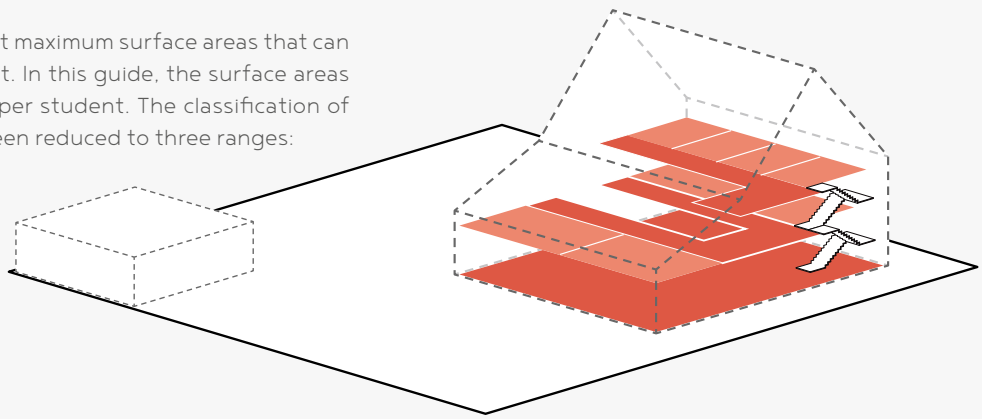
In this guide, the reference surfaces proposed for guidance are those set by the physical standards of the French and Flemish Communities [1]. These standards define the maximum (or minimum) surface areas for which the school can receive subsidies. They therefore correspond to situations considered reasonable, taking into account financial means, and thus represent a balance between saving resources and educational needs.

An area per student (m^2/s) well below the reference area therefore indicates a high occupancy rate (and therefore reduced or zero capacity), and vice versa. However, a situation where the capacity is high, but the space actually available is insufficient, is a sign of inefficient organisation of the space. The potential for improvement in this case is significant. The alignment between the organisation and the layout must therefore be analysed separately, as suggested in the sheets that follow.

Occupancy rate of the building

$$\frac{\text{Gross surface area}}{\text{total number of students}} \ (m^2/s)\ [2]$$

The physical standards set maximum surface areas that can be subsidised per student. In this guide, the surface areas are therefore expressed per student. The classification of reference surfaces has been reduced to three ranges:



RATIOS RESULTING FROM THE MAXIMUM SURFACE AREAS AUTHORISED BY THE PHYSICAL STANDARDS (SIMPLIFIED BY TRANCHE)

- Schools with fewer than 120 students: > 10 m^2/s
- School with one class per level (120-220 students): 8.9 to 10 m^2/s
- School with two classes per level (> 220 students): < 8.9 m^2/s

Physical Education room

Gross surface area (m^2) [3]

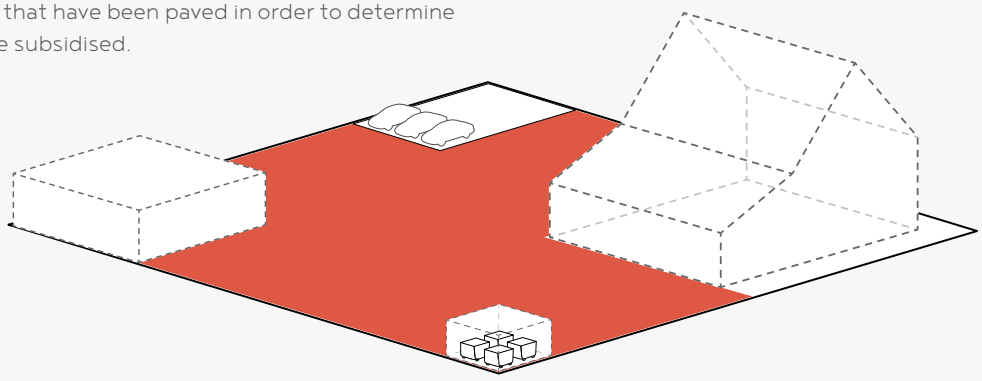
MAXIMUM GROSS SURFACE AREA THAT CAN BE SUBSIDISED BY PHYSICAL STANDARDS

- 80 m^2 for schools with less than 12 weekly periods [4] in the French community, or 40 to 120 students in the Flemish community. No specific room is required, but the maximum surface area authorised for the building as a whole is increased by 80 m^2.
- 320 m^2 for schools with 12 to 23 weekly periods in the French community, or 120 to 200 students in the Flemish community.
- 485 m^2 for schools with 24 to 48 weekly periods in the French community, or 40 to 120 students in the Flemish community.
- 805 m^2 for schools with more than 49 weekly periods in the French community, or more than 491 students in the Flemish community

Outdoor spaces

$$\frac{\text{Surface area of outdoor spaces}}{\text{total number of students [5]}} \ (\text{m}^2/\text{s})$$

The guide suggests counting the surface area of the outdoor spaces, subtracting those intended for parking and other specific functions (e.g. waste treatment area), as well as any remaining areas that are unsuitable. It should be noted, however, that the physical standards only take into account outdoor play areas that have been paved in order to determine the surface area that can be subsidised.



MAXIMUM SURFACE OF THE PLAYGROUND THAT CAN BE SUBSIDISED (PHYSICAL STANDARDS)

- 8 m^2/s in the Flemish Community
- 5 m^2/s in the French-speaking Community

MINIMUM SURFACE OF THE PLAYGROUND THAT CAN BE SUBSIDISED (PHYSICAL STANDARDS)

- 250 m^2 in the Flemish Community
- 300 m^2 in the French-speaking Community

School canopy area

$$\frac{\text{School canopies}}{\text{total number of students}} \ (\text{m}^2/\text{s}) \ [5,6]$$

MAXIMUM SURFACE OF THE SCHOOL CANOPIES THAT CAN BE SUBSIDISED (PHYSICAL STANDARDS)

- 1.2 m^2/s in the Flemish Community
- 2 m^2/s in the French-speaking Community

MINIMUM SURFACE AREA OF SCHOOL CANOPIES ELIGIBLE FOR SUBSIDIES (PHYSICAL STANDARDS)

- 50 m^2 in the Flemish Community [7]

[1] "Physical standards"

Physical and financial standards defined by the French-speaking Community (now the Wallonia-Brussels Federation). A.Gt 06-02-2014, BOJ 05-06-2014, Decree of the Government of the French-speaking 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, 2014.

Fysische en financiële normen. Besluit van de Vlaamse Regering van 5 oktober 2007 houdende vaststelling van de regels die de behoefte aan nieuwbouw of uitbreiding bepalen en van de fysische en financiële normen voor de schoolgebouwen, internaten en centra voor leerlingenbegeleiding, Vlaamse Overheid, 2007.

[2] "The gross floor area of a building is defined as the sum of the gross floor areas of all the floor levels. (...) The gross floor area of each floor level results from the external contour of the construction elements limiting the building, at floor level (...) Gross floor areas do not include ventilated crawl spaces (...) attics and cellars not suitable for conversion (...), technical areas (...), fire escapes located outside the building (...), openings and crawl spaces larger than 4 m^2" (Physical standards).

The physical education room is considered separately, and therefore subtracted from the total gross floor area of the building.

As defined by the standards, the surface area recorded decreases according to the building's construction date. If the building is from before 1920, 70% of its gross floor area is counted in the French and Flemish Communities; if it was built between 1920 and 1958, 80% in the French-speaking Community; between 1920 and 1969, 90% in the Flemish Community; and between 1959 and 1987, 90% in the French-speaking Community.

[3] Includes "essential annexes such as changing rooms, showers, sheds, accesses" (Physical standards).

[4] Psychomotor education included, excluding swimming lessons.

[5] The number of students counted is the number using these spaces simultaneously.

[6] This is the total surface area of covered outdoor spaces or equivalent indoor spaces (for example, an indoor space suitable for play on rainy days).

[7] This minimum surface area is always subsidised, even if, based on the number of students, the school could only aspire to a smaller surface area.

I.
A FLEXIBLE AND ADAPTED SCHOOL

> TO HAVE TO HAND

- Number of students, teachers and other staff
- Educational project, timetable and/or schedule for use of the rooms (including by external stakeholders)
- School plans (including evacuation plans)
- Inspection reports or certificates: educational reports, Internal Service for Protection and Prevention at Work (ISPPW/SIPPT)
- Construction period and history of the school and its various transformations
- Initial educational project and its evolution

←

The school's forum and entrance are entirely dedicated to the school's educational approach: they are designed for interactions and exchanges between students and teachers, for educational activities or exhibitions of work, and so on. The distribution space thus becomes a place for debate, experimentation and expression, serving learning and the collective life of the school. (L'Autre Ecole, Auderghem) © 2018 Jonathan Ortegat

I.1
GENERAL ORGANISATION OF THE INTERIOR SPACES

The suitability of school spaces depends on the overall organisation of the school and the size and quality of the indoor and outdoor spaces. The overall organisation of the building strongly influences the ability of the school infrastructure to meet the educational needs. Not only the economy of space, but also the efficiency and conviviality of the school vary according to how the different spaces are arranged and articulated, and depend to a significant extent on their diversity and mutual relationships.

The adaptability and flexibility of the school's spaces make it possible not only to incorporate changes in teaching practices, but also to avoid the functional and technical obsolescence of infrastructure, in a context where the school population is growing and requirements in terms of safety, comfort and the environment are evolving rapidly. In existing buildings, adaptability is highly dependent on construction methods, which vary greatly depending on the era in which they were built. Post-and-beam buildings, for example, enable interior spaces to be rearranged and adapted, while generous slab heights make it possible to split levels and/or install new technologies, and so on.

> WHAT TO LOOK FOR

VISIBILITY OF THE ORGANISATION OF THE BUILDING

- Is it easy to understand how the building is organised?
- Is it easy to find your way around the building?
- Is it easy to identify the function of different spaces?

EFFICIENT AND BALANCED USE OF SPACE

- Does the location of different functions encourage rational journeys?
- Are activities planned in such a way as to ensure optimum use of the rooms?

EFFICIENT AND BALANCED USE OF SPACE

- Does the school have a variety of additional facilities to meet educational needs (computer room, room for philosophy and citizenship classes, remediation room, study room, etc.)?
- Does the school include classrooms of various sizes (small-group classrooms, meeting rooms for pairs or larger groups, etc.)?
- Does the school offer suitable areas for infants to take a nap?

Recommendations:
At least 2 m^2 per child taking a nap in nursery school (IDS, AGION-GO !) [1]
60 x 120 cm per bed (FWB) [2])

FLEXIBILITY OF USE AND MULTI-FUNCTIONAL SPACES

- Can several types of learning activities be carried out simultaneously and/or consecutively (e.g. different layouts, mobile partitioning systems between classes or common areas)?
- Does the school have the capacity to respond to changing educational needs over time (in the same school year and over the years)?

ADAPTABLE ARCHITECTURE

- Does the structure (load-bearing elements) offer the possibility of modifying the configuration of interior walls to allow different spatial configurations?
- Is the headroom under the slab more than 3 m to allow a technical suspended ceiling to be installed?

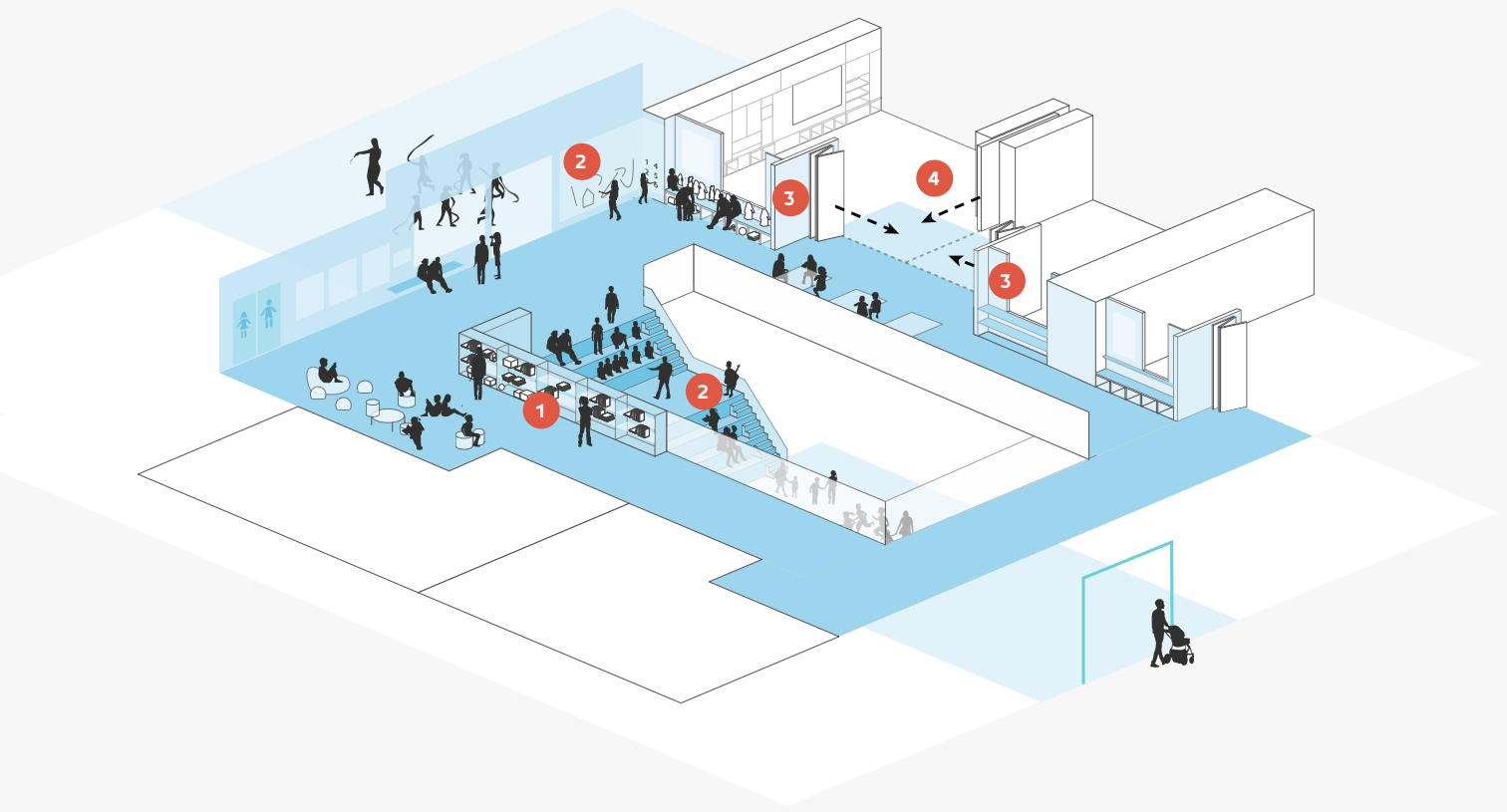
SUFFICIENT STORAGE SPACE

- Does the school have enough storage space to complement the classrooms? Are they sufficiently divided?
- Are there enough coat racks for the students?

CONVENIENTLY LOCATED SANITARY FACILITIES

- Are the sanitary facilities well distributed and well located (near the playground, refectory or nursery school classrooms)?

➔ **See Sheet III.5. Hygiene and cleanliness, p. 61.**



1. LIBRARY AND STORAGE AREAS, READING, RELAXATION AND QUIET PLAY AREAS
2. MEETING PLACES TO STIMULATE INTERACTION : DISPLAY SPACE, BENCHES, STANDS, ETC.
3. PERSONALISED CLASSROOMS AND SIGNAGE TO PROVIDE GUIDANCE AND FACILITATE ORIENTATION
4. POSSIBLE CONNECTIONS BETWEEN ROOMS AND CORRIDORS TO EXTEND SPACE FOR CERTAIN ACTIVITIES (INTERIOR WINDOWS, MOVABLE WALLS, ETC.).

> FURTHER INFORMATION

USEFUL INFORMATION:

[1] « IDS (Instrument voor duurzame scholenbouw) » GO! – AGION ;Naar een inspirerende leeromgeving. Instrument voor duurzame scholenbouw. GO! – AGION October 2016 version, based on the May 2010 version, available on the AGION website www.agion.be > ontwerpinfo;

[2] FWB tip sheets "Dessine-moi une école"; Tip sheets for designers of school buildings (FWB). FWB, Service des infrastructure scolaires subventionnées de la Direction générale des infrastructure (DGI), available at www.infrastructure.cfwb.be > publications ;

[3] Blueprint des meubles modulaires de ABC huis www.abc-web.be/basisbox ;

[4] http://www.fixbrussel.be/» www.fixbrussel.be.

I.2
AREAS OF TRAFFIC CIRCULATION

Circulation areas (staircases and corridors) must first and foremost provide comfortable, easy movement for groups of varying sizes. They also provide the opportunity for a positive experience of space, by encouraging discovery or offering interesting views, for example.

When large enough, corridors also allow new forms of appropriation and can become vibrant areas: places to relax and interact, storage areas, display of information about school life or students' work, etc. As spaces for expression, the corridors reinforce the school's identity.

> WHAT TO LOOK FOR

ADAPTED TRAFFIC AREAS

- Are corridors wide enough and clear enough?

  Minimum 1.5 m clearance (IDS, AGION and GO!) [1].

- Are vertical walkways sufficient (stairs, ramps, elevator), well dimensioned (width, openings, slope) and equipped (handrails, etc.)?

  Staircases must comply with the following dimensions:
  Minimum staircase width: 80 cm
  Overhead clearance: 200 cm
  Stair height: 17 cm
  Step depth: 25 cm

- Do the circulation systems allow smooth evacuation in the event of a fire alarm?

➔ **See Sheet II.1. Fire safety, p. 40**

EASE AND QUALITY OF ROUTES WITHIN THE SCHOOL

- Do the corridors make it easy to find one's way around the building?
- Do they offer interesting and varied perspectives and views of the exterior and/or interior spaces?

OPPORTUNITIES FOR APPROPRIATION AND INTERACTION

- Are traffic flows designed to stimulate exchanges and encounters?
- Are circulation areas configured and equipped to accommodate a variety of uses (exhibitions, reading, group activities, etc.), without creating congestion likely to compromise fire safety or accessibility of PRM?

> FURTHER INFORMATION

USEFUL INFORMATION:

[1] « IDS (Instrument voor duurzame scholenbouw) » GO! – AGION ;Naar een inspirerende leeromgeving. Instrument voor duurzame scholenbouw. GO! – AGION October 2016 version, based on the May 2010 version, available on the AGION website www.agion.be > ontwerpinfo ;

[2] FWB tip sheets "Dessine-moi une école"; Tip sheets for designers of school buildings (FWB). FWB, Service des infrastructure scolaires subventionnées de la Direction générale des infrastructure (DGI), available at www.infrastructure.cfwb.be > publications ;

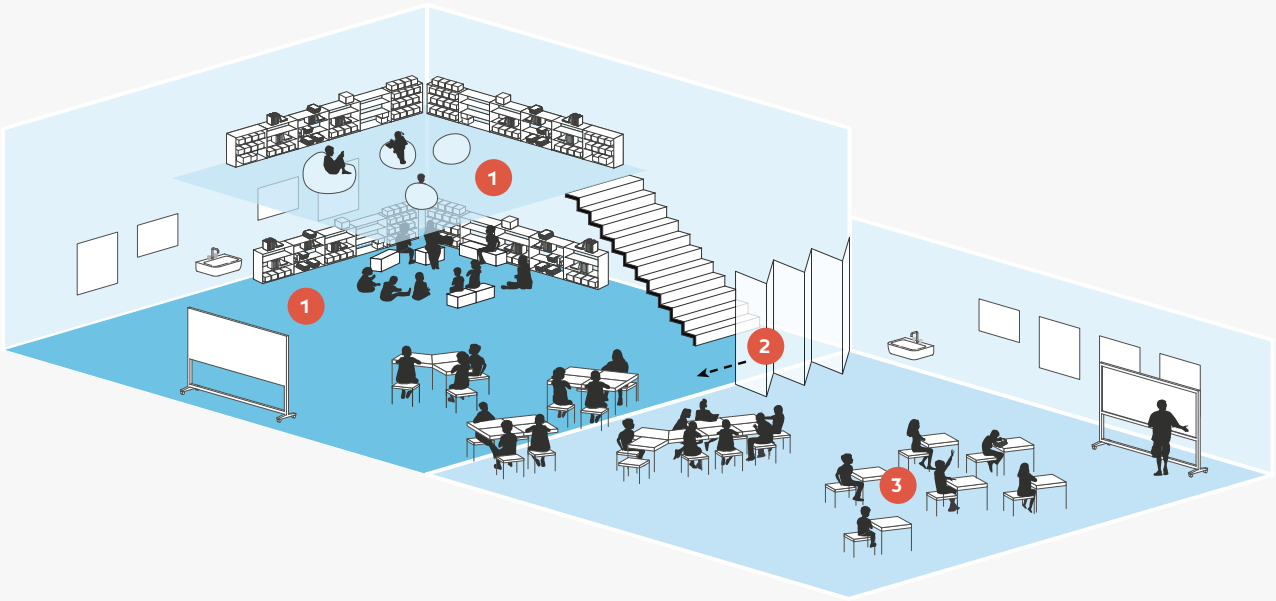
[3] Blueprint des meubles modulaires de ABC huis www.abc-web.be/basisbox ;

1.3
THE CLASSROOM

The classroom is the main place of learning where students and teachers spend most of their time at school. It must therefore be adapted to the needs of the students and the educational activities taking place there. The maximum number of students per class is defined by the communities according to levels and educational objectives.

Most classrooms are ideally suited to today's teaching activities. However, activities based on active or alternative teaching methods, which often require more space per child, do not always have the right conditions here. Schools under heavy demographic pressure are sometimes obliged to fit out classrooms in reclaimed space, which often offer less comfort.

The adaptability of the classrooms and their flexibility of use are major assets (grouping of rooms thanks to movable walls and the possibility of different classroom layouts in particular). Finally, it's important that the classroom has efficient storage space for teaching materials.



1. DIFFERENTIATED ZONES FOR RELAXATION, READING, ETC.
2. MERGED CLASSES USING MOVABLE WALLS
3. LIGHTWEIGHT FURNITURE OR MOVABLE TABLES TO INCREASE THE NUMBER OF POSSIBLE SPATIAL CONFIGURATIONS

> WHAT TO LOOK FOR

SUFFICIENT NUMBER OF CLASSES

- Does the school have enough classrooms for the number of students and groups?
- Does the school have suitable classrooms for individual work with students (e.g. speech therapy, PMS or remediation)?

APPROPRIATE DIMENSIONS AND PROPORTIONS

- Is the usable floor space per student adequate and in line with the teaching methods used?

  The recommended floor space for students, excluding teacher and storage areas, is at least 2 m^2/student (FWB tip sheets [2]), or 50 m^2 for 25 students and 65 m^2 for 25 students in the case of active teaching (IDS, AGION-GO!) [1].

- Are classrooms well-proportioned (not too long, not too low, etc.)?

ADAPTABLE SPACE FOR DIFFERENT EDUCATIONAL ACTIVITIES

- Can the spaces be easily transformed to suit different uses (e.g., working in groups or half-groups)?
- Can the layout take on different configurations (light, modular furniture, movable boards, mezzanine space, etc.)?

SUITABLE EQUIPMENT

- Are classrooms equipped with at least one blackboard of sufficient size and adapted to teaching needs?
- Are the spaces and furniture adapted to the size of the students?
- Do classrooms have a sink at the right height for students?
- Do they have enough storage space?
- Do they have enough display space?

GOOD CONDITIONS OF COMFORT

- Do classrooms offer good thermal, acoustic and visual comfort, as well as good air quality?

➔ **See Sheets III.1 à III.4 Thermal, acoustic and visual comfort and air quality, p. 50 to 59**

> FURTHER INFORMATION

USEFUL INFORMATION:

[1] « IDS (Instrument voor duurzame scholenbouw) » GO! – AGION ;Naar een inspirerende leeromgeving. Instrument voor duurzame scholenbouw. GO! – AGION October 2016 version, based on the May 2010 version, available on the AGION website www.agion.be > ontwerpinfo ;

[2] FWB tip sheets "Dessine-moi une école"; Tip sheets for designers of school buildings (FWB). FWB, Service des infrastructure scolaires subventionnées de la Direction générale des infrastructure (DGI), available at www.infrastructure.cfwb.be > publications ;

[3] Blueprint des meubles modulaires de ABC huis www.abc-web.be/basisbox ;

→

At the request of the school management, the non-profit organisation Arts Basic for Children (ABC vzw) worked with the teachers to create custom-made, playful and modular furniture (integrated storage, stackable tables, etc.). These modifications make it possible to diversify the uses of the classroom space despite its small dimensions. (De Kriek local school, Schaerbeek)© 2018 Jonathan Ortegat


KARLIJN
NISRINE

I.4
THE PHYSICAL EDUCATION ROOM

The physical education room for primary school students and the psychomotor education room for nursery school students are ideal for sporting activities. In older schools, it is often the case that a sports hall was not originally planned, thereby obliging schools to convert spaces designed for other purposes (e.g. school canopy, classroom, chapel or multi-functional hall). The conditions for playing sports are often less than optimal: inadequate dimensions, lack of changing rooms, unsuitable surfaces, etc. Some schools have sports facilities in the neighbourhood, but using them can be difficult, especially when it comes to availability and accessibility.

Whenever possible, sports fields should meet the standards laid down by sports federations, even if the surface area subsidised by communities is often smaller). This means that sports can be learned under real-life conditions, and gives the school more opportunities to open up to the neighbourhood by welcoming an extracurricular public outside school hours.

➔ **See Sheet V.2. Sharing public facilities between the school and the city, p. 77**

> WHAT TO LOOK FOR

PRESENCE OF A PHYSICAL EDUCATION ROOM

- Does the school have a dedicated area for sports activities?
- Does it have a separate psychomotor education room?

APPROPRIATE DIMENSIONS AND PROPORTIONS

- Do the dimensions of the pitches meet sports federation standards?
- Is the psychomotor education room large enough?

  Recommendation: 60 m² minimum - FWB [3] (The surface area of the psychomotor education room is part of the m² allocated for physical education in the physical standards [1]).

- Are the gym's proportions adapted to the needs of sports activities?

ADEQUATE FITTINGS AND EQUIPMENT

- Is the flooring in the gym hard-wearing, non-slip and suitable for sports activities?
- Can the physical education room be divided into several areas if necessary?
- Can it be easily adapted to different sports?
- Is it well equipped with sports equipment?
- Does it have enough storage space?

  Minimum 60 m² - (IDS, AGION-GO !) [2]

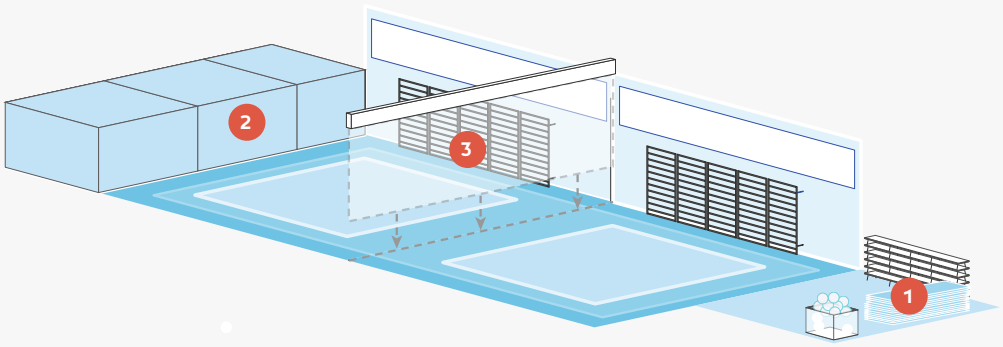
SUFFICIENT AND ADAPTED CHANGING ROOMS

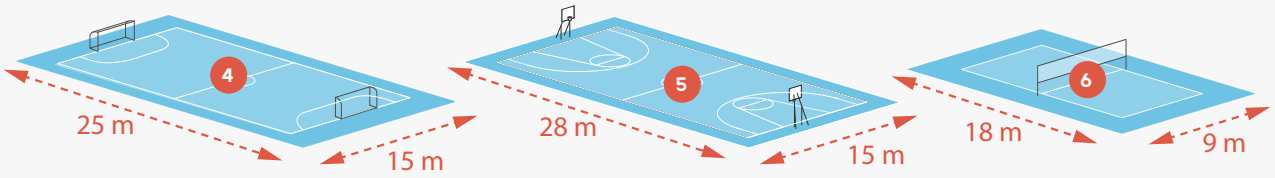
- Does the school have at least one 20 m^2 changing room per gender for each physical education room (IDS, AGION-GO!) [2]?
- Are these changing rooms well-equipped (benches, coat racks, etc.) with showers and toilets?
- Are they located in the immediate vicinity of the gym?
- Does the school have a changing room for PE teachers?

GOOD CONDITIONS OF COMFORT

- Do classrooms offer good thermal, acoustic and visual comfort, as well as good air quality?

➔ **See Sheets III.1, 2 et 4 Temperature and acoustic comfort and air quality p. 50 to 59**





1. SUFFICIENT STORAGE SPACE
2. SEPARATE CHANGING ROOMS FOR EACH GENDER, AND FOR PHYSICAL EDUCATION TEACHERS
3. CAN BE CONFIGURED IN A VARIETY OF WAYS (DIVIDED INTO DIFFERENT AREAS, ADAPTED TO DIFFERENT SPORTS, ETC.).
4. MINIMUM DIMENSIONS OF A REGULATION INDOOR FOOTBALL PITCH
5. MINIMUM DIMENSIONS OF A REGULATION INDOOR BASKETBALL COURT
6. MINIMUM DIMENSIONS OF A REGULATION INDOOR VOLLEYBALL COURT

> FURTHER INFORMATION

LEGISLATIVE AND REGULATORY FRAMEWORK:

[1] Physical standards

Physical and financial standards defined by the French-speaking Community (now the Wallonia-Brussels Federation). A.Gt 06-02-2014, BOJ 05-06-2014, Decree of the Government of the French-speaking 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, 2014.

Fysische en financiële normen. Besluit van de Vlaamse Regering van 5 oktober 2007 houdende vaststelling van de regels die de behoefte aan nieuwbouw of uitbreiding bepalen en van de fysische en financiële normen voor de schoolgebouwen, internaten en centra voor leerlingenbegeleiding, Vlaamse Overheid, 2007;

OTHER USEFUL INFORMATION:

[2] « IDS (Instrument voor duurzame scholenbouw) » GO! - AGION ;Naar een inspirerende leeromgeving. Instrument voor duurzame scholenbouw. GO! - AGION October 2016 version, based on the May 2010 version, available on the AGION website www.agion.be > ontwerpinfo ;

[3] FWB tip sheets "Dessine-moi une école"; Tip sheets for designers of school buildings (FWB). FWB, Service des infrastructure scolaires subventionnées de la Direction générale des infrastructure (DGI), available at www.infrastructure.cfwb.be > publications ;

[4] Call for projects launched by the Flemish Government to encourage schools to make their sports facilities accessible outside school hours (after school, at weekends and during school holidays) and to improve their quality. www.sport.vlaanderen/ scholen/ondersteuning/ subsidiering-sportinfrastructuur/;

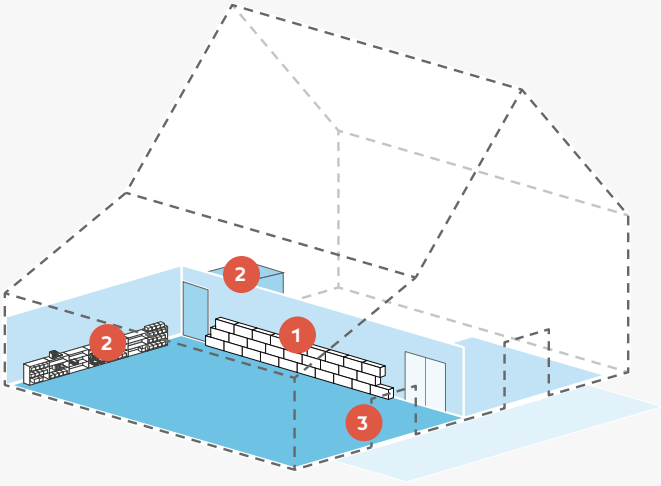
[5] Sport: Subsidies granted by the VGC to organisations and institutions to organise regular sports activities. http://www.vgc.be/ ondersteuning/subsidies/subsidies-sport;

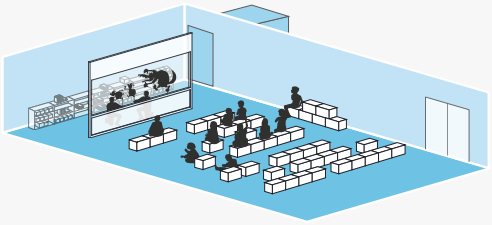
[6] My club, my school. Subsidies granted by the Government of the French-speaking Community to schools and local sports associations to enable students to discover a sporting discipline through an educational and fun approach outside physical education hours. www.sport-adeps.be > Subventions et aides financières.

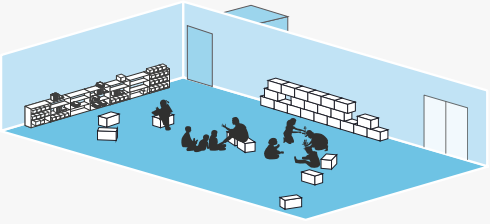
I.5
THE MULTI-FUNCTIONAL AREAS

Depending on the time of day, week and year, the multi-functional indoor areas can host a variety of activities, such as after-school care, indoor games or occasional events. They can also open up to parents and a public outside the school to stimulate interactions with the neighbourhood.

Multi-functional spaces are often lacking in overcrowded schools. Where they originally existed, they have sometimes been sacrificed to accommodate functions deemed more vital to the school's operations. In some cases, a large refectory or sports hall can play this role to some extent, provided the layout is flexible.







1. LIGHTWEIGHT, COLLAPSIBLE AND/OR STACKABLE FURNITURE FOR A VARIETY OF ACTIVITIES
2. STORAGE SPACE (CUPBOARDS, DRAWERS, CONTAINERS, ETC.) AND SUFFICIENT STORAGE
3. INDEPENDENT ACCESS TO FACILITATE OPENING TO EXTERNAL TARGET GROUPS

> WHAT TO LOOK FOR

PRESENCE OF INDOOR MULTI-FUNCTIONAL FACILITIES

- Does the school have one or more indoor multi-functional areas?

APPROPRIATE DIMENSIONS AND PROPORTIONS

- Is the usable surface area of multi-functional areas adequate?

  Recommended surface area: more than 0.5 m^2 per student (IDS, AGION-GO!) [1].

- Are its dimensions adequate and well-proportioned?

  Minimum recommended surface area: 50 m^2 and minimum headroom of 3 m (IDS, AGION-GO!) [1].

SUITABLE POSITION IN THE BUILDING AND SEPARATE ACCESS POSSIBLE

- Are the multi-functional areas well located in the building?
- Are they directly accessible from the public space?

FLEXIBILITY OF USE

- Can the multi-functional spaces easily accommodate a variety of uses (games, workshops, shows, exhibitions, group work, etc.)?
- Can they have different spatial configurations?
- Can they be easily used by the neighbourhood?

➔ **See Sheet V.2 Sharing public facilities between the school and the city p. 77**

ADEQUATE FITTINGS AND EQUIPMENT

- Do the multi-functional spaces stimulate social interaction (communication and information boards, seating and play areas, etc.)?
- Do they have adequate storage space?
- Is the furniture flexible (modular, lightweight, foldable, stackable, etc.) and adapted to the size of the children?

GOOD CONDITIONS OF COMFORT AND SAFETY

- Do the multi-functional areas offer good thermal, acoustic and visual comfort, as well as good air quality?

➔ **See Sheets III.1 to III.4 Thermal, acoustic and visual comfort and air quality, p. 50 to 59**

- Do the multi-functional areas offer good fire safety conditions, given their higher occupancy rates?

➔ **See Sheet II.1, Fire safety, p. 40**

> FURTHER INFORMATION

USEFUL INFORMATION:

[1] « IDS (Instrument voor duurzame scholenbouw) » GO! – AGION ;Naar een inspirerende leeromgeving. Instrument voor duurzame scholenbouw. GO! – AGION October 2016 version, based on the May 2010 version, available on the AGION website www.agion.be > ontwerpinfo ;

[2] FWB tip sheets "Dessine-moi une école"; Tip sheets for designers of school buildings (FWB). FWB, Service des infrastructure scolaires subventionnées de la Direction générale des infrastructure (DGI), available at www.infrastructure.cfwb.be > publications ;

[3] Blueprint des meubles modulaires de ABC huis www.abc-web.be/basisbox ;

1.6
THE REFECTORY AND KITCHEN

School meals should be a calm and peaceful time. One of the major challenges is the sharing of the refectory space, the use of which is concentrated in a very short space of time. The challenge is all the greater when the school shares the refectory with other schools or educational levels on the same site. Outside mealtimes, the refectory is often an under-utilised space; however, with a certain amount of flexibility, it can accommodate other activities.

The kitchen and refectory also offer educational opportunities for developing food-related activities.

> WHAT TO LOOK FOR

APPROPRIATE DIMENSIONS AND PROPORTIONS

- Is the refectory's usable surface area adequate?

  1.2 m^2 per seat, calculated on the basis of the number of students using it at the same time (estimated on the basis of half the students) (IDS, AGION-GO!) [1].

- Does the refectory allow at least 30 minutes of use per child?
- Are its dimensions adequate?

  Minimum headroom of 3 m (IDS, AGION-GO!) [1].

ADEQUATE LOCATION

- Is the route from classroom to refectory to playground clear and easy?
- Is the refectory close to a toilet block?
- Do the location, layout and/or equipment of the refectory avoid noise and odour pollution in the teaching areas?

ADEQUATE FITTINGS AND EQUIPMENT

- Does the layout allow easy circulation between tables?
- Does it guarantee easy supervision?
- Is the furniture adapted to the students' size?
- Does the refectory have a sink to allow students to wash their hands and have access to drinking water?
- If required by the type of service, does the refectory meet FASFC standards (e.g. in terms of washability of surfaces, etc.) [3]?

MULTI-FUNCTIONAL NATURE OF THE SPACE

- Can the space easily accommodate other uses (lightweight and/or stackable furniture, possibility of dividing the space, etc.)?

GOOD CONDITIONS OF COMFORT AND SAFETY

- Does the refectory offer good thermal, visual and, above all, acoustic comfort and good air quality?

➔ **See Sheets III.1 to III.4 Thermal, acoustic and visual comfort and air quality, p. 50 to 59**

- Does the refectory offer good fire safety conditions, given its higher occupancy rates?

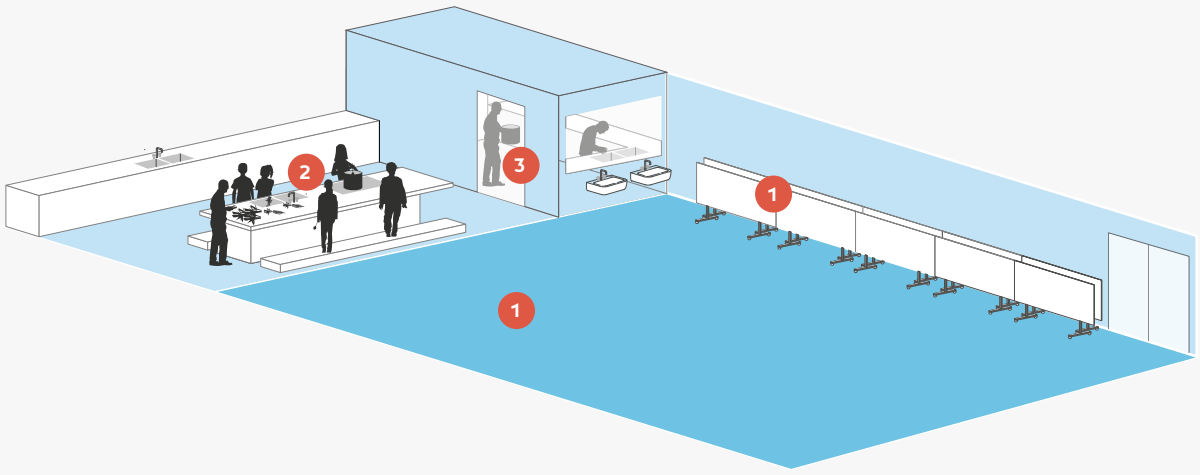
➔ **See Sheet II.1, Fire safety, p. 40**

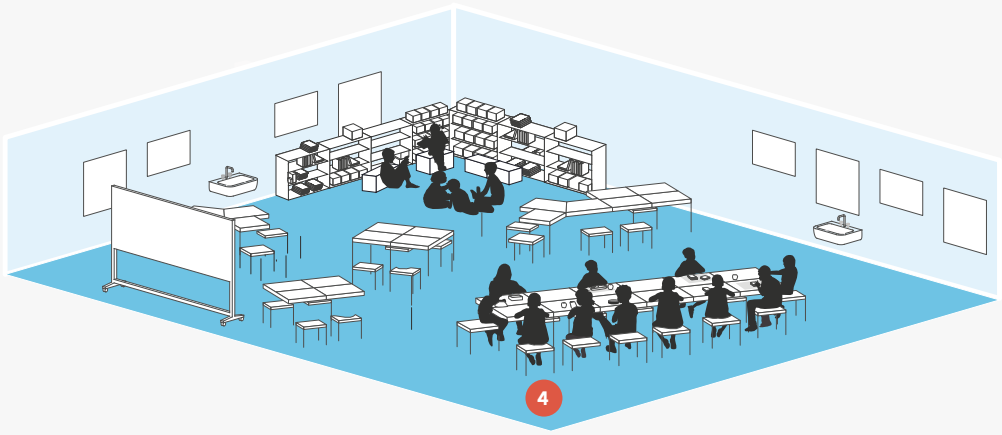
FULLY EQUIPPED AND EFFICIENT KITCHEN

- If the school offers hot meals, is it equipped with a kitchen where meals can be prepared or reheated in compliance with FASFC standards (double sink, electric hob and oven, refrigerator, sufficient cupboards)?

EDUCATIONAL OPPORTUNITIES

- Are the kitchen and refectory equipped for food-related educational activities?





1. FOLDABLE OR STACKABLE FURNITURE FOR OTHER USES OUTSIDE MEALTIMES
2. EDUCATIONAL KITCHEN
3. KITCHEN EQUIPPED TO PREPARE HOT MEALS
4. CLASSROOM MEALS FOR QUIET AND RELAXED MOMENTS

> FURTHER INFORMATION

USEFUL INFORMATION:

[1] « IDS (Instrument voor duurzame scholenbouw) » GO! – AGION ;Naar een inspirerende leeromgeving. Instrument voor duurzame scholenbouw. GO! – AGION October 2016 version, based on the May 2010 version, available on the AGION website www.agion.be > ontwerpinfo ;

[2] FWB tip sheets "Dessine-moi une école"; Tip sheets for designers of school buildings (FWB). FWB, Service des infrastructure scolaires subventionnées de la Direction générale des infrastructure (DGI), available at www.infrastructure.cfwb.be > publications ;

[3] "Schools and the FASFC". Publication available at www.afsca.be/professionnels/publications/thematiques/ecoles/.

I.7 ADMINISTRATION

Administration includes all the facilities needed to run the school: management office, secretariat, bursar's office, infirmary, meeting rooms and staff room. In addition to the practical requirements they must meet, these rooms must offer good conditions of comfort and a pleasant working environment for staff, stimulate exchanges between staff members and guarantee good reception conditions for parents and visitors.

> WHAT TO LOOK FOR

OFFICES ADAPTED TO THE ADMINISTRATION AND MANAGEMENT OF THE SCHOOL

- Does the school have an office for the management?
- Does this office have enough space for at least three people (parents and students)?
- Is it easily located and accessible from the school entrance, especially for parents?
- Does the school have sufficient space for the secretariat?
- Is it close to, but separate from, the management office?

ADAPTED STAFF ROOM

- Does the school have a staff room?
- Is it large enough for the number of teachers?

  Minimum 50 m² - (IDS, AGION-GO !) [1]

- Is it set up to allow relaxation and work, alone or in groups, but also to stimulate interaction between teaching staff?
- Is it well-equipped (relaxation area, refectory, personal lockers, kitchenette, refrigerator)?

SUITABLE MEETING ROOM

- Is the school equipped with a suitable space of sufficient size for meetings?

ADDITIONAL ROOMS

- Is an infirmary available?
- Does the school include space for archiving, photocopiers, printers, etc.?
- Does the school have storage space for consumables?

GOOD CONDITIONS OF COMFORT

- Do the administrative areas offer good thermal, acoustic and visual comfort, as well as good air quality?

➔ **See Sheets III.1 to III.4 Thermal, acoustic and visual comfort and air quality, p. 50 to 59**

> FURTHER INFORMATION

USEFUL INFORMATION:

[1] « IDS (Instrument voor duurzame scholenbouw) » GO! - AGION ;Naar een inspirerende leeromgeving. Instrument voor duurzame scholenbouw. GO! - AGION October 2016 version, based on the May 2010 version, available on the AGION website www.agion.be > ontwerpinfo ;

[2] FWB tip sheets "Dessine-moi une école"; Tip sheets for designers of school buildings (FWB). FWB, Service des infrastructure scolaires subventionnées de la Direction générale des infrastructure (DGI), available at www.infrastructure.cfwb.be > publications ;

1.8
ARCHITECTURAL TRANSLATION OF THE EDUCATIONAL PROJECT

The school architecture is a reflection of an era and its societal values, but also of the visions and educational projects it embodies. As such, it gives the school a more or less strong identity, which is reflected in the types of classrooms and complementary teaching spaces on offer, the meeting and gathering spaces, and the architectural character, from overall spatiality to ornamentation.

The architecture must be able to integrate the evolution of the school's educational practices, both in terms of its operation and its image. The presence of multi-functional, flexible spaces (multi-functional rooms, wide circulation areas, generous ceiling heights, etc.) is an undeniable asset.

> WHAT TO LOOK FOR

CHARACTER AND UNIQUENESS OF THE ORIGINAL BUILDING

- Has the school's architecture been designed with a specific type of teaching and educational project in mind?

➔ **See Sheet V.1 Identity and urban character, p. 76**

IN LINE WITH CURRENT EDUCATIONAL REQUIREMENTS

- Is the architectural typology adapted to the school's current educational approach?

MAINTAINING THE BUILDING'S ORIGINAL QUALITIES

- Have any alterations and adaptations preserved or enhanced the building's original architectural qualities (listed features, etc.)?

> FURTHER INFORMATION

[1] BMA website – bouwmeester-maître architecte de la RBC: http://bma.brussels/fr/accueil/;

[2] Inventory of the property assets in the Brussels Capital Region. www.irismonument.be;

[3] Grants for conservation work on a listed property awarded by the Government of the Brussels-Capital Region. www.patrimoine.brussels >agir > aide-financiere;

[4] Grants for restoration work on small heritage features: www.patrimoine.brussels >agir > aide-financiere.

1.9 INFORMATION AND COMMUNICATION TECHNOLOGIES FOR EDUCATION (ICTE)

As part of the digital transition in education, schools are gradually integrating the tools needed for digital education into their teaching activities [1]. Tools such as interactive whiteboards, tablets and computers are grouped together under the name Information and Communication Technologies for Education (ICTE).

As part of the authorities' anti-discrimination commitments, ICTE is also one of the facilities that schools must be able to offer students with special needs [2].

Integrating ICTE as an educational tool means adapting the school's infrastructure to exploit the potential of the devices available. Questions of layout relate not only to the right conditions for using the devices (good visibility of interactive whiteboards or computer screens in classrooms), but also the conditions for powering and connecting the devices. The installation, maintenance and proper use of ICTE also require adequate training for teachers and technical staff.

> WHAT TO LOOK FOR

PRESENCE OF ICTE EQUIPMENT

- Does the school allow the use of digital teaching tools?
- Is it sufficiently equipped with computers, laptops or tablets to meet teaching needs?
- Are the devices available compatible with the software used?
- Is the school fully or partly equipped with interactive whiteboards?
- Does it have projectors?
- Are the right conditions in place to provide appropriate support for students with disabilities or learning difficulties?

SUITABLE IT AND ELECTRICAL INSTALLATIONS

- Are the electrical installations sufficient (power, wiring and switches)?
- Is the computer system networked?
- Is the school connected to the Internet?
- Is Internet access adapted to needs?

  Structural IT equipment requirements: a backbone (wired LAN network) including wireless WLAN coverage (RJ 45 wired network in Gigabit Ethernet, Wifi, patch panel, server, etc.) covering the school premises (classrooms, refectory, etc.) [1].

- Can wi-fi terminals be easily adjusted and disconnected to limit children's exposure to radio waves? If so, can a centralised control system regulate signal transmission by zone?

GOOD CONDITIONS OF USE

- Can classroom lighting be adapted so that ICTE tools can be used in good visibility conditions?
- Can blackboards and interactive whiteboards be used simultaneously?
- Does it guarantee good visibility of the boards from all student benches?

ICTE TRAINING FOR TEACHERS

- Are teaching staff trained or have access to training in the use of ICTE tools?
- Is a qualified member of staff appointed as a reference for educational aspects?
- Are user manuals available?

MAINTENANCE AND REPLACEMENT PLAN

- Does the school have an ICTE management plan for equipment maintenance and replacement?
- Is special attention paid to data security and management?
- Is a qualified member of staff designated as a resource person for technical aspects of ICTE?

> FURTHER INFORMATION

LEGISLATIVE AND REGULATORY FRAMEWORK:

[1] Opinion n°3 of the "Pact for excellence in education", strategic objective 1.6 (make the digital transition a success), approved by the FWB Government;

[2] Cfr. 19 JULY 2007, Protocol between the Federal State, the Flemish Community, the French-speaking Community, the German-speaking Community, the Walloon Region, the Brussels-Capital Region, the Joint Community Commission, the French-speaking Community Commission in favour of people with disabilities; Protocol relating to the concept of reasonable accommodation in Belgium under the law of 25 February 2003 intended to combat discrimination and amending the law of 15 February 1993 creating a Centre for equal opportunity and the fight against racism;

[3] FWB - Circulaire 6184 du 15/05/2017 IRUNE-2017, Infrastructures, ressources et usages du numérique dans l'Enseignement, 2017. Inventory produced in collaboration with the Wallonia-Brussels Federation, the Agence du numérique and perspective.brussels, for school heads and teachers in primary and secondary schools;

[4] Kaderdecreet voor het Vlaamse gelijkekansen - en gelijkebehandelingsbeleid van 10 juli 2008.

OTHER USEFUL INFORMATION:

[5] Brussels Regional Informatics Centre (BRIC): http://cirb.brussels/;

[6] Example of an inspiring innovative space 'The Future Classroom Lab' (FCL) http://fcl.eun.org.

I.10
SCHOOL ENTRANCE

The school entrance consists of the consecutive areas between the public space (the school forecourt) and the distribution areas (staircases, corridors). This includes doors and/or gates, the entrance hall and any playgrounds. The configuration of entrances varies significantly depending on the location of the school (e.g., detached or semi-detached) and the neighbourhood in which it is located.

The entrance is the first physical contact with the school, and therefore plays a major role in defining its image. Opening a school to the outside world often represents an opportunity to redefine the conditions of access and reception on the school site.

From a practical point of view, the entrance has to offer good reception conditions for students and staff, as well as parents and visitors. It must also guarantee effective control of people entering and leaving.

➔ **See Sheet V.3. Forecourt and public spaces around the school**

> WHAT TO LOOK FOR

CLEARLY IDENTIFIABLE LOCATION

- Are the entrances easy to locate on the school site and from the public space?
- If there are several entrances, are they hierarchical (primary or secondary), complementary and clearly identifiable (by section or target group type, for example)?
- Are they well connected to the main distribution and assembly areas (staircases and corridors, after-school care areas, playgrounds)?

➔ **See Sheets V.1. Identity and urban character, p. 76 and V.3. The school forecourt, p. 82**

OBVIOUS ACCESSES AND ROUTES

- Are the routes from the entrance to the various parts of the school obvious?

APPROPRIATE DIMENSIONS

- Are the threshold (door and/or gate) and entrance areas large enough for busy periods, especially at the beginning and end of the day?

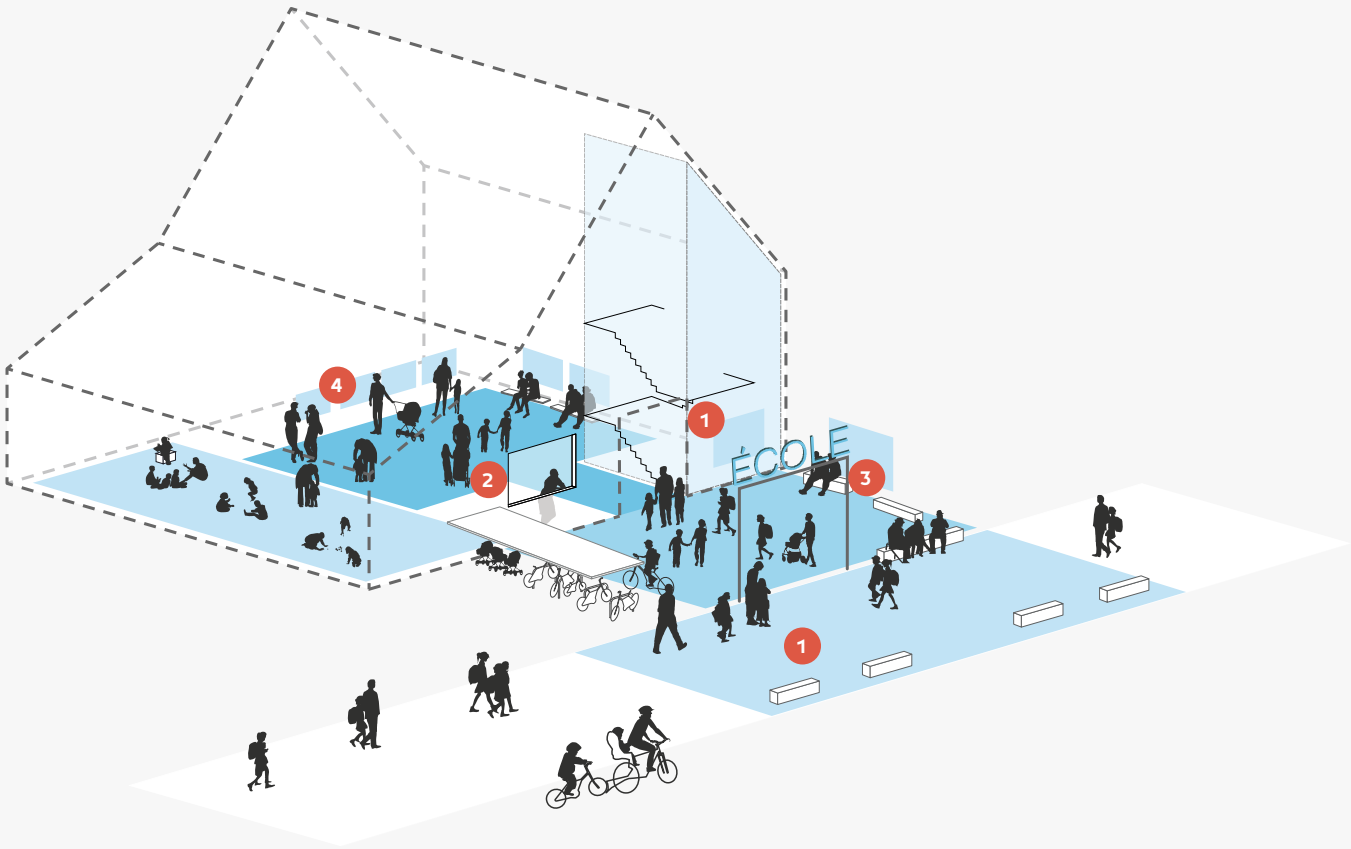
EASY MONITORING

- Can door opening and closing be controlled easily?
- Are the entrances visible from areas such as the concierge or secretariat?
- Is there a pleasant, suitable space for the person in charge of welcoming and supervising guests at entry and exit times?
- If necessary, is an intercom or video surveillance system envisaged?

➔ **See Sheet II.3 Security against intrusion, p. 44**

CONVIVIALITY AND SOCIAL INTERACTION

- Are entrance areas equipped with waiting and reception areas (benches, canopy, etc.) for staff and students?
- Is there a waiting area for parents?
- Do the school's entrance areas allow it to communicate information and promote students' work (e.g. display areas inside and/or outside the school)?



1. A CLEARLY IDENTIFIABLE ENTRANCE USING COLOURS, ARTISTIC INTERVENTIONS, ETC.
2. ENTRANCE AREAS VISIBLE FROM STAFF AREAS TO FACILITATE SURVEILLANCE
3. BENCHES AND A SCHOOL CANOPY FOR A COMFORTABLE WAITING AREA FOR TEACHERS, PARENTS, CHILDREN, ETC.
4. CHILDREN'S WORK DISPLAYED INDOORS AND OUTDOORS TO COMMUNICATE THE SCHOOL'S PROJECT

> FURTHER INFORMATION

USEFUL INFORMATION:

[1] « IDS (Instrument voor duurzame scholenbouw) » GO! – AGION ;Naar een inspirerende leeromgeving. Instrument voor duurzame scholenbouw. GO! – AGION October 2016 version, based on the May 2010 version, available on the AGION website www.agion.be > ontwerpinfo ;

[2] Fiches-conseils FWB " Dessine-moi une école "Fiches-conseils à l'attention des concepteurs de bâtiments scolaires (FWB), FWB, Service des infrastructure scolaires subventionnées de la DGI ; available at www.infrastructure.cfwb.be > publications.

I.11
RECREATIONAL AREAS

The playground is an outdoor space for play and relaxation, where a variety of activities can be performed over short periods of time (quiet or dynamic games, discussions or sporting activities, for example). The creation of sub-spaces with different vibes encourages the cohabitation of different uses. Some playgrounds have sports fields. Sometimes, part of the recreation area takes the form of a green space, reinforcing the diversity of vibes and offering educational potential around nature-related issues.

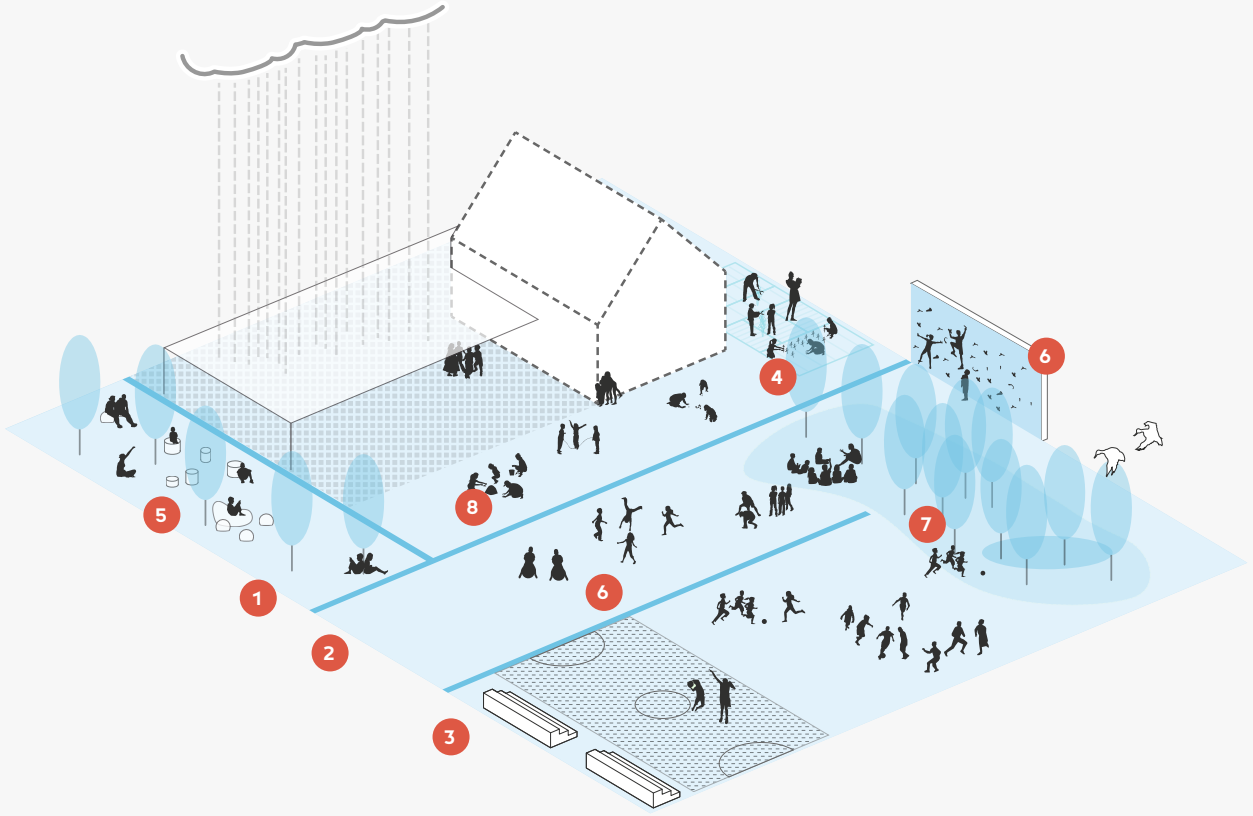
Particularly in dense urban environments, playgrounds are often too small for the number of students. In some cases, cramped conditions are due to poor use of the space, which can be explained by a lack of any modifications and maintenance, and/or by the difficulty of ensuring supervision. The proportions of the playground and its configuration have an effect on the perception of the space actually available. For example, a very elongated playground dominated by tall buildings will appear smaller than a square playground with the same surface area in an open environment. Given Belgium's climate, it's also important to have playgrounds that are sheltered from rain, wind and sun.

Outdoor areas such as bicycle parking and waste bin storage are often linked to recreation areas. These service areas are covered in other sheets.

➔ **See Sheets IV.4 Waste, p. 72 and V.4 Mobility, p.84**

→

"A playground for playing, dreaming, playing sports, strolling, chatting, planting, resting, having fun... " This redevelopment, carried out as part of a Sustainable Neighborhood Contract, leaves room for a wide range of activities for young and old alike; the many opportunities for play and learning (lookout tower, sports fields, play trail, "talk-tube", vegetable gardens, sorting waste bins, etc.) are set out in a large figure 8, unifying the space. This project was designed with the school's children and staff. (municipal school n°9, Forest)



1 2 3 DEMARCATION OF SEATING ZONES (1) , RUNNING ZONES (2), BALL PLAYING ZONES (3) TO IMPROVE USER COHABITATION AND SAFETY

4 5 6 7 A DIVERSITY OF ENVIRONMENTS TO ENCOURAGE PLAY AND LEARNING: VEGETABLE GARDEN (4), READING CORNER (5), SPORT (6), NATURE (7)

8 SPACES THAT OFFER DIFFERENT SENSORY EXPERIENCES / CONTACT WITH SAND OR TREE BARK, ETC.

> WHAT TO LOOK FOR

SUITABLE SURFACE AREA AND PROPORTIONS

- Is the usable surface area of the playgrounds sufficient for the number of students?

  Maximum area that can be subsidised according to the physical standards: 5 m²/student (French-speaking Community) and 8 m²/student (Flemish Community), including school canopies.

- Do the proportions and configuration of the school grounds create a sense of space?
- Does the playground layout allow for the organisation of one-off events such as parties or sporting events (free space, no difference in level, no obstacles, etc.)?

A DIVERSITY OF ENVIRONMENTS AND HARMONIOUS COHABITATION OF USES

- Can the playgrounds accommodate several uses simultaneously under good conditions of cohabitation (quiet corner and seating areas, "ball" area, running area)?
- Do they stimulate positive interactions between students?
- Does the layout of recreation areas mean they are easy to supervise?
- Do they offer a range of different vibes?
- Is there a separate, secure area for younger uders? If not, are the breaktimes for the different age groups spread out over time?
- Do they offer good acoustic and thermal comfort in summer (protection against overheating) and winter (sunlight and protection from wind and rain)?

➔ **See Sheets III.1 Thermal comfort, p. 50 and III.2 Sound comfort, p. 54**

- Is the playground organised in such a way that it can be played in without disrupting lessons (if breaktimes are staggered)?

SCHOOL CANOPIES OF ADEQUATE DIMENSIONS AND WELL-LOCATED

- Is the usable surface area of the school canopies adapted to the number of students likely to be playing there at any one time?

  Maximum area that can be subsidised according to the physical standards: 1.2 m^2 (Flemish Community) and 2 m^2 (French-speaking Community)

- Are the school canopies high enough?
- Do they provide effective protection against wind, rain and sun?
- Are they well integrated into the school's architecture?
- Are they located near building entrances?

SUITABLE FITTINGS AND EQUIPMENT

- Do the playgrounds facilitate the organisation of educational activities (vegetable garden, animals, board games, reading corner, discussion corner, outdoor physical activities)?
- Do they offer play equipment that complies with safety standards?

➔ **See Sheet II.2 Physical safety, p. 42**

- Are the playgrounds equipped with enough benches, water fountains and waste bins?
- Do they have adequate lighting?
- Does the layout allow students to come into contact with natural elements (sand, bark, vegetation, etc.)?

SUITABLE FLOORING IN GOOD CONDITION

- Is the floor covered with a hard, even, non-slip material (e.g. paving, tartan, rubber or asphalt) to reduce the risk of injury?
- Are the surfaces of the playground free of irregularities, obstacles or hazards (water trickles, gullies or kerbs, tree roots, etc.)?

➔ **See Sheet II.2 Physical safety, p. 42**

USABLE SPORTS FIELDS

- Do the outdoor recreational areas include sports fields?
- Do the fields meet the standards set by the sports federations?
- Is the surface suitable for sports?
- Are the fields equipped with basketball boards, nets, etc.?

QUALITY GREEN SPACES

- Do the school's recreational areas include a variety of vegetation (trees, ornamental plants, grassy areas, vegetable gardens, etc.)?
- Are these areas used for educational activities (games and sports, vegetable gardening, chicken coop)?
- Do they offer good landscape qualities?
- Are they well maintained and managed?

➔ **See Sheets IV.2 Water, p. 68 and IV.3 Biodiversity, p. 70**

> FURTHER INFORMATION

USEFUL INFORMATION:

[1] « IDS (Instrument voor duurzame scholenbouw) » GO! – AGION ;Naar een inspirerende leeromgeving. Instrument voor duurzame scholenbouw. – AGION versie oktober 2016, basée sur la version de mai 2010, disponible sur le site d'AGION www.agion.be > ontwerpinfo ;

[2] FWB tip sheets "Dessine-moi une école" Tip sheets for designers of school buildings (FWB), FWB, Service des infrastructure scolaires subventionnées de la DGI ; available at www.infrastructure.cfwb.be > publications.

[3] FWB-DGI grant as part of the Priority Works Program to remedy the inadequacy of playgrounds and replace unsuitable school canopy surfaces;

[4] Pimp je speelplaats: call for projects launched by the Flemish Government to contribute to better quality and opportunities for play and education in playgrounds. www.pimpjespeelplaats.be/;

[5] Buitenspel. Subsidies voor een uitdagende speelplaats: Call for projects launched by the VGC to support Dutch-speaking schools in the BCR in renovating their playgrounds. http://www.vgc.be/ondersteuning/subsidies/onderwijs/waarvoor-dient-buitenspel;

[6] MOS: duurzame scholen, straffe scholen www.lne.be/mos-duurzame-scholen-straffe-scholen ;

[7] Brussels Environment (call for projects – vegetable gardens);

[8] Ose le vert, recrée ta cour@bxl: www.environnement.brussels > thématiques > espaces verts et biodiversité.

II.
A SAFE SCHOOL

> TO HAVE TO HAND

- School plans (including evacuation plans)
- ISPPW reports (Internal service for prevention and protection at work)
- ESPPW reports (External service for prevention and protection at work)
- Opinion of the SIAMU (Fire and Urgent Medical Assistance Service)
- Asbestos inventory, if applicable (buildings prior to 1998)
- Soil condition certificate
- Environment permits

←

This contemporary intervention, respectful of the architectural identity and existing heritage, has improved the overall spatial organisation while complying with current safety standards: the creation of new classrooms and a media library on the roof has created new circulation spaces and reorganised existing circulation routes, notably in school canopy, which has become a luminous, interactive space. These transformations involve the construction of a second escape route to ensure safety in the event of fire. This independent access via an external staircase and lift makes the added floor usable outside school hours, for associative and neighbourhood activities. (Sint-Joost-aan-Zee, Saint-Josse-ten-Noode) ©2005 Lander-loeckx

II.1
FIRE SAFETY

School buildings require special attention in terms of fire safety, as the number of people to be evacuated and the density of occupancy are generally high. This is all the more so in high-rise buildings, where the risk of blocked escape routes increases as the number of students rises, and as they come down the staircase.

Fire safety in a school depends on the fire resistance of the structural elements, building compartmentalisation, the size of escape routes and exits, detection and alarm systems, and extinguishing systems. In addition, a series of prevention and information measures, such as the organisation of evacuation drills, must also be adopted.

A Royal Decree [1] lays down the "basic standard" fire safety requirements for building components, compartmentalisation and escape routes. However, these requirements do not apply to buildings built before the standard came into force in 1994, provided they have not undergone major renovation work. For these, it is essential to consult the Fire and Urgent Medical Assistance Service of the Brussels-Capital Region (SIAMU) to decide on the appropriate preventive measures. There is a specific standard for school buildings dating from 1982 (NBN S21-204) [3], but it is currently being revised. However, most of the information contained in this specific standard is taken from the basic standards.

Furthermore, as "workplaces", schools must comply with the Code on Well-being at Work [2], which imposes additional precautionary measures to tackle fire, such as fire-fighting equipment, warning and alarm systems, information for staff and the obligation to draft in-house prevention plans.

> WHAT TO LOOK FOR

FIRE-RESISTANT STRUCTURAL ELEMENTS

- Are the structural elements fire-resistant?

  Requirement of the Royal Decree [1]: Structural elements resistant to fire for 30 minutes if the building is < 2 storeys; 60 minutes if the building is ≥ 2 storeys

COMPARTMENTALISATION OF STAIRCASES AND THE BUILDING

- Are stairwells separated from corridors and classrooms by fire-resistant walls?

  Requirement of the Royal Decree [1]: Compartment walls resistant to fire for 30 minutes if the building is ≤ 2 storeys; 60 minutes if the building is > 2 storeys

- Are fire doors in good working order (not blocked, not too heavy for small children, etc.)?

- If compartmentalisation is not possible (e.g. to preserve heritage value), are there measures to compensate for this (e.g. centralised detection)?

- Are spaces over 2,500 m² compartmentalised? If not, are there any measures in place to compensate for this shortcoming (automatic shutdown system, for example)?

CONFORMITY OF ESCAPE ROUTES

- Are escape routes (corridors, staircases, exits) compliant: clear space and sufficient width for occupancy and floor?

  Approximate sizing (simplification of the basic standard): ≥ 1.25 cm per person or ≥ 2 cm per person for a building ≥ 2 storeys

- Are all spaces less than 45 m from stairs or exits?

- Are dead ends less than 15 m long?
- In high-occupancy premises (multi-functional halls, refectories, etc.), are the number of exits compliant: two exits if occupancy exceeds 50 people, in medium and tall buildings (over 10 m high)?

SUITABLE SIGNING

- Do posted evacuation plans and signage take into account the current occupancy situation?

ALARM AND DETECTION SYSTEMS

- Is the building equipped with alarms (mandatory)?
- Is the fire alarm clearly audible throughout the school?
- Is the building equipped with fire detectors (recommended)?

REGULAR FIRE EVACUATION DRILL

- Is a fire evacuation drill organised three times a year?

Requirement: one drill per year. Recommendation (FWB): one drill per quarter

CONFORMITY OF EXTINGUISHING EQUIPMENT

- Does the school have fire extinguishers? Are they in place and checked annually?
- Is the kitchen equipped with fire blankets?
- Are smoke vents regularly checked for proper operation?

ACCESSIBILITY OF THE SITE FOR THE FIRE SERVICE

- Is the entire site accessible to fire trucks?
- Are access points clearly identifiable?
- Are hydrants (water intake points for the fire service) easy to locate and regularly checked?

PREVENTION AGAINST SPECIFIC FIRE RISKS

- Have potential sources of fire been identified (e.g., consumables storage areas or waste bins), and have preventive measures been taken to limit the risks?

> FURTHER INFORMATION

LEGISLATIVE AND REGULATORY FRAMEWORK:

[1] Royal Decree laying down the basic fire and explosion prevention standards that new buildings must meet (Royal Decree of 7/7/1994 and amendments – Coordinated version of 18/01/2017);

[2] Title 3 of Book III of the Code on well-being in the workplace. www.emploi.belgique.be/bien_etre_au_travail.aspx;

[3] NBN S21-204:1982 Fire protection in buildings – School buildings – General conditions and reaction to fire (new construction). This standard is currently being revised.

OTHER USEFUL INFORMATION:

[4] SIAMU: Fire and Urgent Medical Assistance Service of the Brussels-Capital Region, be.brussels/siamu;

[5] FWB-DGI grant as part of the priority works program to remedy building safety shortcomings and fire risk problems.

II.2
PHYSICAL SAFETY

Physical safety refers to all the physical conditions that protect against the risk of falls and injuries. Protection against the risk of falling is the subject of specific standards covering, in particular, the requirements for guardrails [1] and glass elements [2,3].

To avoid accidents, you need to remove or protect sharp or pointed objects, avoid overly rough, slippery or uneven floor coverings that can also lead to falls and injuries, limit water temperature and prevent access to toxic products such as cleaning products. In outdoor areas, rough, slippery or uneven surfaces can also lead to falls and injuries.

> WHAT TO LOOK FOR

COMPLIANCE OF RAILINGS AND SPANDRELS

- When the difference in level between two spaces is greater than or equal to 1 m, do the guardrails and handrails comply with the standard (see box)?
- Are the handrails at the right height for younger children (2.5 to 6 years)?
- Are upstairs windows fitted with spandrels of the correct height (see box)?
- Are glass spandrels which overlook outdoor activity areas fitted with safety glazing (see box)?
- Are windows clear of fixed objects or steps that children can climb on?

Requirements NBN B 03-004:2017 [1]: Railing and spandrel height: 1,100 mm if the thickness of the guardrail ≤ 200 mm; 900 mm if its thickness > 400 mm and 1,200 mm if the difference in level ≥ 12m. Vertical bar spacing ≤ 110 mm.

No horizontal elements in front of windows or in railings up to a height of 450 mm to prevent climbing.

NBN S 23-002 requirements for glass elements [3]:

- in areas of human activity where there is a risk of injury from broken glass: toughened glass or laminated glass;

- in areas of human activity where there is a risk of falling: laminated glass.

- Are upstairs windows equipped with safety devices (e.g. key-operated and free-tilt sashes)?

PROTECTION FROM SHARP OBJECTS AND OTHER OBSTACLES

- Are sharp objects protected in playgrounds and elsewhere?
- Is the stairway clearance sufficient (at least 2 m)?

EVEN, NON-SLIP FLOORING

- Are the floors in the playgrounds and playrooms even and non-slip?
- Are the sunken doormats (if any) flush with the threshold? If they are not sunken, do they have an anti-slip system?

LIMITED HOT WATER TEMPERATURE

- Are hot water points accessible to children equipped with anti-scald devices?

TOXIC PRODUCTS OUT OF REACH OF STUDENTS

- Are cleaning products and other toxic products inaccessible to students (locked cupboard or room)?
- Are toxic plants outlawed?

COMPLIANT PLAY AREA

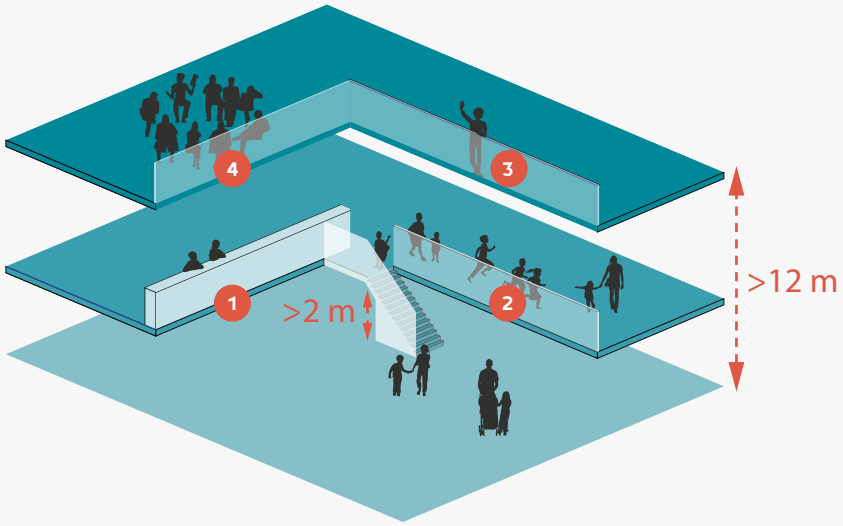
- Do the playground facilities and their operation comply with the Royal Decrees?
- Does the play equipment comply with the safety principles defined by the Royal Decree?

- **Do they have a "certificate of conformity" to the relevant European standards, depending on the type of equipment?**

The decree governing the operation of play areas [5] requires the operator to carry out a risk analysis, take preventive measures and draw up and monitor an inspection and maintenance schedule.

The Decree on playground equipment [4] allows playground equipment to be placed on the market if it complies with the safety principles defined by the same Decree, which require, for example, that not only "normal" but also foreseeable use be envisaged, and that the strength, rigidity and balance of the equipment be taken into account, as well as the risks of falling, cutting, strangulation, choking or flammability.
Equipment with a certificate of conformity to non-mandatory European standards or to European technical specifications where they exist (depending on the type of equipment) is deemed to meet the obligations of the Order.

Equipment weighing less than 3 kg and temporary elements assembled by children for their play are not concerned by this Order.



1. MINIMUM HEIGHT OF RAILINGS AND SPANDRELS: 900 MM IF THICKNESS > 400 MM
2. MINIMUM HEIGHT OF RAILINGS AND SPANDRELS: 1,100 MM IF THICKNESS > 200 MM
3. MINIMUM HEIGHT OF RAILINGS AND SPANDRELS: 1,200 MM IF LEVEL DIFFERENCE > 12 M
4. LAMINATED GLASS FOR GLAZED RAILINGS IN AREAS OF ACTIVITY

> FURTHER INFORMATION

LEGISLATIVE AND REGULATORY FRAMEWORK:

[1] NBN B 03-004: 2017 Building railings;

[2] NIT 221 Installation of glazing in rebates;

[3] NBN S23-002:2010 Glazing;

[4] Royal Decree of 28 March 2001 on the safety of playground equipment;

[5] Royal Decree of 28 March 2001 on the operation of playgrounds;

[6] Code on well-being in the workplace. Available at www.emploi.belgique.be/bien_etre_au_travail.aspx.

OTHER USEFUL INFORMATION:

[7] Practical guide to playground safety, FPS Economy 2012, available at economie.fgov.be > publications;

[8] FWB-DGI within the framework of the Priority Works Program for works to replace the surface covering of areas used for passage, school activities or recreation, inside and outside buildings, which are dangerous for students due to their deterioration.

II.3 SECURITY AGAINST INTRUSION

Various preventive measures can be adopted to dissuade intrusions and control students leaving the school premises. These include social control devices (e.g. a view of the entrance from the premises) and management measures (e.g. the presence of staff at entrances), as well as physical measures (e.g. strong doors, windows and boundaries) and electronic measures (e.g. alarms, video intercom systems). To confront dangerous intrusions in the building (AMOK) and terrorist threats, communities have issued specific recommendations [3 and 4].

> WHAT TO LOOK FOR

SOCIAL CONTROL

- Are entrances visible from staff areas (secretariat, janitor's office, management, etc.) to foster social control within the school?
- Do the layout of the site (visibility of the school from the public space, busy and lively street, etc.) and the school's relationship with the neighbourhood foster social control?

➔ **See Sheet V.3 The forecourt and public spaces, p.82**

- Are the associations that organise extracurricular activities in the building involved in the school's safety plan?

SUPERVISION OF ENTRY AND EXIT

- Is one person responsible for opening and closing doors and managing keys?
- Are building entrances guarded when doors are open? Is there a reception area where visitors can introduce themselves?

PHYSICAL PROTECTION AGAINST INTRUSION

- Are the doors and windows sturdy?
- Do the site boundaries allow for physical closure while preserving visual openness?

STORAGE VALUABLES

- Are valuables (laptops, LCD projectors, etc.) or money securely stored?

TECHNO-PREVENTIVE EQUIPMENT

- If necessary, is the school equipped with an alarm system? Is a member of staff responsible for managing this equipment?

→

As part of a Sustainable Neighborhood Contract, several interventions have improved the quality and safety of the entrances to this 1980s school: decorative openwork railings have replaced the fences, bright colours, planting and lighting have improved the school's visibility in the neighbourhood, and so on. These interventions help to stimulate exchanges between parents, teachers and students, while promoting safety. The view from the rooms into the reception area also makes it easier to control entry to and exit from the school. (Georges Primo local school no. 6, Schaerbeek) © 2013 Georges De Kinder

> FURTHER INFORMATION

USEFUL INFORMATION:

[1] Making schools safer – Preventing burglary, theft and vandalism, manual published by the Directorate for Local Integral Safety of the FPS Interior, available at www.besafe.be;

[2] Site of the Federal Public Service Interior – Directorate General Safety & Prevention, www.besafe.be/fr/base-de-connaissance > Sécurité au sein de l'école et aux alentours;

[3] Sheet 17 "Recommendations in the event of a dangerous intrusion into a building (AMOK)" published by the ISPPW of the FWB, available at www.espace.cfwb.be/sippt;

[4] Canvas intern noodplan voor scholen en internaten – Federale dienst noodplanning gouverneur Oost-Vlaanderen in samenwerking met de Provinciale Brandweerschool Oost-Vlaanderen, het Katholiek Secundair Onderwijs Oudenaarde en het Vlaams Ministerie van Onderwijs en Vorming;

[5] Administratieve aandachtspunten/Veiligheid en Preventie section of the slimgedeeld website: http://slimgedeeld.be/aanpak/administratieve-aandachtspunten/.


ÉCOLE GEORGES PRIMO

II.4
ASBESTOS

Asbestos refers to certain fibrous-textured minerals used in construction (ceilings, cladding, slates) and in technical installations. Buildings constructed before 1998 are likely to contain asbestos, particularly in construction materials installed between 1950 and 1970. Asbestos can split into extremely fine, long fibres that can penetrate the alveoli of the lungs.

Asbestos poses a health risk only if the building components concerned are worn, perforated or broken. As such, by accurately identifying asbestos-containing elements and requiring that any work be carried out by suitably trained workers, the risk can be controlled. However, asbestos must be removed in the event of major work or demolition. In this case, the regulatory protocol must be followed for safe removal or encapsulation.

> WHAT TO LOOK FOR

IS THERE AN ASBESTOS INVENTORY

- Has the asbestos inventory been carried out in accordance with legal requirements (buildings dating from before 1998)?
- Is it up to date and available to the building managers?

IMPLEMENTATION OF RISK MANAGEMENT MEASURES

- Where applicable, have the areas containing asbestos-containing materials been marked?
- Are asbestos-containing building components and installations subject to periodic visual inspection?
- Have technical staff been informed of the presence of asbestos and given instructions for minor work?
- Does the school call in specialised workers for work (plumbing or electrical, for example)?

> FURTHER INFORMATION

LEGISLATIVE AND REGULATORY FRAMEWORK:

[1] Title 3 of Book VI of the Code on well-being in the workplace, available at www.emploi.belgique.be/bien_etre_au_travail.aspx;

[2] Decree of the Government of the Brussels-Capital Region of 10 April 2008 (BOJ 18/06/2008), relating to the conditions applicable to asbestos removal and encapsulation sites.

OTHER USEFUL INFORMATION:

[3] Asbestos section of the Brussels Environment website, www.environnement.brussels/thematiques/batiment/la-gestion-de-mon-batiment/amiante;

[4] FWB-DGI as part of the Priority Work Program to eliminate hazardous products (asbestos, askarel);

[5] Steekproef asbestinventaris in scholen report, OVAM, 2018. Available at www.ovam.be/asbestinventarisatie-in-scholen.

II.5
POLLUTED SOILS

Soil pollution is caused in particular by leaks or spills of fuel oil and other pollutants by companies, but also by the use of pesticides, for example. It is generally invisible, but can have health consequences. Schools are often unaware of the state of the soil on their site; however, they are confronted with this question when undertaking works or applying for administrative acts such as planning permission, leases or environmental permits. Risks do exist, however, particularly in the case of eating vegetables from an open-ground vegetable garden, inhalation when moving soil (to create a pond, for example) or ingesting soil. Soil in Brussels that is polluted or suspected of being polluted, as well as soil that is clean, treated or in the process of being treated, has been inventoried and mapped by Brussels Environment. It is possible to ask Brussels Environment for a certificate stating the category in which a plot of land has been classified in this inventory.

Category 0: unknown soil condition, potentially polluted > to be checked - Category 1: unpolluted soil - Category 2: slightly polluted soil > no risk - Category 3: polluted soil > no risk - Category 4: polluted soil > under investigation, treatment or monitoring

> WHAT TO LOOK FOR

AWARENESS OF THE STATE OF THE SOIL

- Do the administrators of the school know the condition of the soil on the school site?
- Does the school have a certificate indicating the category of soil in the Brussels Environment inventory?
- Are oil tanks known and monitored to prevent leaks (e.g. during construction work)?

PREVENTIVE MEASURES

- Has the school banned the use of pesticides (a legal requirement) and the dumping of chemicals and ashes on the site?
- In the event of polluted soil, are school staff informed?
- Is the open-ground vegetable garden, if it exists, located away from polluted land?
- Are measures being taken to prevent students from ingesting contaminated soil?

> FURTHER INFORMATION

LEGISLATIVE AND REGULATORY FRAMEWORK:

[1] Ordinance of 20 June 2013 on the use of pesticides compatible with sustainable development in the Brussels-Capital Region.

OTHER USEFUL INFORMATION:

[2] Polluted soils section on the website www.environnement.brussels/thematiques/sols-0;

[3] Soil condition map, on the same site;

[4] Application forms for certification, on the same site;

[5] Financial support (AGION and OVAM) for the study and remediation of contaminated soils www.ovam.be/wat-bieden-de-ovam-en-agion-u-aan.

III.
A SCHOOL WHICH IS HEALTHY AND COMFORTABLE FOR ALL

> TO HAVE TO HAND

- School plans
- ISPPW reports (Internal service for prevention and protection at work)
- ESPPW reports (External service for prevention and protection at work)

←

In this school from the 1960s, the spaces were designed to enable active teaching: spacious and bright, they are still well adapted to today's developments. In the gym on the street-facing first floor, light and views of the outdoors enhance the feeling of space. The position of the sports hall at the front of the building also makes it an element of architectural integration in the neighbourhood. This room is also open to local sports associations. (Municipal School Clair-Vivre, Evere)

III.1
THERMAL COMFORT

Thermal comfort means feeling neither too hot nor too cold. This depends, of course, on the temperature, but also on humidity levels, draughts, activity levels and individual metabolisms.

Thermal comfort inside buildings is mainly linked to the orientation and exposure of the rooms to the sun, insulation and solar protection, as well as heating, ventilation and aeration controls. It increases when the temperature in the room is uniform and there are no cold walls. The ability to control and regulate the temperature (via thermostats, open windows, curtains or shutters, for example) also psychologically enhances the feeling of comfort.

For new buildings (or major renovations), the legislative requirements for the energy performance of buildings (EPB) set out the conditions for ensuring this comfort, while there is no reference standard for existing buildings.

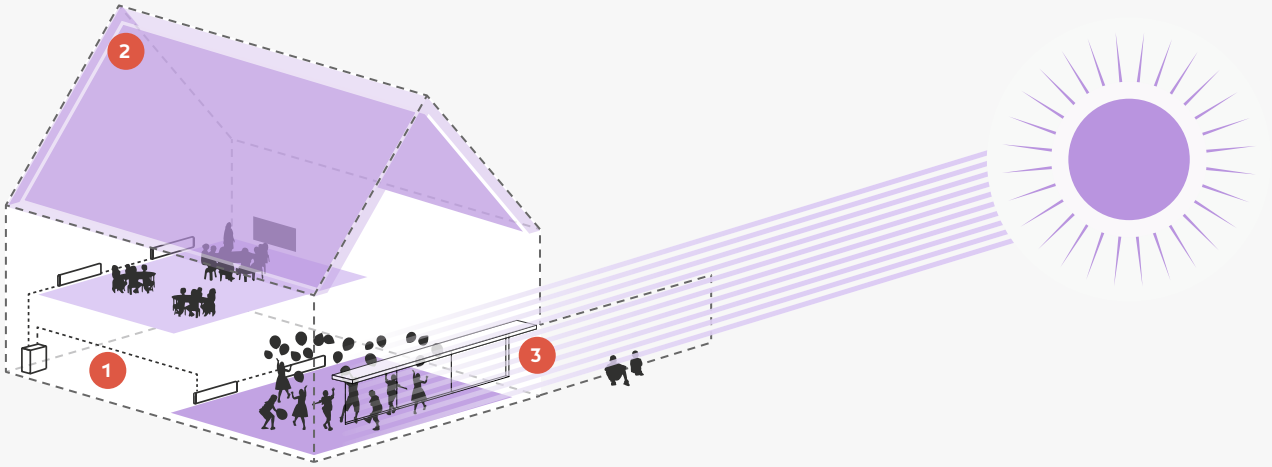
To assess thermal comfort accurately, measurement campaigns or thermohygrometric simulations can be carried out. In the absence of an in-depth study, various on-site observations and a survey of staff and students provide valuable indications.

Comfort in outdoor spaces must also be guaranteed by sun protection in summer and sufficient sunlight in winter, protection against prevailing winds and above all against rain. These conditions are strongly determined by the layout of the buildings surrounding the playground.

IN WINTER

In winter, uncomfortable temperatures are mainly due to a lack of insulation in the building shell (particularly noticeable in the floors under the roof) or to the uneven distribution of heat in the building. Outdated heating systems and lack of maintenance – many schools have no maintenance contract – lead to frequent breakdowns.

Heating control is managed internally or externally, depending on the facility. Internal regulation by school staff poses the problem that the people in charge of this aspect may not be trained. When regulation is centralised and outsourced, it seems to be better controlled. However, the response time can be longer: in the case of low temperatures outside the heating season, for example, the response is not always immediate, due to the simultaneous nature of the requests.



1. DIFFERENT HEATING SETTINGS DEPENDING ON THE ORIENTATION
2. THERMAL INSULATION PLANNED FOR THE MEDIUM AND LONG TERM
3. INTERIOR DRAPES OR BLINDS TO PROTECT AGAINST GLARE WHILE ENJOYING THE SUNSHINE

> WHAT TO LOOK FOR

GOOD SUNLIGHT CONDITIONS

- Do the orientation and configuration of buildings ensure that interior spaces get plenty of sunlight in winter, without producing glare?

SATISFACTORY LEVELS OF THERMAL INSULATION AND WATERPROOFING

- Are walls, frames and roofs insulated?
- Does the building have high-performance glazing (at least double glazing and less than 15 years old)?
- Are draughts (caused by poorly sealed doors, walls or glazing) avoided?
- Is the humidity level in the rooms adequate?

OPTIMISED HEAT DISTRIBUTION SYSTEM

- Is heat distribution even in different parts of the building?
- Is there little or no temperature difference between the beginning and end of the distribution circuit?
- Are distribution channels differentiated according to the orientation of different spaces?
- Does the temperature match the room's occupancy and function?

The Code on well-being at work [2] imposes a minimum of: 18°C for very light work and

16°C for light work

Recommended temperature (widely accepted as comfortable):

Between 20 and 23°C for light activities (in classrooms, for example)

Around 16°C for circulation areas, technical rooms and physical education rooms

EFFICIENT USE, MANAGEMENT AND MAINTENANCE OF HEATING SYSTEMS

- Is the heating set correctly?
- Do occupants have the option of adjusting the heating in the various rooms themselves?
- Is the heating system in good working order?
- Does the school have a maintenance contract?
- When heating control is managed in-house, is someone designated and trained for this task?
- Is heating management efficient (lower temperatures at night, on weekends and during holidays)?

OPTIMISED VENTILATION AND AIRING SYSTEMS

- Does the ventilation system (if any) provide for preheating of the air coming in from outside (e.g. double-flow system)?
- Are ventilation rates adapted to needs (based on occupancy)?
- If ventilation is by means of grilles, are they located and oriented so as not to create draughts?

OUTDOOR AREAS CAN BENEFIT FROM WINTER SUNSHINE

- Does the school have outdoor spaces that are sunny in winter and protected from prevailing winds?

IN SUMMER

In summer, the aim is to avoid overheating. A protective system designed into the building from the outset (e.g. awnings, shutters, screens, blinds) often guarantees optimum protection. In existing buildings, the addition of external blinds can prove effective, as solar protection by means of curtains or light interior blinds is often insufficient. Moreover, they are often damaged by inappropriate or over-intensive handling. What's more, manual control of solar shading does not allow us to anticipate and avoid solar radiation before the premises are occupied.

> WHAT TO LOOK FOR

EFFECTIVE SUN PROTECTION

- Are sunny facades fitted with awnings, shutters or external blinds?
- Are the blinds in good condition?

SATISFACTORY LEVEL OF THERMAL INSULATION

- Is the roof well insulated?

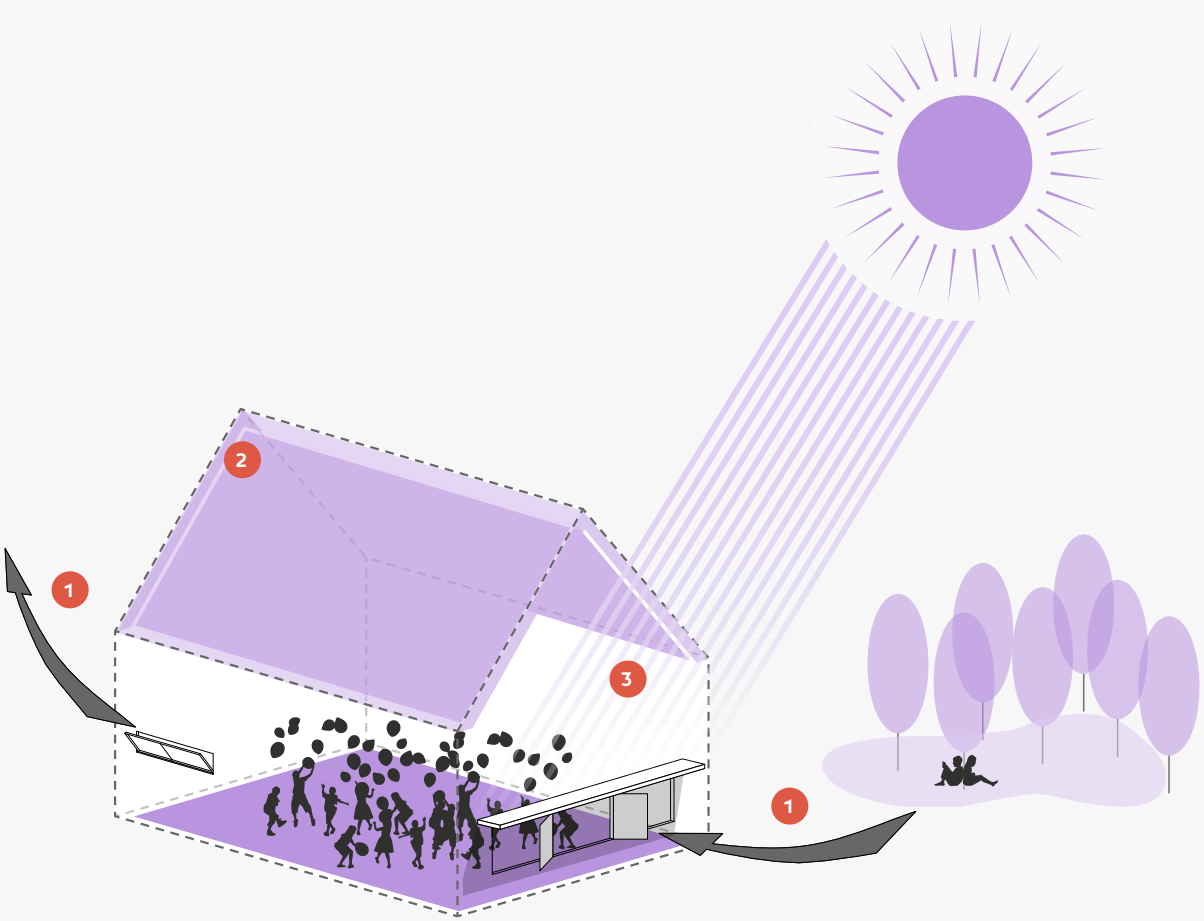
SUFFICIENT VENTILATION

- Do the layout and size of the windows allow for effective ventilation?
- Is the humidity level in the premises adequate?

PROTECTION FROM THE SUMMER SUN IN OUTDOOR AREAS

- Are there any outdoor spaces protected from the summer sun (building shade, canopies, school canopies, trees, etc.)?

➔ See Sheet I.11 **Recreational areas, p. 34**



1. OPENINGS ON OPPOSITE SIDES OF THE ROOMS TO CREATE DRAUGHTS
2. GOOD ROOF INSULATION, ESPECIALLY FOR LOW-RISE BUILDINGS
3. WELL-SIZED AWNINGS FOR PROTECTION FROM THE SUMMER'S MORE VERTICAL SUN, WHILE STILL ALLOWING SUNSHINE IN WINTER

> FURTHER INFORMATION

LEGISLATIVE AND REGULATORY FRAMEWORK:

[1] Energy Performance of Buildings (EPB) Regulations, www.bruxellesenvironnement.be > Accès rapide > La performance énergétique des bâtiments (PEB) > Construction et rénovation ;

[2] Title 1 of Book V of the Code on well-being in the workplace, on thermal environments, available at www.emploi.belgique.be/bien_etre_au_travail.aspx.

OTHER USEFUL INFORMATION:

[3] www.renovermonecole.be ;

[4] Subsidies from the FWB-DGI under the Priority Works Program to insulate the building, compensate for the absence or deficiency of external solar protection and remedy heating problems.

III.2
SOUND COMFORT

Sound comfort at school influences learning ability, behaviour and even health. Excessive noise causes fatigue and stress for students and teachers alike, reduces concentration and can even encourage aggressive behaviour.

In urban environments, acoustic discomfort can be linked to noise generated by the surrounding urban environment. The mapping of transport noise in the Brussels-Capital Region provides an objective assessment of these nuisances. Elements made of heavy materials (such as thick masonry or concrete) without cracks or perforations, as well as insulating glass (double glazing), contribute to good sound insulation from the outside. Noise generated within the school itself is also often a source of nuisance. Sound insulation between classrooms, or between classrooms and traffic areas, or between classrooms and playgrounds or the refectory is generally inadequate. The time difference between activities – for example, classes at the same time as breaktime or meals in the refectory – generates frequent disruption. Acoustic reverberation, an echo phenomenon that amplifies the sound level, in the gym, refectory, halls and corridors is also a recurring problem. Materials with little or no reverberative effect, such as cork or textiles, can help reduce this phenomenon.

Last but not least, the noise generated by the school can also be a nuisance for neighbours in a dense urban environment. However, a well-organised space within the school can reduce this inconvenience. There is a Belgian reference standard [1] which defines the noise levels to be respected according to the activities carried out in a room, as well as the calculation and measurement methods. Brussels Environment has also drawn up a vademecum of recommendations for desirable noise levels at school, and listed a series of measures to reduce nuisance.

According to NBN S01-400-2:2012 [1],
In a classroom, during class periods: background noise (LA90) should ideally remain below 50 dB(A) so that the teacher can be heard distinctly by all students without raising their voice excessively; overall ambient noise (LAeq) should remain below 65 dB(A) so as to avoid excessive acoustic discomfort, limit fatigue and maintain student's attention; the peak level (LA5) should be less than 70 dB(A), which means that the teacher's voice can be "masked" for 5% of the time by short, accidental noises; the reverberation time (T0), indicated in seconds, should not exceed 0.6 in nursery school classrooms.
In refectories: overall ambient noise (LAeq) during meals should ideally remain below 75 dB(A), so that students can converse without raising their voices excessively.
As the technical means for measuring noise levels are not always available, the perception of acoustic comfort can be assessed by the perception of teachers and students in the school.

> WHAT TO LOOK FOR

ADEQUATE SOUND INSULATION

- Does the composition of the building shell (facade and window frames for noise outside the school and in the playground) and the walls (for noise inside) ensure good acoustic comfort in the classrooms?

PROTECTION IN NOISY URBAN ENVIRONMENTS

- Are the noise disturbances of the urban environment mitigated by the construction methods and location conditions of the school buildings (playgrounds away from roads, protected buildings, etc.)?

ORGANISATION OF SCHOOL AREAS AND TIMETABLES TO MINIMISE NUISANCE

- Are classrooms protected from playgrounds, refectories and gyms?
- Are timetables designed to avoid nuisance between activities (lessons and breaktime, meals or sports activities)?

MEASURES TO MITIGATE SOURCES OF INDOOR NOISE

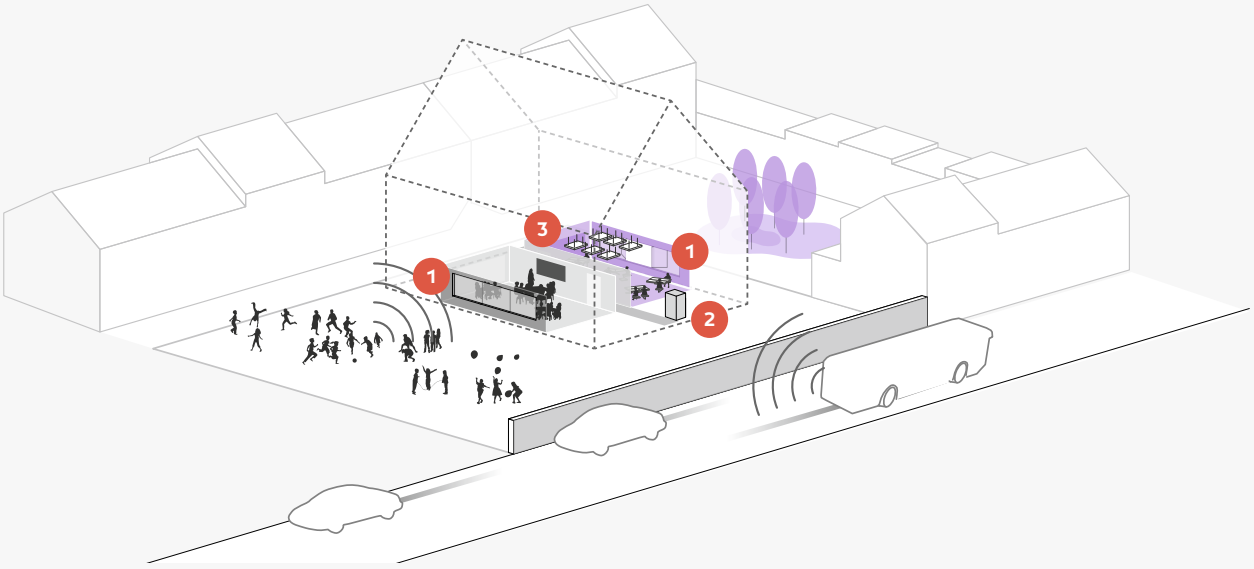
- Are measures in place to mitigate sources of noise (rubber feet on chairs, tablecloths on tables in the refectory, etc.)?
- Is the technical equipment (drinks machine, ventilation, refrigerators) quiet or located where it won't cause disturbance?

ACCEPTABLE LEVEL OF REVERBERATION

- Are the walls of classrooms and communal areas (halls, corridors, sports hall, refectory, school canopy) lined with absorbent materials (cork panels, textiles, etc.)?
- Do the rooms have few large reverberating surfaces (e.g. large bay windows or tiled floors)?

REDUCING NOISE POLLUTION FOR LOCAL RESIDENTS

- Are measures taken to limit nuisance to local residents (e.g. organisation of recreation areas or installation of absorbent surfaces and less noisy play equipment)?



1. CLASSROOMS ORIENTED TOWARDS QUIET AREAS AND TIMETABLES DESIGNED TO AVOID DIRECT PROXIMITY BETWEEN NOISY AREAS AND CLASSROOMS
2. NOISY MACHINES (DRINK MACHINES, REFRIGERATORS, ETC.) AWAY FROM AREAS REQUIRING QUIET
3. RUBBER FEET, TABLECLOTHS IN THE REFECTORY, CORK ON THE WALLS, ETC. TO REDUCE NOISE

> FURTHER INFORMATION

LEGISLATIVE AND REGULATORY FRAMEWORK:

[1] NBN S 01-400-2: 2012. Acoustic criteria for school buildings.

OTHER USEFUL INFORMATION:

[2] Vademecum on noise in schools. Combat noise in schools, why and how?, Brussels Environment, 2014 (on the Brussels Environment website > Confort acoustique dans les écoles);

[3] Section on the Brussels Environment website dedicated to noise at school www.environnement.brussels/thematiques/bruit/lecole;

[4] FWB-DGI grant as part of the Priority Works Program to remedy noise-related discomfort.

III.3
VISUAL COMFORT

Sufficient and adequate lighting (glare-free and able to distinguish colours, in particular) is necessary to carry out school activities in good conditions. The presence of natural light and the connection with the outdoors also strongly determine the quality of life in school spaces.

Visual comfort depends on the level and type of light (natural or artificial), the possibility of modulating it according to needs, particularly for specific activities (projection, use of computers or in dormitories, for example) and the visual connection with the outside from classrooms and common areas.

In the absence of technical means to measure and characterise the level of natural and artificial lighting, it is possible to assess visual comfort through simple observation and a survey of teachers and students.

> WHAT TO LOOK FOR

GOOD LEVEL OF NATURAL LIGHTING

- Do classrooms, common spaces and circulation areas benefit from generous natural lighting, both in summer and winter?

Various studies indicate that a reasonable target is to achieve a daylighting usage time of at least 50-60% of the time the rooms are used.

POSSIBILITY OF MODULATING NATURAL LIGHTING

- Are classrooms equipped with daylight control devices (blinds or more or less opaque drapes) in good condition, to avoid glare and meet specific needs (computer room, projections, dormitories)?

GOOD QUALITY OF ARTIFICIAL LIGHTING

- Is the artificial lighting sufficient (see box)?
- Is it well spread out and located?
- As regards LED lighting, is warm-temperature lighting the preferred choice?

Requirement NBN EN 12464-1 [1]:

Lighting level: ≥ 300 lux on the work surface in classrooms.

Discomfort glare factor: UGR 22.

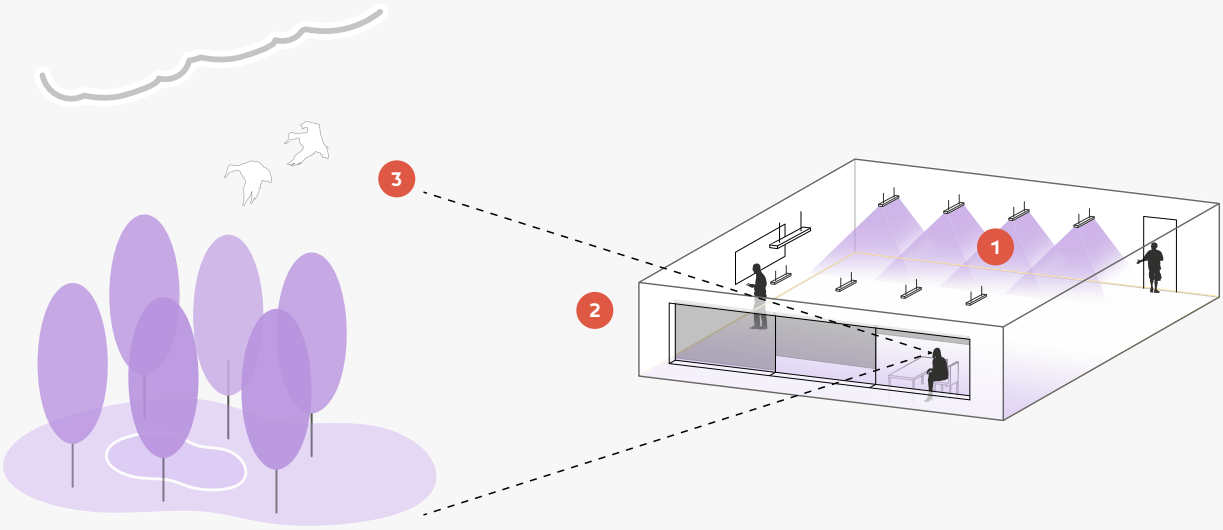
Minimum colour rendering index: Ra 80.

ZONE CONTROL OR SECTORING

- Can the lighting in a space be controlled independently according to the needs of each zone (window side, panel)?

VISUAL CONNECTION WITH OUTSIDE

- Do windows allow you to see outside from a seated position in classrooms and common areas?
- Is the view pleasant (several planes, presence of vegetation, view of the sky, etc.)?



1. INDEPENDENT CONTROL OF LIGHTING ACCORDING TO NEEDS (WINDOW SIDE, CORRIDOR SIDE, BLACKBOARD, ETC.) TO PROMOTE ENERGY SAVINGS
2. BLINDS AND DRAPES TO CONTROL LIGHTING AND PREVENT GLARE
3. MULTI-PLANE VIEWS (GROUND, VEGETATION, SKY, ETC.) FOR A MORE PLEASANT VISUAL EXPERIENCE

> FURTHER INFORMATION

LEGISLATIVE AND REGULATORY FRAMEWORK:

[1] NBN EN 12464-1: 2011 Workplace lighting - part 1: Indoor workplaces, chapter 4. Lighting project criteria;

[2] Chapter III on lighting, of Book III, Title I of the Code on well-being in the workplace, available at www.emploi.belgique.be/bien_etre_au_travail.aspx.

OTHER USEFUL INFORMATION:

[3] FWB tip sheets "Dessine-moi une école" Tip sheets for designers of school buildings (FWB), FWB, Service des infrastructure scolaires subventionnées de la DGI;

[4] School infor sheets by Brussels Environment, Sheet T.2.5: Lighting regulations;

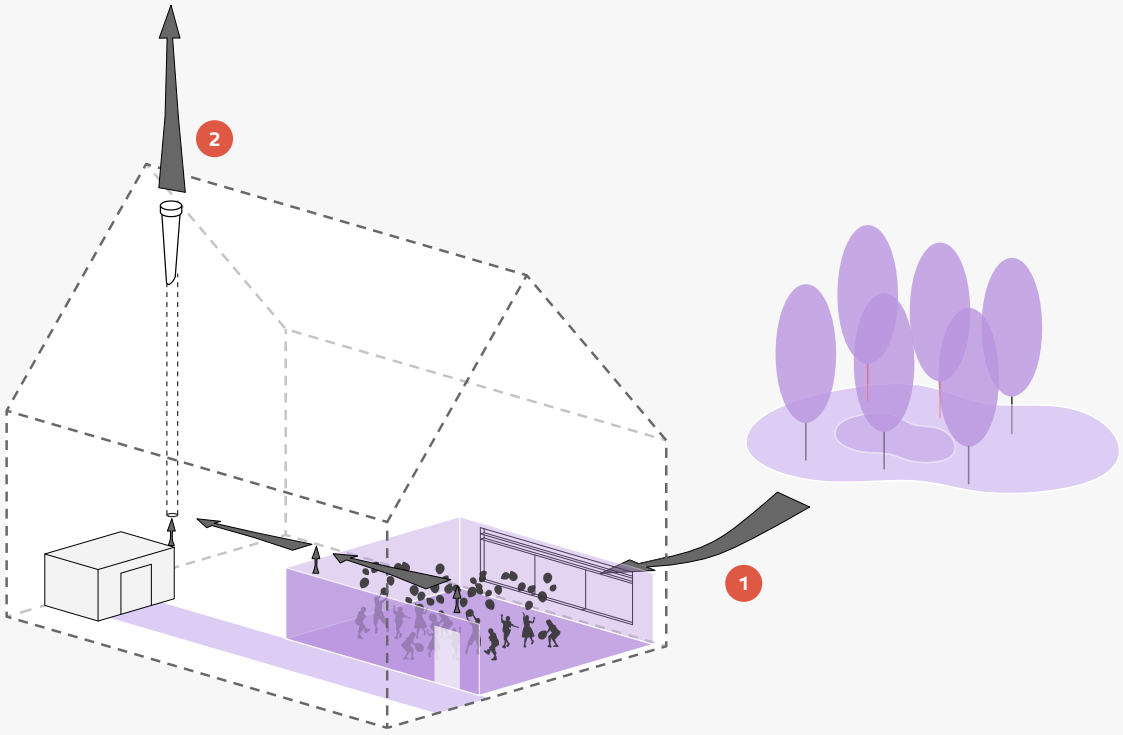
[5] Grant from the FWB-DGI under the Priority Works Program to compensate for the absence or deficiency of external solar protection or lighting.

III.4
AIR QUALITY

Air quality is particularly important at school, as children are more vulnerable than healthy adults. High CO_2 levels can cause fatigue and attention problems. The presence of mold can increase respiratory problems, for example.

Indoor air quality depends on a number of factors: pollutant-emitting sources (interior finishing materials containing volatile organic compounds or formaldehydes, cleaning products, mold, PM_{10} fine particles in outdoor air), occupancy rate, sources of humidity (infiltration or condensation linked to room occupancy), but also the volume and rate of air renewal through aeration or ventilation, which can mitigate pollutant concentrations.

Raising awareness of good ventilation practices among teachers and students helps compensate for the lack of ventilation systems. Installing devices that measure CO_2 levels can help teachers and students become aware.



1 CLEAN AIR SUPPLY SYSTEMS (ADJUSTABLE GRILLES INTEGRATED INTO FRAMES OR MECHANICAL VENTS)
2 STALE-AIR EXTRACTION DEVICES (CEILING VENTS CONNECTED TO VERTICAL DUCTS)

> WHAT TO LOOK FOR

ADEQUATE VENTILATION SYSTEM AND USE

- Are the premises equipped with a ventilation system consisting of a clean-air supply (such as grilles or ventilators built into the frames) and a stale-air exhaust (mechanical or natural)?
- Are the devices silent?
- Do the devices work properly (air intake grilles unclogged, filters cleaned regularly)?
- If a mechanical ventilation system is installed, does the school have a maintenance contract?
- When ventilation control is managed in-house, are staff members designated and trained for this task?

GOOD VENTILATION PRACTICES

- If there is no mechanical ventilation system, are the windows and doors that can be opened large enough, and are window sills unobstructed?
- Are teachers and staff aware of the need for regular ventilation (five minutes every hour, as recommended by the Office of Birth and Childhood, for example)?

NO CONTAMINANTS

- Are classrooms free of contaminants such as mold, VOC-emitting finishing materials and formaldehydes found in certain varnishes, paints, plastic coatings and cleaning products?
- If the outside environment is polluted, is clean air supplied (via filters or other treatments)?

> FURTHER INFORMATION

LEGISLATIVE AND REGULATORY FRAMEWORK:

[1] Ordinance of 2 May 2013 containing the Brussels Air, Climate and Energy Management Code (COBRACE), Coordinated version of 18 December 2015;

[2] Requirements and procedures for EPB work in the Brussels-Capital Region, available at: www.environnement.brussels/thematiques/batiment/la-peb;

[3] NBN EN 13779: 2007 Ventilation in non-residential buildings – Performance requirements for ventilation and air-conditioning systems (included in PEB regulations);

[2] Chapter IV on ventilation, of Book III, Title I of the Code on well-being in the workplace, available at www.emploi.belgique.be/bien_etre_au_travail.aspx.

OTHER USEFUL INFORMATION:

[5] ONE, brochure *L'air de rien, changeons d'air ! La qualité de l'air intérieur pour structures collectives de 3 à 18 ans*;

[6] www.renovermonecole.be;

[7] Mon air, mon école (a large-scale air quality measurement exercise in Belgian schools organised by Greenpeace), www.mijnluchtmijnschool.be;

[8] Grant from the FWB-DGI under the Priority Works Program to compensate for the absence or deficiency of ventilation;

[9] Lekker fris, a project to improve indoor air quality in schools developed by Gezondheid en Milieu: www.gezondheidenmilieu.be/nl/projecten/lekker_fris-907.html.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III.5
HYGIENE AND CLEANLINESS

Hygiene in the sanitary facilities is often a problem in schools. It depends on the number of toilets in relation to the number of students and teachers, their distribution and location in relation to lessons and classrooms, the hygienic equipment provided (washbasins with soap, waste bins), whether they are in good working order, but also the habits of students and teachers. The resources available for maintenance and supervision are also major factors in this issue. For existing buildings, the number of toilets is often lower than the recommended ratios (see box below).

The situation can be significantly improved by implementing hygiene-related educational projects that involve students in thinking about how to achieve more compliance. Several awareness-raising tools exist to encourage hygiene and "lift the taboo" on the subject of toilets.

More generally, cleanliness improves the quality of life at school. This depends on the resources available for maintenance, the nature of the surfaces to be cleaned, and the habits of students and staff.

➔ **See Sheet IV.4 Waste, p. 72**

> WHAT TO LOOK FOR

SATISFACTORY RATIO OF TOILETS TO STUDENTS AND WASHBASINS TO TOILETS

- Is the number of toilets sufficient for the number of students?

There is no legal requirement for a minimum number of toilets per student. However, the ratios recommended by the Code of well-being at work [1] can serve as a reference. These ratios are also recommended by the Commissie van Deskundigen (Flemish commission of experts):

one toilet for every 15 girls;

one toilet for every 15 boys. WCs may be replaced by urinals, provided that at least one WC is installed for every 25 boys;

one washbasin for every four WCs or urinals.

←

As part of the "Ne tournons pas autour du pot!" (Let's not beat around the bush!) project, schools wishing to renovate their sanitary facilities can benefit from financial support via calls for projects. They receive support for both material improvements and educational initiatives, carried out in consultation with students and other school staff. Reflections, advice, ideas and experiences are posted on the website: www.netournonspasautourdupot.be (Let's not beat around the bush, an initiative of the BYX Fund managed by the King Baudouin Foundation, in partnership with the non-profit association Question Santé, with the support of the Minister of Education and School Buildings of the Government of the Wallonia-Brussels Federation) ©2018, "Let's not beat around the bush!"

CONVENIENTLY LOCATED TOILETS

- Are toilets well distributed and well located (near the playground and refectory in particular, at least one toilet on each floor to deal with emergencies)?

SUITABLE TOILETS

- Are the toilets adapted to the users (urinals at the right height for children, low toilets "in sight" for nursery school children)?
- Do the primary school toilets have doors that close (but can be opened from the outside in an emergency)?
- Do the nursery school toilets guarantee children's privacy? Are the urinals separate from the girls' sanitary area?

➔ **See Sheet III.6 Accessibility of persons with reduced mobility (PRM), p. 63**

GOOD STRUCTURAL CONDITION OF SANITARY FACILITIES

- Do the toilet flushes work properly?
- Are the toilet seats in good condition?

GOOD MAINTENANCE OF SANITARY FACILITIES

- Can the sanitary facilities be considered clean?
- Are there any odours coming from the sanitary facilities?
- Are the human resources assigned to maintenance sufficient?
- How easy is it to supervise the sanitary facilities?

PROVISION OF HYGIENIC EQUIPMENT

- Do the toilets have washbasins?
- Are toilet paper and soap provided?
- Do the girls' toilets in primary schools have a waste bin for sanitary products?
- Do nursery schools have access to a washbasin with hot water (to clean up children in the event of an "accident")?

HYGIENE AWARENESS PROGRAMMES AND CAMPAIGNS

- Has the school taken steps to raise awareness and provide information on hygiene issues?
- Does it develop educational projects involving students in this area?

SATISFACTORY CLEANLINESS

- Are the resources in terms of dedicated maintenance staff sufficient [2]?
- Are the finishing materials easy to wash or dirt-repellent?
- Has the school taken steps to raise awareness and provide information on cleanliness issues?
- Does it develop educational projects involving students in this area?

> FURTHER INFORMATION

LEGISLATIVE AND REGULATORY FRAMEWORK:

[1] Sections I, III and IV of Chapter VI on social equipment, of Book III, Title I of the Code on well-being in the workplace, available at www.emploi.belgique.be/bien_etre_au_travail.aspx.

[2] Royal Decree of 06/23/1967 providing indications on the number of working hours for cleaning in schools, depending on whether the premises are furnished or unfurnished. Based on the surface area of the building, you can calculate the minimum number of staff required for cleaning.

OTHER USEFUL INFORMATION:

[3] Naar een inspirerende leeromgeving. Instrument voor duurzame scholenbouw, GO! - AGION October 2016 version, based on the May 2010 version, available on the AGION website www.agion.be > info-voor-ontwerpers;

[4] FWB tip sheets "Dessine-moi une école" Tip sheets for designers of school buildings (FWB), FWB, Service des infrastructure scolaires subventionnées de la DGI;

[5] AGION recommendations in consultation with the Commissie van Deskundigen: www.agion.be/sanitaire-voorzieningen;

[6] Subsidies for sanitary facilities for AGION-dependent schools: www.agion.be/verkorte-procedure-sanitair;

[7] Possible subsidy from the FWB-DGI within the framework of the priority programme of works to remedy unhealthy, inadequate or insufficient sanitary installations;

[8] The BYX Fund (managed by the King Baudouin Foundation) proposes a range of actions and support: www.netournonspasautourdupot.be.

III.6
ACCESSIBILITY OF PERSONS WITH REDUCED MOBILITY (PRM)

For an inclusive school, all areas must be accessible to persons with reduced mobility (PRM): accessibility must be guaranteed both in terms of building access and interior circulation and layouts. Where complete adaptation of the building is not possible in the short term (e.g. due to lack of budget or issues with heritage requirements), the aim is to adapt at least the access, the first floor and a sanitary facility to enable the school to accommodate at least one student or teacher with reduced mobility. All standards are derived from the Regional urban planning regulations (RRU) [1].

> WHAT TO LOOK FOR

SUITABLE ACCESS

- Are adapted access ramps provided where necessary? Are the front door and access door to the playground adapted?
- Is a parking space reserved for PRM planned near the school entrance?

SUITABLE INTERNAL TRAFFIC FLOWS

- Do free passages in corridors, doorways, stairways, lifts and accessible routes comply with the requirements of the RRU?

SUITABLE TOILETS

- Does the school have at least one suitable sanitary facility out of 20, and one on each floor?

RRU requirements:
Access and playground ramps: maximum incline of 7% for a length (L) < 5 m, 8% if L < 2 m, 12% if L < 0.5 m. Minimum width: 120cm, 150cm at landings and double handrails.
Access doors: minimum width 95 cm, maximum projection: 2 cm, clear space outside doorway ≥ 150 cm.
1.20 m wide internal passageway and 1.5 m in front of doors or at crossings.
85 cm wide internal circulation doors

Staircases: maximum step height, 18 cm, continuous double handrail, last step marked by a different colour.

Lifts: minimum dimensions of cabin interior 1.4 x 1.1 m, minimum width of elevator door 90 cm.

Sanitary facilities: 85 cm door, obstacle-free space with a radius of 150 cm, adapted equipment.

> FURTHER INFORMATION

LEGISLATIVE AND REGULATORY FRAMEWORK:

[1] Regional urban planning regulations (RRU in French) of the BCR; Title IV Accessibility of buildings for people with reduced mobility and Title VII Roads, access and surroundings: urbanisme.irisnet.be/lesreglesdujeu/les-reglements-durbanisme;.

OTHER USEFUL INFORMATION:

[2] Inspiratiebundel "Integrale toegankelijkheid van schoolgebouwen", AGION en Enter vzw, 2014;

[3] Guide published by the non-profit association Atingo www.atingo.be/;

[4] Possible subsidy from the FWB-DGI as part of the priority works program to make buildings accessible to people with reduced mobility;

[5] http://toegankelijkgebouw.be;

[6] Agentschap Toegankelijk Vlaanderen - INTER: www.inter.vlaanderen/gebouw-omgeving.

IV.
A SCHOOL WHICH RESPECTS THE ENVIRONMENT

> TO HAVE TO HAND

- School plans
- Data on electricity, gas, heating oil and water consumption: invoices and/or annual school budget broken down by item, energy audits, EPB certificate, etc.
- PLAGE (Plan local d'action pour la gestion énergétique – Local action plan for energy management) reports, where applicable

←

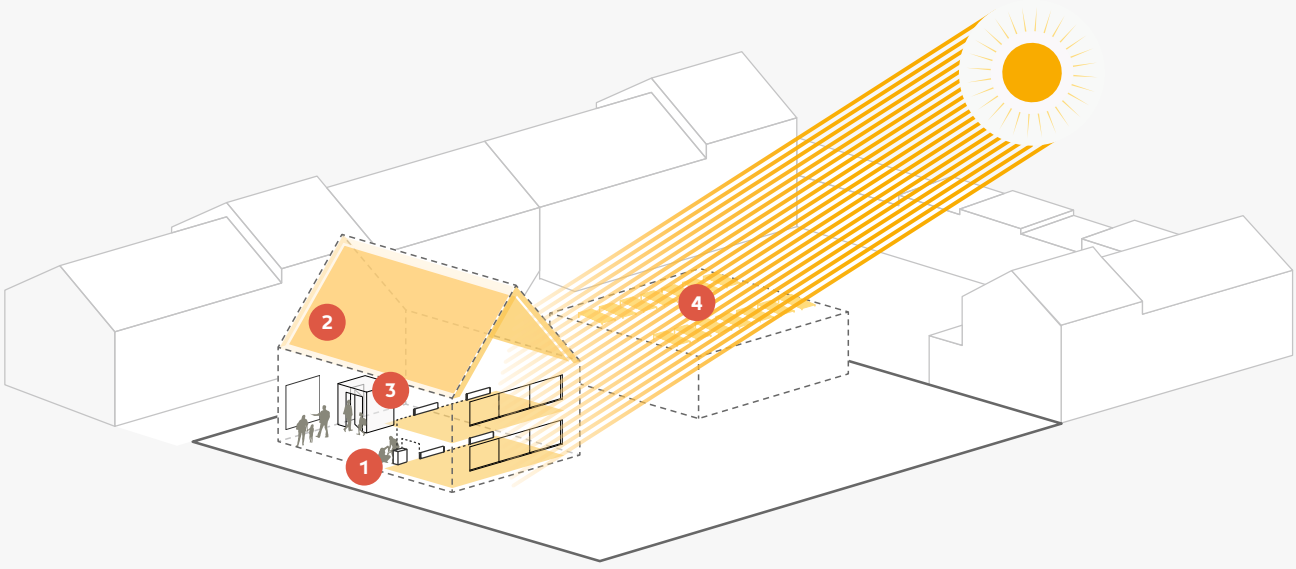
The orchard, vegetable garden, chicken coop and wilderness area are an inexhaustible source of discoveries, observations and experiences: understanding biodiversity, experiencing the cycle of the seasons, learning to be responsible for other living things, etc. The garden is the starting point for projects developed by students and teachers: experimenting with different forms of cultivation, tasting and cooking the harvests, building nesting boxes, fences, a spiral herb garden, a willow hut, and more. The wilderness also brings surprises: elderberries in bloom, poppies, a pair of blackbirds nesting, etc. All this shows the beauty of nature and its fragile balance, and teaches children to appreciate and protect it. (La Marolle nursery school, City of Brussels) © École de la Marolle

IV.1
ENERGY

A school building's energy consumption, mainly for heating and lighting, depends on the building's level of insulation and compactness; the type, age and condition of the technical installations; the type of ventilation; and the management and control of consumption.

In order to compare the consumption of different buildings using different energy sources (gas, electricity or other), consumption is measured in "primary energy consumed" (energy directly available in nature before any transformation) per square meter of heated surface. To calculate primary energy, we need to add up the various consumption levels (gas, electricity or other), multiplying each by the corresponding conversion factor (1 for fossil fuels; 2.5 for electricity). Under the Energy Performance of Buildings (EPB) regulations, schools are required to carry out an annual "EPB certification" indicating their actual annual primary energy consumption per square metre of heated surface, compare it with the regional average for schools, and display it in a prominent place. This measure raises awareness of energy consumption. The PLAGE approach (Programme local d'action pour la gestion énergétique – Local action plan for energy management) proposed by Brussels Environment, provides a range of tools (e.g. a checklist for drawing up a technical register, or consumption monitoring tools) to optimise energy management in buildings. A pilot program (PLAGE-schools) carried out in Brussels schools between 2009 and 2014 has shown that significant energy savings can be achieved without major investment.

1. PROPER REGULATION OF HEATING
2. INSULATION (ROOF, WALLS, HIGH-PERFORMANCE FRAMES, ETC.) PLANNED FOR THE MEDIUM AND LONG TERM
3. BUFFER SPACES OR AIRLOCKS AT ENTRANCES TO PREVENT AIR INGRESS
4. PHOTOVOLTAIC PANELS BY THIRD-PARTY INVESTORS ON FLAT ROOFS



> WHAT TO LOOK FOR

LOW LEVEL OF PRIMARY ENERGY CONSUMPTION

- Does primary energy consumption correspond to an A, B or C classification according to EPB certification?

  Class A : < 43 kWhEP/m², class B: 43-105 kWhEP/m², class C: 106-167 kWhEP/m².

  On average, school buildings in Brussels are rated between D and E, which means they consume around 230 kWhEP/m² per year.

MANAGEMENT AND CONTROL OF CONSUMPTION

- Is a suitably trained person in charge of regulating the heating?
- Does the school keep track of electricity and gas consumption and bills?

GOOD INSULATION AND AIRTIGHTNESS OF THE BUILDING SHELL

- Are walls and roofs well insulated?
- Are windows fitted with high-performance glazing (at least double-glazed and less than 15 years old)?
- Are draughts avoided (air- and watertight frames, buffer spaces or entry locks)?

EFFICIENT TECHNICAL INSTALLATIONS

- Are the technical installations (boilers, distribution pipes, radiators) efficient?
- Are boilers highly efficient (over 100% for condensing boilers, for example)?
- Are they less than 10 years old?
- Are they regularly maintained?
- Are the pipes insulated?
- Does the ventilation system allow heat to be recovered from inside (double-flow ventilation system)?

ENERGY GENERATION ON SITE

- Does the school produce energy from renewable sources on its site (e.g. photovoltaic panels on roofs)?

> FURTHER INFORMATION

LEGISLATIVE AND REGULATORY FRAMEWORK:

[1] Ordinance of 2 May 2013 containing the Brussels Air, Climate and Energy Management Code (COBRACE), Coordinated version of 18 December 2015;

[2] Decree of the Government of the Brussels-Capital Region (03/06/2010) on the EPB requirements applicable to heating systems for buildings during their installation and operation.

OTHER USEFUL INFORMATION:

[3] Brussels Environment website: www.environnement.brussels/thematiques/energie-0;

[4] EPB certification protocol for public buildings in the Brussels-Capital Region, available at www.environnement.brussels/thematiques/batiment/la-peb;

[5] About the PLAGE programme (financement du responsable énergie finalisée) : www.environnement.brussels/thematiques/energie/economiser-votre-energie;

[6] www.educ-energie.ulg.ac.be;

[7] www.renovermonecole.be;

[8] www.fixbrussel.be;

[9] www.lne.be/mos-duurzame-scholen-straffe-scholen;

[10] FWB-DGI subsidy under the Priority Works Program to improve the building shell or technical equipment that is a source of heat loss;

[11] Energy unit of the FWB's Infrastructure Department;

[12] VGC subsidy for reducing energy consumption in collaboration with the non-profit association FIX "Energiezorg op school" www.vgc.be/ondersteuning/subsidies/onderwijs/energiezorg-op-school;

[13] Bonuses granted by the Government of the Brussels-Capital Region to encourage all buildings in Brussels to improve their energy performance. www.environnement.brussels > thematiques > energie > primes-et-incitants > les-primes-energie-en-2018.

IV.2 WATER

Water consumption must be optimised to preserve this natural resource. Awareness-raising campaigns and programs can encourage responsible consumption. Flow-limiting taps or dual-flush toilets can also help reduce consumption. The regular water consumption register kept by the school should make it possible to quickly identify issues (dripping taps, leaks), while raising awareness of quantities and costs. The recovery and reuse of rainwater also represents a good opportunity to reduce consumption.

In addition, disruptions to the natural water cycle must be minimised. To reduce the risk of flooding, it is important to reduce the quantity and speed of rainwater run-off into sewers, by maximizing permeable surfaces that allow infiltration into the soil. These measures also promote biodiversity, groundwater replenishment and the evaporation of water into the atmosphere.

Soil permeability at school sites is often low, or even virtually non-existent. In addition to their ecological benefits, features such as retention basins, areas that can be temporarily flooded, green roofs, ponds or valleys can contribute to good rainwater management. These types of installations make the natural water cycle visible, and thus offer educational opportunities.

> WHAT TO LOOK FOR

GOOD PERMEABILITY OF OUTDOOR SPACES

- Is the degree of permeability greater than 0.5 (required by the RRU for new constructions)?
- If not, are there any features such as retention basins, temporary flooding zones, green roofs, ponds or ditches?

Degree of permeability: ratio between the degree of permeability of different surfaces and the total exterior surface (surface x % permeability/total exterior surface)[2].

WATER RECOVERY ON THE SITE

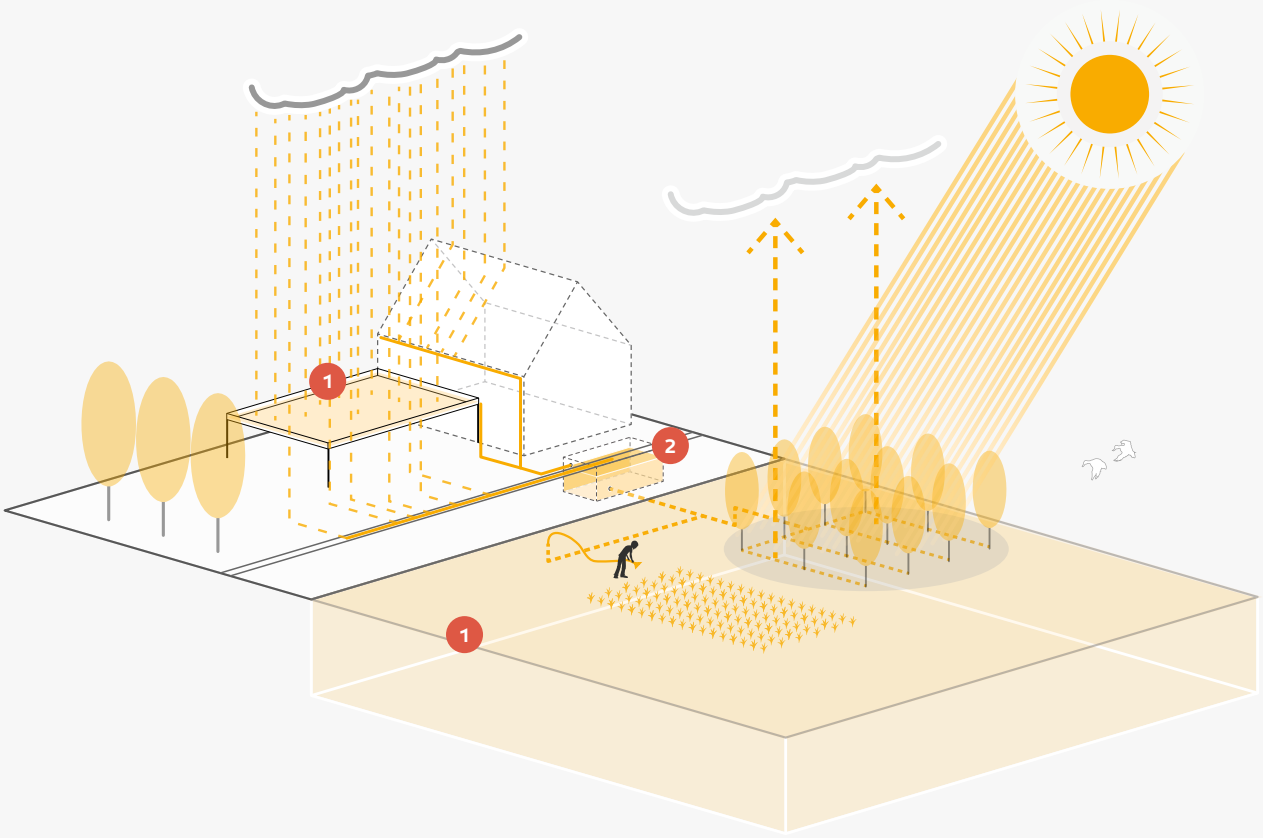
- Is rainwater collected and reused?

RATIONAL WATER USE

- Does the school keep track of water consumption and bills?
- Are devices such as taps and toilet flushes equipped with water-saving devices?
- Is there a means of identifying possible leaks or dripping taps (e.g. a member of staff responsible for regularly checking the condition of on-site installations and intervening promptly if necessary)?

RAISING AWARENESS AMONG USERS ABOUT RESPONSIBLE CONSUMPTION AND THE WATER CYCLE

- Does the school develop programs and actions to raise awareness among schoolchildren about responsible consumption and the natural water cycle?



1. PERMEABLE SURFACES WITH GREENERY
2. RAINWATER RECOVERED FOR WATERING, TOILET FLUSHING, ETC.
3. EDUCATIONAL AND AWARENESS PROGRAMS

> FURTHER INFORMATION

LEGISLATIVE AND REGULATORY FRAMEWORK:

1] RRU – Regional urban planning regulations – Title I – About impermeable surfaces and sizing water tanks.

OTHER USEFUL INFORMATION:

[2] Guide to durable buildings www.guidebatimentdurable.brussels > Thème : eau;

[3] www.lne.be/mos-duurzame-scholen-straffe-scholen.

IV.3 BIODIVERSITY

Biodiversity refers to the diversity of species in the living world. On school sites, it contributes to the urban ecosystem in general, but also allows contact with nature. It enhances the quality of life at school and offers great potential for educational activities. Various programs run by Brussels Environment also encourage the development of nature-related projects with schoolchildren, either in-house or with other stakeholders from the city (citizens' groups, associations).

In urban environments, the ecological potential of school sites is often relatively low due to their location in a dense urban setting. Despite having a lot of concrete, some school sites include large trees, some of which are listed in the inventory of remarkable trees, as well as ponds, vegetable gardens and planters. Some schools benefit from the close proximity of (large) green spaces and sometimes even a semi-natural area. In high-potential school sites (sites with large unpaved areas), biodiversity is often under-exploited, mainly due to a lack of resources for management.

Ecological potential can be measured by the Biotope Coefficient per Surface (BCS), which represents the ratio between eco-developable surfaces (surfaces that promote biodiversity) and the total surface area of the plot.

Green space management methods that directly influence biodiversity and ecological potential must also be considered.

> WHAT TO LOOK FOR

VALORISATION OF THE SITE'S BIODIVERSITY

- Does the school have biodiversity-friendly surfaces (open-ground areas, green roofs, green walls, hollows in walls, nesting boxes, etc.)?
- Are these spaces designed to support rich, diverse vegetation and wildlife?

HIGH ECOLOGICAL POTENTIAL OF THE SITE

- Is the biotope coefficient per surface (BCS) close to that recommended by Brussels Environment?

  For a building footprint < 0.37, BCS recommended > 0.6

  For a building footprint between 0.38 and 0.49, BCS recommended > 0.45

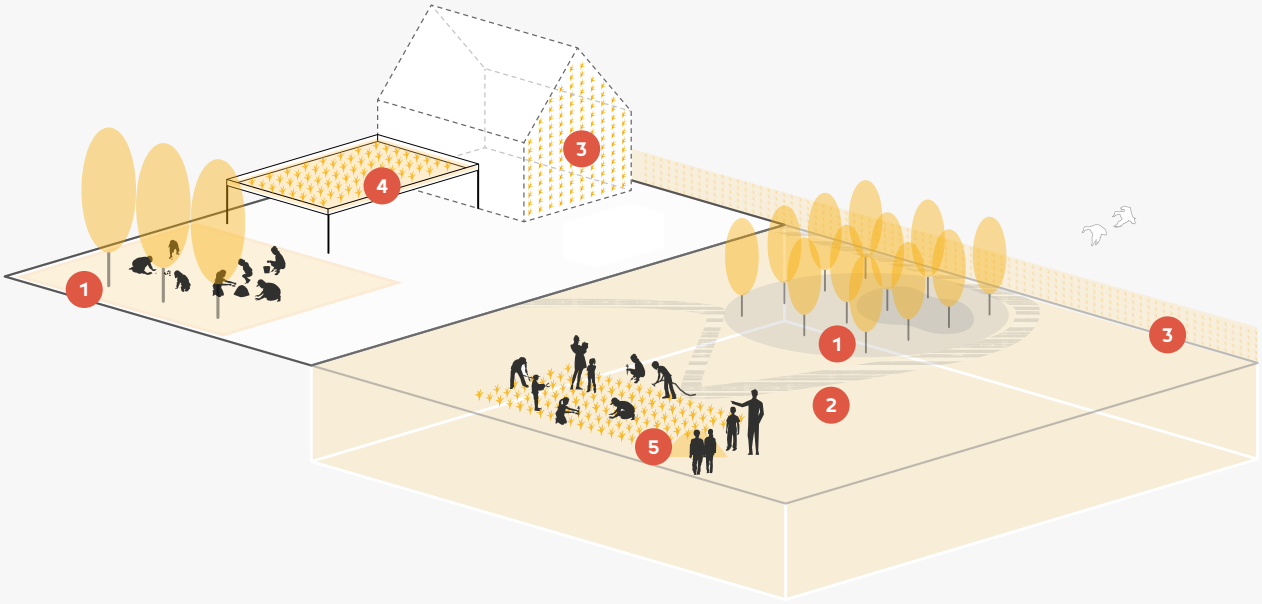
  For a building footprint of more than 0.5, BCS recommended > 0.3

GOOD MANAGEMENT OF OPEN SPACES ON THE SCHOOL SITE

- Are one or more people in charge of green space maintenance, even during holiday periods?
- Do management methods promote biodiversity (differentiated management, no use of pesticides)?

EDUCATIONAL PROJECTS ON BIODIVERSITY

- Does the school develop projects with students on the theme of biodiversity, drawing on resources within the school or nearby (through programs such as the Bubble network, calls for projects from Brussels Environment, etc.)?
- Does the school take part in biodiversity projects in the neighbourhood (shared vegetable garden, exchanges and visits)?



THE BCS OF THESE DIFFERENT DEVICES ARE ESTABLISHED ACCORDING TO THEIR ECOLOGICAL VALUE [4]:

1. OPEN-AIR GARDENS AND WETLANDS: BCS (FOR INFORMATION ONLY) 1
2. PERMEABLE CONCRETE AREAS: BCS (FOR INFORMATION ONLY) 0.3 TO 0.5
3. GREEN FENCES AND RETAINING WALLS AND GREEN FACADES: BCS (FOR INFORMATION ONLY) 0.5
4. GREEN ROOFS AND RAISED CROPS: BCS (FOR INFORMATION ONLY) 0.5 TO 0.7
5. PLANTED COMMUNAL AREAS: BCS (FOR INFORMATION ONLY) 0.3 TO 0.7

> FURTHER INFORMATION

LEGISLATIVE AND REGULATORY FRAMEWORK:

[1] Ordinance of 20 June 2013 on the use of pesticides compatible with sustainable development in the Brussels-Capital Region.

OTHER USEFUL INFORMATION:

[2] For more information on activities within the framework of the "Green Mesh" programs, the Regional Nature Plan and others, visit the Brussels Environment website: www.environnement.brussels/thematiques/espaces-verts-et-biodiversite-0;

[3] Bubble Network for Environmental Education in Schools, www.environnement.brussels/thematiques/ville-durable/lecole-durable/bubble-les-ecoles-en-action/le-reseau-bubble;

[4] Project evaluation via BCS www.guidebatimentdurable.brussels > Développement de la nature > Dossier | Maximiser la biodiversité > Concevoir > Etapes de conception;

[5] www.lne.be/mos-duurzame-scholen-straffe-scholen;

[6] www.goodplanet.be;

[7] Ose le vert, recrée ta cour@bxl: http://www.environnement.brussels >thematiques > espaces verts et biodiversité

IV.4 WASTE

The issue of waste at school is analysed through measures that encourage good management, waste reduction or waste sorting.

The first issue concerns equipment (waste bins, containers) and their spatial location: waste bins must be sufficient in number, well located, well distributed and regularly emptied. It's also important to provide specific space for the containers in which the waste bins are grouped. Waste management policy also extends beyond the walls of the school site: containers must be placed in public spaces on collection days, and waste bins must be placed at school exits. Schools need to organise waste sorting [1] by providing appropriate waste bins, information and awareness-raising. Finally, as equipment alone is not enough to ensure good waste management, it is important that one or more people within the school are responsible for waste management (maintenance staff or janitor, for example), and that awareness campaigns and possibly educational projects are developed around this issue. Schools can develop a sustainable approach within the framework of eco-labels or certificates such as eco-schools, the eco-dynamic company label, and implement a whole range of actions and educational programs proposed by Brussels Environment.

> WHAT TO LOOK FOR

WASTE REDUCTION POLICY

- Are school staff encouraged to use photocopiers sensibly (double-sided, recycled paper where possible, etc.)?
- Does the school develop awareness-raising projects and actions that encourage waste reduction (using lunchboxes and reusable water bottles, for example)?

EQUIPMENT AND AREAS ADAPTED FOR WASTE MANAGEMENT

- Does the school have sufficient, well-located and well-distributed separated waste bins?
- Is there a specific area for containers on the school site? Can they be moved easily?
- Is there a place for containers in the public space on collection days?
- Are public waste bins planned in the immediate vicinity of the school?

WASTE MANAGEMENT PROGRAMMES

- Has an outdoor compost area been set up, ideally for educational purposes?
- Does the school participate in a sustainable approach or develop educational projects on the issue of waste?

> FURTHER INFORMATION

LEGISLATIVE AND REGULATORY FRAMEWORK:

[1] Decree of the Government of the Brussels-Capital Region of 21 June 2012 determining the rules for implementing the sorting obligation for producers or holders of waste other than household waste.

OTHER USEFUL INFORMATION:

[2] Practical information sheets on waste reduction and sorting from the Réseau Ecoconso;

[3] www.lne.be/mos-duurzame-scholen-straffe-scholen.

IV.5 SUSTAINABILITY OF MATERIALS

In an existing school, the question of materials arises mainly in the event of conversion or extension. More sustainable solutions involve keeping as many elements as possible in place, repairing or renovating where necessary. Recycling and reclaiming materials helps to reduce the environmental and often economic impact of the work.

When choosing new materials, preference should be given to those with a low environmental footprint. Throughout their life cycle (from the extraction of raw materials, transport, manufacturing and transformation, installation, to demolition and disposal at the end of their life), materials consume energy – this is known as "grey" energy. This means selecting materials that do not come from finite natural resources, that are produced in a non-polluting way, that use recycled materials and that are manufactured locally. Furthermore, the choice of durable, easy-to-maintain materials means that early replacement can be avoided, saving time and energy. For some materials, there are declarations that provide information on the product's environmental impact (EPDs or environmental product declarations) [4], and sometimes also on compliance with certain social aspects (e.g. the FSC label for wood). The TOTEM software, developed by the three Belgian regions, is used to estimate the environmental impact of buildings [2].

> WHAT TO LOOK FOR

MINIMISING RESOURCE CONSUMPTION

- Does the school prefer materials with a long working life (mechanically resistant to wear and tear, stains)?
- When wear and tear is inevitable, are maintenance and servicing preferable to replacement?
- Is reuse or recycling of equipment encouraged to minimise waste production?

CHOOSING MATERIALS WITH A LOW ENVIRONMENTAL IMPACT

- Are materials reused or recycled in situ given priority?
- Are materials with reduced environmental impact (eco-friendly, partially recycled, recyclable materials) given priority?
- If so, does the wood come from sustainably managed forests (i.e. with a label such as FSC)?

"REVERSIBLE" CONSTRUCTION ELEMENTS

- Can the building, or parts of it, be dismantled and the materials reused if the spatial organisation is changed (using dry assembly or modular elements, for example)?

> FURTHER INFORMATION

LEGISLATIVE AND REGULATORY FRAMEWORK:

[1] Sustainable construction portal www.portailconstructiondurable.be > thématiques > Matière;

[2] TOTEM evaluation tool www.environnement.brussels >thematiques>batiment>matériaux de construction et environnement.

OTHER USEFUL INFORMATION:

[3] www.health.belgium.be/fr/base-de-donnees-pour-declarations-environnementales-de-produits-epd;

[4] www.lne.be/mos-duurzame-scholen-straffe-scholen.

V.
A SCHOOL IN THE CITY

> TO HAVE TO HAND

- Monitoring of neighbourhoods in the Brussels Region (monitoringdesquartiers.brussels)
- Environmental Atlas (www.environnement.brussels/etat-de-lenvironnement/atlas-de-lenvironnement)
- Fund and cartographic data for the Brussels region www.mybrugis.irisnet.be/MyBruGIS/brugis/
- Data on extracurricular activities, "Accueil temps libre" and Brede School, community services: Brede School website (bredeschoolbrussel.be); "Accueil temps libre" website (www.bruxellestempslibre.be/); mapping of community services and initiatives (maps.dewey.be).

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Bordered by four schools, this street in the historic centre of Brussels was redeveloped between 2008 and 2012 as a "school street": the public space is unified and designed for active mobility, street furniture is adapted, and car traffic is banned during school hours. The aim is to provide an additional play and interaction space for schoolchildren in this densely populated area. Students and teachers from the four schools were closely involved in the project, through a participatory process led by the non-profit organisation JES Stadslabo (Yota!). Today, Rue de la Braie continues to be a place of civic initiative for schools, as demonstrated by the project to install mobile "Pic-Nic Ping-Pong" tables as part of the VGC's Bruss-it call for projects. (Rue de la Braie, Bruxelles-Ville) 2018, +research and Collectif ipé.

V.1
IDENTITY AND URBAN CHARACTER

The identity of the school is influenced by the characteristics of the neighbourhood in which it is located, and vice versa. The school tells its own story in relation to its urban environment, in the way it asserts its school function in relation to the buildings and public spaces that surround it. It therefore has a strong symbolic importance in the social life of a neighbourhood, and contributes to its identity. This landmark value is built up through the vibrancy generated by the school, but also through its "visual imprint" on the neighbourhood landscape.

Through its architectural expression and integration into the urban fabric, the school can also add value to its immediate surroundings, contributing to the quality and visibility of public spaces and the urban fabric. The quality of the interfaces between the school site and the public space, i.e. the surfaces that define the school's building shell (facades, fences, planting, marking elements), is one of the conditions for integrating the school into the urban landscape.

> WHAT TO LOOK FOR

EXPRESSION OF THE SCHOOL FUNCTION

- Is the school easily identifiable as a public facility in the neighbourhood, without relying on signage?
- In addition to architectural expression, is the function emphasised by architectural elements and fittings such as entrance or enclosure features (portico, canopy, staircase), lighting, specific street furniture or special signage?
- Are the public spaces around the school designed in continuity and harmony with the school?

➔ See Sheet I.8 **Architectural translation of the educational project, p. 29**

CONTRIBUTION TO THE QUALITY OF PUBLIC SPACE

- Does the school contribute to the quality of the living environment?
- Does it offer an active ground floor open to the neighbourhood?
- Does the school site include vegetation visible from the public space?
- Does the school infrastructure fit harmoniously into the existing urban fabric (continuity of lines and volumes, integration of perspectives, visual sequences, framing, enhancement of [small] heritage)?
- Do the boundaries of the school site (facades, fences, planting, marking elements) enhance the quality of the relationship between the school and its urban environment (quality materials, colours, variety, information support)?

➔ See Sheet I.10 **The school entrance, p. 32**

> FURTHER INFORMATION

USEFUL INFORMATION:

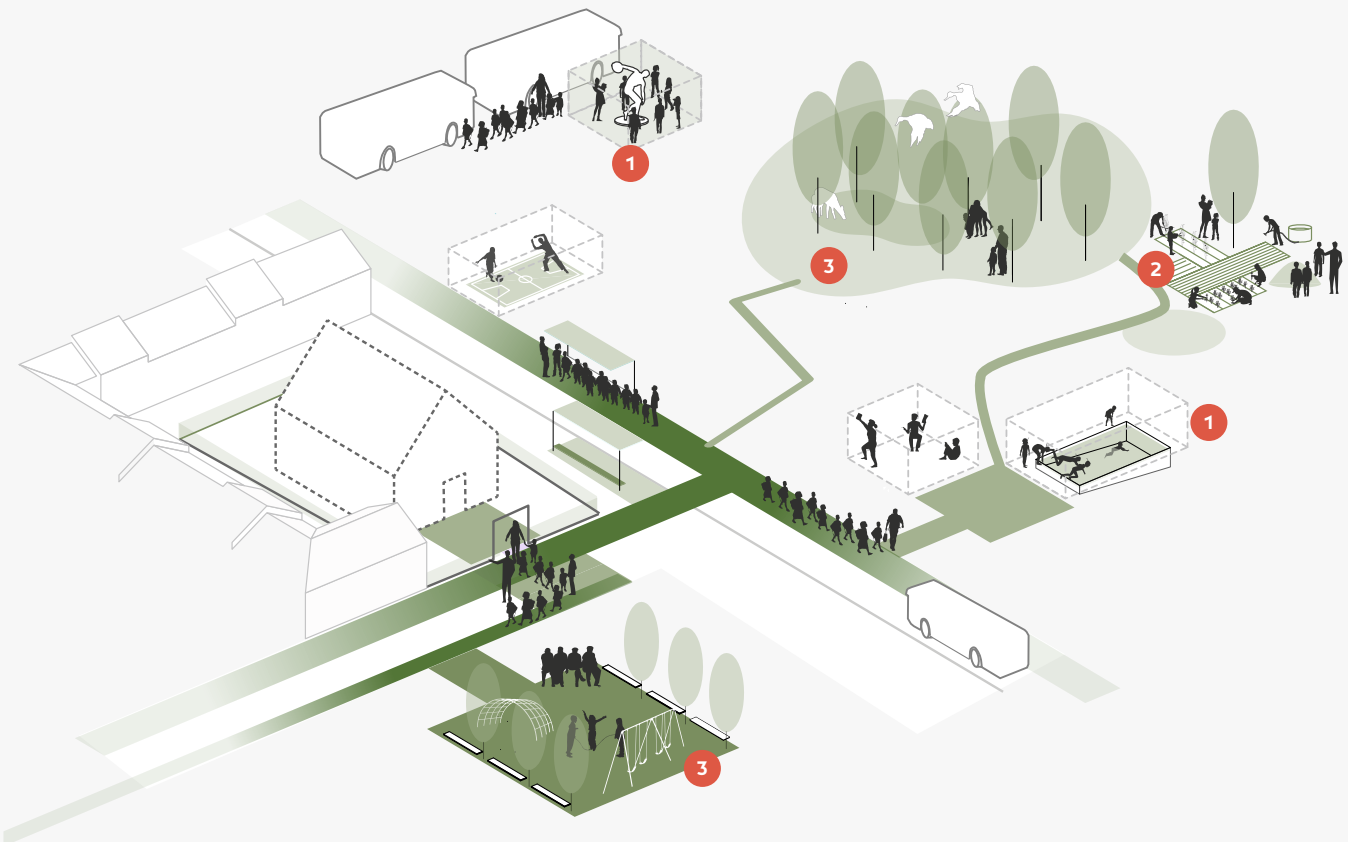
[1] Schools Service of the Brussels Capital Region: www.perspective.brussels/service-ecole;

[2] BMA bouwmeester maître architecte of the Brussels Capital Region: bma.brussels;

[3] Bruss-it. Call for projects launched by the VGC to support innovative urban initiatives. www.vgc.be/bruss-it.

V.2
SHARING PUBLIC FACILITIES BETWEEN THE SCHOOL AND THE CITY

The sharing of facilities and spaces between the school and the neighbourhood represents a real opportunity for schoolgoers as well as for neighbourhood residents and users. Indeed, the school can find opportunities in the neighbourhood to develop its educational mission, both in terms of available space and educational input. A school that's open to the neighbourhood can also become a real lever for urban development.



1. FACILITIES SUCH AS SWIMMING POOLS, MUSEUMS, SPORTS HALLS, LIBRARIES, ETC.
2. SYNERGIES WITH LOCAL PLAYERS IN WASTE MANAGEMENT, VEGETABLE GARDENING, ETC.
3. GREEN SPACES, SQUARES, ETC.

FACILITIES AND PUBLIC SPACES IN THE NEIGHBOURHOOD

The facilities and public spaces in the neighbourhood can sometimes compensate for a lack of space on the school site itself. Swimming pools and public libraries, for example, are regularly used by schools. Squares or parks are sometimes used as playgrounds or for physical education classes. Some facilities, such as museums, are used on a more occasional basis, as part of educational activities.

The public space can also be used as an educational medium to address specific themes such as heritage, the environment (biodiversity, water management or waste) or mobility and road safety. Indirectly, the use of community spaces and facilities outside the school site enables students to get to know and experience the neighbourhood and the city, thereby developing their physical and social autonomy.

The school's use of the neighbourhood facilities and spaces also has the advantage of contributing to urban vitality, raising the school's profile in the city and fostering respect for the neighbourhood through greater buy-in.

However, the use of local facilities and public spaces by schools can come up against a number of obstacles, such as overuse of the facilities (common at swimming pools, for example), difficulties in accessing them on foot in comfortable and safe conditions, or simply a lack of communication and information.

> WHAT TO LOOK FOR

FACILITIES THAT MEET THE SCHOOL'S NEEDS

- Does the neighbourhood offer public facilities that meet the school's needs?
- Is there a wide range of facilities in the neighbourhood?

EDUCATIONAL OPPORTUNITIES

- Do the neighbourhood's facilities and public spaces offer educational opportunities (ecological development, sustainable materials, biodiversity, waste management systems, heritage, citizen projects and governance)?

GOOD CONDITIONS OF USE OF THE FACILITIES

- Does the facility offer good reception conditions (quality of infrastructure, good layout, good maintenance, availability)?
- Does it allow for easy student supervision?

GOOD ACCESSIBILITY

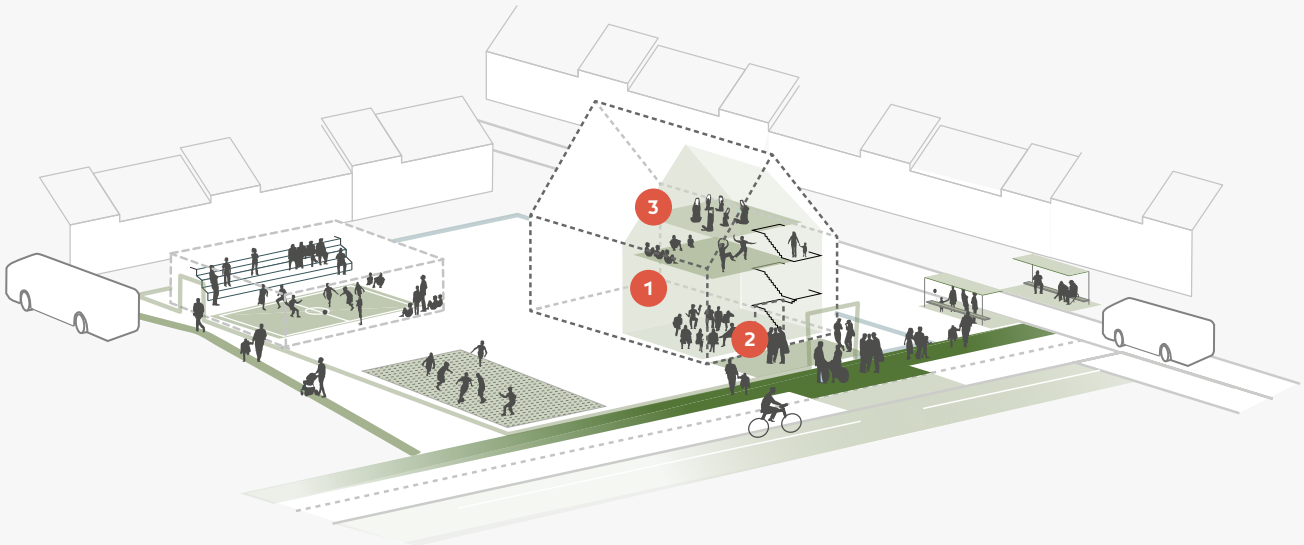
- Are public facilities or spaces easily accessible on foot, by bike or by public transport, in terms of distance, comfort and safety from the school?

OPENNESS OF THE SCHOOL TO LOCAL RESIDENTS

The school can open certain areas outside school hours to a public from outside the school. The school then becomes a community facility serving a wider public than just schoolgoers, helping to integrate it into the neighbourhood.

Activities organised in the school also give students access to extracurricular activities, and can broaden their outlook on the world through exchanges with other stakeholders.

However, the opening of the school requires certain spatial conditions to allow access to the school from the public space, and the closure of certain parts that are not accessible to the public outside the school. It also requires suitable management based on agreements and partnerships that guarantee mutual respect, proper maintenance and monitoring of the infrastructure used.



1. THE POSSIBILITY OF CLOSING CERTAIN AREAS TO IMPROVE SAFETY CONDITIONS
2. AN OCCUPANCY AGREEMENT SETTING OUT THE RESPONSIBILITIES OF EACH PARTY, MAINTENANCE CONDITIONS, ETC.
3. ACTIVITIES THAT ARE OF EDUCATIONAL BENEFIT TO STUDENTS RATHER THAN PURELY LUCRATIVE

> WHAT TO LOOK FOR

ORGANISATION OF THE BUILDING SUITABLE FOR BEING OPENED TO THE PUBLIC

- Are the school entrances clearly identifiable for the public?
- Do entrances allow easy access from the public space to the parts of the school open to the public?
- Are pathways to areas used by the public clearly visible?
- Are shared spaces suitable for activities open to an external target audience?
- In addition to the rooms or outdoor areas themselves, does the school provide any equipment (e.g. sports equipment or a piano)?
- Are closed storage areas provided on the premises for equipment that is not shared?

GOOD CONDITIONS OF SAFETY

- Does the school offer good safety conditions for shared use (fire safety, intruder security, closing of rooms not accessible to the public)?

➔ **See Sheets II.1 Fire safety, p. 40 and II.3 Security against intrusion, p. 44**

GOOD MANAGEMENT CONDITIONS

- Have management measures been laid down for sharing the rooms: responsibility of each party, maintenance, administrative formalities (occupancy agreements, insurance)?

> FURTHER INFORMATION

USEFUL INFORMATION:

[1] About the "Brede School": www.bredeschool.org, www.bredeschoolbrussel.be;

[2] About the "Accueil temps libre": www.bruxellestempslibre.be;

[3] Inventory of facilities and services for the population in BCR (ADT-BRAT, 2012);

[4] Slim gedeeld, an equipment-sharing website: slimgedeeld.be;

[5] Call for projects launched by the Flemish Government to encourage schools to make their sports facilities accessible outside school hours (after school, at weekends and during school holidays) and to improve their quality. www.sport.vlaanderen/ scholen/ondersteuning/ subsidiering-sportinfrastructuur/;

[6] Sport: Subsidies granted by the VGC to organisations and institutions to organise regular sports activities. http://www.vgc.be/ ondersteuning/subsidies/subsidies-sport;

[7] My club, my school. Subsidies granted by the Government of the French-speaking Community to schools and local sports associations to enable students to discover a sporting discipline through an educational and fun approach outside physical education hours. www.sport-adeps.be >Subventions et aides financières;

[8] "In ruimte naar de brede school. Available at www.agion.be/onderzoek-brede-school.

→

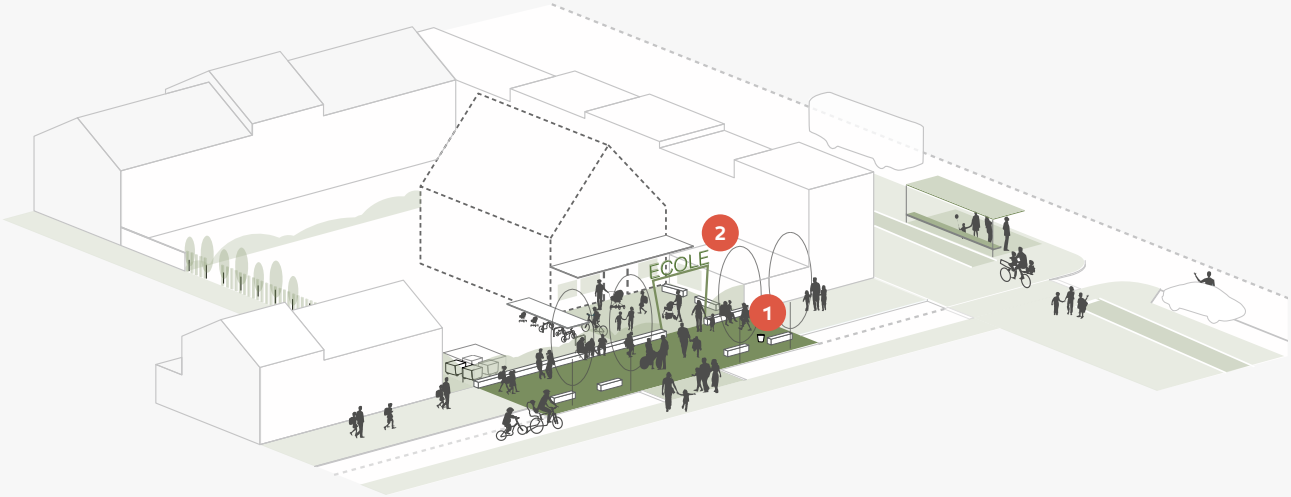
The school canopy of this listed school regularly hosts a flea market and other Art Nouveau-related activities, opening its doors to the neighbourhood, creating a meeting place, offering educational opportunities and fostering the school's integration into the city. (municipal school n°13, Schaerbeek) © Cécile Dubois

V.3
FORECOURT AND PUBLIC SPACES AROUND THE SCHOOL

The quality of the school infrastructure depends on the image and uses of the public spaces surrounding it. They are areas of intense interaction between school and stakeholders in the neighbourhood. They must be capable of accommodating different modes of transport – with priority given to active modes (pedestrians and bicycles) – but also of accommodating other uses for the benefit of school stakeholders, such as interactions, relaxing and playing. Public spaces in the vicinity of schools are an important part of children's daily lives, where they need to find the right conditions for well-being and safety. These public spaces follow the rhythm of school hours, with more intense occupancy during the narrow time frames when students arrive at and then leave school. They must therefore be adapted to the uses generated by the school, without excluding or privatising, while ensuring consistency of design with the surrounding public space.

The public space in front of the entrance to the school site, which we call the "forecourt", is a particular focus for these issues. It should be noted that, when there is no possibility of creating a forecourt in the public space, certain uses such as parents wiating should be envisaged within the school site itself.

The layout and management of public spaces is the responsibility of a number of different stakeholders: the municipalities (and within these, various departments), the Region, but also the STIB and the police. Good coordination between schools and these departments is therefore essential to meet the needs of all.



1 BENCHES, DISPLAY AREAS, RAIN SHELTERS TO ENCOURAGE INTERACTION
2 COLOURS AND ARTISTIC INTERVENTIONS TO ENHANCE THE SCHOOL'S VISIBILITY AND IDENTIFICATION

> WHAT TO LOOK FOR

VISIBILITY OF ACCESSES AND THE SCHOOL IDENTITY

- Does the design of the forecourt and public spaces surrounding the school help to identify the school function and access to the school site?
- Does it make it easier for users to find their way to school?

ADAPTED TO A VARIETY OF USES AND CONDUCIVE TO INTERACTION

- Does the layout of public spaces, and more particularly the forecourt, allow for a variety of uses in good conditions of cohabitation: stopping, resting, chatting, waiting (especially for parents), moving around, playing, etc.?
- Does it encourage interaction and exchanges between different target groups?
- Are the public spaces around the school pleasant: places to sit and take shelter; greenery and/or water; quality materials and street furniture (benches, waste bins, lighting, fixtures) that are robust and durable?

FEELING OF SECURITY

- Does the organisation of the space encourage social control, i.e. a reassuring presence, in the public space (houses, passers-by, shops)?
- Is public space adequately lit?

➔ **See Sheet II.3 Security against intrusion, p. 44**

GOOD CONDITIONS OF CLEANLINESS

- Are the public spaces around the school well maintained (waste bins emptied regularly, no illegal dumping, good quality, well-maintained surfaces)?
- Do they have enough waste bins?
- Does the school have a waste storage system integrated into the public space that does not impede movement or prevent the scattering of refuse on collection days?

GOOD ACOUSTIC AND CLIMATE COMFORT

- Do the public spaces around the school, especially the forecourt, offer good acoustic comfort, good sunlight conditions and the possibility of sheltering from the rain?

EDUCATIONAL POTENTIAL OF PUBLIC SPACES

- Is the public space exemplary in terms of sustainability, water and waste management?

> FURTHER INFORMATION

LEGISLATIVE AND REGULATORY FRAMEWORK:

[1] RRU (Regional urban planning regulations) – Titles I Characteristics of buildings and their surroundings, VII Roads, access and surroundings and VIII Off-street parking standards: https://urbanisme.irisnet.be/lesreglesdujeu/les-reglements-durbanisme/le-reglement-regional-durbanisme-rru.

OTHER USEFUL INFORMATION:

[2] Guide to public spaces in Brussels: www.publicspace.brussels;

[3] Guide to designing public spaces: www.environnement.brussels/thematiques/ville-durable-0 > urbanisme > la boîte à outils;

[4] Guide to sustainable neighbourhoods: www.environnement.brussels/thematiques/ville-durable-0 > urbanisme.

IV.4 MOBILITY

Mobility to and from school is a major issue: different modes of transport have to coexist in conditions of comfort and safety (especially for the most vulnerable users) and within the narrow time frames dictated by school times. The development of sustainable mobility can be encouraged by the design of public spaces, but also by awareness-raising campaigns or actions undertaken within the school to encourage the modal shift.

The means to encourage sustainable mobility are in the hands of various stakeholders. Schools play a vital role in raising awareness among students, teachers and parents, through communication and the organisation of educational activities (raising awareness of the use of "active" modes of transport, in particular in the context of Mobility Week, organisation of pedestrian and/or cyclist certificates, cycling and road safety courses, for example). They can also develop concrete actions throughout the year, such as accompanied groups on foot or by bike, provide certain facilities such as bike and scooter parking on the school site, or develop projects to improve the school's visibility in the public space (mural frescoes, for example). The Municipality and the Region, for their part, can act on the development of public spaces around the school. Local police and public transport operators (STIB) are also potential contacts for these issues.

The School Travel Plans (STP), supported and financed by the Region, stimulate and accompany all these awareness-raising actions in favour of sustainable mobility. The diagnostic phase of the STP provides an opportunity to assess the situation in terms of mobility and road safety around the school. This diagnosis can then be passed on to the road managers concerned, so that the infrastructure requirements necessary for this type of mobility can be objectively assessed and then translated into concrete projects.

Finally, schools with more than 100 employees are required to draw up a Company Travel Plan (Plan de déplacement d'entreprise – PDE), which provides an opportunity to reflect on the conditions for sustainable staff mobility.

ACTIVE MOBILITY

The major challenge for school mobility is to improve accessibility by alternative modes of transport to the car, and especially by active modes (walking, cycling, scooters, etc.). Safety, comfort and convenience are the basic prerequisites for the development of active mobility.

→
Encouraging alternative modes of transport to the private car is one of the major objectives of school travel plans in the Brussels region. Learning to ride a bike is one of the activities offered to schools to encourage students to use this mode of transport. Schools can be supported by specialist associations to organise bicycle activities, enable students to take the "brevet du cycliste" or organise walking or cycling courses. (School travel plans, Brussels Mobility in collaboration with Coren, Goodplanet, Brulocalis "Association des villes et des municipalities de la Région de Bruxelles-Capitale", STIB and IBSR.) © Brussels Mobility

> WHAT TO LOOK FOR

COMFORTABLE AND PLEASANT PUBLIC SPACES FOR PEDESTRIANS

- Does the layout of public spaces promote accessibility and comfort for pedestrians, including people with reduced mobility (PRM): surfaces in good condition and comfortable for walking, but also for pushchairs or wheelchairs; street furniture judiciously placed to avoid creating obstacles in the path; lowered kerbs and ground-level crossings?

In protected areas where the heritage aspect takes priority, it is sometimes compulsory to preserve stone pavements.

GOOD CONDITIONS OF SAFETY FOR PEDESTRIANS

- Does the layout of public spaces guarantee pedestrian safety: layout adapted to the function and status of the road, and to the volume of traffic, in order to make the speed limits credible; visibility; safe crossings; legibility of routes; forecourt protected from vehicle traffic and unobstructed to allow visual interaction; appropriate road signs; sufficiently wide pavements?

Recommended: pavements at least 2 m wide with longitudinal parking; pavements 2.5 m wide without on-street parking.

- Do pedestrian crossings widen at school forecourt level?

Pedestrian crossing at least 3 m wide for speeds under 60 km/h, 4 m along major roads.

COMFORTABLE AND PLEASANT PUBLIC SPACES FOR CYCLISTS

- Does the layout of public spaces promote accessibility and comfort for cyclists: road surfaces for vehicles and/or cycle paths in good condition; no street furniture which creates an obstacle in the pathways and a "chute" for bicycles at staircases?
- Are cycle paths pleasant, with maintained greenery, comfortable acoustics, sufficient sunlight and lighting?

Children up to the age of 9 are allowed to ride on the pavement.

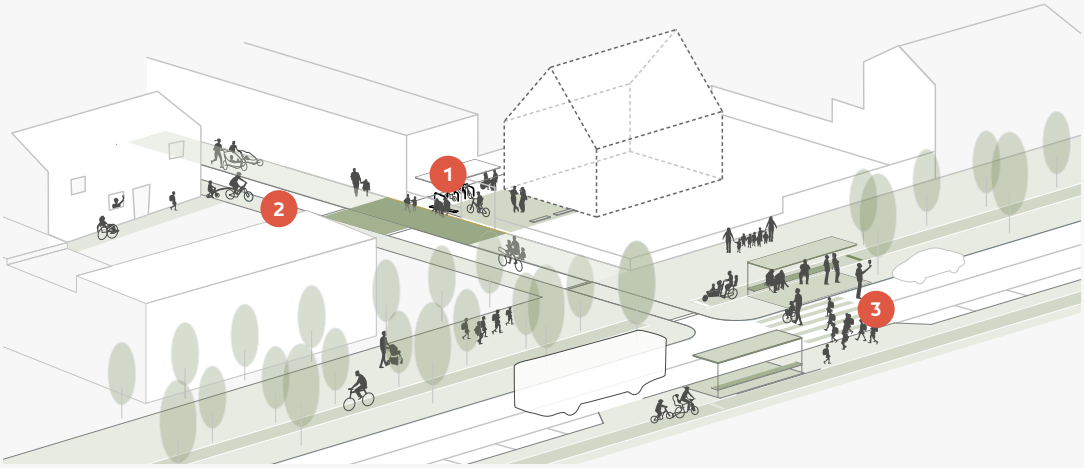
GOOD CONDITIONS OF SAFETY FOR CYCLISTS

- Does the layout of public spaces guarantee cyclists' safety: layout adapted to the function, status and volume of traffic on the roadway; visibility; obvious routes; appropriate road signage and bending of the pavement at forecourt level?

For well-developed local roads: mixed use (strolling zone, pedestrian zone open to cyclists, 30 km/h zone); for inter-neighbourhood roads: dedicated space for cyclists via pavement markings; on primary roads (main and metropolitan): separate traffic space (separate bike lanes, in side lanes).

BICYCLE PARKING

- Does the school site offer sufficient bicycle parking (scooters and other new types of mobility equipment) for students and staff?
- Are they secured and covered (50% minimum)?
- Are there secure, off-street bicycle parking facilities for parents and visitors?



1. ADEQUATE PARKING FACILITIES FOR BICYCLES, SCOOTERS, PUSHCHAIRS, ETC.
2. OBSTACLE-FREE PATHS FOR PEDESTRIANS, BICYCLES, SCOOTERS, ETC.
3. SAFE CROSSINGS

ACCESSIBILITY BY PUBLIC TRANSPORT

The use of public transport is encouraged by the proximity of stops to the school, as well as by the safety and comfort of access and waiting.

> WHAT TO LOOK FOR

GOOD ACCESS TO THE SCHOOL BY PUBLIC TRANSPORT

- Is the school site well served by public transport: number of lines, frequency, proximity of stops?

COMFORTABLE AND SAFE ROUTES BETWEEN THE SCHOOL AND PUBLIC TRANSPORT STOPS

- Does the layout of public spaces between schools and stops guarantee pedestrian accessibility and safety: visibility, safe crossings, legible routes, sufficiently wide pavements free of obstacles?

GOOD SAFETY AND COMFORT CONDITIONS AT PUBLIC TRANSPORT STOPS

- Are the stops clearly visible and signposted?
- Do they offer good conditions of comfort: seating, rain protection, sufficient space for waiting large groups, good information (timetable, route) and waste bins?

CAR TRAFFIC AND PARKING

Car traffic around the school must give priority to active modes of transport (cyclists, pedestrians, scooters) and public transport. The Highway Code requires that the street giving access to the school be placed in a 30 km/h zone for a distance of 150 metres on either side of the school entrance.

The conditions for traffic calming are linked to the layout of the public space, but also to the signposting for the school, which encourages preventive driving in the vicinity. Measures that make it possible to identify the school from a distance without the need for numerous signage devices should be encouraged.

Accessibility and parking for teachers and other staff are criteria to be taken into account, remembering the accessibility of schools and where the teachers live. In a context of high urban density, however, the presence of parking facilities must in no way detract from the quality of other spaces, especially those dedicated to school activities.

> WHAT TO LOOK FOR

CALMER TRAFFIC FLOW RESULTING IN GOOD SAFETY CONDITIONS

- Does the layout of public spaces clearly give priority to active modes of transport: moderate speed (30 km/h or 20 km/h zone, strolling zone, shared zone, pedestrian zone); visibility of the school so that motorists are aware of the school in good time; no parking on the school forecourt or within 5 metres of crossings?

GOOD CONDITIONS FOR DROPPING OFF STUDENTS BY CARS AND SCHOOL BUSES

- Has the school taken steps to ensure that children can be dropped off in good conditions of comfort and safety (teacher awareness-raising, facilities on the school's own site, or possibly the installation and effective management of a kiss-and-ride to avoid illegal parking or prolonged stops)?

- Does the design of public spaces include a specific, secure zone for school buses that could also be used for deliveries?

PARKING FACILITIES ADAPTED TO THE CONTEXT

- Does the school offer a car park for school staff that is adapted to the school's accessibility by public transport?
- Does the neighbourhood offer PRM parking for teachers and/or parents or visitors?
- Is parking shared with other neighbourhood functions?

"MOBILITY" ACTIONS AND PROJECTS

In parallel with the development of physical space, measures to raise awareness of sustainable mobility and space management can be developed. The School Travel Plan is a good tool for defining appropriate measures.

> WHAT TO LOOK FOR

SCHOOL TRAVEL PLAN (STP)

- Does the school have an STP?
- Does this STP provide a good diagnosis of the infrastructure?

EDUCATIONAL AND AWARENESS-RAISING PROJECTS

- Does the school develop education and awareness-raising projects on sustainable mobility and safety for students, staff and parents alike (e.g. information on the environmental and societal impact of motorised mobility in the city)?
- Does the school take part in mobility and road safety education projects supported by the Region, such as pedestrian and cyclist brevets or Opération cartable (actions for primary education)?

CONCRETE ACTIONS TO PROMOTE SUSTAINABLE MOBILITY

- Does the school develop concrete actions to promote sustainable mobility: school bus, pedestrian or bicycle routes, bike training, road traffic courses, bike repair workshop, use of bikes for school management tasks, organisation of car pooling, etc.?

INVOLVEMENT OF THE SCHOOL IN LOCAL MOBILITY PROJECTS

- Does the school participate or is it involved in projects relating to mobility in the neighbourhood (redevelopment of roads, sustainable neighbourhood contracts, municipal mobility plans, PAVE [accessibility plans for roads and public spaces developed by the RBC])?

> FURTHER INFORMATION

LEGISLATIVE AND REGULATORY FRAMEWORK:

[1] RRU (Regional urban planning regulations) – Titles VII Roads, access and surroundings and VIII Off-street parking standards: https://urbanisme.irisnet.be/lesreglesdujeu/les-reglements-durbanisme/le-reglement-regional-durbanisme-rru;

[2] Highway code;

[3] New regional mobility plan (under development): goodmove.brussels;

[4] If necessary, consult your local mobility plan, the PAVE (plan d'accessibilité de la voirie et de l'espace public).

OTHER USEFUL INFORMATION:

[5] Road safety action plan 2011-2020, approved by the Government of the Brussels-Capital Region: mobilite-mobiliteit.brussels/en/plan-de-securite-routiere;

[6] Guide to public spaces in Brussels: www.publicspace.brussels;

[7] Regional Development Plan (PRD) (guiding framework);

[8] Plan Iris II (guiding framework);

[4] Guide to sustainable neighbourhoods: www.environnement.brussels/thematiques/ville-durable/urbanisme/guide-referentiel-pour-des-quartiers-durables ;

[10] School travel plans on the Brussels-Mobility website: mobilite-mobiliteit.brussels > écoles et mobilité;

[11] Vademecum pedestrian-bicycle and public transport stops published by Brussels Mobility: https://mobilite-mobiliteit.brussels/fr/publications-techniques;

[12] 30 km/h review for school zones published by IBSR: webshop.ibsr.be > produits > aménagements voirie;

[13] Werkboek Schoolomgeving van Agentschap Wegen en Verkeer: http://wegenenverkeer.be/werkboek-schoolomgeving

[14] Recommendations and actions by Gracq, Provélo, Fietsersbond;

[15] Recommendations for PRM, including the non-profit Atingo: www.atingo.be;

[16] Safety around schools. Call for projects launched by the Fonds Dominique De Graeve to support initiatives aimed at improving the safety of children aged 0 to 12 in traffic, particularly in the immediate vicinity of schools. www.kbs-frb.be > activités > appel à projets ;

[17] Dossier of the "Moniteur de la Mobilité et de la Sécurité routière". "Mobilité scolaire", published by Brussels Mobility and Brulocalis, September 2017;

[18] Octopusplan, travel plans developed by the Flemish government www.octopusplan.be.

LIST OF ILLUSTRATIONS AND PHOTO CREDITS

Sint-Lukas School, Schaerbeek. Furniture project: ART BASICS for CHILDREN. © Ilse Liekens
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Timeline
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Neo-Gothic Catholic schools:

Centre scolaire Sacré-Coeur de Lindthout, Woluwe-Saint-Lambert. Architect Julien Walckiers. © Direction des Monuments et Sites - Brussels Regional Public Service

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(p. 14)

De Kriek School, Schaerbeek. Modular classroom layout by ART BASICS for CHILDREN. 2018 Jonathan Ortegat
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Courtyard landscaping project for communal schools no. 9 and 11b, Forest: architects Suède 36, 2013. 2013 Cyrus Pâques
(p. 35)

Sint-Joost-aan-Zee municipal school, Saint-Josse. Architects: BAS (Bureau voor Architectuur en Stabiliteit), 2005. ©2005 Lander-loeckx
(p. 38)

Design project for the entrances to municipal school n°6 Georges Primo, Schaerbeek, 2013. 2013 Georges De Kinder for the Direction de la Rénovation urbaine (DRU)
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Saint-Joseph de Couvin school. ©2018, "Let's not beat around the bush!"
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Vegetable garden in La Marolle nursery school, City of Brussels © École de la Marolle
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Redevelopment of a school street, rue de la Braie, Brussels. Contracting authority: City of Brussels, with the collaboration of JES Stadslabo (Yota!). ©2018, +research and Collectif ipé
(p. 74)

Flea market at municipal school number 13, Schaerbeek © Cécile Dubois
(p. 81)

Bike rack ©Bruxelles mobilité
(p. 85)

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MY SCHOOL, A QUALITY SPACE.

GUIDE TO BASIC EDUCATION

CHECKLIST

SCHOOL	Name:				
	Address	Street:		No.	
		Postcode:		City:	
USER	Name:				
	Position:				
DATE					

TO COMPLETE THE QUALITY CHECKLIST:

ASSESSMENT

With the help of the questions in the criteria sheets, each indicator must be qualified as:

+ +	**Fully satisfactory**
+	**Satisfactory**
− +	**Acceptable**
−	**Unsatisfactory**
− −	**Completely unsatisfactory**

ACTIONS

When an indicator reveals a completely unsatisfactory or unsatisfactory situation, the quality checklist suggests intervention categories to help the user think about the actions that can be taken:

- **Awareness-raising and communication measures**
- **Management measures**
- **Maintenance and repair modalities**
- **Minor alterations or transformations**
- **Major renovation or extension**

The comment space linked to each criterion allows the user of the checklist to specify the diagnosis or the courses of action.

	ASSESSMENT					ACTIONS				
	+ +	+	+ −	−	−	Awareness-raising and communication	Management	Maintenance and repairs	Minor alterations or transformations	Major renovations or extensions
I. AN ADAPTED, FLEXIBLE SCHOOL										
I.1 GENERAL ORGANISATION OF THE INTERIOR SPACES → PAGE 16										
Visibility of the organisation of the building										
Efficient and balanced use of space										
Diversity and complementarity of spaces										
Flexibility of use and multi-functional spaces										
Adaptable architecture										
Sufficient storage space										
Conveniently located sanitary facilities										
Comments:										
I.2 AREAS OF TRAFFIC CIRCULATION → PAGE 18										
Adapted traffic areas										
Ease and quality of routes within the school										
Opportunities for appropriation and interaction										
Comments:										
I.3 THE CLASSROOM → PAGE 19										
Sufficient number of classes										
Appropriate dimensions and proportions										
Adaptable space for different educational activities										
Suitable equipment										
Good conditions of comfort										
Comments:										

	ASSESSMENT					ACTIONS				
	+ +	+	+ −	−	− −	Awareness-raising and communication	Management	Maintenance and repairs	Minor alterations or transformations	Major renovations or extensions
I.4 THE PHYSICAL EDUCATION ROOM → PAGE 22										
Presence of a Physical Education room										
Appropriate dimensions and proportions										
Adequate fittings and equipment										
Sufficient and adapted changing rooms										
Good conditions of comfort										
Comments:										
I.5 THE MULTI-FUNCTIONAL AREAS → PAGE 24										
Presence of indoor multi-functional facilities										
Appropriate dimensions and proportions										
Suitable position in the building and separate access possible										
Flexibility of use										
Adequate fittings and equipment										
Good conditions of comfort and safety										
Comments:										
I.6 THE REFECTORY AND KITCHEN → PAGE 26										
Appropriate dimensions and proportions										
Adequate location										
Adequate fittings and equipment										
Multi-functional nature of the space										
Good conditions of comfort and safety										

	ASSESSMENT					ACTIONS				
	+ +	+	+ −	−	−	Awareness-raising and communication	Management	Maintenance and repairs	Minor alterations or transformations	Major renovations or extensions
Fully equipped and efficient kitchen										
Educational opportunities										
Comments:										
I.7 THE ADMINISTRATION → PAGE 28										
Offices adapted to the administration and management of the school										
Adapted staff room										
Suitable meeting room										
Additional rooms										
Good conditions of comfort										
Comments:										
I.8 ARCHITECTURAL TRANSLATION OF THE EDUCATIONAL PROJECT → PAGE 29										
Character and uniqueness of the original building										
In line with current educational requirements										
Maintaining the building's original qualities										
Comments:										
1.9 INFORMATION AND COMMUNICATION TECHNOLOGIES FOR EDUCATION (ICTE) → PAGE 30										
Presence of ICTE equipment										
Suitable IT and electrical installations										
Good conditions of use										

	ASSESSMENT					ACTIONS				
	+ +	+	+ −	−	−	Awareness-raising and communication	Management	Maintenance and repairs	Minor alterations or transformations	Major renovations or extensions
ICTE training for teachers										
Maintenance and replacement plan										
Comments:										
I.10 THE SCHOOL ENTRANCE → PAGE 32										
Clearly identifiable location										
Obvious accesses and routes										
Appropriate dimensions										
Easy monitoring										
Conviviality and social interaction										
Comments:										
I.11 RECREATIONAL AREAS → PAGE 34										
Suitable surface area and proportions										
A diversity of environments and harmonious cohabitation of uses										
School canopies of adequate dimensions and well-located										
Suitable fittings and equipment										
Suitable flooring in good condition										
Usable sports fields										
Quality green spaces										
Comments:										

	ASSESSMENT					ACTIONS				
	+ +	+	+ −	−	−	Awareness-raising and communication	Management	Maintenance and repairs	Minor alterations or transformations	Major renovations or extensions
II. A SAFE SCHOOL										
II.1 FIRE SAFETY → PAGE 40										
Fire-resistant structural elements										
Compartmentalisation of staircases and the building										
Conformity of escape routes										
Suitable signing										
Alarm and detection systems										
Regular fire evacuation drill										
Conformity of extinguishing equipment										
Accessibility of the site for the fire service										
Prevention against specific fire risks										
Comments:										
II.2 PHYSICAL SAFETY → PAGE 42										
Compliance of railings and spandrels										
Protection from sharp objects and other obstacles										
Even, non-slip floor covering										
Limited hot water temperature										
Toxic products out of reach of students										
Compliant play area										
Comments:										

	ASSESSMENT					ACTIONS				
	+ +	+	+ −	−	− −	Awareness-raising and communication	Management	Maintenance and repairs	Minor alterations or transformations	Major renovations or extensions
II.3 SECURITY AGAINST INTRUSION										→ PAGE 44
Social control										
Supervision of entry and exit										
Physical protection against intrusion										
Storage of valuables										
Techno-preventive equipment										
Comments:										
II.4 ASBESTOS										→ PAGE 46
Is there an asbestos inventory										
Implementation of risk management measures										
Comments:										
II.5 POLLUTED SOILS										→ PAGE 47
Awareness of the state of the soil										
Preventive measures										
Comments:										

	ASSESSMENT					ACTIONS				
	++	+	+−	−	−	Awareness-raising and communication	Management	Maintenance and repairs	Minor alterations or transformations	Major renovations or extensions
III. A SCHOOL WHICH IS HEALTHY AND COMFORTABLE FOR ALL										
III.1 THERMAL COMFORT → PAGE 50										
IN WINTER										
Good sunlight conditions										
Satisfactory levels of thermal insulation and waterproofing										
Optimised heat distribution system										
Efficient use, management and maintenance of heating systems										
Optimised ventilation and airing systems										
Outdoor areas can benefit from winter sunshine										
Comments:										
IN SUMMER										
Effective sun protection										
Satisfactory level of thermal insulation										
Sufficient ventilation										
Sun protection for outdoor spaces										
Comments:										
III.2 SOUND COMFORT → PAGE 54										
Adequate sound insulation										
Protection in noisy urban environments										
Organisation of school areas and timetables to minimise nuisance										

	ASSESSMENT					ACTIONS				
	+ +	+	+ −	−	− −	Awareness-raising and communication	Management	Maintenance and repairs	Minor alterations or transformations	Major renovations or extensions
Measures to mitigate sources of indoor noise										
Acceptable level of reverberation										
Reducing noise pollution for local residents										
Comments:										
III.3 VISUAL COMFORT → PAGE 56										
Good level of natural lighting										
Possibilities of modulating natural lighting										
Good quality of artificial lighting										
Zone control or sectoring										
Visual connection with outside										
Comments:										
III.4 AIR QUALITY → PAGE 58										
Adequate ventilation system and use										
Good ventilation practices										
No contaminants										
Comments:										

	ASSESSMENT					ACTIONS				
	+ +	+	+ −	−	−	Awareness-raising and communication	Management	Maintenance and repairs	Minor alterations or transformations	Major renovations or extensions
III.5 HYGIENE AND CLEANLINESS										→ PAGE 61
Satisfactory ratio of toilets to students and washbasins to toilets										
Conveniently located sanitary facilities										
Suitable toilets										
Good structural condition of sanitary facilities										
Good maintenance of sanitary facilities										
Provision of hygienic equipment										
Hygiene awareness programmes and campaigns										
Satisfactory cleanliness										
Comments:										
III.6 ACCESSIBILITY OF PERSONS WITH REDUCED MOBILITY (PRM)										→ PAGE 63
Suitable access										
Suitable internal traffic flows										
Suitable toilets										
Comments:										

	ASSESSMENT					ACTIONS				
	+ +	+	+ −	−	− −	Awareness-raising and communication	Management	Maintenance and repairs	Minor alterations or transformations	Major renovations or extensions
IV. A SCHOOL WHICH RESPECTS THE ENVIRONMENT										
IV.1 ENERGY → PAGE 66										
Low level of primary energy consumption										
Management and control of consumption										
Good insulation and airtightness of the building shell										
Efficient technical installations										
Energy generation on site										
Comments:										
IV.2 WATER → PAGE 68										
Good permeability of outdoor spaces										
Water recovery on the site										
Rational water use										
Raising awareness among users about responsible consumption and the water cycle										
Comments:										
IV.3. BIODIVERSITY → PAGE 70										
Valorisation of the site's biodiversity										
High ecological potential of the site										
Good management of open spaces on the school site										
Educational projects on biodiversity										

	ASSESSMENT					ACTIONS				
	++	+	+ −	−	−	Awareness-raising and communication	Management	Maintenance and repairs	Minor alterations or transformations	Major renovations or extensions
Comments:										
IV.4 WASTE → PAGE 72										
Waste reduction policy										
Equipment and areas adapted for waste management										
Waste management programmes										
Comments:										
IV.5 SUSTAINABILITY OF MATERIALS → PAGE 73										
Minimising resource consumption										
Choosing materials with a low environmental impact										
"Reversible" construction elements										
Comments:										

	ASSESSMENT					ACTIONS				
	++	+	+ −	−	−−	Awareness-raising and communication	Management	Maintenance and repairs	Minor alterations or transformations	Major renovations or extensions
V. A SCHOOL IN THE CITY										
V.1 IDENTITY AND URBAN CHARACTER → PAGE 76										
Expression of the school function										
Contribution to the quality of public space										
Comments:										
V.2 SHARING PUBLIC FACILITIES BETWEEN THE SCHOOL AND THE CITY → PAGE 77										
FACILITIES AND PUBLIC SPACES IN THE NEIGHBOURHOOD										
Facilities that meet the school's needs										
Educational opportunities										
Good conditions of use of the facilities										
Good accessibility										
Comments:										
OPENNESS OF THE SCHOOL TO LOCAL RESIDENTS										
Organisation of the building suitable for being opened to the public										
Good conditions of safety										
Good management conditions										
Comments:										

	ASSESSMENT					ACTIONS				
	+ +	+	+ −	−	−	Awareness-raising and communication	Management	Maintenance and repairs	Minor alterations or transformations	Major renovations or extensions
V.3 FORECOURT AND PUBLIC SPACES AROUND THE SCHOOL → PAGE 82										
Visibility of accesses and the school identity										
Adapted to a variety of uses and conducive to interaction										
Feeling of security										
Good conditions of cleanliness										
Good acoustic and climate comfort										
Educational potential of public spaces										
Comments:										
V.4 MOBILITY → PAGE 84										
ACTIVE MOBILITY										
Comfortable and pleasant public spaces for pedestrians										
Good conditions of safety for pedestrians										
Comfortable and pleasant public spaces for cyclists										
Good conditions of safety for cyclists										
Bicycle parking										
Comments:										

	ASSESSMENT					ACTIONS				
	+ +	+	+ –	–	–	Awareness-raising and communication	Management	Maintenance and repairs	Minor alterations or transformations	Major renovations or extensions
ACCESSIBILITY BY PUBLIC TRANSPORT										
Good access to the school by public transport										
Comfort and safety of routes between school and stops										
Good safety and comfort conditions at public transport stops										
Comments:										
CAR TRAFFIC AND PARKING										
Calmer traffic flow resulting in good safety conditions										
Good conditions for dropping off students by cars and school buses										
Parking facilities adapted to the context										
Comments:										
"MOBILITY" ACTIONS AND PROJECTS										
School Travel Plan (STP)										
Educational and awareness-raising projects										
Concrete actions to promote sustainable mobility										
Involvement of the school in local mobility projects										
Comments:										

General comments:

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