Air de Jeux

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Introduction

In the average European city, approximately 70% of public roadway space is allocated to vehicles, leaving only 30% for pedestrians. These pedestrian areas are named differently across different English-speaking regions. In the United Kingdom, 'pavement' refers to paved pedestrian areas or pathways in or alongside streets or public thoroughfares. Similarly, many Commonwealth nations, such as India, also use this term. In Australia and New Zealand, the term 'footpath' is preferred, emphasizing their exclusive use for pedestrians. In the United States and Canada, the term 'sidewalk' is particularly telling, as it reflects how space for pedestrian movement has been relegated to the margins - a reality that underscores the broader vehicle-centric approach to urban planning seen in cities around the world. Since the inclusion of raised pedestrian sidewalks on the Pont Neuf bridge in Paris in 1607, little has changed regarding the general sidelining of pedestrian traffic.1 Since the 19th century urban streets have increasingly prioritized vehicular traffic, often to the detriment of pedestrian accessibility. As described by Richard Sennett in The Conscience of the Eve. 'The street becomes a corridor for the movement of automobiles rather than a place for people to meet and interact.'2

The marginalization of pedestrian movement along urban trajectories has long been the subject of criticism. In *The Death and Life of Great American Cities*, Jane Jacobs highlighted the role of streets as essential in promoting social interaction and urban safety.³ She argued that a steady flow of pedestrians ensures 'eyes on the street', enhancing safety and support for the diverse human activities — walking, socializing, playing and street vending — that enrich urban life. Henri Lefebvre, in his *Right to the City*, argued that streets should belong to those who live and work in them, that they should be viewed as social constructs shaped not only by cultural and economic activities, but by everyday human interactions: streets are shaped by their residents.⁴ These theorists also emphasize the temporality of streets. Lefebvre's concept of 'rhythm analysis'

explores how time and rhythm shape urban spaces, with street life influenced by overlapping rhythms, including weather, social schedules and individual traits, such as the pace at which people walk.⁵ Jacobs similarly describes streets as 'public stages' where everyday dramas unfold, as a theater of life through which people are moving, engaging in daily activities or simply observing, actors in an ongoing performance of public life. These theories suggest that, in contrast to the static and functional physical constructs of contemporary approaches to street planning, street use and interpretation can adapt to changing needs throughout the day, from bustling mornings to quiet evenings.

Throughout the 20th century, the dominance of private vehicles and commerce on streets was particularly detrimental to the well-being of children, leaving them with very little space for play, sports or social interaction, especially in low-income neighborhoods. In various cities, safety concerns grew with the rise in accidents and criminal activities involving children, prompting a range of initiatives aimed at reclaiming the streets for their residents and enhancing safety, particularly for children. These efforts led to initiatives for interventions in streets. One pioneering example was the ongoing Play Streets Program, first introduced in the early 20th century in New York City. In an effort to provide children in poorer neighborhoods with access to outdoor space, the Play Street experiment was launched in July 1914. A section of Eldridge Street in the Hell's Kitchen neighborhood in Manhattan was closed to traffic, and vendors, street pianos and a dance festival transformed the area into a space for music, sports and recreation. Due to its popularity, the program was expanded in 1924 to include 50 Play Streets across the outer boroughs. This initiative continues today, with the NYC Parks Department managing designated Play Streets in all five boroughs. 6,7

Internationally, other traffic safety campaigns focused on children also followed, including the Safe Routes to School program, which began in Denmark as part of the 1976 Danish Traffic Act.8 This campaign required local authorities to establish safe routes for all schools. Toward the end of the 20th century, these efforts were followed by the introduction of School Streets, with the first implementation in Bolzano, Italy, in 1992. A School Street refers to a street or a section of a street that is temporarily closed to vehicular traffic during certain hours, typically during school pick-up and drop-off times, to improve safety for

children and pedestrians. Following its success in Bolzano, the School Street initiative has spread globally, reaching such cities as Lille in France in 2003, Milan and Ghent in Italy and Belgium, respectively, in 2012, London in 2016, Brussels in 2019, and more recently, Auckland in New Zealand in 2020, Victoria in Australia in 2021, and Berlin in 2024.

Ensuring the safety of streets around schools has become a priority, given the frequency with which children undertake this journey. Globally, a significant proportion of injuries to children occur in close proximity to schools. For instance, in the United Kingdom, research has revealed that one-third of child road traffic injuries take place during commutes to or from school. School street initiatives have proven effective, with various cities reporting reductions in both automobile traffic and accidents in school commuting areas.

While traffic safety is a primary concern, school street initiatives also address other critical issues. Traffic-related air pollution and noise are known to contribute to respiratory problems, developmental delays and mental health challenges in children. The implementation of school street interventions has demonstrated a substantial positive impact on air quality by reducing concentrations of air contaminants. For instance, in London's School Streets initiative, nitrogen monoxide (NO) levels decreased by approximately 35%, and nitrogen dioxide (NO₂) levels saw reductions of up to 25% during morning drop-off periods. Moreover, automobile drop-offs at schools, often in conjunction with unsafe walking conditions, reduce physical activity and limit social interaction for children. By encouraging walking and cycling, these initiatives promote physical activity, which has been shown to result in more engaged and active children in the classroom. These and other urban health challenges highlight the need to redesign streets with children in mind.

School street initiatives that have been implemented since the Bolzano intervention have embraced a range of urban actions tailored to local needs, in order to create safer, healthier and more engaging streets for children. While they all propose partial or permanent street closures, other actions are also deployed as combined toolkits, responding to the pressing concerns in each particular location. These include traffic regulation and parking restrictions, street guards, promoting soft mobility by non-motorized means, installing school street signage, implementing green infrastructure, sensing devices for environmental awareness,

street furniture installations, street painting, the organization of school street community participation and more. The following paragraphs outline some of the most commonly implemented actions for urban school streets. Many other possibilities remain open, and it is for cities, communities and designers to explore these options, further enriching and expanding the school streets toolbox.

Street closures using physical barriers are the most common initial measure for school streets, as seen in the first implementation in Bolzano. These range from temporary plastic or metal barriers, often managed by school guards, to more permanent closures, such as manually operated gates or automated bollards. Closure durations vary from 30-minute intervals during drop-off and pick-up times to full-day restrictions, with permanent street closure adopted for some locations. These measures have succeeded in enhancing safety and creating pedestrian-friendly environments. For instance, a 2018 evaluation in Ghent, Belgium, reported a 40% reduction in automobile traffic and a 30% increase in walking or cycling near schools.¹³

<u>Traffic speed regulations</u> are introduced on school streets to improve safety and reduce congestion. Municipalities typically establish speed zones around schools, with a common limit of 30 km/h. Cities such as Bolzano, Turin, Parma and Dresden have adopted 30 km/h zones, while in Brussels, the school zone speed limit is 20 km/h. These traffic regulation measures aim to decrease the number of accidents, improve safety for children, raise awareness and reduce traffic near schools.

<u>Parking restrictions</u> on school streets are increasingly repurposing spaces into green areas, seating zones and/or playgrounds, as seen at the Scheut elementary school in Anderlecht and Saint-Antoine in the Brussels Capital Region, where parking lots have been transformed with planter barriers, waiting areas and play spaces.

Walking buses and street guards, with young schoolchildren walking together with one or more adult chaperones, generally managed by schools or parent associations, are key features of school streets, reducing vehicle congestion while promoting physical activity and social interaction. First introduced in 1956 in Bonn, Germany, street guards now assist pedestrian school commutes in such cities as Berlin and Dresden. Pioneered in Bolzano, these walking buses consist

of groups of at least ten children walking up to 15 to 20 minutes to school, accompanied by adult guards for safety and efficiency.¹⁴

<u>Bicycle paths and bicycle parking</u> are increasingly being implemented on school streets. Recent examples can be seen, for example, in the city of Parma, Italy, as well as in Berlin. Promoting soft, non-motorized mobility to schools has been shown to reduce traffic congestion around school areas, improve air quality and enhance children's social and physical activity.¹⁵

<u>School street signage</u> is installed to alert drivers that they are approaching a school zone. As with physical barriers, school street signage has been developed as either movable elements or permanently installed features. Both movable and static signage serve to improve driver awareness and ensure compliance with school street rules.

Street painting has been implemented as a strategy both to signal the entrance to a school street and to create a communications tool for children, allowing them to design their own streets. Various projects have used this approach, including the *Filter Café Filtré* and *Pool is Cool* school street project in the Brussels Capital Region, in which a street painting pattern enhances play opportunities for the children, with chalk provided so they can collaboratively design their own street environment.¹⁶

The greening of school streets, often driven by municipalities or parent associations, includes temporary installations such as movable planters (e.g., Scheut Elementary in Anderlecht) and permanent changes, including the conversion of parking spaces into planted areas. Trees are also added to provide shade and improve environmental well-being, creating a more pleasant and sustainable space for both the pupils and the community.

<u>School street furniture</u> is increasingly being installed to enhance comfort during drop-off and pick-up times, as well as to transform the perception of the school street from a mere space for through transit into a place to spend time, where activities can take place. Street furniture can include seating areas, improved lighting, bicycle storage and so on.¹⁷

<u>Environmental sensing</u>, notably to signal air pollution, is being more frequently implemented in school environments due to growing concern about children's exposure to air pollutants. This is the case in London, where the *Breathe London*

air pollution sensing project has highlighted the increased exposure of urban children to harmful air quality, as well as assessing the effectiveness of school street interventions¹⁸ Heat exposure is also becoming an increasing concern in school environments, leading to the installation of additional environmental sensors.

<u>Community engagement initiatives</u> to teach effective management of school streets have been organized in a number of school zones, with examples in Falkensee in Germany, Graz in Austria and Ghent in Belgium.¹⁹ These reduce traffic by coordinating school street closure times with parents, introducing designated drop-off areas to minimize parking and blockages, as well as organizing parent group drop-offs to streamline the process and encourage cooperation.

NOTES

- Fournier, Édouard, Histoire du Pont-Neuf, 1862, Paris, Librairie Académique Didier.
- 2. Sennett, Richard, *The Conscience of the Eye: The Design and Social Life of Cities*, 1992, W. W. Norton & Company.
- 3. Jacobs, Jane, *The Death and Life of Great American Cities*. 1961. Random House.
- 4. Lefebvre, Henri, *Le droit à la ville*, 1968, Editions Anthropos.
- 5. Lefebvre, Henri, Rhythmanalyse: Espace, temps et vie auotidienne. 1992. Presses Universitaires de France.
- 6. Loukaitou-Sideris, Anastasia & Ehrenfeucht, Renia Sidewalks: Conflict and Negotiation over Public Space, 2009, MIT Press.
- 7. City of New York, *The Play Streets Program:*A History of Urban Recreation, July 15, 2014, NYC.gov, https://www.nyc.gov/playstreets (accessed December 2024).
- 8. Smith, John 'Safe School Routes', *Traffic Days at Aalborg University*, 2023, 10(2), pp. 15-25.
- Child Health Initiative School Streets: A Political Economy Analysis, 2022, FIA Foundation, https://www.fiafoundation.org/ media/hr3fmhin/school-streets-report-pages.pdf (accessed December 2024).
- Transport for London, Safety of Schoolchildren on London's Roads (n.d.), https://content.tfl.gov.uk/ safety-of-schoolchildren-on-londons-roads-report.pdf (accessed December 2024).
- 11. European Commission, School Streets for Safe and Sustainable School Trips, October 23, 2024,

- EU Urban Mobility Observatory, https://urban-mobilityobservatory.transport.ec.europa.eu/resources/case-studies/ school-streets-safe-and-sustainable-school-trips_en (accessed December 2024).
- 12. Air Quality Consultants, Air Quality Monitoring Study: London School Streets, 2021, https://www.london.gov.uk/sites/default/files/school_streets_monitoring_study_march21.pdf (accessed December 2024).
- 13. Stad Gent, Schoolstraten, City of Ghent (n.d.), https://stad.gent/nl/mobiliteit-openbare-werken/kinder-enjongerenmobiliteit/schoolstraten (accessed December 2024).
- 14. Metamorphosis Project, School Streets: Bolzano (n.d.), https://www.metamorphosis-project.eu/event/school-streets-bolzano.html (accessed December 2024),
- Faulkner, Guy Edward, Buliung, Ron N., Flora, Phillip K., & Fusco, Caroline, 'Active School Transport, Physical Activity, and Body Weight: A Systematic Review', *Preventive Medicine*, 2009. 48(1), pp. 3-8.
- 16. Perspective.brussels, À bord de l'école: A Guide for Safer School Routes (n.d.), https://perspective.brussels/sites/default/files/abordsecole_en.pdf (accessed December 2024).
- 17. Ibid.
- 18. Greater London Authority, School Streets Monitoring Study: March 2021, https://www.london.gov.uk/sites/default/files/school_streets_monitoring_study_march21.pdf (accessed December 2024).
- City of Ghent, Schoolstraten (n.d.), https://stad.gent/nl/mobiliteit-openbare-werken/kinder-en-jongerenmobiliteit/schoolstraten (accessed December 2024).

Air de jeux

This book presents an overview of the *Air de Jeux* school street project. *Air de Jeux* is a collaborative project developed in partnership between the University of Louvain (UCLouvain), Vrije Universiteit Brussel (VUB), Les chercheurs d'air non-governmental organization, the BuildWind enterprise, and regional representatives, proposing an urban environmental instal-lation for a school street in the Brussels Capital Region (BCR). This project, awarded the 2022 European Research Prize and consequently funded by the international SOM Foundation, began with calls for proposals addressing the relationship between architecture and environmental pollution, and proposed to implement ephemeral school street installations to mitigate exposure to environmental stressors for children while enhancing opportunities for play.

During the autumn 2023 academic semester, working in groups, graduate students at UCLouvain were invited to propose street action strategies for a school street in the Municipality of Saint-Gilles, in the Brussels Capital Region. They proposed and presented urban interventions that included street closures, street painting, greening, air pollution sensing and the installation of street furniture infrastructure. Brief descriptions and illustrations for each of the proposed strategies are included in this publication.

A jury composed of academics, environmental experts and public officials made a selection from the resulting proposals for the purpose of further development and execution of the project. The selected actions, most notably closing streets to establish play areas, included a critical perspective on the contemporary management of school streets, highlighting the fact that children are not fully benefiting either from street closures or from the potential to transform these spaces into play streets. The proposals suggested extending street closure times, as well as mitigating vehicle speed through the presence of movable infrastructure. Temporary fabric barriers were designed for street closures, deployable

across the full width of the street, making use of pre-existing lampposts and vertical infrastructure, as well as newly developed movable posts to enhance flexibility. These barriers are also intended to function as multi-purpose infrastructure, serving as play structures such as volleyball or tennis nets, as well as a theater curtain and hide-and-seek play areas, among other uses. Additionally, to support other proposed urban actions, pollution-filtering plants were incorporated into one of the closure mechanisms, and a sensing system was installed to further promote community awareness. This kit included sensors for air pollutants (PM_{2.5} and PM₁₀), as well as for temperature and relative humidity. The installation aimed to allow children to make full use of the school street space, incorporating reconfigurable fabric elements that span the street for play and interaction while fostering community engagement and raising awareness of surrounding environmental conditions.

Following discussions with the Municipality of Saint-Gilles, Rue de la Rhétorique, a street in Saint-Gilles, home to the Peter Pan Primary School, was selected for the implementation of the school street interventions proposed in the first semester's research. Workshops aimed at engaging the children themselves, as well as the teaching staff, were held at the school. These workshops were designed to raise environmental awareness amongst primary school pupils, gathering insights from their own ideas and visions through questionnaires, street exploration and play. Some of the results are included in this publication.

In the spring of 2024, two workshops were held at the Saint-Gilles campus of UCLouvain in order to further develop the selected strategies. Preparations were divided into two segments, involving hands-on metalworking and fabric design. All the materials, including both metal and fabric, were reclaimed, and the assembly took place within walking distance of Rue de la Rétorique. UCLouvain students worked under the guidance of experts in metalworking and fabrication techniques, as well as fabric selection and preparation.

The elements for the installation were completed during the summer, and the inauguration in Rue de la Rhétorique in Saint-Gilles took place on September 13th, 2024.

In the Words of Children

Located on Rue de la Rhétorique in Saint-Gilles, the Peter Pan Primary School partnered with the *Air de Jeux* team to explore the experiences and aspirations of the school staff and engage with the children about how they envisioned their ideal school street. Inspired by the poetic work of Jeremy Allan Hawkins and adapted by professor Christine Fontaine, exercises were proposed to create a subjective, sensory and emotional language for the street the school was on, based on recollection of personal experiences through poetic texts. The aim was to reveal an understanding of lived spatial situations. Through questionnaires, testimonials and free sketching, ideas were gathered in both written and illustrated form. These were then shared with the UCLouvain students to help inspire their school street strategies and installation preparations. Finally, the Peter Pan pupils actively participated in the *Air de Jeux* installation process, contributing to activities including planning for play and games, and planting new flora.





Capturing the Ephemeral Nature of the Street:

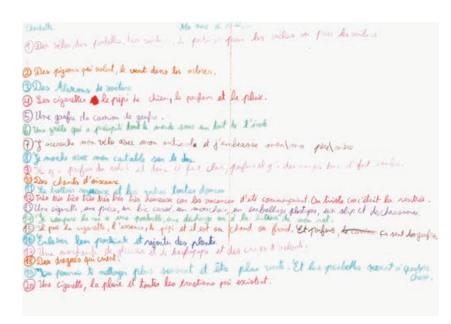
- 1. Describe the first image that comes to mind when you think of the school street.
- 2. Capture a movement you observed through the school window onto the street.
- 3. Describe a particular sound from the street that remains etched in your memory.
- 4. Describe a smell that you remember from the street.
- 5. Now describe a taste.
- 6. Think of a moment you saw on the street and ask it a guestion.
- 7. Describe something you associate with arriving at school via the street.
- 8. Describe an image of yourself on the street (from an outsider's perspective) at a particular time of day.
- 9. Choose a moment when you were on the street and describe the quality of the light.
- 10. Describe another sound that stands out in your memory.
- 11. Describe a particular or memorable texture you felt anywhere along the way to school.
- 12. Describe a specific emotion or feeling (physical, emotional) you experienced during your journey to or from school.
- 13. List a short series of objects you saw on the street.
- 14. Use a comparison to liken the street to something ('Like a...').
- 15. Describe an atmosphere you associate with the streets you traveled.
- 16. Think of the street in front of the school and ask it a question.
- 17. Name something you dream of happening on the school street that has never occurred For example games? What kind of games?
- 18. Now describe something that would surprise you one day on the street.
- 19. Admit something (to your friends, yourself, or the street).
- 20. Name an object, feeling, action, or ambiance you associate with the school street.

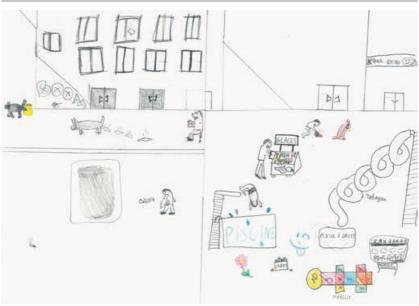
BONUS: Go back to the beginning and give your poem a title! Now, illustrate the resulting text!

La vue de St-Gilles caché Michelle 8. Moi qui a un cosque sur les oreilles 1: ouleurs dande et qui regande but les petis detail toole atené vogole 9: Des foix quand je regarde les 2: Der julibaje xy e délaits je vois que la lumière diminu Culles you in like Di en une petite siegonde. clubalis at dua 10: Une alarme de voiture. 3. les maternels qui vue M. les muss, très sale aussi bale que si tu super fort touche tu dois le laver les main après. 4. l'odenz du parfum de Cost le monde 5 le repas de la quantine Ca depent l'endrait au tu es le parking figues.
16: Devenir une rue pietonne enterer le parking figues. les personne de jelencles Netans 17. Un margarin de toutes natuit Boutson tokenté.
18: Des ormoson trein de la contraction de la contra Des pour sonnes bourie Meste assi a coté de 2'ecole. La la plus la manda de mande a l'aiole. 7: Des personnes qui vont













Proposed Street Reclamation Strategies



Closing Streets



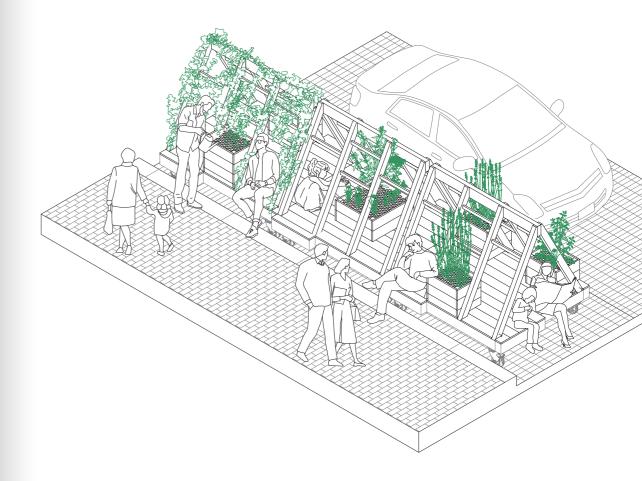


This strategy transforms street closure elements into play infrastructure. Street elements such as trees or lampposts can serve as vertical elements to strategically support game or sport infrastructures, such as volleyball or tennis nets, or soccer goals. A simple act of spanning a net from one side of the street to the other says STOP to vehicles and immediately transforms its purpose, converting school streets into pollution-free play streets. Given that vertical urban elements can be distributed differently on each side of a street, movable vertical post units, on wheels and using repurposed materials, were suggested to allow more flexibility for the installation of street-spanning nets. These mobile elements also permit the positioning of street-spanning elements as barriers at the entrances to streets to prevent automobiles from entering the school zone, thus enhancing security.

Occupying Parking Spaces

This strategy involves movable gardens equipped with air pollution filtration systems, which act both as absorbers and as screens against unhealthy particles in parking areas for vehicles. These movable gardens are placed between the road and the sidewalk, serving as a barrier to reduce the spread of pollutants onto the sidewalk. It also repurposes vehicle parking areas, making them available for children as environments with reduced environmental stress. By combining modules in various ways, areas for relaxation and recreation can be created in different locations along the school street, reducing vehicular traffic and increasing interaction between children near the school entrances.







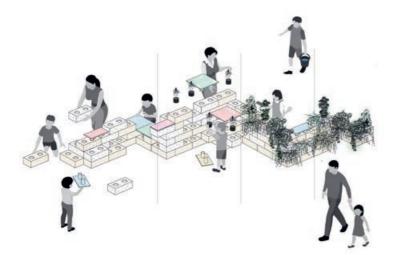
Filtering Playground

This strategy uses scaffold structures arranged into cube-like formations and wrapped with patterned textiles that have environmental remediation properties through photocatalytic pollutant removal. These pollution-remediating textiles provide shade and create environmental shelters that protect against heat stress, as well as pollution. Additionally, the fabric can be used to display messages, serving as a platform for the local community to promote environmental awareness in younger generations.

Absorbing Gardens

This strategy uses plants to absorb and filter air pollution. Pollution-filtering systems can be installed in school environments to reduce air contaminants, while also mitigating heat stress. A vertically arranged scaffolding system is introduced to support plants, making them easy to maintain by the children themselves and ensuring sustainable upkeep as a part of school activities. The result is a large-scale urban installation — a 'living environmental tower' — that emerges within surrounding public spaces, enhancing air quality, providing shade and offering thermal comfort. It serves both as an urban landmark and as a tool for promoting environmental health in cities.







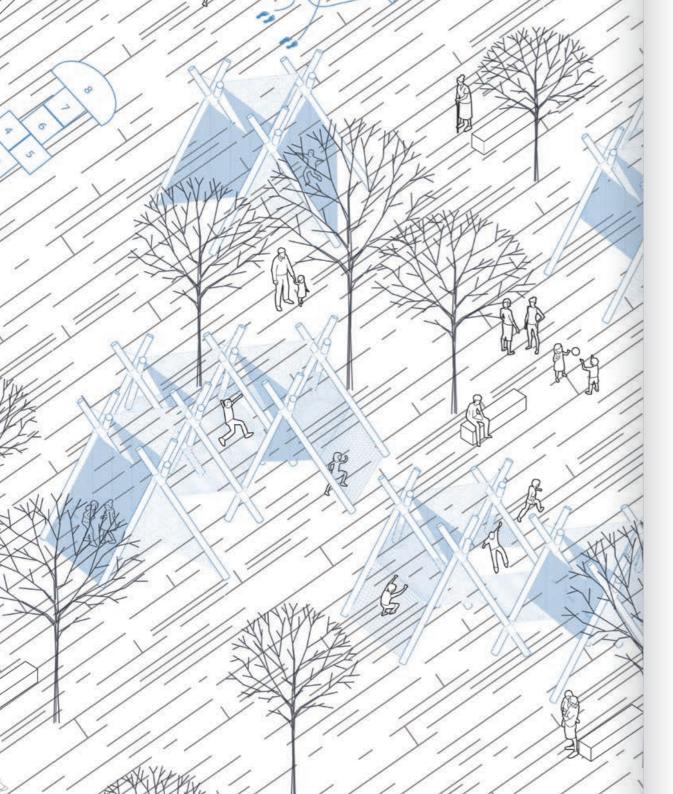
Recycling Waste Materials

This strategy uses recycled waste materials in the production of urban furniture for school streets. Traditionally manufactured urban furniture made from metal or concrete, the production of which relies on polluting resources and emitting greenhouse gases, is a contributor to local air and heat stressors. In this intervention, repurposed school waste, such as paper, is used as construction material. It features adaptable blocks that can be transformed into urban benches or barriers to combat heat and air pollution. Some of these blocks also incorporate air pollution filtration in the form of plants in segments shaped like pots. Producing these waste-based blocks offers an educational opportunity, engaging children in sorting waste, creating modular objects and collaborative design, while fostering environmental responsibility and awareness.

Streets as Canvases

This strategy involves creating a painted pattern on the street to serve as a play surface for children. It proposes painting streets to transform their usage, helping to mitigate air pollution in two ways. Firstly, during school entry and exit times, as well as throughout the school day, it influences traffic patterns. Drivers tend to slow down when navigating these streets, due to the potential danger of children running around. Secondly, the specific paint used helps mitigate air pollution through its inherent photocatalytic quality. Most importantly, the road patterns encourage play and allow children to appropriate the street as their own space. Additionally, biodegradable paints can be provided to the children, enabling them to complete and customize the street patterns. In this way, school streets are transformed into canvases for children.





Condensation Nets

This strategy involves the integration of condensation meshes that help mitigate air pollution concentrations in playgrounds adjacent to urban schools. The meshes operate by collecting rain or fog droplets, which capture suspended particulate matter from the air. These pollutants are then filtered and purified for recovery, inspired by the phenomenon of atmospheric washing. The modules, grouped in pairs or in triplicate, form elevated platforms that support various playful activities. Suspended netting provides opportunities for sitting, reclining or climbing, creating an adventure course and allowing movement at different heights.

Streets with Senses

This strategy involves the implementation of a low-cost environmental sensing kit being placed on streets around schools. It furthermore encourages making the data readily accessible online so that parents and school staff can stay informed in real time about both outdoor and indoor environmental conditions in the school environment. The kit includes sensors for air temperature and relative humidity, as well as nitrogen dioxide (NO₂) and inhalable particulate matter (PM $_{2.5}$ and PM $_{10}$). Based on the concentration values, school staff can decide whether outdoor play is advisable and potentially use this information to extend school street closures, ensuring improved environmental conditions for the children.







Following jury deliberations with representatives from the Municipality of Saint-Gilles, the UCLouvain School of Architecture, and the Vrije Universiteit Brussel (Brussels Free University, VUB), the Closing Streets / Sports Fields as Closing Devices proposal, nicknamed Faire Play, was selected for further development. It was agreed that the project would be implemented on Rue de la Rhétorique in the Municipality of Saint-Gilles, in the Brussels region, directly in front of the Peter Pan Elementary School. To carry out this strategy, hands-on workshops were organized, in which both undergraduate and graduate students participated in the design, construction and installation of the Closing Streets school street project.

Metal Workshop

Artist Gilles Libert conducted a metalworking workshop, in collaboration with Les Ateliers Melens & Dejardin, a manufacturing company based in Liège. The goal was to familiarize students with the tools and processes involved in metalworking through practical experimentation, integrating design and production into a cohesive process.

The workshop began with a lecture covering the entire process from design to production in metal. The lecture focused on plan preparation, material selection, patternmaking and tracing, and the use of hardware and equipment. Student groups were then tasked with creating a small cardboard model to scale for the metal prototype they intended to build. The prototypes focused on:

- 1. Developing a vertical metal support system, considering safety in the proximity of children and the need for structural flexibility for roadside-to-roadside extension.
- 2. Creating metal fastenings for attaching textile surfaces to existing urban infrastructure, such as lampposts, trees, street signs and walls, possibly incorporating street identity markers.

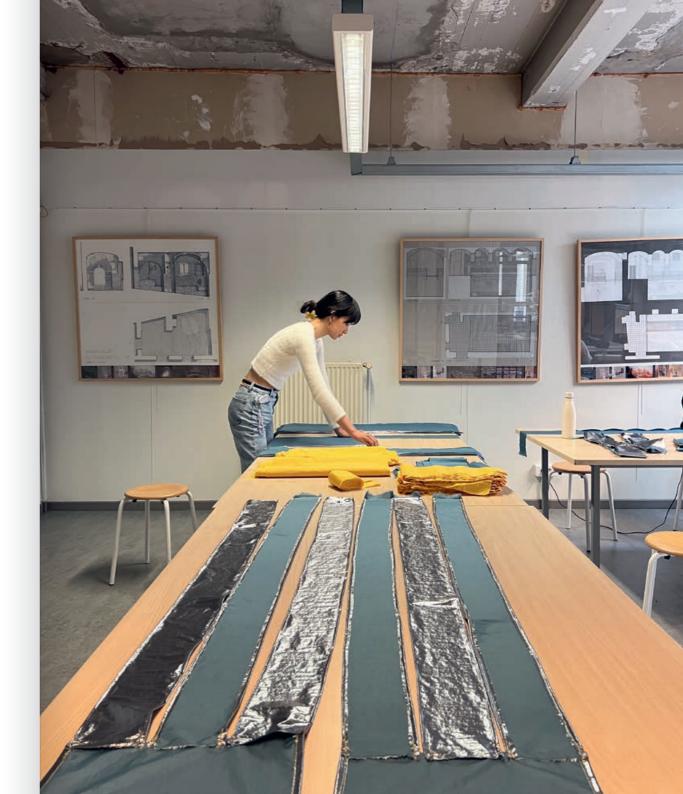
Tables equipped with the necessary technical tools for assembly, welding, painting and finishing were set up at the UCLouvain architecture faculty. Reused metal parts, such as beams, tubes, flat sheets, rounds, squares and angles were provided. Students were also encouraged to explore other materials, and if needed, additional elements could be purchased from local suppliers.





Textiles Workshop

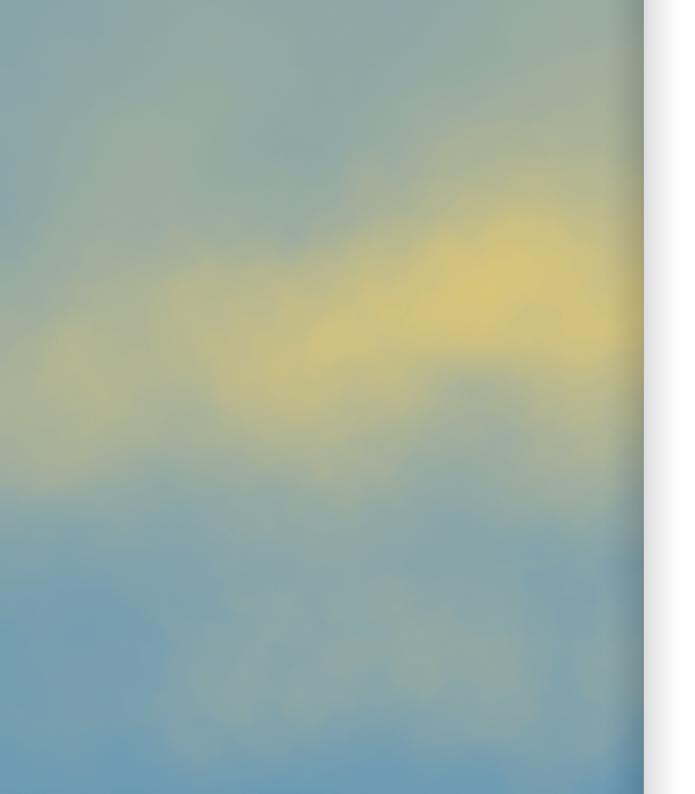
A fabrics and sewing workshop was conducted by guest artist Sara Daniels, in collaboration with the Brussels-based Green Fabric organization, which is focused on repurposed fabrics, including courses and sales. The goal of the workshop was to familiarize students with the processes of planning and preparing sewn objects through practical experimentation, aiming to integrate design and production into a cohesive process. The workshop began with a lecture covering the workflow from design to fabric preparation. It described model preparation, fabric selection, cutting and sewing processes, as well as the exploration of fastenings and material bonding techniques. Following this introduction, student groups were invited to develop two fabric installation proposals that could stretch from one sidewalk to another. To create the proposals, two sewing stations and additional support materials for the sewing workshop were installed at the architecture faculty at UCLouvain. As part of the textiles workshop, students visited the Green Fabric facilities in order to identify repurposed fabrics for their proposals.











Rue de la Rhétorique

Following the completion of the metal and fabric workshops, two street-spanning structures were assembled during the summer of 2024 for installation on Rue de la Rhétorique in Saint-Gilles in the Brussels Capital Region. These two elements serve distinct purposes. The first creates a 'soft', rather theatrical street closing, designed to form a welcoming stage for the entrance to the school. It incorporates the colonnade of the Peter Pan School, a modernist building built in 1962, designed by Léon Stynen. Extending at a 90-degree angle from the school's façade, this element spans Rue de la Rhétorique – the school street – using a now-you-see-me-now-you-don't effect. Fabric strips of contrasting colors – blue and yellow – along with reflective metal, were employed to echo the colors of the local municipality. These create a visually dynamic, community-oriented atmosphere. The second street-spanning element is a net for ball games, designed for adaptability. It can be installed in various positions and heights to suit different age groups, as well as well as different games, such as tennis, volleyball and others, providing versatility and fostering active participation.

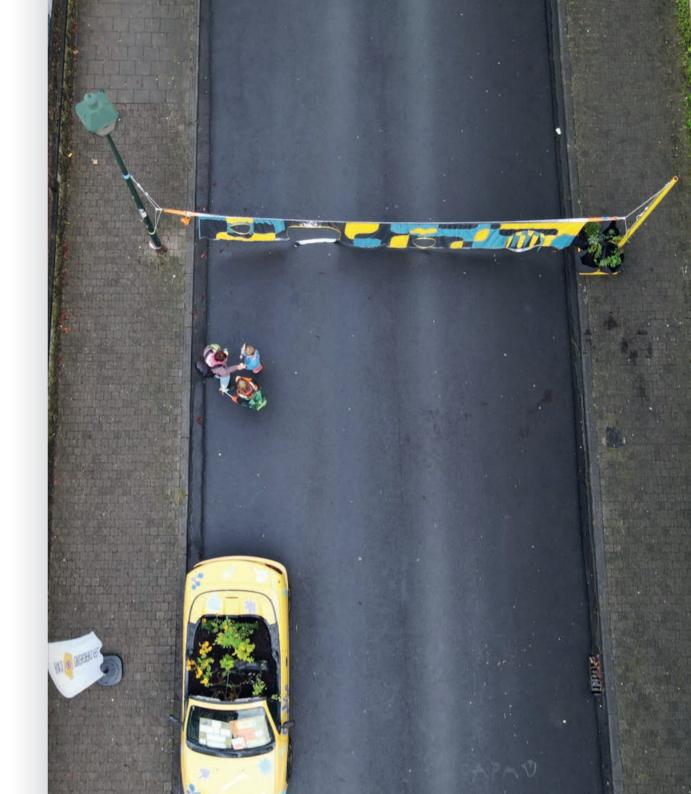
The installation was completed over the summer, and the inauguration on Rue de la Rhétorique took place on September 13th, 2024. During the inauguration party, students from Peter Pan School were invited to participate by proposing games that utilized the street-spanning infrastructures, planting air-pollution-filtering greenery, and drawing game lines on the street.

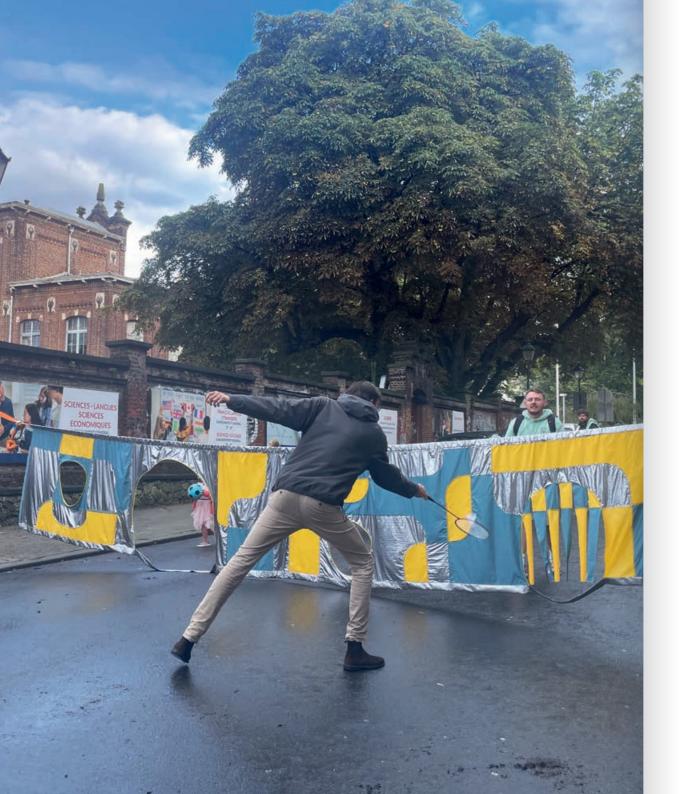
The festive event was further enriched by the presence of members of the school's parent association, families, friends, and the group *La Nouvelle Flibuste*, a Brussels-region jazz band who create their instruments from reclaimed materials.















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TEXTS

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Urban streets often fail to provide safe environments for children, with pollution and traffic posing significant challenges. School street initiatives tackle this problem by closing streets around schools to traffic, promoting safety and health. Air de Jeux is a school street installation in the Municipality of Saint-Gilles in the Brussels Capital Region, aimed at creating healthier, more play-friendly urban streets for children and residents. built through a partnership between the University of Louvain (UCLouvain), Vrije Universiteit Brussel (VUB), the Les chercheurs d'air non-profit organization, BuildWind engineering company, and Brussels Capital Region representatives. It was awarded the 2022 European Research Prize and was funded by the SOM Foundation.

