Bildung Umwelt Chancengleichheit

Walking on foot in Berlin-Neukölln

Participatory ways to reduce barriers and heat stress and to improve walking for pedestrians

Sasarsteig, a barrier for people with mobility impairments.
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Content

"The Car Free Day was very good, it was much quieter and more pleasant to walk through the neighbourhood."
(Resident during an interview)

A health map with recommendations for improving walkability in the neighbourhoods Flughafenstraße and Donaustraße-Nord in Berlin-Neukölln – Why?

Walking is healthy, environmentally friendly and free. Almost all people move around on foot or with assistive devices in their everyday lives. They fill streets and squares with life. The design of urban spaces and settlements ensures accessibility to places of everyday needs and can promote walking. The „walkability method"[1] can be used to assess the opportunities and needs of pedestrians in a neighbourhood. The project „Health Map" collected data on the conditions for and requirements of active everyday mobility in the neighbourhoods Flughafenstraße and Donaustraße-Nord. The graphical presentation of the results in two maps should help to draw the attention of politicians and administration to problems in order to solve them faster. At the same time, a map with cool as well as barrier-free paths and nice public places shows where people can already get around well on foot.[2].

The neighbourhoods Flughafenstraße and Donaustraße-Nord are located in Berlin-Neukölln between Hermannplatz, Hermannstraße, Karl-Marx-Straße and Sonnenallee. In Berlin, 34 designated neighbourhood management areas ("Quartiersmanagement", QM) receive support based on social factors and to promote neighbourhood cohesion. The neighbourhood management areas are funded through the "Social city programme" ("Soziale Stadt"). Funding is

1 The concept of walkability describes the goal of improving pedestrian friendliness in neighbourhoods, city centers or even entire communities. Improving walkability encourages people to walk more, which has positive effects on their health and, by avoiding motorized mobility, also on the environment and climate. For more information, see list of sources.

2 The project title is „Creating a health map on heat stress and walkability for vulnerable urban neighbourhoods (using the example and with the participation of the residential population in two Berlin neighbourhoods)". This project was funded by the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection and the Federal Environment Agency from proceeds of the 15th special „For the Environment" stamp on the theme „Environmental Protection is Health Protection".

provided by the European Union, the German federal government and the state of Berlin. The two neighbourhoods studied here are supported by this program. Both neighbourhoods are very lively due to a large retail and gastronomy offer and are characterized by a well-developed infrastructure and a diverse range of services. The neighbourhoods are centrally located in the southeast of the Berlin metropolitan circle line (S-Bahn Ring) and are very well connected to public transportation. The U7 and U8 underground lines have several stops around and within the neighbourhoods. Likewise, many bus lines connect the area with its neighbouring districts and beyond (M41, M43, 104,166, 171, 194, N7, N94).

The updated Environmental Justice Atlas of the City of Berlin (2021/22) rates the neighbourhoods Flughafenstraße and Donaustraße-Nord as burdened by multiple factors: social disadvantages (high rates of unemployment, transfer payments, child poverty), lack of green spaces (there are no public green spaces in Donaukiez at all), and high climate and air pollution (heat stress, traffic). Particular tensions are created by the living conditions for children and young adults and limited opportunities for exercise. All factors put a strain on the health of residents, especially those groups who have to reach their daily destinations by walking.

The project „GesundheitsKarte“ (Health Map) examined four factors that can promote or impair walking and health together with the residents of the neighbourhoods. These factors are:

- Quality of green areas and public squares as well as infrastructure of urban spaces
- Barriers at/on sidewalks
- Heat stress due to rising temperatures (climate change)
- Road safety and subjective security

Two maps illustrate the themes: The first map shows where people can walk well because of existing cool and low-barrier pavements and places to rest, exercise and play. The second map visualizes multiple stress factors, i.e. obstacles and barriers.

Public water fountain - Improving water supply for hot summer days.
© Marlene Pfau / LIFE e.V.

Methodology and procedure

The experiences and impressions of the residents were surveyed using neighbourhood walks and interviews. Special attention was paid to groups that walk a lot and are exposed to particular risks: residents with limited mobility or disabilities, children or their guardians, women, queer people, people affected by racist or anti-Semitic acts, and employees of the neighbourhood management and other local initiatives.

In addition, ideas and suggestions for better walkability and liveability in the neighbourhoods were collected together with the residents. They are intended to activate local initiatives, social institutions, economic actors as well as institutions (e.g. schools, daycare centres, neighbourhood management) and residents to advocate for better walking conditions. The ideas, support and recommendations can be found after the Health Map I „Cool and on foot through the district" which shows pedestrian-friendly routes. Further recommendations for action targeting the administration, politicians as well as environmental, traffic and urban planners can be found at the end. These recommendations make up the majority of the necessary steps for a better walkability, liveability and reduction of heat stress and are linked to the Health Map II.

The results of the project were discussed with residents, local actors and local politicians and presented in the context of a play street and street festivals.

„In the calm traffic area, the cars drive way too fast."
(Resident during a neighbourhood walk)

"Cars parked the wrong way create blind spots for pedestrians."
(Resident during a neighbourhood walk)

Kiezgarten (neighborhood garden) in Donaustraße-Nord for more greenery in the neighborhood.
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Health Map I:

Cool ways to walk on

The map shows how pedestrians can walk safely through the neighbourhood, without barriers and on cool paths, where there are places to sit and rest as well as opportunities to play and exercise.

Trail markings

- COOL PATHS
- LOW-BARRIER PATHS

Urban amenities

- SEATING
- ELEVATOR
- (SEMI-)PUBLIC RESTROOM
- ACCESS TO WATER/REFRESHMENTS (PARTIALLY DRINKABLE WATER)
- CURRENTLY NOT FUNCTIONAL

Locations and squares

- PLAYGROUNDS / EXERCISE AREAS
- GREEN SPACESE
- FAVORITE PLACES OF THE RESIDENTS

How to improve walkability and liveability in the neighbourhoods – Ideas and suggestions

The following ideas have been collected for residents, local initiatives, social institutions, gastronomy and other local actors. Many of them can only be successful if different actors cooperate with each other, such as administration, school administrators and parents, public companies or actors from the private sector such as gastronomy. Many suggestions for improvement must be implemented by the district or the state of Berlin. A good infrastructure for pedestrians is not the responsibility of the residents, however walkability and liveability can be improved through residents' commitment and advice. This way, increasing challenges such as adaptation to climate change can be met more quickly.

A good place to start is by looking at reporting mechanisms for faults and deficiencies, creative solutions and the maintenance of green spaces. Green spaces play a central role for the health of the population in the neighbourhoods regarding mobility, opportunities to play and exercise or contributing to stress relief and recreation. There are few green areas in the neighbourhood of Flughafenstraße, while there are is no public green area or playground at all in the neighbourhood of Donaustraße-Nord. Greening is also relevant for cities to adapt to climate change, as they have a cooling function on the one hand and provide important compensation for sealed surfaces on the other, for example during heavy rainfall. The quality of the pavements is poor in both neighbourhoods. Not many paths without barriers connecting through neighbourhood can be found. The following ideas can be initiated directly by the actors mentioned above:

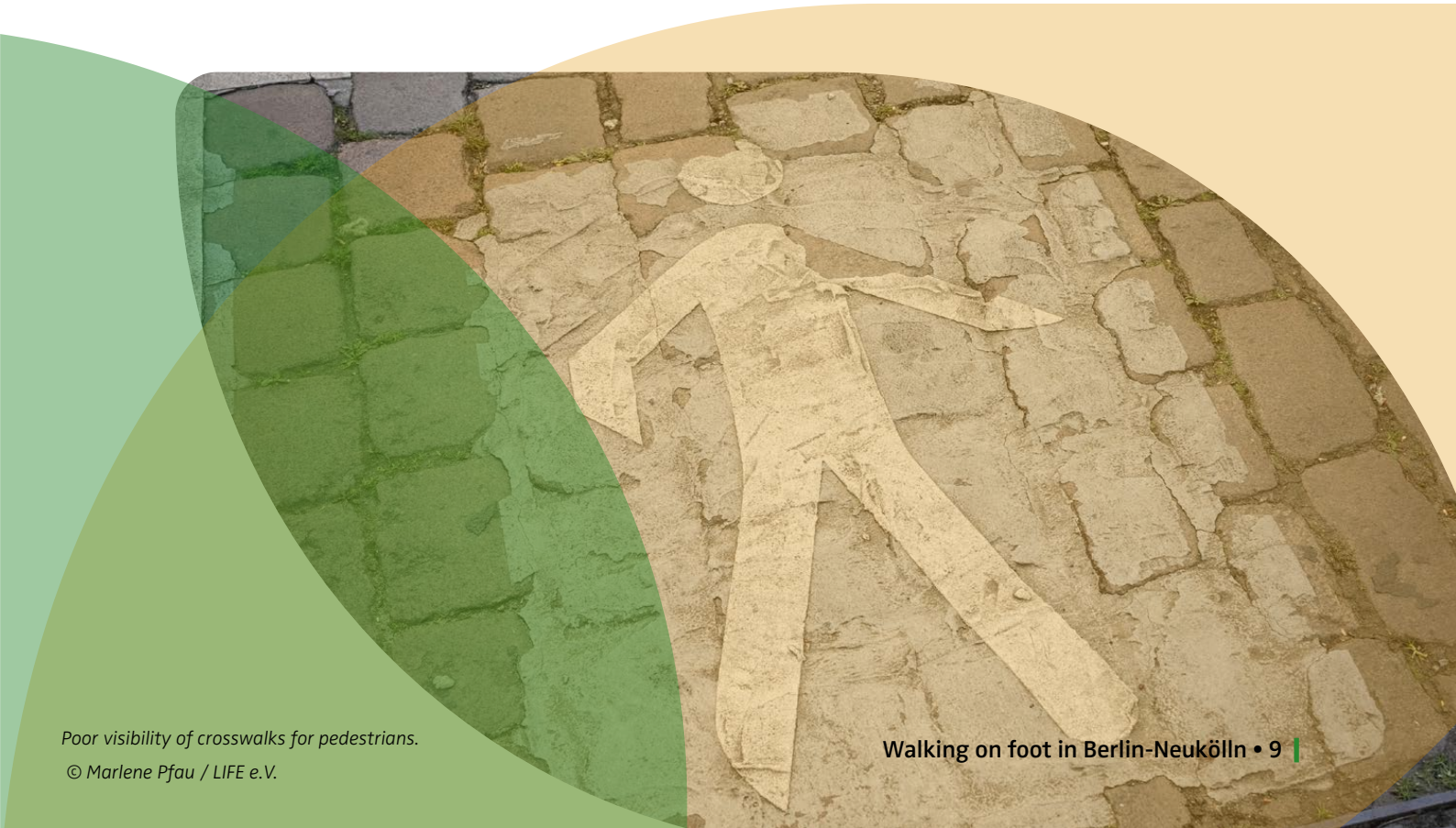
- Establish new seating and additional greening, for example, through the permanent installation and maintenance of the Kiezgarten (neigbourhood garden) at Donaustraße.
- Create new school gardens, planting around tree bases as well as watering city trees, this is especially necessary for hot days in both neighbourhoods.
- Create seating at regular intervals shaded by trees in hot locations. Creative ideas such as benching[3] could provide temporary alternatives.
- Expand the range of public and free restrooms/changing facilities and sanitary facilities, for example, restaurant owners could be encouraged to cooperate with the project "nette Toilette". Within the neighbourhood, there are only two public city's restrooms.

3 Benches built and permanently placed in public spaces by residents.

Semi-public restrooms are only accessible during opening hours in Neukölln Arkaden, Neukölln City Hall and Neukölln Citizen Centre. In addition, restaurant owners should also be encouraged to cooperate with "re-fill Germany" to increase access to drinking water (see more recommendations below).

› Improve the waste situation and cleanliness, because residents in both neighbourhoods complain about the lacking cleanliness of the public space. Bulky waste and large accumulations of waste are additional barriers on the pavement, thus the neighbourhood days for bulky waste removal should be repeated by Berliner Stadtreinigung (for example, at Sasarsteig). In addition, regular educational opportunities and waste collection events could reduce the problem.

› Extending traffic light timing, when traffic light timing is too short, pedestrians can sometimes help themselves out by operating the switch for people with visual impairments. In many places, green phases can be extended in this way.



Poor visibility of crosswalks for pedestrians.
© Marlene Pfau / LIFE e.V.

Report deficiencies in public space and improve the liveability in the neighbourhood:

Ordnungsamt (regulatory authority)
Illegally deposited garbage or bulky waste, damage to pavements, damage to equipment in public spaces, for example park benches, can be reported to the regulatory authority.
Online via the complaint management system (AMS) "Ordnungsamt Online": https://ordnungsamt.berlin.de/frontend/meldungNeu/wo
Via app: https://www.berlin.de/ordnungsamt-online/mobile-app/

Problems / violations in traffic can also be reported to the regulatory authority, but for quick elimination necessarily by telephone. All telephone numbers of the regulatory agency by district can be found, for example, here: https://service.berlin.de/standorte/ordnungsaemter/

BerlinLicht
Defective street lamps can be reported to BerlinLicht.
Online directly via an interactive map: https://www.stoerung24.de/responsive/home/?mandant=StromnetzBerlin#/
Via app: https://www.stromnetz.berlin/technik-und-innovationen/unsere-apps/lichtstoerung
By phone: 0800 110 20 10

Maintain trees and tree bases in Berlin
Many actors are involved with urban greening in Berlin, for example Stiftung Naturschutz Berlin, BUND Berlin or Pflanzenschutzamt Berlin (nature conservation authority). They rely on the voluntary work of residents; more information can be found on their websites.

BUND Berlin: Guidelines on how to plant on tree bases – Leitfaden zur ökologischen Bepflanzung von Baumscheiben, https://www.bund-berlin.de/service/publikationen/detail/publication/begruenung-von-baumscheiben-aber-richtig/
Gieß den Kiez: Interactive map for watering trees, https://www.giessdenkiez.de/

Neighbourhood Management Flughafenstraße and Neighbourhood Management Donaustraße-Nord
Both institutions are available on site for residents' concerns and suggestions and provide support if residents face problems. Their websites also provide useful contacts and information about many contact points in the neighbourhood.

Neighbourhood Management Flughafenstraße
Erlanger Straße 13
12053 Berlin
Website: www.qm-flughafenstrasse.de
Phone: (030) 62 90 43 62
E-mail: info@qm-flughafenstrasse.de

Neighbourhood Management Donaustraße-Nord
Donaustraße 7
12043 Berlin
Website: www.donaustrasse-nord.de/
Phone: (030) 346200 69 / 70
E-mail: info@qm-donaustrasse.de

"The whole neighbourhood is very hot because everything is sealed and densely built. Improving the greening and reducing the heat load could help" (Residents about the heat load in summer).

Health Map II:

Barriers, deficiencies and heat stress that make walking difficult in neighbourhoods

Legend *

- LOW SENSE OF SECURITY AND INADEQUATE LIGHTING (11; 12)
- CONFUSING INTERSECTIONS, POOR TRAFFIC SITUATION (4; 7; 8; 9)
- BARRIERS: POTHOLES, CURBS, STAIRS (1; 2; 3 ; 5)
- HOT PATHS (13; 14; 15; 16)

Recommendations *

- PLACES WITH DEVELOPMENT POTENTIAL
- PROMOTE TRAFFIC-CALMED STREETS (10)
- TRAFFIC LIGHTS / CROSSWALKS (7; 8; 9)
- SHADING / GREENING (14)
- DRINKING FOUNTAINS (13)
- SEATING OPTIONS (15)

**The numbers refer to the respective recommendations on the next pages.*

Recommendations for action for decision-makers, administration as well as traffic, environmental and urban planners and public companies

Based on the surveys conducted during the neighbourhood walks and events, as well as the interviews with residents, local initiatives and other stakeholders, is becomes clear that a large number of barriers, deficiencies and burdens in the neighbourhoods make walking in everyday life difficult. Most of the recommendations for action are addressed directly to the administrative levels of the state of Berlin, to the relevant political decision-makers, and to traffic, environmental and urban planners involved in change at the local level. The recommendations are divided into two sections: A) focuses on walkability and liveability. B) refers to climate change adaptation measures related to walking. All recommendations are numbered and can thus be located on the Health Map II. The following two recommendations refer to structural and institutional improvements:

- **Establish institutional frameworks to improve walkability.** Walking strategies which use neighbourhood walks, interviews, and workshops to measure the walkability of an area and identify main pedestrian routes are fundamental for improving the walkability of deprived areas. This enables to identify challenges and barriers and address them systematically. Even when roads and pavement reconstructions are funded by budget streams of different administrative levels, it should always be ensured that all users are considered (see also 1. recommendation below).

- **Encourage the involvement of citizens.** Municipalities should support the design of tree bases or open spaces with so-called benching3 and similar initiatives. They complement, at least temporarily, missing urban infrastructure. Additionally, they signal the needs of residents and should be incorporated into urban planning practices. A good-practice example in the neighbourhoods is "Platz unter der Linde" (at the junction of Erlanger Straße and Reuter-

straße), where residents have campaigned for a green area.

A) Improve Walkability and Liveability!

Whether people are able and willing to walk and linger in public places is also related to the quality of public spaces and urban furnishing. This is especially true for children and youth/ young adults as well as for elderly people or people with limited mobility who spend more time in areas close to their homes. The evaluation of the qualitative surveys in both neighbourhoods shows a clear need for improvement in these regards. Accessibility is a prerequisite for people who walk, use a walker, who are in a wheelchair, who walk with a stroller or have mobility impairments to move independently and safely. Barrier-free pavements without obstacles must run closely and continuously through the neighbourhoods, which is rarely the case in the areas studied here. **Currently, the low-barrier pavements are heavily impacted by heat in the summer.** In both neighbourhoods, the quality of the pavements was criticized.

In addition, pedestrians have the greatest risk of injuries and danger in road traffic. Examples of these risks as mentioned in the surveys are speeding cars or bicycles, lack of crosswalks and crossings, parked intersections, especially around schools and day care centres.

Improving conditions for pedestrian traffic could eliminate multiple disadvantages and barriers.

In addition to road safety, subjective security has a major influence on people's everyday mobility. In the survey of subjective security[4], fear of discriminatory statements, fear of leaving the house in the dark, fear of assault[5] or aggression by other people and car drivers were mentioned, for example. All underground stations in the neighbourhoods have deficiencies in terms of subjective and objective security that should be addressed together with the transport operator Berliner Verkehrsbetriebe (BVG).

4 Subjective safety means the individual feeling of a person in a certain situation, e.g. in public space.

5 E. g. queer-phobic attacks.

Subway station Rathaus Neukölln – Improvement of (subjective) safety at subway stations.
© Marlene Pfau / LIFE e.V.

Recommendations

1. **Improve quality of pavements.** As shown on the map, a large number of pavements are not barrier-free due to potholes, unevenness, sections with cobblestones, numerous bollards and poor surfacing. In addition, there are gradients and slopes in the district of Flughafenstraße. Often this means taking detours or using the pavement along busy streets, which may be of better quality, yet present other types of barriers (for example, due to restaurants and markets on Sonnenallee). Therefore, pavements in the neighbourhoods should be urgently repaired, especially on Boddinstraße, Mainzer Straße and Erlanger Straße as well as on Donaustraße, Schönstedtstraße, but also beyond. In the future, when road surfaces are repaired, the pavements should always be reconstructed at the same time (as in Karl-Marx-Allee, but not implemented in Donaustraße).

2. **Lower curbs throughout the area.** In addition to the barriers mentioned above, there is a lack of lowered curbs. The curbs should be lowered across the whole area, especially on Boddinstraße, Mainzer Straße and Erlanger Straße as well as on Donaustraße and Schönstedtstraße. Lowered curbs are also missing at the crossings to the center island at Boddinstraße underground station on Hermannstraße, and on Karl-Marx-Straße at Albert-Schweitzer-Platz.

3. **Create wider pavements.** When maintaining the pavement, a redistribution of pavement and street space should be examined and pedestrian crossings should be planned as bulges of the pavement. There are numerous user conflicts in both areas due to outdoor restaurants and bicyclists swerving onto the pavement, as the street surfaces are often made of cobblestone. Walking can be made safer and more barrier-free by widening pavements in certain places.

4. **Create barrier-free paths despite construction sites.** Especially at busy streets, squares and underground stations or stops, the prescribed minimum width for pavements at construction sites are not always sufficient. Particularly on Karl-Marx-Strasse, wider paths must be created so that people in wheelchairs, with baby carriages and other aids can easily pass through.

5. **Repairing elevators. T**he elevators at the underground stations are the responsibility of the BVG and are regularly repaired. There is a permanent barrier at Neckarstraße at the stairs leading to Kindl-Gelände, as there is no functioning elevator here. If the situation does not improve due to the responsibility of the Kindl-Gelände management, another solution must be urgently found - for example with the help of residents and financed with public funds. A barrier-free access is needed to easily access basic infrastructure in the neighbourhood (e.g. the health center "Gesundheitszentrum").

6. **Provide railings and ramps.** All steps/stairways in public spaces should be equipped with railings to enable people with limited mobility to use them safely. Especially the Sasarsteig as a green walking path should be provided with a railing should, and the improvement of the ramps should be examined. In their current state, these are a barrier for baby carriages, wheelchairs and other aids.

7. **Intersections must be safe.** Parked intersections present hazards and barriers for people walking. Incorrectly parked cars should be towed away. Bike racks already help prevent parking at some intersections; they should be used more often.

8. **Improve traffic light timing.** The green phases for pedestrians are often too short, making it difficult for people who cannot walk quickly to cross the street (e.g. Reu-

terstraße/Karl-Marx-Straße and Reuterstraße/Sonnenallee). At the intersections of Hobrechtstraße/Sonnenallee and Mainzer Straße/Flughafenstraße, traffic lights should be installed to protect the crossing, as especially children and young people use this route to school and kindergarden.

9. **Improve crosswalks and markings for pedestrians.** Many crosswalks in the neighbourhood are poorly visible or faded. Improvements are necessary, for example, at the intersection of Boddinstraße and Isarstraße.

10. **Promote calm traffic areas.** In existing calm traffic areas, the rules on speed limits are often not followed, such as in Neckarstraße/Isarstraße. Compliance with the rules must be enforced through controls. Play streets allow the neighbours to use the street and contribute to reducing traffic. The play street Anzengruberstraße in the neighbouring area, for example, has received a positive response; this represents an opportunity for the neighbourhoods studied here, such as Donaustraße. Other possible play streets should be examined as well.

11. **Improve lighting.** Lighting should be improved in dark areas (Boddinstraße, Mainzerstraße, Sasarsteig/Karl-Marx-Straße, Kindl Gelände stairway, some parts of Donaustraße); this would increase the sense of security. Residents should be informed about how to report defective lighting.

12. **Focus on underground stations.** Underground stations are often places of fear or places where assaults take place. This applies especially to the underground stations Hermannplatz, Boddinstraße and Rathaus Neukölln. In order to improve subjective and objective security at underground stations, joint actions should be organized with the BVG and the Senate, e.g. an information campaign about reporting cases of discrimination, highlight emergency call numbers or spreading messages against hate.

Temporary play street on Donaustraße to promote no car areas and streets. © Marlene Pfau / LIFE e.V.

B) Counteracting increasing heat stress and improving climate change adaptation!

Heat stress in public spaces already has a negative impact on walking. Climate change will have an even greater impact on walkability and health in the future. The physical consequences range from mild heat exhaustion, especially during physical exertion or sleep disturbances, to severe health consequences, for example due to water deficiency, organ damage and circulatory diseases. The two neighbourhoods of Flughafenstraße and Donaustraße-Nord are conspicuous for their high heat stress and are crisscrossed by pavements exposed to heat (e.g., Karl-Marx-Straße, Hermannstraße, Sonnenallee). During summer, the high heat stress limits both health and the accessibility of everyday destinations. In addition to more and qualitative green spaces, it is necessary to create cooling opportunities, accessible cool pavements, and places for resting. Recommendations therefore range from installing and repairing drinking fountains to calming traffic to allow more space for greening and unsealing. Even if there are trees throughout the neighbourhoods, greening and shading remain key. This is because green spaces and public squares are important for the quality of life in cities, especially in densely built areas such as the Flughafenstraße and Donaustraße-Nord neighbourhoods, where heat, noise and air pollutants are concentrated. In this context, green spaces play a central role in the health of the neighbourhood's population in terms of opportunities for exercise, play and sports, stress reduction and recreation. Public green spaces exist only sporadically in the Flughafenstraße neighbourhood (Boddinplatz, Sasarsteig, Albert-Schweitzer-Platz), albeit with inadequate shading, while there are currently no public green spaces or playgrounds in Donaustraße-Nord.

Seemanngarn/Strandgut playground with insufficient shading.
© Marlene Pfau / LIFE e.V.

Recommendations:

13. **Increase public drinking fountains (water pumps and drinking water dispensers).** Drinking fountains provide drinking water on hot days, offer cooling in the heat, or allow watering the trees in front of the house. In both neighbourhoods, there is only one drinking water dispenser from Berliner Wasserbetriebe. The QMs have already applied for the additional installation of further drinking water dispensers. The Neukölln Health Department also regularly checks the existing drinking fountains (water pumps) and repairs defective pumps. In the Donaustraße neighbourhood, the tip:tap association is active with campaigns on drinking water, watering culture and cooling. Similar actions should be transferred to the Flughafenstraße neighbourhood and further expanded.

14. **Promote greening and providing shade.** In particular, places to linger and too meet in the neighbourhoods need shade. Trees are present throughout both neighbourhoods and contribute positively to the urban climate. They need to be cared for and preserved. The Kiezgarten community garden in Donaustraße is very popular and creates an important green space in the neighbourhood. It consists of raised beds and seating, is used for neighbourly exchange and must be permanently secured as a permanent area. Actions to promote planting tree bases, includes care and watering, lead to more greening. In addition, more trees in seating areas need to be planted or sun awnings installed to provide shade. At the Käpt'n Blaubär playground between Karl-Marx-Straße and Reuterstraße, for example, it is too hot to play in the summer without sun protection. Rathausplatz, where many people spend time, also lacks shaded areas for hot days.

15. **Create more seating options in public spaces.** Seating is important so that people can pause in public spaces, interact with each other and be in one place without having to consume anything. Especially elderly people, pregnant women, or people with limited mobility need seating to rest during their daily commutes. With rising temperatures, they represent important recreation points, provided they are shaded. Seating is particularly lacking at Hermannplatz, Sonnenallee, the corner of Boddinstraße and Karl-Marx-Strasse, and Flughafenstraße. The Kiezgarten in Donaustraße creates both new seating and additional greening. It should therefore be established permanently.

16. **Create a cool and barrier-free pedestrian network.** The removal of the barriers described in the previous section should be prioritized to create a barrier-free pedestrian network through the neighbourhoods that runs through the "cool" streets. The focus is therefore particularly on Boddinstraße, Mainzer Straße and Erlanger Straße as well as Donaustraße and Schönstedtstraße in order to create a cool pedestrian network .

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Pavement damage as an (almost) continuous barrier in both neighbourhoods.
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www.life-online.de

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