



The Basin as Hydro commons

Negotiations on ownership, accessibility,
distribution and care of the future rainwater
infiltration basin in Berlin-Kreuzberg

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“We need to ask not only whether one has access to water, but who has access to water, and at what cost—financial and otherwise.”¹

1.1 Hydrocommons and bodies of water

In her essay “Bodies of Water, Human Rights and the Hydrocommons” (2009) Astrida Neimanis addresses that in radical democratic political theory commons are invoked as new paradigms for civil society. In her view, this builds an opposition towards global privatization of spaces, living beings or even ideas on the one hand, and on the other can function as a place for action.² Yet, Astrida Neimanis remarks that these approaches strikingly show a “stunning somatophobia” which in her words means “a fear of our fleshy material bodies which hold great untapped political and ethical potential”.³ Therefore she claims that we do not live as bodies on the one side which need water on the other, but that we are “intimately bound up, both physiologically and semiotically, in our wateriness”.

Vandana Shiva similarly concludes in her book “Water Wars” (2002) that “the real solution to the water crisis lies in people’s energy, labor, time, care, and solidarity”.⁴ Considering this, Neimanis follows that our human bodies of water not only have the potential, but also the responsibility to cultivate new relations with other more than human beings.⁵ In her book “Bodies of Water. Posthu-

man Feminist Phenomenology” (2017) she therefore proposes a framework for negotiating these relations, which means a practice, ethics, and poetics of “hydrocommons”. The relations between more-than-human actors can so be seen as a challenge and opposition to anthropocentrism and the strict differentiation of nature and culture.⁶

She makes clear that within a hydrocommons, bodies of water are neither all the same nor part of it in the same way and that the differences of bodies have to be attuned critically.⁷ In her view, human projects like for example fossil fuel burning or plastic consumption may be executed by human subject-bodies, but everyone and everything as “embodied hydrocommons materially live these effects”. Thereby she shows the interconnectedness of all bodies of water being part of a planetary, multispecies hydrocommons.⁸

Neimanis’ approach in conclusion does not consider hydrocommons as just a network of geophysical and meteorological waters, but that all bodies materialize and transform these waters.⁹ Following this view, water is nothing that should be claimed as property and something ‘out there’ but as interconnected bodies that need to take care and show solidarity for each other.

sources: 1 Neimanis, Astrida [2009], Bodies of Water, Human Rights and the Hydrocommons, *Topia: Canadian Journal of Cultural Studies*, 21: 161–182, p. 167. | 2 Neimanis [2009], p. 176 | 3 Neimanis [2009], p. 176 | 4 Shiva, Vandana [2002] *Water Wars*. Toronto: Between the Lines, p. 127. | 5 Neimanis [2009], p.177. | 6 Neimanis, Astrida [2017] *Bodies of Water. Posthuman Feminist Phenomenology*, p. 2 | 7 Neimanis [2017], p. 15, p. 62. | 8 Neimanis [2017], p. 64. | 9 Neimanis [2017], p. 11.

While privatization means a changing ownership of water infrastructure or the management of water in a private sector, commodification is defined as “turning water from a public good into a marketable commodity subject”

1.2 Urban Water: A political-ecology perspective

E. Swyngedouw, M. Kaïka and E. Castro also see an interconnectedness of different effects when it comes to the topic of water. Yet, instead of proposing a hydrocommons like Neimanis, the authors differentiate between environmental and social changes which “co-determine each other”.¹⁰ In their essay “Urban Water: A political-ecology perspective” (2002) the authors do not describe bodily wateriness as a connecting factor, but define environment as “combined socio-physical constructions that are actively and historically produced”.¹¹ Further, they point out that due to social power relations, the process of social-environmental change inherits “inevitable conflicts”.¹²

Therefore, Swyngedouw et al. consider questions of sustainability and equality as fundamentally political, with social actors carrying out the decision making processes.¹³ They ask who profits, pays or suffers from these processes and make clear that “environmental transformation is not independent from class, gender, ethnic, or other power struggles”.¹⁴ Following this, the authors propose a program of political ecology that enhances “the democratic content of socio-environmental construction by means of identifying the strategies through which

a more equitable distribution of social power and a more inclusive mode of environmental production can be achieved”.¹⁵

Within their case studies of different cities, the authors distinguish between the privatization and commodification of water, with a general tendency towards the latter.¹⁶ While privatization means a changing ownership of water infrastructure or the management of water in a private sector, commodification is defined as “turning water from a public good into a marketable commodity subject” which applies to cities in Europe.¹⁷ The authors note that this has turned the water industry into a “top-heavy institutional-regulatory body” where privatization and commodification have further led to less access and transparency for the public to information and data about the water management systems of a city.¹⁸ This intransparency in consequence diminishes decision-making procedures and limits access to relevant information to other social groups “on which to base views, decisions, and options”.¹⁹

These changes have also led to an expansion of scale when it comes to urban water. Due to the authors, water businesses are “expanding their operations geographically and become embedded in an international competitive process”.²⁰

sources: **10** E. Swyngedouw, M. Kaïka and E. Castro (2002): Urban Water: A political-ecology perspective. In: Built Environment 28(2). Special Issue on Water Management in Urban Areas, p. 3. | **11** Swyngedouw et al. 2002, p. 3. | **12** Swyngedouw et al. 2002, p. 3f. | **13** Swyngedouw et al. 2002, p. 4. | **14** Swyngedouw et al. 2002, p. 4. | **15** Swyngedouw et al. 2002, p. 4. | **16** Swyngedouw et al. 2002, p. 10. | **17** Swyngedouw et al. 2002, p. 10. | **18** Swyngedouw et al. 2002, p. 14. | **19** Swyngedouw et al. 2002, p. 21.

What if the basin
was seen through
the lense of hydro-
commons including
all bodies of water
to be involved as
equal actors - from
microorganisms,
insects, mammals,
neighbors to politi-
cal institutions?

This also means that the globalization of water companies signals a strategy in which “local waters, turned into capital, are geographically re-allocated to other places and cities”.²¹ Further Swyngedouw et. al. point out that when water is turned into a commodity, capital accumulation by public/private institutions and profit maximization play the core role which also shapes the social, political and cultural value of water.²²

Following this, the authors conclude that integrating water policies within a wider social, urban or economic policy becomes “increasingly difficult, if not impossible” since private actors and companies are the powerful voices in water-related decisions.²³

In sum, the authors see a general tendency within urban water system to leave the “network/infrastructure part of urban water networks to the public sector, while profitable operational and managerial activities are secured by private companies.”²⁴

The creation of a sustainable urban environment therefore requires a political and administrative system that involves all relevant social actors at all geographical scales. In addition, it requires a policy framework that does not isolate the circulation of water from other sustainability-related processes. In fact, it requires a more “integrated approach in

which supply of water is integrated with health and sanitation policy, ecological considerations, socio-economic processes, and urban planning and governance systems.”²⁵

1.3 Defining Hydrocommons as a tool for analyzing the basin in Berlin Kreuzberg

The theory of hydrocommons by Astrida Neimanis and “Urban water” by Swyngedouw et al. is the starting point of this analysis and shall function as a tool to take a closer look at the Floating site in Berlin-Kreuzberg. Therefore, the site will be considered as a hybrid infrastructure²⁶ with different bodies of water, including human and more than human actors.

Neimanis’ approach leads us to question the current political decision making on the site and we therefore ask: What if the basin was seen through the lense of hydrocommons including all bodies of water that are involved as equal actors - from microorganisms, insects, mammals, neighbors to political institutions?

Whereas “Urban water” is helpful to generally understand mechanisms within the water supply system and address conflicts between different political actors, Neimanis approach is useful to

sources: **20** Swyngedouw et al. 2002, p. 18. | **21** Swyngedouw et al. 2002, p. 22. | **22** Swyngedouw et al. 2002, p. 20. | **23** Swyngedouw et al. 2002, p. 21. | **24** Swyngedouw et al. 2002, p. 23. | **25** Swyngedouw et al. 2002, p. 24. | **26** comp. Karjevsky, Gilly and Rosario Talevi (2023): Floating University Berlin: A Natureculture Learning Site. In “Architectures of Care: From the Intimate to the Common”. Edited by Brittany Utting, Routledge.

show the connecting and democratizing potential that lies within the wateriness of all bodies. Further, the theory around urban water helps us to locate the Floating site within the wider network of the public (and semi-private) water supply system in Berlin. Considering this, we want to analyze Floating as more than a rainwater retention basin within the city, but a place to negotiate its accessibility and ownership considering different bodies of water.

1.4 Basin and Rainwater as public material

When Rainwater hits the ground, it is directed into private ownership or managed by city-owned infrastructural sewage systems - depending on to whom a place belongs. Yet, the moment before it touches the floor unfolds its democratizing potential as a hydrocommons. If this potential was considered for the Floating site - which is currently managed by Tempelhof Projekt GmbH and owned by the city of Berlin - who would get access to the water and how might this shape the place as hybrid infrastructure otherwise?

In order to investigate this question, we will follow the way of the water as a first step and analyze where water is visible, in what state and who is the current

owner at a certain place. Further, we will show the status quo of negotiators and conflicts around the retention basin. Therefore, the basin will not be analyzed as an isolated unit, but as a place that is embedded in a broader neighborhood with different actors. To cover this, our analysis will include the surrounding allotment gardens, the Wagenplatz at Lilienthalstraße, sports fields, Pyramidengarten, the adjacent cemeteries, Floating e.V and more than human actors.

1.5 Historical development of the rainwater retention basin

The rainwater retention basin located at Lilienthalstraße in Berlin-Tempelhof is flooded when rain falls on the sealed grounds of Tempelhofer Feld and the former airport building. It was constructed in the 1930s as a technical facility for draining rainwater that is collected on the roofs, roads, and sealed areas of the airfield. For many years, it served solely as an infrastructure and was not accessible to the public. Further, the basin is surrounded by a community garden "Kolonie am Flughafen" which makes it almost unnoticeable to passers-by. Originally, such garden assemblies were introduced in Germany during the 19th century to provide people who had lost their land with a means to grow their

own food within the city.²⁷

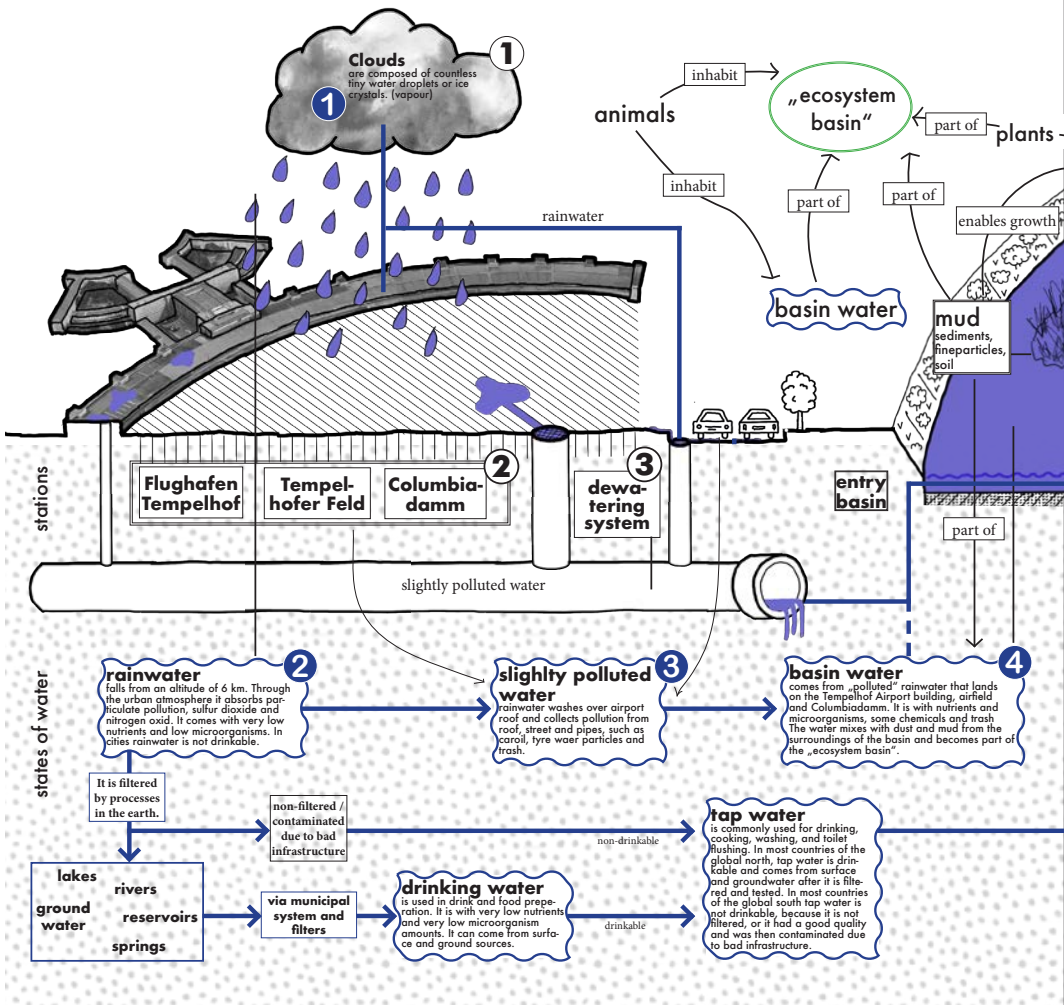
When the Tempelhof airport closed down in 2008, the city proposed relocating the basin as a pond within the remaining 300 hectares of parkland. This plan aimed to convert the 22.500 m² area of public land occupied by the basin into a valuable and profitable asset for Berlin's real estate portfolio.²⁸ However, in the 2014 Tempelhof referendum, the residents of Berlin voted against the city's proposal, effectively preventing any construction on the airfield. This referendum outcome not only safeguarded the green space of the field within the city but also protected the retention basin.

The basin had been inaccessible to the public for over 60 years, but in 2018, Berlin-based architects raumlabor opened the site, establishing a temporary urban laboratory for collective learning. Since then, the association Floating e.V. has continued to develop and create a site where diverse interests translate into projects, interventions, events, and installations.²⁹

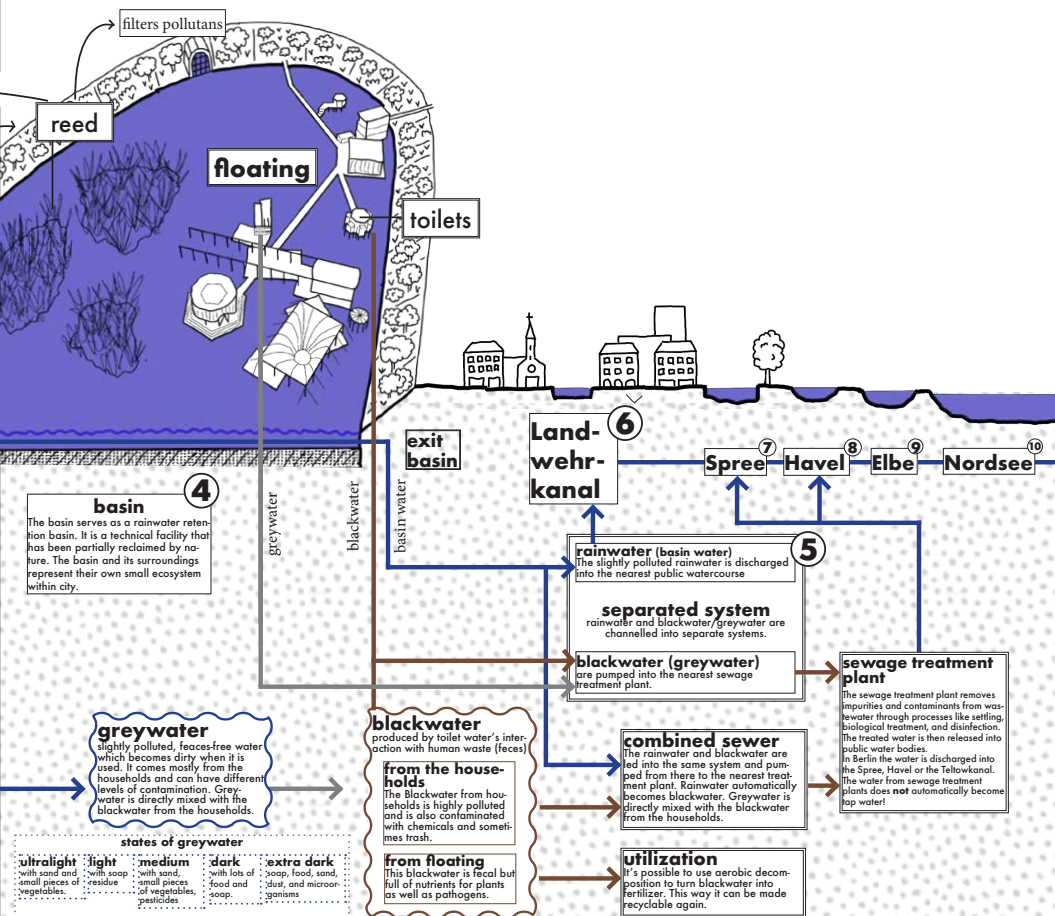
sources: ²⁷ comp. Floating University Berlin (2021): A natureculture learning site. Urban Practice on and in the rainwater retention pool of Tempelhof airport since 2018. Info Dossier, 18.05.2021, p. 2. | ²⁸ ibd., p. 2. | ²⁹ ibd., p. 2.

2 THE RAINWATER RETENTION BASIN

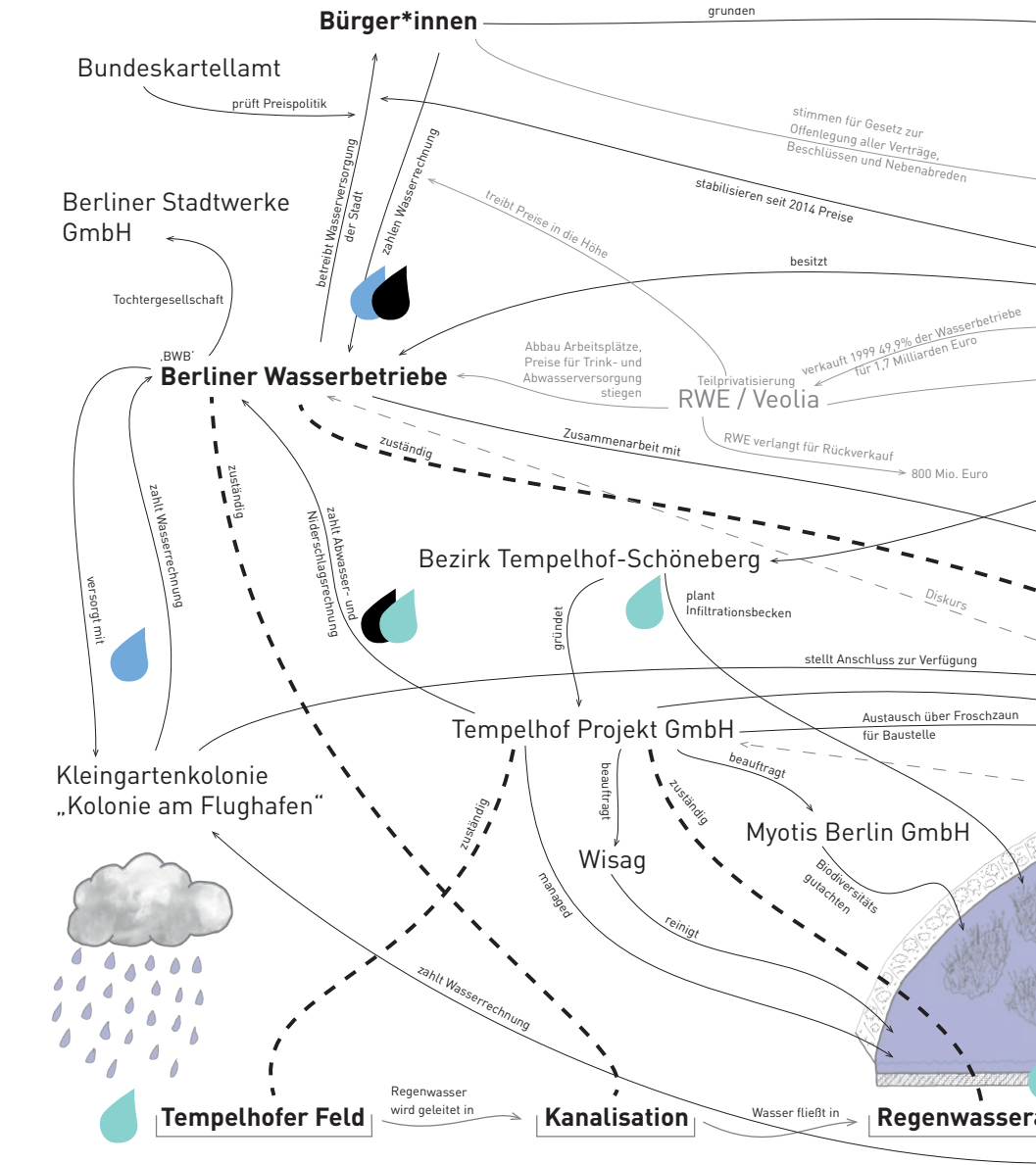
2.2 The way and the transformation of the water on its way through the basin



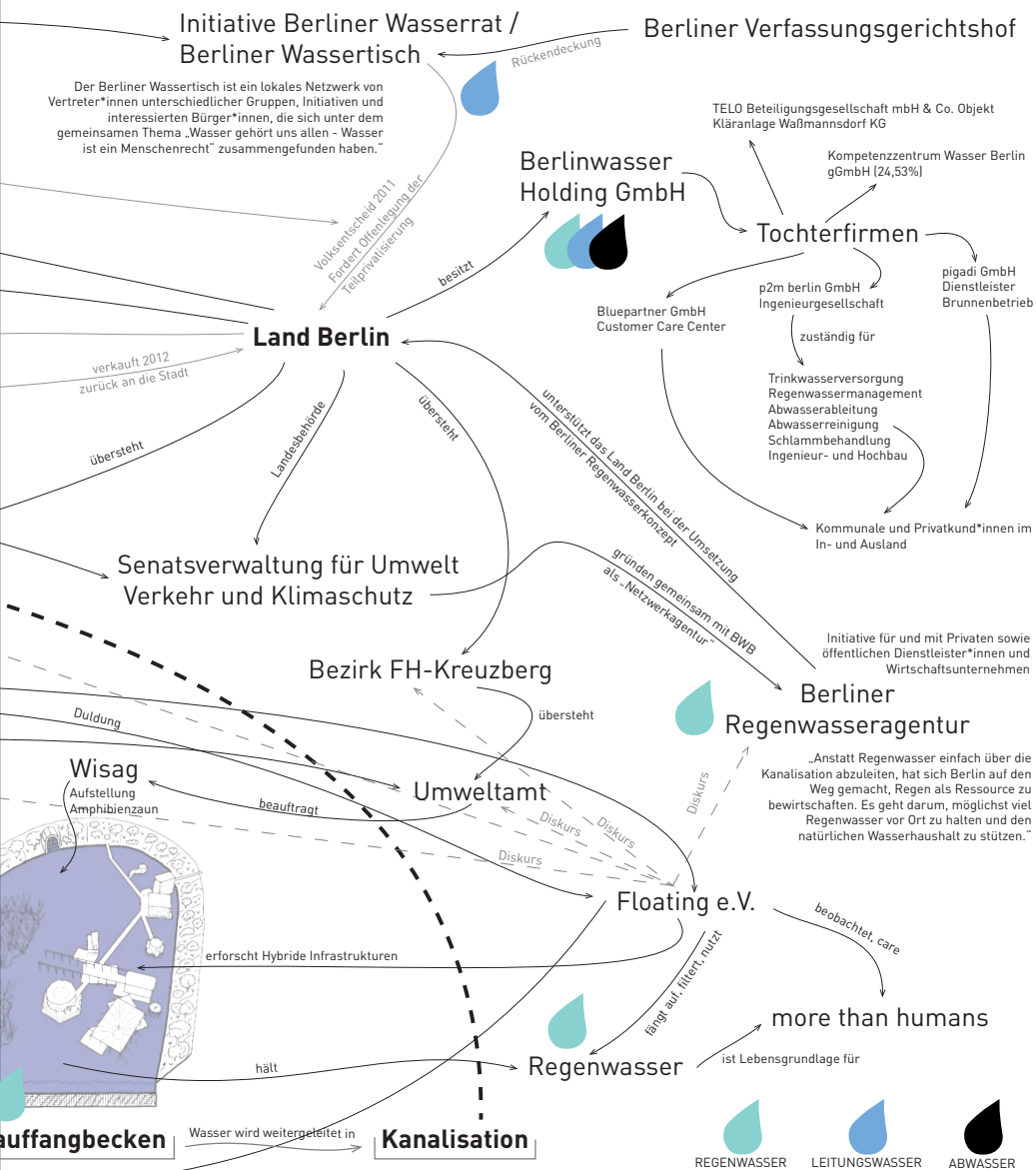
sources: floating-berlin.org | Berliner Wasserbetriebe | thf-berlin.de | berlin.de | Wikipedia | ourworldindata.org | eu-recycling.com | awol.com.au | umweltbundesamt.de | Katherine Ball



2
2.3
THE RAINWATER RETENTION BASIN
The basin as part of a political-economic water system

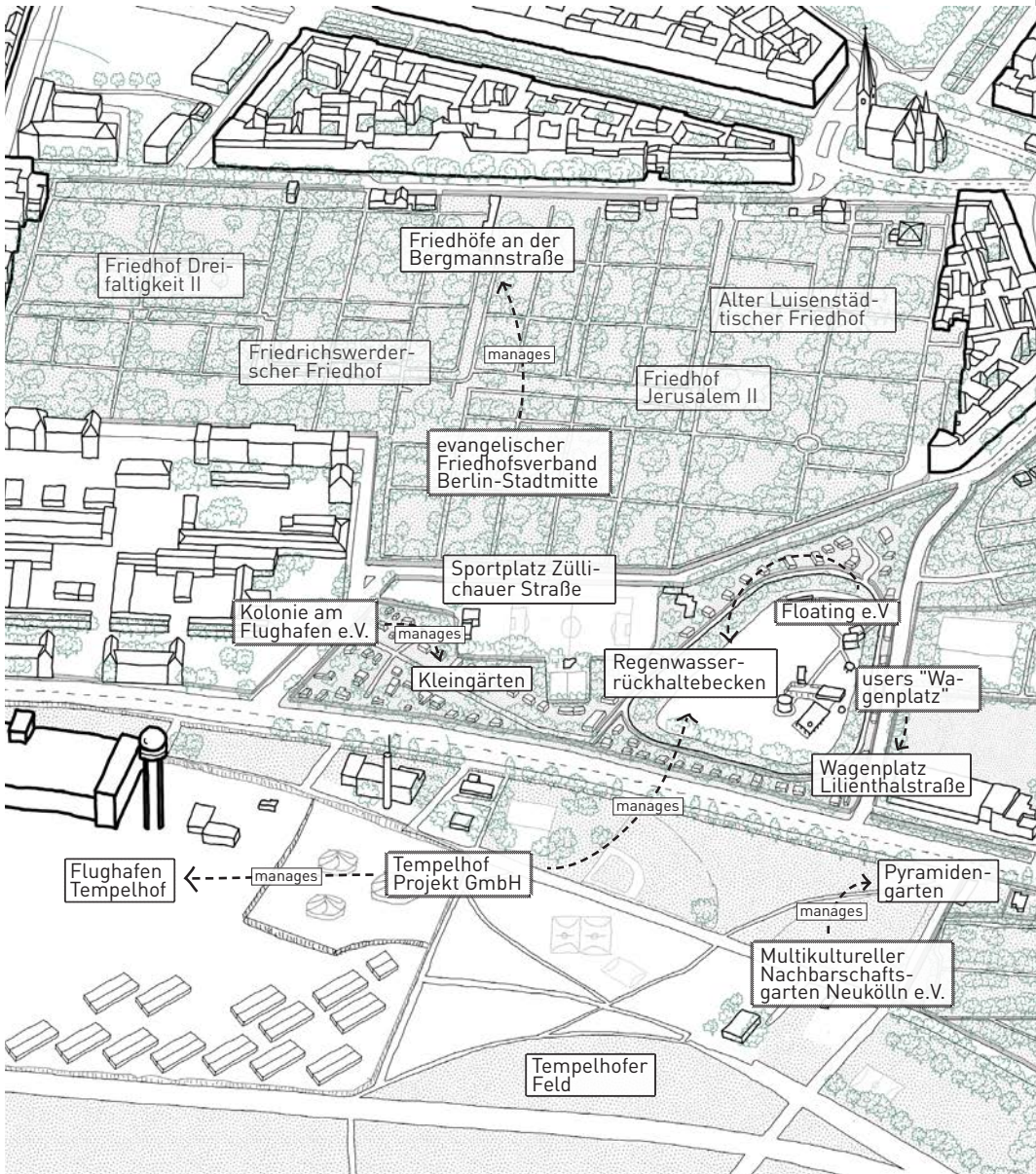


sources: Beliner Wasserbetriebe | berliner-wassertisch.org | Berliner Wasseragentur



2 THE RAINWATER RETENTION BASIN

2.4 Places and actors in the neighbourhood





2 THE RAINWATER RETENTION BASIN

2.5 Physical barriers

„In einer Großstadt wie Berlin verunglücken viele Tiere. Glas, Fahrzeuge, Zäune, Wände, Gruben und andere Strukturelemente werden vielen Tieren zum Verhängnis.“

- Senatsverwaltung für Mobilität Verkehr und Klimaschutz und Umwelt

„Verhaltensbeobachtungen zeigen, dass Säugetiere in der Lage sind, die Gefahr der Überquerung eines Verkehrsweges zu erkennen. Arten, die sich bevorzugt in Deckung aufhalten oder baumlebend sind, vermeiden es häufig Straßenflächen zu betreten.“

- Deutscher Jagdschutz-Verband, 2007

GEOFFNET

Sommer: 08-20h
Winter: 08-18h

FRIEDHÖFE AN DER
BERGMANNSTRASSE

PRIVAT

SPORTPLATZ
ZÜLLIGAUER
STRASSE

KOLONIE AM
FLUGHAFEN

GEOFFNET

Do-Fr: 16-20h
Sa-So: 12-20h

REGENWASSER-
RÜCKHALTEBECKEN

COLUMBIADAMM

TEMPELHOFFER FELD

Gegenüber Emissionen einer Straße zeigen die meisten Säugetierarten eine hohe Toleranz, sodass sie auch an Verkehrswegen gelegene Lebensräume temporär aufsuchen.“

- Projekt Deutscher Jagdschutz-Verband, 2007

FLUGHAFEN TEMPELHOF

GEOFFNET

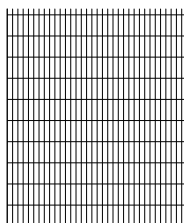
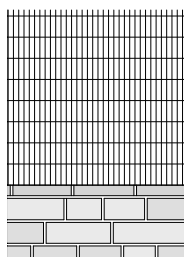
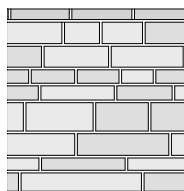
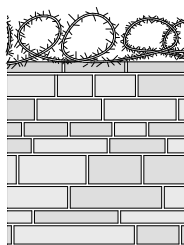
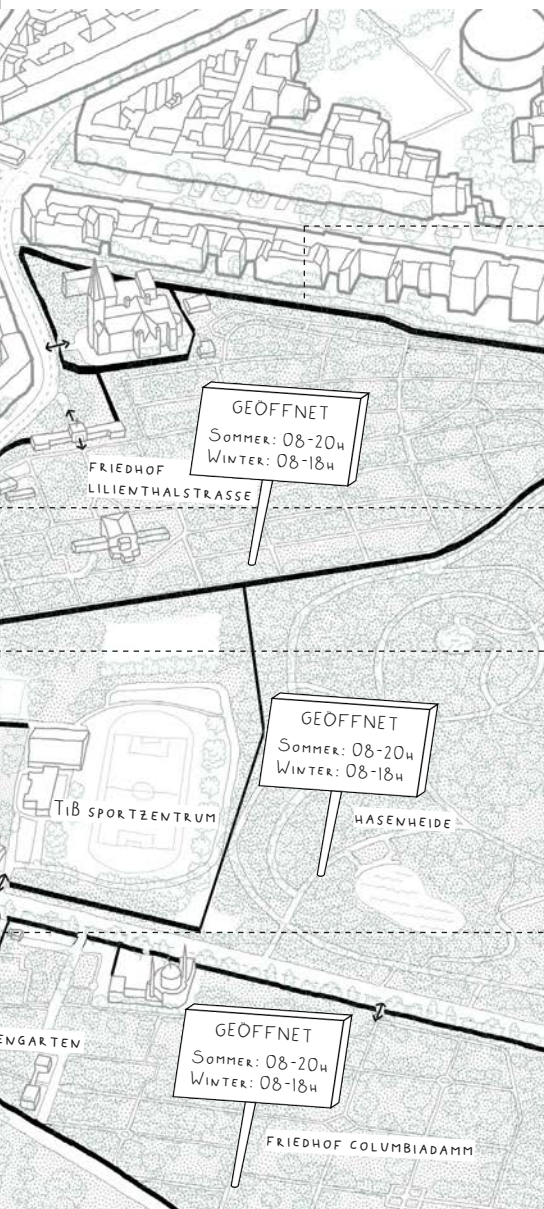
Sommer: 06-23h
Winter: 07-18h

PYRAMIDE

„Dass Verkehrswege trennende Effekte auf Tierpopulationen haben, ist belegt. Sogar im Genpool von Populationen sind die Effekte der Straße manifestiert.“

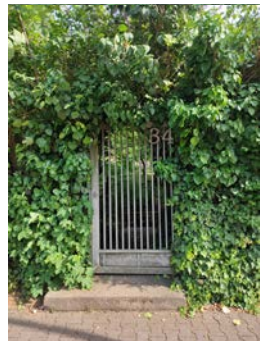
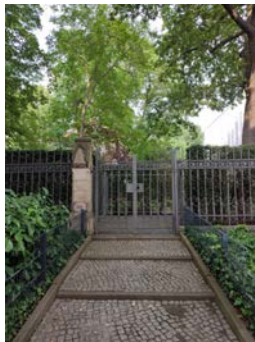
- Projekt Deutscher Jagdschutz-Verband, 2007

sources: Projekt Deutscher Jagdschutz-Verband



2 THE RAINWATER RETENTION BASIN

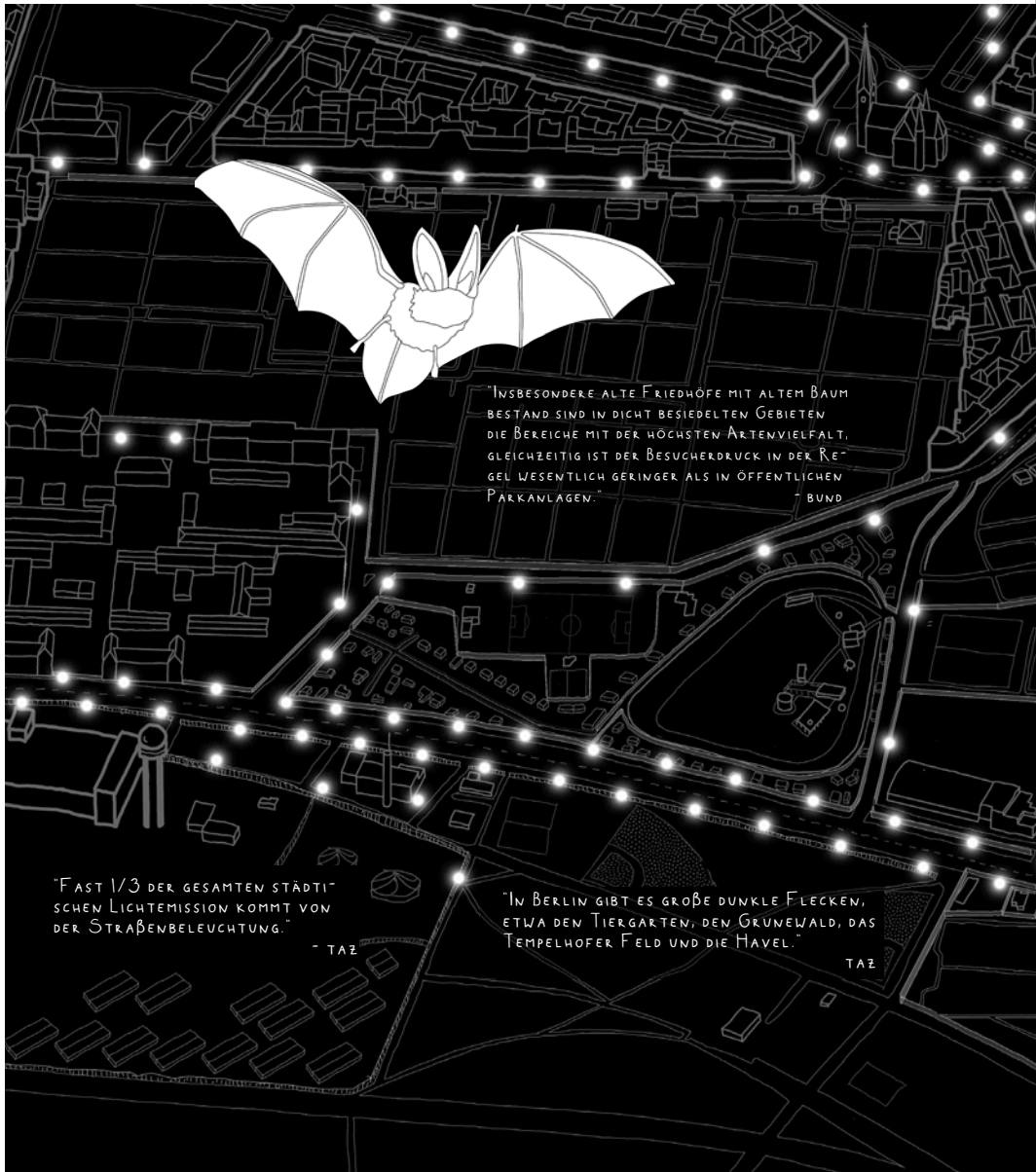
2.5 Physical barriers





2 THE RAINWATER RETENTION BASIN

2.6 Soft barriers: Light emissions



sources: Senatsverwaltung für Mobilität, Verkehr und Klimaschutz und Umwelt | taz | Bund für Umwelt und Naturschutz Deutschland e.V. (BUND)



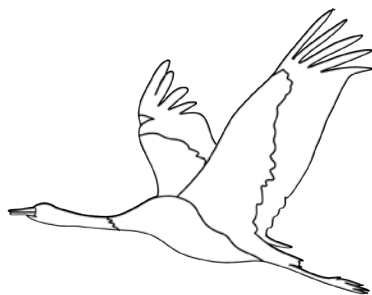
IN BERLIN GIBT ES
204.000
ELEKTROLEUCHTEN
UND 21.000
GASLEUCHTEN

„In der Nähe von Stadtgrün und Gewässern kann die örtliche Artenvielfalt erheblich gemindert werden, wenn viele Insekten durch Licht aus ihren Lebensräumen herausgezogen werden. Denn sie umkreisen die Lichtquelle und verhungern dort oft.“

- Senatsverwaltung für Mobilität, Verkehr und Klimaschutz und Umwelt

„Bei Untersuchungen im Jahr 2020 hat sich gezeigt, dass Zugvögel nachts auch in Bodennähe von starken Lichtquellen angelockt werden können. Vögel verunglücken dann an den Glasscheiben in der Nähe der Lichtquelle.“

- Senatsverwaltung für Mobilität, Verkehr und Klimaschutz und Umwelt

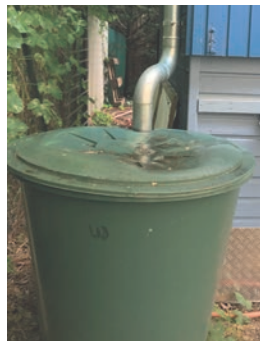


„Zwar gibt es einige Fledermäuse, die gezielt Lichtquellen anfliegen, um dort Insekten zu erbeuten, doch grundsätzlich weichen die meisten Fledermäuse hell beleuchteten Bereichen aus. Dies geht so weit, dass sie für ihre Flüge durch die Stadt nur dunkle Verbindungsstrukturen verwenden können, z.B. nicht beleuchtete Grünzüge. Fledermäuse werden also durch Licht gleich doppelt betroffen: Zum einen verringert sich ihr Nahrungsangebot, weil die Insektenpopulationen verkleinert werden. Und zum anderen wird ihre Bewegungsfähigkeit durch Beleuchtung eingeschränkt.“

- Senatsverwaltung für Mobilität, Verkehr und Klimaschutz und

3 HABITS & ROUTINES OF WATER USE IN THE NEIGHBOURHOOD

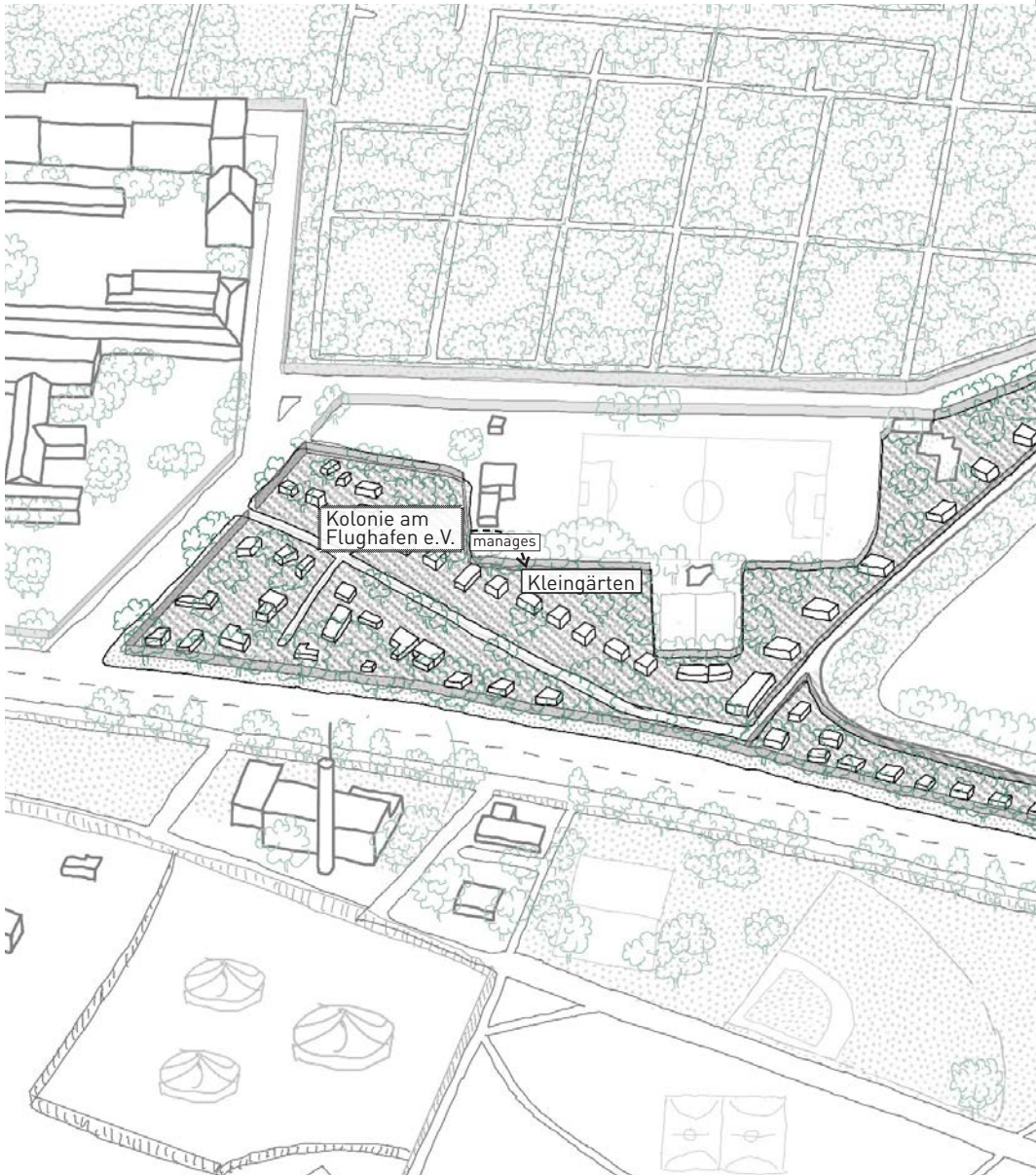
3.1 Allotment gardens

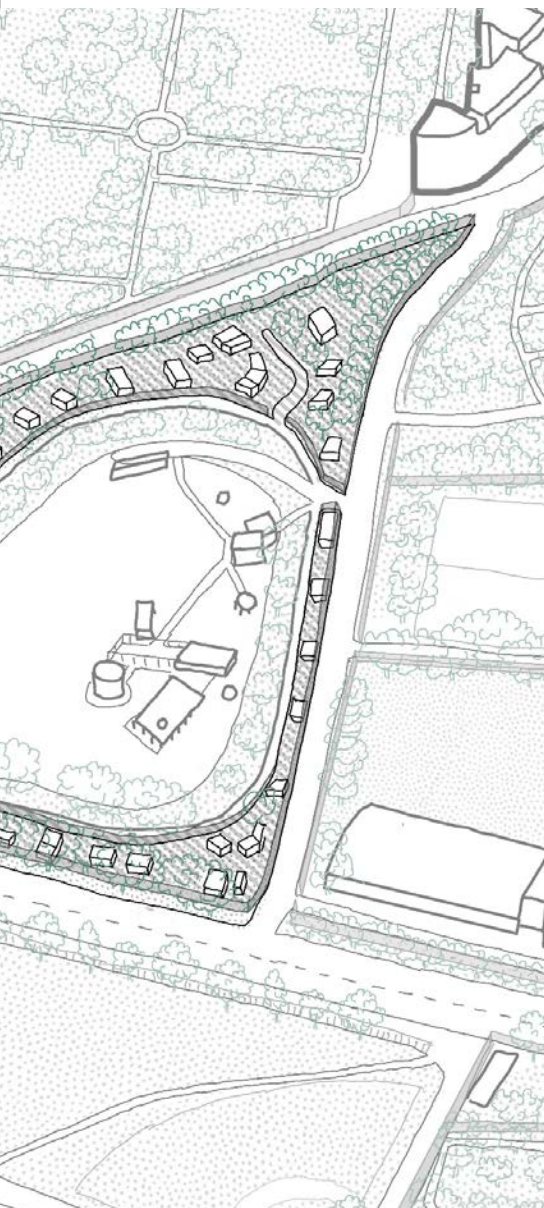




3 HABITS & ROUTINES OF WATER USE IN THE NEIGHBOURHOOD

3.1 Allotment gardens





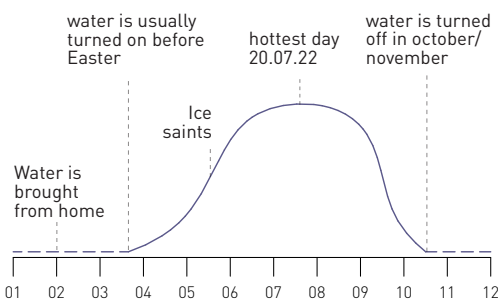
Total

size **22.650 sqm**
 water consumption **3.411.000 l/yr**
 consumption per sqm **151 l/yr**
 costs ***6.184 €/yr**

Parcel

number of garden parcels **97**
 consumption per parcel ***35.165 l/yr**
 costs ***64 €/yr**

tap water consumption over the year



number of pools (via google earth) **13**

charge of a pool (250 cm diameter, 90 cm height) **4.400 l**

water consumption for lush green lawn (summer) **20-30 l/wk**

water consumption of 3 tomato plants (=sqm) (summer) **21-42 l/wk**

3 HABITS & ROUTINES OF WATER USE IN THE NEIGHBOURHOOD

3.1 Allotment gardens

Rainwater - collection and use



Susanne

"Wir haben **2 Tonnen zum Sammeln von Regenwasser** im Garten (...) auf der anderen Seite könnte ich eigentlich noch welche aufstellen. Jetzt sind die Tonnen voll, aber wenn es in den nächsten vier Wochen wieder so wenig regnet wie in den vergangenen, dann ist das Wasser schnell leer."



"Unsere **Katze trinkt lieber das Regenwasser** als das Leitungswasser. Katzen bevorzugen abgestandenes Wasser."



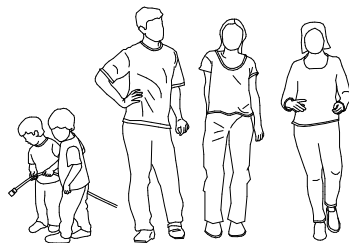
"Ich habe hinten eine eingebuddelte **Tonne als Teich**, da halten sich die **Frösche** auf."



Cordula

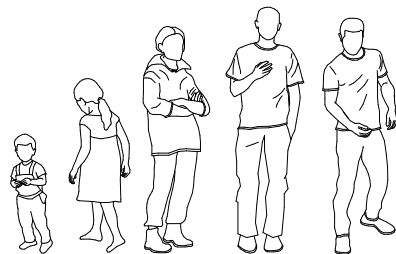
"Wir nutzen das **Tonnenwasser** soweit es geht, denn es ist kein Brunnen und keine Pumpe vorhanden. Wir haben **4 Regentonnen**, die ca. **600 Liter** fassen."

"Wir haben **2 Tonnen zum Sammeln von Regenwasser**"



Kowalski family

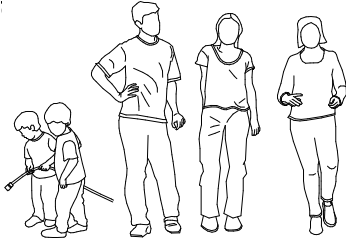
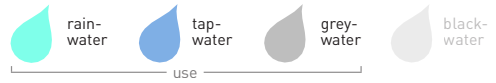
"Wir haben **eine Tonne, die ca. 300 Liter fasst**"



Müller family

sources: Interviews

Irrigation



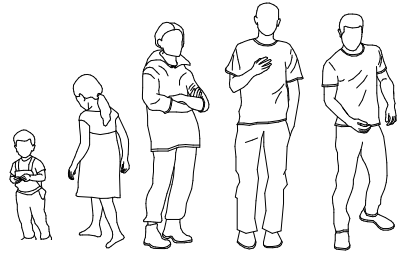
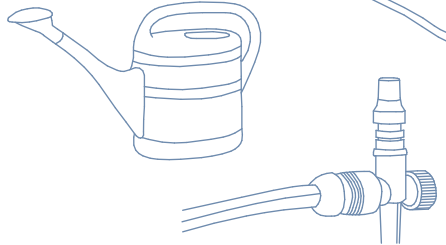
Kowalski family

"Wie bewässern die **Beete** und auch die **Wiese**."



Lea

"Der Rasen war bei uns im letzten Jahr **blanke Erde**."



Müller family

"Wir bewässern die **Pflanzen** und den Rasen **bedingt**. Es geht darum, den Rasen vor dem Vertrocknen zu schützen."



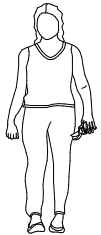
Susanne

"Ich **gieße** nur die **Beete**. Den Rasen zu bewässern hat eh keinen Zweck."

"Ich **bewässere punktuell**, denn es gibt Pflanzen die kein Wasser brauchen."



"Hier an der Stelle **bewässere ich immer für Frösche**. Dort halten sie sich meistens auf."



Cordula

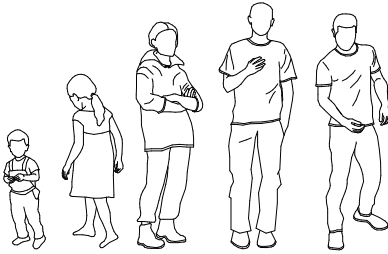
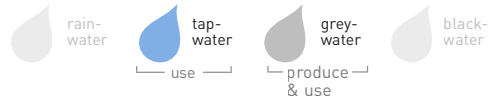
"Dass Rasen so viel bewässert wird, **ist nicht mehr klimafreundlich**."

"Wir bewässern nur die **Beete**. Den Rasen sprenkeln wir nicht."

3 HABITS & ROUTINES OF WATER USE IN THE NEIGHBOURHOOD

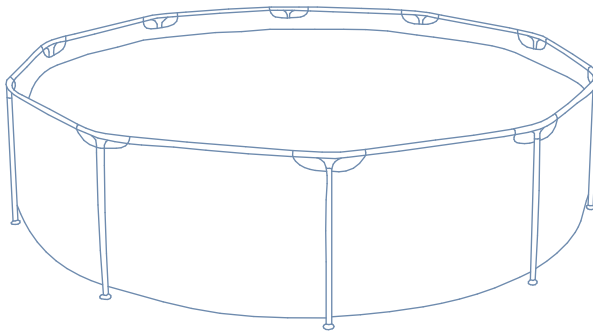
3.1 Allotment gardens

Leisure



Müller family

"Wir haben ein **Planschbecken** für die Kinder. Das **Wasser veralg**t schon nach zwei Tagen und **wird danach für die Beete genutzt.**"



"Ich **nutze das Chlorwasser** aus dem Pool **auch zum Gießen.** Das Chlor verflicht ja."

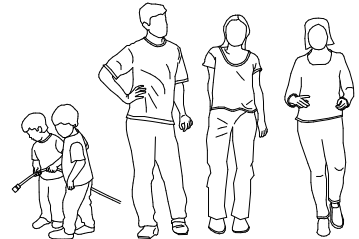
"Der **Pool** wird mit **Leitungswasser** gefüllt."



Lea

"Ich habe schon das **Poolwasser** in die Tonne gekippt und im nächsten **Jahr wiederverwendet** zum Gießen."

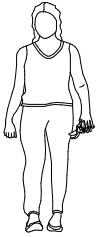
"**Wir nutzen Chlor**, damit das Wasser nicht so häufig ausgetauscht werden muss. Wir haben auch ein Reinigungssystem."



Kowalski family

sources: Interviews

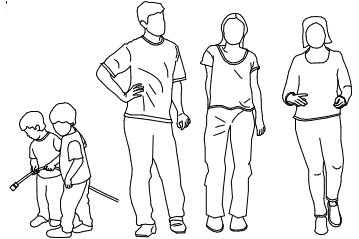
Kitchen and sanitary



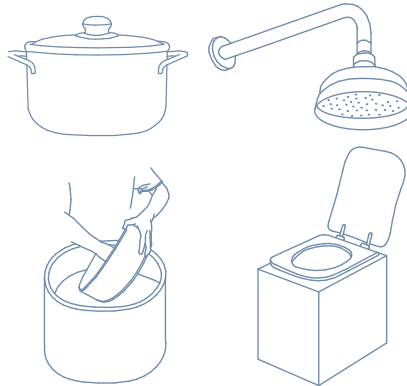
Cordula

"Schwarzwasser produzieren wir nicht, denn wir haben eine Komposttoilette."

"Das Leitungswasser trinken wir nicht. Die Kinder sind schon krank davon geworden."



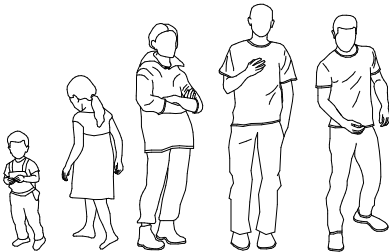
Kowalski family



Susanne

"Die Dusche benutze ich selten. Grauwasser entsteht vor allem in der Küche beim Abwasch."

"In der Küche produzieren wir Grauwasser. Schwarzwasser allerdings nicht, da wir eine Komposttoilette haben."



Müller family

"Die Leute haben entweder eine Grube oder eine Komposttoilette."

"Ah das wusste ich ja gar nicht, dass ihr eine Komposttoilette habt. Das würde ich mir gleich gerne mal anschauen und das nächste Interview mit euch führen."



Lea

sources: Interviews

3

3.2

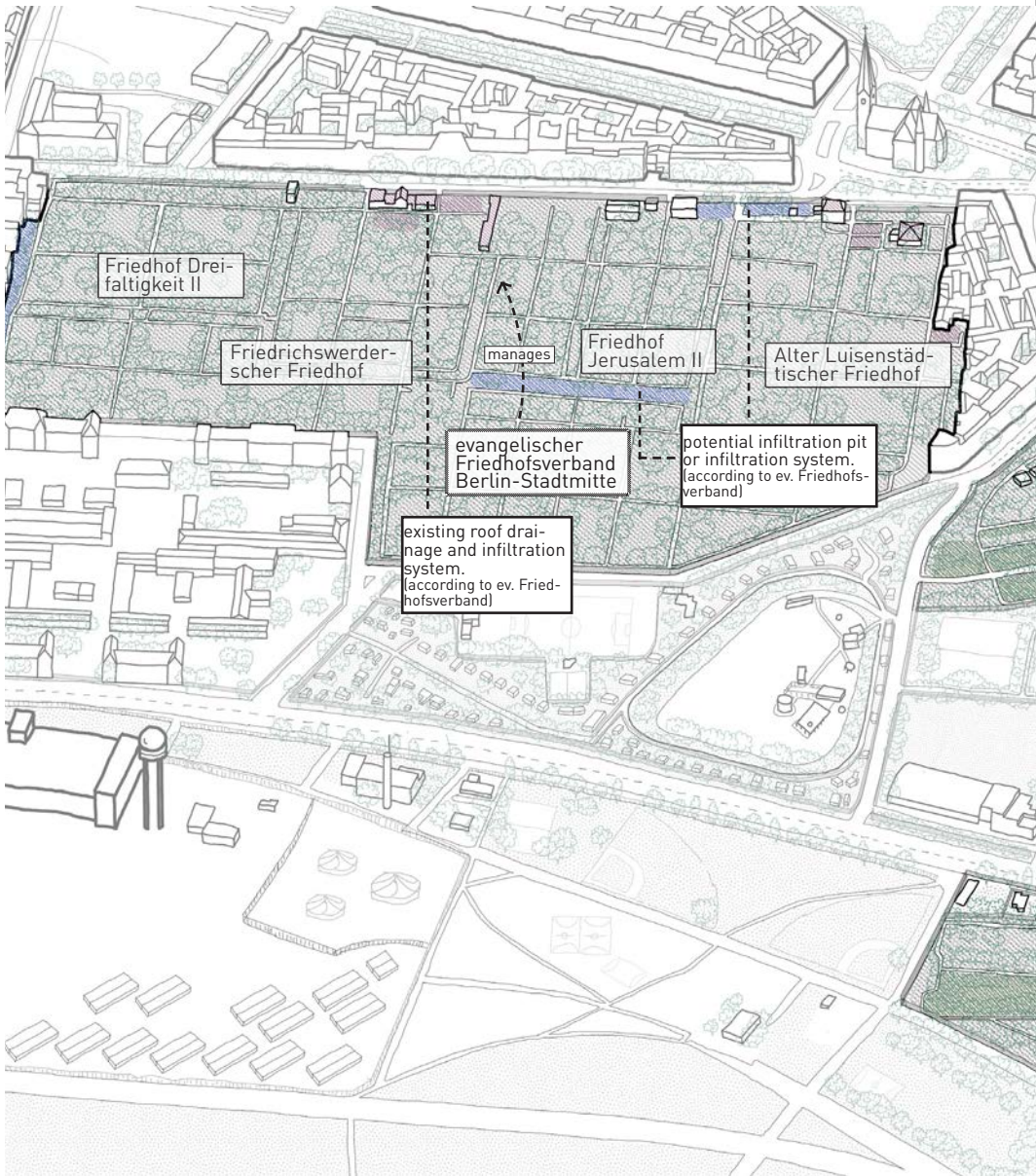
HABITS & ROUTINES OF WATER USE IN THE NEIGHBOURHOOD
Cemeteries

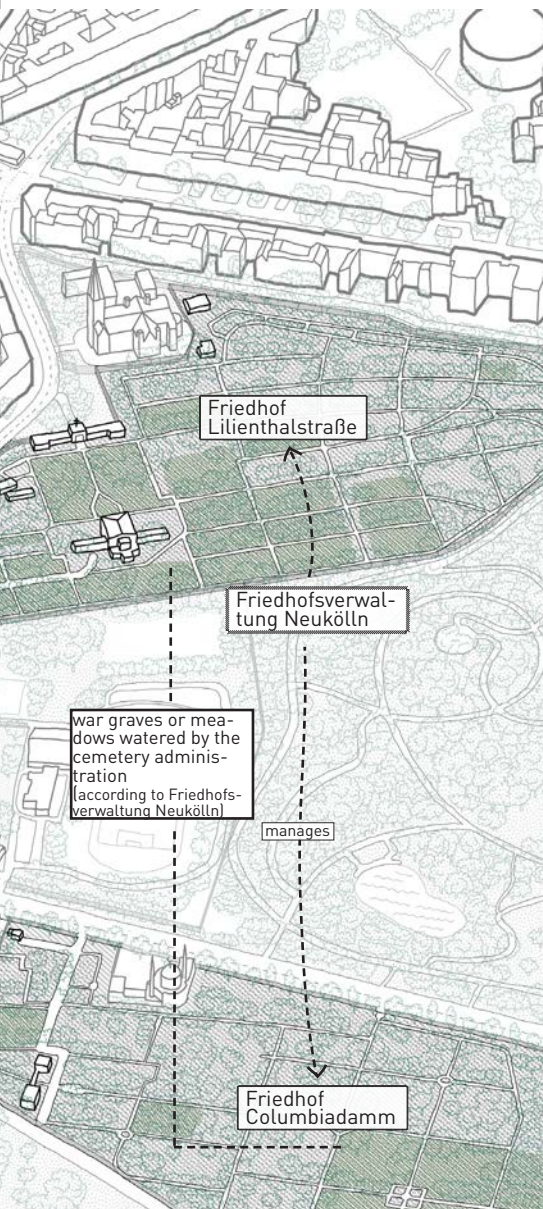




3 HABITS & ROUTINES OF WATER USE IN THE NEIGHBOURHOOD

3.2 Cemeteries





Friedhöfe an der Bergmannstraße

size	205.604 sqm
water consumption	*1.913.380 l/yr
consumption per sqm	*20 l/yr
costs	*7.399 €/yr

Friedhof Lilienthalstraße

size	95.669 sqm
water consumption	*1.913.380 l/yr
consumption per sqm	*20 l/yr
costs	*3.468 €/yr

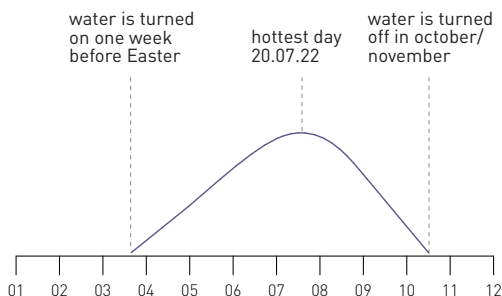
Friedhof Columbiadamm

size	104.044 sqm
water consumption	*2.080.880 l/yr
consumption per sqm	*20 l/yr
costs	*3.773 €/yr

Total

size	405.317 sqm
water consumption	*8.074.937 l/yr
consumption per sqm	*20 l/yr
costs per year	*14.640 €/yr

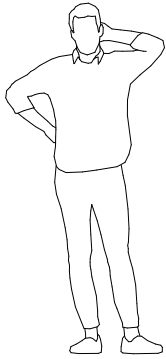
tap water consumption for irrigation over the year



sources: evangelischer Friedhofsverband Berlin Stadtmitte | Friedhofsverwaltung Neukölln | Wikipedia | berlin.de | Berliner Wasserbetriebe:
Trinkwassergebühren (1,813 € pro Kubikmeter Wasser)
*assumption

3 HABITS & ROUTINES OF WATER USE IN THE NEIGHBOURHOOD

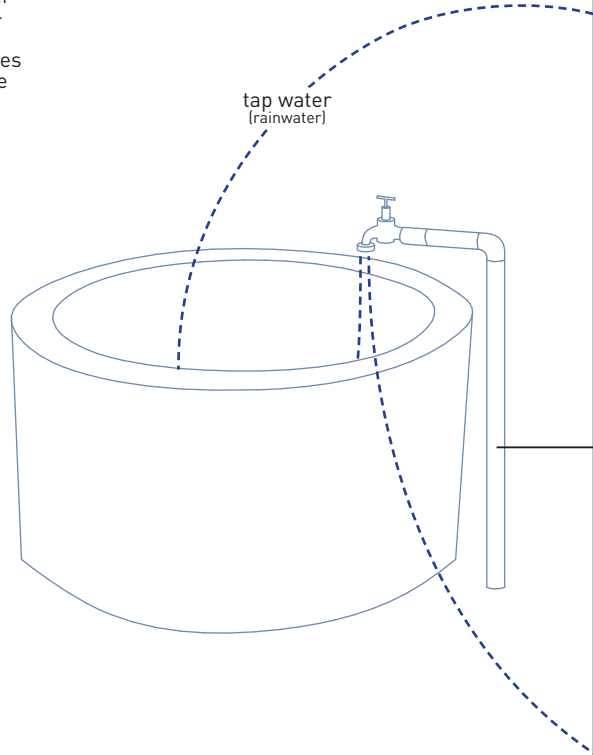
3.2 Cemeteries



Tobias
(Friedhofsverwaltung
Neukölln)

"Von der **Friedhofsverwaltung** aus werden nur **wenige Flächen aktiv bewässert**. Es werden nur **Wiesenflächen** oder die Flächen der **Kriegsgräber bewässert**"

„Alle **Friedhöfe** des Landes Berlin **nutzen Trinkwasser** der Berliner Wasserbetriebe zum Bewässern mit Ausnahme des **Parkfriedhofs** und des **Friedhofs Urnenhein**, die **Grundwasser nutzen**.“

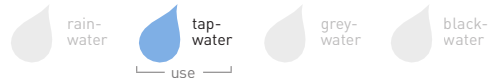


Barbara
(evangelischer Friedhofsverband
Berlin-Stadtmitte)

"Ein Hauptaugenmerk lag auf der Suche nach einem passenden Standort für den **Bau einer Zisterne zur Regenwassernutzung von Dachflächen**, um es künftig **dem Friedhof zuführen** zu können, **statt** es in die **Kanalisation abzuleiten**, und gleichzeitig einen Puffer für Starkregenereignisse zu bilden. Der **Niederschlagsabfluss von Wegen** sollte ebenfalls für die **ergänzende Wasserversorgung** der Alleen berücksichtigt werden, da der alte Alleebaumbestand eine besondere Qualität historischer Friedhöfe darstellt und **alte Bäume** gleichzeitig bei **Wasserknappheit** besonders unter **Trockenstress** leiden."

sources: Friedhofsverwaltung Neukölln | evangelischer Friedhofsverband Berlin-Stadtmitte - (e-Mail) Berliner Energie- und Klimaschutzprogramm Maßnahmen zur Klimaanpassung auf Friedhöfen des EVFBS im Bezirk Friedrichshain-Kreuzberg S.13 | Interviews

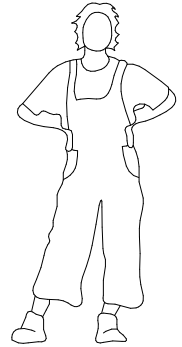
Irrigation



Relatives of deceased use tap water from the tanks to water graves.

"Wir sind nur verantwortlich für die Wege. Der **Rasen wird in den Sommermonaten bewässert**. Hier wird mit **Leitungswasser** gesprenkelt."

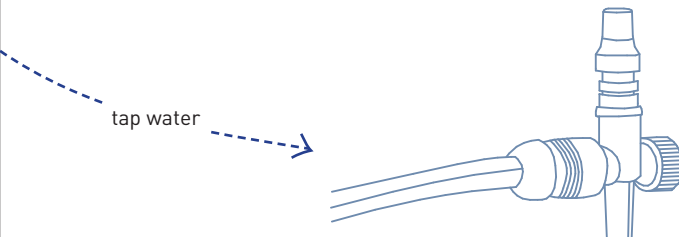
"Hier werden die **Wiesen** und die Gräber **bewässert**. Soweit ich weiß, **wird kein Regenwasser genutzt**"



Eva
(employee Friedhof
Lilienthalstraße)

Only tap water is used to fill the tanks. Rainwater naturally accumulates when it rains, but the amount is neglectable.

"Das Bezirksamt **sprenkelt ohne Ende**. Was kostet die Welt. Für die Kleingärten gibt es ja Regulationen, hier nicht. Der Wasserverbrauch ist unerheblich."



The cemetery administration sprinkles some meadows.

3
3.3

HABITS & ROUTINES OF WATER USE IN THE NEIGHBOURHOOD
Wagenplatz

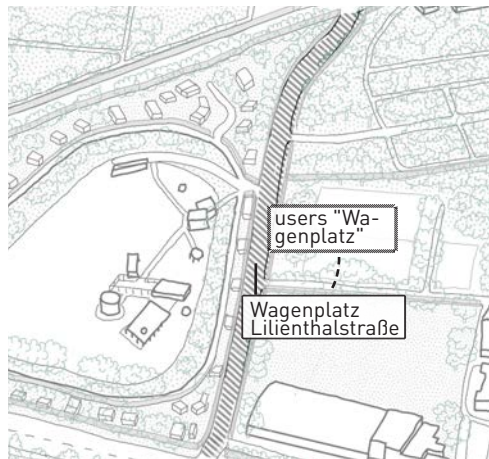




3 HABITS & ROUTINES OF WATER USE IN THE NEIGHBOURHOOD

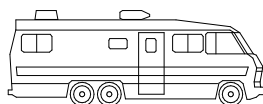
3.3 Wagenplatz



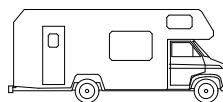


Water consumption per person
 water consumption **8 l/d**
 costs ***0 - 0,014 €/d**

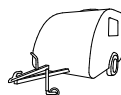
Number of different vehicles on June 24



Wagen **9**



Camper Van **8**



Camping Trailer **4**



Van **8**

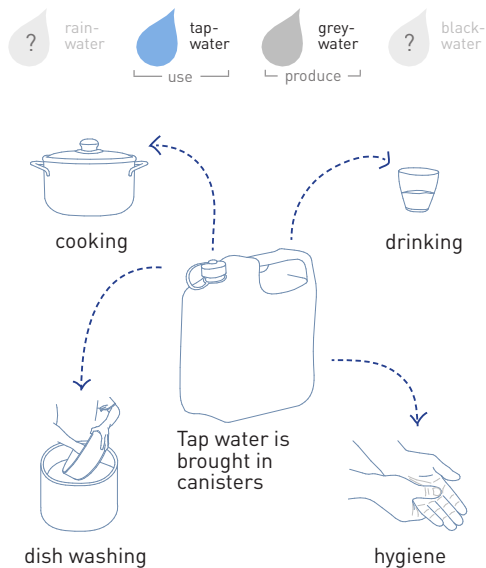
sources: Interviews | Berliner Wasserbetriebe: Trinkwassergebühren (1,813 € pro Kubikmeter Wasser)
 *assumption

3 HABITS & ROUTINES OF WATER USE IN THE NEIGHBOURHOOD

3.3 Wagenplatz

The southern section of Lilienthalstraße, between Züllichauer Straße and Columbiadamm, serves as a low-traffic road connecting the urban and densely populated area near Südstern in Kreuzberg with the Columbiadamm and Tempelhofer Feld.

Situated in a quiet zone, this part of the street is surrounded by a cemetery, a sports field, allotment gardens, and the rainwater retention basin, which means it is sparsely inhabited. Over time, individuals who own larger vehicles such as caravans, vans, or trailers and struggle to find parking in the densely populated areas have discovered this location. Some individuals occasionally even spend a night in their vehicles here, ensuring they bring their own water for personal use.

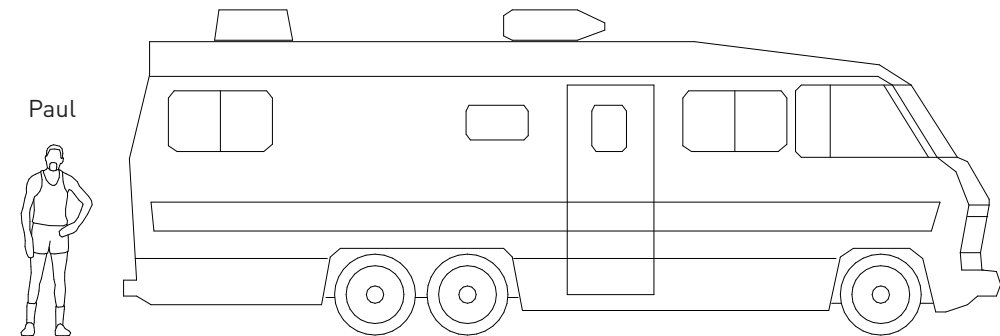


"**Leitungswasser fülle ich zu Hause** in einen **Kanister** ab und nehme es mit. Ich bin ca. ein bis zwei Mal im Monat für eine Nacht hier."

"Die Infrastruktur der Floating nutze ich nicht."

"Ich verbrauche **5-10 Liter Leitungswasser** am Tag und bin so ein bis zwei mal monatlich auf dem Wagenplatz. Ich bin zu jeder Jahreszeit hier."

"Ich **benutze das Wasser zum Kochen und Abwaschen.**"



sources: Interviews



rain-
water



tap-
water

— use —



grey-
water

— produce —

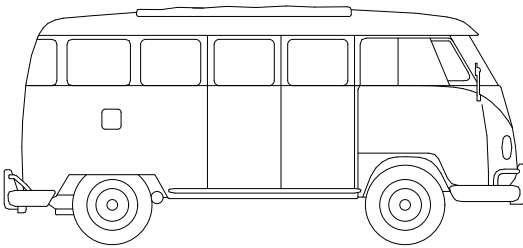


black-
water

"Wenn ich hier bin, brauche ich so circa **5 Liter am Tag.**"

"Als ich gekommen bin, gab es die Floating bereits."

"Ich bin im Zeitraum von Mai bis September da."



"Ich nutze auch die Infrastruktur der Floating"

Leo



"Ich **fülle** mir manchmal **Wasser bei Freunden** zu Hause **ab.**"



rain-
water



tap-
water

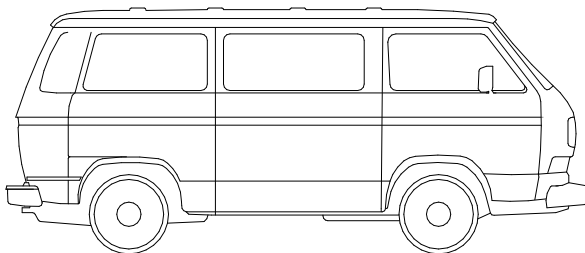


grey-
water



black-
water

"We only park our van here to go away for the weekend. Therefore, we have no need for water. But we know that people live here too. This idea of hydrocommons would be interesting for them. Nice idea, good luck with that."



William & Esther

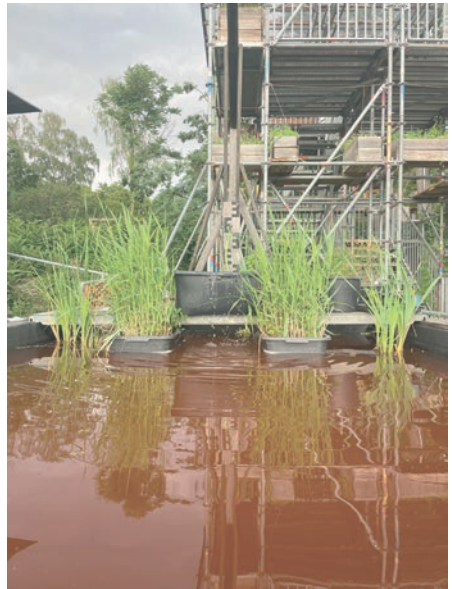
Rocky



sources: Interviews

3 HABITS & ROUTINES OF WATER USE IN THE NEIGHBOURHOOD

3.4 Floating University







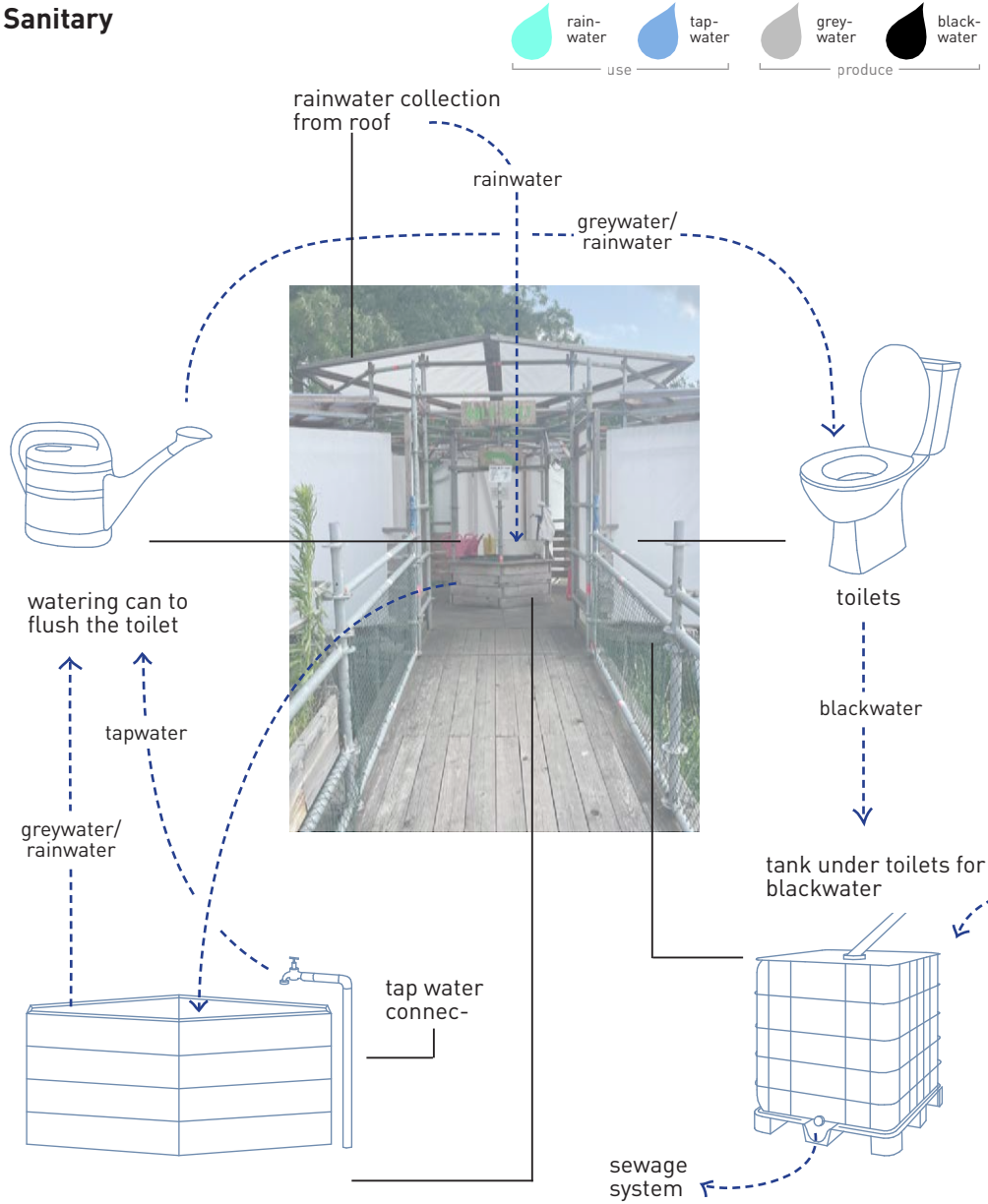


size of the basin
water consumption
costs

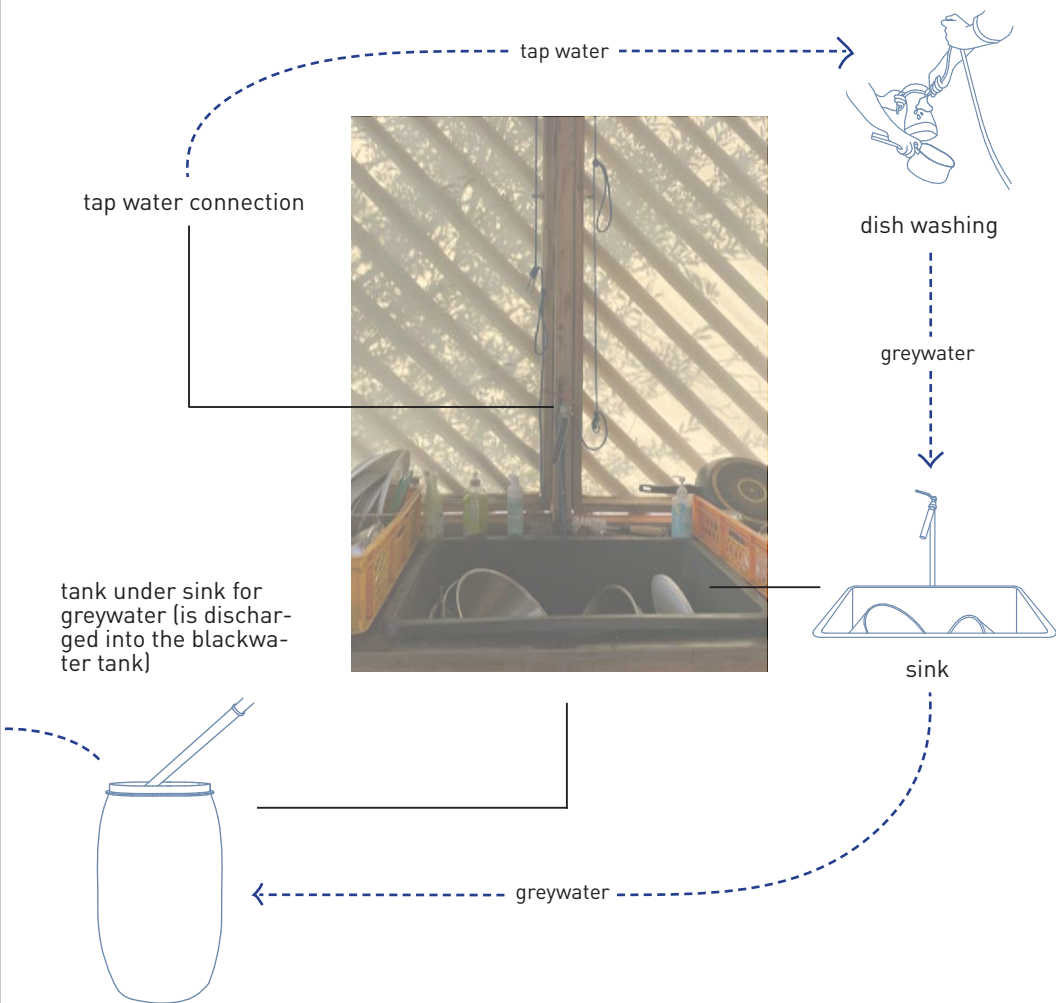
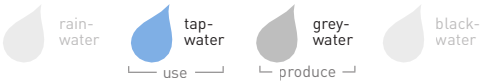
17.000 sqm
189.000 l/yr
***343 €/yr**

sources: Interviews | Vostrand Gartenkolonie | Berliner Wasserbetriebe: Trinkwassergebühren [1,813 € pro Kubikmeter Wasser]
*assumption

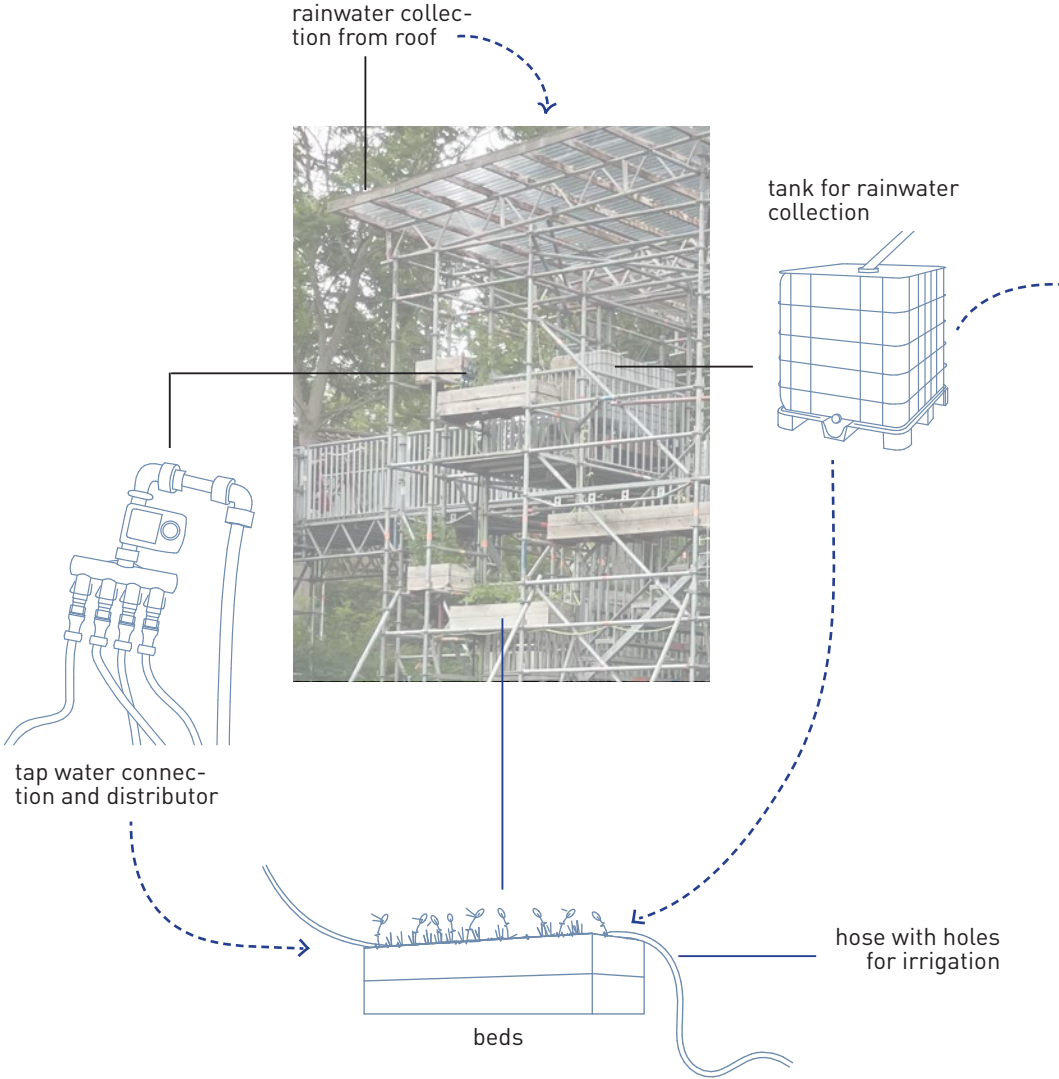
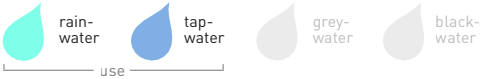
Sanitary



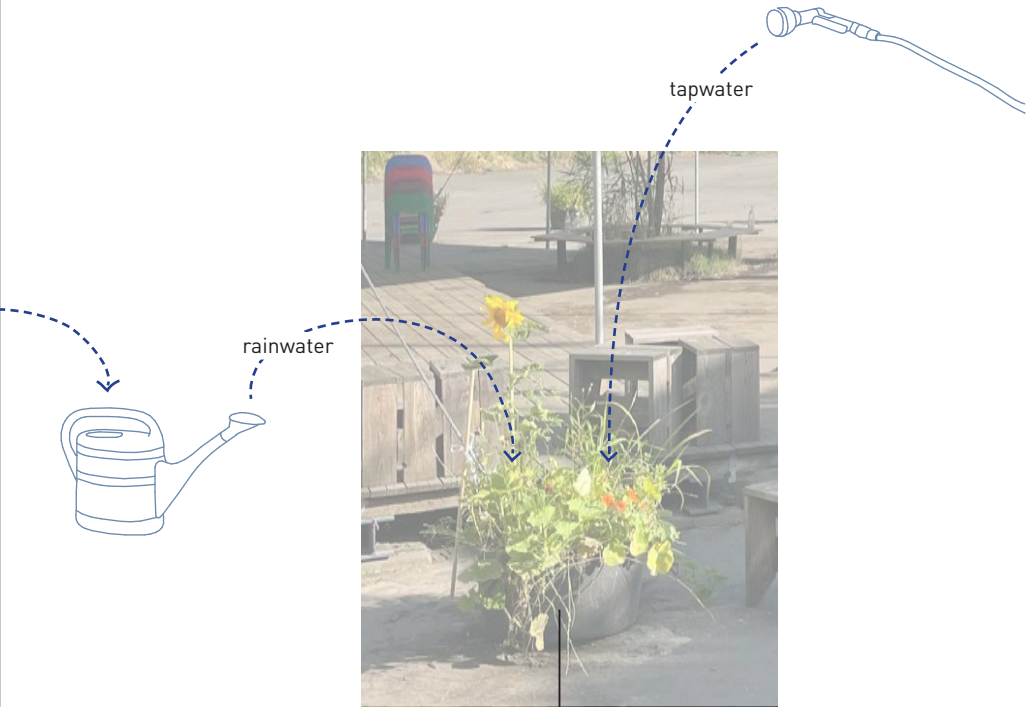
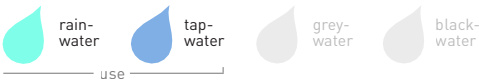
Kitchen



Irrigation system (staircase)



Irrigation beds



beds in tubs without integrated irrigation

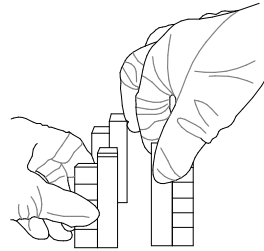
Contaminations (Performances)

"A multi-week program designed for people who want to work with their body. "Contamination" and "immersion" sessions explore the theme of water - our relationship with it and our place in the water cycle. Our bodies are the most intimate ecosystems we know. Taking this as a starting point, it sets up a situation where people connect with their body's ecosystem and the wetland's ecosystem."



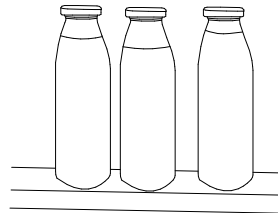
Floating Web (water, earth, biodiversity) workshops by Katherine Ball Water Testing Workshop

"The Water Testing Workshop invites people generally interested in urban water and Floating University. Together, we will test the water in the rainwater basin where Floating is located. We will use some hand-held sensors that give immediate results and we will also fill water bottles that will be brought to a laboratory for analysis. Parameters we will test for include: temperature, pH, conductivity, dissolved oxygen, turbidity, e. Coli bacteria, Enterococcus bacteria, nitrogen, phosphorous, heavy metals, phytoplankton and zooplankton bioindicators."

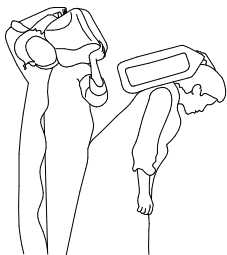


Wasserkostbar

"Our drinking water is precious and we often pollute it thoughtlessly without questioning and changing our behavior. For the project "Watertasting-Bar", the team of the Floating Kinderuni invites students and artists to the Kreuzberg rainwater retention basin to experience the water cycle and get to the bottom of our water consumption in many different ways. Together, we are looking for ideas and plan a mobile bar that offers different water mixes, bringing taste explosions and the topic of water into conversations on Berlin's streets and squares.[...]"
Funded by Berlin projectfunding for cultural education.



sources: floating-berlin.org



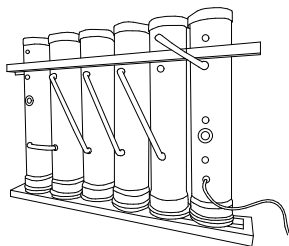
Liquid Movements Open Air Dance by Ulrike Düregger & Compagnie

"Five performers create a kaleidoscope of water associations with movement, dance, voice, videos and objects. They raise political and cultural questions about justice and privilege."



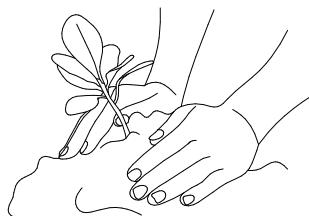
Floating University - Climate Care

Climate Care is a 10-days-festival engaged with theory and practice at the intersection of climate challenges, ethics of care and environmental humanities. Emerging from weathering the conditions of its site, the program is a result of indepth cohabitation with the constructed water infrastructure, its human culture and its multispecies overlays.



Water filtration system by Katherine Ball

"At Floating University, experimental water systems are constructed at every possible avenue. Water cascades down the laboratory stairs and spirals through a series of biological filters. Then, the filtered water journeys to the University kitchen, bathroom, auditorium, and greenhouse."



Floating University - Garden Group

"The garden group cares for everything that grows at the Floating. Every sunday they plant, water, care and sometimes harvest"

3

3.5

HABITS & ROUTINES OF WATER USE IN THE NEIGHBOURHOOD

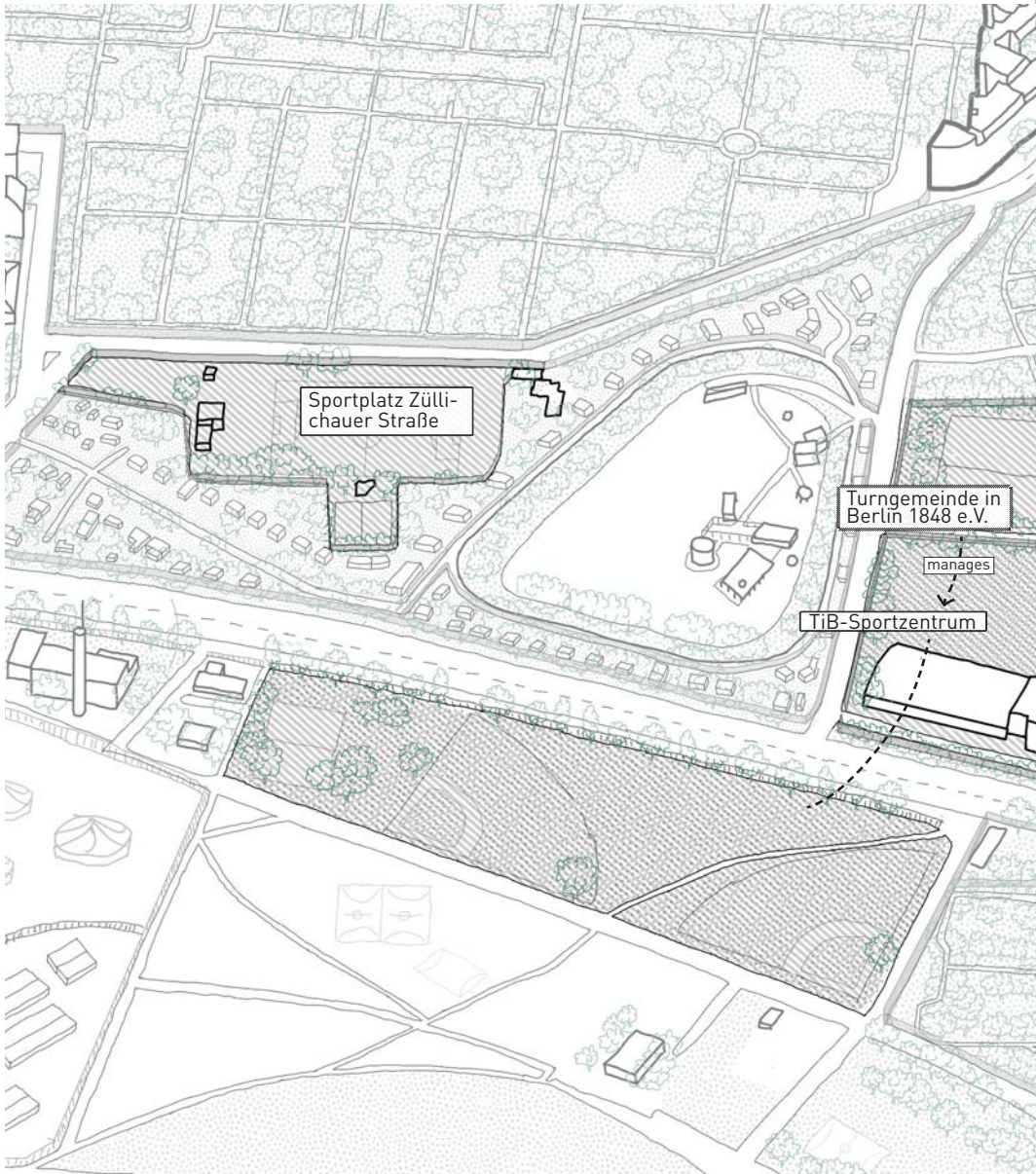
Sports fields

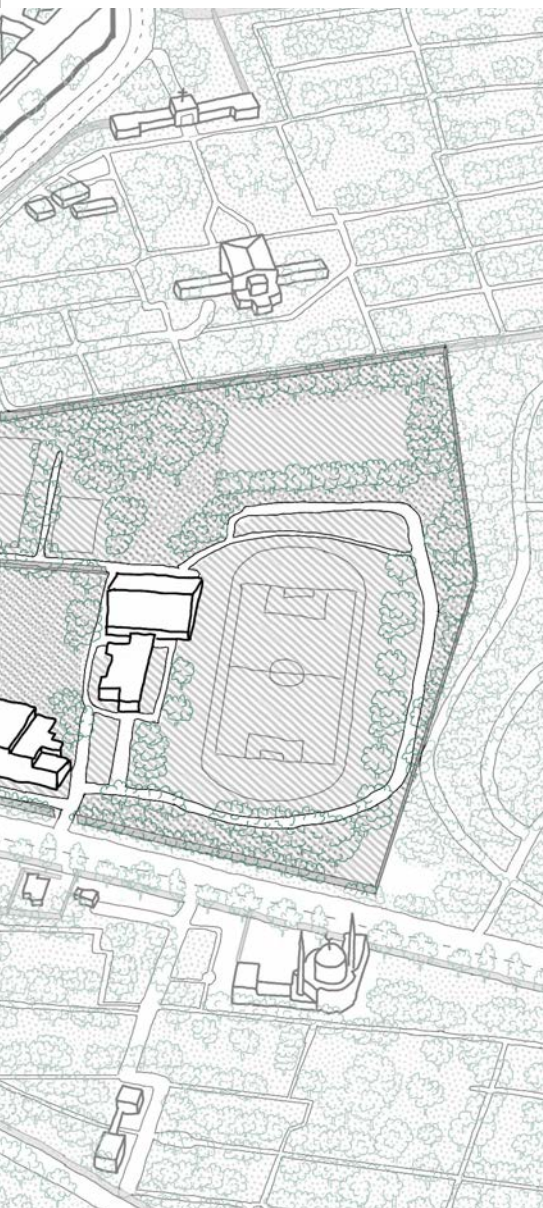




3 HABITS & ROUTINES OF WATER USE IN THE NEIGHBOURHOOD

3.5 Sports fields





Sport field Züllichauer Straße

Sports field	6.500 sqm
Water demand Artificial turf	*4 l/sqm/d
Water demand sports field	*26.000 l/d
Hot days in the year where additional irrigation is used (assumption based on research)	50 days/year
50 days of irrigation	*1.300.000 l/yr

Sport fields Turngemeinde in Berlin

Area of the system that receives irrigation (including spaces on the Tempelhofer Feld)	64.600 sqm
intensively irrigated area	*32.300 sqm
For field per day	*129,200 l/d
50 days of irrigation	*6.460.000 l/yr
Total	*7.760.000 l/yr
water consumption per sqm	200 l/yr
costs	*14.069 €/yr

3 HABITS & ROUTINES OF WATER USE IN THE NEIGHBOURHOOD

3.5 Sports fields

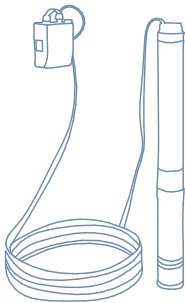
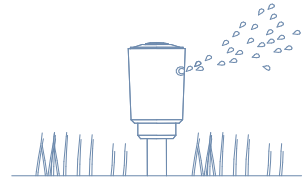


Silke

"Wir **bewässern an heißen Tagen** bis zu drei Mal das Feld."

"Der Kunstrasen wird **wegen der Hitze bewässert**. Bei **hohen Temperaturen** heizt sich dieser **enorm auf**."

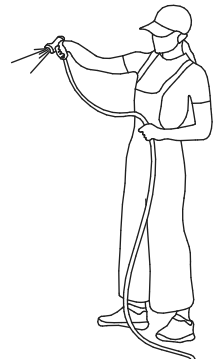
„Wenn wir das Spielfeld **nicht bewässern würden**, wäre die **Verletzungsgefahr** für die Spieler:innen sehr hoch, insbesondere bei Stürzen auf dem Kunstrasen.“



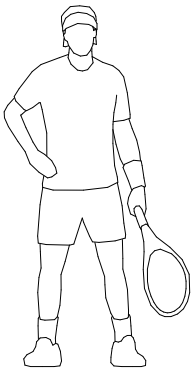
Tiefenbrunnenpumpe

"Der **Tiefbrunnen** hat eine maximale Einbautiefe von 20 Metern. **Er erreicht das Grundwasser**."

„Bei **30 Grad Außentemperatur** an **heißen Sommertagen** kann sich der Kunstrasen auf bis zu **60 Grad aufheizen**. Daher ist eine **Bewässerung zur Kühlung notwendig**.“

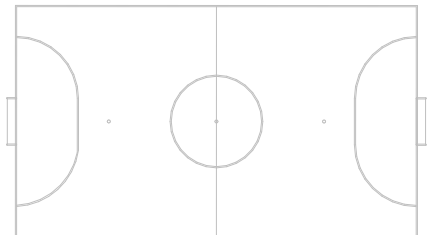


Regine

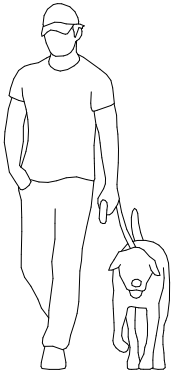


Malte

"Die Tennisplätze **stauben zu sehr bei Hitze**, deshalb **besprühen wir** sie mit dem **Gartenschlauch vor den Spielen**. Zu zweit dauert das **circa 5 Minuten** mit feinem Sprühregen"

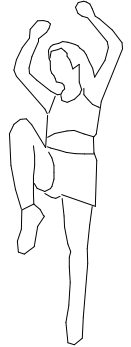


sources: Interviews



Steffan
& Socke

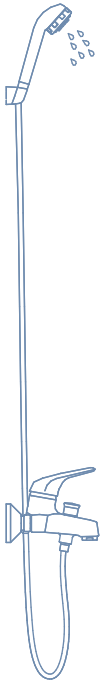
„Ich bin nur zu Besuch hier, weil meine Tochter in der Fußballmannschaft spielt. **An heißen Tagen** wie heute würde ich mir wünschen, dass es **auch für Besucher und ihre Tiere eine kostenlose Wasserstation gäbe**“



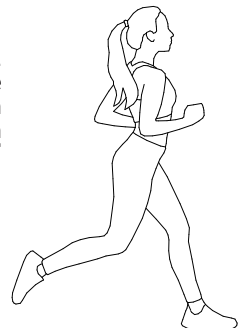
Esther

„Ich trinke **während** eines **Fitnesskurses** etwa **1 Liter Wasser**. **An heißen Tagen** kann es sogar noch **mehr** sein“

„Die Mitglieder aus dem Spotclub **trinken** während des Trainings **überwiegend Leitungswasser**.“



„Ich komme **zweimal pro Woche** hierher. Nach dem Training **benutze ich** immer die **Innenduschen**. Normalerweise würde ich sagen, dass ich zum Duschen 5-8 Minuten brauche“

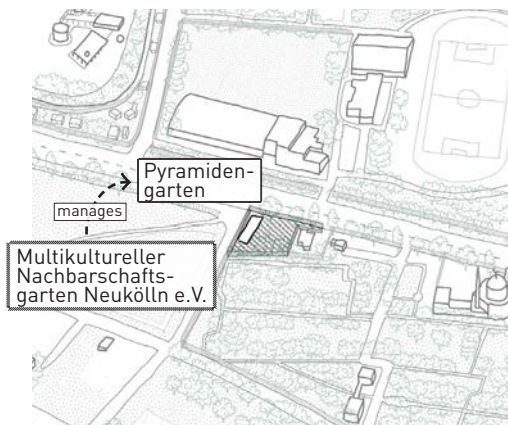


Lou

3 HABITS & ROUTINES OF WATER USE IN THE NEIGHBOURHOOD

3.6 Pyramidengarten





size
including beds
water consumption
consumption per sqm
costs

1550 sqm
800 sqm
80.000 l/yr
52 l/yr
*145 €/yr



Peter

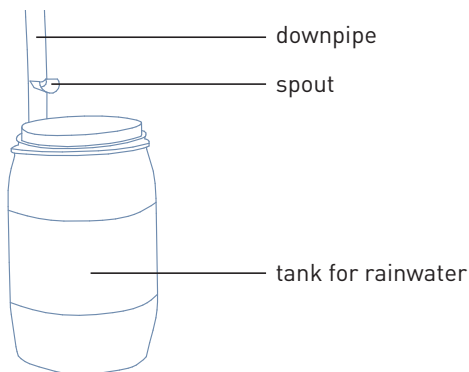
(Contact person Pyramidengarten)

"Wir nutzen im Garten das Regenwasser vom Dach unseres Vereinsgebäudes. Wie viel das übers Jahr ist kann ich nicht beantworten, weil es nicht gemessen wird. Ansonsten **verbraucht der Garten ca. 80m³ Frischwasser pro Jahr für Küche, Toilette und Wässerung.** Es werden **ausschließlich Beete bewässert**, die zur **Nahrungsmittelproduktion** dienen."

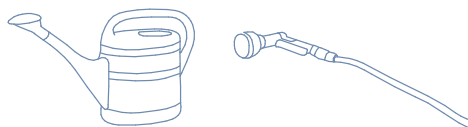
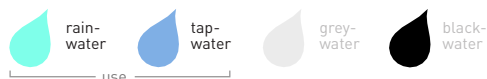
sources: Interviews | Berliner Wasserbetriebe: Trinkwassergebühren (1,813 € pro Kubikmeter Wasser)

*assumption

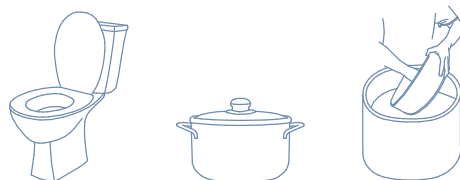
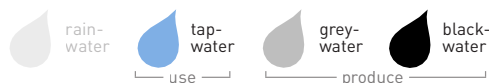
Rainwater collection



Irrigation



Kitchen & Sanitary







size
water consumption
consumption per sqm
costs

500.000 sqm
11.000.000 l /yr
22 l/yr
*19.943 €/yr

The Hasenheide is a public park in the North of Neukölln, which has suffered in recent years from the increasingly **hot and drier** summers, as well as the high occupancy rate by visitors. The district and the city have decided **to make the Hasenheide climate-friendly**.

In the last three years, **almost ten percent of the trees in Hasenheide had to be prematurely cut down** due to various issues, according to the district. **Many of the meadows have become too dry**, damaged by the high number of visitors, and heavily compacted. To address these challenges, the district plans to replant resilient trees while preserving the "extremely valuable old tree stock." They also aim to loosen the soil on a large scale. Herb lawns, meadows, and bushes that can tolerate dry conditions will be sown.

Improving the park's water supply is another focus. Currently, **10,000 to 12,000 cubic meters of water** are used for irrigation during hot years. With the **addition of 650 new trees, water consumption will increase over the next ten years** until the trees can self-sustain. To mitigate this, a **newly drilled well and an intermediate storage system will be used to extract groundwater**.

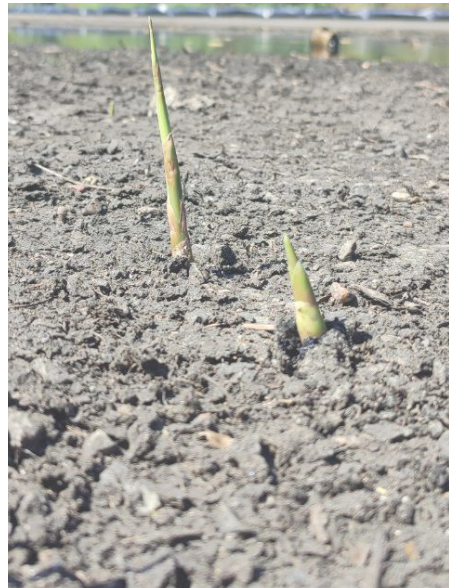
Furthermore, the **park will redirect runoff rainwater**, and additional humus formation will significantly enhance the soil's water retention capacity. About 6,000 tons of mulch and compost will be spread over a twelve-hectare area to achieve this goal.

sources: berliner-zeitung.de | Berliner Wasserbetriebe: Trinkwassergebühren [1,813 € pro Kubikmeter Wasser]

*assumption

3 HABITS & ROUTINES OF WATER USE IN THE NEIGHBOURHOOD

3.8 More than humans



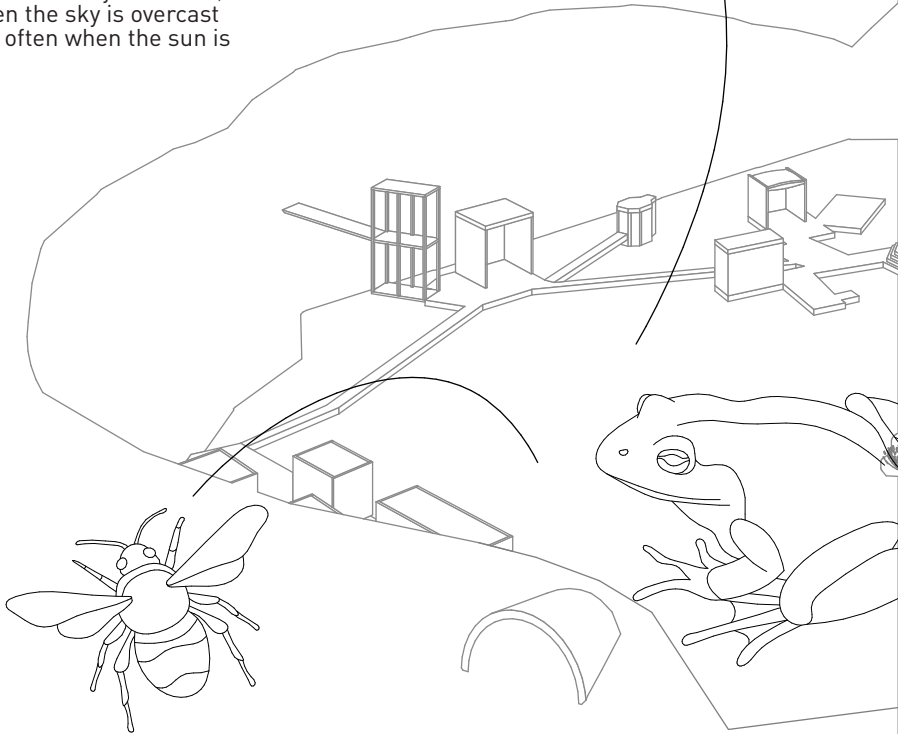
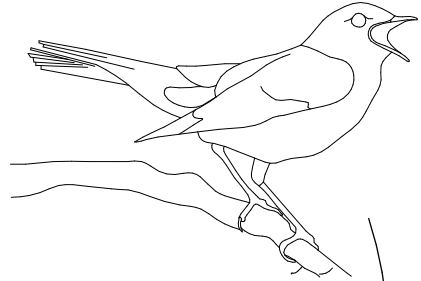


3 HABITS & ROUTINES OF WATER USE IN THE NEIGHBOURHOOD

3.8 More than humans

Birds (blackbirds)

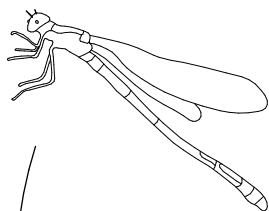
Blackbirds **rarely drink** because the food they eat usually contains enough water. When **drinking**, they often **enter shallow water** up to their belly and submerge their beak. Blackbirds **groom their feathers** or **take a bath** before setting off for their roost. Bathing can be observed all year round, more often when the sky is overcast or raining, less often when the sun is shining.



Bees

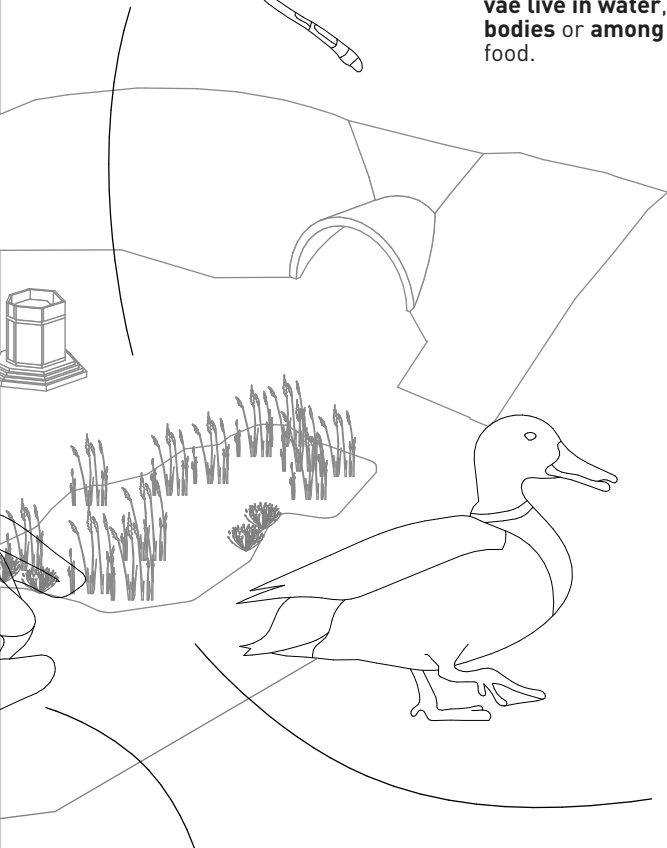
Water is not only food for the bees, but is also important for maintaining the climate in the beehive. **The water is used here for cooling.** For this purpose, bees distribute **small water droplets** in the bee colony in order **to use the evaporative cooling for temperature regulation.** Bee colonies **consume an average of 20 liters of water between the end of February and mid-April.**

sources: **Birds:** Burkhard Stephan: Die Amsel. 2. Auflage, Neue Brehm Bücherei, Hohenwarsleben 1999, S. 87–98, S. 148–151 | **Bees:** Handbuch der Bienenkunde. Haltung und Zucht der Biene von Böttcher, Friedrich Karl.



Dragonflies

Dragonflies are **mainly found near bodies of water**, since their **larvae depend on water as a habitat**. They **attach their eggs to aquatic plants**. The dragonfly **larvae live in water**, mostly **at the bottom of the water bodies or among aquatic plants**, where they look for food.



Ducks

Ducks **dig in the water for food**. They search the **bottom of the water to a depth of about half a meter**. They bite off parts of plants with their beak and **push the water that they have also taken in out** through the horny ridges of the beak. These parts of the beak act like a sieve in which the food gets caught. The duck is predominantly vegetable matter. It uses seeds, fruits, aquatic, riparian and terrestrial plants. The food spectrum also includes mollusks, larvae, small crabs, tadpoles, spawn, small fish, frogs, worms and snails. The **duck is not very demanding when it comes to choosing its breeding grounds** or whereabouts, **as long as there is some kind of body of water**.

Frogs

Frogs **spawn in the water**. **After spending several months in the water**, the actual **metamorphosis into a land animal sets in**, with the gills regressing, among other things. **Tadpoles only live in water**. The **spawning balls are attached to the aquatic vegetation** in shallow places.

sources: Dragonflies: W. Verberk, H. Henksiepel & H. Esselink: Life-history strategies in freshwater macroinvertebrates. *Freshwater Biology* (2008) 53, 1722–1738 | *Vom Leben der Natur: Graziöse Fluginsekten*. Teil 2. Ö1 Radio, orf.at, 29. August 2017 | **Ducks:** Erich Rutschke: Die Wildenten Europas. *Biologie, Ökologie, Verhalten*. Aula, Wiesbaden 1988, S. 40 & S.202 | **Frogs:** Hans Schneider: Rufe und Rufverhalten des Laubfrosches *Hyla arborea arborea* (L.). In: *Zeitschrift für vergleichende Physiologie*, Band 57, 1967, S. 174–189

3
3.8

HABITS & ROUTINES OF WATER USE IN THE NEIGHBOURHOOD
More than humans

banks

Grasflur

- Stachel-Hühnerhirse
- Knaulgras
- Zwiebel-Rispengras
- Spitzwegerich
- Straußblütiger Ampfer
- Mäusegerste
- Löwenzahn
- Weißem Straußgras
- Gemeine Quecke
- Rispengras

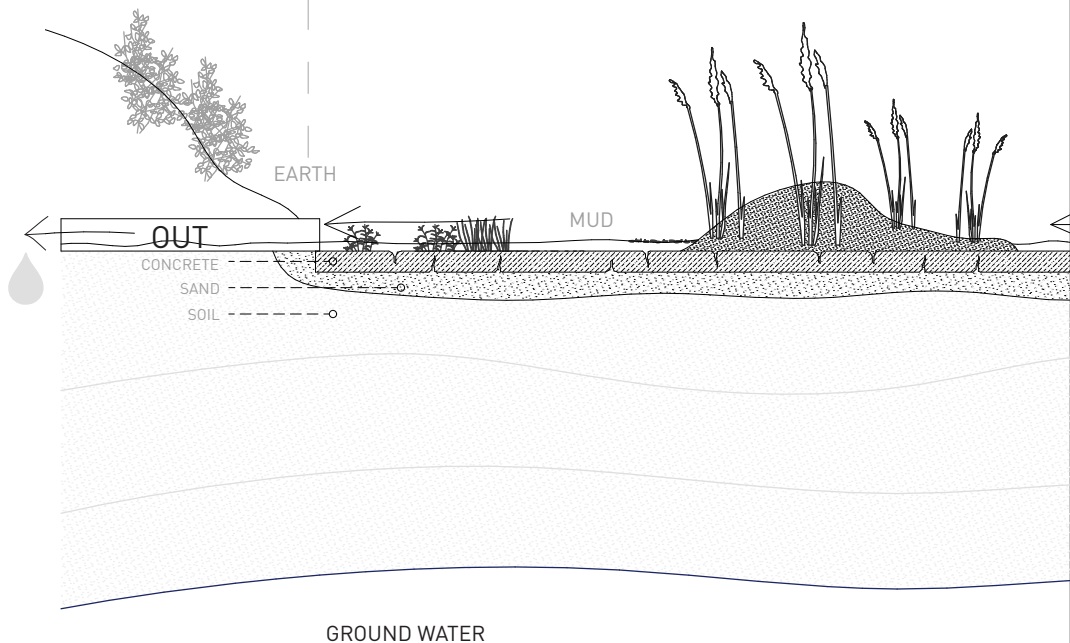
in the basin

Schilfröhricht

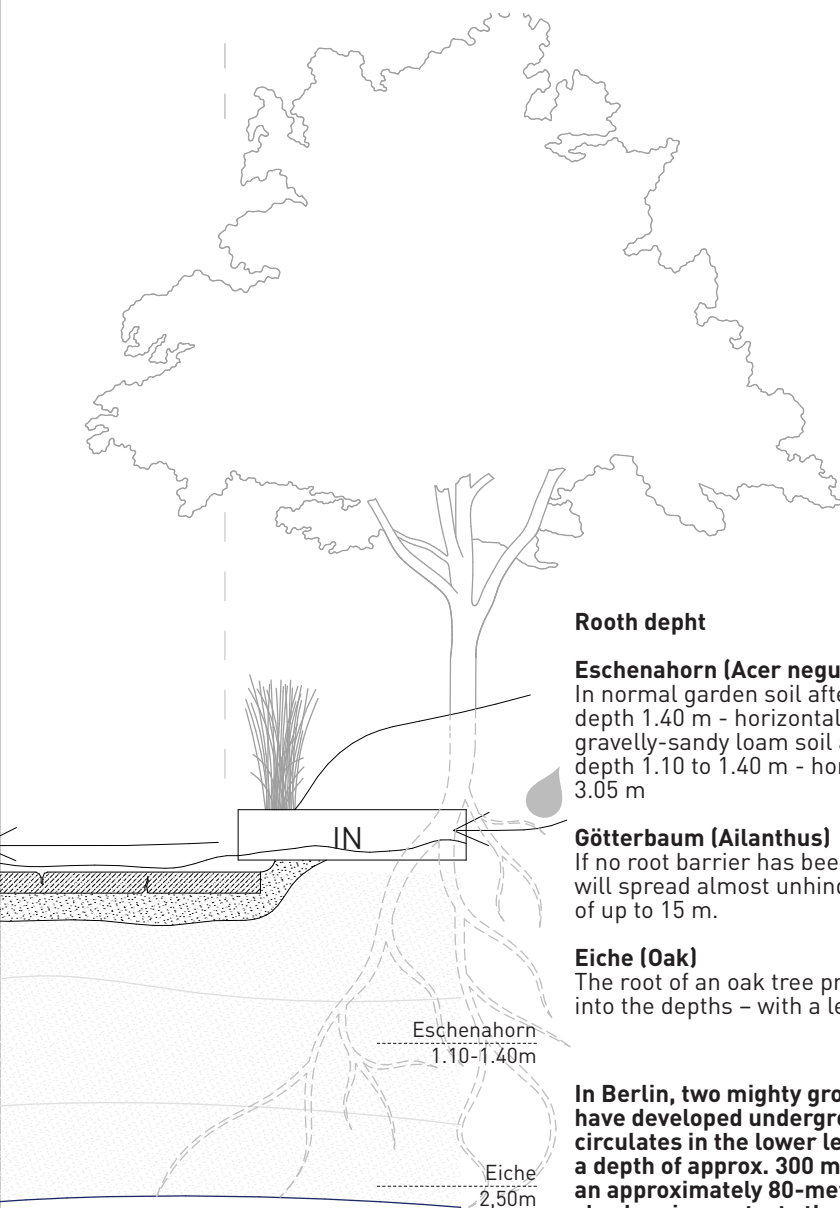
- Blutweiderich
- Gewöhnlicher Froschlöffel
- Weißes Straußgras
- Vielwurzelige Teichlinse
- Gift-Hahnenfuß
- Knaulgras
- Sumpf-Dotterblume
- Silberweiden-Aufwuchs
- Behaarte Segge
- Gemeinem Schilf
- Flohknöterich

Rohrglanzgras-Röhricht

- Rohrglanzgras
- Floh-Knöterich
- Breitblättriger Rohrkolben
- Gewöhnliche Sumpfkresse
- Knick-Fuchsschwanzgras
- Behaarte Segge
- Gift-Hahnenfuß
- Hänge-Segge
- Blutweiderich
- Gewöhnliche Teichbinse
- Teichsimsen-Röhricht
- Einhjähriges Rispengras
- Krauser Ampfer



sources: Senatsverwaltung für Mobilität, Verkehr, Klimaschutz und Umwelt



banks

"Ringforest"

Eschen-Ahorn
 Liguster
 Götterbaum
 Eiche
 Schneebeere
 Efeu
 Brombeere
 Robinien
 Säulenpappeln
 Flatterulme
 Knoblauchsrauke
 Scharbockskraut
 Schöllkraut
 Spitzahorn
 Bergahorn

Root depth

Eschenahorn (*Acer negundo*)

In normal garden soil after 5-10 years: root depth 1.40 m - horizontal spread 2.10 m. In gravelly-sandy loam soil after 70 years: root depth 1.10 to 1.40 m - horizontal spread 3.05 m

Götterbaum (*Ailanthus*)

If no root barrier has been created, the roots will spread almost unhindered within a radius of up to 15 m.

Eiche (Oak)

The root of an oak tree protrudes furthest into the depths - with a length of 2.50 m.

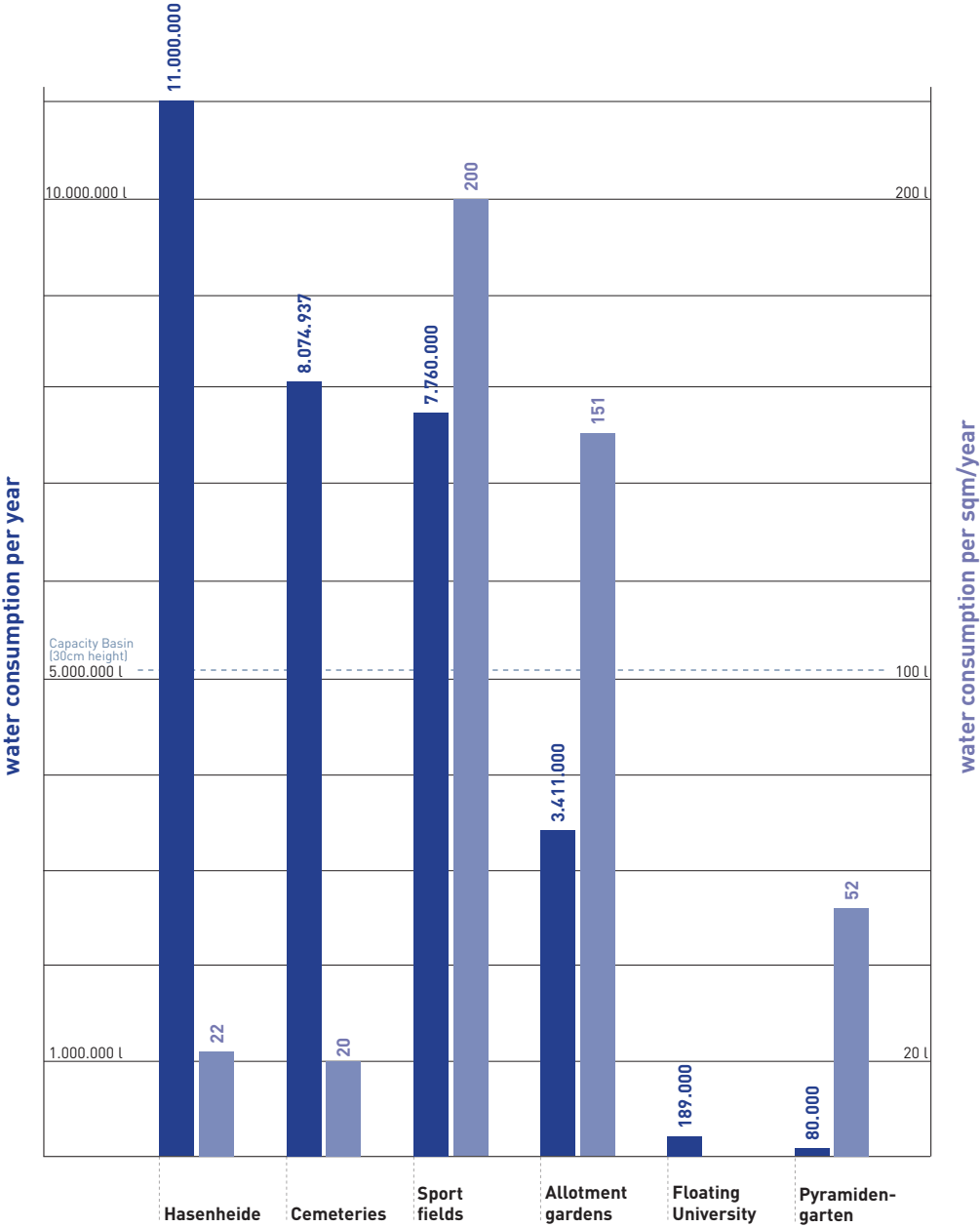
In Berlin, two mighty groundwater levels have developed underground: Salt water circulates in the lower level, which lies at a depth of approx. 300 metres. Above this, an approximately 80-metre-thick hydraulic clay barrier protects the plentiful fresh water that we can use as drinking water.

3

3.9

HABITS & ROUTINES OF WATER USE IN THE NEIGHBOURHOOD

Comparison water consumption





Height of water

30 cm

100 cm

Capacity Basin

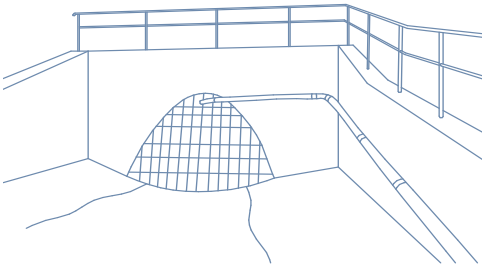
5.100.000 l

***17.400.000 l**

sources: *assumption

"Regenwasser ist ein Gemeingut, das allen gehört."

"Rainwater is a common good that belongs to everyone."



„Ja wem gehört dat Regenwasser. Dat gehört ja uns!“

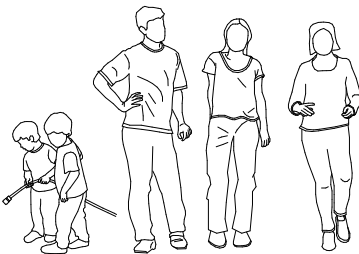
"Was passiert denn aktuell mit dem **Wasser**? Ach das wird in den **Landwehrkanal geleitet**?
Lieber weg als verschenken?
Dat muss in die Medien!"



Eva
(employee Friedhof
Lilienthalstraße)

"Es wäre natürlich **super, wenn das Wasser nutzbar wäre**. Dat wäre je heiß.
Dann sollten ganz diplomatisch erst die
Kleingärten dort berücksichtigt werden -
die, die am nächsten dran - sind und dann
alle anderen."

"Um auch eine andere Meinung einzubringen:
Ich denke schon, **dass die Tempelhof GmbH ein
ökonomisches Interesse an dem gesammelten
Wasser hat** "



Kowalski family

"Ja, da stimme ich zu!"



Susanne

sources: Interviews



Cordula

"Ich fände es sehr gut, wenn das so gesehen würde. Es ist Quatsch, das Wasser in den Landwehrkanal zu leiten, wie es aktuell passiert."



Peter

"Regenwasser ist ein Allgemeingut, da es derzeit durch nichts reglementiert wird."



Paul

"Ja, auf jeden Fall"



"Ja, definitiv"

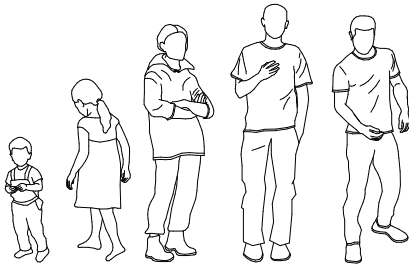


Leo



Isa

"Natürlich, Regenwasser kann man schließlich nicht besitzen. Nichtmal das Regenwasser, was ich selbst auffange gehört mir."



Müller family

„Ich fänd's super.“ „Das ist Wahnsinn, dass das Wasser in den Kanal abläuft“

„Es tut uns immer wieder leid, wenn wir mit Leitungswasser gießen müssen. Das Wasser wird auch bei uns immer knapper und die nächste Katastrophe ist doch vorprogrammiert.“ „Regenwasser, das wegrennt - das ist doch total bekloppt“

"Das Regenwasser als Gemeingut sollte allgemein zugänglich werden."

"Rainwater, as a common good, should become universally accessible."



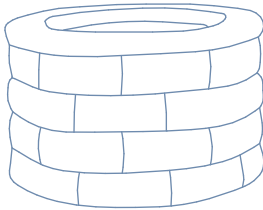
Lea

"Ich würde eine **Zugänglichkeit des Wassers über Brunnen** vorschlagen. Die Brunnen sollten aber außerhalb des Gebiets stehen. Ich fänd's **nicht schön, wenn jede*r über die Kolonie rein kann.**"

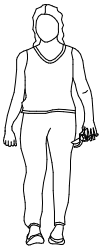
"Ich **denke nicht**, dass es eine **direkte Zugänglichkeit** bräuchte."



Müller family



"Sofern es für **sinnvolle Einsatzgebiete** angewendet wird, **ja.**"



Cordula

"Grundsätzlich finde ich **eine Zugänglichkeit gut**. Allerdings nutze ich selbst den Garten erst seit drei Jahren und habe gehört, dass **Einbrüche eine reale Bedrohung hier sind**. Wir haben daher zur Straße hin Stacheldrahtzaun als Einbruchsschutz angebracht. Der Ort sollte so öffentlich sein, dass die **Menschen, die das Wasser nutzen, Zugang haben.**"



Tobias
(Friedhofsverwaltung
Neukölln)

sources: Interviews

"Ich denke, die **Zugänglichkeit von Becken und Gärten lässt sich nicht trennen.**

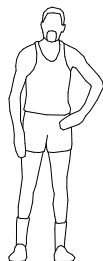
Tagsüber könnte hier offen sein. Nachts könnte das zum Problem werden. Auf dem angrenzenden Sportplatz hier sind nachts oft Parties."



Susanne

"Wenn wir **eigene Ansprüche auf das Wasser** erheben würden, **könnten wir dem Bezirk wie normale Kolonien Zugang anbieten.**"

Normale Kleingärten müssen offen sein. Also die, die im Gartenverband sind. Das ist bei uns nicht der Fall."



Paul

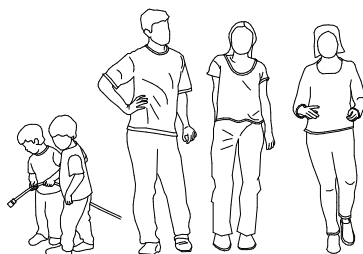
"**Im Prinzip sollte das Wasser dort allen zur Verfügung stehen.** Ich bin mir nicht sicher, wie das funktionieren soll, da ich die Besitzverhältnisse vor Ort nicht kenne. Ich



Isa

"**Natürlich.** Das geht ja weit über das Becken hinaus. Das sollte man generell zugänglich machen und damit auch das Wasser. Klar, nachts kann man das ja abschließen, damit die Kleingärtnler sich nicht in die Hose scheißen, aber solange es hell ist sollte das Becken von allen Seiten zugänglich sein."

"**Einem Zugang zum Becken selbst mit Öffnungszeiten würden wir zustimmen.** Einen Zugang zur Kleingartenanlage wünschen wir uns allerdings nicht."



Kowalski family

"Für das gefilterte Regenwasser aus dem Auffangbecken kann ich mir folgende Nutzungen vorstellen:"

"I can imagine the following uses for the filtered rainwater from the rainwater retention basin:"



Susanne

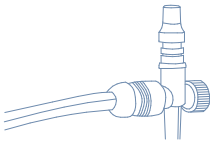
"Wenn ich das **Wasser aus dem Becken** nutzen könnte, wäre mein **Verbrauch ähnlich**, aber **nicht mehr** so eine **Verschwendung**."



"Wenn dieses Wasser eine Qualität hat, die eine Nutzung zulassen würde, macht es höchstens Sinn, das für Flächen auf der gleichen Seite der Straße zu nutzen. **Für das Becken** am Columbiadamm kann ich mir sehr gut vorstellen, dass es ein **durch Menschen ungenutztes Biotop bleibt/wird**. Es muss **nicht alles beplant** oder einer **Nutzung zugeführt werden**."



Peter

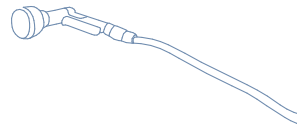


"**Bewässerung für den Friedhof** Lilienthal würde sich anbieten."



Lea

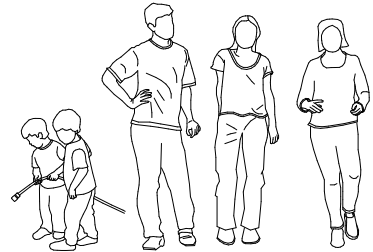
"Es ist natürlich **die Frage, wie kontaminiert das Wasser ist**. Die Floating hat ja im ersten Jahr 2017 Bleivergiftung in einer Ecke festgestellt."



Tobias
(Friedhofsverwaltung
Neukölln)

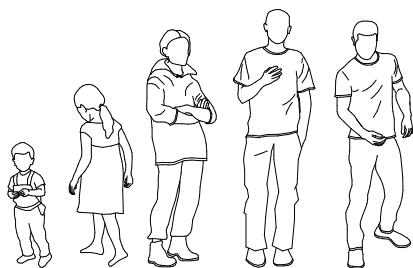
"**Wir würden genauso viel Wasser verbrauchen** wie jetzt. Allerdings würden wir **kein Leitungswasser mehr** zum Sprenkeln benutzen."

"**Früher stand das Wasser viel höher**. Wenn die **Qualität besser** wäre, könnte man sich ja auch eine **Schwimmnutzung vorstellen**."



Kowalski family

sources: Interviews



Müller family

„Es kommt natürlich auf die Menge des Regenwassers an. Es sollte **kein Kampf** darum entstehen, **wer wieviel Wasser abpumpen kann**. Eine **Nutzung des Regenwassers** an sich fände ich **großartig**. Wer dann aus der Nachbarschaft davon profitiert - ob die Friedhöfe oder wir - ist zweitrangig.“

„Für die Tiere ist das **Wasser** natürlich auch wichtig - die Frösche und die Lurchen. Zuletzt gab es ein Froschkonzert. Das war hammermäßig, wieviele Frösche da waren.“

“Es wäre gut, das **Wasser zu filtern**, um die Qualität zu verbessern. Das wäre vergleichbar mit der Idee einen Teil der Spree oder des Kanal mit **sauberem Wasser zum schwimmen zu nutzen**.“

“Die Kleingärtner:innen sollten auch gefragt werden, was sie davon halten. Es gibt mehrere Leute, die das interessieren könnte.“



Paul



“Ein **Renaturierungsbecken** wäre sehr sinnvoll. Es sollte **mehr Wasser in der Stadt gehalten werden**. Sendet mir gerne Informationen zu, denn ich arbeite selbst an der Uni.“

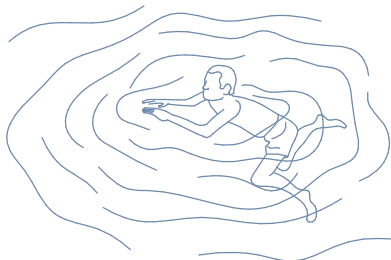


Cordula



Isa

“Ganz ehrlich, wieso sollten denn die Kleingärten das Wasser überhaupt bekommen. Die hocken doch sowieso nur in ihrer Gated Community, zu der nur sie Zutritt haben. **Man sollte mit dem Wasser direkt im Becken was machen, ein Biotop** oder so, und wenn es **vergossen** werden soll, dann sollte man **erstmal bei der Hasenheide anfangen**, die ist doch furztrocken!“



If different stakeholders around the basin had access to the rainwater and made decisions, how would this shape the place otherwise while affecting water consumption, habits & routines?

We are all connected through our bodily wateriness. That is why our human bodies have the responsibility to establish new relations with other more than human beings (Neimanis). This shall be the guiding principle for defining who is involved in the process of rainwater collection and distribution, and also the maintenance and care taking of the infrastructural systems. Looking at the site in Kreuzberg through the lense of hydrocommons raises the question of who will have a voice in future decision-making processes concerning the rainwater.

In the near future, the site will be transformed from a retention into an infiltration basin which will presumably increase not only the quality of the water, but its available volume. Today, this rainwater enters with a degree of toxicity into the city's canal system. Therefore, we want to open the dialogue about who will own the filtered water and have access to it. What if the water in the basin was treated otherwise than how land ownership is currently defined? In our political and economic water system, market driven interests are regulating the accessibility, cost and distribution of water and direct rainwater into private property as soon as it hits the ground or city-owned infrastructural sewage systems manage the resource (Swyngedouw et al.).

sources: 1 Helfrich, Silke [2012]: Gemeingüter sind nicht, sie werden gemacht. In: Helfrich, Silke/Heinrich-Böll-Stiftung (Hrsg.), Commons: Für eine neue Politik jenseits von Markt und Staat. Bielefeld: Transcript, p. 85.. | 2 Euler, Johannes [2018]: Conceptualizing the Commons: Moving Beyond the Goods-based Definition by Introducing the Social Practices of Commoning as Vital Determinant. In: Ecological Economics, 143C, pp. 10–16. | 3 Doran, Peter [2017]: A political economy of attention, mindfulness and consumerism: reclaiming the mindful commons. London, England and New York, NY, USA: Routledge

Therefore, the project wants to ask: If different stakeholders around the basin had access to the rainwater and made decisions - from the surrounding allotment gardens, cemeteries, sports fields, Pyramidengarten, Wagenplatz, Floating e.V. and more than humans - how would this shape the place otherwise while affecting water consumption habits and routines?

We consider water as a commons. The focus thereby does not lie on the material substance of a thing, but on the process of its making, like Silke Helfrich (2012) suggests. She points out that commons “are not, they are made”.¹ Further, Johannes Euler et al. define commons as a “social form” determined and produced by commoning.² Following Peter Doran (2017), commoning is about making visible what has been enclosed or sealed off from the public. It is about restoring the “deep connection between a community's ‘values-intentions’ and the connection they can make with a shared resource” which also has the potential to increase the connection between the people involved and the more-than-humans.³

Therefore, we aim to explore a possibility to detach rainwater from the ground it falls on, in order to challenge current neo-liberal ideas of ownership, accessibility and ecological justice.

By designing
a “basin within
the basin” we aim
to provide a forum
to discuss the
tension between
ownership, acces-
sibility, distributi-
on and caretaking
of water.

Further, the capacity of collecting water shall not define who has access to it or decides about its use. That is why we first mapped human and other than human actors around the rainwater retention basin, researched their routines and habits of water use and now want to question how the rainwater could be distributed in an ecological and fair way in the future.

Yet, especially when it comes to more than human stakeholders, it has to be doubted in what way they can be represented with a fair voice in an anthropocentric system. This topic is also reflected by Mihnea Tanasescu in “Understanding the rights of Nature” (2022) where he states that although the rights of nature have to be represented by someone, a “practical outline” is needed and they have to be “institutionalized in some form”⁴ Tanasescu makes clear that the rights of nature are inevitably intertwined with pre-existing power relations and therefore being represented by humans “will inevitably work to empower certain groups over others.” That is why the author sees “practices such as commoning as important allies that may work, in some cases, together with rights of nature”⁵

Therefore, the project proposes a place of assembly where different bodies of water can come together. Filtered rain-

water is the connecting element which holds a democratizing potential. By designing a “basin within the basin” we aim to provide a forum to discuss the tension between ownership, accessibility, distribution and caretaking of water. Since the representation of animals, plants, microorganisms or insects by human stewardship is difficult for a place of fair discussion, we are curious to see how the “seats” of more than humans in an assembly could look like. How can they be involved in the building process and form their own spots of representation - with humans assisting to build the framework of the place?

In our view, interrelationality and situational interdependence rather than technocratic management through capital driven urban development should be in the focus of the future debate about the infiltration basin. Therefore, the proposed intervention performs two spatial protocols: An assembly space where diverse forms of life convene to debate on water issues and second, a pedagogical device which - when not used for sessions of assembly - speaks about the cohabitation of these diverse forms of life through their connection to water.

sources: ⁴ Tanasescu, M. [2022]. Understanding the Rights of Nature: A Critical Introduction. (New Ecology, 6). Bielefeld: transcript Verlag, p. 139. | ⁵ *ibid.*, p. 140f.

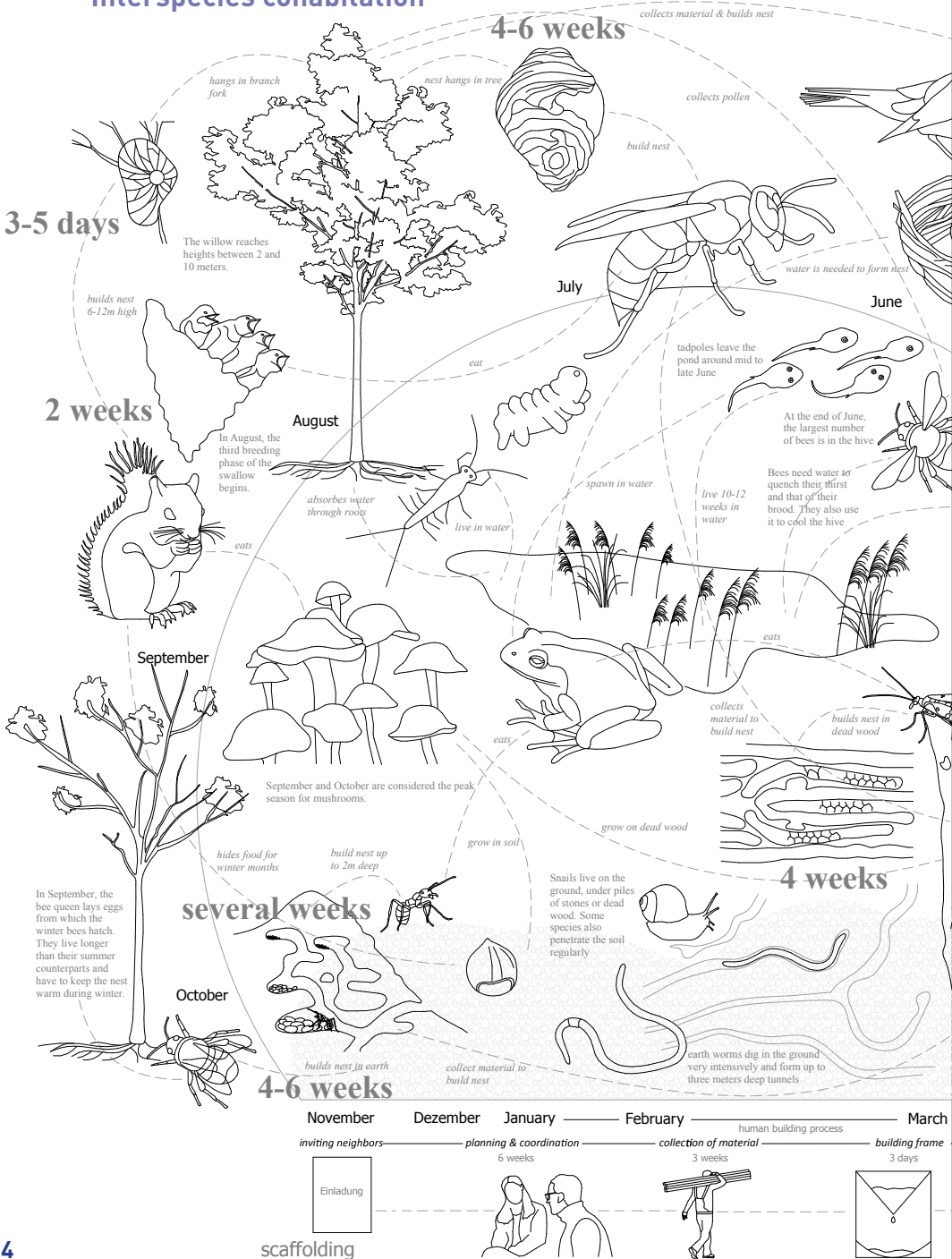
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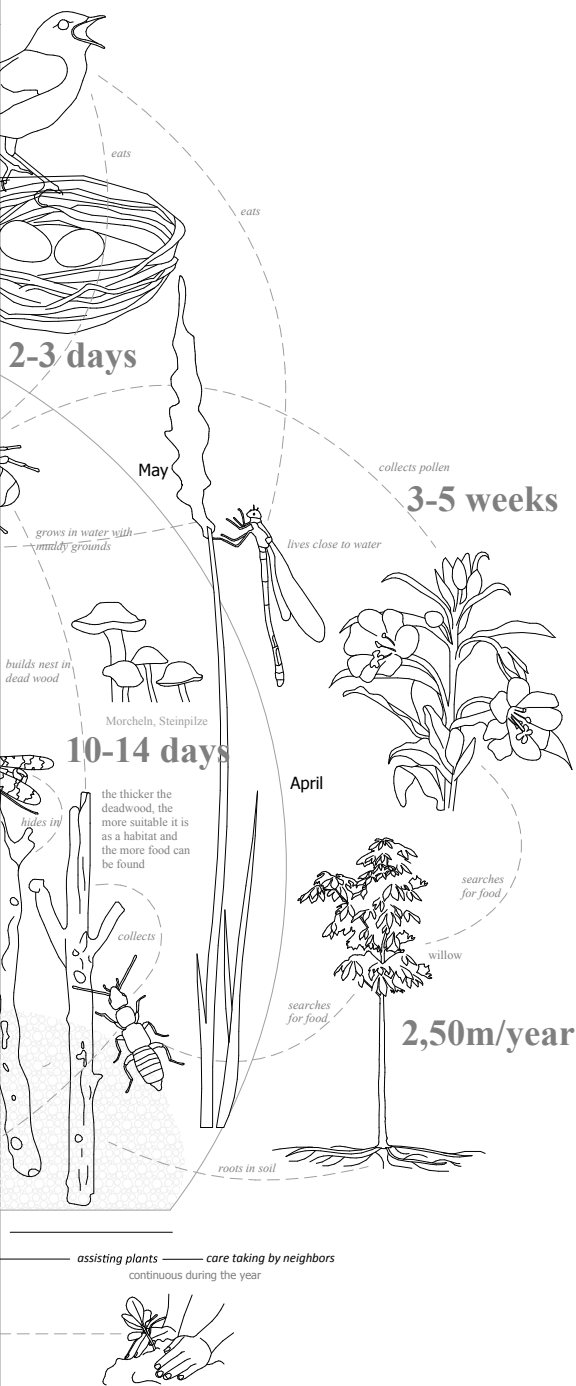
4.2

HYDROCOMMONS ASSEMBLY

Spatial Translation: Assembly space and pedagogical device

Interspecies cohabitation





How could a building process with more than humans look like?

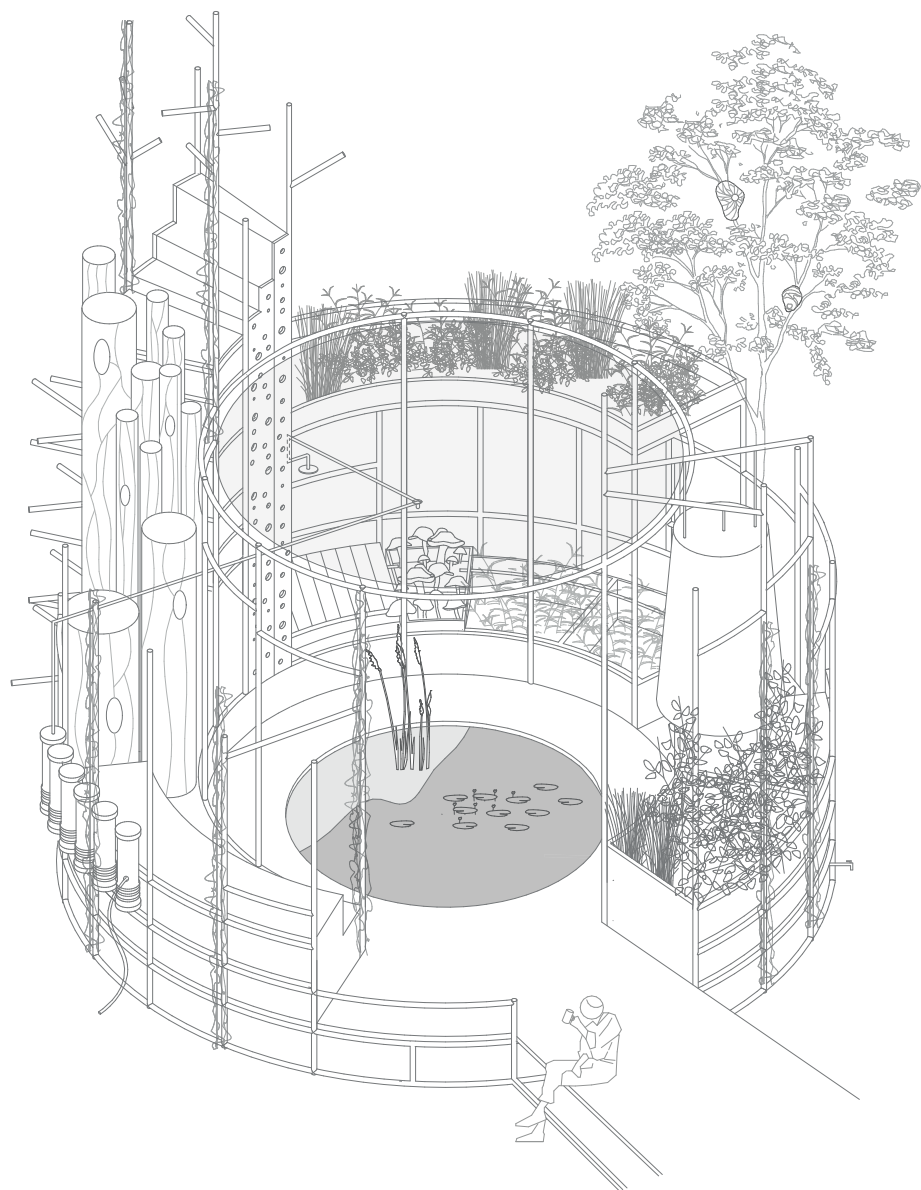
According to the Parliament of Things for a political ecology (Bruno Latour), we propose a direct representation of more-than-humans in the Assembly. The political model of the collective is based on the expansion of human actors to include more-than-human entities.

With our installation, we aim to integrate more than humans in the building process. To be part of a more than human assembly, we want them to be visible in the space and have "seats" that require their needs.

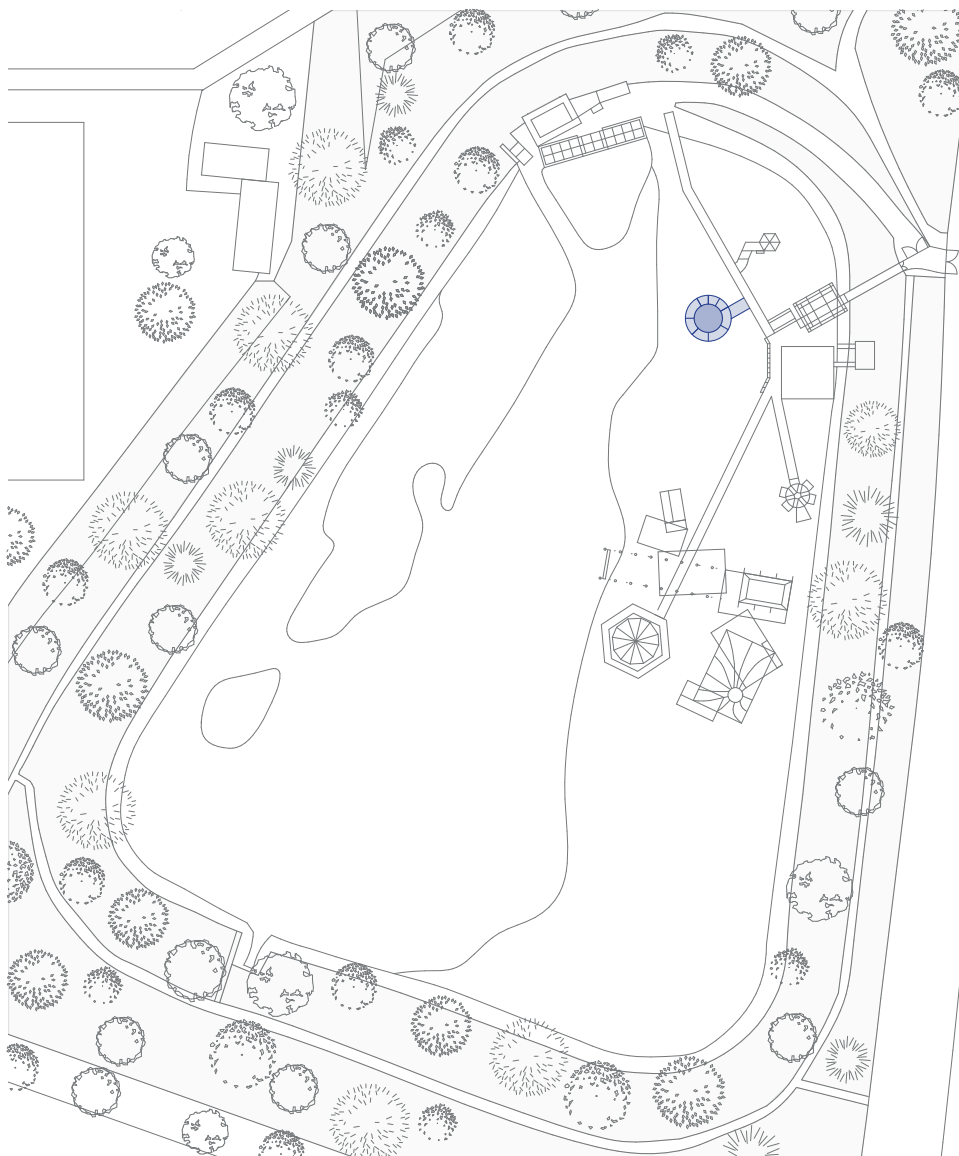
As humans, we are used to linear construction processes with a planning- and building phase. Since different species have different rhythms and scales of cohabitation throughout the year, we experienced with the installation of how more than humans could be part in creating their own "seats" in the assembly space. To integrate them, we thought about humans building the "frame" of the installation and assisting the plants in order to start growing and then let more than humans "take over" that process. The human construction phase therefore starts in the winter months since flora and fauna are less active throughout that period. With the beginning of spring, the more than humans can start creating their "seats" within the frame of assembly, using for example dead wood or provided soil to build nests and create a habitat. Since water is needed by all actors (humans and more than humans) it is placed as the central element of the installation frame.

4 HYDROCOMMONS ASSEMBLY

4.2 Spatial Translation: Assembly space and pedagogical device



isometric drawing



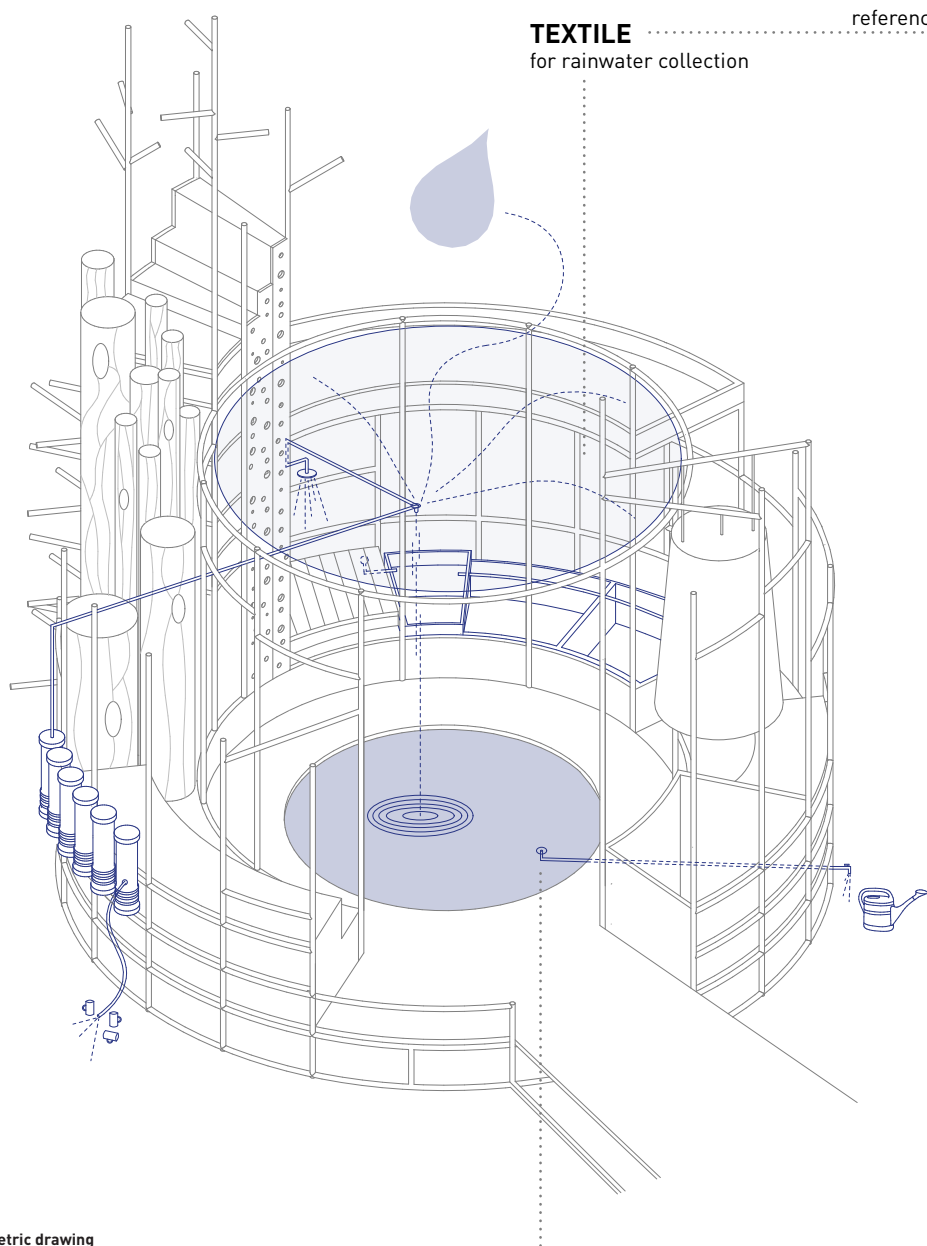
4

4.2

HYDROCOMMONS ASSEMBLY

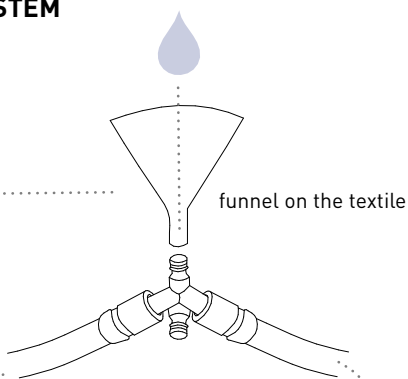
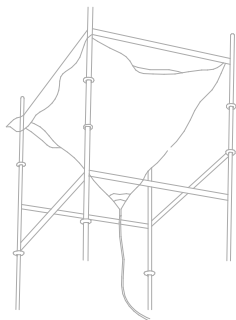
Spatial Translation: Assembly space and pedagogical device

Water system



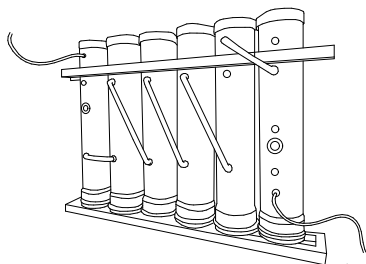
RAINWATER COLLECTION SYSTEM

by Katherine Ball

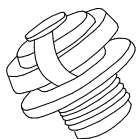


WATER FILTRATION SYSTEM

by Katherine Ball



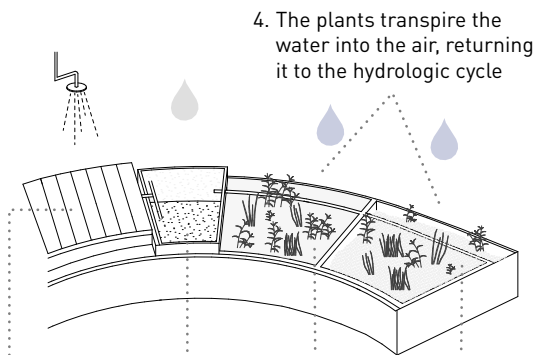
drinkable water



drainage

GREYWATER SYSTEM

by Katherine Ball



1. Water from the shower travels through pipes into two mushroom bins

2. The mushroom mycelium filters out pollutants

3. The water travels into two planters filled with water-loving plants



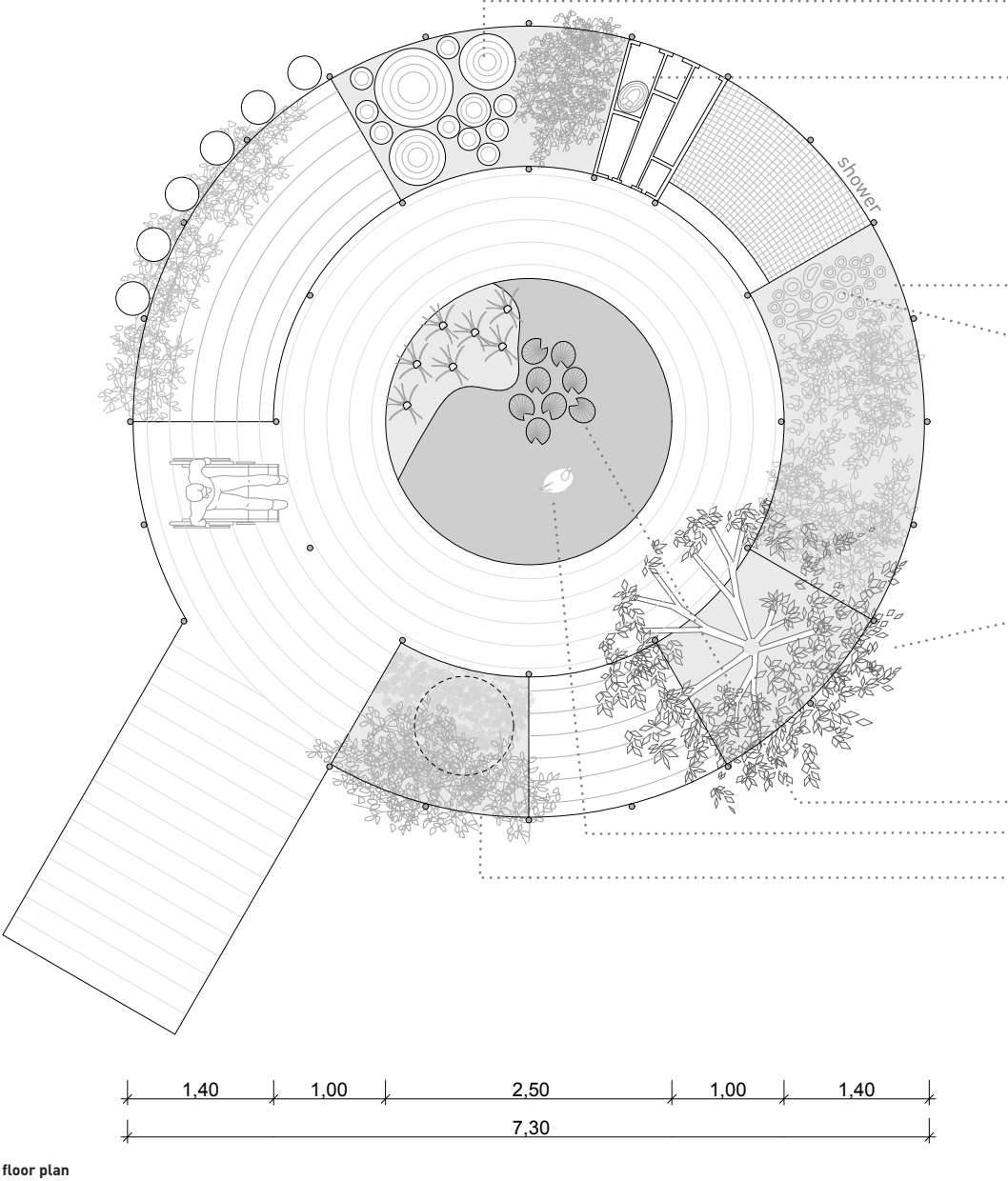
4

4.2

HYDROCOMMONS ASSEMBLY

Spatial Translation: Assembly space and pedagogical device

Interspecies cohabitation



HÖHLENBRÜTER

Birds that build their nest in small holes of trees or walls to hide from predators. The classic cave breeders include the **blue tit**, the **nuthatch** and the **woodpecker**.

DEADWOOD

offers **insects**, **birds** and **small mammals** the opportunity to build their nests and is the habitat of food for birds and other vertebrates. Woodpeckers and other native birds feed on the insect larvae in the wood.

MUSHROOM

Fungi can **filter polluted material** in soil and water. Further, their bodies are important food sources for mammals, insects, arthropods and snails.

SOIL

consists of minerals, water, air and organic materials and is the habitat for a variety of plants, animals and **microorganisms**, which all depend on each other. In soil with many **earthworm** tunnels, moisture does not accumulate, but the soil absorbs the rain like a sponge. Plant roots and important soil organisms also thrive better in loose soil.

WILLOW

are flat-rooted trees and grow rapidly up to 2,5 m per year. From an ecological point of view, the willows' pollen serves for **bees** and many other insects such as **wasps**, **beetles**, **butterflies** and **birds** depend on the species.

DRAGONFLY

Dragonflies are mainly found near bodies of water, as their larvae depend on water as a habitat. They attach their eggs individually to **water plants**.

EARTHWORM

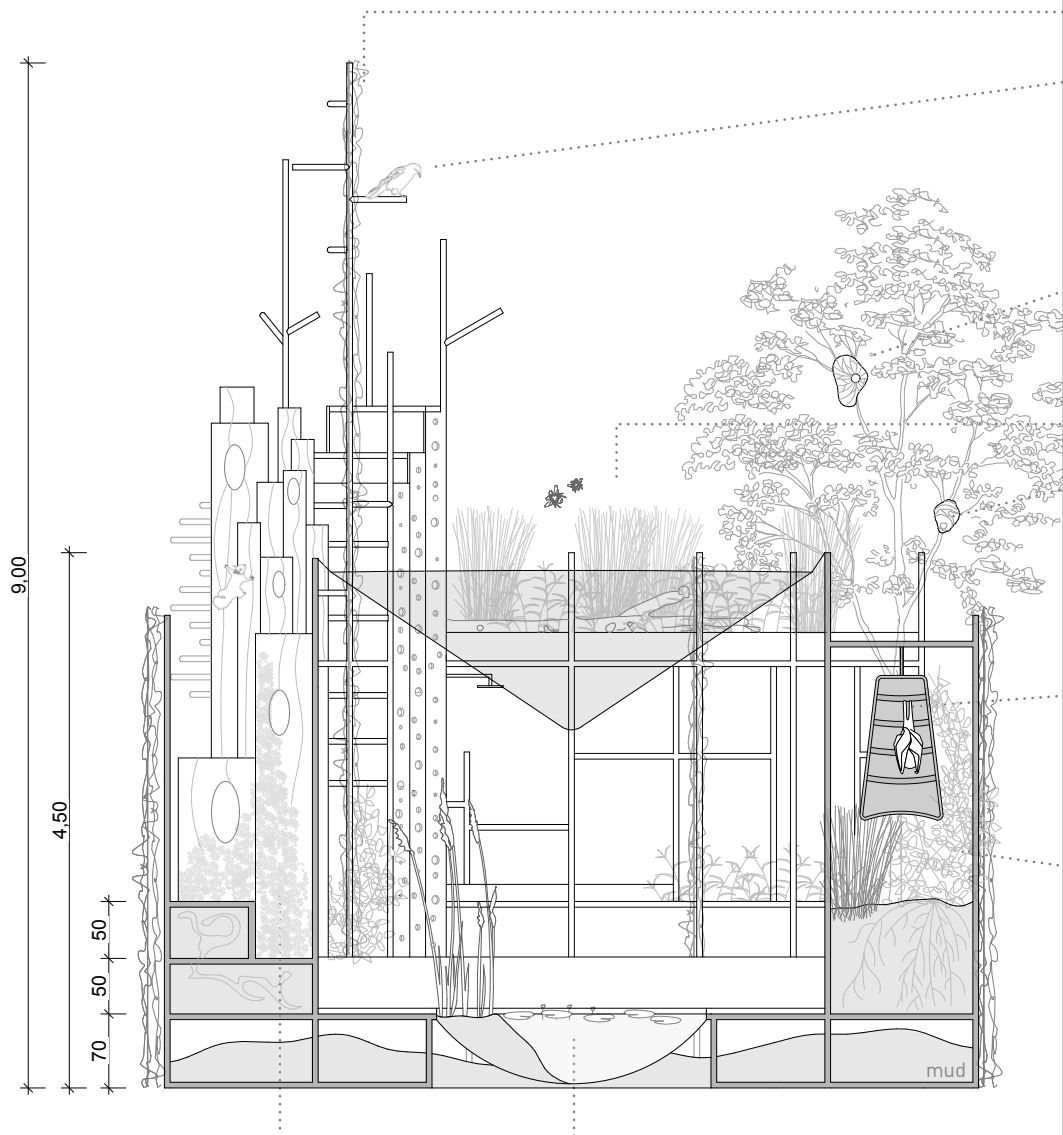
are important in the process of **decomposition**. They voluntarily dig up, compost old leaves and fertilize the garden with nutrient-rich droppings. Their tunnels are up to three meters deep and by constant digging, the earthworms aerate the soil and bring nutrients from the bottom to the top.

DUCK

The characteristic posture of ducks, with the rump sticking out of the water vertically, is called **burrowing**. When doing this they search the bottom of the water for food up to a depth of about **half a metre**.

4 HYDROCOMMONS ASSEMBLY

4.2 Spatial Translation: Assembly space and pedagogical device Interspecies cohabitation



section

CROW

prefer to use open and semi-open landscapes with individual structures. They use **raised perches** around **7-20 meters** height for assembling and watch out for hostile animals.

SQUIRREL

Lives in trees of forests, gardens or parks. They are active during the day and collect food. In fall, squirrels hide some of their supplies for the winter. They live mainly solitary and come together for reproduction.

WASP

Is a very flexible and adaptable species when it comes to choosing its nesting site. They are **dark cave breeders** and prefer to build their nest at protected places. In larger colonies, the art also nests in **free-and open-hanging spots**.

BAT

Depending on the species, the bat's nurseries and male roosts are located in **roof-like structures** or cracks of walls & wood. The majority prefers cavities as daytime hiding places.

HECKENKIRSCH

prefers a partially shaded location. Small birds like **sparrows** or **blackbirds** collect the fruits and build nests in their branches.

(MALE) FROG

choose calling places on plants or branches and lie in **flat waters** and hold on to plants with their front legs.

IVY

can form high and wide hedges and provides habitat for animals such as **bees, butterflies, blackbirds** and **greenfinches**.

KOBEL

The squirrel's nest. It is usually in **forked branches** at a height of more than **6 meters**. Squirrels often use different Kobeln at the same time and rest there during the day.

WILDWIESE

High meadows are an important habitat for animals and offer an opportunity for food searching, collecting material for nests or reproduction. Especially **bees** need meadows with different flower types to provide for their hives.

MOSS

often grows on old trees and deadwood. It grows on the bark and blends into the plant succession present during the **decomposition** of the tree. As a **habitat**, mosses play an important role for small animals, and as a germination bed for flowering plants. Some mosses form **symbioses** with **cyanobacteria** and **fungi** (mycorrhiza). Some liverworts trap ciliates and other small animals in their water sacs.





