
UNFOLD WASTED LAND

by Meike Sanger



MASTER THESIS REPORT

Examiner: Johnny strand
Supervisor: Laura Liuke



LTH
Lund University



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1. BACKGROUND REASONING

THE ISSUE

Introduction

The following booklet presents my master thesis project “Unfold Wasted Land” which deals with the potential within the refurbishment and revitalization of industrial wastelands. It underlines the qualities of such sites and examines drawbacks and issues that need to be overcome. Based on personal research, it proposes solutions and presents straightforward guidelines that ought to aid a successful process of transformation of suchlike projects. In addition, the booklet presents exemplary projects.

In the second half of this report, the booklet presents the specific refurbishment project that I have worked on in order to personally experience the working procedure of a reactivation process and to illustrate a concrete example that makes the practice of restoration more tangible.

In the end, this booklet gives a summary of all that should be taken into consideration. Based on all that, I will draw a personal conclusion and an estimation of how seminal I view the proposition of preferential wasteland revitalization.

Origin of Project Idea

The reasoning for working with such a topic for my master thesis is based on both a very generic and at the same time a personally rooted reason.

When I am at home in Germany, I am often struck with the large numbers of disregarded sites – both industrial and others – which are lying dormant amidst German cities. As clear reminiscence of what has been, they go back to a time when German cities

were still prospering from manufacturing industries. Where suchlike industries were once figureheads for productivity and wealth, they merely emphasize the pitiful decay of cities nowadays. Derelict factories both in the city centre and in the outskirts in which work has long since been seized. Abandoned army barracks that lost their meaning. And not to forget the generally vacant buildings throughout cities and the gaps between buildings that never seem to be filled again and that are denounced as ugly eyesores in a seemingly working, spotless urban grid. While many people disregard or even disdain these sites, I see a huge potential for architectural and urban projects that do not simply upgrade these places from eyesores to more respectable grounds but most importantly also have a striking impact on their surroundings and help mend the urban structure and transform the area into a more coherent urban pattern.

The reason for viewing these sites as such ‘potential-bearers’ might be rooted in my background. Due to the fact that my parents are working with real estate and have, beyond other things, specialized in refurbished heritage buildings, I have had many possibilities to experience the potential of old, existing buildings that have been refurbished. Therefore, I would like to spread this view in order to give a better knowledge of all necessary steps that need to be taken into consideration so that the probability of such projects comes to the fore.

Seeing all those abandoned sites slowly but gradually decaying is truly a shame since they bear a lot of different qualities that could be utilized to gain a highly prosperous urban area. Compared to the popular greenfield development projects, wasteland refurbishments definitely outplay new constructions on the undeveloped, 'virginal' field. One of the most distinct arguments for refurbishing an inner-city site rather than constructing on the greenfield is that most aspects of the necessary infrastructure are pre-existing. This will save both time and money when working with inner-city wastelands. While greenfield development projects are still in need of a well-planned, new network of streets, a supply network and social infrastructure such as kindergartens and schools, inner-city wastelands are usually already integrated into a well-established network of all necessary functions and structures. Of course, since the street network might have been inactive for some time, it might be necessary to bring road infrastructure back to life and fit it to today's situation that has evolved around it regardless of the site. Therefore, it might be necessary to retrofit the existing roads and access points to improve the accessibility and adjust it to its surroundings.

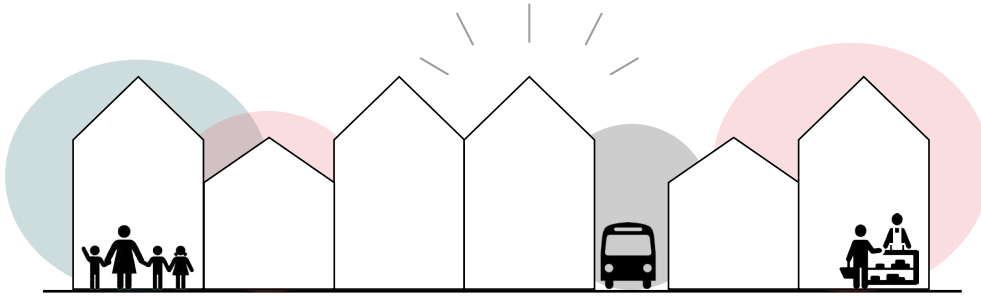
There can be no doubt that the planning and construction of a completely new infrastructure raises

the costs and expenses of greenfield development projects immensely above inner-city refurbishment projects. Looking at research comparisons, the documented numbers speak volumes:

For instance, the Chamber of Architecture of my region has published numbers in which it is stated that greenfield development projects account for a plus of up to 25-times higher costs for the necessary new development of infrastructure in order to connect these projects to the existing urban network (Architektenkammer Nordrhein-Westfalen, 2009). Besides, there are also other arguments against the construction of new infrastructure for projects on the green field. Considering the distance of the newly constructed area, it is important to highlight that the amount of exhausts cast into the air by cars driving from the new site into the city centre are naturally respectably higher than of those living in the city. An exemplary calculation underlines that a simple plus of 10km back and forth per housing unit within a 400-unit estate would mean a total plus of approximately 2.5 million kilometres per year that must be multiplied by the amount of exhaust fumes (Architektenkammer Nordrhein-Westfalen, 2009). This emphasizes the severity of deliberating between a project that is using an inner-city wasteland and one that is starting from scratch.

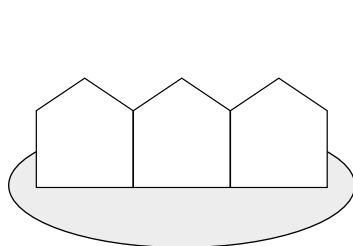
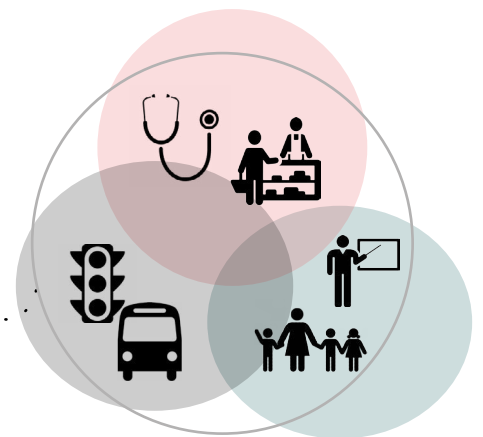
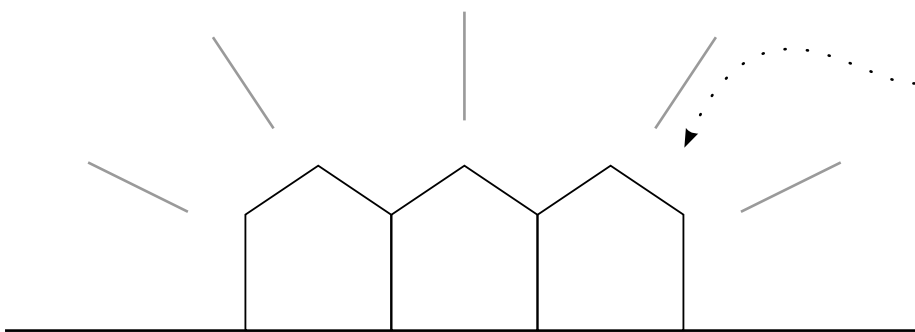
COMPARISON

INNER-CITY WASTELAND

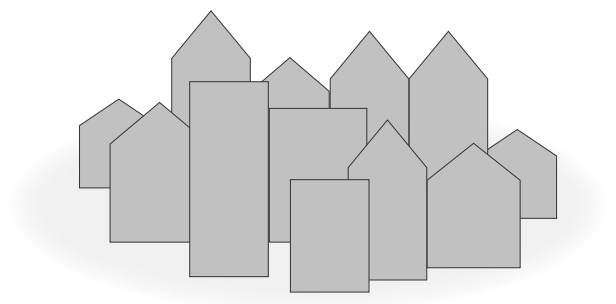
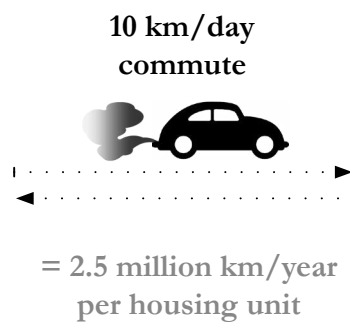


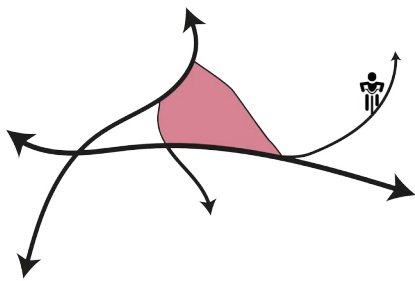
existing infrastructure & specific character

GREENFIELD DEVELOPMENT SITE



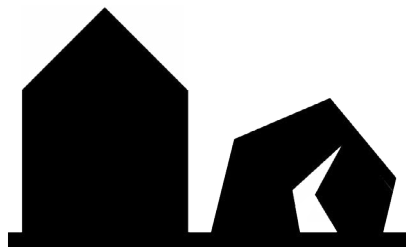
400 housing units





existing infrastructure.

Wasteland sites can definitely score with their pre-existing infrastructure. Due to the fact that there was a time when factory workers had to be able to easily come and go to do their work and deliveries had to be carried out to keep the production running, these sites had to have a well-functioning street network and a thought-through public transport system. Over the years of non-use, those networks might have become a bit 'rusty' but with a simple update, it makes industrial wastelands well-connected and accessible sites.



existing built structure.

The previous use of industrial wastelands also entails pre-existing structures on the premises. These structures can – depending on their condition – be of great help when revitalizing these sites. Their potential of revitalization should be surveyed in advance in order to ensure a reasonable way of handling the remainders.



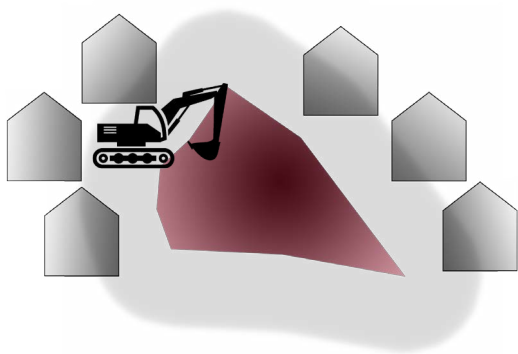
history & character.

In correlation with these pre-existing structures, industrial wastelands possess a prevailing character that has developed through time and use and bears in remembrance of the place's history. This raises the value of the site, thus making it worth being treasured and commemorated. Besides, it gives it an edge of 'maturity' over greenfield development sites that have to build from scratch.

Besides the infrastructure, wastelands usually also constitute existing built structures on site. These vary from an intact, re-usable condition to one that is condemned for demolition. Albeit the condition of the architecture, it cannot be denied that pre-existing structures add great value to sites and give them an authentic and distinct character that makes this place unique. In addition, it binds the site into history which strengthens its importance of existence.

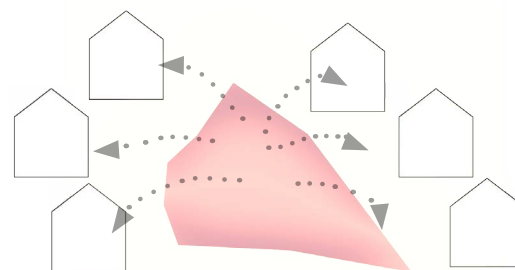
Another argument for the revitalization of inner-city wastelands might be actually viewed as one of the most important arguments:
 Refurbishing a derelict area in the city does not

simply alter the site in itself but more importantly the entire area. By the means of reviving such a site again, a prevailing physical and ‘psychological’ gap is filled to reconnect what has once been a coherent urban pattern. Making a wasteland accessible again reactivates old connections and creates new ones which lead to a whole new way of moving around the area. Besides, depending on the function that is given to the refurbished site, a transformation might occur if the area incorporates urban green or spaces for social interaction. This would increase the value of the area and encourage a stronger interaction between the inhabitants of the neighbourhood and others, thus, strengthening the community.



eyesore of the area.

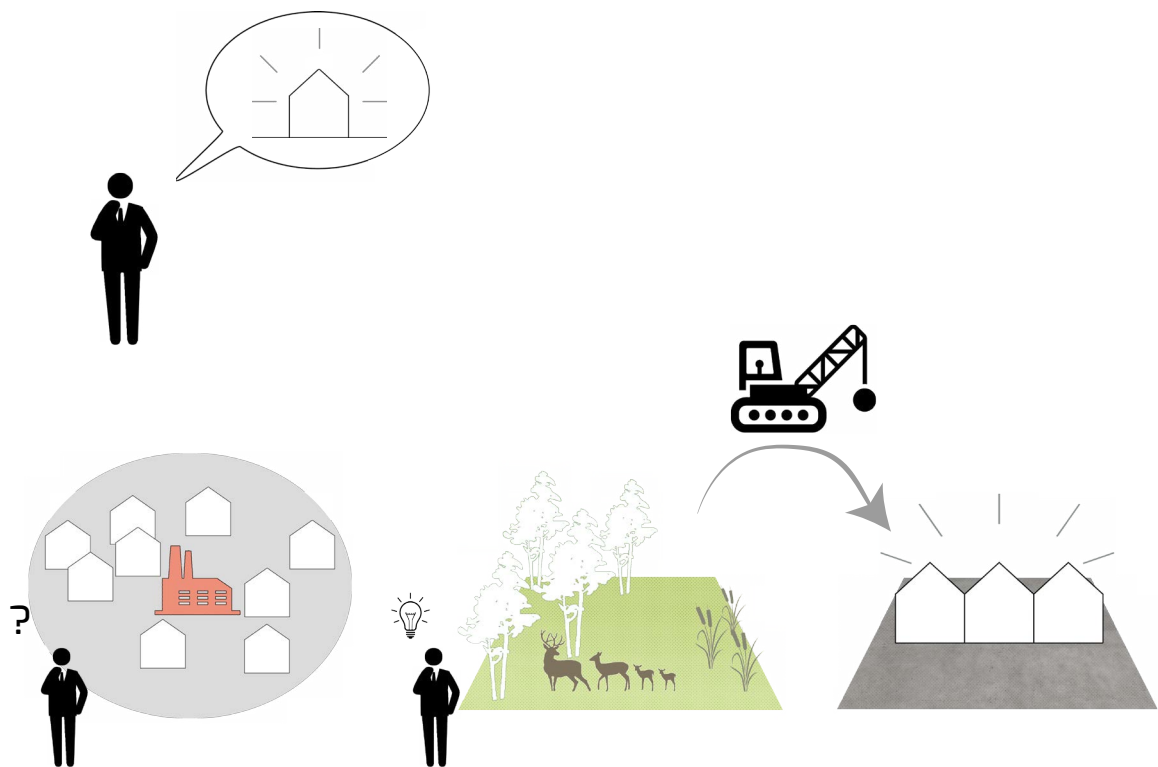
One of the strongest arguments for the revitalization of fallow lands is, besides the obvious site improvement, the great impact that a refurbishment can have on the surroundings. By reviving these sites, gaps in the urban fabric are being filled with new life,



retroactivity for surroundings.

thus (re-)activating urban flows and creating a location for new communal activities. Hence, investing into the refurbishment of an urban “eyesore” usually entails a positive effect on the entire area.

transformation of wasteland
 = transformation of the entire area



greenfield development sites.

Projects that are making use of pristine land rather than covered ground are therefore also making use of valuable resources that should better be treasured and kept for the sake of

preservation or otherwise for naturally kept agricultural land because biodiversity can thrive on extensively cultivated fields and pastures (Umweltbundesamt, 2017).

high percentage of greenfield development

One could think that these qualities would tempt planners and investors to engage more often in the work with wasteland projects. However, looking at the numbers, it becomes apparent that most projects in Germany are still greenfield development projects. Even though there are estimations that Germany has **around 150.000 to 176.000 ha of industrial wasteland** (increasing since 1993) and an **estimated redevelopment potential of 63.000 ha**, new construction planning often disregards these numbers. Therefore, the country has still an immensely high consume of greenfield land each day. Due to the fact that the problems of suchlike handling are known, a goal has been set in the year 2002 which determines that 30ha should be the maximal area that can be built upon each day. This goal should be reached by the year 2020. (Umweltbundesamt, 2015)

However, observations show that in the years **2008 to 2011**, the **daily 'use' of land still accounted for 81ha** of land which makes the set goal seem to be a far-fetched dream. (Umweltbundesamt, 2013). Within my region, the goal has been set to 5ha a day. In 2015, the land consumption had accounted for 9.4ha a day although this number included also recreational areas and cemeteries so that the actual number of built land added up to only 3.7ha, thus making the handling of construction projects seem more well-balanced than those of the overall German government. (IHK Wuppertal-Solingen-Remscheid, N.A.) Albeit the good statistics of my region, the national figures give reason for concern and demand rethinking and a shift in action.

Despite my good will for increasing the number of wasteland refurbishment projects to utilize their existing potential and to spare the precious greenfield, I do not believe to be naïve enough to think that this idea can easily be implemented. I am absolutely conscious of the fact that revitalization projects of industrial (and other) wastelands bear certain issues and obstacles that need to be overcome to put the pure idea into seminal practice.

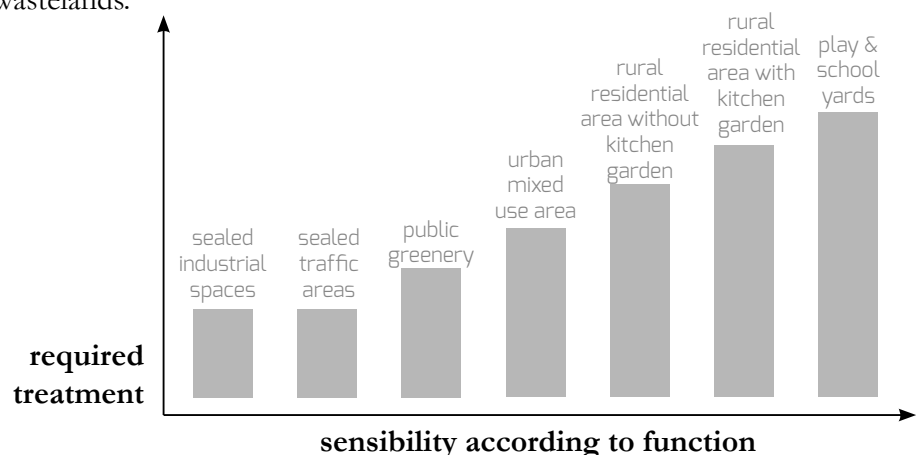
Therefore, I have looked closer at the possible obstacles that one might encounter when taking it upon oneself to tackle the transformation of an abandoned wasteland to a prosperous area of use.

One of the most striking reasons for the hesitation of involvement with such projects is the prevailing condition of the wastelands. Based on the prior function of those sites, many areas are often defined by pollution or derelict, instable constructions which need a preceding course of action in order to secure a safe and secure ground for new construction.

According to a survey that was made in 2011, there are around 290.000 ha of polluted land in Germany, most of these in fact in my region (Ingenieur, 2011) which is due to the fact that areas such as the *Ruhrgebiet* are included in this calculation which were completely dominated by manufacturing industries. These numbers highlight that especially the issue of pollution needs to be examined closer to be able to draw a valid conclusion of the potential of industrial wastelands.

Depending on the new function and on the severity of the pollution, different measures of action must be taken. First of all, the site in question needs to be thoroughly surveyed in order to be able to determine the location and degree of pollution. Some sites might only contain some scattered spots of polluted soil, others bear polluted groundwater and yet others might have severe pollution problems that might be difficult or impossible to clean with feasible means.

Besides, it is important to determine which functions are supposed to be integrated into the refurbished design because this will eventually determine the thoroughness of the following cleaning process. Depending on the aimed group of users, there needs to be a certain sensibility in handling the pollution. This signifies that industrial and infrastructural subsequent uses need the least amount of cleaning treatments, followed by public green. More thorough treatment is required for dense residential area, loose housing areas and areas with (private) gardens with the possibility of agricultural use. The most sensible and thorough cleaning process is necessary if the subsequent function is supposed to be a playground or school yard. In those cases, there is no margin left which means that all the pollution needs to be removed without any exception. (Institut für Bodenmanagement, 2002)



POLLUTION

fact check_pollution.

development of sites with pollution

- pollution as burden 26%
- pollution only conditionally obstacle 15%
- pollution no obstacle 59%

(Heinzel, 2010)

obstacles of conversion/transformation:

- no new user 57%
- inadequate planning parameters/situation 30%
- lacking start-up financing/funds 13%
- missing infrastructure 11%
- construction economics 9%
- objection/recourse within heritage buildings, homeland security and others 9%
- unsuitable parameters (e.g. in terms of taxes) 9%
- obstacles on the part of administration 8%
- objection/recourse from neighbours/private sector 6%
- elimination of pollution 0%

(Heinzel, 2010)

polluted wasteland in NRW.

	2006	2008	2010	2012	2014
determined areas	55,764	63,313	75,370	81,825	84,841
thereof accumulated pollution	21,313	27,199	30,493	33,397	31,667
thereof sites with pollution	34,451	36,114	44,877	48,428	53,174
risk assessment	14,540	17,614	17,969	22,414	24,762
refurbishment	5,319	6,070	6,138	6,766	7,201

(LANUV NRW, 2017)

After gravity and thoroughness of required cleaning have been determined, there are different ways of proceeding. Depending on the question of what is polluted and how badly, the pollution treatment can be executed through hydraulic, pneumatic, chemical-physical, electro kinetic, thermal or biological methods. Most of these methods have a passive and an active procedure, in which the passive is mostly used for means of securing the site and encapsulating the pollution to prevent further spreading while the active way is used for means of decontamination which entails that the site is truly cleaned off its pollution. It is not uncommon that actually both passive and active way are being executed within the cleaning process. Besides, it is also common to make use of several methods of cleaning in order to ensure a thorough treatment.

The hydraulic method is used for cleaning water pollution while the pneumatic method takes effect when a site bears problems with toxic gases and vapours. The electro kinetic method helps accumulating and extracting heavy metals in polluted soil and the thermal procedure is used for dealing with organic and non-organic elements either on site or off site. For both chemical-physical and biological methods, it can be chosen between on-site, off-site and in-situ treatments. On-site treatment means in this case that the pollution is being extracted from the ground and then treated on site. In contrast to that, the off-site treatment entails the transportation of the polluted elements to a specially dedicated cleaning facility. The decision for in-situ treatments always depends on the severity of the pollution because the treatment of the pollution right in place aggravates the possibility of monitoring the treatment progress. Thus, it is mostly advisable for less-severe pollutions.

The chemical-physical method is a treatment in which the polluted element is being washed to remove the pollution while the biological method includes the use of microorganisms that are supposed to clean all pollution. (Eiswirth, 2000)

Due to the fact that I have previously come across the biological treatment during my studies at Lund university when our study trip to Amsterdam led us to the project “De Ceuvel” which is located on a former industrial site with a high degree of ground pollution. Since the project has aroused my interest, I have explored the procedure and the possibilities a bit further. One of the most inspiring aspects of this project for me was the handling of the biological treatment of the polluted soil. Here, it was decided to keep the soil on site and, rather than treating it with chemicals or other means, to cover it with so-called hyperaccumulator plants. (De Ceuvel, N.A.)

These plants are defined by an extremely high tolerance of metallic soil and by their quality of absorbing heavy metals from the soil through their roots and accumulating the metals in their foliage. (Wikipedia, 2017)

Amongst these species are for example ferns, hydrangea, hydrilla (Wikipedia, 2017) and digitalis (De Ceuvel, N.A.). This method does not only clean the soil in a very thorough and natural way but also entails that the metals could theoretically be ‘harvested’ later by extracting them from the leaves. A drawback to this method is that it takes some time to fully clean the soil. (Wikipedia, 2017)

Thus, it is not an ideal solution in cases when a quick cleaning process is needed. Nonetheless, I find this method extremely inspiring and definitely worth considering.

hydraulic



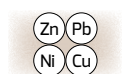
pneumatic



chemical-physical



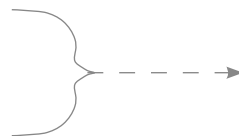
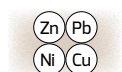
electronics



thermal

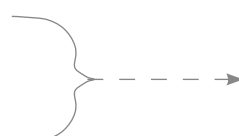


biological



passive (means of securing)

active (means of decontamination)

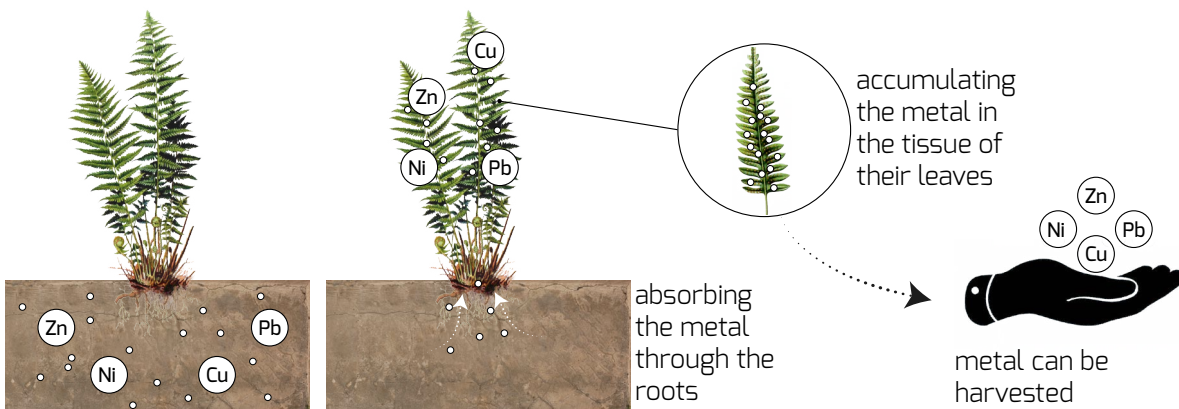


in situ (difficult to monitor)

on site (extracted & treated on site)

off site (transported to cleaning facility)

CLEANING PROCESS



biological treatment.

The biological treatment of polluted soil is quite fascinating because it means that microorganisms or plants are set at the polluted material in order to naturally handle the pollution. This means that neither chemicals nor special machines or

techniques are needed to clean the soil. In combination with the fact that using plants for the cleaning process can also help to harvest and restore heavy metals makes this method extremely sustainable.

Another aspect that needs to be taken into consideration when dealing with industrial wastelands is the fact that many of these sites still bear constructional remainders of their preceding existence. While often adding unique features to a site, this also entails a certain degree of required planning for the refurbishment of these structures, especially if their condition is far from being undamaged and pristine. A survey of the structural acceptability needs to be conducted in order to ensure absolute safety and structural stability.

In addition to the above-mentioned problems, reasons for hesitation for an involvement with such sites are the question of financing the project, finding appropriate tenants and also more general issues such as a bad or 'stained' reputation and possibly the question and circumstances of ownership which need to be solved and overcome.

Due to suchlike reasons that are conditioned by their preceding character, the majority of planners and investors prefers to work with greenfield developments sites as they appear to be easier to handle at first sight, even though they require a lot of planning for new infrastructure and large amounts of additional money. An increased handling of industrial wastelands and other abandoned inner-city sites would be desirable because it could spare valuable resources, would mend the urban fabric and would induce an Indian summer for the site in question, providing it with a lot of potential for the communal life.

Based on my research, I can say that it is sometimes inevitable to encounter some of these problems but at the same time, I have also learned that these problems are hardly ever insolvable.

Not only the pollution problem can easily be tackled in various manners but also the other issues pose no real obstacles.

In terms of the question of financing, there are several possibilities that can help to fund industrial wasteland refurbishments. Besides the possibility of crowdfunding and other 'informal' ways of fundraising, one of the most common methods is the funding through a public-private-partnership. (Umweltbundesamt, 2005)

Here, a contractually stipulated collaboration between public and private sectors acts together to achieve an efficient working process. Within this partnership,

all required tasks are assigned according to the best suitability, meaning that for example the financial aspect and the planning and provision of expertise is often handled by the private sector while the public sector takes care of the common welfare (Wikipedia, 2017).

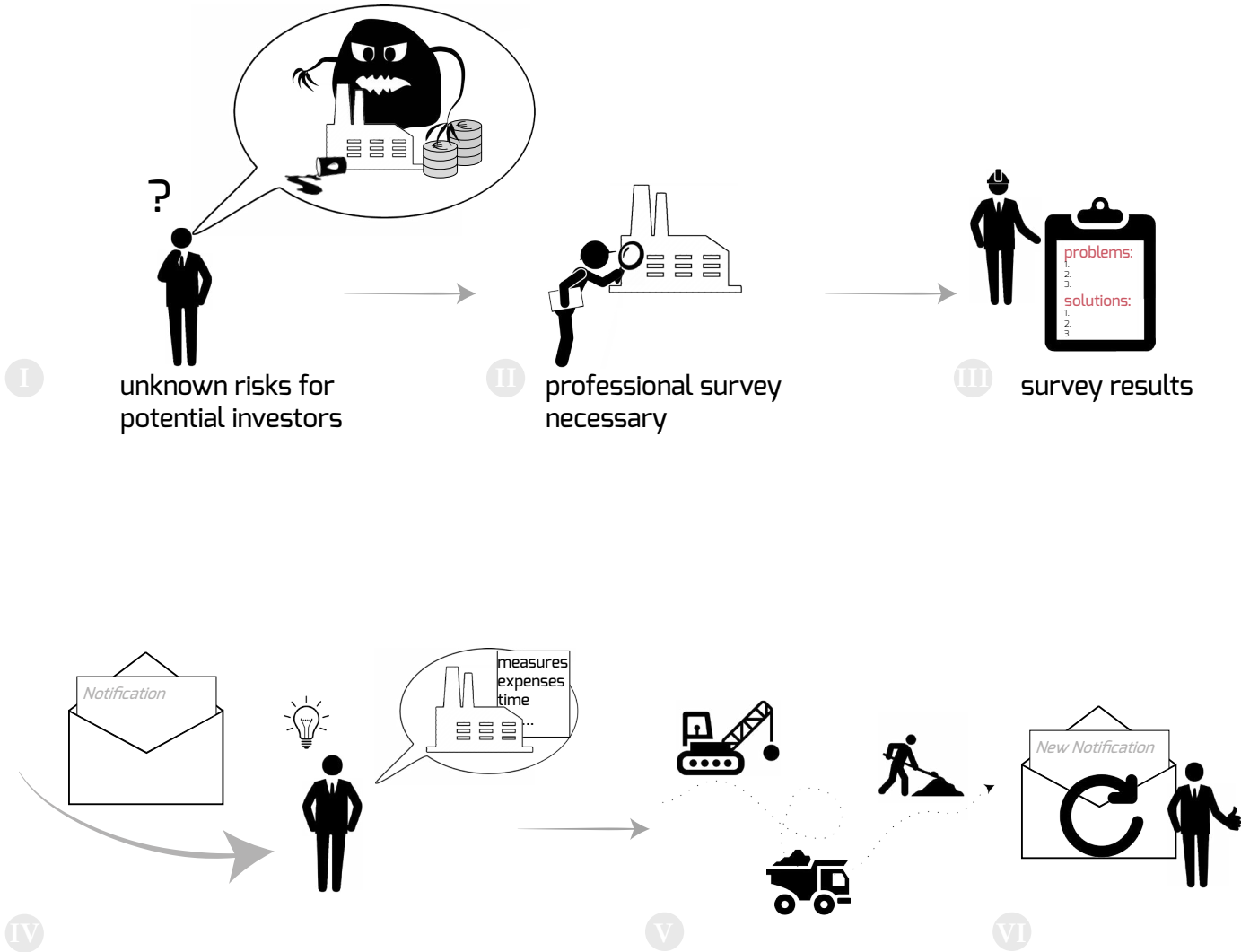
Moreover, the necessity of financial aid has found an attentive ear in the sectors of economy and governmental cognisance. In fact, the state has started to offer tax abatements to promote an increased 'use' of abandoned wastelands in order to accommodate investors with monetary aid for their expenses. This shows that the necessity of dealing with wastelands and of sparing valuable greenfield has been registered. (Umweltbundesamt, 2005)

In addition, the hesitation of handling such sites can be overcome with fidelity and forthrightness. During my research, I came across an article that expressed that it had been proven that, provided that a thorough survey of the condition of the wasteland had been conducted at the beginning of the process, the hesitation could easily be overcome if it was made public what the true status quo of the site is and what that entails in terms of costs and expenses. One of the major reasons for hesitation is actually the lack of knowledge of what an involvement will entail. If however the condition of the site was made publicly known, possible investors could better evaluate whether they can and want to afford to engage in this project or not. This facilitates the search for investors. Besides, the previously mentioned article emphasized also that a frank and close communication between all involved parties was recommended for the entire working process. Hence, it was best if a frequent update would notify about the goings-on and the current status quo of the project. This should obviate any reason for complaints and potential lawsuits (Umweltbundesamt, 2005).

In conclusion, this shows that there are definitely various advantages of revitalization of industrial wastelands in comparison to simple greenfield development projects and that possible obstacles can be overcome in different ways. Subsequently, I would like to promote an increase of wasteland refurbishments in order to spare valuable resources and revive what has fallen into oblivion.

SECURING INVESTORS

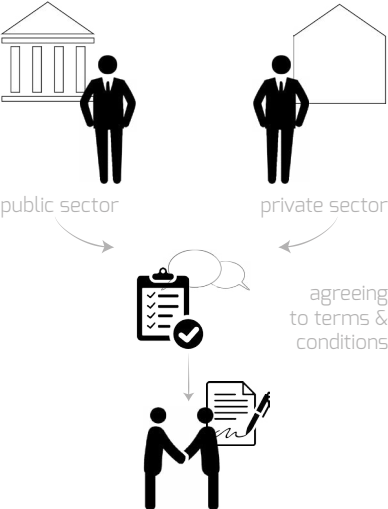
how to overcome hesitation
of potential investors



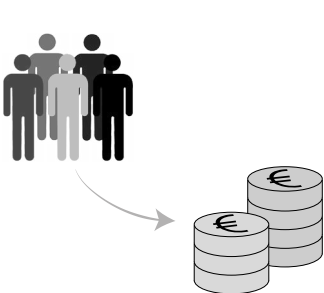
MEANS FOR FINANCIAL ASSISTANCE

financing

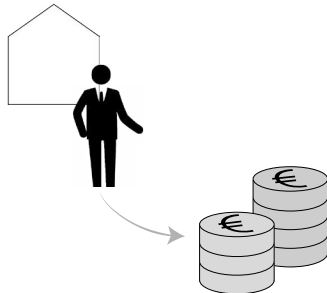
PPP
public-private-partnership



crowdfunding



private investor



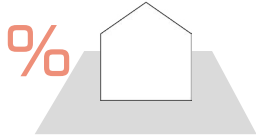
promotion of economic development



European funds



abatement of taxes & other monetary matters
e.g. abatement of real estate transfer tax

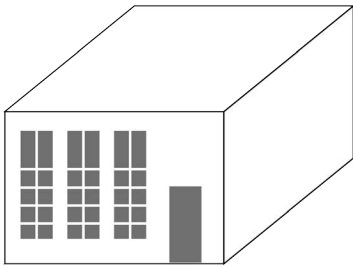


2. GUIDELINES

REFURBISHMENT STEP-BY-STEP

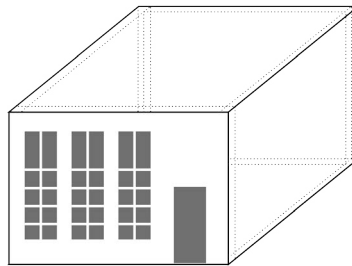
The process of refurbishment of an old industrial site is composed of various steps and includes decisions that entail an outcome of great diversity along the way. In order to clarify the extent of required design decisions, I have created a simplified, compound list. This list can be viewed as manual that can help to guide through the process of substantial transformation of dormant fallow lands into actively used urban areas.

RECYCLING THE BUILDING



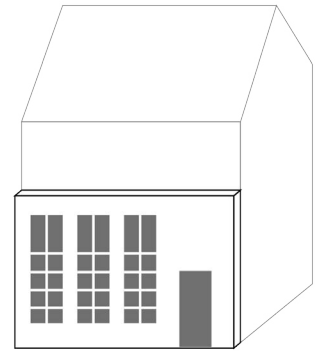
cube.

A building can be refurbished in various ways. One of the easiest is to keep 'everything' the way it is and simply reuse the space within. However, this method depends on an acceptable condition of the building.



shell.

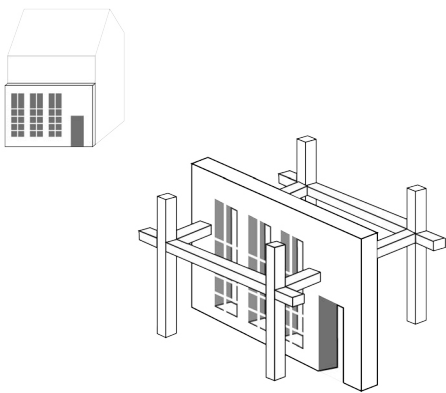
Besides, it is also possible to make new use of a building by keeping the exterior untouched while altering the inside according to the new need. This is common practice if the interior does not constitute a bearable condition for repurposing or if the layout simply cannot accommodate the new function.



piece.

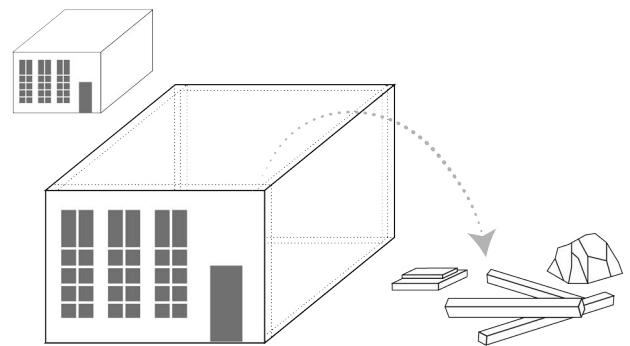
Next to 'cube' and 'shell', it is also possible to reuse parts of a pre-existing building such as individual wall slices. This is commonly done when parts of the architecture are damaged or destroyed. Besides, it is also common practice in cases when the inside of a building is of no desire but the existing appearance of the place ought to be maintained.

SAFETY MEASURES



stabilize.

If existing (parts of) buildings ought to remain on site, it is requisite to verify that the structure is stable in order to ensure safety for both the workers of the refurbishment process and naturally also the later users. If that is not the case, the structure needs to be stabilized by means of beams and columns or other load-bearing elements.

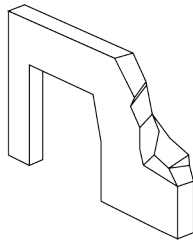


clean.

Besides an impeccable structural stability, it is also necessary to ensure the 'cleanness' of the area, meaning that there should not be any pollution left from the previous industrial use. Otherwise, a thorough cleaning process needs to be conducted before any further step can be taken. Depending on the kind and degree of pollution and the desired future purpose of the site, there are different methods of eliminating the polluted material such as a biological and a chemical-physical treatment.

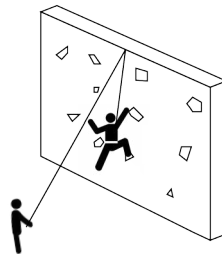
HANDLING OF EXISTING STRUCTURES

The matter of left-over structures can be handled in various ways that can be distinguished between physical and non-physical contact.



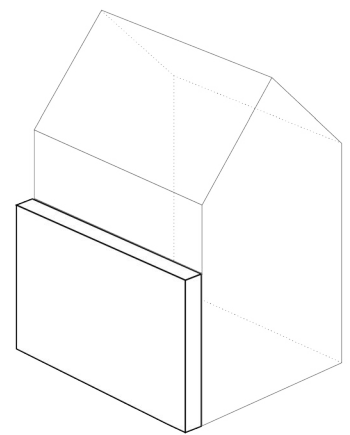
observe.

One option is to keep the architecture as a reminiscence of past-times, using it purely for 'visual pleasures'. This includes ruins that are being preserved and then used as staged photo motive. Thus, the architecture is transformed from being an object of physical use into a sculpture.



use.

Another purpose of a left-over structure can be the literal use of it which means that the building can be used as object in different activities. One of the most common examples for this would be the structural reuse as climbing wall for an indoor or outdoor climbing crag. Another option would be to use the structure as means to get up on higher ground, serving as raised viewpoint in a landscape or an urban area.

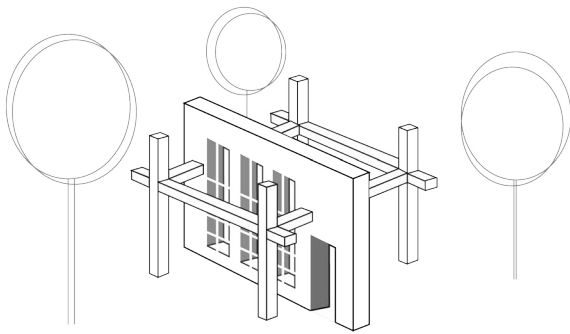


live in.

Moreover, an existing structure can also be repurposed to serve as residence. Here, the structure can provide space for the entire accommodation or it can house part of the estate and can be added by auxiliary buildings and annexes.

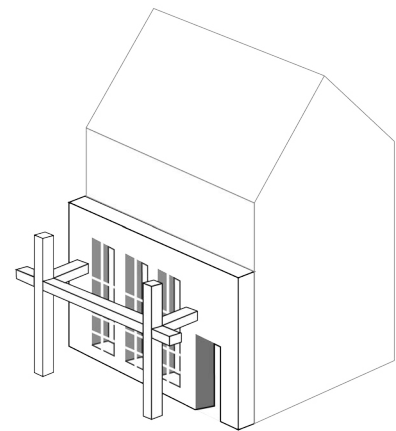
THE WAY OF USE

There are different ways how 'left-over' structures can generally be repurposed.



landscape.

A left-over buildings can also be used as part of a landscape. That means that the structure in question is maintained the way it is currently in and then staged in a landscape of greenery or architecture. Under this definition come refurbishment projects that transform fallow lands into industrial parks. Here, vegetation and structures are often combined to restage an area in an image of long gone history, taken over by nature.



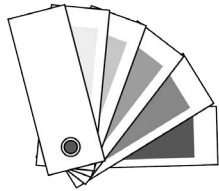
building.

In contrast to that, the structure can also maintain its function as building that supplies space for dedicated needs and houses different activities.

ADAPTATION

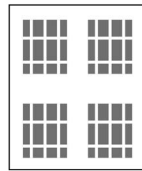
Moreover, if a decision is made to edit a site with additional structures (either because the spatial accommodation of the existing structure does not suffice or because the structure needs to be added due to damaged parts of the building), it is highly recommended to consider a suitable, site-coordinated architecture. In more specific terms, this means that

it should be considered whether the architectural addition should highlight the existing structure and be 'submissive' to it or whether it should blend in with the old architecture. Furthermore, it is also possible to let the new architecture blend in for the most part while reserving itself the right of slight distinction to emphasize what is old and what is new.



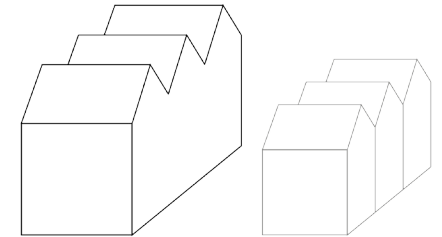
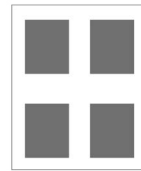
colour & material.

Looking at the different means of adaptation, it is for instance possible to match colours, patterns or materials of the existing architecture.



lines & alignment.

Another option is to pick up certain lines of focus such as window heights or an obvious imprint of ceiling heights on the façade.

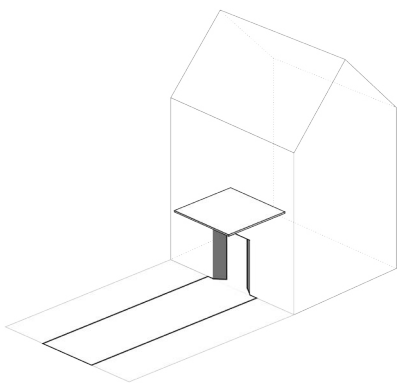


shapes & features.

Yet another way of adapting is to adopt certain characteristic shapes of the existing architecture such as roof shapes, organic forms or other physical adaptation.

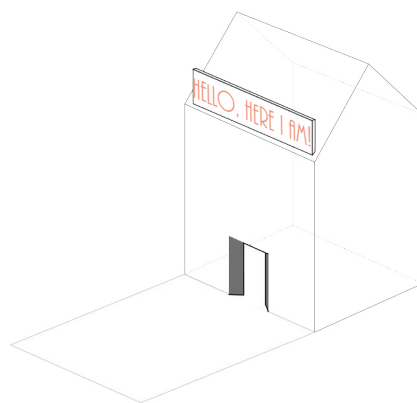
LINK TO THE SURROUNDINGS

The revitalization of fallow lands does not only require planning throughout the site but also in excess of the site's borders so that connections to the surroundings are ensured.



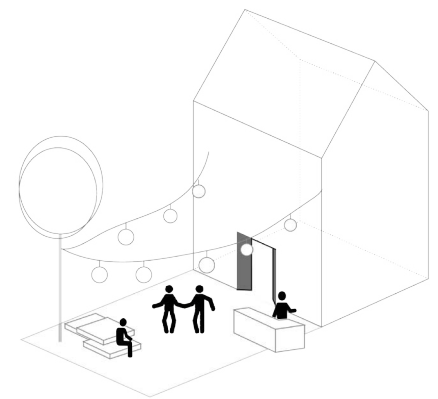
entrances.

In this context, it is extremely important to reactivate all pre-existing site entrances – providing that they are still reasonable according to the current surrounding structures. Due to the fact that the site in question might not have been in use for some time, the reactivation of certain entrances might not make sense anymore since the surrounding urban flows might have altered inconsistently to the site. Therefore, additional planning might be needed to see where the best entrances to the site and the best connections to the surroundings would be placed at. This ought to ensure that not only people who have the intention of entering the site will do so but also that other people who walk by are attracted by the entrances and feel encouraged to enter.



advertisement.

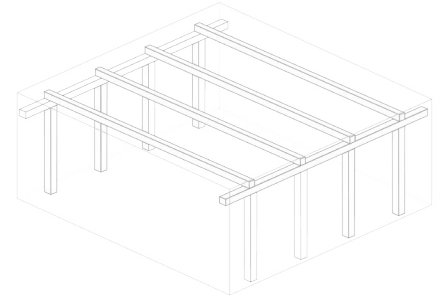
Furthermore, it is of utmost importance to advertise the refurbished site in order to arouse the people's awareness and interest, thus inviting for a visit. More precisely, the site needs to be reintroduced into society and the everyday communal activities. Hence, advertising for the newly refurbished site could attract both locals and others to get to know the site.



activities.

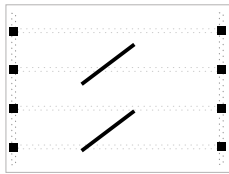
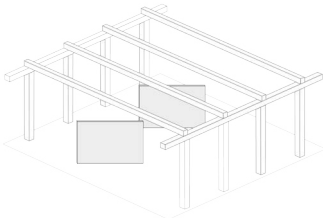
Moreover, it is important that, in accordance with the advertisement, the site invites for different events right after it has been refurbished or even already throughout the refurbishment process, for example by means of temporary activities. Different events should help to launch and ensure a frequent use of the site and with this, a lively atmosphere throughout it. Hence, early arranged activities should help to give the site a good, new reputation and awaken the awareness of the site as great option for interesting activities.

**most common
condition of
existing structures**



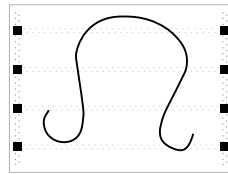
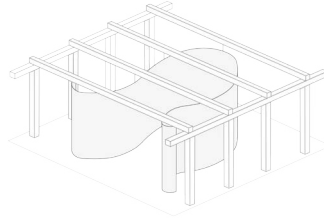
TRANSFORMATION TECHNIQUE

The possibilities of transforming an existing building are surely numerous and depend on the condition of the site and many other parameters so that a listing of all would exceed the reasonable volume of this guidebook. However, it is possible to say that there are certain typical ways of transformation. Based on the fact that most factory halls have been designed according to the special needs of manufacturing work processes. These processes commonly required large machines which in turn needed spacious grounds. Therefore, many of these factory buildings are designed in a frame construction with beams and columns that surmount large spaces. Hence, these factory buildings prove to be extremely suitable for a transformation and repurposing without much further ado. The following examples show how, with just a few small interventions, repurposing can take place.



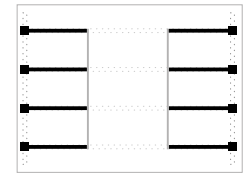
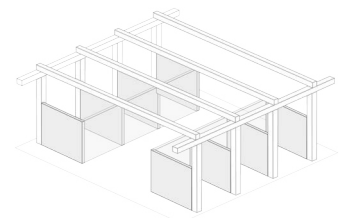
individual wall slices.
> ‘museum style’

One option of reusing an old factory building is to add individual wall slices, scattered throughout the surmounted space. This style is typically used for spacious museums and similar public facilities. Besides, in buildings where the surmounted spaces is smaller, this technique can also be used to create apartments with a typical ‘open floor plan’, as defined by Le Corbusier in his ‘Five Points of Architecture’.



curtain walls.
> ‘multipurpose space’

The literal curtain wall, i.e. a curtain substituting a solid wall, can be another means to divide large spaces into smaller zones to reinstate them for new purposes. This technique can for example be used in multi-purpose halls in which easy interventions and gimmicks are needed to quickly change a space according to varying purposes. Moreover, this technique can become handy in libraries as well as conference and study areas where subsidiary zones are sometimes but not frequently needed. Naturally, curtains, no matter how thick the fabric, cannot truly substitute solid walls. Nonetheless, they can help to muffle sound for some independence from the happenings around and can easily create additional zones to accommodate multiplying activities.



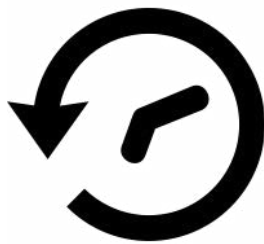
modular box.
> ‘offices & lofts’

Last but not least, there is the option of modular boxes that make use of easy-to-plan-and-produce wall arrangements to easily create a large number of equal, spatial divisions. This is especially useful for transformations into offices or loft apartments. Both purposes do not need complicated floor plans to accommodate the necessary needs, thus making this an ideal, easy way of transforming a factory building.

WHAT IS NEEDED?

FUNCTIONAL USE

When working with the revitalization of an industrial fallow land, it needs to be considered which functions should be included in order to turn this into a successful transformation project. Theoretically, the new purpose could involve everything and anything. However, there are some functions that are wise to incorporate due to their impact on the project's outcome.



reminiscence of history.

Seeing that the project is materializing in a place that bears a significant record of history, it would only do it justice to include a feature that bears in remembrance what the original purpose of the site was and how it has changed over time. This is best done in a museum or visitor centre and should invite all generations to get to know more about the history of the site. This will keep the spirit of the place alive to some extent.



culture.

Besides, it makes sense to incorporate cultural facilities of various kinds, attracting different groups of people at different times of the day. Cultural facilities are a great means to repurpose a fallow land because they can help to ensure a frequent flow of users on site. In addition, cultural facilities bear the potential of offering special events now and then, raising new interest and possibly attracting new clientele.



events & activities.

It is very important to consider offering different kinds of events on site in order to ensure and maintain the use of the place. Besides, launching varying kinds of events will help to attract different groups of people.



housing.

Even if a residential use might not seem necessary at first sight, it is actually quite important to include some dwelling units on a refurbished wasteland. Owing to the fact that residents have to come home eventually, this means that they ensure a permanent vitalization of the site, no matter whether the site is attracting visitors with other means or not. In addition, the accommodation of residents on site will help to secure a frequent use of for example shops, convenient stores and gastronomy.



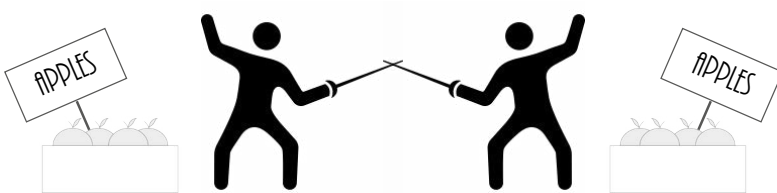
gastronomy.

Talking about gastronomy, it also makes sense to incorporate a certain number of restaurants, cafés and bistros that are catering to different groups of people at different times with different occasions. This can certainly help to make sure that the site is visited on a regular basis.



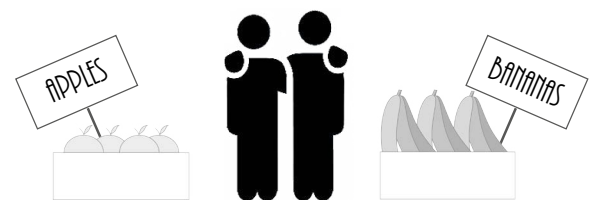
office spaces.

Last but not least, it might also be wise to integrate office spaces because it also ensures a frequent use of the sites premises. Besides, having office workers on the site will also entail that lunch and possibly also dinner places or bars are being used regularly. In addition, office facilities introduce a different clientele to a site that adds to the groups of residential and free time visitors.



competition.

When choosing the functions on site, it needs to be considered what the surroundings already offer and what is not represented yet. Due to the fact that competition seems rather futile, it is rather advisable to find functions that are entirely new to an area so that



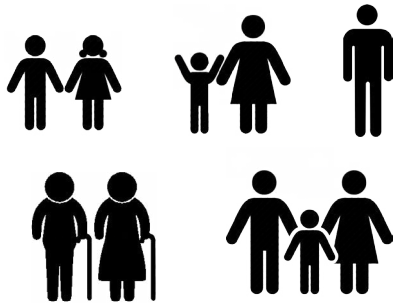
addition.

people will actually be attracted by the features that the site has to offer. Since a fallow land refurbishment is a physical fill-in within the previously intermittent urban grid, it should also be a symbolic fill-in when it comes to giving the site a new purpose.

USER

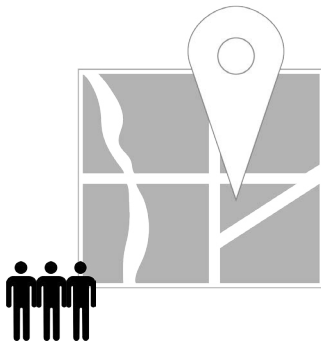
Planning the refurbishment of an industrial fallow land entails the question: Who should be the users of the site? Answering this question will help to find an answer to the question of purpose.

While one option could be to simply cater to one group of people of one generation, it appears to be much more reasonable to lay one's focus on a wider range of users. Enlarging the variety of clientele helps to secure the permanent use of a site and thus, its viability.



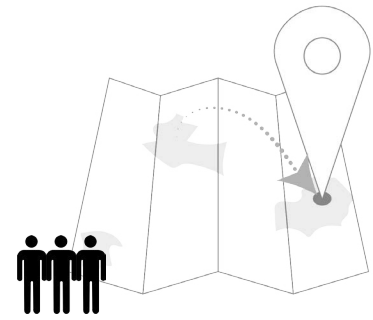
user diversity.

The site could cater to younger as well as elderly people, families or students. Whichever group will be focussed, it should not be the only target group.



locals.

A site refurbishment could appeal mostly to locals, offering for instance community facilities or facilities of the everyday life that every city tends to offer.



visitors.

A site refurbishment could also incorporate functions that attract people from across the city borders. This could help to increase the amount of visitors on site.

As in so many cases however, it is recommended to cater to both locals and visitors to a certain extent.

FREQUENCY OF EVENTS

Depending on the new purpose, a refurbished site can cater to different kinds of events. Here, it is wise to consider offering various kinds of events at different times in order to appeal to different groups of people.

OPENING HOURS	
Mon - Fri	█
Sat	█
Sun	█

permanent.

The offered events could be permanent or in other words on a regular basis. This would secure the frequent visit of a specific group of people.

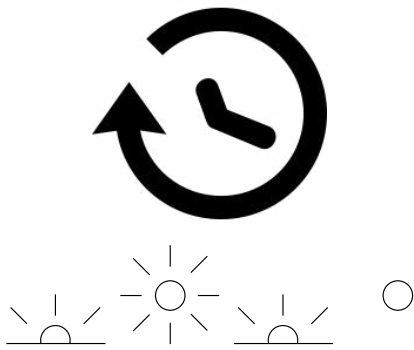
S	M	T	W	T	F	S
				⊗		

temporary.

A site could also offer temporary events or occasional activities. Giving the opportunity of launching temporary events can implicate events of various kinds that might not be possible if the site only offered the possibility of permanent features. This can help to keep the groups of users diverse and numerous, thus ensuring the viability of the area.

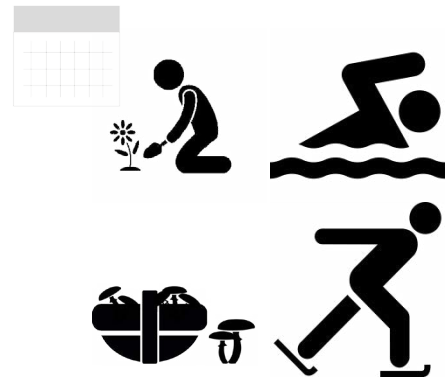
TIMELY MANNER

A site can be used at different times of the day or even at different times of the year. The focus will most likely lie on various daily activities since they ensure an important lively atmosphere on site. However, it is also worth considering whether a site should not also offer temporary, seasonal activities throughout the year to increase the scope of offers that a site can provide.



activities throughout the day.

The common, frequent activities come under the field of various, daily activities. Depending on the offered functions on site, the premises might be used more during the day or, for example in case of housing projects, from night time to morning hours and less during the day.

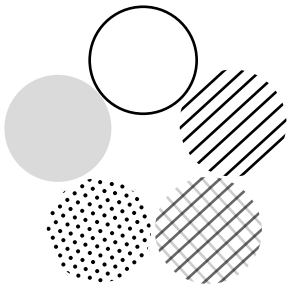


activities throughout the year.

While having everyday activities planned on a regular basis, a site could also offer special events that relate to seasonal activities. Examples for that could be ice skating on a water feature that is in the open or offering an outdoor pool during the summer. This would attract a lot of different groups of people at different times throughout the year and would make the site a matter of enduring interest.

FOCUS

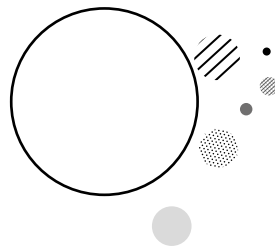
The last aspect of my guidebook sums up the notion that an industrial site refurbishment should follow. It concerns the question of focus and illustrates the impact that the choice of purpose can have on the outcome of a project.



equal distribution.

The focus of a site refurbishment can be equally distributed to various functions. Offering various functions throughout a site can only be a plus since this entails appealing offers for various groups of people which will keep the life on site manifold and active. It might be good to have equally strong focus points if the surroundings of the site promise to ‘fill’ these functions with equal activeness.

However, an equal focus on too many functions might weaken the site in total because the project might lose its stand-alone status and its uniqueness within the urban fabric. Therefore, it should be considered wisely, what should be focussed and what not.



main focus.

A refurbished site could also be set to bear a main focus and additional subsidiary features. This would help to shape the character and purpose of a site while still ensuring a larger, more diverse group of users and therefore the viability of such a project by offering additional, smaller events and activities.



monofunction.

(not recommended)

A monofunctional repurposing is possible but also rather questionable. Naturally, the monofunctional use of a place would mean a strong main pillar. However, if that pillar fails to find its group of frequent users or loses its attraction and significance over time, the lack of subsidiary functions will make a project automatically fail. Therefore, it is recommended to build up a project based on various functions that keep a site enduring.

In order to sum up this guidebook, it can be said that there are definitely numerous aspects that need to be taken into consideration when dealing with the revitalization of industrial fallow lands. One of the most apparent conclusions is that no matter what the choices of repurposing might be, the ideal way is always to widen the horizon and offer a variety of functions to a variety of users to ensure a frequent use and the viability and success of a site refurbishment.

3. EXCURSION

COMPARABLE PROJECTS



**Tapetenwerk,
Leipzig.**

[1]



**Zeche Zollverein &
Landschaftspark,
Ruhrgebiet.**



**Utopiastadt,
Wuppertal.**

[2]

During the past few years but especially also during my work with this project, I have stumbled across ‘various’ projects that deal with industrial wastelands. I would like to do on a quick excursion and briefly introduce some of these projects that I have found most interesting and inspiring in their way of dealing with different, ‘theme-related’ problems, sustainable solutions or a clear concept for re-introducing the handled sites into the active community life and everyday activities.

Tapetenwerk

One of these projects is a project that I came across while researching industrial refurbishment projects in Germany. It is a project called “Tapetenwerk”

(translated “wallpaper factory“) situated in Leipzig that is focussed on micro enterprises, designers and architects. A special approach was the low investment-related, gradual transformation of the area that has proven to be well-consistent with low sales and assets and allows therefore for low rents. In order to facilitate these low rents, the concept was to alter as little as possible and recycle and restore what cannot be left untouched. In addition, flexibility, close proximity and connections as well as clustered work helped to turn this project into a lively area. Most importantly however, this project was designed to act as case study to explore possible effects of transformation such as gentrification and counterproductive regulations as well as to explore the possible replicability of such a project.

Therefore, this project is an extremely interesting reference. (Sigmund, 2014)

Zeche Zollverein & Landschaftspark

In addition, there is a group of linked projects in the area *Ruhrgebiet* in the west of Germany.

The area in question and several cities around were defined by coal mines and the works connected to coal and steel. Since the economic crisis within the coal and steel industries in the 1950’s to 70’s, the region is in an ongoing structural change of the area’s character and image. After a period of vacancy, several sites have been gradually refurbished and transformed in order to reactivate the old structures of historical heritage. (Wikipedia, 2017)
Beyond others, some buildings



have been turned into museums that accommodate the documentary of the history of the region or other closely related topics. In the meantime, the “Landschaftspark” (landscape park) in Duisburg is a large district that combines several functions and activities at the same time. The park offers activities that are both seasonal and year-round as well as temporary and permanent. The area is characterized by various landscape features with different themes that both adapt and coincide with the appearance of decaying industries but also contrasts the existing industrial landscape in other parts with neat garden design of flowering bushes and hedges. The entire park is designed with the idea in mind that the old, existing building structures should be somewhat preserved and newly experienced in different ways. For example, visitors can enjoy a swim in a roof-top pool in old shipping containers, go ice-skating in winter, go diving or enjoy the view over the entire area while climbing through the climbing park

which is set into the industrial site. All these activities help to attract both people from the nearby area but also tourists, thus, reviving the sites, commemorating their significance and subsequently affecting the sites’ surroundings through a renewed link to those succinct areas.

Utopiastadt

The project “Utopiastadt” is mainly defined by communal work. The project arises from the refurbishment of an old train station in Wuppertal that is put under monumental protection. “Utopiastadt” was intended as project by the community for the community and aims to create a groundwork for neighbourhood activities. The financing of the project was provided in several ways, both with monetary support from a bank (loan), fundraising platforms and large amounts of voluntary work that reduced the overall costs. The old train station was transformed into a communal

centre and is used greatly by the community ever since. For example, it offers a café and bar area on a voluntary working basis that invites a lot of people throughout the week and during the weekend to come by. This is combined with various events such as poetry slams and readings that are held within the bistro area, allowing the visitors to enjoy a coffee or beer while listening or even participating in the event. In addition to that, the project offers special features such as a bike repair and rental facility where bikes can be rented for free. This attracts especially families on the weekends to come by, enjoy a bike tour through the area and then spend the rest of the day in the café or outside on the premises. Another outstanding feature is a communal workshop space where people can meet to simply fix things but also to work on a conjoint handiwork project such as building vegetable beds for communal gardens. (Eickhoff & Gennies, 2014-2017)

4. THE SITE

SOLINGEN

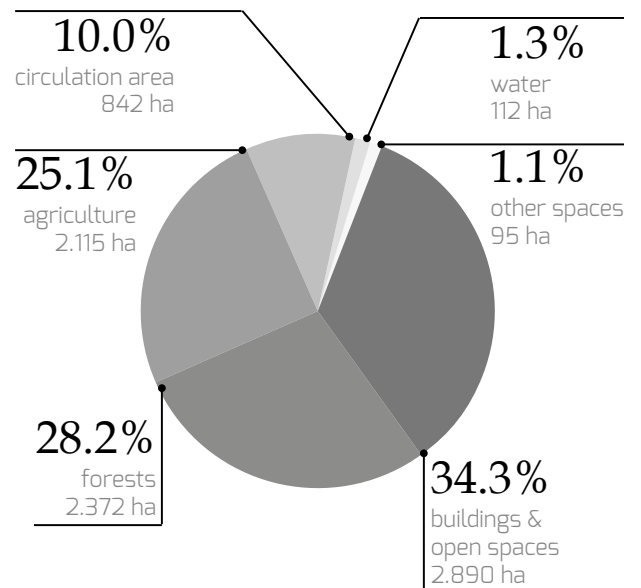
In order to convey a better understanding of my specific site refurbishment, I would like to briefly present some of the most important parameters that define the city Solingen and the life there.

Solingen was founded around one thousand years ago and belonged originally to the association of Hanseatic cities in Germany, giving it a great significance in history.

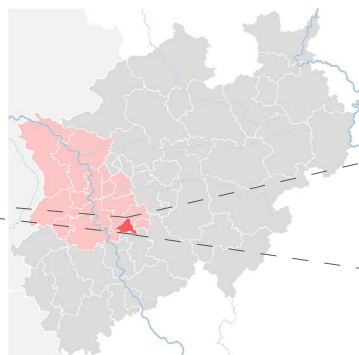
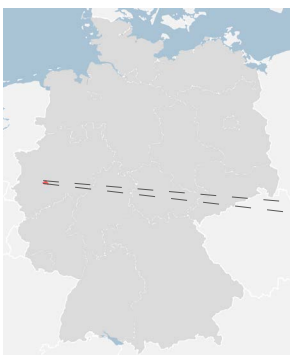
Today, it is a middle-size city of 158.726 inhabitants

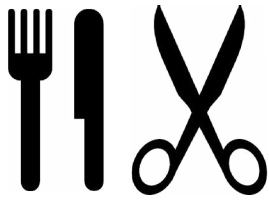
(status of 2015) and a population density of 1.773 persons/km². The city is situated in the west of Germany in the state Nordrhein-Westfalen which is the densest and most inhabited state in Germany. It constitutes an area of 89.54km² (Wikipedia, 2017) that consists to 34.3% of buildings and open spaces, followed by forests and agriculture (Stadt Solingen_ Stadtdienst Vermessung und Kataster, 2016).

land use of the urban area



(Stadt Solingen_ Stadtdienst Vermessung und Kataster, 2016)





steel & cutlery.

Since the Middle Ages, the city is Germany's heart of the cutlery industries.

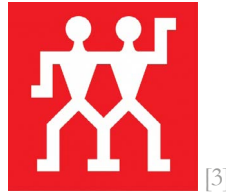
90%
of Germany's cutlery industries situated in Solingen

(Wikipedia, 2017)

However, the city bears also several small creeks adjacent to the urban area which entailed that it was a location where a lot of blacksmiths and armourers settled in the early days, turning the city into a place known for its numerous high-quality iron industries, producing swords, knives, general cutlery and other items. Due to this, the city had periods of great wealth, importance and appealing amenities which led the city to its climatic point during the 18th century and once again during industrialization in which Solingen grew immensely in size and population.

This reputation has remained until today, even though the competition of cheaper prices on the global market has led to bankruptcy of many manufacturers and a decline

Klingenstein



[3]

general figures.

industrial rate/sales volume

+1,4%

export quota

47,3%

unemployment rate

8,8%

in population and status. Despite globalism, the most prominent firms have survived, making Solingen still famous for the home of companies such as Zwilling. At the moment, Solingen is slowly recovering from its low so that for example their industrial sales volume is increasing again and 90% of Germany's cutlery industries are once again situated in Solingen. (Wikipedia, 2017)

Despite that positive development, it is also worth mentioning that the once very prominent industries of metal, engineering as well as electronics and automobile production are on the downgrade whereas chemistry, plastics and food industries are experiencing a positive economic development. (IHK_Wuppertal Solingen Remscheid, 2016)

economic development.

positive development ↗

**chemistry, plastics/
synthetic materials,
food**

negative development ↘

**metal, electronics,
engineering and
automobile industries**

(IHK_Wuppertal Solingen Remscheid, 2016)

Solingen is located in a relatively hilly area which has resulted in the use of trolleybuses, a transportation system that Solingen is known for. More precisely, the city centre is located at 221m above sea level while the entire urban area has in fact a height range of 53m to up to 276m above sea level. (Wikipedia, 2017)

These numbers highlight well that the townscape is defined by spatial ups and downs, constantly creating different view angles when walking through the area.

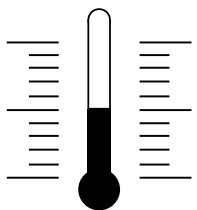
The parameters of living are relatively typical for German medium-size cities: The common form of housing in the ‘outskirts’ of the city and parts of the inner-city urban area are defined by 1- to 3-storey family houses and row houses with individual gardens. Towards the direct city centre, the houses rise to up to 5 or a maximum of 6 storeys in form of apartment buildings. This results in the overall appearance of a low-rise urban area that only gains visual variety due to the rise and fall of the terrain.

The housing stock accounts for approximately 81.911 housing units (Wessendorf & Kurth, 2016), compared to 75.250 in the year 1995 (Bezirksregierung Düsseldorf, 2014). The average size of one housing unit in Solingen accounts to 84.4m² which is slightly less than

the average size of households in North Rhine-Westphalia and Germany in general (unknown, 2015). These housing units are distributed to 62.1% in apartment houses and 33.5% in single and double family houses. Corresponding to an amount of 76.614 households, Solingen constitutes an average size of 2.1 persons per household. (Wessendorf & Kurth, 2016)

As a quick side info, I would also like to point to the climatic data of Solingen. Most striking about the city’s weather is a high tendency of rain due to the hilly condition of the area. In fact, the average amount of rain is so high that it sends Solingen right on second place after Wuppertal as the city with the most annual rain. (afp, 2008)

While some might see this as disagreeable condition, it can also have a positive side because the extensive amounts of rain can be accumulated in dedicated tanks that are filled with specifically suitable plants that can filter the water. After this natural cleaning process and an additional percolation process in which the water is further filtered and purified by means of rocks, sands and sediments, the rainwater can be reused for different purposes such as water supply for the laundry and the irrigation of public and private greenery. Otherwise, the weather condition of Solingen is rather unremarkable and therefore does not require further mentioning.



temperature.

temperature

minimum Ø 0.1
 maximum Ø 24.2



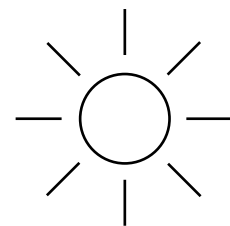
precipitation.

precipitation (mm)

minimum Ø 50 (Feb)
 maximum Ø 129 (Aug)

days of rain

minimum Ø 13 (Apr/Sept)
 maximum Ø 22 (Dec)



sun.

hours of sun

minimum Ø 1
 maximum Ø 6

annually 1091.5 l/m²
 of precipitation (second
 highest amount in Germany)



PROMINENT BUILDINGS NEARBY

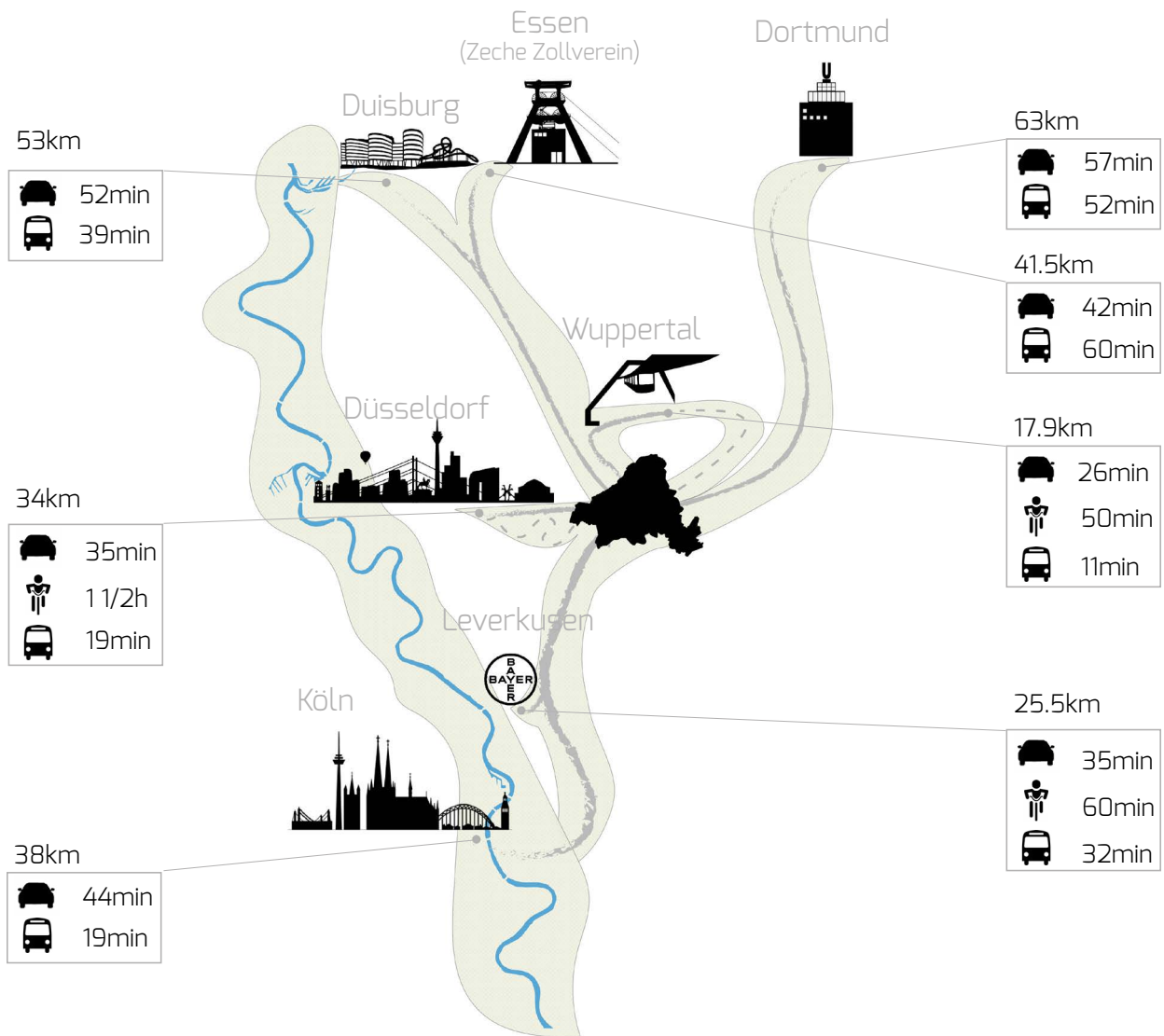


The following images show iconic buildings and constructions of Solingen so that it is better understandable what the architecture of this city looks like. Beyond these photos is the head office of the cutlery manufacturer 'Zwilling' (upper left), a castle in the surroundings of Solingen's outskirts and the old railway bridge "Müngstener Brücke" from the late 19th-century which is the highest railway bridge in Germany (Wikipedia, 2017) (the two lowest

photos on the right). Besides, it is worth mentioning that the upper middle photo symbolizes a type of housing that is very typical for the entire region. It is a half-timbered house with black-coloured waling timbers and beams and white-coloured fillings. The speciality of these houses is that usually not all of the façade had this appearance. In fact, these half-timbered houses bear usually one to three external walls that were additionally covered by roof slates as were the roofs.

The cladding of roof slates on the external walls had the purpose of protecting the façade from the negative influence of weather. Even though this technique is not extremely typical anymore, it is nonetheless still practiced from time to time, thus maintaining this outstanding kind of architecture.

MAP OF THE REGION

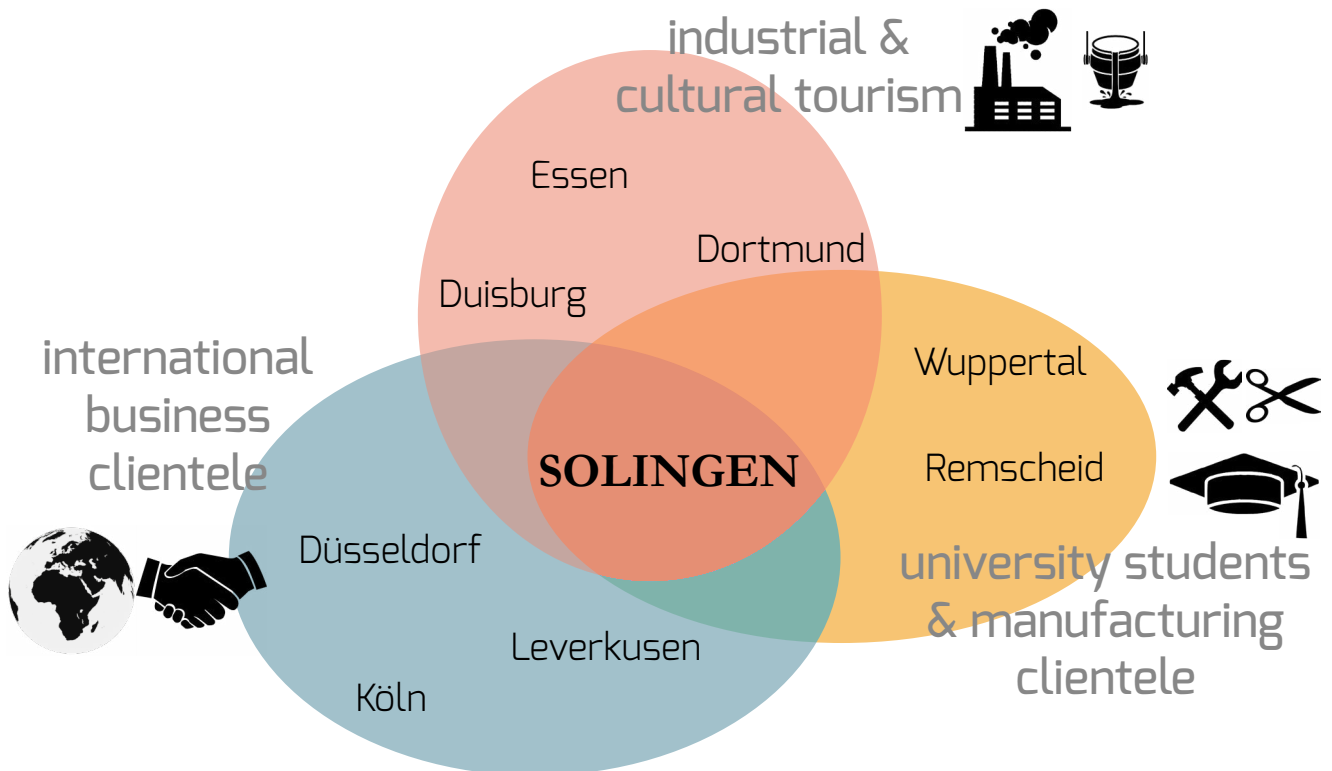


AFFILIATED POTENTIAL

In order to gain a better understanding of Solingen as project location, it is also important to take a closer look at the vicinity of the area so that a valid evaluation can be drawn concerning the potential of an urban development of the city. The closest neighbours are Wuppertal and Remscheid. Together, they create a closely connected trinity within economy, culture and the academic education. (Bergische Struktur- und Wirtschaftsförderungsgesellschaft mbH, N.A.) Other significant cities close by are Cologne, Düsseldorf and the „Ruhrgebiet“ region with cities such as Duisburg, Essen,

Dortmund and Oberhausen which are especially famous for their previous functions as Germany's dominating coal producers. Therefore, the proximity to the Ruhrgebiet region beholds the promise of an involvement of Solingen in the prevailing industrial and cultural tourism that is currently reviving this region. At the same time, an equally auspicious liaison could be developed through the proximity to cities such as Cologne, Düsseldorf and also Leverkusen. All three of them are well-presented in international affairs due to their size and their attractions such as significant fairs and their economic activities. Hence, their proximity

promises an involvement with an international business clientele. All this shows that Solingen is well-located in an accumulation of significant cities that could help Solingen to also rise in importance and popularity again if it was offering sufficiently appealing attractions and novelties. This means that albeit the comparably small size of Solingen, there is no need to restrict oneself to a planning focus on local participation. The city is located close enough to its significant neighbours that it could likewise attract people from these cities to visit and explore Solingen.



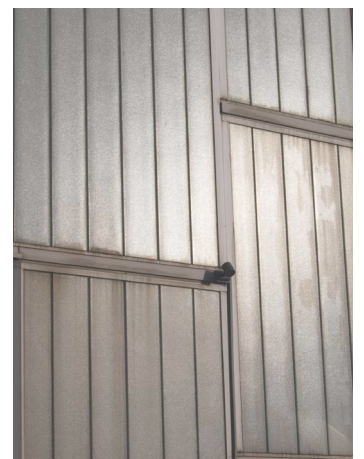
activities in correlation with potential visitors for the site

- fairs
- carnival & funfairs
- international businesses
- universities
- Ruhrgebiet industrial sites






THE SITE

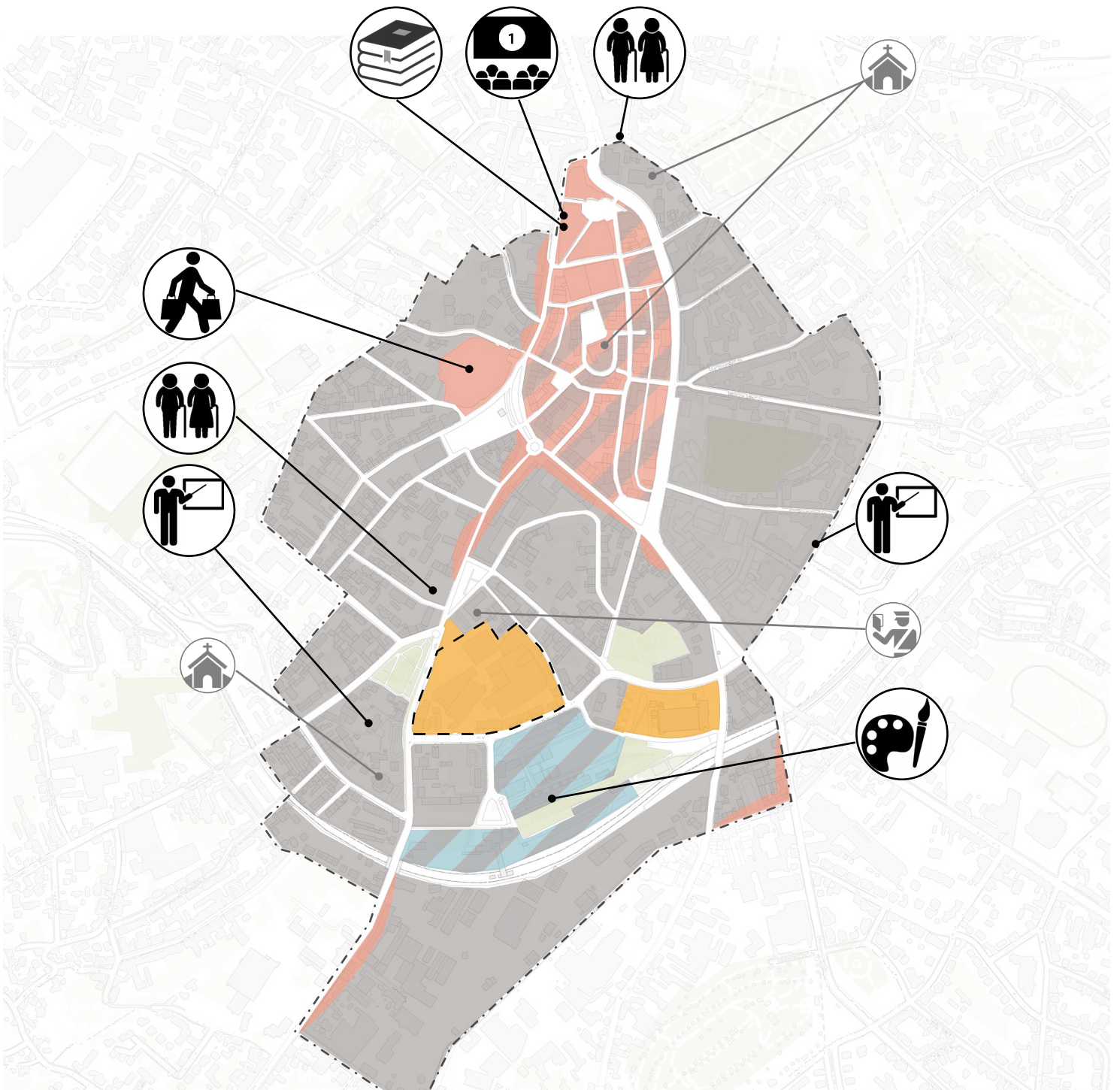


PHOTOS OF THE IMMEDIATE SURROUNDINGS



FUNCTIONAL MAP

- industrial 
- commercial 
- residential 
- mixed use 
- partly residential 



Now zooming in on my specific site, I would like to present the most important parameters and immediate vicinity of my site in order to clarify the circumstances that affected the design of my working process.

My site is located around 700m south from the direct city centre (Stadt Solingen, N.A.), making this site very central and well-connected.

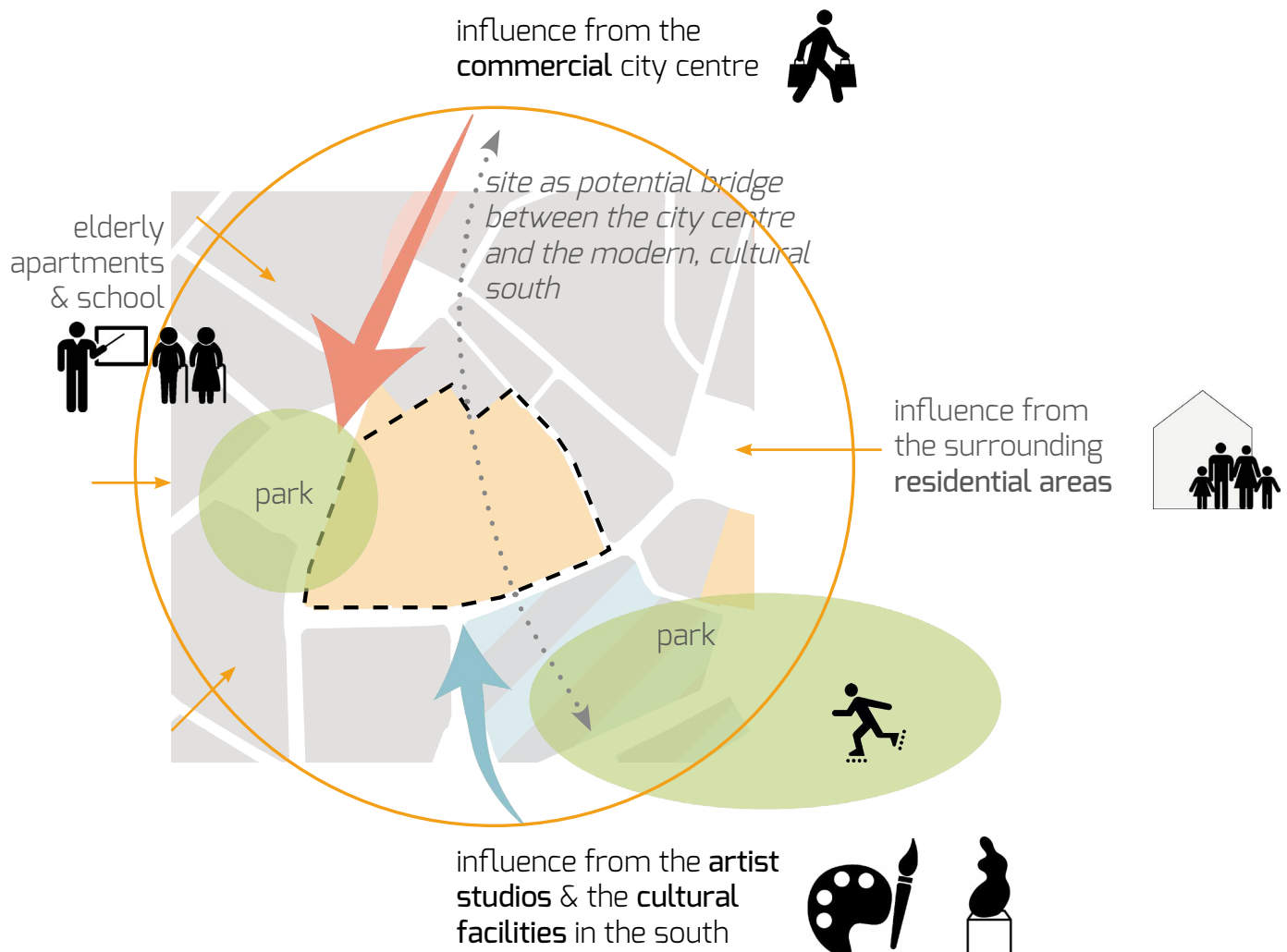
In general, the entire area is dominated by low- to medium-rise residential houses that incorporate some smaller shops and convenient stores along the more frequented roads. Besides, there are a number of elderly apartments under construction right next to my side. Towards the city centre, the amount

of commerce increases, followed by a pedestrian commercial area in the centre of the city. The direct vicinity also includes a public library and a cinema while a theatre is located further north from the city centre. In addition, there is a police station, a church and a primary school close by. Moreover, it is important to mention that there are a museum and a forum dedicated to product design which is linked to the university of Wuppertal located in the south of the site. Adjacent to that is an old train station that has recently been transformed into artist studios and a restaurant.

Taking all this into consideration, it can be said that the large amount of dwellings, in combination with

the elderly apartments and the primary school, make this site a very promising location for various activities that can bring together different groups of people. Besides, its location right between the artist area and the city centre allow this site to become a fill-in that can help to bridge the prevailing gap between these two nodes of interest, thus creating new flows throughout the city. In fact, this would have the fringe benefit of leading people right through my site which could bear great potential for the liveliness on site. Moreover, the proximity to the city centre promises potential for gastronomy and different events.


DIRECT INFLUENCE PARAMETERS



GREENERY, BIKE LANES & LEISURE

bike lane 

bicycle-friendly roads 

scenic bike route 

public greenery 

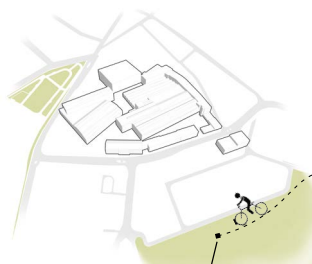



Looking at public greenery and possibilities for leisure, there are not that many options available at the moment. There is a small park right opposite of the western side of the site and another park in the south in combination with the design forum and the refurbished artist studios. Furthermore, there are a couple of playgrounds and an enclosed field for different kinds of sportive activities such as basketball. Concerning the aspect of biking, it can be said that Solingen cannot

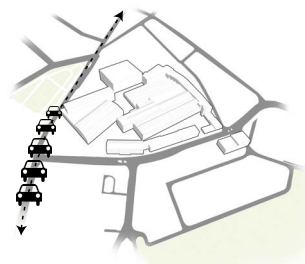
be called a bike-focussed city yet. There are some bike paths close by and some bike-friendly roads but otherwise, the movement is mostly focussed on cars and pedestrian. However, it needs to be mentioned that there is a scenic bike route that has been constructed on the route of old train tracks, connecting Solingen in this manner with cities such as Wuppertal. The scenic route currently ends rather abruptly at the foot of the refurbished artist studios. However, I see this as great opportunity to propose the

continuation of this route across my site and into the city centre. Besides, creating a bike path that runs across my site would also help the everyday biker on his way to work since it would no longer be necessary to bike on the car-dominated roads and especially across the traffic-prone intersection in the south-west corner of the site. This might eventually encourage more regular bike traffic of people that would like to take the bike rather than the car to get to work.

BIKING 
situation today

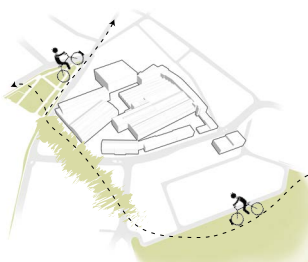


 stop of scenic bike route



busy road / intersection 

proposition



connecting the south (new art „district“) with the city centre





continuation of bike route across the site (away from the car road)

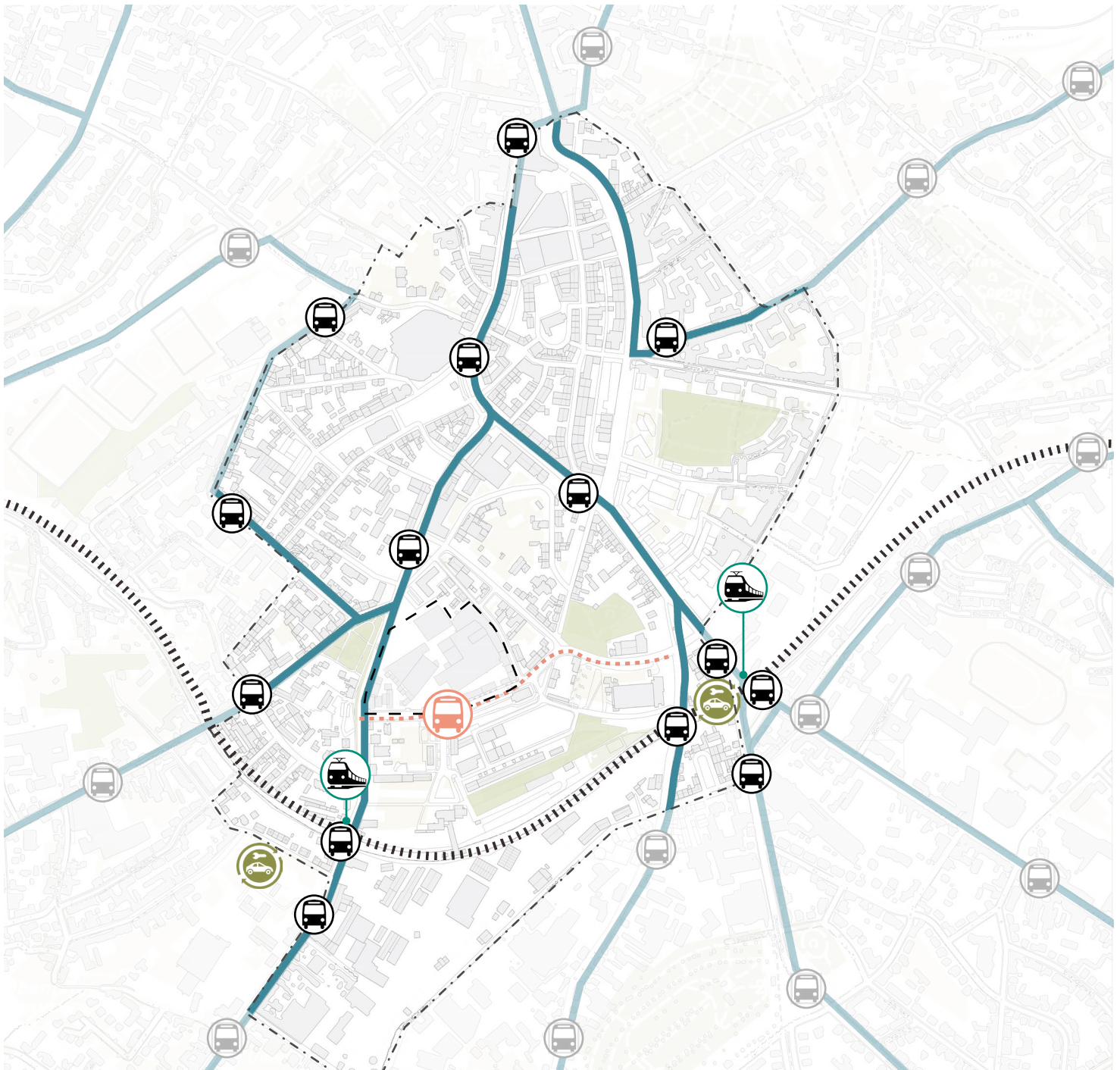


TRAFFIC MAP

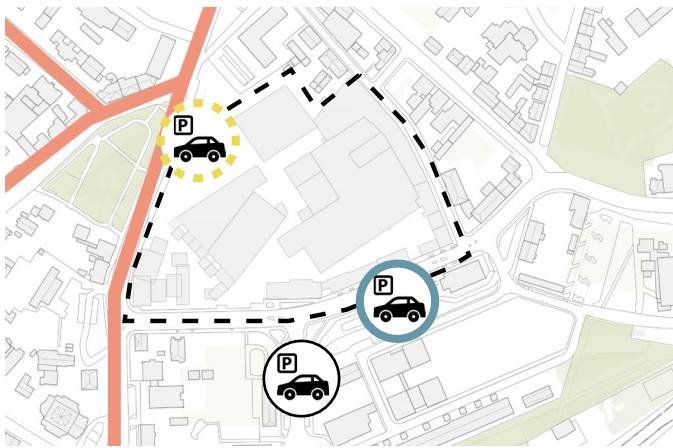
Talking about traffic, the following map shows that Solingen has a relatively extensive public transport network. The dominating means of transportation is the bus (trolleybus). At the same time, there are also train tracks running in the south of the city, close from my site with two train stops nearby.

In combination with these train stops, there are two car-sharing stations that allow for more possibilities of getting around without having to own an own car. Besides, this can help to turn the focus of the city's inhabitants away from the individual car traffic towards a more sustainable life style.

- train 
- bus lines 
- proposed bus line/stop 
- car sharing 



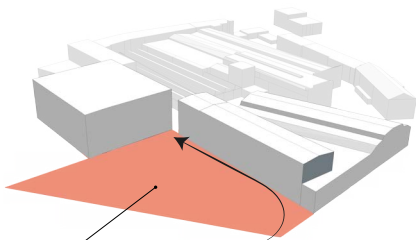
parking for the site



existing free parking 

proposed parking lot 

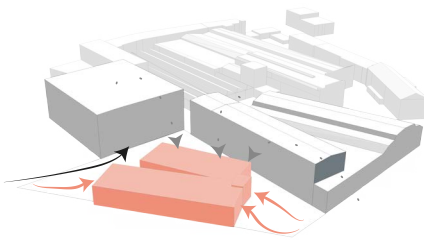
altered parking situation 



customer parking



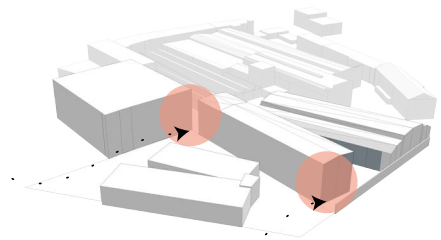
delivery



delivery



extended parking
(for customers, site
visitors and residents)



new, additional
entrances to
the site



HISTORIC presentation



the beginnings

1958



1962



today



In order to clarify the history of the site, I am going to give a brief description of the site's birth to its decay. This ought to reason the current abandoned state of this area.

The site as industrial ground dates back to the late 19th century when it was found as engineering works and iron foundry ("Kieserling & Albrecht"). Over the years, it seized the opportunity to expand their factory several times, turning it gradually into a large, renown factory. Prospering from the economic boom in Germany, expanding even further. However, due to economic problems, it soon had to cut back on workers during the 1980s, suffering from a strong downward development until it was handed over to a business competitor in the 1990s and then eventually shut down completely in 1998. Since then, some of the factory buildings have remained in use in different ways. The south part of the site holds a building that is still used by the previous factory owners as administrative building since a

small remainder of the company is still active in a different part of Solingen. The adjacent building was repurposed as adult education centre which is still operating as such today. This creates an already existing flow of action on site by different generations at different times of the day. This does not only show potential for the site but also encourages a design proposal that allows a merging of the existing and the new, trying to attract new people to the site as well as those who are already coming there for regular study classes.

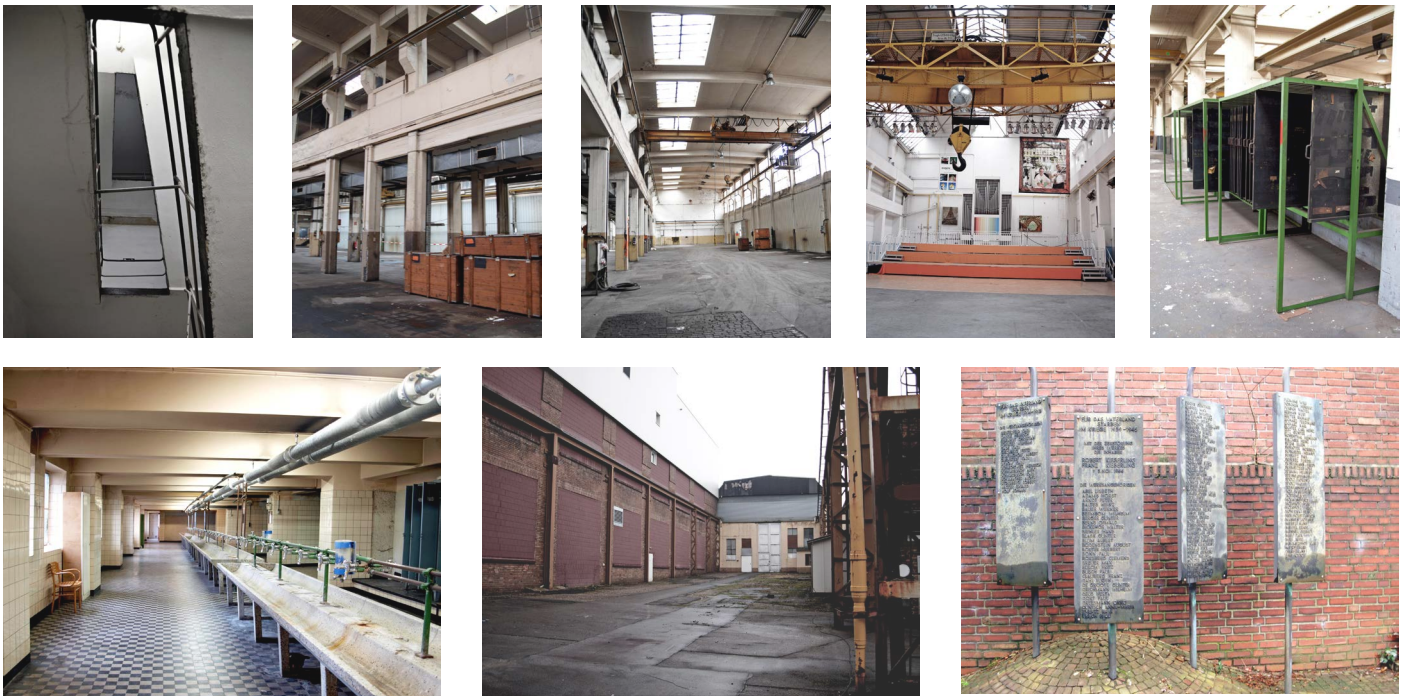
Another building in the north east of the site was taken over by a municipal music school and another factory building was turned into a furniture store which is situated in the north of the site, unfortunately currently blocking off the area from a direct connection to the city centre. Therefore, as I have mentioned before, I am proposing to rearrange the parking situation of the furniture store which helps to increase accessibility and overall movements to and throughout the

site.

In addition to that, the site is somewhat linked to an adjacent field of land that was, as mentioned before, originally used as corporate parking lot. Today, that plot of land is half-heartedly used on one side as continuous parking spot for employees of a new bike shop that was placed right on the corner of that field of land.

Last but not least, one factory hall in the midst of the site has been used now and then as exhibition hall.

All this shows that there have been attempts and ideas to reactivate the area, though there has not been a fertile proposition yet that could have revitalized the entire area as one cohesive element. Therefore, I am proposing to repurpose the continuously vacant buildings with function and activities that create interaction between the existing users of the site and new ones and provide a new urban area that functions as meeting place and as reintroduced part of the everyday life.



After having depicted the overall circumstances of the site and its immediate vicinity, I would like to zoom in properly on the site and the site specifics to emphasize the parameters that contributed to the proposition of my design.

The site itself accounts to approximately 3ha of total area that is on three of four sides framed by streets. Its terrain ranges from 206.0m in the south west corner to up to 214.7m above sea level in the north-east corner which entails a notable height change of ground level throughout the site.

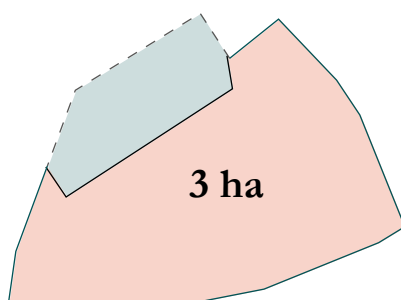
(Solingen, 2016)

The site constitutes different conditions, some of which are worth preserving while others can and should be disregarded or replaced. In general, the site still bears several 'charming' features that clearly bear in remembrance that the site was once a place of a different time and different activities. For example, one can still find the old bathrooms throughout the different buildings. Some of these are especially appealing as they bear beautifully preserved washing basins that could definitely be integrated into the refurbished site design.

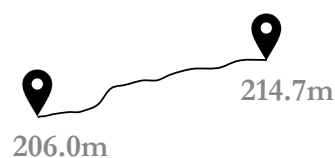
Other reminders of history are lar-

ge indoor cranes that bear evidence of the extreme working environment and the connected processes that were once practiced on the premises. A special reminder is also a memorial at one end of a factory building, commemorating the death of the two proprietors and many company workers during the 2nd World War.

Based on the history of these remainders, I believe it to be very important to preserve them as reminiscence of what has been and as elements of unique character that will make the new site design a lot more meaningful.



height range:



AIMS FOR THE DESIGN PROPOSITION

Preserve what can be preserved.

Owing to the prior history of my site, I have set myself the goal to keep as much of the existing character of the place as possible while restoring its usability and accessibility. Therefore, I have for instance decided to keep the site's existing appearance by preserving the facades. This ought to maintain the character of the site while giving it a new internal purpose.

Recycle as much as possible.

Due to the fact that my chosen site bears certain signs of pollution, a cleaning process is beyond question. However, I have decided to clean, where possible, in a natural, biological way. In addition, my aim is to recycle as much of the polluted and damaged site material as possible. For example, concrete floors that need to be torn out due to pollution should be cleaned sufficiently and then crumbled up and returned to the site in form of gravel in order to serve as new, permeable ground cover. Similar recycling measures could be taken with wooden elements which could be reused for the design of the outdoor spaces.

Allow for easy transformation.

Based on the idea of altering the place as little as possible while still aiming for a large spatial transformation, the physical changes should be done in a way that they still allow for a future possibility of alteration. For me, it is important to make architecture more enduring so that it does not only cater to one specific function and user during its lifetime and is afterwards torn down because it cannot accommodate any other function. I believe that architecture should always allow for spatial alteration if the owner of the site changes over time and a repurposing is desired.

Diversify the functions.

My aim is to diversify the offered functions on site from a pure manufacturing use to various residential and communal uses that facilitate and encourage social interaction and make the site attractive to different groups of people at different times. This should keep the site viable and enduring.

Diversify the users.

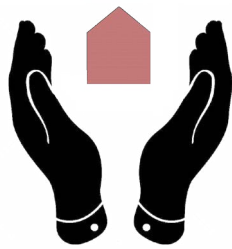
In accordance with a new diversity of functions, I am aiming for a diversity of users. In general, my aim is to appeal to young and old

and also offer different facilities for both the local community and a wider-targeted group of regional visitors.

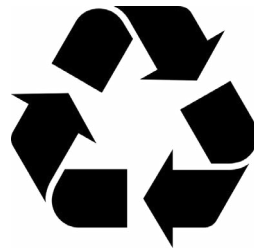
Saying this, I have to clarify though that I would like to keep the previous notion of my site as place that accommodated social interaction and communal activities. In compliance with the notion of an industrial, 20th-century enterprise that accounts for hundreds of workers all acting communally to achieve a result, I would like to provide space for activities that bring together people and invites them to interact, thus creating a tighter community similar to an industrial family.

Remind of the history.

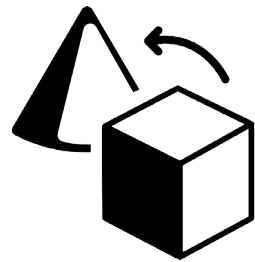
Last but not least, I think that it is very important to bear in remembrance of the site's prior history. Therefore, I am including a museum on site that informs about the former use of the area and educates about the reasons of timely change and decay. At the same time, this museum should also teach about the potential of industrial fallow lands and about the possible measures that can be taken to bring suchlike sites all over Germany back to life.



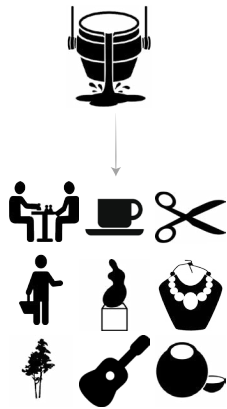
preserve what can be preserved



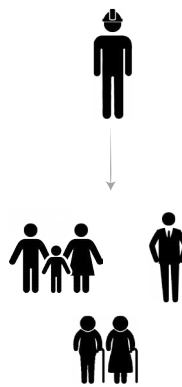
recycle as much as possible



allow for easy transformation



diversify the functions



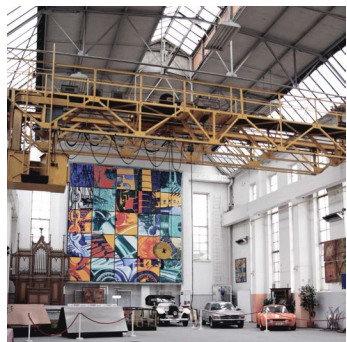
diversify the users



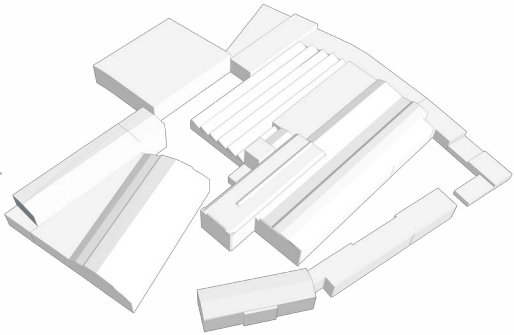
remind of the history

IMPRESSIONS FROM THE SITE





SITE CONDITIONS



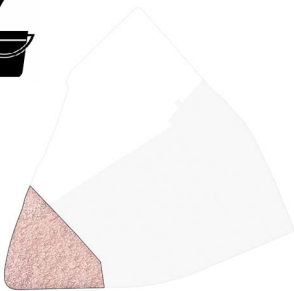
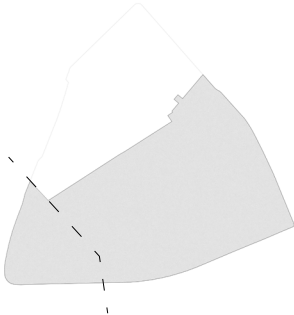
As mentioned before, the site is currently defined by two prevailing conditions:

The south-left corner had previously been cleaned of any sort of pollution and left-over buildings to accommodate the reactivation of this plot of land by means of a vintage car show. However, before the project could actually gain a foothold and take effect, the promised investor bailed out, letting the idea

come to nothing. The matter of the other part of the site is still untouched since it was used for manufacturing purposes. This means that this part still bears obvious signs of pollution. After the active practices of the factory were shut down in 1998, a survey was conducted in order to estimate the condition of the site. However, the results of this survey might not be valid anymore which is why a

new, thorough quality survey must be conducted before any new constructions or activities can assume shape on site. (Solingen, 2016) After having talked to a municipality official who is responsible for matters of industrial pollution and suchlike topics, I can however assume that the prevailing pollution is not extremely severe and can probably be qualified as nests or accumulated veins.

2 prevailing site conditions



has been cleaned of pollution and buildings



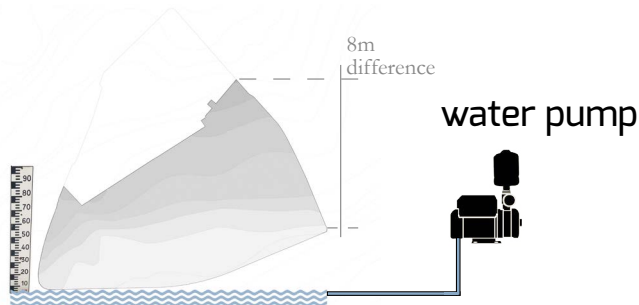
is still polluted and covered by buildings

In addition, this part of the site is still filled to the rim with various factory halls and other related buildings that constitute different quality conditions. Therefore, one of the first steps that I had to take when starting my work on this site was a more detailed examination of the existing matter in order to evaluate their durable quality and safety.

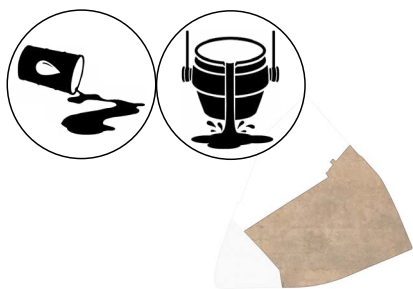
Besides, the site is affected by high ground water level on the lowest point of the site in the south-west. However, this appears to be manageable by means of sporadic water pumps and should otherwise be of no concern. (Solingen, 2016)

prevailing problems

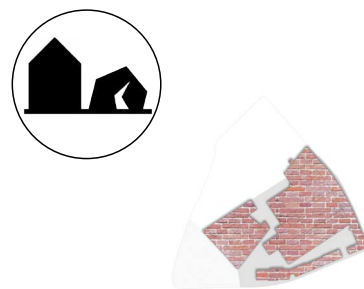
high ground water level



pollution



pollution of soil and floors



damaged structures

POLLUTION TREATMENT & RECYCLING PROCESS

In terms of the mentioned pollution, I am proposing to extract the nests of polluted soil but then to maintain the material on site rather than transporting it to a dedicated cleaning facility. With my plan of keeping the soil on the premises, I am tending to two different aims: The most obvious is to avoid the effort of having to transport it off site. The other aim is based on my idea to treat the soil on site and integrate it hereby as exhibited 'keepsake' for a

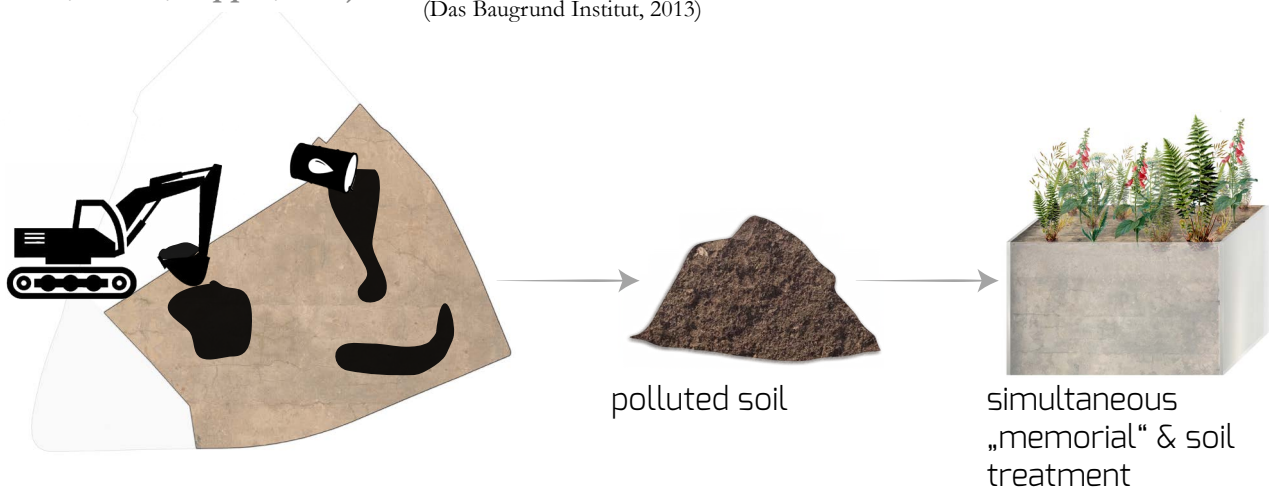
museum that I am proposing. Since the museum should be dedicated to the history of the site and its timely evolution, a display of the encountered polluted soil would illustrate what certain side effects of industrial functions are and what needs to be dealt with when reactivating these grounds. The manner in which I am proposing to exhibit the polluted soil is to encapsulate it in a few spacious 'glass boxes' that prevent the polluted material to migrate

to the clean environment. These boxes should be open on the top in order to facilitate the replenishment with the earlier-mentioned hyperaccumulator plants which do not only ornament these glassed piles of soil but also gradually clean the polluted material from heavy metals. In order to circumvent the possible hazard of passers-by being exposed to pollution, the walls of the glass box would be high enough so that no one can reach inside.

partial pollution of the soil with heavy metals

(e.g. zinc, nickel, copper, lead)

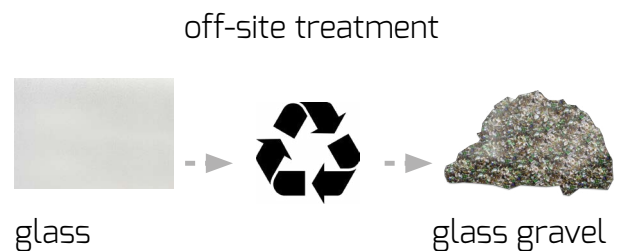
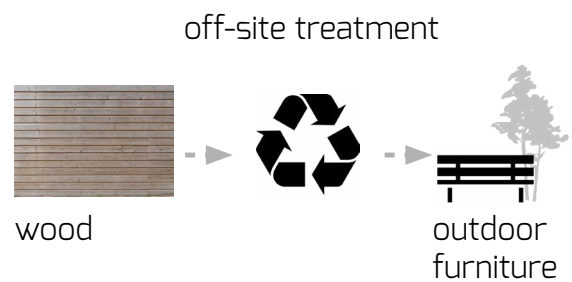
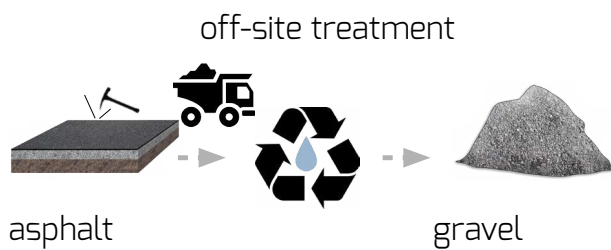
(Das Baugrund Institut, 2013)

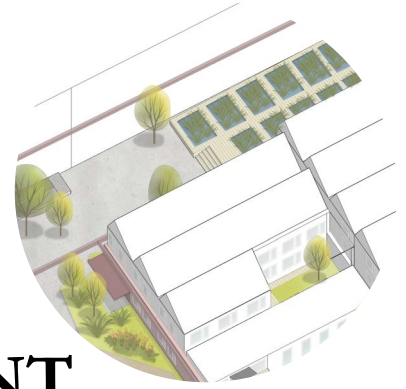


Concerning the pollution issue, I am also proposing to attempt to recycle as much of the polluted material as possible. As I have mentioned in my overall aims for this project, I would like to remove polluted asphalt and concrete from the site to clean it and then return it in a 'shredded' form to replace the removed impermeable ground cover by this recycled form of gravel to allow for a better rainwater run-off and natural irrigation of the vegetation.

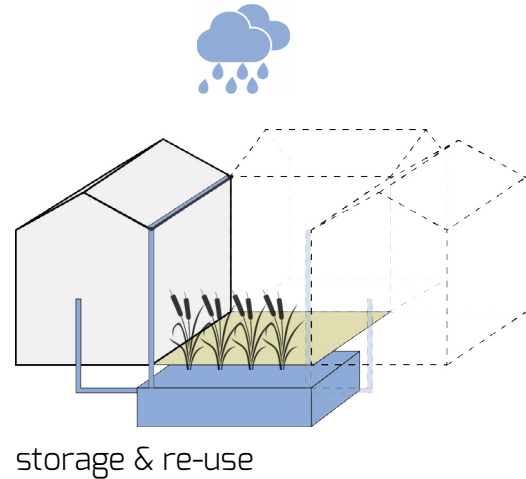
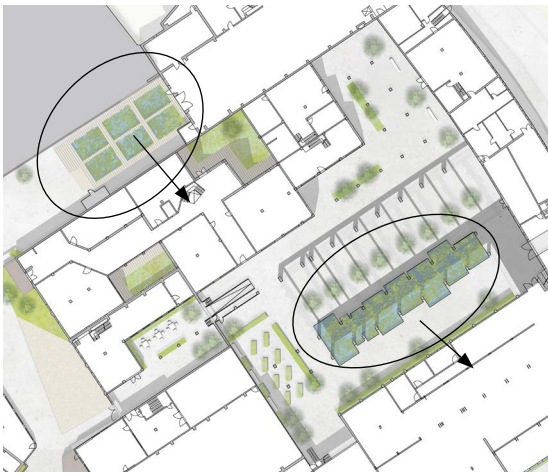
In addition, I would like to recycle polluted wooden material as much as possible so that it could be reused for outdoor furniture and other purposes. Also, demolished structures could be used within this upcycling process. For instance, glass could be recycled and returned in form of gravel that could both be used for covering surfaces but most importantly also to help with the filtration of my proposed rainwater management system.

ways of recycling





RAINWATER MANAGEMENT



laundry



domestic use



irrigation



drainage



fire-fighting



education

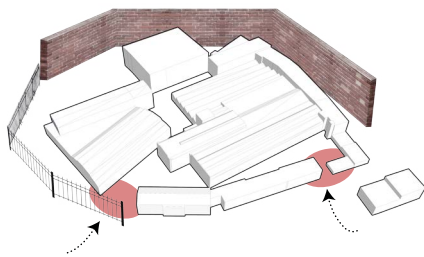
As I have mentioned at the beginning of this report, Solingen is a city that is extremely prone to rain due to its hilly constitution. Therefore, it would be an adequate idea to integrate means of treating the rainwater for possible reuse. Hence, I am proposing at least two initial spots on site where rainwater will be collected in outdoor basins and then naturally treated by means of suitable plants, sands and gravel. The gravel could be recycled glass, as I have said previously. After the treatment, the rainwater could then be reused for laundry facilities, irrigation of vegetation and in other suchlike ways.

Either way, one location of this rainwater management system would be in a 'back space' in between the newly constructed apartment buildings in midst the site and the furniture store north of that. Due to the enclosure by those two buildings, it has been difficult to find a new purpose for this space. Therefore, the rainwater management system would be ideally placed there. In addition, this means that the cleaned water can be directly send to the laundry facility adjacent to the water basins on the ground floor of the residential building. The other location of rainwater

management basins is underneath the bridge feature in the new open space behind the museum. Here, it can treat the water for reuse while also acting as showcase for the museum to show what a possible new function for a refurbished industrial fallow land could include. Besides, these vegetated water features add nicely to the atmosphere of the outdoor spaces on site. All in all, I am hereby trying to emphasize that the refurbishment of a site cannot only create new spaces to meet, interact and live but also spaces that can be used to facilitate a more sustainable and resource-efficient way of living.

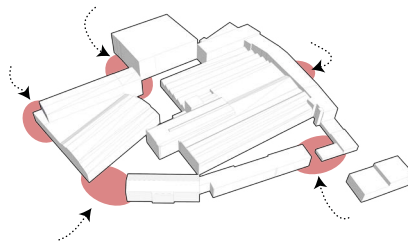
ENTRANCES, CONNECTIONS & FLOWS

today

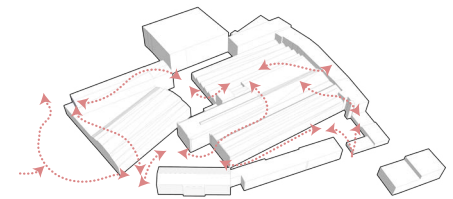


breaking open the inaccessible wall

proposed 'entrances'



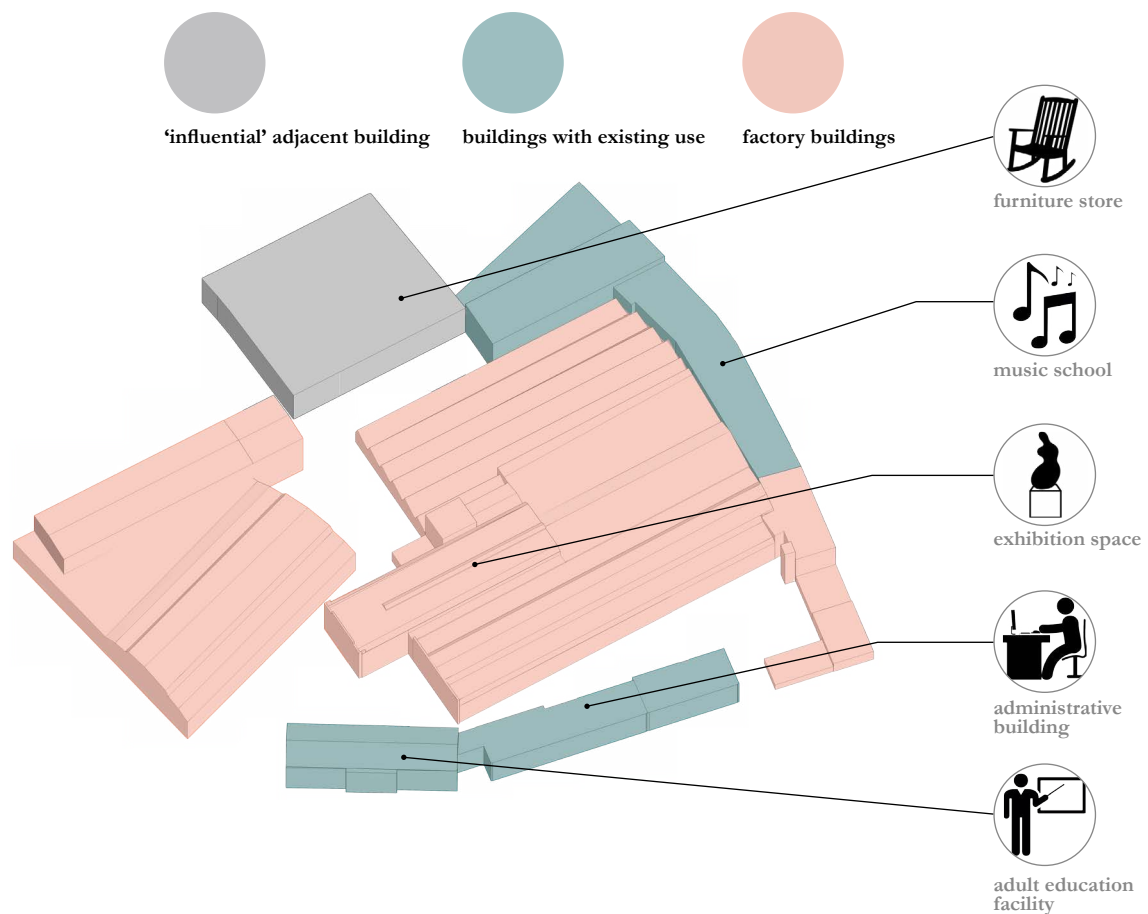
proposed 'flows' on site



Besides the issues of the site condition, another aspect of concern was the current enclosure of the premises. Non-accessible from the north and fenced all around the sides, there are only two entrances, one of which is closed off by a gate. Therefore, I have assessed the

site and the nodes that are bordering significant points in the vicinity, followed by a design proposal that is based on three new entrances along the north and east façade, thus facilitating the access of the area and also generating a better flow across the site.

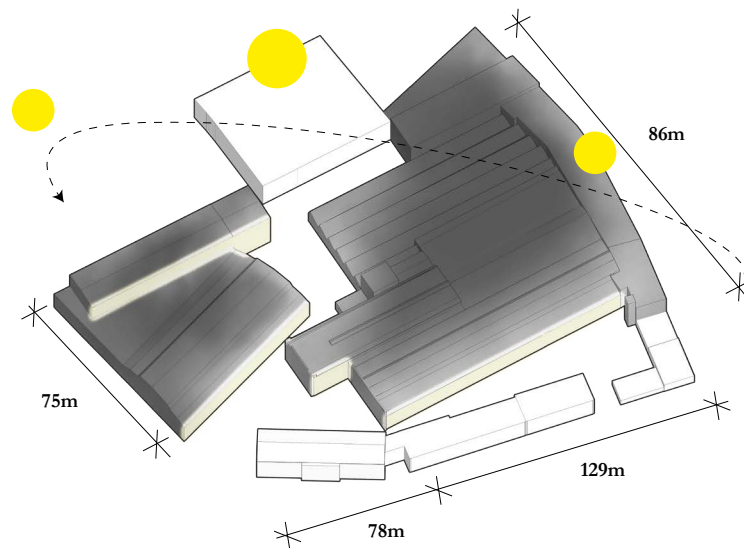
THE EXISTING SITE



In the following, I would like to amplify the condition of the built structures. Starting point for the design process is the clarification of the current function of each building. As I have mentioned before, some of these buildings along the sides of the site have been

repurposed, now featuring an adult education centre, a municipal music school, the administrative building of the site's pre-owner, a furniture store and a hall that is occasionally being used for exhibition. Otherwise, all factory buildings are currently empty.

DENSENESS



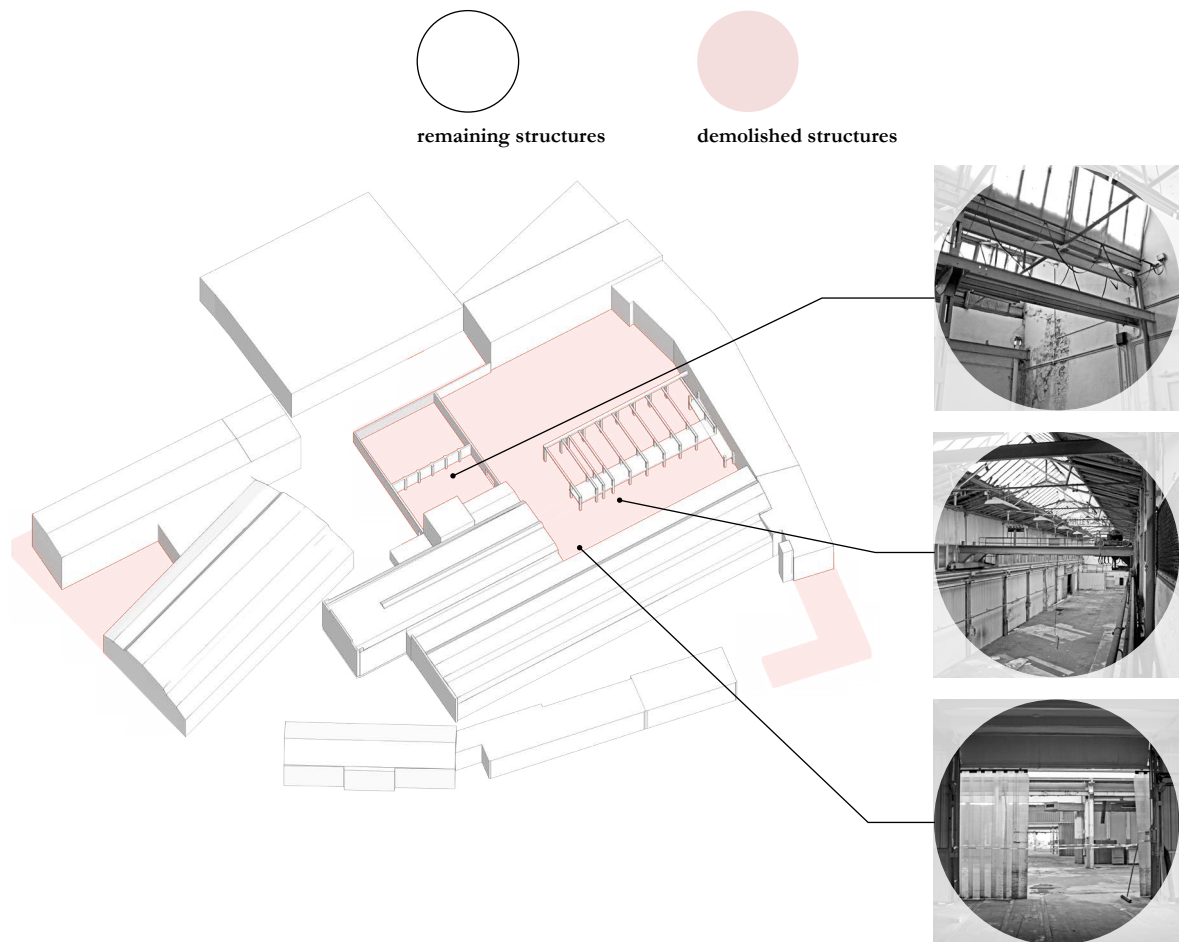
Another aspect worth mentioning is a prevailing spatial issue that had to be dealt with at the beginning of the project. More precisely, the pre-existing buildings accumulate to an extremely dense building block that cannot be easily penetrated, thus making this building complex rather difficult to handle without further editing. Besides the problem of accessibility, this condensed construction also entails an issue of interior illumination.

This led me to the decision that albeit my desire to

preserve as much as possible, the building complex had to be broken down in order to air out the structures and gain higher quality spaces both inside and outside.

The choice of demolition was naturally based on the condition of the individual building parts which I will illustrate more closely below.

RECLAIMING OF THE SITE



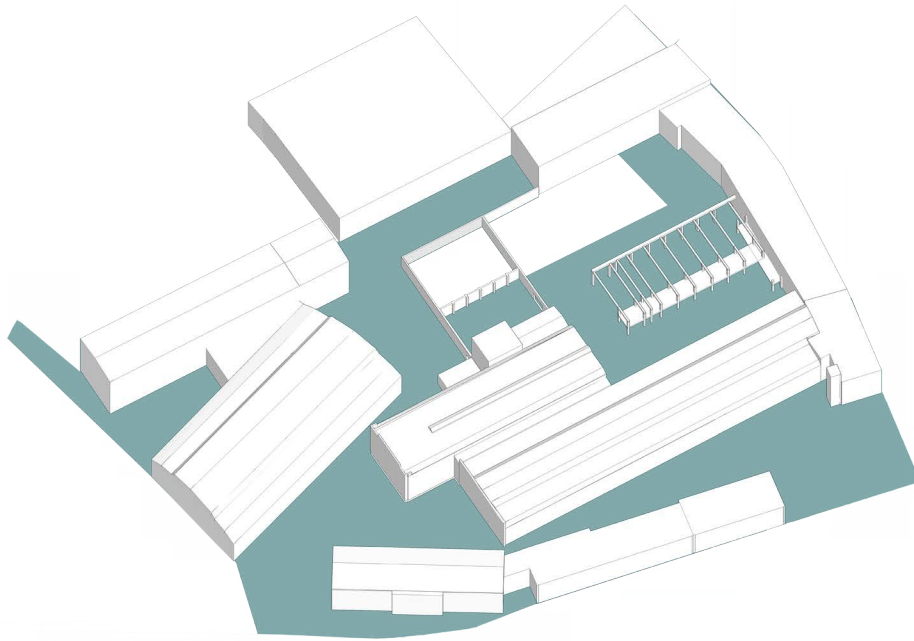
Besides a minor faultiness in the condition of windows, most wall elements are acceptable. However, the floors prevalently bear signs of pollution which entails that I am proposing to exchange the floors with clean floor covering. Albeit that, most buildings are in a state that can be refurbished without difficulties. However, two larger buildings have been a thorn in my side based on their problematic condition: One of them has a caved-in roof that has subsequently led to dilapidated floors and an overall questionable condition. The other one has also damaged roof elements that have caused some damage from incoming rainwater. In addition to the fact that it was also extremely difficult to repurpose this

building due to its enclosure and its inapplicable impact on its adjacent buildings, I have decided to demolish these two buildings in order to loosen the parts that are improper and subsequently, to air out the site and get more free spaces. However, I have kept one element of the first-mentioned building. This building had been used for construction and installation work, thus bearing a bridge-like gallery structure. Due to its intact condition and its special appearance, I have decided to maintain and ‘externalize’ this element and turn it into a part of a new outdoor area with surrounding greenery. Standing on top of it gives a slight overview over the vicinity. In addition, the space underneath the bridge featu-

res several basins for the rainwater management system, thus using the shadowed space underneath in a suitable manner. In order to ensure that rainwater actually runs into these basins, subtle rails and downpipes along the bridge structure could help to lead the water. Furthermore, I am freeing some additional space by taking away three sheds that are currently situated at one of the prime nodes right next to one of the main entrances. At last, I am airing out one building that is particularly dense and deep by taking away parts of the roof of an auxiliary structure. The result of my conditioning is the basis for my following design proposal.



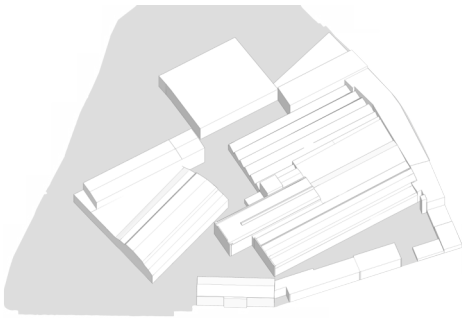
public realm



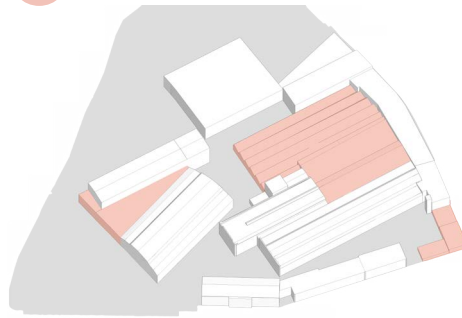
The rest of the site is entirely dedicated to public and commercial functions.

TRANSFORMATION

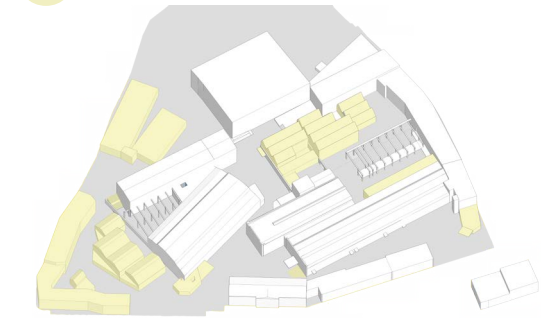
existing



demolition

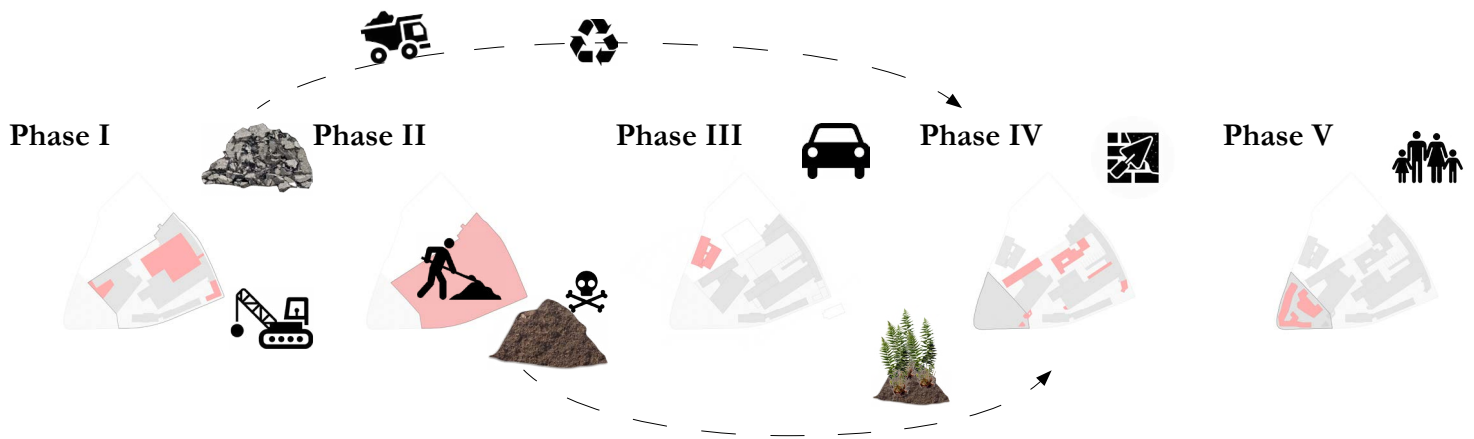


new construction



This graphic shows the overall structural transformation that I am undertaking with my design proposal for this site. It highlights especially the cut-down of building scale and the increase in outdoor spaces.

PHASING PLAN



Based on all the different circumstances that I have mentioned until now, I have drafted a rough phasing plan that indicates how the procedure for the various working steps should be organized. In accordance with the requirement of cleaning, the very first step will be to demolish the above-mentioned structures that are not bearable for this project. This will free up space to facilitate progression. The following step would be to clean the site of all pollution so that it is secured for further development and public use. In this context, the polluted matter that can be recycled, should be transported to a cleaning facility and then returned in

a clean state later on in this project when these elements can be directly integrated into the construction process. Besides, this is also the time when the polluted soil should be extracted from its location and then placed in the specially designed glass boxes and complemented by hyperaccumulator plants so that the cleaning process can start as early as possible. The third phase will constitute the spatial rearrangement of the parking lot north of my site so that the new access nodes are created prior to the refurbishment of the buildings on site. Moreover, this rearrangement will help to organize the parking situation for the site

and will make the newly proposed dwelling units more attractive and feasible. Phase IV includes the refurbishment of the existing buildings and the construction of smaller additions so that new tenants can be found as soon as possible. This would help to achieve an early reactivation of the area and could help to raise awareness for this redeveloped location, thus increasing the attractiveness of the area even further. The final stage will constitute the construction of the residential area and the community centre in the south-west corner of the site.

MODEL PHOTOS

PART 1_THE SITE

scale 1:1000

On these model photos, the differentiation between insert boards illustrates the proposed transformation, highlighting especially the alteration in volume dimensions and amount of in-between spaces.

before



after



These photos simply depict certain model details.



BIRD'S EYE VIEW

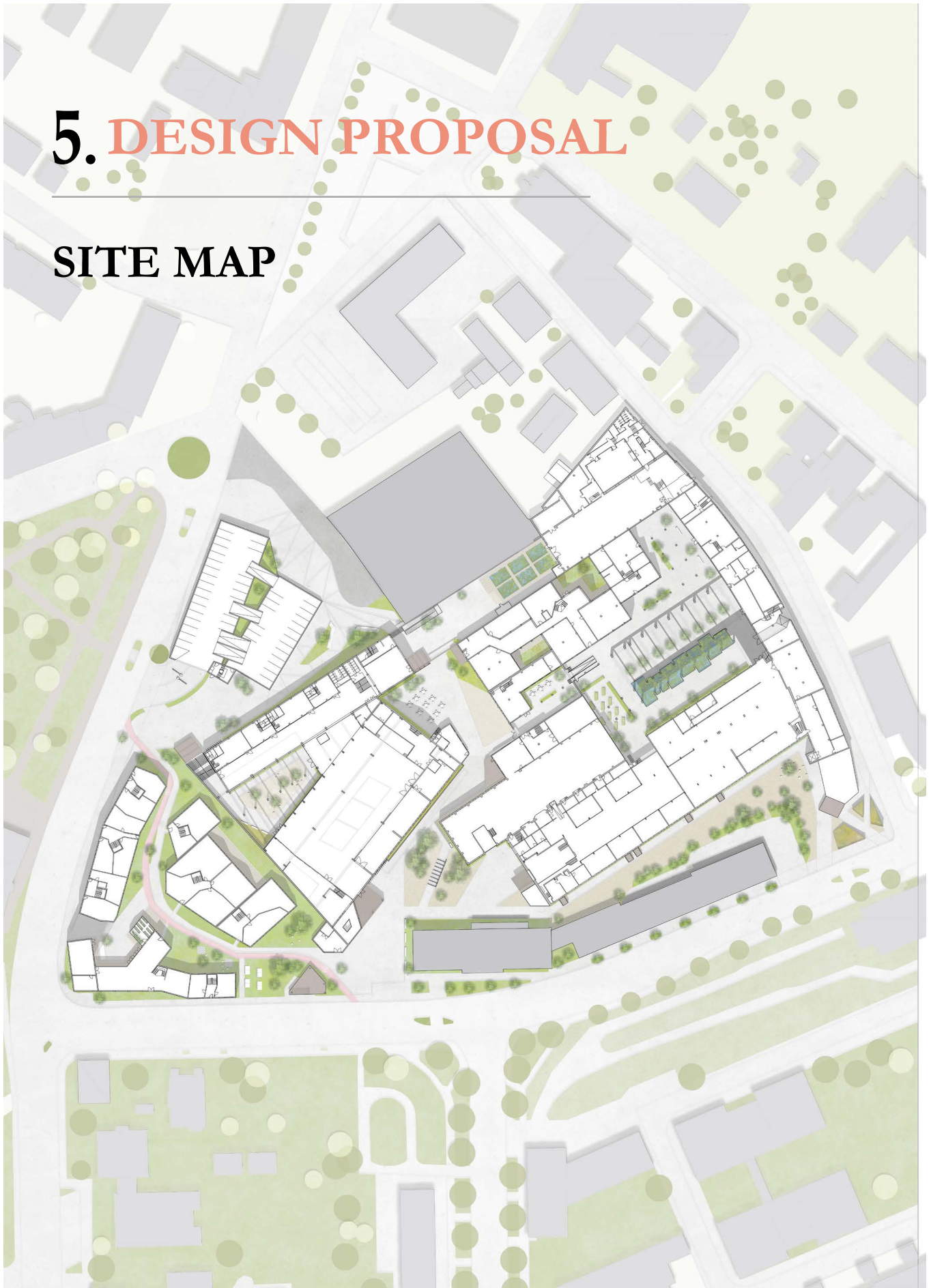


The chosen bird's eye view shows how my design proposal is fit into its residentially dominated, low-rise surroundings.

The public buildings that trace back to the abandoned factory halls can be distinguished from the buildings with pre-existing use and those of residential use by means of their brick façade.

5. DESIGN PROPOSAL

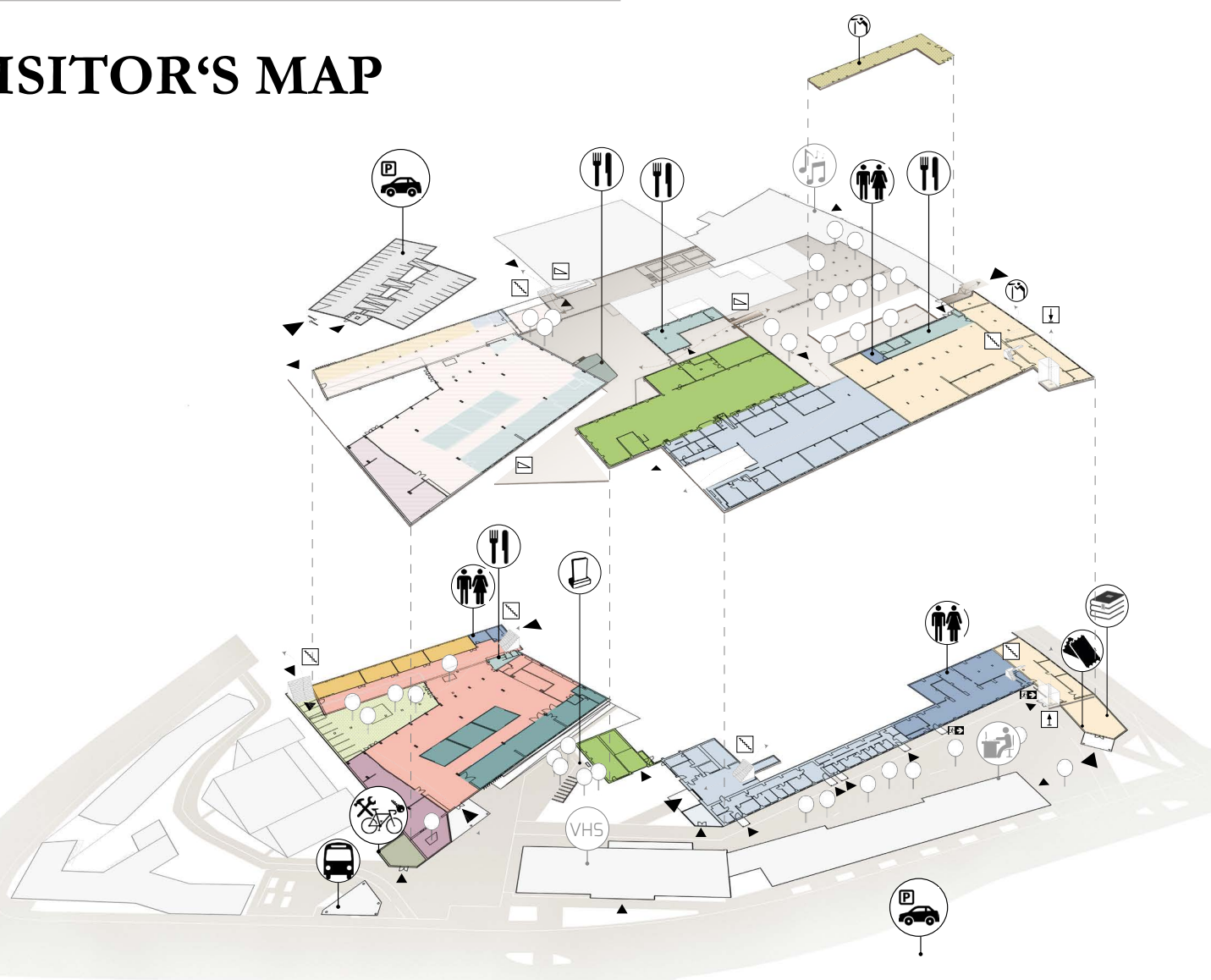
SITE MAP



original scale 1:500

The following site map presents my proposed design for the entire site, including the rearrangement of the parking situation in the north/north-west adjacent to the plot.

VISITOR'S MAP



- | | | | | | | | | | |
|--|----------------------|--|---|--|-----------------------------|--|----------------------------|--|-----------|
| | multifunctional hall | | non-packaging supermarket & delicacy shops | | arts & crafts manufacturing | | VHS adult education centre | | parking |
| | greenery | | bike rental & repair | | workshop space | | administrative building | | memorial |
| | WC | | bookable conference rooms & co-working spaces | | museum | | music school | | viewpoint |
| | day care | | gastronomy | | vintage car show | | bus stop | | lift |
| | | | | | | | | | ramp |
| | | | | | | | | | staircase |

activities
information
conversation

remediation
reminiscence
education

trade
exhibition
education

This visitor's map is designed to aid visitors, especially those that are not local, to find their way around the site and indicates where which public function or activity can be found. By means of small icons, it also illustrates where the nearest entrance respectively exit for a building is and includes special features such as the pre-existing war memorial in midst the site as well as the newly designed viewpoint and certain landscape features.

Utilizing that map, I would hereby like to present the new functions that I am introducing to the site by means of my design proposal, first of all in form of a quick listing to present them at first glance. Subsequently, I will elaborate further on the set-up of the new functional arrangement.

Pre-existing functions on site:

- adult education centre
- administrative building, used by the pre-owner of this site
- municipal music school

New private functions:

- apartment building in the south-west corner
- smaller apartment buildings in second row of that
- apartment building complex in midst the site, replacing one of the demolished factory halls
- loft apartments inside the multipurpose building

New public facilities:

- museum with café, small museum shop and ticket counter
- arts and crafts studios for small manufacturing businesses with possibility of selling produced goods
- vintage car show
- bar
- restaurant
- multipurpose building:
 - zero-waste market
 - delicacy shops
 - small day-care
 - bistro
 - co-working spaces & bookable conference rooms

In the following, I would like to elaborate on the arrangement of the different functions.

Starting from the east corner, I have repurposed the building part to the right (whitish-yellow) and turned into a museum that is dedicated to the history of this

site. In different rooms of various sizes, this facility tells the story of this area, its rise and fall as well as its newly attained renaissance. It is combined with a café area that is situated in the north-western part of this building, facing the new green area with the bridge feature. The museum can also be exited on that side, thus encouraging the visitor to leave the building on a different way and explore the entire area after the prior visit to the museum. Besides, this building includes a small museum shop and naturally a ticket office, located in the newly designed annex that constitutes the entrance of this building. It is situated at one of the most important nodes since it is extremely accessible and nicely visible from the street which could attract spontaneous visitors. Based on this, I have decided to exhibit the previously described glass boxes with the polluted soil right by the entrance area.

Continuing alongside the museum, one is shortly afterwards greeted by several arts & crafts manufacturing work spaces (light blue). These work spaces are spread on two storeys. In order to get to the other work spaces on the second floor, one needs to continue along that building and then turn right at the end of it. Here, the building that is the extension of the museum building, can be entered. The visitor is led onto the second floor across several manufacturing studios which can be visited to buy some of the handcrafted goods produced there. Continuing even further through this building, one is eventually led to the outdoor space with the bridge feature.

However, if one does not enter the arts and crafts building, but rather continues further around the corner, then one can access the building that had previously been used for general exhibitions and that is now bearing a vintage car show

(bright green), as it had already been planned a couple of years ago as new function for the corner area in the south-west.

In contrast to that, straight across from the arts and crafts studios, one can enter the large multipurpose building that includes a zero-waste market and small delicacy shops (somewhat turquoise), a small day-care facility (dark red), a bistro (light blue-green) and the overall multipurpose area (coralline) which offers frequent events such as readings, poetry slams, music performances, exhibitions, viewings and other suchlike activities. In addition, this building contains bookable conference spaces and co-working spaces (dark yellow) and a small bike repair and rental shop (dark green) that can only be accessed from the outside. Besides, this building also includes loft apartments on the upper two floors (not indicated in this map since they are private property).

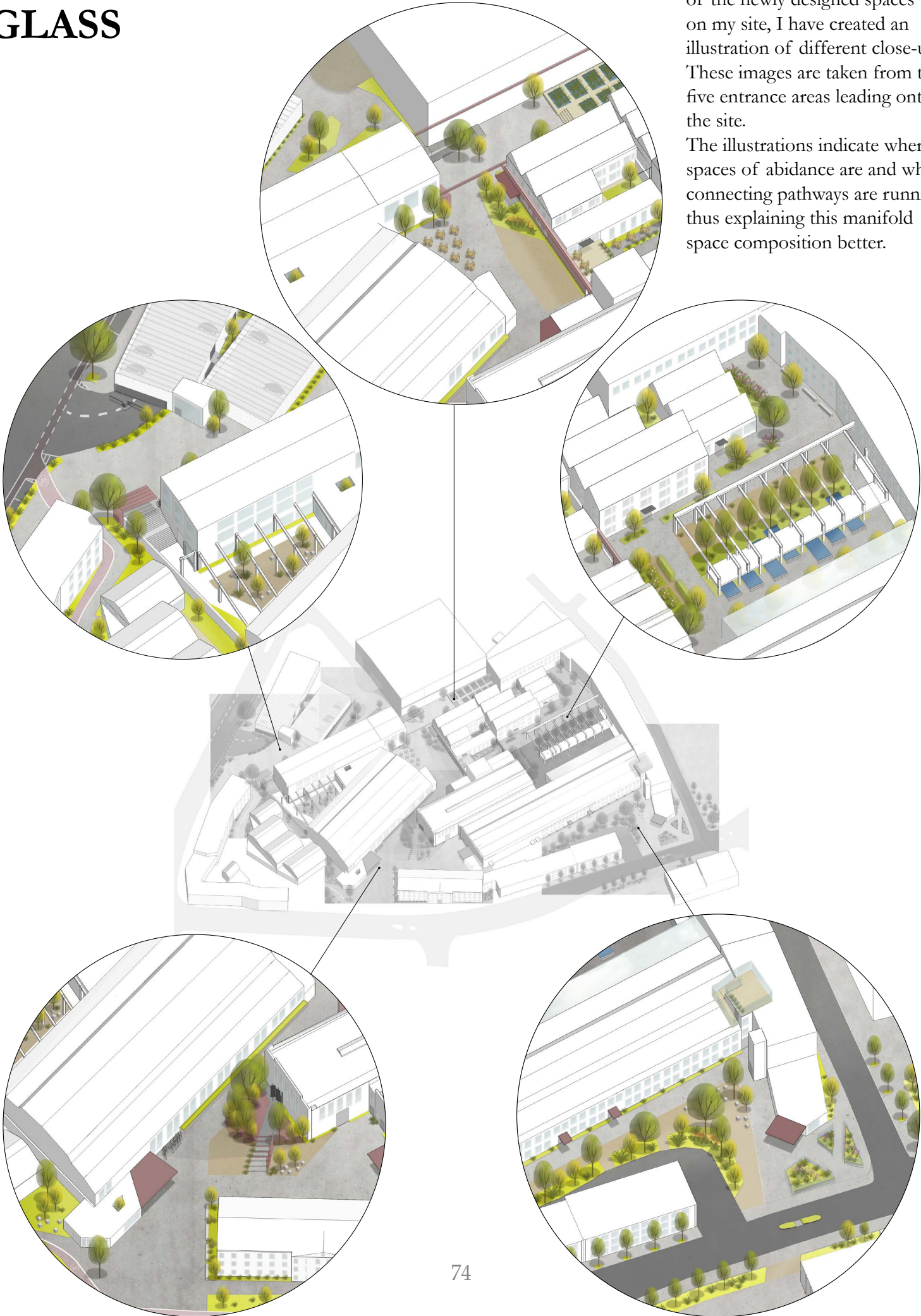
This building can be exited across the newly designed courtyard space and along a flight of stairs that leads up to the arranged space with the new parking garage.

Turning to the right along the multipurpose building, one can re-enter the site at an outdoor area that is linked to a small restaurant (light blue-green). This walk can be finalized by going through an open wall on the left (coming from the north, walking towards the east) which leads past a bar (light blue green) and across the outdoor space with the bridge feature, through a newly created passage in the building and out onto the street which leads back to the entrance area of the museum.

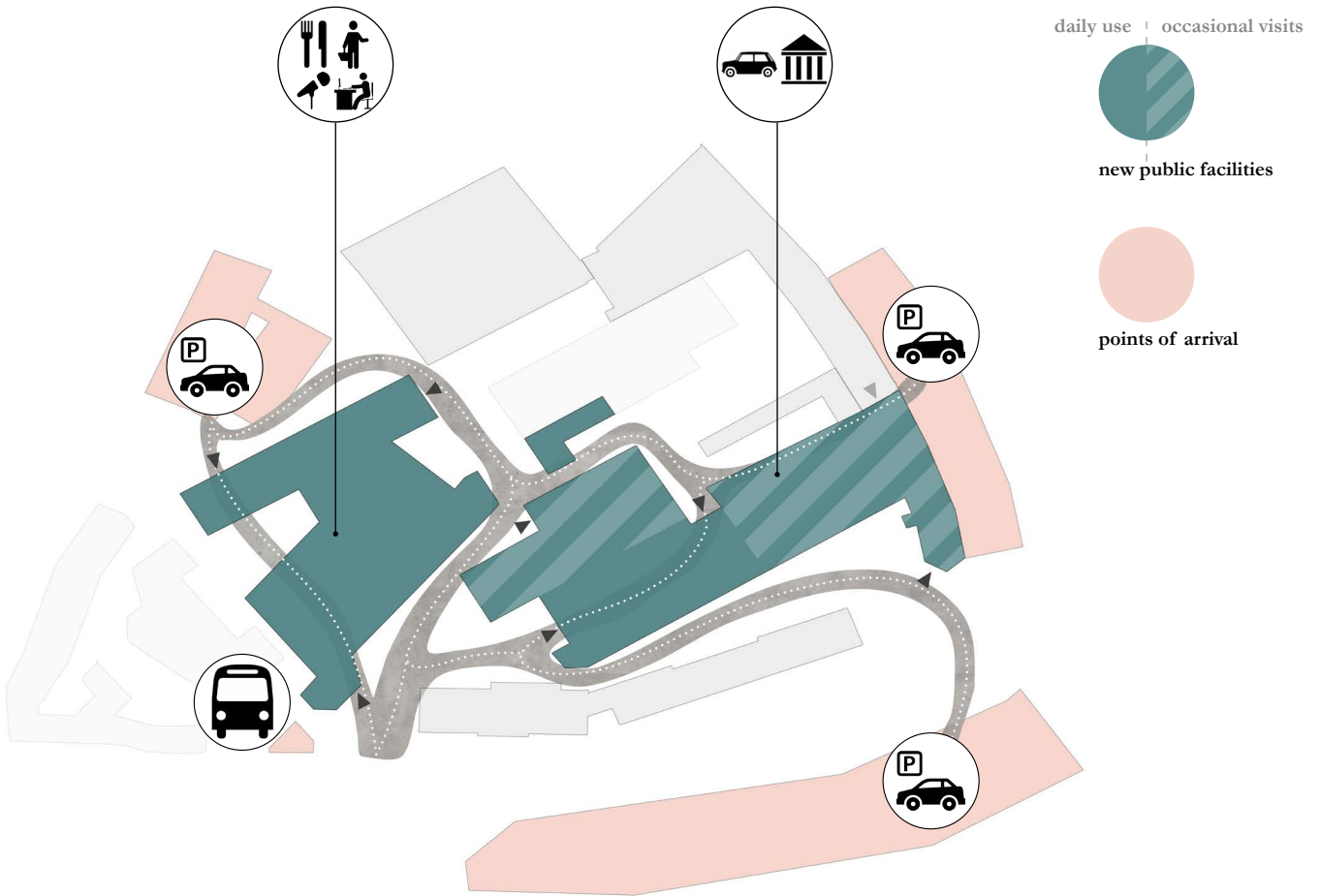
This description highlights the connectivity of the different buildings and shows that there are various ways of moving across the site.

UNDER THE MAGNIFYING GLASS

In order to present a better image of the newly designed spaces on my site, I have created an illustration of different close-ups. These images are taken from the five entrance areas leading onto the site. The illustrations indicate where spaces of abundance are and where connecting pathways are running, thus explaining this manifold space composition better.



HOW TO GET AROUND

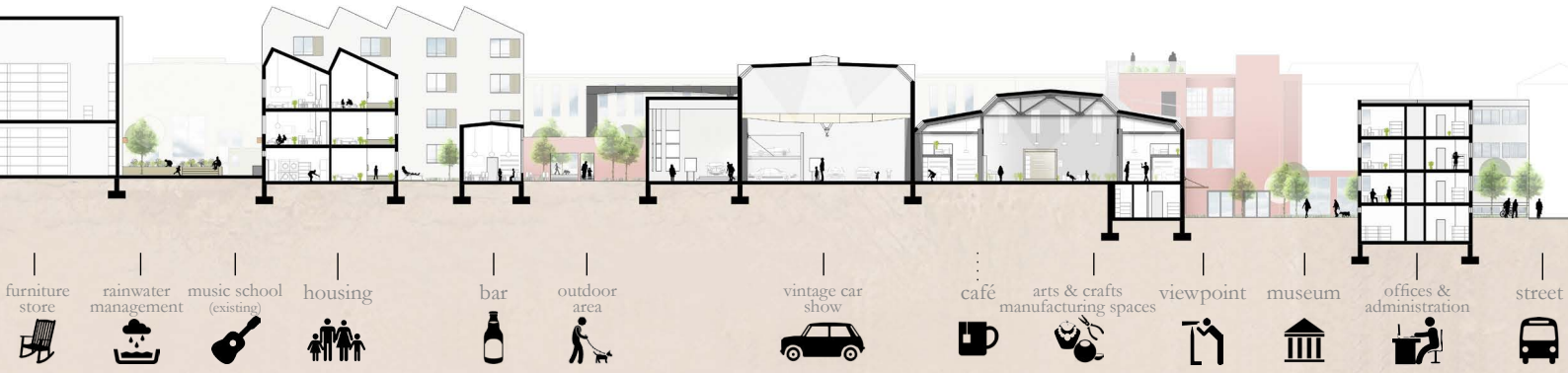


The illustration above clarifies how one can move around on site. Starting from the points of arrival (indicated by three different parking areas and a bus stop), this map highlights the possible ways of movement, based on the general visit of the site rather than a specific building. In addition to that, it indicates where the entrances to the respective buildings are situated.

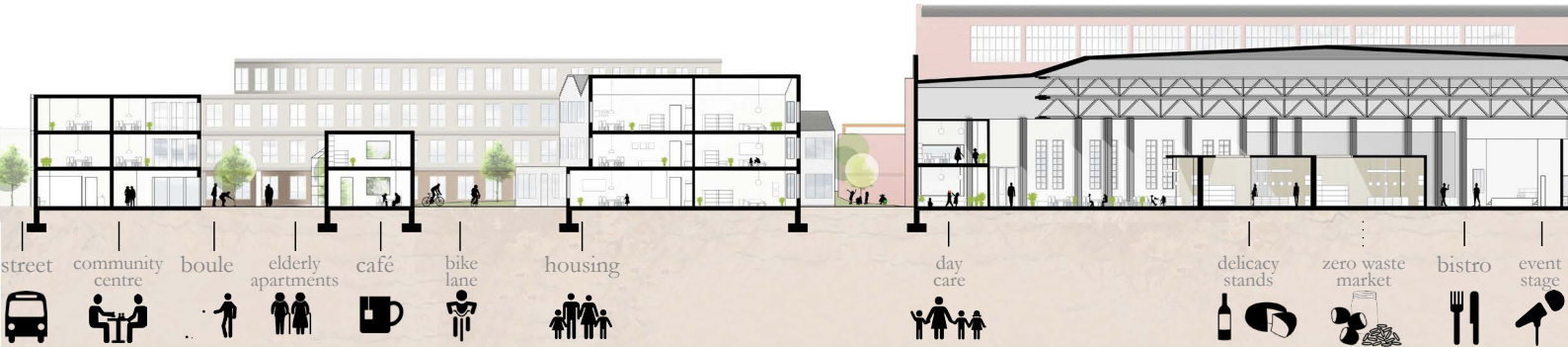
Moreover, this map expresses the distinction between the expected frequency of use by an individual, differentiating between buildings that are ‘used’ on a daily basis and those that are buildings that one would rather visit occasionally. Under this definition come mostly the museum and the vintage car show. In comparison to that, buildings of the everyday life are the different

gastronomical areas, the event area and those areas in which goods are offered such as the zero-waste market and the arts and crafts manufacturing studios. The illustration of this distinction in use underlines the expected liveliness and frequency of action in order to convey a better understanding of the presumed atmosphere on site later on.

SECTIONS



CROSS SECTION BB
original scale 1:250



CROSS SECTION AA
original scale 1:250

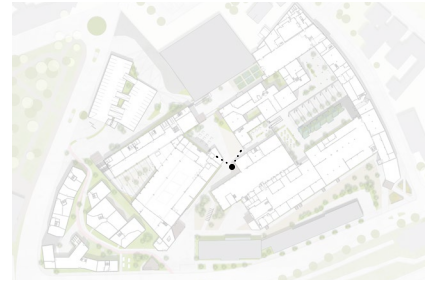


In the following, I would like to briefly point out a few aspects concerning the sections. Both sections are especially aiming to facilitate the understanding of the height change of the terrain on site. In addition, they also illustrate the design and atmosphere of the spaces in between the different buildings. Since these sections are otherwise relatively self-explanatory, I will only pinpoint quickly what the course of the individual sections shows:

The section AA is cutting from the south-west corner, looking northwards and ending on the north-east side of the plot. Hereby, it is cutting through part of the residential apartments and the community centre, followed by the lower-rise residential houses. Subsequently, the section is cutting through the multipurpose hall and the adjacent restaurant, followed by the bar with residential buildings in the back until it is eventually cutting through the pre-existing music school.

The section BB is running from the north side to the south, looking eastwards. Herein, it is cutting the adjacent furniture store, followed by the residential buildings with the integrated rainwater management system. Afterwards, one can see the bar which is followed by the vintage car show and the arts and crafts manufacturing studios until it finishes with the administrative building. Here, one can also see the museum with the viewpoint on top in the background.





PERSPECTIVE

repurposing outdoor spaces



This is a perspective taken from the viewpoint indicated in the map in the top right corner of this page.

The view illustrates the aimed serenity of atmosphere throughout the area that is conveyed by the casual use of public spaces. Besides the atmosphere, it also shows the proposed appearance of the newly created residential buildings, set into a frame of pre-existing walls.

SECOND FLOOR



original scale 1:200

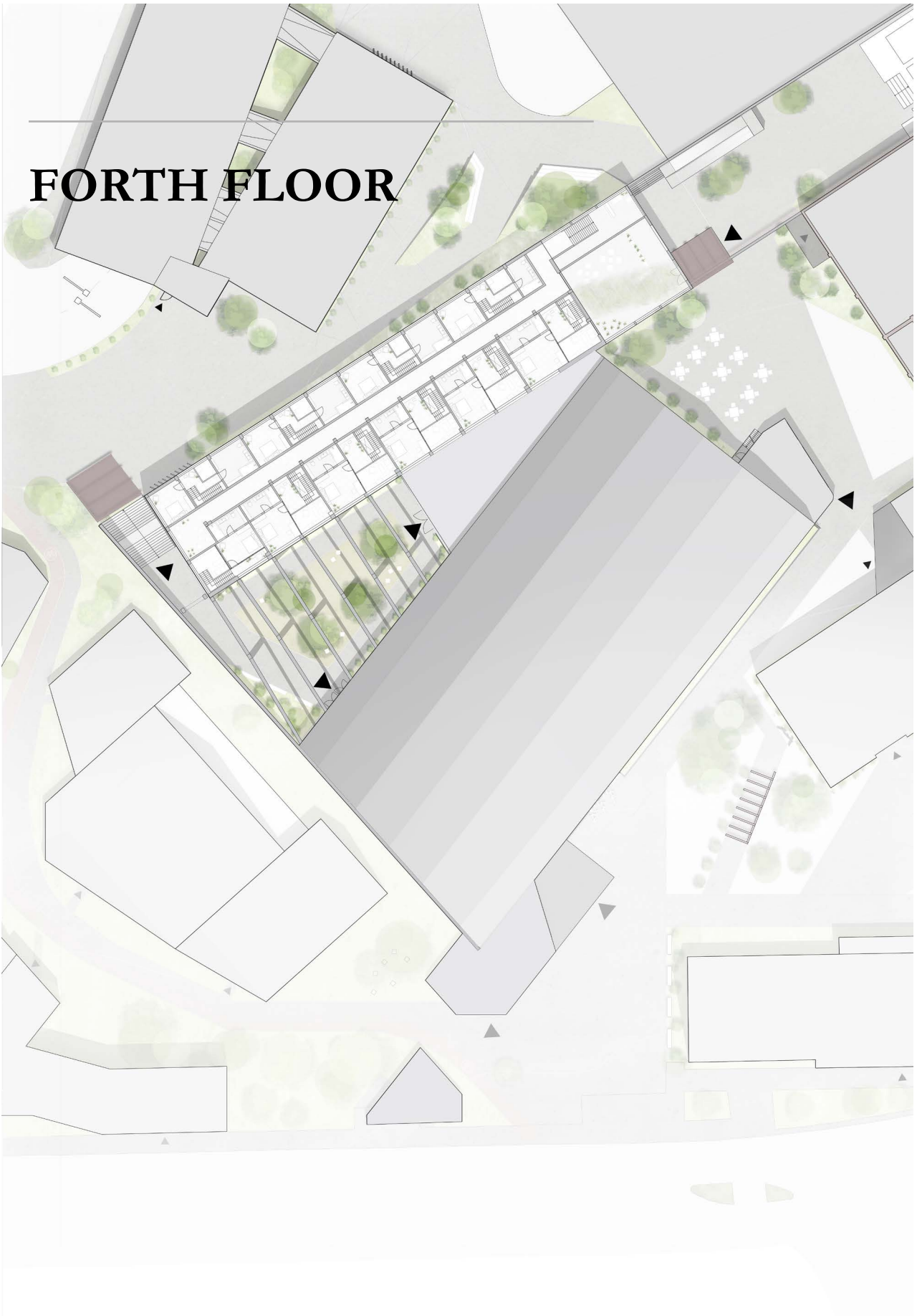
THIRD FLOOR



original scale 1:200



FORTH FLOOR



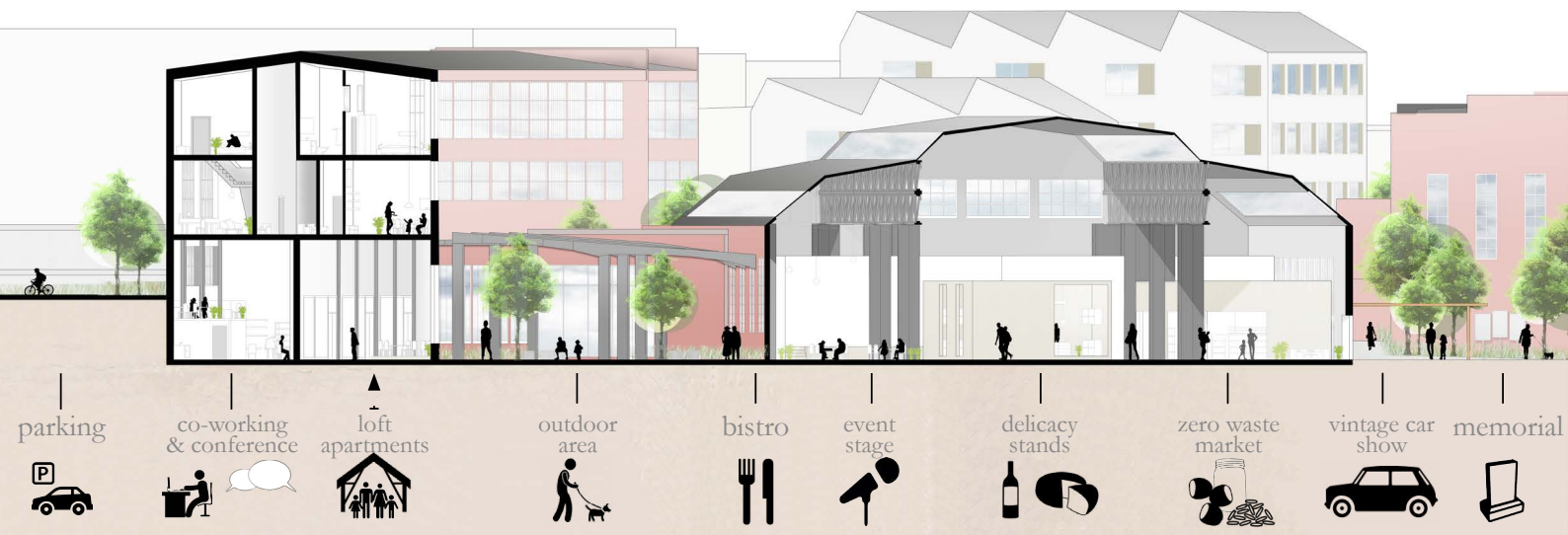
original scale 1:200

SECTION

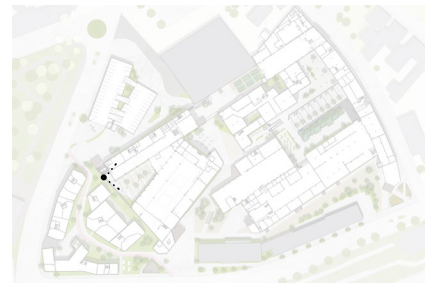


The section below cuts through my focus building, showing especially the height difference between the north entrance area where the new parking garage is situated and the ground level of the multipurpose building. It also shows the different, newly provided spaces such as the co-working spaces on the ground floor towards the left and the loft apartments on top. After that, it cuts through the courtyard area

and the large hall that contains event stage, delicacy shops and the zero-waste market beyond other facilities. Towards the right, one can see the connection to the next building which contains the vintage car show and adjacent to it the war memorial along the outside façade. Besides, this section depicts the vastness of building volumes adequately, thus underlining the potential for reuse in various ways.



original scale 1:200



PERSPECTIVE

view across the courtyard



This perspective is looking from the bottom of the newly created site entrance alongside the elongated building part that contains the co-working spaces and the loft apartments on top, across the new courtyard area towards the multipurpose hall. The image also illustrates how the remaining column structures commemorate that this has once been a covered space that has been altered in the course of action.

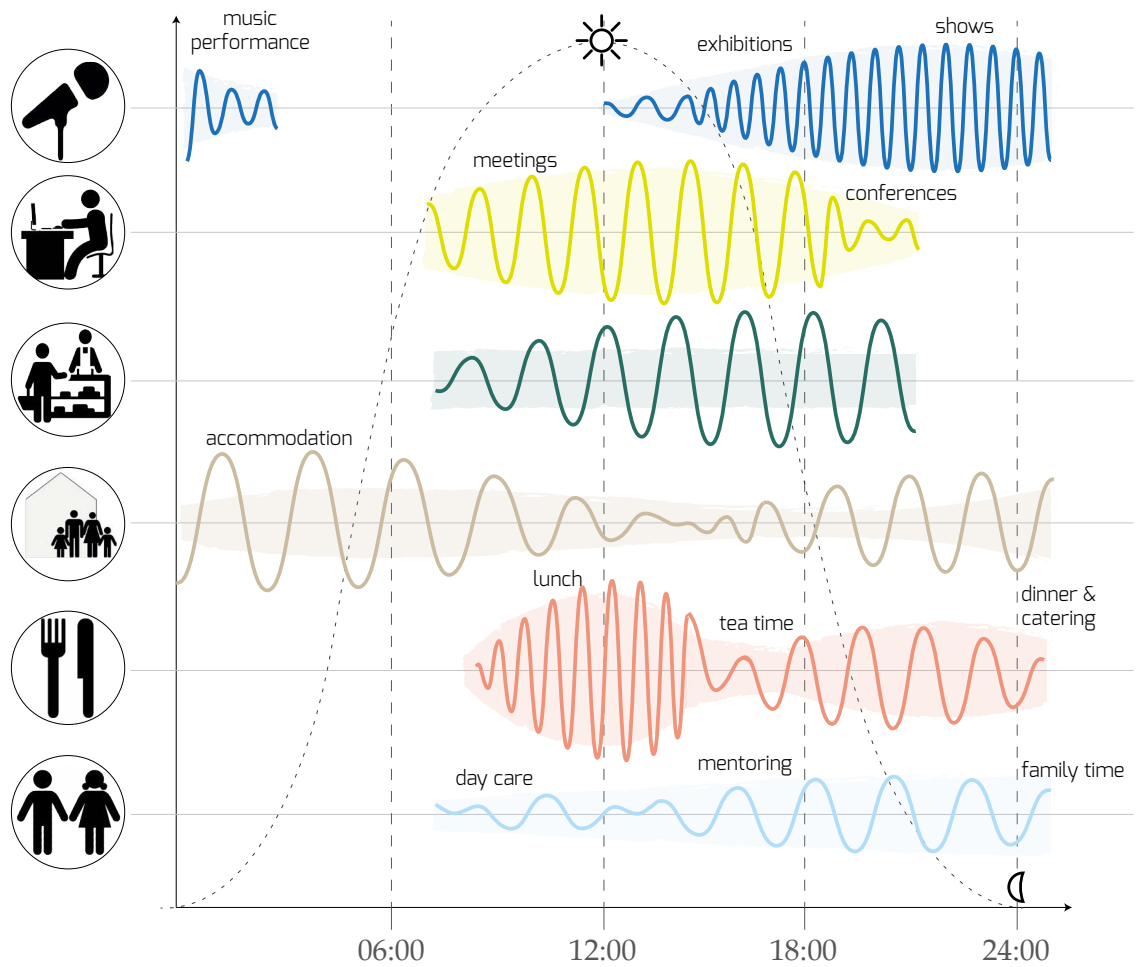
SCHEDULE OF USE

The illustrated schedule presents the expected use of the multipurpose building according to the different functions and the respective time of use. This ought to highlight that the building is designed to be in constant use of simultaneous activities.

Events and activities would occur mostly from noon onwards but especially during the evening hours whereas the co-working spaces and the small delicacy and zero-waste shops would be actively used from morning to late afternoon or evening. The residential use naturally adds a permanent use to this building although the most 'active' hours would presumably be the time from evening to morning. This adds a nightly use to this building.

The expected frequency of use of the provided gastronomy would start in the late morning, coinciding with lunch time where it could serve both the people working and living in this building but also others close by as a lunch place. The degree of operation might abate a bit right after lunch time but will presumably pick up again during late afternoon for 'tea time' and then be in full use again by the evening hours.

The day care centre is the most volatile function. During the morning hours until early afternoon, this part of the building could be visited by parents or grandparents with smaller children and could function as space where children can interact with other children under supervision while their parents are engaged elsewhere on site



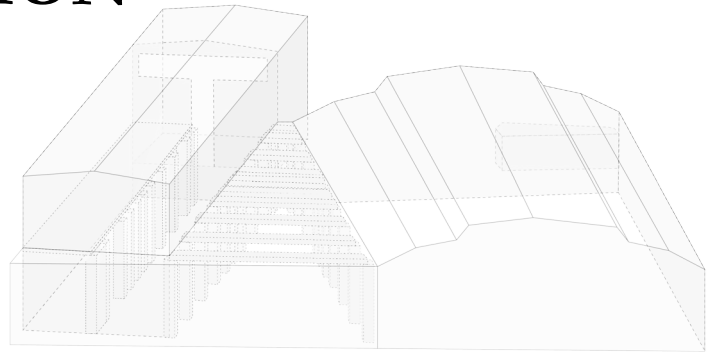
for example while they are perusing the arts and crafts studios to purchase some goods. During the late afternoon, this facility could function as supervised day care for primary school students from the nearby school where they could do their homework and then spend some time with friends before going home. In the evening, the area could once again help parents to have their children safely supervised and engaged while they are participating or watching a show or event that is taking place in the multipurpose building.

In conclusion, this shows that my design proposal includes activities for various generations at different times of the day, thus creating a constant activeness within the building and on site in general.

TECHNICAL TRANSFORMATION

EXISTING

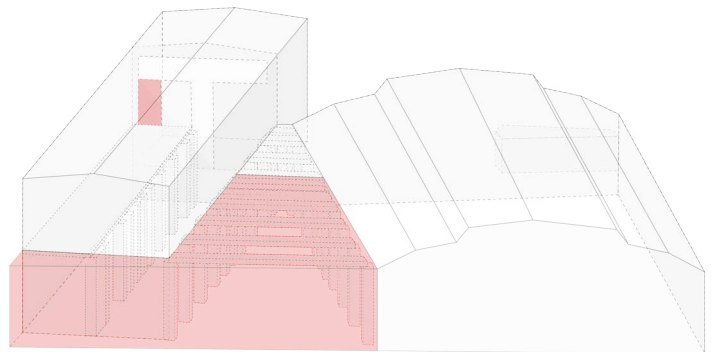
The following illustration shows how the multipurpose building could be refurbished and how I am proposing to transform it. The red elements show what was demolished while the yellow symbolizes everything that was added. Based on this, it becomes apparent that I have kept the action of demolition to a minimum, only taking away one interior wall and the indicated roof area with adjacent wall slide.



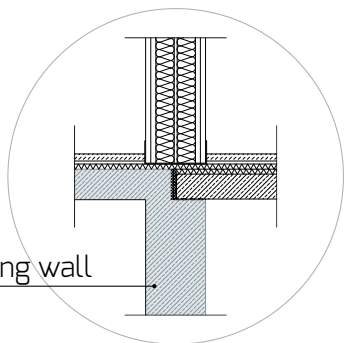
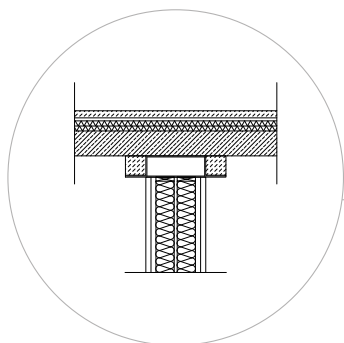
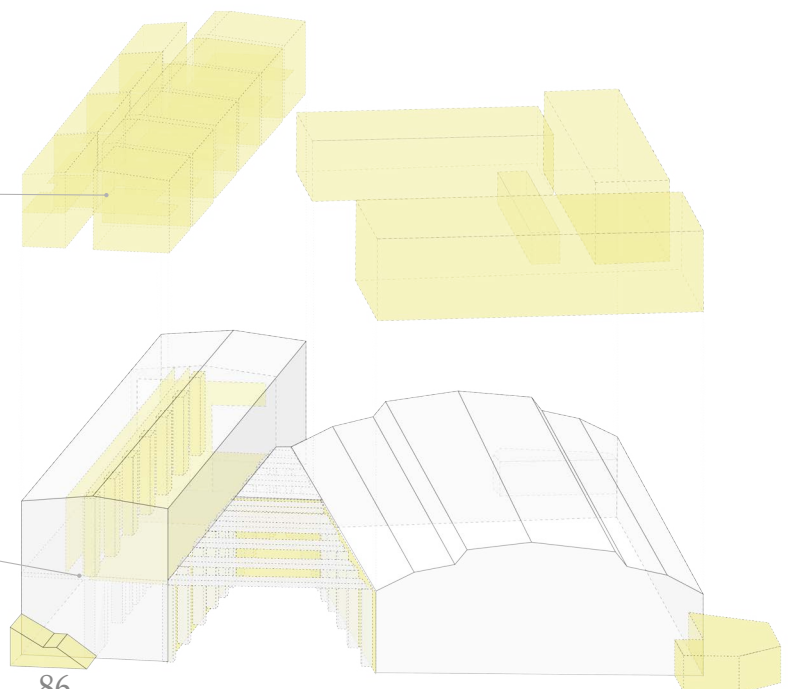
DEMOLITION

In comparison, I have added a lot more in order to cut down the large spaces into reasonably smaller spaces and fill these with various functions.

The two additional technical details show how old and new comes together. The lower illustration gives an insight of how the pre-existing ceiling- and column-structure on the ground floor of the higher tract of this building complex can be combined with an additional wall structure that is responsible for bearing the load of the outer unit walls of the loft apartments. The upper illustration is a technical detail of the point where the added wall meets the new ceiling in between third and fourth floor.



NEW CONSTRUCTION



existing wall



PERSPECTIVE

inside the multipurpose building



This interior perspective depicts a snap-shot of the imagined atmosphere inside the multipurpose building.

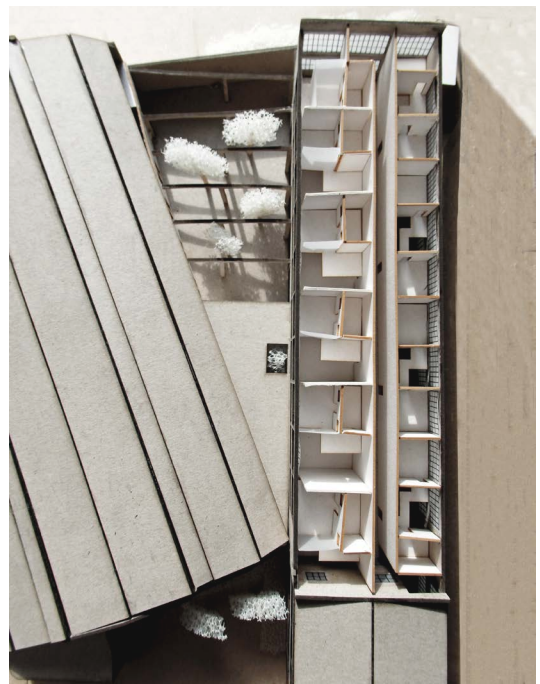
The image captures a view that looks from the event stage across the hall towards the green courtyard area. It also incorporates the delicacy stands in midst the large hall as well as seating possibilities that invite to pause and use this opportunity to sit down and relax or interact with others.

MODEL PHOTOS

PART 2_FOCUS BUILDING

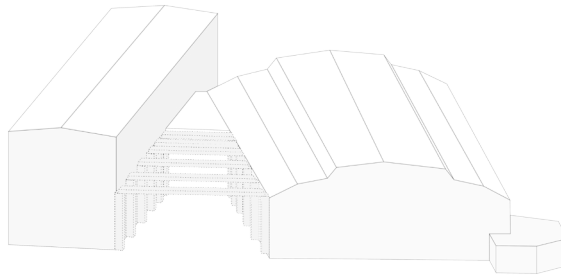
scale 1:200

On these model photos, the distinction of cardboards depicts whether a wall element is existing or proposed (*brown for existing vs. white for proposed*).



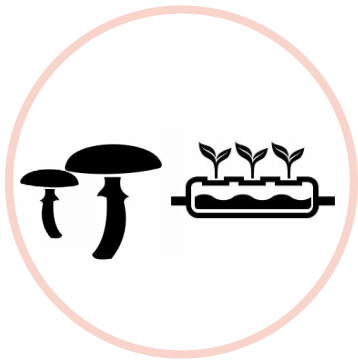
6. LOOK INTO THE FUTURE

POSSIBILITIES FOR AN ANEWED REPURPOSING PROCESS



FARMING

(mushroom farm, hydroponic agriculture)



In order to conclude this design proposal, I would like to present a few ideas of a possible new repurposing at a later time, in case for example if the owner of the multipurpose building changes and the new owner would like to alter the function of the building or in case the current functions become redundant due to change of times and a more adequate purpose is needed. In this case, it would be possible to find several new proposals that could easily reuse this building without much ado.

CLIMBING CENTRE

(with indoor and outdoor features)



One option would for example be to use it for agricultural purposes such as hydroponic agriculture or even mushroom plantation. This could be a great solution to provide Solingen with a new source of food.

Another option would be to turn the building into a climbing centre or crag which would be extremely suitable due to the high ceiling height.

Yet another option could for example be to turn the building into a food court with various stands that

FOOD COURT / MARKET HALL



offer all kinds of ethnic food and different food trends. Also for this purpose, the building size would be quite suitable.

What I would like to express with this is that the building can easily serve further functions without great alterations since the currently proposed alterations are not major, thus leaving space for further transformation. This emphasizes the potential of durability that lies within architecture and that should not be wasted.

PERSONAL CONCLUSION

After dealing intensely with the topic of industrial wastelands and my particular site for several months, I would like to draw a conclusion.

First of all, I would like to say that I have definitely learned a lot in terms of general facts and figures and especially about the working procedures when it comes to handling suchlike projects. In addition, I have gotten to know a lot of different refurbishment projects and community-engaging projects. Having encountered these projects might come in handy in my future career as architect. Moreover, working with such a site has brought me the real practice, the difficulties that need to be faced and also unexpected qualities closer so that I can better grasp the extend of work expenses that need to be put into refurbishing such a site.

Besides, researching about suchlike projects has also shown me that there is definitely potential for these projects and that there is also a will to experiment with such sites to revive them. I have actually been surprised about the variety of

projects that I have come across. For instance, I have always had certain prejudices against the city Wuppertal but after reading about the project “Utopiastadt”, I have gained a different impression of the city. The project showed me that the inhabitants of Wuppertal can be very proactive, innovative, young and modern in their actions.

Furthermore, working with my project has actually opened my eyes in terms of the will to deal with industrial wastelands based on the amount of positive, refurbishment-promoting articles that I have read. This and the governmentally set aim of reducing the daily land consumption have given me the hope that my appeal for a shift in planning might actually be on the right track towards stronger appreciation and thus increased implementation.

Besides, I would like to draw a conclusion from my work with the site in Solingen. Similar to so many German cities, Solingen has suffered from quite a lot of decay over the past few decades. After a

long period of wealth and success that entailed a high population increase, the city had to face difficulties related to a nationwide shift in economy. Many previously prestigious factories had to close, people started moving away and the city lost its good image. This resulted in a downgrade of the city’s economy that led to many empty shops throughout the city centre. Hereby, a vicious circle had been reached. An empty city centre is in no way appealing which means that customers stay away, thus making it difficult for new businesses and shops to gain ground in Solingen. However, due to many recent projects concerning communal life and sustainability, I can sense a strong will for a positive change in the city. Besides, due to the fact that Solingen bears several similar sites throughout the city area, I do believe that it has a lot of potential for a positive development of the urban area if only it would make proper use of the areas by introducing diverse functions that are future-oriented and appealing for locals and visitors.

Even though I naturally understand that dealing with issues of pollution, demolition and bad reputation can be daunting so that a project on the greenfield might be more tempting, albeit the increase in planning and expenses when it comes to infrastructure. However, I sincerely hope that it will become common practice to reactivate old abandoned sites, both industrial and others, so that we can reduce our land consumption and spare greenfield. In addition, I am appealing for this because constructing more and more new dwelling developments in the outskirts of a city entails so much more than just a bit of planning for new infrastructure. Spreading cities means weakening the existing areas and also wasting large amounts of energy on transportation of people and goods. Therefore, I am hoping that we will soon seize on planning our projects on greenfield areas and rather look for challenging but extremely interesting, potential-packed and unique sites in the city centre that have previously been abandoned and are now just waiting to be rediscovered. Reactivating

those sites can unfold so many different options for new activities, new movements and flows through the city and so many ways to enable social interaction in midst the dense urban fabric. Therefore, I do hope that my project is not simply a make-believe flight of fancy but an evolving trend to save resources.

—————**Meike Sanger**
Unfold Wasted Land
Master Thesis Project

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