
Brownfield regeneration in Budapest, Hungary

An analysis of the quality and functionality of two regenerated brownfields

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Summary

This report attempts to shed light on the Hungarian approach to the concept of 'brownfield regeneration'. This process reintegrates unused and underdeveloped former industrial sites back into the urban fabric by means of a complex renovation process. The complexities of this process are highlighted and positioned within the Hungarian frame of reference. The main research question focuses on the current quality and functionality of two recently regenerated Hungarian brownfields. The four characteristics of sustainability, public participation, history and functions are used as descriptive measures to gauge the extent to which the selected regenerated brownfields are successful. Interviews with professionals and surveys among local residents help to illustrate the process of brownfield regeneration in Hungary. The two regenerated brownfields that were examined are of decent quality and functionality. However, both projects could have been better, if a number of changes were to be executed, the most important of which is the more efficient use of public participation.

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I. Introduction

I.1 Background

The urban structure of Budapest was quite heavily influenced by spatial planning that was carried out during Hungary's period of state socialism. "In Hungary, as in many other post-socialist countries, the origin and distribution of brownfield sites is conditioned by land use patterns inherited from the past. In a narrow sense, the state ownership of land and direct state (non-market) control over the spatial resources of cities contributed to the fact that large industry zones are located in central urban areas" (Perić, 2016). Nowadays, a fair share of these locations have lost their former functions and some of those have not yet been given any new functions. These 'brownfield' areas, which make up more than ten percent of the urban area in the case of Budapest (Perić, 2016), are abandoned as a result of a loss of function and are in need of spatial intervention in order to once again become properly functioning parts of the urban fabric.

The process of renovating these brownfield areas and reconnecting them with their surroundings is called 'brownfield regeneration'. Brownfields are typically problematic for cities and their local governments, as they can negatively influence their environments. As a high percentage of brownfields are former industrial sites (with very heavy industry in some specific cases), these areas can be very badly contaminated (Hou, 2016; Hula and Bromley-Trujillo, 2010). Therefore, such brownfields can benefit greatly from a regeneration process that includes a thorough clean-up. The presence of a brownfield site within a part of a city can have a plentitude of other (negative) effects on the area. A good example is the negative impact that untreated brownfields can have on the property values in the surrounding areas (De Sousa et al., 2009).

Regenerating brownfields is not merely a matter of eliminating threats to an area within a city, there are also a number of interesting opportunities to be considered. For instance, a city could boost its tourism if it is able to successfully regenerate brownfield areas in a way that showcases the city's history (Kotval-K, 2016). In essence, it's very much worthwhile for cities to regenerate their brownfields, as it solves issues and creates opportunities.

I.2 Research problem

Hungary, like the other post-socialist states of central and eastern Europe, has a recent history that deviates a lot from that of western European countries, has a different situation regarding brownfields and an accordingly different approach to brownfield regeneration, all of which makes the country an interesting case for brownfield regeneration research.

The aim of this research is to assess the (perceived) quality and performance of two recently completed brownfield regeneration projects in the city of Budapest, Hungary. The main research question is:

"What is the current quality and functionality of two recently regenerated Hungarian brownfields?"

This main research question will be answered by combining the answers to the follow sub-questions:

1. *"How do involved professionals evaluate the regeneration processes and the current (and possible future) quality and functionality of the selected regenerated brownfields?"*
2. *"How do local residents evaluate the quality and functionality of the selected regenerated brownfields?"*

I.3 Structure

The report features numerous parts that shed light on the various facets of the research. Firstly, one chapter is devoted to the theory behind the topic of brownfield regeneration in Hungary and to the theoretical framework that is derived from that theory. After that, the methodology is elaborated upon. This is followed by a description and explanation of the research results. Finally, a chapter is used to present conclusions about the research results and the research as a whole.

2. Theoretical framework

2.1 Brownfield regeneration

A clear understanding of what brownfields are and what it means to ‘regenerate’ a brownfield is essential in order to fully comprehend the theoretical background of this research. In general, nearly all definitions by various researchers state that brownfields are sites within urban areas that are negatively influenced by the former use of the area, are underused or abandoned and that require (spatial) intervention to be restored (Rizzo et al., 2015). The actual regeneration of brownfields refers to “the management, rehabilitation and return to beneficial use of brownfields in such a manner as to ensure the attainment and continued satisfaction of human needs for present and future generations in environmentally sensitive, economically viable, institutionally robust and socially acceptable ways” (Alexandrescu et al., 2016).

Brownfield regeneration projects are characterized by their typically high level of complexity, which is due to the great variety of policy fields (planning, social, political, economic, environmental, etc.) that have to be taken into account, as well as the great number of different stakeholders involved (Perić, 2016; Rizzo et al., 2015). Doak and Karadimitriou (2007) state the following about the stakeholders involved with brownfield regeneration projects: “The range of actors involved in brownfield regeneration fluctuates with the scale and complexity of individual sites or regeneration areas, but it is often substantial. They ‘come to the table’ with an equally disparate range of goals, demands, perceptions, requirements, resources, strategies and constraints. Apart from the landowners, developers and supporting specialists, there is a range of governmental and community agencies and interests who have a ‘stake’ and specific roles in the regeneration process.”. All of the above calls for great efforts and a rigid and thoroughly thought-out strategy to be employed (Rizzo et al., 2015). There should be proper cooperation between different institutional levels and organizations, as well as integrated policies that facilitate successful brownfield regeneration (Perić, 2016). It becomes clear that the regeneration of brownfields is a complex matter, regardless of the location.

2.2 Brownfield in Hungary

This complexity of brownfield regeneration is also apparent in Budapest, where, as noted in the introduction, brownfield areas make up more than 10% of the city’s land. In Hungary, 51% of brownfields are abandoned industrial sites, out of which more than half have completely lost their previous function (Perić, 2016). Brownfields occupy 68 km² of the Budapest area, which amounts to roughly 13% of the capital’s territory (Perić, 2016) and around 40% of all brownfield areas in the country (Marinčák and Kozma, 2018). The regeneration of brownfields in Hungary is tackled at a national level by the Hungarian National Development Agency, on a regional scale this institution cooperates with the so-called Regional Development Agency (Perić, 2016). The local governments of areas in which brownfields are situated carry responsibility, in the case of Budapest, the Metropolitan Government of Budapest is important. It functions cooperatively with the local administration and the district government of the district(s) in which a particular brownfield is located (Perić, 2016).

2.3 Analyzing brownfield regeneration

Brownfield sites are very complex and therefore difficult to analyze. There are many varying aspects by which brownfields could potentially be examined, a number of rather important ones were selected for this research. These ‘characteristics’ don’t exclusively belong to brownfield regeneration, they may also be used to assessed ‘regular’ urban development projects.

History - Brownfields are the result of the industrialization of inner-city areas during previous decades or centuries (Perić, 2016). This strong link between brownfields and their past could be regarded as negative, but it can also be exploited in a positive way; cities can boost their tourism sector by using the marketing advantage of historic structures. Kotval-K (2016) states that: “brownfields can provide opportunities for cities to redevelop history through industrial heritage tourism. By returning brownfield sites to historic conditions and adding educational and experiential elements, a city could draw visitors, stimulate its tourism industry, and celebrate its previous success.” Preserving the historical aspect of brownfields has the potential to enrich the city and make it more attractive.

Sustainability - The matter of sustainability is very present in brownfield regeneration and there are two sides to it: ensuring that contamination is removed and making an area sustainable for the future. Many brownfields are contaminated and cannot be developed according to traditional cleanup standards (Poindexter, 1995), which is why there is an emphasis on decontaminating and rehabilitating them thoroughly (Hou, 2016), in order to meet the ever-growing demands for development land (Marincsák and Kozma, 2018). The most severely polluted brownfield areas often appear to be located in the most distressed neighborhoods (Howland, 2007). These communities and their local governments should ensure that the health of their residents is protected on the long term, through the creation of and adherence to adequate environmental (clean-up) standards. This requires an integrative public health and planning approach (Bacot and O’Dell, 2006). Brownfields should be redeveloped in sustainable ways, to guarantee that the next generations will also be protected from (the effects of) environmental harm (Howland, 2007).

Public participation - Public participation has the potential to allow members or collectives of members of a certain community to impact decisions made by governments and private organizations (Solitare, 2005). Public participation at the local level is a requirement for successful brownfield regeneration (Gallagher and Jackson, 2008; Rizzo et al., 2015). “Framing a project as a neighborhood revitalization or urban redevelopment initiative with positive benefits for the community encourages involvement and collaboration from members of the community” (Kotval-K, 2016). People want to feel as though they’re being heard, that their issues are important, that the community will benefit and that they can trust the people that are involved (Kotval-K, 2016; Solitare, 2005). Public participation can be very effective, as long as tools for public participation are used correctly and there are active neighborhood organizations (Solitare, 2005). However, among impoverished communities without active organizations there is typically very little meaningful public participation, as the traditional tools such as public hearings are not effective enough (Gallagher and Jackson, 2008; Solitare, 2005). Local governments are always limited by the public participation tools that they have at their disposal. Even with all the right tools, public participation isn’t always a guarantee for successful brownfield regeneration (Solitare, 2005). This means that local governments should have the proper tools available, all non-public stakeholders should be willing to engage in public participation and a number of other conditions need to be met. If these things are set up correctly though, the chances of meaningful public participation occurring are higher.

Function(s) - An area’s function or land-use can greatly influence the area final design, this allows for a wide range of possibilities to be considered when envisioning the regeneration of a brownfield. A study by Osman et al. (2015) regarding the shift of functions of brownfield sites in the Czech Republic shows a very clear shift from production to consumer activities. These figures might be relatively representative for other central European countries as well, including Hungary. However, so far there don’t appear to be any sources that indicate the precise proportions of different functions among regenerated Hungarian brownfields.

3. Methodology

3.1 Conceptual model

The figure below (*figure 1*) is a schematic representation of the research's theoretical underpinnings. It illustrates the relationships between the various concepts used and the way(s) in which these concepts relate to and/or influence each other.

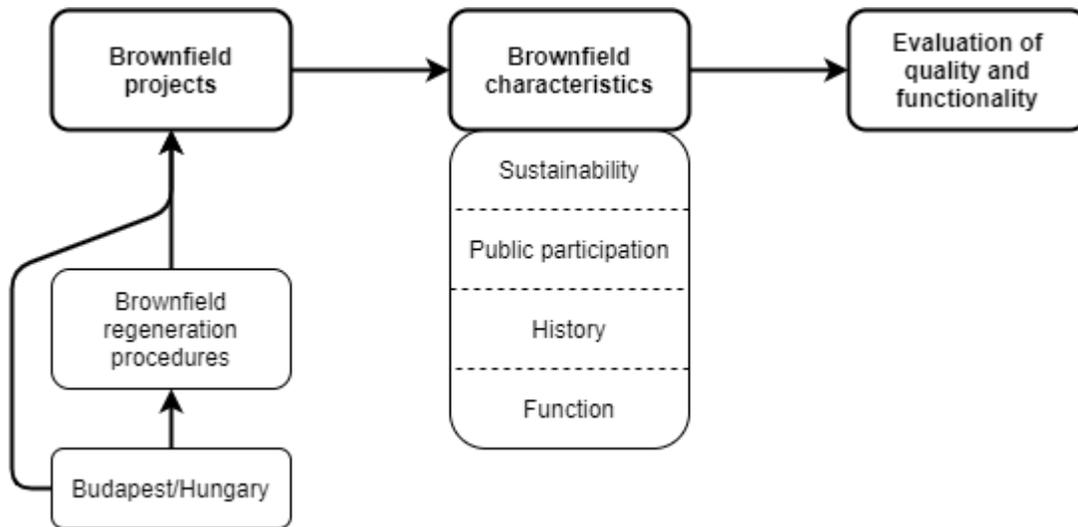


Figure 1: Conceptual model.

The local context and the approach to brownfield regeneration are import factors in the regeneration of brownfields. The main idea underlining this research is that the characteristics of brownfields described in *chapter 2.3* are indicative of the quality and functionality of a brownfield. Ergo, an examination of these characteristics sheds light on the regenerated brownfields themselves.

3.2 Selection of cases

The research aims to illustrate a general image of brownfields in Budapest and their regeneration processes. The most logical strategy is to analyze a few specific brownfields that are relatively representative of Budapest's brownfields in general, that's why two specific brownfields were examined. Both of these are located within a certain riverside area of the city's ninth district (Ferencváros), that has seen a lot of urban (re)development over the last two decades. The first one is called 'Bálna' (Hungarian for 'whale'), formerly a warehouse for various sorts of cargo, it's now a multifunctional building that was intended to house shops, bars, restaurants, art and exhibition spaces among other things, but in reality, it's mostly empty. The second site is the Gizella Mill, as the name suggests this building used to contain a milling factory, nowadays the building is filled with luxurious 'loft-style' apartments and offices. These two projects have been selected because of their relatively limited scale and the available amount of knowledge regarding them. Photographs of both buildings are displayed below in *figures 2 - 6*, the exact locations of both sites are marked in the *figure 7*.

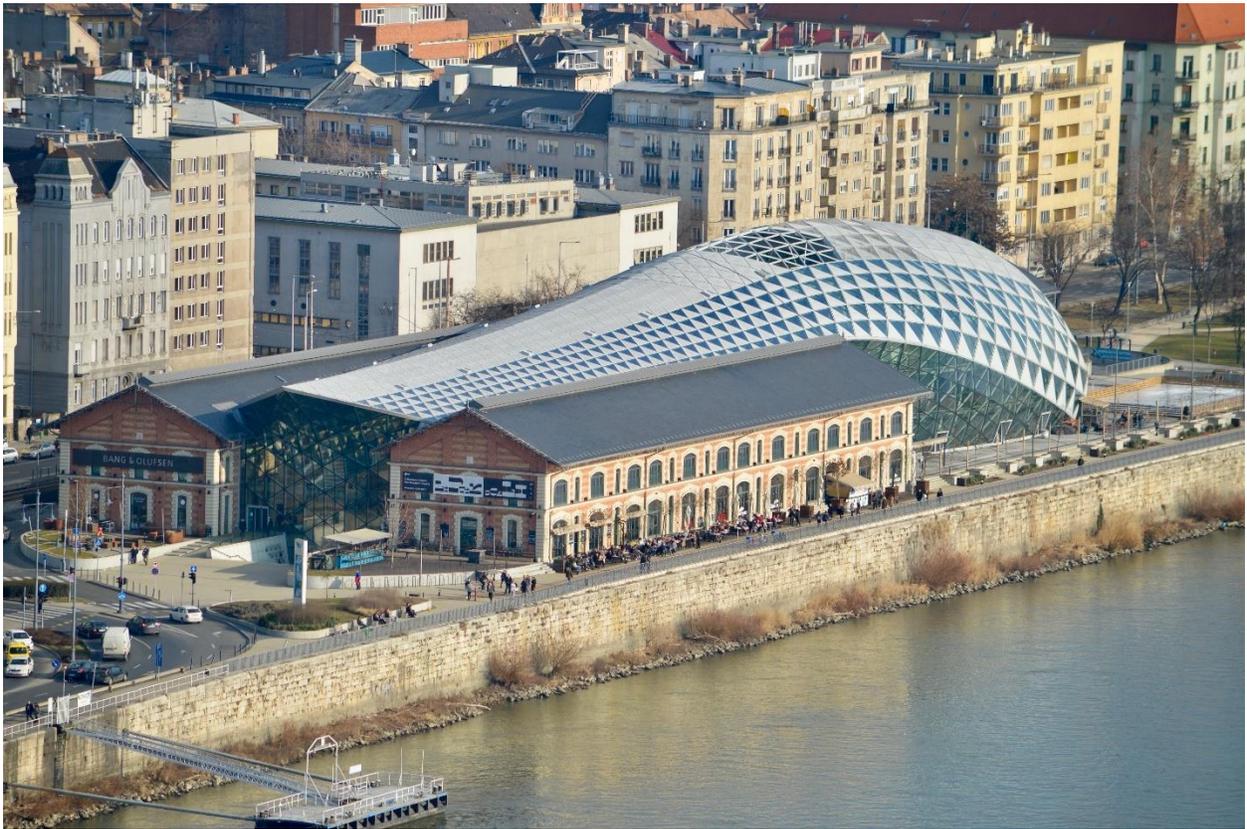
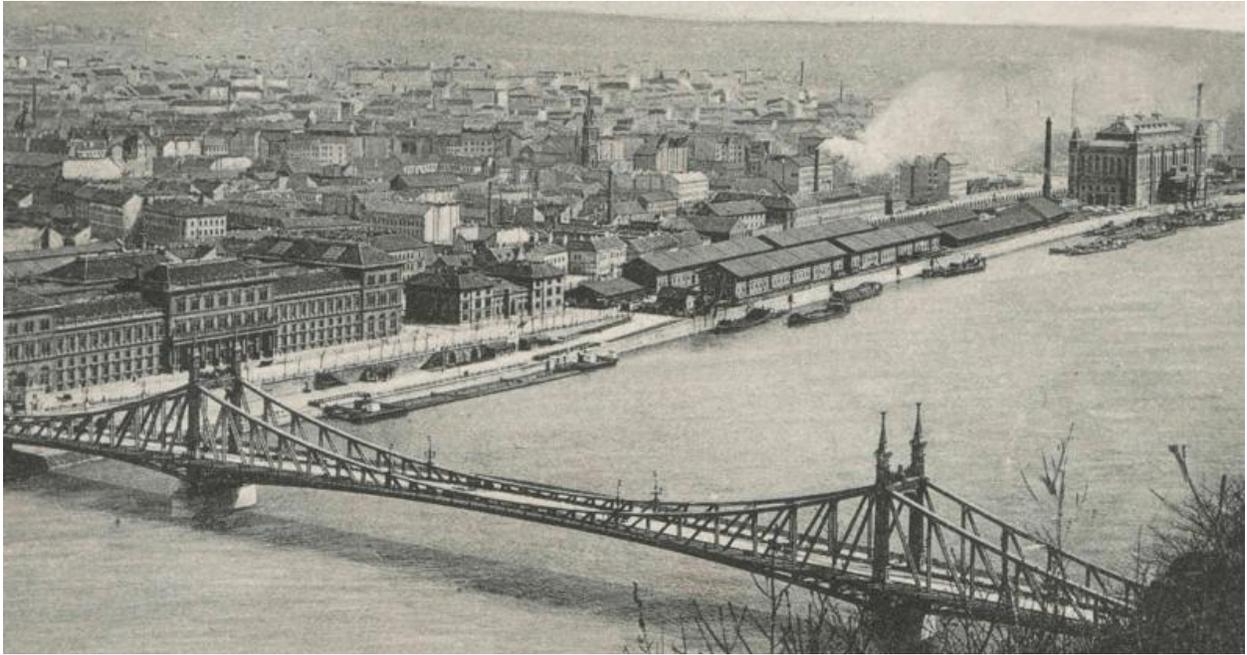


Figure 2: Bálványos's warehouses behind the Szabadság Bridge around 1910 (above) and the Bálványos building in 2019 (below).



Figure 3: Bálina's warehouses around 1960 (above) and the Bálina Building in 2011 (below).

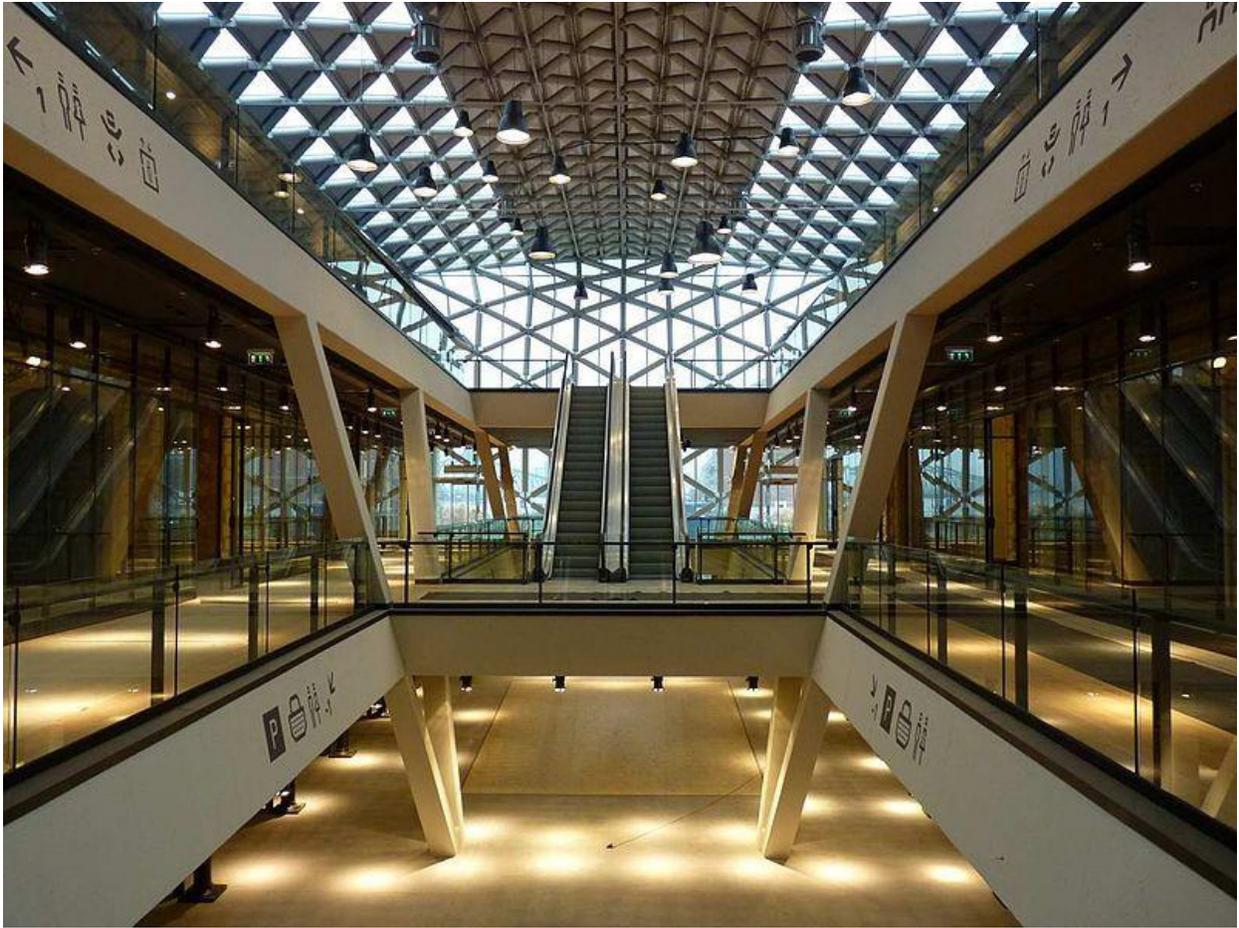


Figure 4: The current interior of the Bálna building.



Figure 5: The Gizella mill in the 1920's (above) and the renovated Gizella building in 2010 (below).

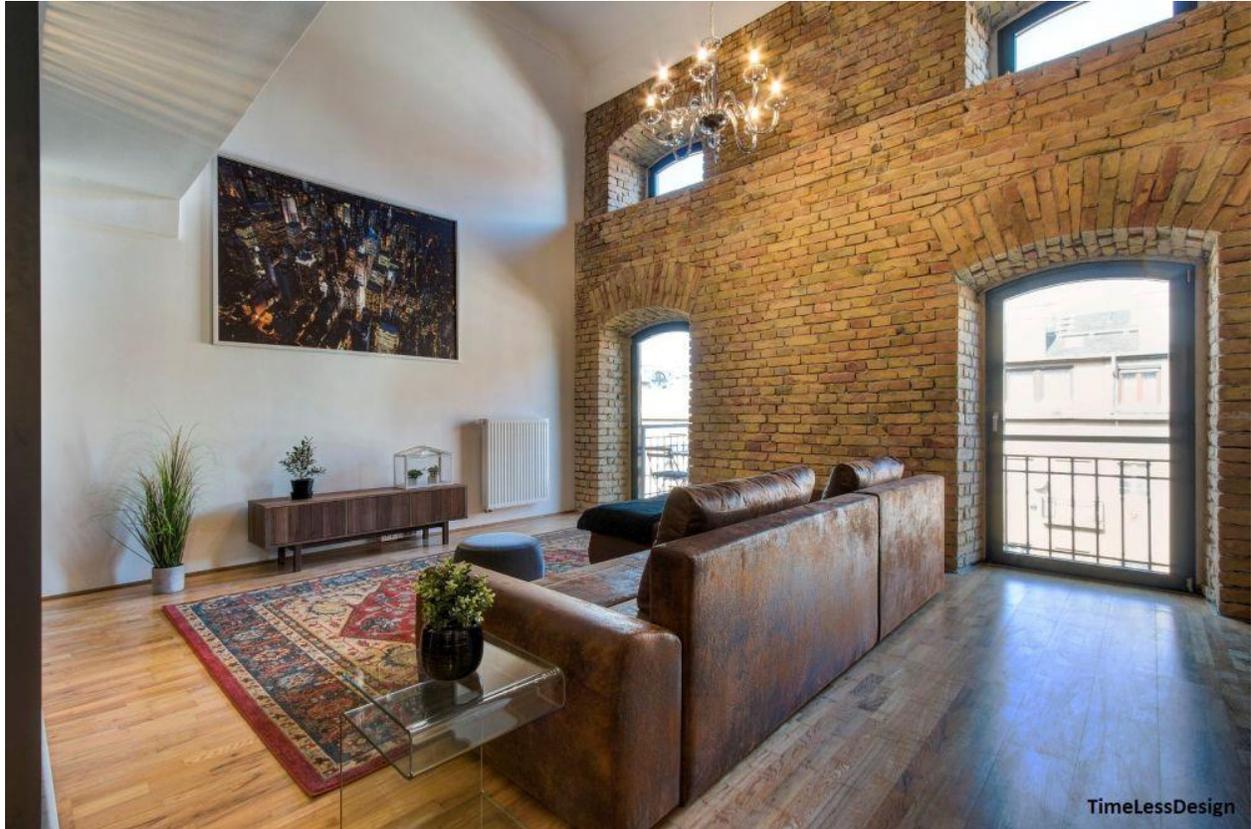


Figure 6: The luxurious loft-style apartments within the renovated Gizella building.



Figure 7: The locations of Bálna (orange) and Gizella (blue).

3.3 Research methods

The most straightforward method to gain information about the selected brownfield regeneration projects is to interact with different stakeholders. This sheds light on the projects' specificities, while simultaneously illustrating what the stakeholders think about the regeneration of the brownfields. Splitting these stakeholders into professionals that were involved in the project and the local residents shows whether there's a difference in perception between these two groups. In turn, this shows if both groups are equally well-informed and whether their opinions are similar. The research consists of both interviews and surveys, these are elaborated upon below in their own dedicated paragraphs. The interviews were done with the involved professionals, the surveys were conducted amongst the 'local residents'. Both groups were examined along the same lines, as both were asked about the aforementioned characteristics of brownfields, merely using different methodology for the two groups. The interviews with the professionals allowed for a more in-depth exchange of information about the topic, as compared to the surveys.

Interviews

The interviews were to be done with involved professionals, this could be any individual from any different party that was involved with either the design, construction or management phase of the selected brownfields ('regeneration'). The interviews were of exploratory nature, as the aim was to establish an initial knowledge base. The way in which the interviews are set up reflects this, the interview guide can be found in *appendix 1*. The interviews start with introductory questions, to make the interviewees feel at ease and to inquire about them and their involvement with the project(s). After that, the main interview questions are asked, divided into the four different 'characteristic' categories that this research focuses on.

The goal was to conduct four separate interviews for each of the selected sites. Unfortunately, this could not be realized; only two interviews were conducted for the Bálna project and only one for the Gizella project. Virtually all professionals that were approached to do an interview seemed extremely hesitant to participate. They gave referrals to other people that were somehow involved, made promises they didn't keep, or ignored requests from the beginning. The very limited (social) network on the researcher's side didn't make things any easier. As such, a very limited amount of information could be gathered from interviews. Furthermore, it's difficult to assess how reliable this information is, given that so few perspectives could be included. The two Bálna interviews were done with a lead designer for the project and with a researcher from the Eötvös Loránd University who has studied the development of the greater area extensively. After that, this researcher was also interviewed about the Gizella project. The names of the interviewees can't be disclosed, as they were promised to remain anonymous (due to a change in the research strategy in an earlier phase), and it would be unethical to break such promise afterwards.

Surveys

The surveys provide insights into the knowledge, opinions and experiences of local residents, visitors, passersby and people employed at or around the site. The aim for this part of the research is to portray the local people's views on the renovated brownfield, which (once combined with the views of the interviewees) provides a thorough overview of the situation regarding the selected brownfields. The survey questions were also translated into Hungarian by a native speaker, in order to overcome the language barrier. Printed surveys were handed out to people at the site(s) and collected after being filled in. The questions are rather simple, to ensure that they were understandable and that the answers could be analyzed efficiently. For this reason, the survey largely consists of questions according to a basic question format. These formats are: 'yes/no'-questions, 'agree – disagree'-questions according to a Likert-scale (1 represents "I strongly disagree, 5 represents "I strongly agree"), 'short answer'-questions, 'multiple answer'-questions and 'open'-questions. The exact survey form as used throughout the research is displayed in *appendix 2*. The majority of the survey questions are linked to the four 'characteristics' categories, as was the case with the interview questions.

The aim was to have 30 respondents per location, this was achieved for the Bálna site (32 respondents), but not for the Gizella site (15 respondents). Both sites have relatively few respondents, as people weren't eager to participate. This was an obstacle that was challenging to overcome, even though the surveys were translated in Hungarian, and the respondents were approached in Hungarian whenever possible. Fortunately, the Bálna building had relatively many visitors, which in the end resulted in an adequate number of respondents. Contrarily, the (area around the) Gizella building had few visitors and passersby and it was difficult to enter the building. The low number of respondents negatively impacts the reliability of the data and therefore the results. Ideally, the survey samples would consist of a great number of respondents and be as representative of the population as possible, so that accurate inferences could be made about all the local residents. This is not possible, as the samples are small, they include people that are not local residents, and the perceptions of the respondents that were local residents can't be assumed to be representative of the population. For these reasons, the outcomes of the two surveys remain limited to the samples. With regards to the population, these results remain speculative.

Methods of data analysis

The interview analysis and the survey analysis are carried out in different ways, as they concern different types of data. The interviews yield qualitative data, the surveys yield predominantly quantitative data. The interviews' contents are summarized, after which conclusions are made based upon the most noteworthy mentions of facts, concepts, experiences and opinions. The interview outcomes are split into the four different 'characteristics' categories mentioned before, so that a clear view can be obtained on every individual part. This ultimately aids in answering the first sub-question of this research, that relates to the perception by experts. The same 'four categories'-approach is adopted for the analysis of the survey data, this provides an answer to the second sub-question. However, since the survey outcome consists of quantitative data, different methods of analysis are required. Statistics is used to visualize the perception of the selected sites by the respondents. Ultimately, properly analyzed interviews and surveys can answer the secondary research questions, which in turn helps to answer the main research question.

3.4 Ethical considerations

Ethical considerations must be taken into account for both the interviews and the surveys. Firstly, it's essential for any participant to be adequately informed about the aim and methods of the research, and what will be done with the data provided by them. Namely, that their data will only be used in order to further the research and that it won't be used or distributed for any other purpose. Secondly, it's important to ask potential interviewees for permission to make an audio recording of the interview (and mention that recordings won't be distributed in any way). Another crucial matter is anonymity; ensuring that it won't be possible to retrace which people participated in either the interviews or the surveys. This can be achieved by only using basic descriptive measures such as age and nationality. Once again, it's essential to ensure that no personal information is spread to parties that are not involved with the research.

4. Results

This chapter gives an overview of the results obtained from both the interviews and the surveys. They are initially discussed in their own dedicated sub-chapters, after which they are combined in a third sub-chapter, together with theory.

4.1 Interviews

The interview outcomes for the two selected regenerated brownfields are separately discussed below. The summaries for the interviews can be found in *appendix 3*. The information in the second and third summaries overlaps for certain parts, as the projects are located in the same area and were completed around the same time. The summaries contain a lot of interesting information regarding the (development of the) greater area, but the following section only discusses the parts that are directly relevant for this research.

Bálna

Bálna consists of former warehouses that were built in the late 1800's and were part of a greater industrial area (Interview 1, 2019; Interview 2, 2019). The warehouses became severely underused in the second half of the 20th century and their renovation eventually started in 2005 (Interview 2, 2019). 60% of the buildings had to be preserved, as they were protected by monument regulations. The stakeholders deemed the preservation of the site's historical aspect important and believe that this has been realized adequately (Interview 1, 2019). However, the interviewed professor believes that more could and perhaps should have been done to reflect Bálna's (and the area's) industrial heritage (Interview 3, 2019).

The entire development area most likely contains some fairly contaminated spots (Interview 2, 2019), but the Bálna site didn't violate any environmental standards before the renovation (Interview 1, 2019), so no (soil) decontamination had to be performed. Bálna has also been made sustainable for the long term, ensuring that the present environmental regulations are met (Interview 1, 2019). The stakeholders of the Bálna project valued sustainability (Interview 1, 2019), but that might not have been the case for stakeholders of other developments in the area (Interview 2, 2019).

There weren't any regulations or guidelines stipulating the employment of public participation, which made developers not particularly interested in fostering it (Interview 1, 2019, Interview 2, 2019). As a result of that, the community was essentially not involved in the decision-making process of the project (Interview 1, 2019, Interview 2, 2019). However, this appears to be changing slowly, as companies and politicians seem to become more aware of the importance of public participation (Interview 1, 2019, Interview 2, 2019).

Bálna has the capacity to accommodate a variety of functions (commerce, hospitality, culture), which allowed it to host various amazing establishments and events over the years (Interview 1, 2019). However, not everyone seems to understand the vision behind Bálna, which prevents them from being drawn to the building (Interview 2, 2019). The current functions are the same as those that were initially envisioned (Interview 1, 2019), though some wonder whether other functions should have been applied instead (Interview 2, 2019). The stakeholders are adamant that the current functions have the potential to work, provided that they're managed properly (Interview 1, 2019).

Gizella

The Gizella mill was one of the many mills of Budapest, that processed agricultural goods coming in from the countryside, it did so from 1880 to 1963 (Interview 3, 2019). The mill survived the periods of underusage and was eventually renovated, starting in 2007 (Interview 3, 2019). Only the outer shell was preserved, everything else was made anew. The building doesn't reflect its history that well, which may be explained by the fact that the stakeholders saw limited value in the thorough preservation of the historical aspects (Interview 3, 2019). The site had great potential for a better reflection of the past, but in its current form it doesn't live up to that potential (Interview 3, 2019).

The area around the site probably has some contaminated hotspots (Interview 2, 2019), but this was probably not the case for the Gizella site, as no heavy pollutants are likely to have been used there. Even though the environmental standards were eventually met, it remains questionable how important sustainability actually was to the stakeholders (Interview 2, 2019; Interview 3, 2019).

Similar to other developments in the area, the Gizella project was not integrated well into the neighborhood (Interview 2, 2019). On one hand, this can be explained by a lack of public participation regulations at the time of development. On the other hand, the stakeholders most likely didn't deem public participation very useful or necessary (Interview 2, 2019). This situation is currently improving, as awareness about the topic increases (Interview 2, 2019).

The Gizella building currently houses luxury loft-style apartments and offices (Interview 3, 2019). The apartments were very overpriced and not authentic within the Hungarian context, and most of them weren't even purchased to be lived in (Interview 3, 2019). Additionally, the building is virtually inaccessible to people who don't live or work there, rendering it rather useless to 'outsiders' (Interview 3, 2019).

4.2 Survey

This sub-chapter presents the outcomes of the Bálna and Gizella surveys. Firstly, the two sites' survey results are discussed separately. The appendices contain an overview of the survey outcomes for both Bálna (*appendix 4*) and Gizella (*appendix 5*). These diagrams display the results of the survey questions that were not open or short-answer questions. *Table 1* shows the percentages of respondents that either agreed or strongly agreed with statements posed in the question that were based on a Likert-scale.

Percentage of respondents that either agrees or strongly agrees with the statement	Bálna	Gizella
"The renovated building reflects the site's history well"	47%	73%
"It's important for a site like this to reflect its history"	68%	73%
"I believe the site has been developed so that it doesn't have negative environmental impacts on the surrounding area on the long term"	66%	93%
"It's justifiable that governments spend a lot of money on cleaning contaminated, abandoned industrial sites"	94%	87%
"I feel as though the developers listened to me and the community"	4%	7%
"The site's current functions are in line with what the neighborhood/community needed"	32%	73%

Table 1: Likert questions - percentage of respondents that either agree or strongly agree

Bálna

The survey regarding the Bálna project yielded 32 respondents, of which 72% were Hungarian and 28% were foreigners.

History

More than 50% of the respondents know that the Bálna building consists of former warehouses. Most people either agree or remain neutral when asked if the renovated brownfield reflects the site's history well. Almost 75% of people think that it's important for a renovated brownfield site's history to be reflected in its current-day design. Surprisingly, only 38% of people that find this reflection of history important think that the Bálna building actually manages to do this well.

Sustainability

78% of respondents think the site needed to be cleaned up or decontaminated before the renovation process started, 76% of those respondents think it's justifiable for governments to spend a lot of money doing so. In total, nearly everyone (more than 90%) believes that it's justifiable for governments to spend great amounts of money to achieve this. Also, 65% of respondents believe that the site has been developed in a sustainable way for the long term, with a further 25% remaining neutral on the matter. Bálna scores well with regards to sustainability when looking at the percentages in *table 1* (66% and 94%).

Public participation

Around three quarters of the respondents claimed to not know whether there were any events for public participation, of those people a vast majority (84%) answered either 'No' or 'I don't know' when asked whether they actively tried to be involved in the project as a part of their community. More than half of the people neither agree nor disagree when asked whether they feel as though their voices have been heard by the developers, almost 25% says "no". Of the people that claim they tried to be an active part of the project, when asked whether they felt like their 'active' voice was being heard, only one person agreed, with none of them actually agreeing. Furthermore, the most common answer to the open question was that there was very little or no information available about any possibilities for public participation.

Functions

32% of respondents think the building has the right functions, 39% disagrees, the other respondents remain neutral. Everyone that claimed to not have faith in the building's current functions gave suggestions for alternative uses. Most of them suggested functions that positively impact the community (such as a community center) or things related to leisure/entertainment (such as art exhibition spaces).

Gizella

All respondents for the Gizella survey were Hungarian. The survey yielded a mere 15 respondents, the implications of this are stated in the part about the quality of the data.

History

Almost two thirds of the respondents were able to state that the Gizella building's former function was a (milling) factory. Around 73% of the respondents thought that the building's design is a good reflection of the former function. The same percentage of people agreed that a proper reflection of the historical aspect is important, and of those people yet another 73% think that the historical preservation has actually been carried out well for the renovation of the Gizella brownfield.

Sustainability

Exactly two thirds of the surveyed people believe that the site had to be cleaned up or decontaminated, a further 80% of these people believe it's justifiable that governments spend lots of money on this cause. The total percentage of respondents agreeing to this is even higher, at 87%. Over 90% of respondents stated that they think the site has been developed in a sustainable way for the long term.

Public participation

Around half of the respondents were unaware of any possibilities to engage in public participation, a third of the respondents claimed such opportunities were in fact available. Of the people that didn't know about opportunities for public participation being available, none actively tried to be a part of the project as a member of their community. Of the people that did know about these opportunities, 60% actively tried to represent their community and the other 40% didn't. Aside from two individuals, every respondent was rather neutral when asked whether they thought their opinions had been heard by developers. One person, that knew about possibilities for public participation and also actively tried to participate, stated that their voice was indeed heard.

Functions

Nearly 75% of respondents believed that the site's functions are in line with what the community needed, the remaining respondents remained neutral on the matter. Furthermore, aside from one person mentioning that a small grocery/convenience store would have been nice, none of the respondents actually had any suggestions for alternative or better functions that the building could've had.

4.3 Combined results

This part features the combined results from the interviews and surveys concerning both renovated brownfield sites, in relation to the theory presented in *chapter 2*. It aims to provide an answer to the sub-questions and the main research question.

Both developments have tried (to a certain extent) to let the renovated buildings reflect their past. Survey respondents and stakeholders believe this has been done decently well for both projects. However, there are still facets to improve upon when it comes to historical preservation and reflection. Both regenerated brownfields had and have the potential to achieve this at a higher level. The aim should indeed be to do so, because of the many benefits that are related to industrial heritage tourism (Kotval-K, 2016).

Sustainability in brownfield regeneration is important, as it ensures that future generations and the space they live in will be protected from the dangers of contamination and other environmental hazards caused by industrial activities of the past (Howland, 2007). Doing so can be a very extensive process (Hou, 2016), but it's worth it. The fact that both brownfields managed to comply with environmental regulations is a good sign, although one might wonder whether this was achieved because sustainability was very important to the stakeholders, or because the regulations at the time of development might have been rather mild.

Neither of the researched regenerated brownfields had any meaningful public participation, even though that is regarded as a requirement to successfully regenerate brownfield sites (Gallagher and Jackson, 2008; Rizzo et al., 2015). Public participation can only occur when it's facilitated properly (Solitare, 2005), but it seems like this wasn't problematic. Instead, it appears as though the developers of both projects were simply not willing to foster public participation, as there were no regulations telling them to do so. It's unknown whether proper public participation could occur within the current regulatory system. This is desirable however, since the lack of public participation for the researched projects ultimately had a negative impact on these projects and their surroundings.

The shift from manufacturing to other activities as described by Osman et al. (2015) has clearly been observed at both researched brownfield sites. They now have different functions, that are supported by their developers, but not liked as much by the people who actually live near them. Both regenerated brownfields had (and have) potential to be more functional in relation to the local community. However, living up to this potential can only be done by proper management and the involvement of the community.

Overall, the regenerated brownfields that were researched perform rather well, but there is room for serious improvements, especially with regards to public participation. This characteristic was perceived poorly for both selected cases, and by interviewees as well as survey respondents. Increased public participation could lead to better quality and functionality of regenerated brownfields altogether. Both brownfields have a lot of potential to make their areas and communities better, but this requires interventions in multiple facets.

5. Conclusion

This research focused on uncovering the Hungarian approach to brownfield regeneration, by researching two regenerated brownfields: the Bálna and Gizella sites. This assessment was done based on the characteristics of history, sustainability, public participation and functions. In-depth interviews with professionals and surveys with local residents were performed, in an effort to gauge the perceptions of these two groups about said characteristics.

The interviews indicated that improvements can definitely be made to both projects, with regards to all four characteristics that were used for assessment, especially public participation. A similar pattern shows among the survey outcomes. Although the respondents are rather positive about the regenerated brownfields (more so for Gizella than for Bálna), they also think that there is room for improvement in all four categories. In addition, the respondents also were most critical of the aspect of public participation. The two selected brownfields perform alright, but measures need to be taken in order to improve them. In order to improve the (future) regeneration of brownfields in Hungary, regulations regarding the preservation of history and the implementation of sustainability should become stricter, to ensure that the standards for these aspects of brownfield regeneration are raised and their performance can improve consequently. Public participation is the main thing that should be bettered, since that has the potential to improve a variety of things, such as community involvement in projects and the functionality of the actual regenerated brownfields. There should be an adequate structure that enables all stakeholders to allow for meaningful public participation to occur. Willingness to do so is another obstacle, but this might increase over time, as such support structures become embedded in the practice of brownfield regeneration.

The research was conducted without much previous knowledge, little publicly available information, a virtual lack of a network and a language barrier, all of these factors created obstacles. The relatively limited timespan and available means made conducting proper research challenging. The final number of interviewees and survey participants is low, mainly due to the aforementioned factors. Additionally, no real statistical inference could be made about the entire local population, due in part to the nature of the gathered data and the limited data that was previously available. Nonetheless, the research offers interesting insights into Hungarian brownfield regeneration. Future in-depth research could be conducted using the findings of this research, to more accurately map the quality and functionality of regenerated brownfields in Hungary.

References

- Alexandrescu, F., Rizzo, E., Pizzol, L., Critto, A. and Marcomini, A. (2016). The social embeddedness of brownfield regeneration actors: Insights from social network analysis. *Journal of Cleaner Production*, 139, pp.1539-1550.
- Bacot, H. and O'Dell, C. (2006). Establishing Indicators to Evaluate Brownfield Redevelopment. *Economic Development Quarterly*, 20(2), pp.142-161.
- De Sousa, C., Wu, C. and Westphal, L. (2009). Assessing the Effect of Publicly Assisted Brownfield Redevelopment on Surrounding Property Values. *Economic Development Quarterly*, 23(2), pp.95-110.
- Doak, J. and Karadimitriou, N. (2007). Actor Networks: The Brownfield Merry-Go-Round. In: *Sustainable Brownfield Regeneration: Liveable Places from Problem Spaces*. Blackwell Publishing Ltd, pp.67-88.
- Gallagher, D. and Jackson, S. (2008). Promoting community involvement at brownfields sites in socio-economically disadvantaged neighbourhoods. *Journal of Environmental Planning and Management*, 51(5), pp.615-630.
- Hou, D. (2016). Divergence in stakeholder perception of sustainable remediation. *Sustainability Science*, 11(2), pp.215-230.
- Howland, M. (2007). Employment Effects of Brownfield Redevelopment: What Do We Know from the Literature?. *Journal of Planning Literature*, 22(2), pp.91-107.
- Hula, R. and Bromley-Trujillo, R. (2010). Cleaning Up the Mess: Redevelopment of Urban Brownfields. *Economic Development Quarterly*, 24(3), pp.276-287.
- Kotval-K, Z. (2016). Brownfield Redevelopment: Why Public Investments Can Pay Off. *Economic Development Quarterly*, 30(3), pp.275-282.
- Marincsák, M. and Kozma, G. (2018). The appearance of Brownfield and Greenfield developments in the integrated urban development strategies of the northern Hungary (Hungary). *Revista Română de Geografie Politică*, pp.57-66.
- Osman, R., Frantál, B., Klusáček, P., Kunc, J. and Martinát, S. (2015). Factors affecting brownfield regeneration in post-socialist space: The case of the Czech Republic. *Land Use Policy*, 48, pp.309-316.
- Perić, A. (2016). Institutional Cooperation in the Brownfield Regeneration Process: Experiences from Central and Eastern European Countries. *European Spatial Research and Policy*, 23(1), pp.21-46.
- Poindexter, G. (1995). Addressing Morality in Urban Brownfield Redevelopment: Using stakeholder theory to craft legal process. *Virginia Environmental Law Journal*, 15(1 (Fall 1995), pp.37-76.
- Rizzo, E., Pesce, M., Pizzol, L., Alexandrescu, F., Giubilato, E., Critto, A., Marcomini, A. and Bartke, S. (2015). Brownfield regeneration in Europe: Identifying stakeholder perceptions, concerns, attitudes and information needs. *Land Use Policy*, 48, pp.437-453.

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- Solitare, L. (2005). Prerequisite conditions for meaningful participation in brownfields redevelopment. *Journal of Environmental Planning and Management*, 48(6), pp.917-935.

Appendices

Appendix I: Interview guide

Introduction

1. What was/is your role within this project?

History

1. What can you tell me about the history of the site?
2. To what extent or in which way(s) was the site's history taken into account when the plans for the renovation were created?
3. Do you think that the regenerated brownfield is a good reflection of the site's history?
4. How much importance did the various stakeholders give to the preservation of the site's historical aspect?

Functions

1. Which functions were initially intended to be incorporated in the renovated brownfield? Has the incorporation of these functions been realized? If not, why?
2. In hindsight, would it have been better to assign different functions to the site?
3. Which stakeholders decide which functions shall be assigned to a project?
4. How do the current functions impact the site and its surrounding area?

Public participation

1. In which ways (if at all) was public participation applied to the renovation of the site? Was the public involved with every part of the renovation process?
2. Are there rules or guidelines about public participation for projects of this scale in Hungary?
3. What do you think the public thinks about the way in which their voice was represented when important decisions were made about the brownfield?
4. How important was public participation to the other non-public stakeholders?

Sustainability

1. Did the site exceed legal limits of contamination before the renovation? If so, which things were done to overcome this obstacle?
2. How were you able to ensure that the site will have as few environmental impacts as possible on the long term?
3. Was there a large focus on topics such as sustainability, environmental impact and contamination among the different stakeholders?
4. Could and/or should more have been done to further decrease the environmental impact of the renovation process and the building?

Appendix 2: Survey form

History

<p>1. What was the former function of the site?</p> <p><i>(Put an 'X' in the box next to your answer, more than one answer possible)</i></p>	<input type="checkbox"/>	Military buildings			
	<input type="checkbox"/>	Freight station			
	<input type="checkbox"/>	Factory buildings			
	<input type="checkbox"/>	Residential buildings			
	<input type="checkbox"/>	Warehouses			
	<input type="checkbox"/>	Public services buildings			
	<input type="checkbox"/>	Shops / market			
	<input type="checkbox"/>	School			
<p>2. "The renovated building reflects the site's history well"</p> <p><i>(Circle the answer that reflects your opinion about the statement)</i></p>	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
<p>3. "It's important for a site like this to reflect its history"</p>	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

Sustainability

<p>4. Do you think this site required to be cleaned up before it was renovated?</p>	<input type="checkbox"/>	Yes	<input type="checkbox"/>	I don't know	<input type="checkbox"/>	No
<p>5. "I believe the site has been developed so that it doesn't have negative environmental impacts on the surrounding area on the long term"</p>	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	
<p>6. "It's justifiable that governments spend a lot of money on cleaning contaminated, abandoned industrial sites"</p>	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	

Public participation

<p>7. Were there any public events to foster public participation in the project?</p>	<input type="checkbox"/>	Yes	<input type="checkbox"/>	I don't know	<input type="checkbox"/>	No
<p>8. Did you try to actively participate in the project as a member of the local community?</p>	<input type="checkbox"/>	Yes	<input type="checkbox"/>	I don't know	<input type="checkbox"/>	No
<p>9. "I feel as though the developers listened to me and the community"</p>	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	

10. What could've been done better with regards to public participation?
.....
.....
.....
.....
.....

Functions

11. "The site's current functions are in line with what the neighborhood/community needed"	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
12. Do you think other functions would've worked better? If so, which one(s) and why?					
.....					
.....					
.....					
.....					
.....					

Personal questions

13. What is your age?	
14. What is your nationality?	
15. What is your reason for visiting the (area around the) site? <i>(Put an 'X' in the box next to your answer, more than one answer possible)</i>	<input type="checkbox"/> I live here
	<input type="checkbox"/> I work here
	<input type="checkbox"/> I'm visiting (someone)
	<input type="checkbox"/> I'm shopping
	<input type="checkbox"/> I'm here for recreation
	<input type="checkbox"/> I'm just passing through
	<input type="checkbox"/> Other

Appendix 3: Interview summaries

3a: Bálna

Interview I (with a designer)

The river Danube splits Budapest in half, but at the same time it unites these two halves. The design of the building was intended to mimic the flow of the river. The building also aimed to bring the two parts of the city even closer together, by way of eye-catching design. The area was formerly quite closed off, but the design opened the site and its surroundings up to the river, the city center and the opposite river bank. Bálna (a Hungarian word for whale) is supposed to represent Budapest's position as one of the major cities of Central Europe, as well as its connection to the great river Danube. It's located on the eastern banks of the river, in between the Szabadság and Petőfi Bridges. The name and shape of the building were envisioned to showcase Budapest's potential for culture and commerce, while being both a great old and a great new city. Bálna's main entrance points towards the city center, this part is constructed in between the two main warehouses that still stand today. The glass cover expands in height and width, in the direction of the new National Theatre. The building showcased the pinnacle of technology and design at the time of construction.

A lot has happened in relation to the Bálna building during the last decade and a half or so. The design process saw a number of disagreements between designers and developers, resulting in these two parties eventually parting ways. After that, the building was sold to the city of Budapest in 2013 and then to the state in 2019. The interviewee called the project a very politically charged matter and says it's a miracle that the building even ended up being finalized in its current form at all. The lease contracts of most shops and such were terminated as part of this recent sale, this didn't apply to the bars and restaurants on the waterfront. It's not known how the state plans to revitalize the building.

Bálna has hosted some amazing activities over the past few years, these include art exhibitions, concerts, conferences and fitness classes. The building could really benefit from "intense cultural and commercial programming". This application has occurred on numerous occasions throughout recent years, but it wasn't exactly the initial concept for the redevelopment of the brownfield site. The various spaces within the building beautifully accommodate a variety of functions, activities and events. Unfortunately, the building is not visited as much by tourists, as it appears to be just a little too far outside of the city center. This makes Bálna more of a destination than something people randomly come across, but perhaps that's actually good for the value that it has to the locals.

The buildings formerly functioned as warehouses in which a variety of goods were stored, but mainly salt. This area within Budapest was used for the transportation, storage and manufacturing of goods during the late 19th century and roughly the first half of the 20th century. The specific site was used to transfer goods from one means of transportation onto another and for the (temporary) storage of those goods. The site originally consisted of 6 warehouses, but not all of those survived into the 21st century. Of the ones that did, a minimum of 60% had to be renovated. This was due to them being part of a protected (and monumental) city view, even though the buildings themselves weren't officially classed as monuments. The various stakeholders that worked on the project unanimously agreed that the preservation of the historical aspect of the site was very important. The interviewee believes that this preservation has been realized adequately, and that the site currently reflects its history well.

The building's current functions are the same ones that were initially planned during the design stage. All of these functions have been realized, or at least the potential to house these functions, as the exploitation has not been

optimal. The functions were and are a good addition to this area of Budapest and the local community. This project was a public-private partnership, for this specific case it means that the local government worked together with the real estate developer, and they decided on the functions of the building. The building functions as a magnet for catering and hospitality establishments, such as bars and restaurants. The more cultural functions are not being exploited to their potential, due to previous mismanagement of these functions. This might change however, as the building has been sold to the state, which plans to take a different approach (most of the lease contracts within the building were terminated).

There was no proper public participation for the development of this project. This is mainly due to the lack of regulations regarding this topic at the time of development. As such, private stakeholders were not obliged to organize public participation initiatives, they didn't seem to care for it all that much. As a result of that, members of the local community were only involved a little bit (in an indirect way) through the few public hearings that were organized. The interviewee isn't familiar with the current rules and regulations regarding public participation, but suspects that the new mayor (who's not part of the ruling party) will try to foster more public participation. Aside from the fact that the local community didn't have a proper say in the developments of Bálna, the locals embrace the building, as it has become an icon of Budapest. However, many of them are also rather well aware of the turbulent recent history of the building and its (re)development, including some of the (technical) difficulties that were caused by poor decision making on the developer's end.

The site was not contaminated before the renovation process started, or at least not to the extent that any environmental standards were violated, thus no clean-up was required. As such, no extensive decontamination of any kind (of the soil e.g.) was performed. The Bálna building in its current form does not pose a risk to the environment in any way, shape or form. Furthermore, all present-day environmental and sustainability rules and regulations are met. The various stakeholders valued environmental protection and (long term) sustainability. Not just because this was necessary in order to meet the environmental standards, but also based on personal beliefs regarding these topics. Some cost saving measures with regards to things such as materials may have slightly impacted the sustainability of the project, so the building could've been even better in that regard, had those cost saving measures not been put in place.

Interview 2 (with a professor)

From the middle-ages, Buda held the position as the political and cultural capital of Hungary, whereas Pest, while starting out small, became the main hub for economy and trading. Hungary had a specific position within the Austro-Hungarian empire and its division of labor. The Czech Republic and Austria had the role of manufacturing, whereas Hungary (and especially the Great Hungarian Plain) served as the agricultural provider for the empire. Budapest grew very rapidly in the second half of the 19th century, as more and more people and goods started coming into the city. The capital was the gateway for all of the agricultural goods into the rest of the country and empire. All of these goods entered the city through the current research area, which was named the stomach of Budapest. The Danube, the railways and the (local) roads, such as the Soroksári road, all entered the city through this area. A number of buildings were constructed to handle all these incoming goods. First there was the customs building in 1874 (nowadays the home of Corvinus University), then the municipal warehouses in 1881 (nowadays the Bálna building; four of these warehouses were made of stone, the other two were made of wood), followed by the 'elevator building' in 1883 and the Grand Market Hall in 1897. A number of manufacturing facilities were also constructed around this time, this includes the mills of which Gizella is one. Thus, products could be transported, passed through customs, stored, used and sold within the same area. This area was the major industrial area of Budapest at the time, it also included massive slaughterhouses, liquor factories and even chemical factories a little while later.

The area (and its immediate surroundings) can be described as a typical industrial neighborhood according to the Chicago School, because of the way it was set up within its surroundings and how it was planned (and because it had a great food industry, just like Chicago). The area was notorious for producing terrible odors, this is even reflected in a few current-day street names. Early on, people were attracted to area because of the employment opportunities, but later on it became a typical working-class neighborhood and eventually the living standards went downhill, following a similar pattern as some of the great cities of the British industrial revolution. The massive industry buildings were dominating the skyline of the Pest-side ever since the 1920's. In 1933, a famous Hungarian journalist of that time stated that the district of Ferencváros resembled one big warehouse for people and goods. He went on to propose a total removal of all the large-scale industry in the area. World War I and the Treaty of Trianon played a role in the decrease of industrial productivity, as Hungary lost a great share of its agricultural land and Hungarian products were boycotted on a large scale. The food industry couldn't be taken over by other kinds of industry, or at least not at the same scale. Most of the buildings were severely underused during the following period of state socialism. There was very little investment in this area during that period, it became almost completely derelict in the 1990's.

The massive railyard that was located in the area was demolished in the years 1991-1992. There were plans to revitalize the entire area, but no overall masterplan seemed to have been created. The late 1990's saw the election of the first Fidesz government, which to an extent relied on strong symbolism to support its narratives. This symbolism was realized through three important construction projects: Millenáris (a renovated brownfield displaying the power of innovation), the House of Terror (a museum aimed at presenting the horrors thrown at Hungary and Hungarians during the 20th century) and the new National Theatre (to represent the governments appreciation of 'official culture'). The old National Theatre used to be located in the city center, but was demolished by the socialist government during the 1960's. The new Fidesz government decided to construct a new National Theatre in the former industrial area. This was completed in 2001, making it the first new construction of a major scale in this area. The façade of the old National Theatre was put onto the new National Theatre, which was also done because of symbolism. The old inner-city of Budapest has historically been a difficult political battleground for the Fidesz party. The party gets its support from the country side and the non-inner-city parts of Budapest. This explains why the government chose to move away from the inner-city to develop projects that were meant to represent their stability and power through symbolism. The areas outside of the inner-city also

typically had a lot more land available for development, making investments in such areas easier and much more worthwhile. The entire area essentially changed from a wasteland into a new and revitalized district in about two decades. The area became quite segregated, with an expensive waterfront and poorer areas further away from the river. Soroksári road can be seen as a border, since the buildings go from new and shiny to old and worn down within less than 50 meters of this road. Tourist typically don't get to see much of the redeveloped area, as it's just outside the city center, some of them might still go to Ráday utca or Bálna, but most skip the area altogether.

The warehouses were still partly used for storage in the 1990's, the first plans for their renovation emerged in 2005, as part of an attempt by the city of Budapest to become the 2010 cultural capital of Europe. Bálna was intended to mimic the market hall of Covent Garden in London, a former industry building turned into a trendy market. However, Bálna didn't even get close to the success of Covent Garden. Another idea was to make a large boat stop next to Bálna, so that international cruises would stop there and passengers would be stimulated to enter the building. There were many ideas, most of which were not really successfully implemented. The result is sort of a misunderstood shopping mall, with shops that don't attract large enough crowds. There are no big brands such as McDonald's or H&M there, so many people just don't know about the building or don't even bother to take a look. Bálna is next to a big university building and one of the most famous tourist attractions (the Great Market Hall), yet it fails to attract a lot of the people from those places. Perhaps different functions or other a better exploitation of the current functions could change that, because the building does have potential, due to its eye-catching design and interesting location. The current selection of functions is bad, as it's unclear what the actual functions are and some of the functions focus too much on niches (such as a store for antiques). The current functions and functionality don't have a negative impact on the surroundings, but rather just kind of no impact at all.

Budapest really wanted a building designed by an internationally renowned architectural firm, to boost its image as a prime European metropolis. Three different companies applied to be the developer of the project, two of which were large and well-established firms, the other one was a small lesser-known firm. The latter ended up getting it, possibly because they had the best connection to the architects. Bálna didn't open once it was finished, it remained closed for around 3 years (until 2013), due to financial and legal issues. The cooperation between the developers and the architectural firm was eventually terminated due to disagreements, the building was then finished according to the original design, but with cheaper and lower quality materials. Eventually, all involved stakeholders basically ended up sewing all of the other ones, which is one of the reasons why it took so long for Bálna to be opened. In recent years, it seems as though the building has become symbolically linked to the ruling Fidesz party, as the last two election result events for them were at Bálna, whereas they previously did it at Millenáris.

The district essentially consists of a rich island in a poorer sea, with big offices of multinational companies being located in a working class neighborhood. Most of the projects in the area were not properly integrated into the neighborhood; for the majority of the projects, the stakeholders did not check the neighborhood to see if their grand and shiny buildings would actually fit within the neighborhood. The local community was not or barely involved in any of these projects. The first time public participation was even properly attempted to be implemented in Budapest was in 2008-2009. During the development of Bálna and Gizella, the idea of public participation was not really thought of and there were practically no regulations or guidelines for it either. As such, it didn't happen adequately for either of the projects. At the time, there appeared to be an idea among investors and engineers that such projects were more of a technical endeavor. For this reason, 'outsiders' (or rather local residents) weren't ought to be necessary to involve, as it was not seen as a community endeavor after all. Nowadays, the topic of public participation is becoming slightly more prevalent in projects, due partly to a gradual increase in corporate social responsibility. The topic is also getting a more prominent representation through updated regulations and guidelines.

The greater area most likely contains a number of environmental hazards, but this is more so the case for the part further south. The waterfront area contained a large railyard that could possibly have some rather contaminated spots, during the demolition of this railyard the soil was not replaced. The park next to the Bálna building would be built on top of this and could therefore have potentially been quite badly contaminated, but eventually the soil was replaced. Bálna's warehouses and the Gizella mill building probably weren't too badly polluted, as they didn't involve as many harmful substances. It's possible that sustainability and decontamination were treated similarly to historical preservation or public participation by investors, only being deemed "worth it" if it actually resulted in something significant for them.

3b: Gizella

Interview 3 (with a professor)

The abundance of agricultural goods coming into Budapest during the 19th century called for mills to be built, in order to process the cereals. First, there was milling on the water, on so called ship mills. Later, the mills along Soroksári road were constructed, the first ones in 1866 – 1868, the second generation of mills in the years after (the Gizella mill was one of these, having been constructed in 1880) and the last mill was completed in 1893. For a long time, Budapest had the largest milling capacity in Europe, it was called the milling capital of Europe and was only surpassed in capacity by Minneapolis. In total, the milling activity on the largest scale lasted around half a century. Along with the great decrease in industrial output throughout the entire area, came the underusage of the mills of Budapest. Some of them were demolished as early as the 1930's, the Gizella mill's production seized in 1963, but it was not torn down. Gizella was built by the aristocratic Krausz-Moskovits family and named after the wife of one of the men in the family. Nothing was happening with the mill in the 1990's, the first ideas to renovate the building came about in 2006 – 2007, when parts of the building were started to be taken down. The building was almost completely torn down, only the shell/façade remained and the rest was newly built to resemble the old building.

The first idea was to create loft apartments, a trend that was started by artists in the US. It's typical development for renovated former industrial buildings found in many US cities, featuring exposed pipes and bricks, among other things. In the US, it was a counter-cultural movement, but in Hungary it was just taking a concept that didn't match the local context and trying to apply it regardless, hoping to make it seem trendy. The apartments turned out to be extremely expensive, they have similar square meter prices as some of the biggest mansions in the Buda hills, which is quite overpriced, considering what you get for it. The square meter prices were (and perhaps still are) 2-3 times higher than the average in (inner-city) Budapest. As such, the apartments were only advertised to the upper class, they actually sold rather quickly, but not to people who desired to live there. Instead, the apartments were mostly acquired as an investment, or for companies to accommodate their guests. A fair share of the potential buyers were foreigners, but they backed out once the 2008 financial crisis hit, an event which left one of the investors close to or fully bankrupt. In addition, the bottom floors contain office spaces, which are occupied by various companies. An important detail is that the building can only be accessed by people who live and work there, so it doesn't really serve a purpose for other local residents.

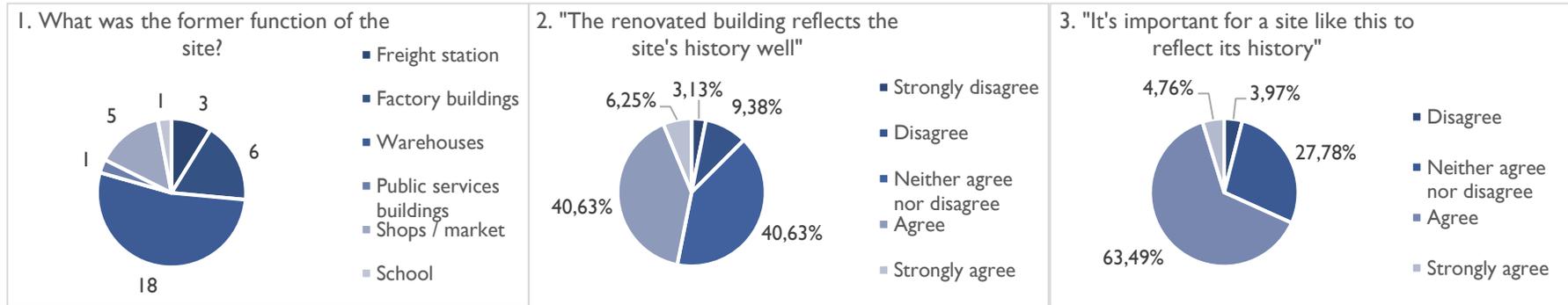
Gizella had a sustainability scandal: an underground tunnel connecting the building to the riverbank was discovered (it was formerly used to pull mine carts to and from the river) and it was very historically relevant. Unfortunately, certain investors chose to dump rubble from the construction process in there, instead of having it researched. Investors, in a general sense, were extremely powerful during this time. Other than that, the Gizella site likely meets all the environmental standards. The investors also initially wanted to demolish the building's tower, but the crane that was necessary to do so, was considered too expensive, so they decided to leave the tower alone.

To a certain extent, it appears as though developers of these two projects only wanted to preserve historical aspects whenever it was in their favor. The buildings may look historical, yet it can be hard to tell what they once were. It might be that the preservation of the historical aspects was viewed from a perspective of "Will we make a profit or not?". Some nearby projects somehow saw the demolition of certain monumental historical aspects, which shouldn't have been possible or allowed. The greater area has a very interesting history, but this is hardly reflected. Most people might know what one or two buildings used to be, but very few people know the history of the entire area. There used to be a very informative museum dedicated to the history of the area and the milling legacy of Budapest, but it doesn't exist anymore. There could and should be a new museum, but more

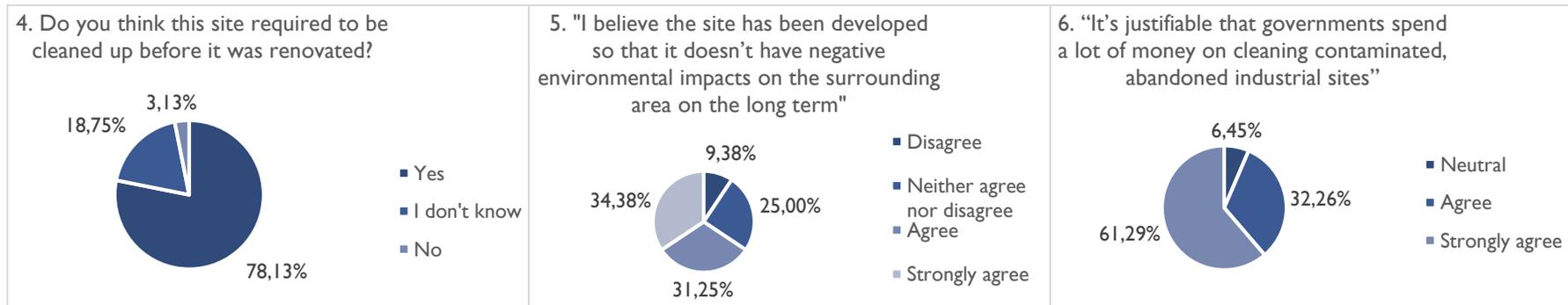
contemporary and interactive than its predecessor. The Hungarian approach to historical preservation differs from the western approach. In Hungary, there's perhaps not as much of a focus on opening people's eyes to the history of sites like these. This is a shame, as the area has lot of potential to inform tourists and give an extra dimension to the Budapest experience. Additionally, this might be an interesting new way for the city to increase its income.

Appendix 4: Survey results – Bálna

4a: History



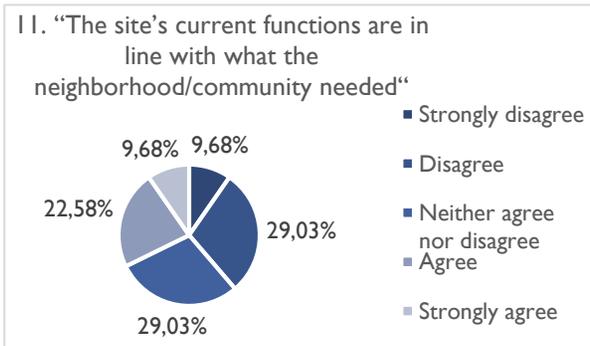
4b: Sustainability



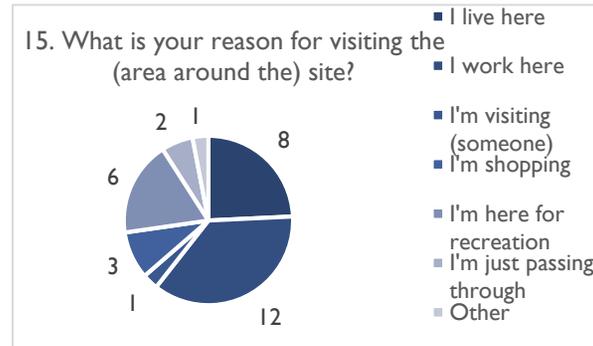
4c: Public participation



4d: Functions

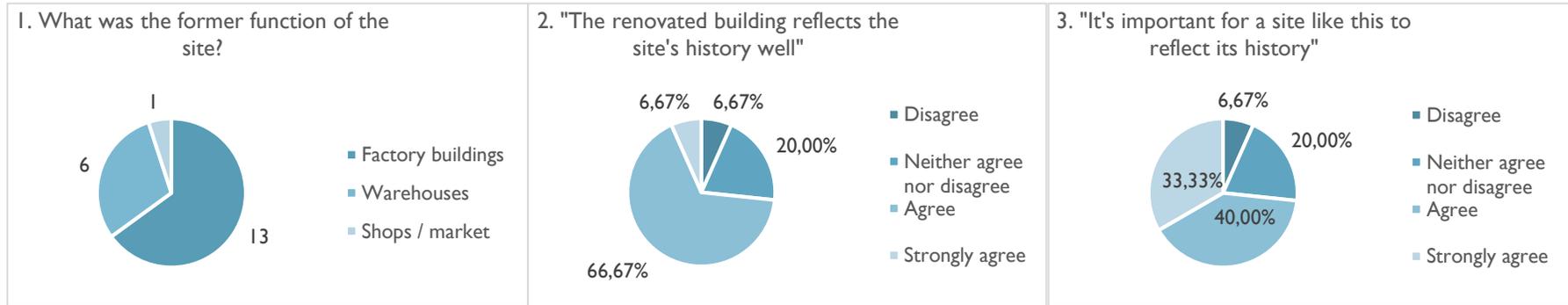


4e: Reason(s) for visit

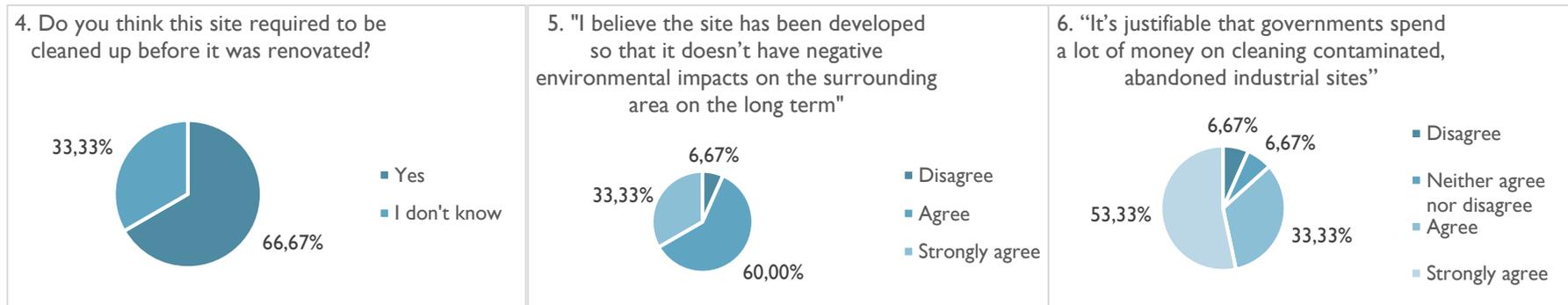


Appendix 5: Survey results – Gizella

5a: History



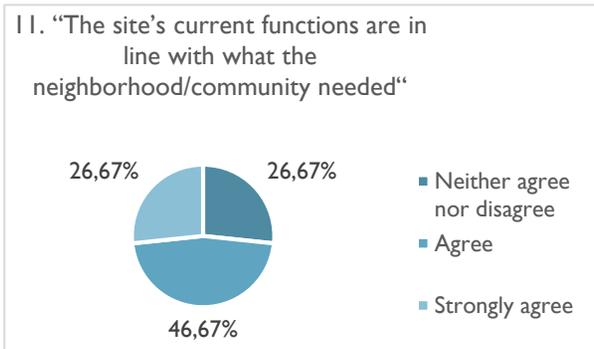
5b: Sustainability



5c: Public participation



5d: Functions



5e: Reason(s) for visit

