LANDSCAPE IN CHANGE – PLACE IN UNCERTAINTY. A CASE STUDY OF DETACHMENT

IWONA MARKUSZEWSKA

Department of Remote Sensing and Soil Science, Institute of Physical Geography and Environmental Planning, Adam Mickiewicz University, Poznań, Poland

Manuscript received: February 4, 2023
Revised version: October 24, 2023

MARKUSZEWSKA I., 2024. Landscape in change – place in uncertainty. A case study of detachment. *Quaestiones Geographicae* 43(1), Bogucki Wydawnictwo Naukowe, Poznań, pp. 45–61. 11 figs.

ABSTRACT: This paper discusses place-oriented values via actions against unwanted landscape changes reported by the community affected. The case study was based on a post-mining area in the city of Poznań (Poland), now functioning as a naturally valuable ecosystem. The relationships between landscape changes and the local community's perception of these changes were studied. The results showed that a landscape transformation which is not accepted by the local community can stimulate a sense of loss, specifically, a feeling of detachment from the emotionally valued landscape. Based on this, a conceptual framework of detachment from a place was constructed. In this regard, the findings fill the gap in the case of experiences of solastalgia and topophobia. Different qualitative methods supported the analytical proceedings, such as content analysis, in-depth interviews, case study visits, community observation, field study and exploratory analysis.

KEY WORDS: landscape, changes, sense of place, sense of loss, feeling of detachment

Corresponding author: Iwona Markuszewska; iwona.markuszewska@amu.edu.pl

Introduction

Contemporary communities are facing changes that radically or moderately transform landscapes. On the other hand, changing landscapes influence people's perception of their geographical surroundings. This affects the relationships and emotional bonds with the landscape, because landscape changes are not always accepted by local communities. The critical point can be the loss of ties with the landscape caused by unhappy experiences due to the difficulty in coping with transformations taking place. In turn, the deteriorating quality of the landscape and living conditions (triggered by both natural factors and human interventions) evokes a sense of loss.

With this in mind, cases of strong NIMBYism (Not In My Back Yard) but especially LULU syndrome (Locally Unacceptable Land Use) are well known. However, NIMBYism can be expressed by an egoistic attitude, as well as by care for the landscape. Therefore, during planning processes (which are important for creating a sustainable future in urban areas and maintaining human well-being), administrative bodies should cooperate with inhabitants and create opportunities for community participation. In relation to landscape planning and city management,

https://doi.org/10.14746/quageo-2024-0003
ISSN 2082-2103, eISSN 2081-6383

human–place bonding may have important implications too, as attachment to a certain place is shaped by personal experience and familiarisation with the surrounding landscape through direct contact with it.

In this paper, attachment to landscape has been considered from a dynamic perspective. It has been argued that unwanted changes of geographical locations imply a loosening of positive relations with a place and consequently, a tendency towards the feeling of detachment from a place. Following different models of emotional relations with place and landscape, the process of losing emotional ties with a place has been analysed. Based on this, a conceptual framework of detachment from a place has been constructed. This approach allows us to observe how critical situations and actions taken can determine the sense of place and sense of loss. The case study was in a post-mining landscape – a semi-natural ecosystem located in the fringe of Poznań city (Poland). This case study is a great example of a changing landscape: from mining to a semi-natural landscape, to a recreational and developed area.

Literature overview

The first part of the literature review deals with issues of emotional relations between people and places. As this article concerns a post-mining landscape, in the following sections the review of research on brownfields is presented, with special attention paid to the importance and functions of post-mining sites in the spatial structure of urban areas. In addition, the role of participatory planning is emphasised in the sections.

Landscape and people: Emotional relations

According to the European Landscape Convention (2000), landscape is *an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors*. Landscape is under constant human intervention and is influenced by natural processes (Antrop 2005, Layne 2014) that change land use and the visual appearance of the landscape (Oudes, Stremke 2020).

However, changes in landscape may cause controversy among landscape users. This is due to a strong NIMBYism with regard to psychological possession of a certain space and unwillingness towards any intervention (Devine-Wright 2013, DiEnno, Thompson 2013, Markuszewska 2021). Thus, affected communities demand the right to participate in the decision-making process, and by becoming active in spatial planning, they can feel responsible for the place they feel attached to (Manzo, Perkins 2006, Loupa Ramos et al. 2016, Jansson et al. 2019, MacKenzie et al. 2019, van der Sluis et al. 2019, Banini, Ilovan 2021).

The general meaning of place attachment is the emotional bonds between people and their physical settings, which comprehensively recognise people–place relations (Tuan 1974). This emotional affection with place is variable and depends on determining factors, processes, actions and circumstances; therefore, the intensity of attachment and attitude to places are inconstant and changeable over time (Lewicka 2011). The process of building a relationship with a place is multi-stage and complex and is based on constant and/or temporarily being in a place, concessions of place, getting a meaning of place, experiencing of place, gaining place satisfaction and creating a sense of place. All of these build, maintain and reshape emotional people–place relations (place attachment) that are expressed via place identity, place belonging and place dependence (Kasarda, Janowitz 1974, Tuan 1974, Relph 1976, Proshansky et al. 1983, Sack 1988, Williams et al. 1992, Hay 1998, Kals et al. 1999, Stedman 2002, Williams, Vaske 2003, Schultz et al. 2004, Manzo 2005, Cresswell 2009, Trentelman 2009, Stobbelaar, Pedroli 2011, Egoz 2013, Edwards 2019, Butler, Sarlöv-Herlin 2019, Ilovan, Markuszewska 2022).

As Samon (2014) noted: *Feelings for place can range from disinterest and minimal cognitive awareness to superficial fondness, stronger devotion, or attachment so powerful that people are willing to defend and even sacrifice their lives for a place*. This explains how people are oriented towards a certain place, how they understand a place and how they feel about a place. In the creation of people's relations with a place, Samon (2014) distinguished six place processes:

1. place interaction,
2. place identity,

3. place release,
4. place realization,
5. place creation,
6. place intensification.

However, as he pointed out: *None of the six processes are more important than the others, though for particular places and historical moments, the particular dynamic of the six processes may involve different generative combinations and different gradations of intensity, quality, and duration*.

In turn, in a process of building sensitive bonds with a place, Markuszewska (2022) created a model of attachment to landscape. This model includes holistic and dynamic approaches that interpret people–landscape relationships under the constant influence of changeable policies about landscape planning and human management. In particular, it contains the following:

1. long-term residence and involvement in place,
2. acting in and feeling about the material setting,
3. accumulating unique experience in a physical setting,
4. sentimental and emotional qualities of geographical surroundings,
5. perception of and emotional relation to material setting.

The usefulness of this model was proved in analysing the concept of sensitive planning of landscape.

As for people–place relationships, some meaningful should be mentioned here. Scannell and Gifford (2010) proposed a tripartite framework of place attachment. This model refers to the personal context, the psychological process and place dimension. In turn, Raymond et al. (2010) compiled a three-dimensional model of place attachment, which consists of personal, community and natural environment attributes. The model of Diener and Hagen (2022) is composed of place and self/community, nature (materiality/familiarity), social relations (performance/partiality) and meaning (narration/memory). In the model of Ilovan and Markuszewska (2022), the spatial, temporal and social dimensions are intertwined in the formation of place attachment. Among others, it is worth mentioning the models of landscape identity compiled by Stobbelaar and Pedroli (2011), and Loupa Ramos et al. (2016).

To conclude, the place-oriented literature delivers a variety of models and descriptions of the process of building and preserving emotional relations with places and landscapes. However, only a small amount of the literature is devoted to processes of deconstructing and losing bonding with places and landscapes. Therefore, this paper contributes to the scope of detachment from a place.

Post-mining landscape: Changes and management

Post-mining areas accompany many European urban agglomerations currently or formerly within the range of extraction of raw materials. Extraction of raw materials indicates its presence through the creation of post-mining conditions: water ponds with flora and fauna habitats that may contribute substantially to local biodiversity and recreational utility (Prach, Hobs 2008, Clewell, McDonald 2009). In addition, post-mining pits, especially in the past, were used as landfills (Markuszewska 2007).

One of the interesting processes that occurs in post-mining areas is re-naturalisation. This is due to a slight degradation of the environment and relatively easy self-regeneration to make it possible. Secondary succession on brownfields creates specific ecosystems, which relatively often become ecologically valuable semi-natural sites in the intensively developed urban pattern. Such areas, which are distinguished by a specific composition of fauna and flora, are nowadays unique in urban space – there are peculiar enclaves of nature within urban sprawl (Qiu et al. 2013, Jabareen, Eizenberg 2021, Zwierzchowska, Stępniewska 2022). However, these greeneries, which most often are used by local inhabitants for recreational purposes, also gain interest for housing development. This is why such situations can lead to conflicts over land use.

The range of literature on the incorporation of post-industrial areas into the city via investment and development is quite wealthy (cf. Garrett 2011, Mah 2012, DeSilvey, Edensor 2013, Ruelle et al. 2013, de Tejada Granados, van der Horst 2020). However, only a little interest is dedicated to post-mining areas that constitute a specific ecological urban enclave and create difficulties in the process of landscape planning (de Waal, de Wit 2012). This seems to be important as decisions made ignore the needs of local landscape

users (Ociepa-Kubicka 2015). As has been noted (Smith 1994, 2000, Emami et al. 2015), social and procedural justice should be a key element in planning procedures. Emotional aspects and sensitive issues that bind people with a certain landscape should be considered as well (Brown, Raymnond 2007, Erfani 2022, Markuszewska 2022). Nevertheless, fulfilling the needs of local residents may be perceived as disregarding the needs of what is common to the public. For this reason, satisfying groups of interests should be an extremely skilful art of compromise relying on negotiation and dialogue (Markuszewska 2021).

The importance of public participation in decision-making with regard to landscape planning (its protection and management) is recognised as significant (The European Landscape Convention 2000). Of special importance is the relationship between people and their geographical location. Participation of local communities in the decision-making process provides answers on why and how people value their local surroundings and which places are of importance in their residential area (Solecka 2019), as well as how a place-making process is constructed by residents (Ilovan, Răcăşan 2022).

Concluding the above, urban post-mining areas (whose biography includes dynamic transformations in land use and functioning) can be a valuable case study of people–place interrelations. This is particularly desirable when landscape alteration does not gain unequivocal social acceptance, as is the case in this article.

Methodological background

This research was focused on how landscape changes trigger place-protection actions and reshape emotional relations with place. To do this, I studied the discourse between the local community (affected by potential landscape changes), the administrative body and urban planners (responsible for elaborating zoning plans). I analysed arguments that were presented by the affected community and intentions that guided this community. Apart from this, I investigated the critical opinion of the local community about bottom-up initiatives which, in public opinion, slowly but steadily transformed the wild place into a concrete jungle.

That being so, the collected data showed the fragile relations between people and place and how these emotional relations with place changed over time and were caused by landscape transition; in particular, how reshaping the neighbourhood results in a loss of sense of place, sense of belonging and identity with the place. By doing this, I indicated causes and effects of landscape changes, which translate into loss of attachment to the place. Referring to the model of creating attachment to a landscape (Markuszewska 2022), I presented the process of decaying a positive bond with a place, with special attention put on the sense of loss. I described the process of redefining the topophilia and outlined a pattern of relations between changes and the degree of attachment to a place, which turns into detachment with a place in the most extreme case (cf. Fig. 11).

The qualitative methods followed by the investigation were:

1. content analysis of word-data of literature, press documents and online newspapers, as well as social media (collecting data concerning the history of a place, the conflict over landscape changes and community perception about landscape changes),
2. content analysis of planning and strategic documents (collecting data on possible scenarios of landscape transition),
3. in-depth interviews (collecting data on community perception about landscape changes),
4. study visit and community observation (collecting data on conflict about landscape planning), and
5. field study and exploratory analysis (collecting photo documentation and observation of landscape changes).

The time spectrum for the most intense dispute covers the years 2018–2022, while landscape observation and photo documentation have been systematically carried out since 2000.

Case study

The case study is located in the south-western part of the city of Poznań (Fig. 1) (Poland). There are two post-mining areas separated by Głogowska Street. Of particular interest of research was the southern part, namely real estate belonging to the city of Poznań, while

Fig. 1. Location of the case study.

the northern part is under private ownership. Administratively, the southern part belongs to two housing estates Fabianowo-Kotowo and Świerczewo, while the north-eastern border is adjacent to the Górczyn housing estate. Special interest was focused on landscape (ca. 170 ha) for which the local zoning plan (*Rejon ul. Mieleszyńskiej/Around of Mieleszyńska Street*) has been elaborated. Typically, this area in question is called *Szachty*.

Results and discussion

Landscape as palimpsest

The landscape biography consists of overlapping layers of changes in time, in which the history of place is inscribed and represents the contemporary image of landscape. In relation to the analysed case study, among changes that have occurred over the past centuries, the most imperative was mining activity dating back to the 19th century.

The extraction of ceramic materials (clays and tills) was forced by city growth. The operation started in the 1930s and 1940s of the 19th century when Poznań experienced its spatial expansion, and ended in the post-war period (Markuszewska 2007). Several excavation zones were placed here and brickyard factories were also created.

Post-mining hollows (clay pits) were filling up with groundwater relatively quickly. Consequently, following 150 years of mining activity, more than 40 water ponds had been created. Most of them kept their shape until today and surface from the 1980s. The total area of the water ponds is around 150 ha, but individual surface varies between 1 and 14 ha. These post-mining ponds fulfil an important role as retention reservoirs (Tritt et al. 2022).

After the excavation was completed, the post-mining zone was left and was not reclaimed. The process of natural succession progressed very intensively. However, impurities were observed due to storing wastes. Even spontaneous vegetation did not charm away a bad reputation, which stuck to this place for good. Nonetheless, after years of neglect, this ecologically valuable ecosystem (a mosaic of water bodies, waterlogged areas, grass vegetation and woodlands) was rediscovered by residents of the city (Markuszewska 2007, Stępniewska, Abramowicz 2016). This naturally valued landscape attracted tourists. Anglers, cyclists and walkers were the first penetrators; it was by no means an advanced touristic escapism. Only the touristic adaptation (since 2015) made this place famous among the residents of the city. Pedestrian and cycling paths between the ponds, beauty spots, viewing terraces, pond jetties, barbecue area, benches, litter bins and information boards, as well as a 25-m lookout tower were supposed to serve this place for tourists.

Consequently, growing recreational opportunities, continuing littering and progressive land development (e.g. filled-in water ponds, investments approaching boundaries of water bodies, concreting paths) contributed to threats towards existing habitats of flora and fauna (cf. Kluza-Wieloch 2022, Kluza-Wieloch, Janyszek 2022). However, the expansion of ruderal species and

the disappearance of protected plants had been observed before. A botanic and faunistic inventory made in 2005 discovered a disturbing tendency of vanishing flora habitats in comparison to the floristic and fauna inventory carried out in the 1990s (Borysiak, Markiewicz 2005). As Matuszyńska (2001) noted, the former inaccessibility of this land due to wets and bogs made people hesitant to penetrate it, leaving animals with suitable habitats. Finally, the proximity of Głogowska Street (and its upgrade in 2005) reinforced landscape fragmentation. Although these two former mining areas have always been separated by this road, ecosystems isolation and alteration of flora and fauna were progressing since the transport infrastructure was expanded.

It should be added that to protect the habitats of endangered bird species, regionally unique meadows, low peat bogs, and diverse flora of dump and wet habitats, selected wetlands were legally protected as ecological areas (Uchwała nr CV/610/94). However, the amendment of the law in 2000 revoked this legal protection. This does not mean that the valuable plant communities in the former ecological areas are lost (Wrońska-Pilarek, Kluza-Wieloch 2022).

Genius loci: History inscribed in local toponyms and post-mining heritage

The heritage value of post-mining sites is shaped the most by historical values (cf. Heatherington 2012). In terms of the sense of place identity, the specificity of *genus loci* can be expressed through toponyms. In the analysed case study, the names of selected streets and housing estates refer to previous mining activity, and they are the linguistic variations that come from the original words: exploitation or brickyard.

A few years ago, a public vote was organised over a new name for the area of the analysed case study. Of the two proposals, *Szachty* and *Glinianki*, the former won. The word *Szachty* comes from German; the noun *Schacht* means excavation or hole. The reference to German is justified, as this mining zone was established by Prussians. In turn, *Glinianki* means clay pits and is a common name for post-mining sites of clay exploitation occurring everywhere.

As for the local streets, *Wykopy* means Excavations, *Ceglana* means Brickly and *Glinianki,* as explained above, means Clay Pits. *Stara Ceglanka*, which is the name of a housing estate, can be translocated as Old Little Brick. Another name of the *Strumień Junikowski* (a river flowing through this area) is *Ceglanka* (Little Brick). Also, the name of the former ecological units *Kopanina* can be translated as Digging.

Moreover, a visual image of post-mining places are the remnants of brickyards. There is one brickyard in the northern part; however, it is now very dilapidated. Within the southern part, there are remnants of two brickyards. One of them (located at the Leszczyńska Street and established at the turn of the 19th and 20th centuries) was a part of the Świerczewo farm complex, which comprised of the brickyard building, the brickyard owners' house, a residential building for servants and employees (detached with a stable, a coach house and a granary) and the so-called holiday home (located on the border of a park and a brickyard). This brickyard operated until 1971. In 1975, it was destroyed in a fire and afterwards, was completely demolished. However, to this day, some buildings of the farm complex have survived and are used as residential and service buildings. The second area of the former brickyard and tile factory is located at Mieleszyńska Street. Although a few parts of the buildings have survived, they are in poor condition (Prognoza oddziaływania na środowisko… 2020).

Place-protection actions: Dialog about top-down and bottom-up initiatives

The formal proceedings of a local zoning plan (the chapter *Case study* specified this) began on 12 May 2009 at the request of local residents, who demanded regulation of the legal status of the land plots and to arrange the designation of plots and roads (Uchwała nr LIV/727/V/2009). Urban Planning Office (pol. *Miejska Pracownia Urbanistyczna*) was the city authority that elaborated the local plan. The first stage of public consultation took place in July and August 2009 (on 17 July, the meeting with local residents was organised, and between 13 July and 3 August, people's proposals were collected). However, due to formal impediments, elaboration of the local plan was postponed until 2018.

When elaborating a local zoning plan, the guidelines of a master planning document

– Study of conditions and directions of the spatial development (pol. *Studium uwarunkowań i kierunków zagospodarowania przestrzennego*) – should be followed. This document for Poznań city (2014) mentioned the area of *Szachty* as to be protected against becoming built-up since *[…] preserving green infrastructure and natural potential of this place is the main goal of landscape protection*. Therefore, suggestions proposed in the draft zoning plan and submitted for public inspection were surprising. For instance, semi-natural vegetated areas were recommended to be fully built up (Fig. 2). In the opinion of the local community, this would have resulted in considerable losses of trees, and in addition, carried serious consequences in water circulation due to concreting of the infiltration surface (Osiedle Świerczewo, Portal Osiedlowy, 2019.10.15).

In 2018, a debate took place about the propositions to the draft plan. On 24 April, a meeting between city planner's residents was organised, and between 24 April and 10 May, the residents submitted questions and proposals to the draft zoning plan. At that time, in June, I organised a study visit (Fig. 3) with members of three housing estates: Fabianiwo-Kotowo, Świerczewo, and Górczyn, as well as with representatives of the neighbouring town of Luboń. During a few hours' long walk, I had the chance to get to know about the conflict situation between landscape users and landscape planners. Visiting each hot spot was a chance to discuss future landscape changes, including scenarios proposed by the urban planners and other alternative scenarios proposed by the local community. The concluding remarks from this study visit can be summarised by what one of the participants said: *We don't want to be perceived as people who reject any changes. One thing we'd like to make clear: we don't mind against continuing building-up the land which has already been developed – we accept the scenarios of further developing of housing estates. But, we do not agree to invest the naturally valuable places of this landscape*. Moreover, the mayor of the town of Luboń explained that the reason why urban planners proposed highly criticised solutions is that the city stewards do not want to burden the budget with costs of purchasing the land, if the planned investment were to require it. This is why housing estate development is a more preferable option.

At this point it is worth taking a closer look at some areas of disagreement. In the draft zoning plan, two areas of housing development were proposed. Both were located in the environs of the above-mentioned brickyards: at Mieleszyńska and Leszczyńska Streets. As for the former (Fig. 4), the proposed investment (multi-family and service buildings) reaches one of the water ponds at a close distance. It is estimated that the currently biologically active surface would have been reduced to 20%, while 80% would have been developed (buildings, parking lots and sidewalks). To do this, trees and bushes currently growing there would have to be felled (about several hundred trees, over an area of 55,000 m^2) (Osiedle Świerczewo, Portal Osiedlowy, 2019.10.15). The same is the case for Leszczyńska Street (Fig. 5).

Fig. 2. Proposition of land development – a draft local zoning plan (on the left). The land use in 2018 (on the right).
Source: Miejska Pracownia Urbanistyczn, Poznań.

The next stage of discussion took place in autumn 2019. The draft plan (including Environmental Impact Assessment [EIA]) was made available for the public and a meeting with the residents was also organised. By the statutory deadline (4 November 2019), the planning office had received 98 comments sent by 34 persons. Finally (by 21 November), the governance body made the decision to include 24 comments and disregard 74 comments (including 31 partially). The changes made forced another round of debate, scheduled on 2020.

Discussion over a draft plan attracted the local media attention. Journalists took part in public debates, keeping up to date with them. In one of the articles (recounting the meeting organised on 16 October) (Gazeta Wyborcza, 2019.10.17), attention was drawn to green areas in *Szachty*. It was reported that, in the opinion of inhabitants, the proposed suggestion of a housing estate

Fig. 3. A study visit in Szachty.

Fig. 4. Proposed landscape changes at Mieleszyńska Street. On the left – the current land use in the vicinity of the lookout tower (*wieża widokowa*) and the former brickyard with the surrounding greeneries. Green colour indicates trees for cutting down. On the right – the draft of the zoning plan with areas intended for built-up (in red) and roads (in black).
Source: Osiedle Świerczewo, Portal Osiedlowy.

Fig. 5. Proposed landscape changes at Leszczyńska Street. On the left – the current land use in the vicinity of the gardeners' house (*dom ogrodnika*) and the former brickyard with the surrounding greeneries. Green colour indicates trees for cutting down. On the right – the draft of the zoning plan with areas intended for built-up (in red) and roads (in black).
Source: Osiedle Świerczewo, Portal Osiedlowy.

would destroy the valuable ecosystem of *Szachty*. And, as they argued, the wild greenery, so greatly valued today, could not be replaced by compensation planting after a new housing estate is constructed. In this context, however, the planner's authority's assurance seems surprising. Namely, the manager of the planning team said that the plan was created precisely to protect the valuable natural sites. He questioned residents' arguments about the ecological value of existing greenery, arguing: *What grows there is ruderal and spontaneous*. Nevertheless, from an ecological point of view and what has been proved by biological inventory, spontaneous vegetation is of inestimable value.

At that meeting, the issue of landownerships was also raised. The vast majority of land properties here are under city ownerships. Local residents suspected that the zoning plan was a commissioned project by the city governance. In the residents' opinion, as expensive a sale as possible of the most valuable land plots is in the interest of the governors. The most valuable land plots mean those located near water ponds and surrounded by greenery, that is, offering attractive locations in terms of residence. In particular, private land owners (despite repeated requests) have never received the development conditions. Lack of consent to the development conditions was the reason why residents suspected that a developer company had made an unofficial agreement with the city government to take control of this land after the zoning plan was accepted. However, the manager of the planner's team denied such suggestions, although he admitted that when creating the plan, it was necessary to take into account the ownership of the plots in order not to expose the city to compensation payments (Gazeta Wyborcza, 2019.10.17).

Previous proceedings did not dispel residents' doubts. Thus, local activists organised a petition (signed by 3940 people). The authors of the petition emphasised that the proposals of the local plan undermine the efforts of estate councillors and local residents, who created this space for common use. In the petition, the role of *Szachty* in maintaining the natural conditions of the city was emphasised. Attention was also drawn to the fact that valuable natural areas that have been specified in the EIA were underestimated by urban planners. The construction of new roads and the creation of multi-family and service buildings will come at a cost of cutting down almost 6 ha of trees and bushes. This was incomprehensible to councils and local residents.

Finally, the actions taken by residents, councils of local housing estates and city councillors resulted in a compromise being worked out. The zones of multi-family housing at Mieleszyńska and Leszczyńska Streets have been significantly reduced (cf. Figs 6 and 7).

The zoning plan, *Rejon ulicy Mieleszyńskiej*, was adopted on 8 December 2020 (Uchwała Nr XXXIX/678/VIII/2020). The plan protects water reservoirs and floristic habitats (the area of 110 ha, ca. 64% of the entire plan). The area intended

Fig. 6. Proposed landscape changes at Mieleszyńska Street. On the left – the land use in the vicinity of the lookout tower (*wieża widokowa*), the former brickyard at Mieleszyńska Street and the surrounding greeneries (in 2019). On the right – the accepted local zoning plan (in 2020).
Source: Osiedle Świerczewo, Portal Osiedlowy.

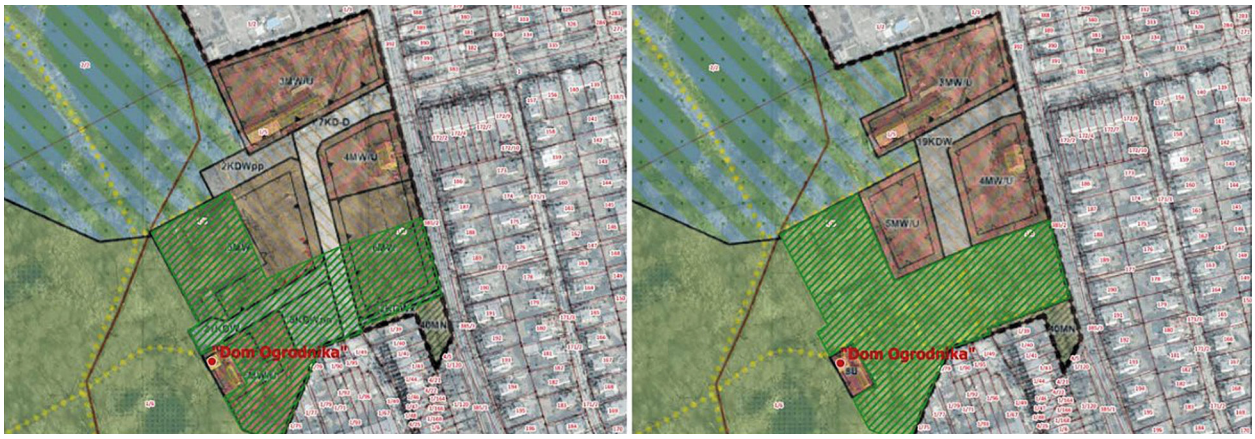

Fig. 7. Proposed landscape changes at Leszczyńska Street. On the left – the land use in the vicinity of the gardeners' house (*dom ogrodnika*), the former brickyard at Leszczyńska Street and the surrounding greeneries (in 2019). On the right – the accepted local zoning plan (in 2020).
Source: Osiedle Świerczewo, Portal Osiedlowy.

for housing development is 42 ha, and the vast majority covers single-family housing (*poznan.pl*, 2020.12.07). The local paper announced the success of the activists and the local community (Gazeta Wyborcza, 2020.12.08).

Place protection actions: Participatory fatigue

When the area of *Szachty* had been made widely available for people (concreting paths, creating a lookout tower and beauty spots), a process of landscape changes started to progress very fast. Social media (e.g. the fanpage *Szachty*) provided updates and put forward new proposals. People's perceptions of the proposed and implemented investments are provided in the comments. By analysing the comments, we get a reflection of the changeable public feelings towards landscape changes. Over the past couple of years, the emotional stage varied from being enthusiastically welcome to heavy criticism of new initiatives.

As an example, content analysis of the discourse on paving one of the paths along the pond – *Staw Rozlany* (cf. Fig. 8; the examples of other paths on Figs 9 and 10) has been conducted. The initial stage (26 October 2019) was voting in the Poznań Civic Budget on a project: *New walking paths in Szachty*. An argument to pave this path was to increase accessibility, including for disabled people. However, the project did not receive the required number of votes to get funding. In the entry of 4 December 2020, it is stated: *What has not been achieved in the Poznań Civic Budget has*

been achieved in a competition for Housing Estate Councils. Namely, in response to the competition announced by the Mayor of Poznań for co-financing investment tasks, some leaders of Fabianowo-Kotowo estate submitted an application: *Construction of a pedestrian and cycle path on the northern side of Staw Rozlany in Poznań*. In March 2021 the tender for the project was settled. Finally, the approximately 800-m long path was paved with a permeable gravel and resin surface. The path was put into use in the first half of September 2021. On this update (8 September 2021), there was a post which read: *The northern side of Staw Rozlany is friendlier and safer. […] The area has become more accessible to residents and visitors, and the new surface enables safe recreation for people with disabilities, toddlers in prams and cyclists.*

However, opinion was divided on whether this improvement was necessary. We can read: (1) *Accessible recreational areas are needed and the development of this area seems to be quite sustainable*, and a riposte: (2) *There is already a paved 'flyover' to the lookout tower and a lot of people are walking there. At the moment, there are a few wild places left for 'a handful of locals and anglers', because probably people do not want to walk on the casual path – there must be asphalt poured. This is not sustainable development for me. And the effect will be that those who already have an area for walking on asphalt will 'link' subsequent parts with asphalt, and a handful of locals, anglers or bird watchers will not have anything to look for there.*

Other statements were: (1) *I get the impression that most of the criticism comes from selfish reasons. I am not a specialist, but I have not seen that the construction of the walking infrastructure would lead to devastation of the natural value of this area, and I have not heard that it was a protected area for natural reasons (I could be wrong). However, as a resident of the Poznań agglomeration area, I know how much such places are lacking. Hence my claim about a relatively sustainable development of this area. Ad vocem* this: (2) *It can also be said that the praise of this investment results from selfish motives. Both are true – we exchange views on what matters to us. Construction of anything in the ponds and wastelands devastates this area, because it is not done with a shovel, but with heavy equipment. These are not formally protected (this is a pity), which does not mean that there is nothing to protect there. I have been living in this area for 10 years and I remember how many water birds swam in the ponds 10 years ago and how many now. The sad thing is that […] the area where pheasants still live […] will be concreted. And I agree with you that there is a lack of green areas […].*

Many critical comments about this investment can be found on the fanpage. They overwhelm the positive ones. The concreting is considered as the most controversial interference: (1) *Can't they just harden the path? This would be cheaper and more*

Fig. 8. The view of Rozlany Pond.

Fig. 9. An example of concreting and touristic improvement.

Fig. 10. A fragment of the wild area of Szachty.

ecological, also in terms of water retention. I have the impression that Poznań has a great ambition to be an environmentally friendly city, but these are such empty declarations. (2) *How many more paths asphalted? We already have one Malta in Poznań. By eliminating natural depressions, puddles are getting rid of new habitats for insects, amphibians, mammals and birds. Where are the newts now?* (3) *Spend money on cleaning, or on parking places, rather than interfering with natural pathways.* (4) *It was safe without asphalt there. So is it still wild? Another piece of nature destroyed.* (5) *I am waiting for the banks of the ponds to be paved in concrete for our safety, to cut trees and to dry the area and build housing estates. You will not find peace anymore, like a dozen or so years ago, when you went fishing to sit in peace and quiet.* (6) *In a few years people will not be able to walk otherwise than on asphalt … Until now, I thought that this wildness and naturalness was an advantage of such places.*

The area of *Szachty* is open for residents of nearby housing estates as well as inhabitants of the Poznań city. However, the share of local recreants has been decreasing over the past few years. Nowadays, the locals reluctantly visit *Szachty*. The reasons are overcrowding, concreting and littering. There are a number of comments about this. Here are some examples: (1) *There are more and more 'tourists', and as a result, concrete and rubbish, as well as wild parking and noise. In a few years, no one will find relaxation here.* (2) *I feel more and more unwilling to come here. Lots of people and dogs, lack of quietness.* (3) *That's why I'm not there on Saturdays and Sundays.* (4) *Something needs to be done with Szachty – rubbish, alcohol bottles and drunkenness.* (5) *I walk, but away from 'asphalt'. Where there is wildness, and there are still many such places, there is silence and beauty*. There was also argument against estate councils: *I wonder why we need a housing estate council that does not defend the interests of the inhabitants and allows for further environmental degradation, a new path at the expense of damaged molehills […].*

Soothing the anxiety of paving the path around *Staw Rozlany*, the fanpage admins provided a description of this path which ensured that the surface will be a mixture of mineral aggregates and solvent-free epoxy resin. As they guaranteed, this kind of material is ecological friendly as well as water permeable.

In response to widespread criticism of concreting and making this area accessible to tourists, the bad reputation this place used to have in the past is returning: a neglected area attracting pathology, and a place that was known for making dark business. There are, however, voices refuting this criticism: (1) *I have never been afraid to walk here… And now the crowds, well, thank you for such 'relaxation'.* (2) *I still like to walk on the wild part. About half of this area is already flooded with asphalt for those who like it and that's enough. […] Besides there are other ways of landscaping and tidying up the area than asphalting and building a highway.* On the other hand, voices concerning injustice around the access to the landscape can be heard: (1) *The wild Szachty used to had its charm, but it served a handful of locals and anglers. You are not alone …*, and: (2) *I am there every day and there is enough nature for everyone…*

To conclude, in one of the comments we find a reflection on what sharing greenery means: *Sharing greenery does not have to immediately mean tidying it up, making infrastructure. Sharing means that people will be informed about the existence of this unique place and they will be made aware of why this place is so special. Then they will be able to easily climb the tower (which already exists), and they will be delighted with the wildness and naturalness of the above-mentioned area. Simple, cheap, great.*

Landscape in lost – the sense of detachment from a place

The above analysis presents local residents' feedback on top-down proposals and grassroots initiatives, both of which change the landscape of *Szachty*. The interest was focused on how the local community perceived transforming the landscape by making it widely available to landscape users. This study was about analysing people's bonds with the landscape, memories about the past and sentimental connection that enhances positive relations with the place, known as topophilia (cf. Tuan 1974). Beyond this, it was necessary to detect the context of participatory planning, as those local residents who are deeply involved and engaged in the place-changing process pay attention to what is significant for sustainable development of a certain landscape (cf. Markuszewska 2022).

Bearing this in mind, it can be concluded that for a significant number of landscape users, both top-down and bottom-up initiatives met

with their undisguised reluctance. People who are deeply attached to the landscape of *Szachty* question the legitimacy of the proposed changes. They provide arguments concerning the negative effects on both the natural condition and human well-being, due to ongoing and possible future transformations of this unique ecosystem. In their opinion, *Szachty* has lost its wildness through existing intervention. Frustration is growing: according to inhabitants, their voice is not taken into account, and the introduced initiatives do not serve them at all.

It has been proved that exploring wildness can lead to building a strong emotional bond with a place (cf. Folmer et al. 2019). Consequently, being in the landscape of *Szachty* provides emotional satisfaction to the local residents. Spontaneous penetration of wild nature and access to greenery can symbolise a psychological possession of this land. In turn, this emotional comfort offers a scope for strong feelings of belonging to a place. A strong nature bonding is expressed in disinterestedly protecting bird and animal habitats. Responsibility for nature and caring for a local place empowered identity with the landscape and the sense of belonging.

Experiencing wildlife is perceived as an extraordinary experience. People's bonds with local green places make that place special. Based on repeated visits, people build a relationship with local wildlife. Wildlife experiences in specific places are often strongly entwined with a person's (past) life biography (cf. Folmer et al. 2019). For such people, the comfort of being in the bosom of nature means the immutability of the landscape, penetrating what is known, and the predictability of expectations in terms of contact with nature. Many people complain that *Szachty* looks like a promenade: concreted and full of people and dogs. There are critical opinions that *Szachty* has already been degraded, as it has nothing to do with the concept of wildness and naturalness, and this was the nature of this area before the improvements of the landscape had begun. Seeing the threat to this landscape, members of local community proposed the creation of a protected area and only making proposals to the local zoning plan after this. Such a suggestion was raised during the debate in 2019.

The results of the study indicated a significant losing of sense of place. The feeling of emotional disconnection to landscape was also detected. *Szachty* became unwanted to many local residents who do not agree with taming the natural ecosystem by changing it. This is why emotionally linked people feel estrangement and separation from their landscape. Along with the growing tourism and the inflow of newcomers, local landscape users are made to feel that their own space has been taken away from them. It is difficult to come to terms with it due to memories and experience related to landscape. It can be seen in the declaration of reluctance to visiting *Szachty* due to crowding and destruction of the area (e.g. littering) by people staying here. It needs to be clarified that people means those who use the landscape instrumentally, and not those landscape users who care about this place. The identity with this landscape has been also questioned. For instance, the remnants of a brick factory (a valuable symbolic meaning of cultural heritage) have not been taken into account when elaborating the local zoning plan.

In shaping the attachment to landscape, the importance of factors and processes that make the placeless become a place is emphasised (see the literature review section). In the case of losing emotional attachment to a place, there is a question about conditions that transform an emotionally valued place into placelessness. The outline of the place-losing process due to landscape changes, which has been created based on the findings of this study (Fig. 11), proves that the milestone is a feeling of loss. Traumatic loss of place affects the sense of place. This can also be confirmed by the results of studies on solastalgia (cf. Albrecht et al. 2007, Galway et al. 2019). The feeling of solastalgia is very hard to accept due to people's lived emplacement and place experience.

Figure 11 illustrates the interdependence of stages of landscape transformation, perception of a changing place and the emotional relationships between people and landscape. It starts from building a positive emotional relationship with place, through to maintaining placement due to landscape domestication, to symptoms of traumatic experience of being in place that provokes the feeling of detachment from place. The course of both lines, reflecting the intensity of landscape metamorphosis and shifting human–place relations, is not accidental. Both variables

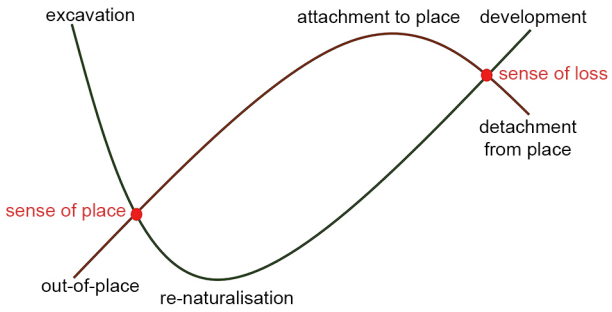

Fig. 11. Shaping emotional relationships between people and place due to landscape changes.

are interdependent and significant changes affect one another. Specifically, a devastated post-mining landscape has been reshaped into a semi-natural space thanks to re-naturalisation. The landscape became domesticated and placelessness has been accepted by local people. Positive emotional relations with place have gone through various stages of creating bonds with landscape, including a very significant one – place satisfaction. However, the turning points that are of fundamental importance are as follows: the sense of place (as a manifestation of topophilia) and the sense of loss (that initiates a permanent break of emotional ties with place and expresses topophobia). The sense of loss (solastalgia) also expresses deep discouragement towards place, which until recently has been a source of many positive interactions with landscape. The loss of the feeling of at-homeness results in rejection of the current transformation of the landscape.

Concluding remarks

This paper discusses place-oriented values via place-protection actions against unwanted landscape changes reported by the affected community. The relationships between landscape changes and the perception of these changes by the local community were studied.

The most important findings include the following:

- the results showed that local residents lose emotional ties with their landscape due to the landscape being transformed in a way that they do not accept. This means that landscape changes can stimulate a sense of loss and a feeling of detachment from the emotionally valued places. Based on this, a conceptual framework of detachment from a place was constructed;
- the findings revealed that a feeling of solastalgia (traumatic experience of losing the connection with place) was a starting point for creating the process of topophobia and people's detachment from the landscape;
- the results indicated that the feeling of losing a positive relationship with place (topophilia) due to landscape transition does not have to apply to all inhabitants of an analysed case study. With this in mind, the emotional reaction to unwanted landscape changes and the process of detachment from a place is worth investigating further. Therefore, there is a need to deepen research on detachment from places, and the methodology developed should be tested on various case studies, which will give feedback on the cause–effect relationships of breaking bonds with landscapes. It is necessary to add that although the case analysed here (*Szachty*) relates to the local context, it can refer to other case studies where urban sprawl contributes to land-use and social conflicts within European and non-European urban fringes.

As for *Szachty*, the next step will be to continue the research on people–landscape emotional interrelations, but this time to focus on rebuilding broken bonds with a place and landscape. *Szachty* was chosen as one of the case studies under the HORIZON Project – RESTORY: Recovering Past Stories for the Future: A Synergistic Approach to Textual and Oral Heritage of Small Communities.

Acknowledgement

I would like to express my gratitude to Adam Mickiewicz University in Poznań for financial support. Thank you to Agata Piasecka for compiling Figure 1. I also thank the anonymous reviewers for their thorough and constructive feedback on this publication.

References

Albrecht G., Sartore G.M., Connor L., Higginbotham N., Freeman S., Kelly B., Stain H., Tonna A., Pollard G., 2007. Solastalgia: The distress caused by environmental change. *Australasian Psychiatry* 15: 95–98. DOI 10.1080/10398560701701288.

Antrop M., 2005. Why landscapes of the past are important for the future? *Landscape and Urban Planning* 70: 21–34. DOI 10.1016/j.landurbplan.2003.10.002.

Banini T., Ilovan O.R., 2021. Introduction: Dealing with territorial/place identity representations. In: Banini T., Ilovan O.R. (eds), *Representing place/territorial identity in Europe. Discourses, images, and practices*. Springer, Cham: 1–19.

Borysiak J., Markiewicz J., 2005. *Weryfikacja granic terenów cennych przyrodniczo – byłych użytków ekologicznych Kopanina I i Kopanina II w celu wyróżnienia terenów predysponowanych do objęcia ochroną, z uwzględnieniem wprowadzenia w ich sąsiedztwie (teren ZKO*) funkcji sportowo-rekreacyjnej*. Miejska Pracownia Urbanistyczna, Poznań [MS].

Brown G., Raymond C., 2007. The relationship between place attachment and landscape values: Toward mapping place attachment. *Applied Geography* 27: 89–111. DOI 10.1016/j.apgeog.2006.11.002.

Butler A., Sarlöv-Herlin I., 2019. Changing landscape identity – practice, plurality, and power. *Landscape Research* 44(3): 271–277. DOI 10.1080/01426397.2019.1589774.

Clewell A., McDonald T., 2009. Relevance of natural recovery to ecological restoration. *Ecological Restoration* 27: 122–124.

Cresswell T., 2009. Place. In: Thrift N., Kitchen R. (eds), *International encyclopedia of human geography*. Vol. 8. Elsevier, Oxford: 169–177.

de Tejada Granados C.S., van der Horst D., 2020. Tabula-non rasa: Go-along interviews and memory mapping in a post-mining landscape designated for urban expansion. *Landscape Research* 45(1): 6–25. DOI 10.1080/01426397.2019.1569220.

de Waal R., de Wit A., 2012. The restoration of opencast coal mines. In: Jorgensen A., Keenan R. (eds), *Urban wildscapes*. Routledge, London: 99–109.

DeSilvey C., Edensor T., 2013. Reckoning with ruins. *Progress in Human Geography* 37: 465–485. DOI 10.1177/0309132512462271.

Devine-Wright P., 2013. Explaining 'NIMBY' objections to a power line: The role of personal, place attachment and project-related factors. *Environment and Behavior* 45: 761–781. DOI 10.1177/0013916512440435.

Diener A.C., Hagen J., 2022. Geographies of place attachment: A place-based model of materiality, performance, and narration. *Geographical Review* 112: 171–186. DOI 10.1080/00167428.2020.1839899.

DiEnno C.M., Thompson J.L., 2013. For the love of the land: How emotions motivate volunteerism in ecological restoration. *Emotion, Space and Society* 6: 63–72. DOI 10.1016/j.emospa.2012.02.002.

Edwards J., 2019. Literature and sense of place in UK landscape strategy. *Landscape Research* 44(6): 659–670. DOI 10.1080/01426397.2018.1518519.

Egoz S., 2013. Landscape and identity: Beyond a geography of one place. In: Howard P., Thompson I., Waterton E. (eds), *The Routledge companion of landscape studies*. Routledge, Abingdon: 272–285.

Emami P., Xu W., Bjornlund H., Johnston T., 2015. A framework for assessing the procedural justice in integrated resource planning processes. *Sustainable Development and Planning* 193: 119–130. DOI 10.2495/SDP150101.

Erfani G., 2022. Reconceptualising sense of place: Towards a conceptual framework for investigating individual-community-place interrelationships. *Journal of Planning Literature* 37(3): 452–466. DOI 10.1177/08854122221081109.

Folmer A., Haartsen T., Huigen P.P., 2019. How ordinary wildlife makes local green places special. *Landscape Research* 44(4): 393–403. DOI 10.1080/01426397.2018.1457142.

Galway L.P., Beery T., Jones-Casey K., Tasala K., 2019. Mapping the solastalgia literature: A scoping review study. *International Journal of Environmental Research and Public Health* 16: 2662. DOI 10.3390/ijerph16152662.

Garrett B., 2011. Assaying history: Creating temporal junctions through urban exploration. *Environment and Planning D: Society and Space* 29(6): 1048–1067. DOI 10.1068/d18010.

Gazeta Wyborcza Poznań, 2019, 2020. Online: https://poznan.wyborcza.pl/poznan/0,0.html.

Hay R., 1998. Sense of place in development context. *Journal of Environmental Psychology* 18: 5–29. DOI 10.1006/jevp.1997.0060.

Heatherington C., 2012. Buried narratives. In: Jorgensen A., Keenan R. (eds) *Urban wildscapes*. Routledge, London: 171–186.

Ilovan O.R., Markuszewska I., 2022. Introduction: Place attachment – Theory and practice. In: Ilovan O.R., Markuszewska I. (eds), *Preserving and constructing place attachment in Europe*. GeoJournal Library 131, Springer Nature, Cham: 1–29.

Ilovan O.R., Răcăşan B.S., 2022. Constructing place attachment and planning the future of the neighbourhood. Case study: Mănăştur, Cluj-Napoca, Romania. In: Ilovan O.R., Markuszewska I. (eds), *Preserving and constructing place attachment in Europe*. GeoJournal Library 131, Springer Nature, Cham: 99–120.

Jabareen Y., Eizenberg E., 2021. Theorizing urban social spaces and their interrelations: New perspectives on urban sociology, politics, and planning. *Planning Theory* 20(3): 211– 230. DOI 10.1177/1473095220976942.

Jansson M., Vogel N., Fors H., Randrup T.B., 2019. The governance of landscape management: New approaches to urban open space development. *Landscape Research* 44(8): 952–965. DOI 10.1080/01426397.2018.1536199.

Kals E., Schumacher D., Montada L., 1999. Emotional affinity toward nature as a motivational basis to protect nature. *Environment and Behavior* 31(2): 178–202. DOI 10.1177/00139169921972056.

Kasarda J., Janowitz M., 1974. Community attachment in mass society. *American Sociological Review* 39: 328–339.

Kluza-Wieloch M., Janyszek S., 2022. Fauna dawnych użytków ekologicznych „Kopanina I" i „Kopanina II". In: Mazurek M., Abramowicz D. (eds), *Środowisko geograficzne zlewni Strumienia Junikowskiego*. Bogucki Wydawnictwo Naukowe, Poznań: 339–348.

Kluza-Wieloch M., 2022. Flora dawnych użytków ekologicznych „Kopanina I" i „Kopanina II". In: Mazurek M., Abramowicz D. (eds), *Środowisko geograficzne zlewni Strumienia Junikowskiego*. Bogucki Wydawnictwo Naukowe, Poznań: 283–290.

Layne M.K., 2014. The textual ecology of the palimpsest: Environmental entanglement of present and past. *Aisthesis. Pratiche, linguaggi e saperi dell'estetico* 7: 63–72. DOI 10.13128/Aisthesis-15290.

Lewicka M., 2011. Place attachment: How far have we come in the last 40 years? *Journal of Environmental Psychology* 31: 207–230. DOI 10.1016/j.jenvp.2010.10.001.

Loupa Ramos I., Bernardo F., Carvalho Ribeiro S., van Eetvelde V., 2016. Landscape identity: Implications for policy making. *Lan Use Policy* 53: 36–43. DOI 10.1016/j.landusepol.2015.01.030.

MacKenzie A., Pearson L.J., Pearson C.J., 2019. A framework for governance of public green spaces in cities. *Landscape Research* 44(4): 444–457. DOI 10.1080/01426397.2018.1444153.

Mah A., 2012. *Industrial ruination, community, and place: Landscapes and legacies of urban decline*. University of Toronto Press, Toronto: 240.

Manzo L.C., 2005. For better or worse: Exploring multiple dimensions of place meaning. *Journal of Environmental Psychology* 25(1): 67–86. DOI 10.1016/j.jenvp.2005.01.002.

Manzo L.C., Perkins D.D., 2006. Finding common ground: The importance of place attachment to community participation and planning. *Journal of Planning Literature* 20(4): 335–50. DOI 10.1177/0885412205286160.

Markuszewska I., 2021. 'Old trees cannot be replanted': When energy investment meets farmers' resistance. *Journal of Settlements and Spatial Planning* 8: 5–13. DOI 10.24193/JSSPSI.2021.8.02.

Markuszewska I., 2022. Between knowledge and feelings. How place attachment can strengthen the sensitive planning of landscapes. In: Ilovan O.R., Markuszewska I. (eds), *Preserving and constructing place attachment in Europe*. Springer, Cham: 33–47.

Markuszewska I., 2007. Funkcjonowanie oraz zagospodarowanie obszarów poprzemysłowych związanych z eksploatacją surowców ilastych ceramiki budowlanej. In: Myga-Piątek U. (ed.), *Krajobrazy Przemysłowe i Poeksploatacyjne*. Komisja Krajobrazu Kulturowego Polskiego Towarzystwa Geograficznego, Sosnowiec: 115–125.

Matuszyńska I., 2001. *Zmiany użytkowania terenu jako element transformacji środowiska przyrodniczego na obszarze zlewni Poznania i jego strefy podmiejskiej*. Wydawnictwo Poznańskiego Towarzystwa Przyjaciół Nauk, Poznań.

Ociepa-Kubicka A., 2015. Udział społeczności w procedurze planowania przestrzennego. *Inżynieria i Ochrona Środowiska* 18(4): 471–481.

Osiedle Świerczewo, Portal Osiedlowy, 2019. Online: https://swierczewo.poznan.pl/.

Oudes D., Stremke S., 2020. Climate adaptation, urban regeneration and brownfield reclamation: A literature review on landscape quality in large-scale transformation projects. *Landscape Research* 45(7): 905–919. DOI 10.1080/01426397.2020.1736995.

poznań.pl. 2020. Online: https://www.poznan.pl/.

Prach K., Hobbs R.J., 2008. Spontaneous succession versus technical reclamation in the restoration of disturbed sites. *Restoration Ecology* 16: 363–366. DOI 10.1111/j.1526-100X.2008.00412.x.

Prognoza oddziaływania na środowisko dotycząca projektu miejscowego planu zagospodarowania przestrzennego" Rejon ulicy Mieleszyńskiej" w Poznaniu., 2020. *MPU-ORZ3/5044-16/Fm/17 219/19*. Miejska Pracownia Urbanistyczna, Poznań.

Proshansky H.M., Fabian A.K., Kaminoff R., 1983. Place-identity: Physical world socialization of the self. *Journal of Environmental Psychology* 3(1): 57–83. DOI 10.1016/S0272-4944(83)80021-8.

Qiu L., Lindberg S., Nielsen A.B., 2013. Is biodiversity attractive?-On-site perception of recreational and biodiversity values in urban green space. *Landscape and Urban Planning* 119: 136–146. DOI 10.1016/j.landurbplan.2013.07.007.

Raymond C.M., Brown G., Weber D., 2010. The measurement of place attachment: Personal, community, and environmental connections. *Journal of Environmental Psychology* 30: 422–434. DOI 10.1016/j.jenvp.2010.08.002.

Relph E., 1976. *Place and placelessness*. Pion, London: 174.

Ruelle C., Halleux J.M., Teller J., 2013. Landscape quality and brownfield regeneration: A community investigation approach inspired by landscape preference studies. *Landscape Research* 38: 75–99. DOI 10.1080/01426397.2011.647898.

Sack R.D., 1988. The consumer's world: Place as context. *Annals of the Association of American Geographers* 78(4): 642–664.

Samon D., 2014. Place attachment and phenomenology. Thy synergetic dynamism of place. In: Manzo L.C., Devine-Wright P. (eds), *Place attachment. Advances in theory, methods and applications*. Routledge, New York: 11–22.

Scannell L., Gifford R., 2010. Defining place attachment: A tripartite organizing framework. *Journal of Environmental Psychology* 30: 1–10. DOI 10.1016/j.jenvp.2009.09.006.

Schultz P.W., Shriver C., Tabanico J.J., Khazian A.M., 2004. Implicit connections with nature. *Journal of Environmental Psychology* 24(1): 31–42. DOI 10.1016/S0272-4944(03)00022-7.

Smith D.M., 1994. *Geography and social justice*. Blackwell Publisher, Oxford: 325.

Smith D.M., 2000. Moral progress in human geography: Transcending the place of good fortune. *Progress in Human Geography* 24: 1–18. DOI 10.1191/030913200671792325.

Solecka I., 2019. The use of landscape value assessment in spatial planning and sustainable land management – a review. *Landscape Research* 44(8): 966–981, DOI 10.1080/01426397.2018.1520206.

Stedman R.C., 2002. Towards a social psychology of place: Predicting behavior from place-based cognitions, attitude and identity. *Environment and Behavior* 34: 561–581. DOI 10.1177/0013916502034005001.

Stępniewska M., Abramowicz D., 2016. Social perception and the use of ecosystem services on municipal post-mining lands. An example of Szachty in Poznan. *Ekonomia i Środowisko* 4(59): 252–262.

Stobbelaar D.J., Pedroli B., 2011. Perspectives on landscape identity: A conceptual challenge. *Landscape Research* 36(3): 321–33. DOI 10.1080/01426397.2011.564860.

Studium uwarunkowań i kierunków zagospodarowania przestrzennego miasta Poznania. 2014. Uchwała Nr LXXII/1137/VI/2014 Rady Miasta Poznania z dnia 23 września 2014 r., Miejska Pracownia Urbanistyczna, Poznań.

The European Landscape Convention. 2000. Council of Europe, European Treaty series, No. 176.

Trentelman C.K., 2009. Place attachment and community attachment: A primer grounded in the lived experience of a community sociologist. *Society & Natural Resources* 22(3): 191–210. DOI 10.1080/08941920802191712.

Tritt R., Graf R., Borkowski G., Jawgiel K., Abramowicz A., 2022. Charakterystyka morfometryczna zbiorników poeksploatacyjnych w zlewni Junikowskiego Strumienia. In: Mazurek M., Abramowicz D. (eds), *Środowisko geograficzne zlewni Strumienia Junikowskiego*. Bogucki Wydawnictwo Naukowe, Poznań: 103–121.

Tuan Y.F., 1974. *Topophilia: A study of environmental perceptions, attitudes, and values*. Englewood Cliffs, Prentice-Hall, NJ: 260.

Uchwała nr CV/610/94 Rady Miejskiej Poznania z dnia 10 maja 1994 r. w sprawie utworzenia użytków ekologicznych i zespołów przyrodniczo-krajobrazowych.

Uchwała nr LIV/727/V/2009 Rady Miasta Poznania z dnia 12 maja 2009 r. w sprawie przystąpienia do sporządzenia miejscowego planu zagospodarowania przestrzennego „Rejon ulicy Mieleszyńskiej" w Poznaniu.

Uchwała Nr XXXIX/678/VIII/2020 Rady Miasta Poznania z dnia 8 grudnia 2020 w sprawie miejscowego planu

zagospodarowania przestrzennego „Rejon ulicy Mieleszyńskiej" w Poznaniu.

van der Sluis T., Arts B., Kok K., Bogers M., Gravsholt Busck A., Sepp K., Loupa-Ramos I., Pavlis V., Geamana N., Crouzat E., 2019. Drivers of European landscape change: Stakeholders' perspectives through fuzzy cognitive mapping. *Landscape Research* 44(4): 458–476. DOI 10.1080/01426397.2018.1446074.

Williams D.R., Patterson M.E., Roggenbuck J.W., Watson A.E., 1992. Beyond the commodity metaphor: Examining emotional and symbolic attachment to place. *Leisure Sciences* 14: 29–46. DOI 10.1080/01490409209513155.

Williams D.R., Vaske J.J., 2003. The measurement of place attachment: Validity and generalizability of a psychometric approach. *Forest Science* 49: 830–841.

Wrońska-Pilarek D., Kluza-Wieloch M., 2022. Dawne użytki ekologiczne w zlewni Junikowskiego Strumienia i ich rola w ekologicznym systemie obszarów chronionych miasta Poznania. In: Mazurek M., Abramowicz D. (eds), *Środowisko geograficzne zlewni Strumienia Junikowskiego*. Bogucki Wydawnictwo Naukowe, Poznań: 223–229.

Zwierzchowska I., Stępniewska M., 2022. Green infrastructure and social perception of its ecosystem services within spatial structure of the city – examples from Poznań, Poland. In: Misiune I., Depellegrin D., Vigl L.E. (eds), *Human-nature interactions. exploring nature's values across landscapes*. Springer, Cham: 221–234.