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Ensuring Public Access to Green Spaces in Urban Densification: The Role of Planning and Property Rights

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ABSTRACT

Implementing densification while ensuring green space accessibility is a crucial planning challenge. The powerful role of private for-profit actors densification projects mean that green spaces are at risk of being co-opted by private interests and transformed into club goods. Using a new-institutionalist approach, we analyse the implementation of densification and urban greening based on two case-studies in Switzerland and the Netherlands. We ask what planning strategies are successful in ensuring public access to green spaces in private-led densification. To counteract club formation, planners need to restrict property rights, actively monitor implementation of planning objectives, and ensure an open physical design.

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Densification; green spaces; club good; project-based planning; institutional resource regime

Introduction

Densification is a widely pursued goal by planning authorities, as it results in a more efficient and therefore more sustainable use of land (Broitman & Koomen, 2020; Neuman, 2005). However, its implementation is complex, given that it aims to increase urban density within the existing built environment. Challenges relate to fragmented landownership, high land values, and the need to deal with a large variety of interests in cities (Buitelaar, 2010; Holman et al., 2015; Khoshkar et al., 2018). For this reason, implementing densification objectives involves many trade-offs (Burton, 2000) and often leads to compromises which may affect the liveability and sustainability of dense environments (Neuman, 2005; Westerink et al., 2013). In particular, the relation between densification and green space availability is paradoxical: as cities become increasingly dense, the provision of sufficient public and green spaces is a fundamental element of developing liveable urban environments. Yet, densification often leads to the opposite: a decrease in the availability of public green spaces (Colding et al., 2013; Giezen et al., 2018) and overuse or congestion of existing ones (Arnberger, 2012). Ensuring sufficient supply of public green spaces is therefore a crucial piece of the puzzle to achieve densification that effectively contributes to more sustainable cities.

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Adding another layer of complexity, the implementation of densification is highly dependent on the involvement of private actors as landowners, investors, and developers, who enjoy a powerful position to determine the outcome of densification processes (Debrunner et al., 2020; van der Krabben & Jacobs, 2013). The need for planning administrations to collaborate closely with private actors is further reinforced by a general paradigm shift to New Public Management (Gerber, 2016; van den Hurk & Tasan-Kok, 2020). In practice, this leads to closer collaboration between the public and the private sector, in the context of project-based and more flexible forms of planning. Public responsibilities are outsourced to private actors, while planning authorities take up the role of facilitators and mediators among a diverse landscape of market-oriented actors (Tasan-Kok, 2010).

In terms of green space accessibility, however, the involvement of private profit-oriented actors in implementing densification raises significant challenges. The provision of public spaces by private actors has been questioned for potentially contributing to the development of spaces of commerce and consumption in the public realm (Madanipour, 2019; Van Melik & Van Der Krabben, 2016). Urban greening in particular has been mobilized by developers and real-estate investors to increase the value of their investments (Garcia-Lamarca et al., 2022). Being so, private governance of urban space has, in some cases, led to the rise of “gated communities” where neighbourhood amenities are accessible only to residents (Glasze, 2003; Glasze et al., 2006). Furthermore, the phenomenon of privately-owned public spaces (POPS) has been widely discussed: although contributing to additional supply of public space, the private interests of landowners often become prioritized (see e.g., Lee, 2022; Van Melik & Van Der Krabben, 2016). Ultimately, the private provision of public space can, in that sense, contribute to the formation of club goods, accessible only to a limited group of “club members” through the instalment of exclusion mechanisms such as the payment of a fee (Webster, 2007; Webster & Lai, 2003). Hence, densification projects led by private for-profit actors and integrating green space provision raise important questions. Due to their crucial role in safeguarding environmental quality and liveability in dense neighbourhoods, green spaces are a particularly relevant aspect of any densification process. When provided by private actors, it is critical to understand to what extent these green spaces are accessible and inclusive.

In urban contexts full of rivalry over public goods, economic theories related to club good formation assert that these goods can be more efficiently provided when organized as club good, based on the clear delineation of access rights between user groups (Webster & Lai, 2003). Due to congestion and use conflicts resulting from densification, there may in fact be demand for some level of exclusion. Accordingly, in this paper we ask to what extent club good formation is an inevitable outcome of densification led by private for-profit actors, who may seek to cater to a demand for exclusive access to green space. However, we do not assume club good formation to take place in a policy vacuum; hence, we also ask what strategies planning authorities successfully implement to ensure public access to green spaces in private-led densification. Our research is based on empirical data collected through two in-depth case studies in Switzerland and the Netherlands. In both countries urban densification is a main policy goal of spatial planning (Nabielek et al., 2012; Schweizerischer Bundesrat, 2012) and, correspondingly, the role of private actors in planning processes is becoming stronger (Buitelaar, 2010; Knoepfel et al., 2012; van den Hurk & Tasan-Kok, 2020). The two cases therefore represent two comparable planning contexts.

The article proceeds by developing an understanding of club good theory in the context of densification and urban greening. We then present our analytical framework combining

institutional economics with public policy analysis, emphasizing the implementation of densification as a negotiation process among actors. Our empirical evidence shows how in both cases private actors sought to transform green spaces into club goods by making access exclusive, despite legal agreements foreseeing public access. Planning interventions are most successful when affecting property rights of private actors. At the same time, the implementation of planning objectives requires active monitoring in the post-planning phase, when residents move in and use conflicts arise. Finally, the institutional design for public access needs to be aligned with physical design supporting an open and public character.

The Governance of Densification and the Provision of Green Space

Green Spaces in Densifying Cities as Exclusive Club Goods?

Many cities have anchored densification as a main planning goal, seeking to prevent urban sprawl. Yet as additional land uses are added to the existing built environment and cities become more dense, public spaces and green spaces in particular become increasingly prone to congestion and use conflicts (Arnberger, 2012; Haaland & van den Bosch, 2015). Access to green spaces is crucial for those living in dense urban environments, among others to reduce the sense of overcrowding and to provide access to important ecosystem services (Kabisch, 2015). Yet, congested and overused green spaces, resulting among others from densification, quickly lose quality and attractiveness (Arnberger, 2012). Densification can, therefore, contribute to the demand for more exclusive access to these spaces.

In cities, where rivalry over and congestion of public goods is part of everyday reality, it is sometimes considered desirable to delineate access rights more clearly in order to solve congestion problems. Economic theory related to club good formation asserts that, in the case of congested public goods, its users will demand more exclusive access to the good based on the payment of a fee or any other mechanism of exclusion (Buchanan, 1965; Webster, 2007; Webster & Lai, 2003). Accordingly, if users of a given publicly-accessible green space experience situations of overcrowding, congestion, or rivalry over the space, developers and landowners have an interest in providing green spaces only to a limited group of users to improve its quality and accessibility for “members of the club.” These dynamics are clearly visible in, for example, gated communities, where residents are willing to pay a fee to gain exclusive access to certain neighbourhood amenities, including parking, green spaces, playgrounds, or swimming pools (Glasze, 2003; Glasze et al., 2006). Other forms of exclusion imply imposing rules of use or behaviour, as is the case when certain user groups such as dog owners or skateboarders are banned. Club good theory, then, is a particularly relevant framework to help explain the dynamics around green spaces in densification contexts: due to increased demand for the use of green spaces, actors will seek to restrict access rights and make use of the space more exclusive to ensure its quality for a limited group of users.

In cities, many public goods primarily serve a limited group of local users (as is the case for urban green spaces), for which demand typically falls off with distance (Webster, 2007; Webster & Lai, 2003). These therefore entail a certain level of exclusion without explicit mechanisms being in place, for the simple fact that a neighbourhood park is mostly used by those living in the neighbourhood. However, if demand for use of the park exceeds its supply, for example due to densification, developers and landowners can, in the case of privately-owned spaces, impose additional forms of exclusion by restricting access for certain user groups. Exclusion is

thus a necessary condition for club good formation, club good theory having been described a theory of optimal exclusion and inclusion (Buchanan, 1965; Webster & Lai, 2003). However, as a former public good becomes available only to a limited and more exclusive group of “club members,” club formation compromises the collective and inclusive nature of public space (Warner, 2011). Being based on exclusion, club formation inevitably reinforces existing inequalities, contributing to the divide between members and non-members (Glasze, 2003, 2005). Nevertheless, there being a demand for exclusivity, provision of exclusive green spaces particularly in densification projects can increase a project’s profitability, given that some users may be willing to pay for gaining exclusive access to green space – on the condition of enjoying a well-maintained and congestion-free space (Glasze, 2003; Webster, 2002).

The Governance of Densification and Access to Green Spaces

Densification is a process by which the existing built-environment is intentionally redeveloped or transformed to achieve a higher density in terms of population, land use or both. Based on a new institutionalist approach, we understand densification to be governed through a set of institutions that shape how the involved actors change the use of land and related resources (Gerber et al., 2020). Our approach builds on the Institutional Resource Regime (IRR) framework, developed as an analytical framework to understand the institutional mechanisms that result in sustainable use and management of resources, including land (Gerber et al., 2009, 2020; Knoepfel et al., 2007). Based on a combination of institutional economics and public policy analysis, this approach highlights the causal relations between the institutions at play, the constellations of actors involved and the (un)sustainable condition of the resource (Blake et al., 2020). The IRR framework has previously been applied to understand the institutional mechanisms shaping densification processes both in the Netherlands (Bouwmeester et al., 2023) and in Switzerland (Debrunner et al., 2020).

The processes of densifying and greening cities are governed by two types of institutions that interact most closely with one another: public policies, including land-use planning, and property rights. Land uses are publicly regulated to ensure that sufficient land is available to the well-functioning of society and to determine what land uses are desirable where. Land-use planning regulates, for example, where and how to densify or where to provide additional green spaces. These policies aim to safeguard the public interest in urban development, when needed by limiting the freedom of landowners (Jacobs & Paulsen, 2009). However, property rights are a crucial institution protecting interests in land (Gerber et al., 2009; 2018). Through their property rights, landowners enjoy a powerful position to resist or change the solution imposed by public policy. For this reason, empirical evidence shows that the implementation of land-use planning objectives is often challenging (Knoepfel et al., 2012). Ultimately, planning is “about finding ways to deal with power grounded in strongly protected property rights” (Gerber et al., 2018, p. 3). The role and power positions of actors are, therefore, crucial in understanding how public policy is implemented.

Actors strategically activate and implement the rules defined by public policy, as they are not only on the receiving end of institutional determinants but also: 1) apply strategies to influence rule formulation; and 2) make strategic use of existing rules to pursue their interest to the best of their legal and political ability (Gerber et al., 2009, 2020). For example, developers and investors may seek to negotiate with planning authorities the allowance of increased densities in a given urban setting, or local citizens may appeal against a densification project to protect the

quality of their neighbourhood. The implementation of public policy, therefore, is dependent on more or less formal agreements negotiated among actors that produce case-specific rules. Within the IRR framework, these rules constitute an intermediary variable designated as Localized Regulatory Arrangement (LRA) – defined as “a set of more or less formal agreements that regulate resource uses at stake with regards to specific situations” (Gerber et al., 2020, p. 160). In urban development, LRAs relate, for example, to project-based planning, including project-specific land-use plans, contractual agreements, and property relationships. LRAs are, however, not only based on formal rules, but can also consist of rather informal ones, sometimes outside the legal framework. The LRA allows actors to adapt existing policy frameworks by: 1) complementing existing rules through the negotiation of specific agreements; 2) circumventing the existing rules; or even 3) diverting from the existing rules, for example when seeking to achieve different objectives than those originally foreseen by policy (Gerber et al., 2020). Given the flexibility and adaptability it provides to deal with the complexity of inner-city development, we recognize LRAs as a major variable influencing the governance of densification and access to green spaces.

Densification as Negotiation Between Public and Private Actors

As made visible by the IRR framework, public policies are often not implemented fully due to the powerful position of private actors. Relying on their property rights, they can resist implementation efforts by public actors. For planning to be effective, its objectives need to be translated into the private-law reality of property rights to ensure coherence between different institutions (Knoepfel et al., 2007). In addition, planning authorities increasingly make use of private-law instruments including contractual agreements and public-private partnerships (Buitelaar et al., 2022; van den Hurk & Tasan-Kok, 2020). As such, planners seek to implement planning goals *together* with private actors (Buitelaar, 2010; Knoepfel et al., 2012; van der Krabben & Jacobs, 2013). These dynamics relate to a general shift towards New Public Management, by which project-based planning and an increasingly managerial and entrepreneurial role of planners have become common practice (Gerber, 2016). Planners strategically combine instruments based both on public and private law to enjoy more flexibility and the possibility to negotiate in great detail the implementation of urban development (van den Hurk & Tasan-Kok, 2020). Therefore, in order to appraise the outcome of densification, understanding not only how densification is negotiated among actors but also how the public actor makes strategic use of the available planning instruments to control its implementation is a key element of our analysis.

Research Questions and Hypotheses

Based on the above, this paper aims to answer the following questions:

Research Question 1

To what extent is club good formation an outcome of densification when led by private for-profit actors?

Hypothesis 1: In the context of densification and potential congestion of urban spaces, there is an economic incentive for developers to provide green spaces as club good. Selling these as exclusive amenity drives up rental prices and real-estate values, therefore increasing profitability.

It is therefore in the interest of for-profit actors to “clubify” green spaces by installing mechanisms of exclusion, making club good formation an expected outcome of private-led densification.

Research Question 2

What strategies by planning authorities are successful in ensuring public access to green spaces in private-led densification?

Hypothesis 2: As densification does not take place in a policy vacuum, it can be prevented through effective planning interventions. However, given the complexity of densification, planning authorities cannot only rely on public-law planning instruments, but must strategically combine them with other types of interventions when negotiating planning agreements as part of the Legal Regulatory Arrangement - namely the use of private-law instruments and instruments that allow for restricting property rights according to planning objectives to ensure coherence within the institutional regime.

Research Design

Our research draws on qualitative data collected through two case-studies of private-led densification projects, one in the Netherlands (Utrecht) and one in Switzerland (Biel). The two countries present similarities, mainly in relation to the overall scarcity of land and corresponding densification goals (Nabielek et al., 2012; Schweizerischer Bundesrat, 2012). In both countries, project-based and more flexible forms of planning have gained ground over the last years, with local planning authorities playing an important role in strategically and proactively seeking to implement planning goals. In the Netherlands, municipalities continue to have a particularly active role in Dutch land policy despite a shift towards more passive planning in the years after the financial crisis of 2009 (Meijer & Jonkman, 2020; van der Krabben & Jacobs, 2013). In Switzerland the implementation of land-use plans has traditionally been mostly reactive; however, the revision of the Spatial Planning Act in 2012 has prompted a move toward more proactive and strategic planning interventions especially in large cities (Hengstermann & Gerber, 2015). On top of that, both countries have experienced a shift towards more entrepreneurial forms of governance, linked with a closer involvement of private actors in urban development (Gerber, 2016; Knoepfel et al., 2012; Tasan-Kok, 2010). Analysing private-led densification projects from both countries allows us, therefore, to better understand the outcome of planning for urban green spaces in densifying cities in contexts of land scarcity and project-based planning.

The two case-studies were selected, first, for presenting typical ownership structures of private-led densification in their respective countries: in Utrecht, densification was led by two large developers who owned the land and later sold the completed units to other parties; in Biel, the land was purchased by an institutional investor who developed and still owns the project, providing rental housing. Second, in both cases the negotiation of access to green space was a significant part of the planning process, allowing for our hypotheses to be discussed. Data was collected in 2021 after both projects were completed and delivered. First, relevant documents were analysed, including planning legislation and project-related visions, strategies and plans (see [Appendix I](#) for an overview). Second, semi-structured interviews were conducted with all actors involved in the planning process of each project. Our interviewees include those representing the public actor/municipal planning department (2 for each case), the landowner and

developer (3 for Biel; 2 for Utrecht), and a landscape architect (1 for each case) (see [Appendix II](#) for an overview). Most interviews were conducted in person taking approximately one hour. Two interviews were conducted online. All were transcribed and coded afterwards. Based on the data collected, we reconstructed the planning process and related negotiations between the public and private actor, allowing for an understanding of their interests and strategic positions. Finally, on-site observations were conducted to understand the outcome of the densification project, focusing on the accessibility of the related green spaces.

Results

Densification in Utrecht, The Netherlands – Project Zijdebalen

Zijdebalen is an inner-city housing project completed in 2019, containing 481 rental and for-sale units divided over four building blocks. It is located on a former industrial site close to Utrecht's historic centre, facing the waterfront of the river Vecht. Utrecht is the fourth-largest city in the Netherlands, and its population of approximately 350.000 is predicted to grow significantly over the next decades. In 2007 the city council approved a spatial vision (*structuurvisie*) for the redevelopment of Zijdebalen, formalizing its intention to change land use from industry to housing. As the plot was purchased by a real-estate investor in 2008, a planning process was initiated to change the land-use plan accordingly. Between 2008 and 2010, several participatory processes with residents were organized on initiative of the landowner, after which a project plan complemented by a new local land-use plan (*bestemmingsplan*) were approved by the city council in 2010. The land-use plan not only allowed a change from industry to housing, but it also outlined detailed regulations regarding the type and size of housing to be provided as well as its urban design. However, due to the financial crisis the project was suspended. Only in 2014 did Zijdebalen receive a second chance, as the plot was now bought by a combination of two large Dutch developers. As is common in the Netherlands, the developers owned the land until construction was completed, being both landowner and developer. The completed project was then sold off to third parties, namely an institutional investor, individual homeowners, and a housing corporation (see [Appendix I](#) for an overview of the planning process) ([Figure 1](#)).

In 2014, new rounds of negotiations between the new landowners and the municipal planning department took place. The new agreements did not require a change of the already-approved land-use plan, being instead formalized through a private-law contract (*antérieure overeenkomst*) between the landowner and the city. Also in 2014, an institutional investor entered the stage by purchasing a large share of the housing units in “turn-key” format, providing financial certainty to the developers. Construction work began in 2015, with the last building block being completed in 2019. The remaining housing units were sold to individual homeowners, a small share being transferred to a housing corporation for the provision of social housing. Nowadays, all four buildings of Zijdebalen are managed by a homeowner association, constituted by the institutional investor as main owner and the remaining individual homeowners.

All interviewees confirmed that, for an inner-city development like Zijdebalen, entering negotiations as early as possible is crucial to ensure cohesion and transparency. For example, the definition of maximum built density as well as the revision of the city's housing affordability policy were critical aspects conditioning the financial feasibility of the project

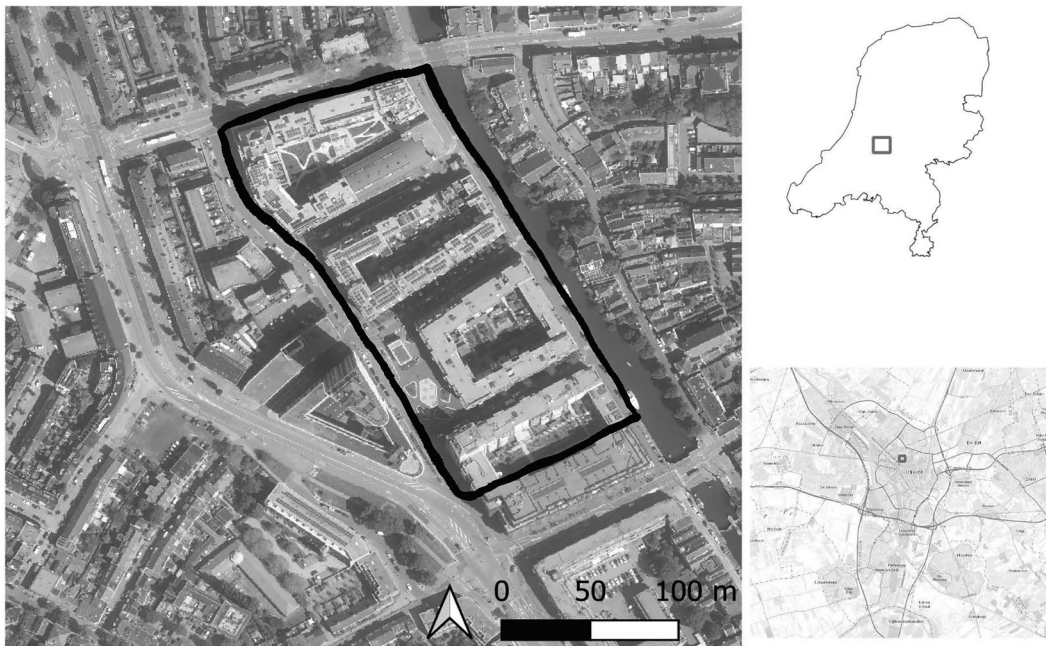


Figure 1. Map of the project area of Zijdebalen (Utrecht). Sources: PDOK Kadaster, BRT Top Grenzen.

(interview developer Utrecht). Based on these negotiations, the obligation to provide a pre-defined share of social (subsidized) housing was replaced by the obligation to provide medium-priced rental housing (supplied by the institutional investor), given negative market perspectives in 2014 (interview developer Utrecht; interview planning department Utrecht 1). Another aspect of the negotiations was the provision of public green spaces. Due to a low share of green spaces in this part of the city, the additional provision of urban green as well as an improved supply of public space targeting a “heterogenous” population were included as main planning objectives in the land-use plan of 2010 (interview planning department Utrecht 2; Gemeente Utrecht, 2010). Planners negotiated two solutions with the developers: 1) the development of the spaces surrounding the four building blocks as public spaces, containing a neighbourhood square, a playground, two cafés, and several spaces that “invite to stay”; and 2) public access to the inner-yards of two of the four buildings, providing access to additional green areas to balance the lack of green in the public realm. The developer understood the quality of these spaces to be important factors for the success (and profitability) of the project, for which it agreed with the solutions proposed by the city, hiring a landscape architecture office to design the public spaces in collaboration with municipal planners and designers. The inner-yards, however, were designed by the buildings’ architects (interview developer Utrecht).

The obligation to grant public access to the inner-yards was included in the land-use plan and later in the private-law contract signed between the developer and the city. However, the land-use plan uses ambiguous wording in setting this requirement, stating that “it is the *intent* that at least two inner-yards are to be publicly accessible” (Gemeente Utrecht, 2010, p. 32 own translation; emphasis added). Besides foreseeing these yards to be used as “play and community space” (Gemeente Utrecht, 2010, p. 32), it does not set any further requirements regarding their

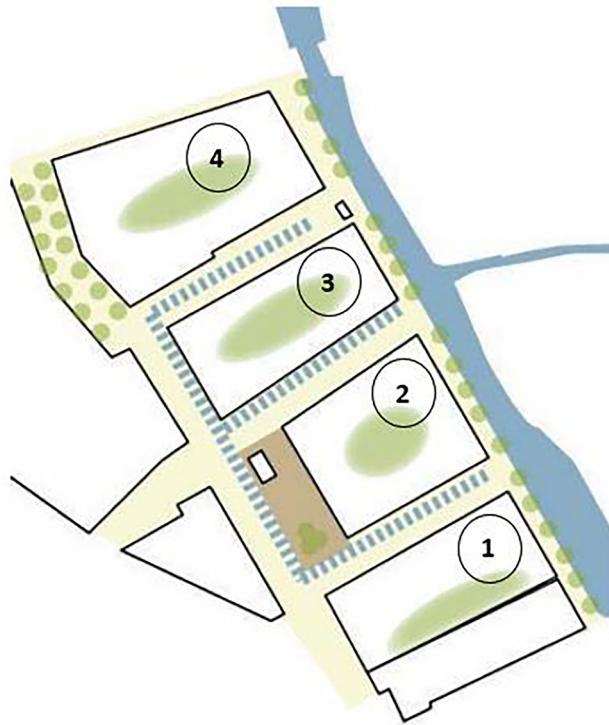


Figure 2. design plan of the green spaces in Zijdebalen. The four building blocks are surrounded by low-traffic streets, some of which contain canals. One side of the project faces the Vecht waterfront. The other side is oriented towards a neighbourhood square, developed in front of building 2. The green elements in the public space are complemented by the green inner-yards, two of which are publicly accessible (building 2 and 4). All canals except the one between building 3 and 4 were removed in later plans to ensure financial feasibility. Source: Gemeente Utrecht (2010).

design. The inner-yards remained in full private ownership of the condominium, and their design and semi-private character emphasizes a clear divide between these gardens and the surrounding public spaces (Figure 2).

Quickly after residents moved into the completed buildings, entrances to the inner-yards were closed off for the public, being accessible only for residents of the respective building. The closing-off resulted from safety concerns, including reports of burglary. While some interviewees, namely the landscape architect and the municipal planners, showed disappointment, the developer and the institutional investor understood the closure of the inner-yards as an almost inevitable outcome without major impacts for the quality of the project. The developer recognized having anticipated that the inner-yards would not function as actual public space, their design giving them a semi-private character - to enter, one needs to go through a gate and up a few steps, clearly delimiting this space from the street:

"But once you access one of these inner-yards, and you are not from there, you do get the feeling as if, even though being semi-public, you are entering one's private domain. The place cannot really be compared to public space. So I have always had my doubts about it [for the inner-yards to be public]" (interview developer Utrecht).¹

The institutional investor, as main member of the respective homeowner associations, agreed with closure of the gates in order to protect the interest of its tenants:

"Yes, what we also took into consideration was, that in the end you want to keep your tenants satisfied. And what you see a lot in this type of places, is that there is indeed nuisance, burglary and so on." (interview investor Utrecht).

The green spaces thus function as exclusive amenity or club good for residents. As explained by the interviewees, enforcing public access was not feasible for the city, despite its agreements with the developer, mainly because ownership had been transferred to the investor and individual homeowners who, based on their safety concerns, had a legitimate reason to protect their private property. As acknowledged by a municipal planner (interview planning department Utrecht 2), although the potential problems of this arrangement became apparent during the planning process, reconsidering it would jeopardize the entire development, as providing additional green spaces outside the buildings clashed with the need to build high densities to safeguard the project's financial feasibility. The inner-yards of Zijdebalen nowadays function as effective club good, being a semi-public good shared among a restricted group of users and not accessible for non-members. The yards are managed and maintained by the respective homeowner associations, each homeowner paying a recurring fee. The public spaces surrounding the four buildings were transferred into public ownership as soon as development was completed, being therefore managed and maintained as public space. Here, however, interviews and on-site observations indicated a lack of green elements, being this a rather solidified and artificial space. Public access to urban green space is thus lacking (Figures 3–5).



Figure 3. in front of building 2, a public square functions as main elements of the public space. Source: own photo.



Figure 4. A closed gate and a Difference in height sets the inner-yards of the buildings as separate from the street. Source: own photo.



Figure 5. An open space between building 3 and 4 provides an additional meeting point, with a café and public benches. The street is complemented with a canal along building 4. Source: own photo.

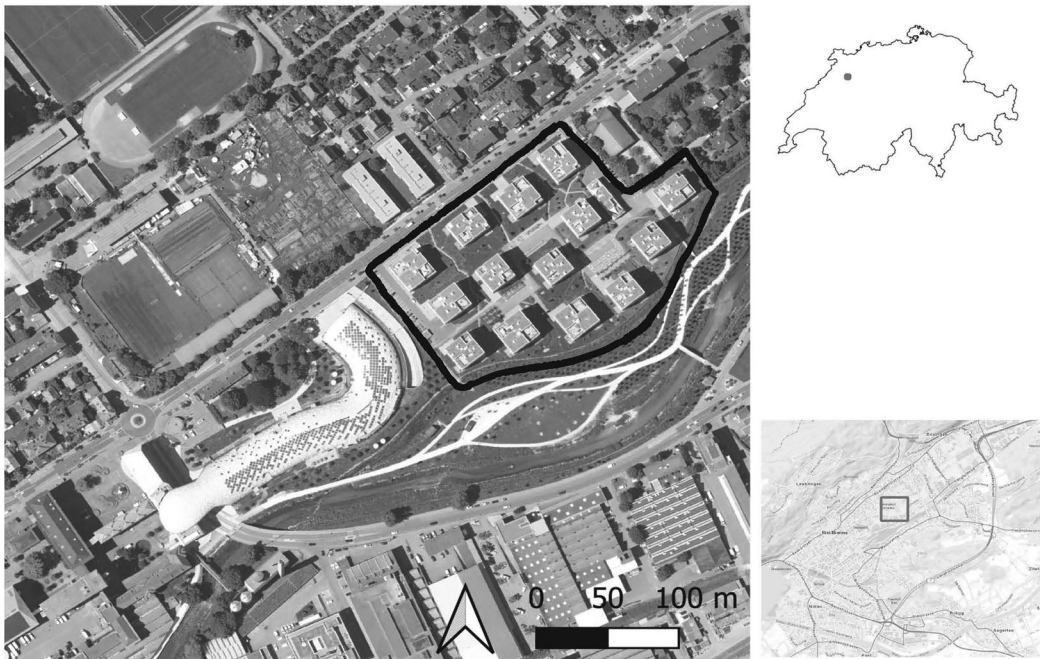


Figure 6. Map of the project area of Jardin du Paradis (Biel). Sources: ESRI Topo, swissTLMRegio.

Densification in Biel/Bienne, Switzerland – Project Jardin Du Paradis

The Jardin du Paradis is a housing project completed in 2018 and containing 279 rental units, developed by a Swiss pension fund on former industrial grounds in the eastern part of Biel/Bienne. Being a medium-sized city with a population of around 60.000, Biel is known for its key role in the development of Switzerland's watchmaking industry. Until today, it is home to some of the world's largest watchmaking brands. However, being hard hit by several global financial crises, by the end of the 20th century Biel was a shrinking city with clear signs of degradation and vacancy. In the 2000s, having a long tradition of land policy, the city turned its fate around, mainly by mobilizing its own land to attract businesses and new investments (Figure 6).

Jardin du Paradis is located in a former industrial area which, in 1999, was included in a so-called "zone with planning obligation" (*Zone mit Planungspflicht*). This type of zoning, established by cantonal law, allows for municipalities to have greater influence over future development within the zone by making a detailed land-use plan (*Überbauungsordnung*) mandatory before development can take place. In 2006, an institutional investor purchased a plot in this area to develop real-estate. However, the planning process effectively started in 2008, when the Swatch Group, with its headquarters in Biel, announced its wish to invest in a new office building next to the already-existing Omega buildings, neighbouring the plot in ownership of the institutional investor. The planning department had a clear economic interest in fulfilling this desire and advanced with a comprehensive planning process for the area, involving, at this point, three actors:

1. The municipal planning department, interested in ensuring high-quality housing development and economic functions, in order to increase the utility and attractiveness of a former industrial area;

2. The Swatch Group, interested in purchasing a plot adjacent to its Omega plot, in order to develop a new Swatch building;
3. The institutional investor, interested in developing housing as an investment asset.

The planning department proposed a land swap with both actors, by which the city exchanged land with the investor in order to sell a plot to the Swatch Group. One plot adjacent to the Schüss river remained in ownership of the city, to be developed as public green space. The land swap enabled the development plans of all three actors and resulted in a profit of 7.6 million Francs for the city of Biel, which was later invested in the park (see [Appendix I](#) for an overview of the planning process) ([Figure 7](#)).

Simultaneous to the land swap, the city negotiated with each landowner a detailed land-use plan (*Überbauungsordnung*) for their new plots, containing project-based rules and regulations. The land swap as well as the respective detailed land-use plans were approved by referendum in 2008, the land-use plans coming into force in 2010. The detailed land-use plan for Jardin du Paradis contains precise and extensively-negotiated regulations, including an increase of maximum floor space density by 15% to compensate for the fact that, after the land swap, the plot owned by the investor was smaller than its original plot (interview planning department Biel). Moreover, the investor was allowed to provide less outdoor spaces (including playgrounds and green spaces) than the minimum defined by cantonal planning law, due to the project's

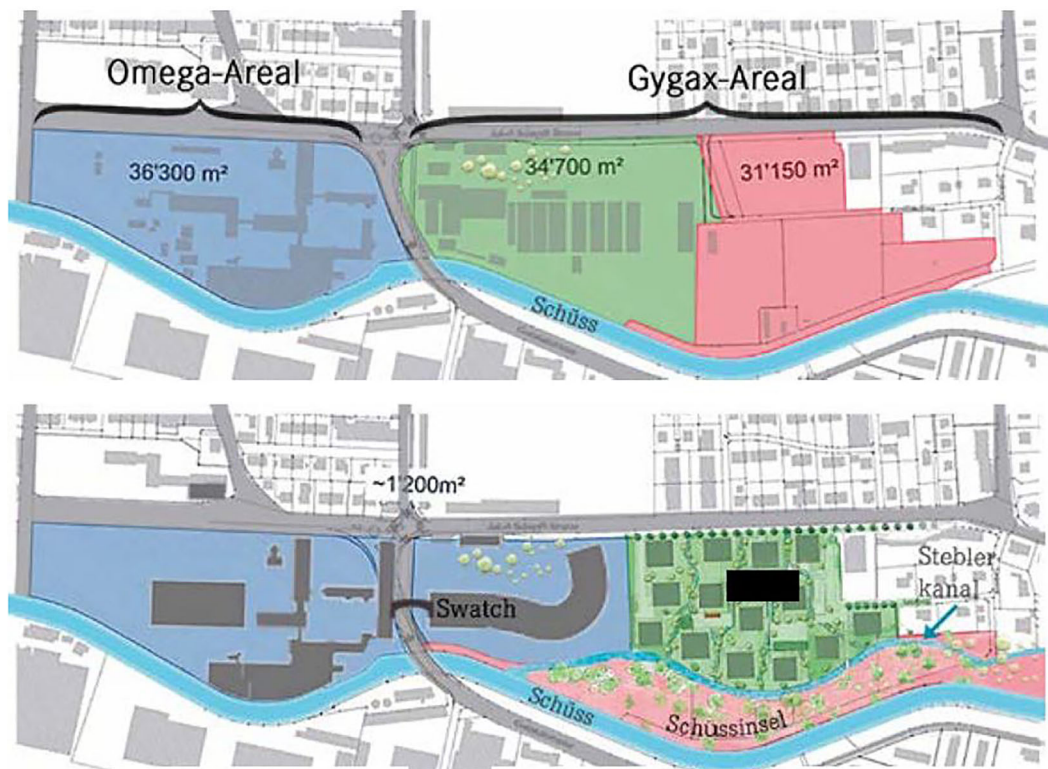


Figure 7. Ownership structures before (above) and after (below) the land swap. Blue: land owned by the Swatch group; green: land owned by the pension fund; red: land owned by the city of Biel. Source: Stadt Biel (2017).

proximity to the new public park (interview landowner Biel 2). The negotiation of the detailed land-use plan was, however, challenging as, according to one interviewee, “the devil is in the details” (interview landowner Biel 3). Besides the above-mentioned adjustments, the planning department made a number of additional demands regarding the design and use of the green spaces surrounding the housing. Based on an urban design concept (*städtebauliches Konzept*) developed in 2008, the planning department intended Jardin du Paradis to function as a link between the street and the public green space, seeking to ensure public access through the privately-owned housing. The planning department furthermore sought to avoid any fencing or gating practices in Jardin du Paradis, to ensure an open and accessible environment and to prevent the idea of a “gated community” – using the detailed land-use plan to legally anchor these aspects of the urban design plan:

“We introduced a lot of details in the detailed land-use plan [*Überbauungsordnung*]. For example, that the terraces and gardens on the ground-floor could not be privatized, not fenced. That was really based on this idea of transferring the quality shown in the urban design concept [*städtebauliches Konzept*] into the detailed land-use plan. That was a main instrument to ensure quality and to enter negotiations with [the institutional investor]” (interview planning department Biel).

In the end, the detailed land-use plan regulates that the green spaces of Jardin du Paradis are to function as “community space,” serving the residents while simultaneously being publicly accessible. Public access was registered as public easement in the land register, including the obligation for the landowner to maintain these public pedestrian paths, which provide easy access to the public green space from the main road. After residents moved in, however, maintaining an open space proved to be more difficult. Despite the legal regulations, the new residents started to “privatize” green spaces by putting up fences and other forms of gating. This clashed with the city’s intention to maintain an open and accessible character. Although the landowner was aware, it waited to explore the reaction of the city, having an interest in providing residents with the possibility to delimitate their own private terraces (interview landowner Biel 1). Mainly, the landowner sought to defend the residents’ interest of privacy and exclusion:

“I do understand the city, why they wanted it like this, for the appearance and the perception. But for us that [no privatized terraces] was a problem, as many tenants did not want to be so exposed... because it’s also a crossing to the Schüssinsel [public green space] (...) Many are disturbed by this, so that was a potential conflict between the city and us. So we had to work it out.” (interview landowner Biel 1).

The planning department, however, quickly demanded the landowner to ensure that fencing structures were removed, as these did not comply with regulations. As a result, a new round of negotiations took place, resulting in a compromise: only removable and temporary structures such as plant pots or pallets are now allowed to fence off terraces. Despite these challenges, the green spaces of Jardin du Paradis function as foreseen during the planning process: access to the plot is public, however the uses provided are oriented towards residents only – as indicated by a sign, the picnic tables are for exclusive use by residents of Jardin du Paradis. Small terraces surrounding ground-floor dwellings are demarcated for private use, but using only removable items. In Biel, the city ensured additional provision of public green space through a greening project on its own land. At the same time, it aimed for ensuring public access to the green spaces of Jardin du Paradis, as extension of and connection between the park and the street. Nevertheless, and despite proximity to the public park, we identified an interest of the landowner to provide green spaces as exclusive amenity for its tenants, in order to enhance the attractiveness of living in Jardin du Paradis (Figures 8–10).



Figure 8. The public green space with the buildings of Jardin du Paradis in the back. Source: own photo.



Figure 9. An open space in the Middle of the housing project provides a playground and several benches. Source: own photo.



Figure 10. Only temporary structures are allowed to demarcate private outdoor spaces in Jardin du Paradis. Source: own photo.

Discussion

In this article, we firstly asked to what extent club good formation is an outcome of densification when led by private for-profit actors. Our hypothesis is confirmed, as both case-studies show how landowners and developers have an interest in providing a certain level of exclusiveness in relation to green spaces, to cater towards residents (or, in these cases, customers). In both cases, private actors recognized a demand for privacy and exclusive access in “this type of places” (interview investor Utrecht): more or less dense urban areas where many non-residents (“strangers”) make use of the space. Even though in Biel the city ensured sufficient supply of public green space, residents of Jardin du Paradis showed a desire to fence off the space adjacent to their housing units from passers-by. As urban spaces become congested or use conflicts arise, users seek to adapt and reorganize access rights to the space and to install more explicit exclusion mechanisms to “clubify” the space (Webster, 2007). In line with club good theory, our cases show how densification can contribute to increased use conflicts and, consequently, a growing demand for exclusive access to green spaces – in particular when residential spaces become used by non-residents.

In both cases, the respective planning authorities implemented strategies aiming to ensure public access to privately-provided green spaces. These strategies were used in the negotiation of project-based and context-specific planning rules, underlining the importance of the Local Regulatory Arrangement (LRA) as variable to understand how public policy is translated into specific densification projects (Blake et al., 2020). The negotiation process provided room for manoeuvre to the involved actors (both public and private) to adapt general planning regulations to their own case-specific interests: for example, in Biel maximum floor space density was increased to ensure the landowner’s acceptance of the land swap, and in Utrecht the obligation to provide social housing was adapted to ensure financial feasibility and thus implementation of

the development. As our cases show, the negotiation of the LRA ensures flexibility but also provides leeway to deviate from public policy goals.

In our second hypothesis, we argued that for planning interventions to be successful in ensuring public access to green spaces in private-led densification, planners need to go beyond public-law instruments by using private-law instruments such as contracts and instruments that allow for engraving planning objectives in property rights. The hypothesis is partially confirmed – both cases show that, considering the complexity of implementing densification, the strategic use of a variety of instruments is necessary to ensure the successful integration of public policy goals. Legally anchoring these project-based agreements is a crucial part of the planning process (van den Hurk & Tasan-Kok, 2020; van der Krabben & Jacobs, 2013). In Biel, this was done mostly through the detailed land-use plan; in Utrecht, the land-use plan was complemented with a contract. However, as our findings confirm, anchoring a rule through legal instruments is not enough to ensure its actual implementation (Gerber et al., 2018). This was most evident in the case of Zijdebalen, where the (ambiguous) obligation to provide public access to the inner-yards did not suffice to ensure *de facto* public access. The homeowner associations were able to make use of the leeway resulting from the incoherence between public policy and property rights: while the public-law instrument imposed public access, the inner-yards remained in full private ownership and the freedom of the landowner to exclude others from making use of its private property was not restricted. This incoherence resulted in failed implementation. In the case of Jardin du Paradis, the registration of public easement on private land – directly restricting private property in the land register – guaranteed public access to the privately-owned green spaces, despite the interest of the landowner to provide these spaces as exclusive amenity for its tenants.

Moreover, our findings show that the LRA goes beyond negotiating legal rules (Gerber et al., 2020) – rather, it involves a constant revision of the rules and their application, and informal ad-hoc agreements once densification is implemented. Agreements on public access to private spaces require monitoring of compliance and a continuous revision of the LRA in the *post*-planning phase, as this is when the spaces become used and, inevitably, use conflicts start to emerge. In Jardin du Paradis, residents sought to delineate parts of the green spaces for private use, the landowner not intervening until the planning department did. The public and open character of these spaces – as foreseen by the detailed land-use plan – was ensured only by the active monitoring role of the planning department after implementation. The fact that Jardin du Paradis was still under ownership of the same actor, facilitating renegotiation of former agreements, seems to have contributed to the successful intervention by the city of Biel.

Finally, what distinguishes our cases is their design and morphology: while Jardin du Paradis was intentionally designed as open space based on a design concept developed on behalf of the city, Zijdebalen was designed as closed space with its inner-yards clearly delineated from its already dense surroundings. As emphasized by Webster (2007), physical design needs to be aligned with the carrying capacity of the space: in Zijdebalen, an exclusionary design led to an exclusionary space. Some interviewees argued that the inner-yards of Zijdebalen could not have functioned as truly public space, serving the building's residents in the first place. Indeed a study in Berlin showed that, even if publicly accessible, inner-yards clearly connected to the surrounding private property “effectively seal them off from the rest of the neighbourhood” (Marquardt et al., 2013, p. 12). The inner-yards of Zijdebalen echo many of the challenges related to privately-owned public space (POPS): they are often not designed for public access and use, but instead made as private and uninviting looking as possible (Lee, 2022). The interest

of the private owner of the space is, first and foremost, to serve a limited group of users, such as the building's residents or employees. Critiques to this type of configuration are wide-spread and its implications for accessibility and inclusiveness well-known (Lee, 2022; Németh, 2009; Van Melik & Van Der Krabben, 2016). Hence, the fact that this design was approved without the necessary changes to property rights provided sufficient leeway to the homeowner associations to "clubify" these spaces. Being so, in dense cities, where use conflicts are always imminent (Madanipour, 2003), ensuring *de facto* public access to green spaces in private-led densification projects requires a strategic combination of planning instruments affecting property rights of the landowner, ongoing monitoring of enforcement and compliance even after the planning phase, and an appropriate open design that enables the public character of the space.

Conclusion

Green spaces are crucial infrastructures in cities, in particular in dense residential areas. While some benefits derive from the mere presence of urban green, such as its cooling effect, potential for rainwater infiltration, and positive effect on air quality (Haaland & van den Bosch, 2015), many ecosystem services require accessing and making use of green spaces – as is the case for effects on well-being, stress reduction, and thermal comfort (Kabisch, 2015; O'Brien et al., 2017). Despite the importance of green space accessibility, our empirical evidence shows how private actors have an economic interest in providing green spaces as club goods. To counteract club formation, planners need to go beyond a narrow approach towards planning based only on public-law instruments. Instead, three additional types of interventions prove to be essential in contexts of densification and land scarcity: 1) planners need to restrict and intervene in property rights to translate planning objectives and ensure coherence among institutions; 2) they need to actively monitor the implementation of planning objectives over time, including in the post-planning when use conflicts arise; and 3) they need to ensure physical design that enables the public character of green spaces. Mainly, our research provides empirical evidence of the discrepancy between planning objectives and effective implementation within a context of private property. The complex process of implementing densification requires ongoing negotiation of interests among actors. Analysed as an intermediary variable between the institutional regime and effective implementation (LRA), this negotiation process provides flexibility and adaptability to the actors involved (Bouwmeester et al., 2023; Gerber et al., 2020). All interviewees highlighted the importance of compromising and finding common ground in densification projects. However, the more flexibility and room for manoeuvre the LRA provides, the more leeway developers and residents have to shape the outcome of densification according to their private interest. In our cases, this was made visible by the effort of the respective landowners to circumvent negotiated agreements in order to make access to the green spaces more exclusive and, as such, jeopardize public access. The translation of *de jure* public access into *de facto* public access needs therefore to be accompanied by appropriate and strategic planning interventions.

By analysing two cases from Switzerland and the Netherlands, we have provided empirical evidence of the challenge to ensure public access to green spaces in private-led densification in contexts where project-based and more flexible forms of planning are gaining ground, and where for-profit private actors have a prominent role in determining the outcome of densification. It is when residents move into the newly-completed projects that use conflicts arise, potentially triggering the instalment of mechanisms of exclusion on behalf of "members of the club." However, club formation is not an inevitable outcome of densification. Rather, it is the outcome

of a political process, based on the negotiation of public and private interests – in which certain interests are compromised on behalf of others. In contexts of land scarcity, providing public access to privately-owned green spaces can be seen as a cost-effective solution to the lack of urban green in the public realm. However, to what extent the private provision of green spaces presents a sustainable solution to an overall lack of green space accessibility in the public realm can be questioned. Finally, while our research has focused on the issue of *access* to green spaces, future research should address how the *quality* of new green spaces developed by for-profit actors is affected by private interests, and how this affects what benefits are provided to what types of user groups.

Note

1. Interviews were conducted in Dutch and German. The English translation of all quotes were verified by the respective interviewees.

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References

- Arnberger, A. (2012). Urban densification and recreational quality of public urban green spaces – A viennese case study. *Sustainability*, 4(4), 703–720. <https://doi.org/10.3390/su4040703>
- Blake, K., Nahrath, S., & Ingold, K. (2020). Combining the Institutional Resource Regime (IRR) framework with the Advocacy Coalition Framework (ACF) for a better understanding of environmental governance processes: the case of Swiss wind power policy. *Environmental Science & Policy*, 112, 141–154. <https://doi.org/10.1016/j.envsci.2020.06.010>
- Bouwmeester, J., Gerber, J.-D., Hartmann, T., & Ay, D. (2023). Non-compliance and non-enforcement: An unexpected outcome of flexible soft densification policy in The Netherlands. *Land Use Policy*, 126, 106525. <https://doi.org/10.1016/j.landusepol.2022.106525>
- Broitman, D., & Koomen, E. (2020). The attraction of urban cores: Densification in Dutch city centres. *Urban Studies*, 57(9), 1920–1939. <https://doi.org/10.1177/0042098019864019>
- Buchanan, J. M. (1965). An economic theory of clubs. *Economica*, 32(125), 1–14. <https://doi.org/10.2307/2552442>
- Buitelaar, E. (2010). Cracks in the myth: Challenges to land policy in The Netherlands. *Tijdschrift Voor Economische En Sociale Geografie*, 101(3), 349–356. <https://doi.org/10.1111/j.1467-9663.2010.00604.x>
- Buitelaar, E., van den Hurk, M., Nozeman, E., & Oude Veldhuis, C. (2022). Public entrepreneurship in private land markets: Contracting dilemmas around selling Amsterdam's major prison. *Planning Theory & Practice*, 23(2), 248–264. <https://doi.org/10.1080/14649357.2022.2034923>
- Burton, E. (2000). The compact city: Just or just compact? A preliminary analysis. *Urban Studies*, 37(11), 1969–2006. <https://doi.org/10.1080/00420980050162184>
- Colding, J., Barthel, S., Bendt, P., Snep, R., van der Knaap, W., & Ernstson, H. (2013). Urban green commons: Insights on urban common property systems. *Global Environmental Change*, 23(5), 1039–1051. <https://doi.org/10.1016/j.gloenvcha.2013.05.006>
- Debrunner, G., Hengstermann, A., & Gerber, J.-D. (2020). The business of densification: Distribution of power, wealth and inequality in Swiss policy making. *Town Planning Review*, 91(3), 259–281. <https://doi.org/10.3828/tpr.2020.15>
- Garcia-Lamarca, M., Anguelovski, I., Cole, H. V. S., James, J., Connolly, T., Carmen, P., Shokry, G., & Triguero-Mas, M. (2022). Urban green grabbing: Residential real estate developers discourse and practice in gentrifying Global North neighborhoods. *Geoforum*, 128, 1–10. <https://doi.org/10.1016/j.geoforum.2021.11.016>
- Gemeente Utrecht. (2010). *Bestemmingsplan Zijdebalen*. Gemeente Utrecht.
- Gerber, J.-D. (2016). The managerial turn and municipal land-use planning in Switzerland – Evidence from practice. *Planning Theory & Practice*, 17(2), 192–209. <https://doi.org/10.1080/14649357.2016.1161063>

- Gerber, J.-D., Hartmann, T., & Hengstermann, A. (2018). *Instruments of land policy – Dealing with scarcity of land*. Routledge.
- Gerber, J.-D., Hengstermann, A., & Viallon, F.-X. (2018). Land policy: How to deal with scarcity of land. In J.-D. Gerber, T. Hartmann, & A. Hengstermann (Eds.), *Instruments of land policy – Dealing with scarcity of land* (pp. 8–26). Routledge.
- Gerber, J.-D., Knoepfel, P., Nahrath, S., & Varone, F. (2009). Institutional resource regimes: Towards sustainability through the combination of property-rights theory and policy analysis. *Ecological Economics*, 68(3), 798–809. <https://doi.org/10.1016/j.ecolecon.2008.06.013>
- Gerber, J.-D., Lieberherr, E., & Knoepfel, P. (2020). Governing contemporary commons: The institutional resource regime in dialogue with other policy frameworks. *Environmental Science & Policy*, 112(June), 155–163. <https://doi.org/10.1016/j.envsci.2020.06.009>
- Giezen, M., Balicki, S., & Arundel, R. (2018). Using remote sensing to analyse net land-use change from conflicting sustainability policies: The case of Amsterdam. *ISPRS International Journal of Geo-Information*, 7(9), 381. <https://doi.org/10.3390/ijgi7090381>
- Glasze, G. (2003). Private neighbourhoods as club economies and shareholder democracies. *Belgeo*, 1(1), 87–98. <https://doi.org/10.4000/belgeo.15317>
- Glasze, G. (2005). Some reflections on the economic and political organisation of private neighbourhoods. *Housing Studies*, 20(2), 221–233. <https://doi.org/10.1080/0267303042000331745>
- Glasze, G., Webster, C., & Frantz, K. (2006). Private cities – Global and local perspectives. In *Private cities*. Routledge. <https://doi.org/10.4324/9780203336182>
- Haaland, C., & van den Bosch, C. K. (2015). Challenges and strategies for urban green-space planning in cities undergoing densification: A review. *Urban Forestry & Urban Greening*, 14(4), 760–771. <https://doi.org/10.1016/j.ufug.2015.07.009>
- Hengstermann, A., & Gerber, J.-D. (2015). Aktive Bodenpolitik – Eine Auseinandersetzung vor dem Hintergrund der Revision des eidgenössischen Raumplanungsgesetzes. *Flächenmanagement Und Bodenordnung*, 2015(6), 241–250.
- Holman, N., Mace, A., Paccoud, A., & Sundaresan, J. (2015). Coordinating density; working through conviction, suspicion and pragmatism. *Progress in Planning*, 101, 1–38. <https://doi.org/10.1016/j.progress.2014.05.001>
- Jacobs, H. M., & Paulsen, K. (2009). Property rights: the neglected theme of 20th-century American planning. *Journal of the American Planning Association*, 75(2), 134–143. <https://doi.org/10.1080/01944360802619721>
- Kabisch, N. (2015). Ecosystem service implementation and governance challenges in urban green space planning – The case of Berlin, Germany. *Land Use Policy*, 42, 557–567. <https://doi.org/10.1016/j.landusepol.2014.09.005>
- Khoshkar, S., Balfors, B., & Wärnäck, A. (2018). Planning for green qualities in the densification of suburban Stockholm – Opportunities and challenges. *Journal of Environmental Planning and Management*, 61(14), 2613–2635. <https://doi.org/10.1080/09640568.2017.1406342>
- Knoepfel, P., Csikos, P., Gerber, J., & Nahrath, S. (2012). Transformation der Rolle des Staates und der Grundeigentümer in städtischen Raumentwicklungsprozessen im Lichte der nachhaltigen Entwicklung. *Politische Vierteljahresschrift*, 53(3), 414–443. <https://doi.org/10.5771/0032-3470-2012-3-414>
- Knoepfel, P., Nahrath, S., & Varone, F. (2007). Institutional regimes for natural resources: an innovative theoretical framework for sustainability. In P. Knoepfel (Ed.), *Environmental policy analyses*. Springer.
- Lee, D. (2022). Whose space is privately owned public space? Exclusion, underuse and the lack of knowledge and awareness. *Urban Research & Practice*, 15(3), 366–380. <https://doi.org/10.1080/17535069.2020.1815828>
- Madanipour, A. (2003). *Public and private spaces of the city*. Routledge.
- Madanipour, A. (2019). Rethinking public space: Between rhetoric and reality. *URBAN DESIGN International*, 24(1), 38–46. <https://doi.org/10.1057/s41289-019-00087-5>
- Marquardt, N., Füller, H., Glasze, G., & Pütz, R. (2013). Shaping the urban renaissance: New-build luxury developments in Berlin. *Urban Studies*, 50(8), 1540–1556. <https://doi.org/10.1177/0042098012465905>
- Meijer, R., & Jonkman, A. (2020). Land-policy instruments for densification: the Dutch quest for control. *Town Planning Review*, 91(3), 239–258. <https://doi.org/10.3828/tpr.2020.14>
- Nabielek, K., Boschman, S., Harbers, A., Piek, M., & Vlonk, A. (2012). *Stedelijke verdichting: Een ruimtelijke verkenning van binnenstedelijk wonen en werken*. Planbureau voor de Leefomgeving.
- Németh, J. (2009). Defining a public: The management of privately owned public space. *Urban Studies*, 46(11), 2463–2490. <https://doi.org/10.1177/0042098009342903>

- Neuman, M. (2005). The compact city fallacy. *Journal of Planning Education and Research*, 25(1), 11–26. <https://doi.org/10.1177/0739456X04270466>
- O'Brien, L., De Vreese, R., Atmiş, E., Olafsson, A., Sievänen, T., Brennan, M., Sánchez, M., Panagopoulos, T., de Vries, S., Kern, M., Gentin, S., Saraiva, G., Almeida, A. (2017). Social and environmental justice: Diversity in access to and benefits from urban green infrastructure – Examples from Europe. In D. Pearlmutter, C. Calfapietra, R. Samson, L. O'Brien, S. K. Ostoić, G. Sanesi, R. A. del Amo (Eds.), *The urban forest – Cultivating green infrastructure for people and the environment*. Springer International Publishing. <https://doi.org/10.1007/978-3-319-50280-9>
- Schweizerischer Bundesrat. (2012). *Raumkonzept Schweiz*. Überarbeitete Fassung, Bern.
- Stadt Biel. (2008). *Rapport final du comité d'experts – Solutions pour l'élaboration des conditions-cadre du plan de quartier "Aire Gygax"*. Département de l'urbanisme FK / fs/ tb.
- Stadt Biel. (2017). *Dossier de candidature – Flâneur d'Or 2017: Ile-de-la-Suze, Bienne*. Urbanisme Bienne.
- Tasan-Kok, T. (2010). Entrepreneurial governance: Challenges of large-scale property-led urban regeneration projects. *Tijdschrift Voor Economische En Sociale Geografie*, 101(2), 126–149. <https://doi.org/10.1111/j.1467-9663.2009.00521.x>
- van den Hurk, M., & Tasan-Kok, T. (2020). Contractual arrangements and entrepreneurial governance: Flexibility and leeway in urban regeneration projects. *Urban Studies*, 57(16), 3217–3235. <https://doi.org/10.1177/0042098019894277>
- van der Krabben, E., & Jacobs, H. M. (2013). Public land development as a strategic tool for redevelopment: Reflections on the Dutch experience. *Land Use Policy*, 30(1), 774–783. <https://doi.org/10.1016/j.landusepol.2012.06.002>
- Van Melik, R., & Van Der Krabben, E. (2016). Co-production of public space: Policy translations from New York City to The Netherlands. *Town Planning Review*, 87(2), 139–158. <https://doi.org/10.3828/tpr.2016.12>
- Warner, M. E. (2011). Club goods and local government: Questions for planners. *Journal of the American Planning Association*, 77(2), 155–166. <https://doi.org/10.1080/01944363.2011.567898>
- Webster, C. (2002). Property rights and the public realm: Gates, green belts, and Gemeinschaft. *Environment and Planning B: Planning and Design*, 29(3), 397–412. <https://doi.org/10.1068/b2755r>
- Webster, C. (2007). Property rights, public space and urban design. *Town Planning Review*, 78(1), 81–101. <https://doi.org/10.3828/tpr.78.1.6>
- Webster, C., & Lai, L. W.-C. (2003). *Property rights, planning and markets – Managing spontaneous cities*. Edward Elgar Publishing.
- Westerink, J., Haase, D., Bauer, A., Ravetz, J., Jarrige, F., & Aalbers, C. B. E. M. (2013). Dealing with sustainability trade-offs of the compact city in Peri-urban planning Across European city regions. *European Planning Studies*, 21(4), 473–497. <https://doi.org/10.1080/09654313.2012.722927>

Appendix I. Overview of planning process of case-studies

Biel – Jardin du Paradis			
Year	Event / planning intervention	Description	Name document (if applicable)
2004	Closure of bread factory in Zidebale		
2007	Approval of local spatial vision by city council	Outlines planning goals by public actor and defines general spatial framework for future development	<i>Structuurvisie Zidebale 2007</i>
2008	Purchase of plot by real-estate investor		
2008–2010	Participatory process with surrounding residents		
2010	Approval of urban development program for Zidebale by city council	Provides the framework within which future development is to take place, including type of uses, access, infrastructure, etc.	<i>Stedenbouwkundig Programma van Eisen (SpvE) - Zidebale 2010</i>
2010	Approval of local land-use plan by city council	Provides the public-law framework for development, building upon the urban development program	<i>Bestemmingsplan Zidebale 2010</i>
2013/ 2014	Purchase of plot and project by combination of two developers		
2014	Agreement between developers and institutional investor	Institutional investor buys up over 50% of apartments to be build in Zidebale in turn-key format	
2014	Agreement between developers and city council	Private-law contract including legal agreements complementing the land-use plan	<i>Anterieure overeenkomst¹</i>
2015	Commission letter on the progress of Zidebale	Letter by responsible councilman to municipal commission 'City and Space'	<i>Commissiebrief voortgang Zidebale – 5 Maart 2015</i>
2015	Start construction		
2019	Completion		
Biel – Jardin du Paradis			
1999	Approval of zone with planning obligation for Gutzelen	Type of zoning making mandatory the approval of a detailed land-use plan before development takes place	<i>Zone mit Planungspflicht – Gutzelen ZPP 4.1 / 4.2 / 4.3</i>
2006	Purchase of plot by institutional investor		
2008	Announcement by Swatch to build new headquarters in Biel		
2008	Jury selection of urban design plan for Gutzelen	Public competition for urban design plan, to serve as (non-binding) basis for development of the three plots in Gutzelen	<i>Rapport final du comité d'experts - Solutions pour l'élaboration des conditions-cadre du plan de quartier "Aire Gyax" (Stadt Biel, 2008)</i>
2008	Approval of land swap by voting majority	Land exchange organized by city of Biel with institutional investor and Swatch Group	<i>01-0811 Abstimmungsbotschaft_28-30 November 2008</i>
2008	Approval of detailed land-use plans by voting majority	Detailed land-use plans following the obligation set by the 'zone with planning obligation'	<i>Überbauungsordnung "Gyax-Areal Ost" (ZPP 4.3, Teilzone 4.3.2)</i>
2010	Coming into force of detailed land-use plans		
2013			

(continued)

Continued.

Biel – Jardin du Paradis			
Year	Event / planning intervention	Description	Name document (if applicable)
	Approval of credit for public green space by voting majority		02-1404 Plan_Gesamtprojekt_Schuessinsel; 05-1704_Prix_FlaneurOr
2014	Start construction Jardin du Paradis		
2014	Introduction of public easement into land register	Introduction of obligation to provide public access to privately-owned land in Jardin du Paradis	Grundbuch_9480_Auszug-Biel-Bienne-371-9480
2015	Start construction public green space		
2017	Inauguration of public green space		
2018	Completion of Jardin du Paradis		
2019	Inauguration of Swatch headquarters		

¹Due to its confidential nature, this document could not be accessed. Information on its content is therefore solely based on interviews.

Appendix II. Overview of interviews

Type of actor	Biel – Jardin du Paradis		Utrecht – Zijdebalen	
	Role of interviewee	Reference	Role of interviewee	Reference
Public actor	Planning department Biel (project manager)	(interview planning department Biel)	Planning department Utrecht (project manager)	(interview planning department Utrecht 1)
	Planning department Bern (expert on greening)	(interview planning department Bern)	Planning department Utrecht (urban designer)	(interview planning department Utrecht 2)
Private actor	Landowner and developer (current manager)	(interview landowner Biel 1)	Developer (former manager)	(interview developer Utrecht)
	Landowner and developer (former manager)	(interview landowner Biel 2)	Investor and landowner (current manager)	(interview investor Utrecht)
	Landowner and developer (external consultant)	(interview landowner Biel 3)		
External	Office for urbanism and landscape architecture	(interview landscape architect Biel)	Office for urbanism and landscape architecture	(interview landscape architect Utrecht)