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Land policy conflict profiles for different densification types: A literature-based approach

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ABSTRACT

Densification is being promoted in urban areas globally because of its many economic, environmental, and social benefits. The concept itself remains ambiguous, however, which is hampering the pursuit of densification as a strategic land policy objective. In this paper we construct literature-based land policy conflict profiles for different types of densification in order to reach a more nuanced understanding of the complexities involved in promoting densification through land policy. To that end we use a hermeneutic approach to critically review the literature and develop a typology of different densification types with relevance to land policy and categorize land policy conflicts specific to each type. As a result, we distinguish four densification-type-specific land policy conflict profiles: 1) policy-driven large-scale brownfield development, 2) policy-driven large-scale densification of strategic areas, 3) owner-driven medium-scale densification of individual high-rise sites, and 4) owner-driven incremental-scale densification of low-rise sites. The land policy conflict profiles address factors hindering the efficiency and effectiveness of the policy, the allocative, distributive, and procedural justice of densification, and conflicting policy outcomes. These unique conflict profiles allow for a detailed recognition of gaps, weaknesses, contradictions, justice and/or political indecisiveness in land policies promoting densification. The paper contributes to a deeper understanding of the challenges faced by land policy aimed at promoting densification. In addition, the conflict profiles will be helpful for practitioners in drafting municipal densification strategies.

1. Introduction

Many municipalities in Europe and beyond are promoting densification through land policies in the name of sustainable development (e.g., OECD, 2012). Containing and redirecting growth to existing urban and suburban structures contributes to climate policy goals and supranational objectives of land cover change, such as the European Union's target of zero net land take (e.g., European Commission, 2016; Jehling and Hecht, 2021). As well as offering environmental advantages, densification brings a wide range of economic and social benefits at the municipal level, such as reduced infrastructure and service costs, better opportunities to maintain and facilitate public transportation, and prospects for revitalizing older neighborhoods and city centers (e.g., Bibri et al., 2020; Berghauser Pont et al., 2021).

Land policy can be defined as a strategic combination of instruments applied by public authorities to manage the use and distribution of land (e.g., Hartmann and Spit, 2015; Meijer and Jonkman, 2020). Our analysis in this paper is limited to land policy conducted by local public

authorities, i.e., municipalities. We follow the approach used by Gerber et al. (2018) and place the strategic actors and their interests in land at the center of our analysis. In the case of densification, these actors are the municipality, landowners, municipal citizens as both residents and taxpayers, and developers/builders. The main strategic actors may have varying interests in densification, creating potential conflicts that need to be addressed or solved by land policy. At the same time, land policies should be – at least theoretically – legitimate and acceptable in terms of democratic legitimacy, effectiveness, efficiency, and fairness (Hartmann and Spit, 2015; see also Mäntysalo and Saglie, 2010). Land policy directs, for example, where and how densification takes place, who will benefit financially from densification, and how the benefits are distributed between public and private actors.

Urban density is often measured through the number of dwellings or population in a given area (Boyko and Cooper, 2011). One popular definition of densification describes it as the 'net increase in housing units' within an existing urban area (Broitman and Koomen, 2015: 34). However, these types of characterizations obscure the great complexity

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of densification as a strategic objective and the difficulty of its application (Boyko and Cooper, 2011; Holman et al., 2015; Dembski et al., 2020; Bibby et al., 2021). The multifacetedness of the concept is apparent in the literature, which addresses a vast range of different types of intensification ranging from large-scale redevelopment projects to incremental infill development of low-rise sites. The densification types are heterogeneous and relate to different questions and challenges regarding, for example, location, public and private interests and actors driving the development, and local and off-site implications of densification (e.g., Touati-Morel, 2015; Jehling et al., 2018; Bibby et al., 2020; Debrunner et al., 2020; Dembski et al., 2020; Dunnning et al., 2020; Gallagher et al., 2020a, 2020b; Pinnegar et al., 2020). This heterogeneity of densification suggests that related land policies must also consider a variety of conflicts of interest in promoting and implementing densification. This paper argues that despite the increased significance of densification policies and the vast amount of recent academic research on the topic, there is a lack of systematic understanding of different densification types and their implications for land policy and its legitimacy. Therefore, there is a risk that knowledge about densification and related land policy becomes too generic and at the same time diluted. This paper strives to fill this gap in the literature.

Our purpose here is to construct land policy conflict profiles that are specific to different densification types. To this end we critically review the literature and formulate a typology of densification types based on the alignment, coherence, and interdependency of their features. We then examine which land policy conflicts are associated with each type of densification, and finally construct a conflict profile for each densification type. The profiles allow for the recognition of gaps, weaknesses, justice, contradictions, and/or political indecisiveness in land policies promoting densification. The generic, literature-based profiles are developed and formulated without a dependence on specific institutional or operational context, notwithstanding the fact that the land policy instruments available or selected to address the challenges identified in the profiles vary in different jurisdictions and across municipalities (e.g., Krigholm et al., 2022). Our paper contributes to the literature on land policy in the context of densification by providing a more nuanced understanding of the complexities of land policy in promoting and implementing densification. In practice, the constructed land policy profiles can be used by municipalities in, for example, drafting municipal land policy strategies. The conflict profiles make it clear that the challenges related to densification vary between different densification types, and municipalities therefore need to tailor their densification strategies accordingly.

This paper is organized as follows. First, based on a synthesis of the literature on land policy conflicts in densification, the theoretical background for the study is presented. Second, the study design for constructing the conflict profiles is described. Subsequently, we first construct a typology of densification types, and then proceed to develop the conflict profiles for the different densification types. In the final two sections, we discuss the profiles and present our concluding remarks, respectively.

2. Land policy conflicts in densification

Land policy is a mix of policy instruments that relies on thoughtful consideration of power relations between different actors to implement politically defined spatial objectives (Gerber et al., 2018; Dembski et al., 2020). Successful implementation of the objectives of densification requires an understanding of the interactions between land use planning and property rights as well as the interests of different strategic actors. Strategic actors operate in a given institutional framework and regime that imposes ‘the rules of the game’ (North, 1990), including property rights and land use regulations. The agendas, drivers, and interests of different actors in potential land development create conflicts that need to be solved, or at least addressed, by land policy. The conflicts of interest reflect factors that constitute the legitimacy and acceptability of

the practiced land policy. An increasingly popular way to assess the legitimacy of land policy is by its democratic legitimacy, effectiveness, efficiency, and fairness (justice) (Hartmann and Spit, 2015). In this section we synthesize the literature on land policy conflicts in densification from different legal and political contexts to form an overview of the issues that land policy must address in promoting densification.

Public land policy and its impact on different actors, such as landowners, municipal citizens, and developers, derives its legitimacy from the equivalence of the norms and values implicit in the policy and in society generally (Jehling et al., 2020; Hartmann and Spit, 2015: 731). Public intervention by means of land policy is typically justified by the intent to correct and prevent market failures and to prevent or reduce negative externalities from unregulated development. This also applies to densification (Meijer and Jonkman, 2020). Here, the legitimacy of land policy concerns the questions of how effectively and efficiently the policy achieves its objectives (e.g., Mäntysalo and Saglie, 2010; Hartmann and Spit, 2015; Muñoz Gielen et al., 2017; Tasan-Kok et al., 2019), how densification is allocated (e.g., Jehling et al., 2018; Jehling et al., 2020), who benefits financially from densification and how the benefits are distributed between public and private actors (e.g., Puustinen et al., 2017; Biggar, 2021), how power is distributed, how transparent the process is, and how public accountability is ensured (e.g. Gerber, 2016; Tasan-Kok et al., 2019; Biggar, 2021).

The land policy literature concerned with densification identifies six conflicts of interest in densification that need to be addressed by land policy: 1) effectiveness conflict, 2) efficiency conflict, 3) allocative justice conflict, 4) distributive justice conflict, 5) procedural justice conflict, and 6) policy outcome conflict. The first five reflect and challenge the factors constituting the legitimacy of land policy and emerge between the strategic actors of densification, while the sixth type of conflict, policy outcome conflict, relates to contradictions in different municipal policy objectives and outcomes, and therefore emerges between policy setters. The six conflict types are summarized in Table 1 and described in detail below.

2.1. Effectiveness conflict

Effectiveness in densification concerns the ability of the policy to implement strategic densification objectives in the built-up urban structure with existing (private) property rights (e.g., Hartmann and Spit, 2015; Muñoz Gielen et al., 2017). From the perspective of effectiveness, it is important that the planning objectives are achieved within a reasonable period of time and in a conflict-averse manner (Thiel, 2008, quoted in Hartmann and Spit, 2015: 731). Moreover, it is important to note (and measure) what has and has not been achieved with respect to the objectives (Needham et al., 2018: 94). There are many changing, intervening variables and unintended and unpredicted consequences that affect the effectiveness of land policy (Needham et al., 2018). Some of the variables may hamper achieving the densification objectives, too, contributing to an *effectiveness conflict*. These factors include asymmetric power distributions between the main strategic actors (landowners, municipality) that hinder the capacity of the municipality to implement densification (Gerber et al., 2018). Asymmetric power distribution relates closely to several factors under the umbrella term of ownership constraints, such as divided ownership rights, owner’s unwillingness to sell, and the need to assemble land under multiple ownership (e.g., Adams et al., 2001, 2002; Farris, 2001; Gallagher et al., 2019; Debrunner et al., 2020). Another effectiveness challenge arises from the lack of a strategic planning framework (or the exclusion of certain types of development from planning) or the lack of a systematic approach, affecting the quality and quantity of densification, and possibly generating unwanted effects of incremental, ad hoc developments (e.g., Newton, 2010; Dunnning et al., 2020; Gallagher et al., 2020a; Bibby et al., 2020, 2021; Bolleter, 2021; Idt and Pellegrino, 2021).

Table 1

Land policy conflicts in densification, strategic actors involved, and legitimacy/policy questions addressed.

Land policy conflicts	Main strategic actors involved	Legitimacy/policy questions
1. <i>Effectiveness conflict</i>	Landowners, municipality	<i>Effectiveness of the practiced land policy</i> addresses many intervening variables and unintended and unpredicted consequences hampering the achievement of densification objectives
2. <i>Efficiency conflict</i>	Landowners, municipality	<i>Efficiency of the practiced land policy</i> addresses the financial involvement of the municipality and associated risks
3. <i>Allocative justice conflict</i>	Municipal citizens, municipality, landowners	<i>Allocative justice of the practiced land policy</i> addresses questions of how and where densification should take place and how it is legitimized in terms of gains and losses (positive and negative externalities) for different strategic actors
4. <i>Distributive justice conflict</i>	Landowners, municipality, municipal citizens, developers	<i>Distributive justice of the practiced land policy</i> addresses the question of who will benefit financially from densification and how the benefits and costs are distributed between the strategic actors
5. <i>Procedural justice conflict</i>	Municipal citizens, municipality, landowners, developers	<i>Procedural justice of the practiced land policy</i> addresses strategic actor engagement, communication, the transparency of the process and power distribution within, and public accountability, for example
6. <i>Policy outcome conflict</i>	Policy setters/municipality	<i>Policy outcomes of the practiced land policy</i> cause positive and negative externalities that complicate or hinder the achievement of the municipality's other strategic objectives, and vice versa

2.2. Efficiency conflict

The efficiency of land policy can be associated with the (typically financial) input and risks for the municipality from pursuing the planning outcomes (Valtonen et al., 2017; Needham et al., 2018: 86). However, monetizing planning outcomes is normative and very difficult as they involve many intricately interwoven variables. Nonetheless the financial involvement of municipalities in different land policy approaches is one way to assess the efficiency of the practiced land policy (Hartmann and Spit, 2015). In terms of financial involvement and financial risks, an *efficiency conflict* in densification results from high financial efforts and risks in achieving densification outcomes for the municipality. Examples include public (or public-private) land assembly and development, which requires a substantial initial investment and where the associated risks are higher than in private-led development (e. g., Hartmann and Spit, 2015; Valtonen et al., 2018; Tasan-Kok et al., 2019); ownership constraints hampering the achievement of planning outcomes (Adams et al., 2002; Needham et al., 2018: 89); and present and future liability issues related to the remediation of brownfield sites significantly adding to the costs and risks for the municipality and/or possible other strategic actors (Farris, 2001). In public land development and partnership arrangements, the municipality is also exposed to the real estate market risk (Valtonen et al., 2017). The main actors in this conflict are the municipality, landowner(s), and developers.

2.3. Allocative justice conflict

Questions of allocation have to do with how and where densification should take place and how it is legitimized in terms of the gains and losses to different stakeholders (Jehling et al., 2020). The principles of allocation affect the way in which different municipalities implement densification, which has an impact on allocative justice among different stakeholders. As a philosophical question, the allocation of densification relates to how land policy is positioned among different concepts of justice (Hartmann and Spit, 2015; Jehling et al., 2020). Jehling et al. (2020: 229) divide idealistic, exclusive allocation principles for densification under three concepts of justice: utilitarian, social, and libertarian (see also Davy, 1997). In utilitarian justice, densification is allocated along main infrastructure axes and central locations with high accessibility in order to reduce costs. In the social justice approach, the emphasis is on integrated mixed land use, and the allocation principle for densification integrates new densification with existing built-up areas, with a focus on the equitable allocation of densification in diverse neighborhoods to share benefits and burdens. Libertarian justice, then, follows market mechanisms of supply and demand or land rents as the guiding indicator for the allocation of densification (Jehling et al., 2020). *Allocative justice conflict* arises from strategic choices steering the allocation of densification and its implications, such as the distribution of negative and/or positive externalities of densification between strategic actors (municipal residents and tenants, municipality, landowners) (see e.g., Debrunner et al., 2020; Cavicchia, 2021), and also from the formation of demographically divided submarkets as a result of urban redevelopment via densification (Easthope and Randolph, 2018).

2.4. Distributive justice conflict

Distributive justice conflict concerns fundamental questions regarding the roles of public and private actors in densification, equality between actors, and the fair distribution of monetary costs and benefits associated with densification. In individual densification projects, key strategic actors include public authorities (municipality and municipal citizens represented by public authorities) and private actors (landowners and in some cases developers). Among the measures applied to manage the distribution of financial costs and benefits of densification between the strategic actors are cost recovery and value capture. Cost recovery refers to the duty of landowners to participate in the costs of providing infrastructure. In value capture, the public authority captures part of the economic value increase that accrues from urban development through taxes, negotiable and non-negotiable obligations of a developer, or public (or public-private) land assembly and development (Muñoz Gielen et al., 2017). Value capture through negotiable contributions can be approached as a means for landowners to compensate for the externalities caused by their developments (Webster, 1998; Valtonen et al., 2018), or to manage density with some level of social return (Biggar and Siemiatycki, 2020; Biggar, 2021). Thus, negotiable contributions can be regarded as trade-offs between added density and the appropriate level of public compensation (Biggar, 2021). Negotiable contributions can be used to incentivize densification (e.g., through reductions in planning gains) in areas under political pressure to densify the urban structure (Puustinen et al., 2017). The legitimacy of case-by-case negotiations on incentivized contributions can, however, be questioned due to equality dilemmas both between landowners and between landowners/developers and municipal citizens (Mäntysalo and Saglie, 2010; Valtonen et al., 2018; Biggar and Siemiatycki, 2020; Biggar, 2021; Puustinen et al., in press).

2.5. Procedural justice conflict

Procedural justice conflict concerns the procedural justice of land policies in the implementation of densification. It encompasses the transparency and the equality of the procedures and practices of

densification projects for different actors. The main actors include municipal citizens, the municipality, landowners, and developers. Procedural justice highlights the need for stakeholder/community engagement and transparency of the process and power distribution within, especially in cases where densification-related land policy is implemented through contracting and case-by-case negotiations (see e.g., Mäntysalo and Saglie, 2010; Pinnegar et al., 2020; Biggar, 2021). The issues of transparency and monitoring also essentially concern public accountability (Gerber, 2016; Tasan-Kok et al., 2019).

2.6. Policy outcome conflict

Land policy is only one of the policy spheres contributing to wider municipal strategic objectives (e.g., Needham et al., 2018: 91–92; Götze and Hartmann, 2021). Other, sometimes overlapping policies include social, economic, and environmental policies (e.g., Gerber et al., 2018; Debrunner and Hartmann, 2020; Cavicchia, 2021; Götze and Hartmann, 2021). The policy outcome conflict concerns the mismatch between the objectives and outcomes of different policies. One policy objective can have unwanted implications for some other objective. In policy outcome conflicts, the main strategic actors involved are policy setters in the municipality. For example, the financial investments made in order to stimulate housing supply through densification may have the effect of driving housing prices in the area, creating affordability challenges and so working against the policy objectives of social equity and sustainability (Debrunner and Hartmann, 2020; Pinnegar et al., 2020; Cavicchia, 2021). Moreover, the pursuit of net land take objectives as an environmental goal may undermine social justice, both by affecting housing affordability in densified areas and increasing deprivation in peripheral areas (Jehling et al., 2018). Policy outcome conflicts therefore often go together with strategic choices steering the allocation of densification.

3. Study design

This paper reviews and analyzes the land policy literature concerned with densification with a view to constructing densification-type-specific land policy conflict profiles. Figure 1 describes the four chronological steps of the research process. Steps 1–2 contribute to the construction of a typology of densification types relevant to land policy, and steps 3–4 develop the conflict profiles for different densification types.

The research is based on a topic-centric, critical review of the academic literature (Webster and Watson, 2002) focusing on land policy conflicts in densification (Appendix 1), in other words, dealing with densification while addressing a clear land policy challenge/issue(s). The literature review builds on a hermeneutic approach that emphasizes developing understanding especially through reading, continuing interpretation, questioning, critical engagement, argument development and writing (Boell and Cecez-Kecmanovic, 2014). According to

Boell and Cecez-Kecmanovic (2014), the hermeneutic approach consists of two intertwined circles – the analysis and interpretation circle and the searching and acquisition circle. The searching and acquisition of relevant literature is supported by parallel reading, classification, interpretation, critical assessment, argument development and research problem/questions (re)formulation. This, called as the analysis and interpretation circle, supports further improvement of literature searches and redefinition of search strategies by allowing a better understanding of what is looked for and what is not. In this research, the sources for literature search included databases and reference and citation tracking.

There is an extensive literature on densification that addresses other fields as well, such as planning, social sciences, and economics, but we believe our selection is justified in view of the hermeneutic approach forming an understanding of a particular problem (Boell and Cecez-Kecmanovic, 2014), and the focus of our study. One of the papers included in our sample (reference no. 41 in the Appendix) does not have a clear land policy orientation, but it provides an example of the characteristics of densification and was considered a critical reference for developing our typology of densification types. The densification-type-specific land policy conflict profiles build on evidence from 41 journal articles, book chapters and scientific reports.

3.1. Steps 1–2: constructing a typology of densification types

In the first step of constructing the typology, we identify the features of densification projects with relevance to land policy. These features play an essential role in the implementation of strategic densification objectives through land use and ownership, the main actors involved, and the end outcome. The identified features are 1) location, 2) prior land use, 3) scale, 4) the role of strategic planning, 5) formality, 6) initiation, 7) main drivers, 8) type of new buildings, 9) size and ownership of target area, and 10) main strategic actors. Column 2 in Appendix 1 shows the occurrence of the features in the respective papers.

In the second step, a typology of densification types is constructed based on the interdependence, coherence, and alignment of a type of particular feature in a densification project (i.e., similarity of attributes of a certain feature) and the comparability of these features across different projects. The densification types describe the holistic and ideal configuration of each type, as typologies usually do (Niknazar and Bourgault, 2017). As a result, four general densification types are distinguished. It should be noted that the typology describes general densification types. The typology is not necessarily exhaustive as the types and their features are also affected by the legal and political context. The validity of the research is further contemplated in the discussion part of the paper.

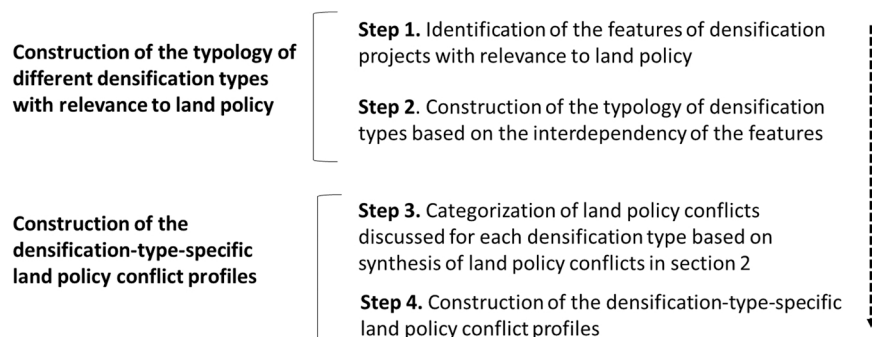


Fig. 1. Four steps in constructing land policy conflict profiles for different densification types.

3.2. Steps 3–4: constructing the densification-type-specific land policy conflict profiles

The third step involves categorizing land policy conflicts in each densification type. To that end we identify the densification types discussed in the reviewed papers (Appendix 1, column 3) and examine the associated land policy conflicts (Appendix 1, column 4) based on the synthesis compiled in the first part of this paper. In the fourth and final step, based on the literature review (Appendix 1) and the literature on land policy conflicts, we construct and describe in detail unique land policy conflict profiles for the four general densification types.

4. Constructing land policy conflict profiles for different densification types

4.1. Typology of densification types

In the first step of constructing the typology, we identified from the literature the following features describing differences in the dimensions of densification projects with relevance to land policy: 1) location, 2) prior land use, 3) scale, 4) size and ownership of target area, 5) role of strategic planning, 6) main drivers, 7) initiation, 8) formality, 9) type of new buildings, and 10) main strategic actors. Table 2 summarizes these characteristics and their most typical attributes (in no special order). In addition to these attributes, some other, less prevailing attributes may exist, but their credible classification is problematic due to differences in terminology and preciseness in the underlying papers. In the second step, based on the interdependence and alignment of the identified features and their attributes and their comparability across the projects, we distinguished four general densification types: 1) policy-driven large-scale brownfield development, 2) policy-driven large-scale densification of strategic areas, 3) owner-driven medium-scale densification of individual high-rise sites, and 4) owner-driven incremental-scale densification of low-rise sites. Importantly, the types represent generalized forms of densification. The borders between the types can be blurred, and the types may have special features and emphases due to institutional differences between jurisdictions. The typology of different densification types is presented below and in Table 3.

4.1.1. Type 1: policy-driven large-scale brownfield development

Large-scale policy-driven brownfield development typically involves a change in use of existing, industrial or other areas, such as former harbors, railroad corridors, and large company premises, with conversions typically made for residential purposes in central areas (e.g., Faris, 2001; Newton, 2010). The new buildings are mainly high-rise, and there is strong intervention in the urban structure. City center revitalization through brownfield development represents a policy-driven development that often aims to meet municipal strategic objectives

Table 2
Characteristics of densification types, and their typical attributes.

Characteristics of densification types	Typical attributes
1. Location	Transport nodes and corridors, growth corridors, city centers, suburban neighborhoods, city fringes
2. Prior land use	Residential, non-residential, industrial, commercial
3. Scale	Large-scale, medium-scale, incremental
4. Role of strategic planning	Strategic planning, tactical (ad hoc) development
5. Formality	Formal, informal
6. Initiation	Public-driven, private (owner)-driven
7. Main drivers	Policy drivers (strategic objectives, such as housing supply, social or growth objectives), economic drivers
8. Type of new buildings	Tower, high-rise, low-rise
9. Size and ownership of target area	From single sites to multiple sites under private and/or public ownership
10. Main strategic actors	Landowners, municipality, municipal citizens, developers

beyond land use and housing. The objectives can overlap across several policy spheres, such as economic, social, and environmental policies (e.g., Adams et al., 2002; Lange and McNeil, 2004). The size of the target area is large, covering a single landowner or many landowners (e.g., Adams et al., 2001). Public authorities play a key role in initiating and supporting brownfield development, especially when there is a need for environmental remediation (e.g., Lange and McNeil, 2004), but implementation can also make use of joint ventures, for instance (Tasan-Kok et al., 2019). Services and infrastructure must be adapted to accommodate higher population densities. Despite potential remediation costs, brownfield land is attractive for developers as it is generally well-located in central areas and inexpensive (Newton, 2010; Gallagher et al., 2019). Large-scale densification is undertaken by major property developers and volume house builders who work with planners within formal planning frameworks (Touati-Morel, 2015; Bibby et al., 2021); in certain jurisdictions it may take place through public land development (Tasan-Kok et al., 2019). The main strategic actors in this case are the municipality, landowners, and developers. For the municipality, the main driver is the implementation of strategic policy objectives. For the latter two, the main drivers are of economic nature.

4.1.2. Type 2: policy-driven large-scale densification of strategic areas

Policy-driven large-scale densification of strategic areas is part of strategic land use planning aimed at meeting general densification objectives and housing supply targets. The main difference between types 1 and 2 stems from prior land use: in type 2 it is mainly residential but can also include commercial and office premises. The strategic areas are often high-rise and/or low-rise suburban areas in growth corridors, transport nodes, activity centers, city centers or such (e.g., Gallagher et al., 2019; Limb et al., 2020; Pinnegar et al., 2020). Examples of implementation include redevelopment, mixed-use development, large-scale renewal, and transit-oriented development. The densification of strategic areas often involves wider objectives regarding growth, revitalization of declining areas or, for example, environmental sustainability (e.g., Charmes and Keil, 2015; Filion et al., 2020; Pinnegar et al., 2020). Policy-driven large-scale densification in strategic areas is typically initiated by public authorities, who must also provide new infrastructure and services to accommodate the increasing number of inhabitants in the area. However, the private sector and market forces also have an essential role in implementing densification (e.g., Tasan-Kok et al., 2019; Debrunner et al., 2020; Filion et al., 2020; Limb et al., 2020; Pinnegar et al., 2020; Thiel and Mach, 2020; Biggar, 2021), and joint ventures or private-led development can also be used depending on the legal and political context. The type of new buildings is either low-rise, high-rise (even towers), or mixed, depending on the features of the existing urban form and land use plans. Typically, however, the level of change in the existing urban morphology is high. The main strategic actors are the municipality, landowners, developers, and residents. For the municipality, implementation is policy-driven. The main drivers for landowners and developers are economic.

4.1.3. Type 3: Owner-driven medium-scale densification of individual high-rise sites

Owner-driven densification of individual high-rise residential sites refers to at least four forms of densification: 1) renewal (demolishing and rebuilding with higher densities) (e.g., Christudason, 2009, 2010; Easthope et al., 2013; Easthope and Randolph, 2018), 2) infill development through the construction of new residential building(s) on already developed sites (e.g., Puustinen and Viitanen, 2015), 3) roof stacking (e.g., Amer et al., 2017), and 4) converting attics for residential purposes (e.g., Amer et al., 2017). The sites in type 3 are often under multiple ownership. Densification can also occur on sites under single ownership, such as those owned by real estate investors. Compared to the previous types, this type is distinctively owner-driven development but preconditioned on planning regulation and sometimes policy measures, such as financial incentives and process-oriented assistance and

Table 3

Typology of different densification types based on their distinctive features; the last row provides examples of implementation in each type.

	Policy-driven large-scale brownfield development	Policy-driven large-scale densification of strategic areas	Owner-driven medium-scale densification of individual high-rise sites	Owner-driven incremental-scale densification of low-rise sites
Location	Depending on the location of the brownfield (e.g., inner city, former harbors etc.)	Strategically important development areas, such as transport nodes	Suburban or inner-city neighborhoods	Suburban neighborhoods
Prior land use	Industrial	Mainly residential	Residential	Residential
Scale	Large-scale	Large-scale	Medium-scale	Incremental-scale
role of strategic planning	Strategic planning	Strategic planning	Tactical, ad hoc development	Tactical, ad hoc development
Formality	Formal	Formal	Formal	Formal or informal
Initiation	Public-initiated	Public-initiated	Owner-initiated	Owner-initiated
Main drivers	Municipal strategic objectives	Municipal strategic objectives/ general densification or housing supply objectives	Economic incentive for landowner/ apartment owners	Economic incentive for landowners/ homeowners
Type of new buildings	Mainly high-rise	High-rise and low-rise	Mainly high-rise	Mainly low-rise
Size and ownership of target area	Neighborhood-scale, multiple sites with varying ownership	Multiple sites with varying ownership	Single sites either under multiple or individual private ownership	Single, mostly privately-owned sites
Main actors	Landowners, municipality, developers	Landowners, municipality, municipal citizens, developers	Private land and apartment owners, municipality	Private homeowners, municipality
Examples of implementation	Change in use of industrial sites, harbors etc. to mainly residential purposes	Redevelopment, mixed-use development, large-scale renewal, transit-oriented development	Converting attics for residential purposes, adding floors to existing buildings, infill development, demolishing and rebuilding with higher densities (renewal)	Extensions of buildings, converting garages or attics for residential purposes, demolishing and rebuilding with higher densities, subdivision of plots for infill development purposes

information steering (e.g., Puustinen and Viitanen, 2015; Puustinen et al., 2017). The size of the target area is typically a single site, the scale of the development is smaller, and the development is less strategic and policy objective-oriented (despite being formal) than in type 2. In type 3, the new buildings are typically high-rise. The main strategic actors are the municipality, land and apartment owners (or housing associations), and developers. The main motivation for land and apartment owners is economic. For apartment owners especially, a key motivation for densification is often the financing of major repairs in the existing, mature building stock (Puustinen and Viitanen, 2015; Puustinen et al., 2017). For the municipality, the motivation is policy-driven and economic, as the development contributes to densification objectives and cutting expenses through lowered infrastructure costs, for example (Hamilton and Kellett, 2017; Puustinen et al., in press). The motivation for developers is economic.

4.1.4. Type 4: owner-driven incremental-scale densification of low-rise sites

Owner-driven incremental-scale densification refers to densification in low-rise areas. This kind of densification is often referred to as ‘soft’ densification. It is a bottom-up, individual-led process that allows people to adapt houses to their needs (Teller, 2021) and either reinvest in or capitalize on their property especially in suburban areas (e.g., Wiesel et al., 2013; Pinnegar et al., 2015; Touati-Morel, 2015). Type 4 densification is often about managing high levels of demand in already desirable places (Dunning et al., 2020). The size of the target area is often a single site, and each development is considered an individual process (e.g., Gallagher et al., 2020a). Homeowner-driven densification typically has only limited effect on the existing suburban morphology. Infill development as a result of lot subdivision might, however, cause more visible changes in the existing suburban form. The main strategic actors are the municipality, homeowners, and small-scale developers. The former has a policy driver, the latter two have economic drivers.

Although subject to planning regulation (Dembski et al., 2020) and possibly incentivized by public authorities (e.g., Touati-Morel, 2015), Idt and Pellegrino (2021: 3) point out that, rather than only the result of decisions made by public entities, this type of densification is often ‘primarily the outcome of decisions made by private landowners choosing, within a single district but independently of each other, to convert their land and to build more densely on it’. Thus, it is more opportunistic rather than

systematic in nature, occurring if plots are large and old enough for profitable redevelopment (Phan et al., 2008) and pursued regardless of other, potentially better redevelopment opportunities elsewhere (Landis et al., 2006). Although it accounts for a considerable share of the total amount of densification, type 4 densification often occurs below the radar of public authorities (Bibby et al., 2020), informally, and in some cases even illegally (Idt and Pellegrino, 2021). In some cases, the lack of a strategic planning framework has resulted in sporadic, ad hoc development without proper coherence with existing residential morphologies, infrastructure provision, character, and design (e.g., Newton, 2010; Dunning et al., 2020; Gallagher et al., 2020a; Bolleter et al., 2021; Idt and Pellegrino, 2021), as well as challenges in managing public spaces and environmental quality (Idt and Pellegrino, 2021).

4.2. Densification-type-specific land policy conflict profiles

Each densification type has a unique land policy conflict profile. To construct these profiles, we identified the land policy conflicts discussed in the literature within each densification type and categorized them into the land policy conflicts identified in the first part of this paper (Appendix 1, column 4). To do that we first identified the densification types mainly discussed in the reviewed papers (Appendix 1, column 3). The conflict profiles are summarized in Table 4 and described below.

4.2.1. Land policy conflict profile 1: policy-driven large-scale brownfield development

We find that four land policy conflicts in particular can be associated with policy-driven large-scale brownfield development: efficiency, effectiveness, distributive, and procedural justice conflicts. *Efficiency conflict* arises in larger public-driven projects, where the municipality’s financial involvement and therefore financial risks are also typically larger (e.g., Farris, 2001; Lange and McNeil, 2004; Valtonen et al., 2017; Valtonen et al., 2018; Tasan-Kok et al., 2019). In the case of brownfield development, these risks relate to environmental remediation and infrastructure provision, for instance. It should be noted, however, that not all land policy approaches involve a similar efficiency conflict regarding this type of densification: the financial risks can be reduced or shared with private parties through joint ventures, for example, or by shifting the development focus to smaller projects and phased

Table 4
Land policy conflict profiles of different densification types: a summary.

Conflict dimension/ Densification type	1 Policy-driven large-scale brownfield development	2 Policy-driven large-scale densification of strategic areas	3 Owner-driven medium-scale densification of high-rise sites	4 Owner-driven incremental-scale densification of low-rise sites
Effectiveness conflict	Asymmetric distribution of power, multiple ownership constraints	Fragmented ownership and other ownership constraints	Lack of strategic planning framework and municipal support, asymmetric distribution of power, and/or lay private collective ownership	Lack of strategic planning framework and municipal support, asymmetric distribution of power
Efficiency conflict	High initial financial involvement may be needed, costs of infrastructure provision, remediation	High initial financial involvement may be needed, costs of infrastructure provision		
Allocative justice conflict		Strategic choices steering the allocation of densification, distribution of negative externalities of densification among municipal citizens		
Distributive justice conflict	Distribution of costs and benefits between landowners and landowners and municipality, liability issues	Distribution of costs and benefits between landowners and landowners and municipality (and municipal citizens)	Distribution of costs and benefits between land/apartment owners and municipality	Distribution of costs and benefits between landowner and municipality
Procedural justice conflict	Transparency of contracting, case-by-case negotiations, public accounting	Transparency of contracting, case-by-case negotiations, public accounting	Transparency of contracting, case-by-case negotiations	Informal actions by landowners in implementing densification, lack of strategic planning framework
Policy outcome conflict		Between economic and social objectives, e.g., gentrification	Between economic and social objectives especially in the case of urban renewal	Social objectives may be undermined due to locational factors

development resulting in more fragmented urban regeneration practices (Tasan-Kok et al., 2019).

Effectiveness conflict arises due to an asymmetric distribution of power between the strategic actors, especially regarding private land ownership. Possible ownership constraints in brownfield development include divided ownership rights, unclear ownership, ownership assembly, and the owner's unwillingness to sell on terms acceptable to potential purchasers (Adams et al., 2002: 201). These constraints complicate, slow down, and affect the quantity of brownfield development (Adams et al., 2001, see also Gallagher et al., 2019). Resolving these constraints through public (or public-private) land assembly and development (requiring strategic engagement and financing), public-private partnerships or contracting is time and resource consuming (Adams et al., 2001) and involves high transaction costs (Samsura et al., 2010), further contributing to the *efficiency conflict*.

In brownfield development, *distributive justice conflict* concerns essentially the municipality and landowner(s). Ownership constraints, land costs related to the purification of contaminated land and liability issues may further complicate the distribution (e.g., Farris, 2001). Planning gains or land use fees are often negotiated in private law contracts. The public accountability of multiple contracts may be complicated due to challenges of transparency and the monitoring of private contracts (e.g., Gerber, 2016; Tasan-Kok et al., 2019), contributing to *procedural justice conflict*. In addition, it can be assumed that some *policy outcome conflicts* might relate to this conflict profile, although the literature search focusing on land policy conflicts in densification did not find clear evidence on this.

4.2.2. Land policy conflict profile 2: policy-driven large-scale densification of strategic areas

All six land policy conflicts can be associated with policy-driven large-scale densification in strategic areas. In this densification type, project target areas consist of multiple plots with varying ownership, laying the ground for multiple land policy conflicts. Densification is implemented, for example, via public-private partnerships, land readjustment, or other types of coordinated development with multiple stakeholders. *Efficiency conflict* derives from the potentially high financial involvement and risks for municipalities in initiating large-scale densification. As in conflict profile 1, the level of financial involvement can vary depending on the municipality's chosen implementation

strategy. *Effectiveness conflict* arises from fragmented land ownership, potential ownership constraints, and difficulties related to land assembly (e.g., Gallagher et al., 2019). Furthermore, *distributive justice conflict* derives from challenges related to the distribution of the costs and benefits of densification between the municipality and landowners, and between multiple landowners. Another distributive justice challenge stems from negotiable value capture in the form of 'social return' through the provision of, for example, public amenities in some jurisdictions, and from how the return is decided upon and divided between local and municipal levels (Biggar and Siemiatycki, 2020; Biggar, 2021). *Procedural justice conflict* arises from issues of transparency and public accountability in the densification project (e.g., Gerber, 2016; Tasan-Kok et al., 2019; Biggar, 2021).

Even though large densification projects in existing residential areas have potential positive externalities locally and contribute to strategic housing supply objectives, local residents and other stakeholders may be opposed due to the negative externalities on-site (e.g., Cinyabuguma and McConnell, 2013; Pinnegar et al., 2020), contributing to *allocative justice conflict*. Finally, increased rents and apartment values may push people with lower income out of densification areas, contributing to gentrification and challenges in social equity (e.g., Debrunner and Hartmann, 2020; Filion et al., 2020; Limb et al., 2020; Pinnegar, 2020; Thiel and Mach, 2020), creating a *policy outcome conflict*. In many jurisdictions, this is shown especially in the context of type 2.

4.2.3. Land policy conflict profile 3: owner-driven medium-scale densification of individual high-rise sites

Four land policy conflicts can be linked to owner-driven medium-scale densification of individual high-rise sites: effectiveness, distributive, procedural, and policy outcome conflicts. An asymmetric distribution of power between the public authorities and private landowners (Gerber et al., 2018) contributes to *effectiveness conflict*. The municipality depends on landowner activity and initiation in densification, which decreases the effectiveness of implementation in contrast to densification through public interventions and interventions in property rights. This position is further complicated by the governance and operational challenges involved in collective, lay ownership of multi-owned housing schemes, which requires collective decision-making (e.g., Easthope et al., 2013; Puustinen and Viitanen, 2015; Easthope and Randolph, 2018). In addition, *effectiveness conflict*

relates to the potential lack of a strategic planning framework as well as the municipality's need to deal with the unwanted effects of ad hoc development. At the same time, private landowners, who in this case are often apartment owners, need support, advice, and facilitation on the part of the municipality to implement densification. Without a strategic planning framework, this may be challenging both resource and method wise (e.g., Puustinen and Viitanen, 2015).

Distributive justice conflict arises from the distribution of costs and benefits between the apartment owners/landowner(s) and the municipality. In type 3, the financial involvement of the municipality and the associated risks are typically low. Financial incentives may serve as a trade-off for higher densities for apartment owners. However, it is not easy to achieve the common interest to densify built-up multi-owned plots because there are several costs that decrease the profitability of densification for landowners (Puustinen et al., 2017). The question of cost recovery in particular is a political one, relating to who has the right to benefit from the increase in land value in cases where there is political pressure for densification in established urban areas (Puustinen et al., 2017). These costs depend on municipal policies, for instance on the share of recovery/value capture and parking regulations. *Procedural justice conflict* arises from the possible lack of transparency in contracting, monitoring, and individual negotiations (e.g., Gerber, 2016; Tasan-Kok et al., 2019).

Potential *policy outcome conflict* derives from the social implications of the renewal of multi-owned sites: on the one hand, gentrification in areas where new apartments are sold at a high premium (Troy et al., 2015; Easthope and Randolph, 2018; Debrunner et al., 2020), and on the other hand, the lack of renewal in areas where renewal is not economically feasible, contributing to further social challenges in these areas (Troy et al., 2015; Easthope and Randolph, 2018). In addition, market-driven renewal of multi-owned sites has in some cases curtailed the availability of housing options and services for families due to an overemphasis on the production of small-sized apartments (Easthope and Randolph, 2018).

4.2.4. Land policy conflict profile 4: owner-driven incremental-scale densification of low-rise sites

Four land policy conflicts can be associated with owner-driven incremental-scale densification of low-rise sites: effectiveness, distributive justice, policy outcome, and procedural justice conflicts. As in type 3, the dependence on landowner activity and initiation decreases the effectiveness of densification, contributing to *effectiveness conflict*. The effectiveness conflict is further amplified by the lack of a strategic planning framework. The lack of top-level coordination and a systematic approach may lessen the effectiveness of densification as potentially better redevelopment opportunities elsewhere are ignored (Landis et al., 2006), the quality and quantity of densification are reduced, and unwanted effects of incremental, ad hoc development are created (e.g., Newton, 2010; Dunnning et al., 2020; Gallagher et al., 2020a; Bolleter, 2021; Idt and Pellegrino, 2021). The question of how the costs and benefits should be shared between the landowner and the municipality has similar repercussions to type 3 in strategically important areas, contributing to *distributive justice conflict*.

At least in certain jurisdictions, densification type 4 has disproportionately large effects on neighborhoods that are already densely developed and that have a high number of lower income households with access to relatively little residential space, and therefore contributes to greater inequality in the distribution of residential space (Bibby et al., 2021) and thus to *policy outcome conflict*. The informality (or even illegality) of the development can compromise social sustainability objectives (Idt and Pellegrino, 2021). Informal actions by landowners may also be perceived as unfair by other residents or stakeholders, and the lack of a strategic planning framework (and the possible lack of municipal advice and facilitation for homeowners) can reduce the transparency and equality of the process, contributing to *procedural justice conflict*.

5. Discussion

This study has shown that it is possible to identify distinct densification types with unique land policy conflict profiles. Essentially, the unique conflict profiles of different densification types indicate that municipalities need to tailor their land policy strategies according to different densification types. Land policy strategy refers to setting a land policy objective and selecting the instruments with which that objective is pursued (Meijer and Jonkman, 2020). Instead of approaching densification as an independent measurable element that will deliver a series of benefits, as it is often represented (Boyko and Cooper, 2011; Holman et al., 2015), the concept needs to be critically scrutinized from different perspectives, even within land policy. What kind of densification do we want, where and why? Other issues that need to be addressed are the implications for strategic actors of land policy promoting different types of densification in terms of allocative, distributive, and procedural justice, as well as the trade-off strategies needed in policy-making. Another key aspect is ensuring an equal distribution of power in the densification process in different types. In addition, the municipality needs to consider ways to enhance the effectiveness and efficiency of densification policies in a legitimate and acceptable way. In many jurisdictions, an important question relates to addressing more informal, owner-driven infill development in a sustainable way. The conflicts of interest between strategic actors lie at the very core of these issues.

The above-mentioned issues arise from the land policy conflicts in densification presented in the first part of this paper. Many of the questions and their potential solutions manifest differently in different densification types, as demonstrated by the specific conflict profiles. For example, this is seen in the effectiveness conflict occurring in all identified densification types. In types 1 (policy-driven brownfield development) and 2 (policy-driven large-scale densification of strategic areas), ownership constraints hamper the effectiveness of large-scale development, and some means of coordination, co-operation, or coercion are needed to achieve the densification objectives. This also creates a potential efficiency conflict, depending on the municipal land policy strategy. Instead, the possible lack of a strategic planning framework and systematic municipal approach creates a different dimension under the effectiveness conflict – and the required land policy solutions – in type 3 (owner-driven medium-scale densification of individual high-rise sites) and especially in type 4 (owner-driven incremental-scale densification of low-rise sites). In type 4, land policy must consider how to address the unwanted effects or consequences of sporadic and ad hoc, sometimes even informal development and contemplate means for monitoring, controlling, and coordinating the development in a more systematic way (e.g., Newton et al., 2020; Bibby et al., 2021). In type 3, the role of apartment owners and housing associations is essential in addressing the effectiveness conflict, through information steering and process-oriented assistance, for example. Similar responses to the same conflict do not work in different densification types.

The typology presented in this paper complements the extant densification and compact city-related typologies, such as e.g., that by Felkner et al. (2019) on the energy performance of different urban growth and densification scenarios, by Jim et al. (2018) on the challenges and solutions for urban forestry in compact and densifying cities and by Grêt-Regamey et al. (2020) on the impact of urban densification on urban ecosystems. These prior typologies use elements such as building height and type, building density, initial land status, and amount of green as basis for their categorization. Our typology is more policy-focused, and hence considers many additional elements fundamental to land policy conflicts, such as landownership conditions, the role of strategic land use planning and the initiative party of densification. Thus, the four-category typology presented in this paper complements the existing densification typologies by acknowledging the land policy features as categorization elements.

Several issues need to be considered in assessing the validity of the densification types and associated conflict profiles. The profiles were

constructed based on the literature addressing several legal and political contexts. In the deeper assessment of the conflict profiles, each legal and political context must be considered individually. Statutory and discretionary systems differ especially in terms of the roles of public and private actors in development, also affecting the predominance or scarcity of certain land policy conflicts within the same densification type in different jurisdictions. However, the core of the conflict (as a conflict of interests) to be solved remains the same despite the 'rules of the game' affecting its nature, actualization, and occurrence. Moreover, it should be noted that because the densification-type-specific land policy conflict profiles were constructed based on the academic literature, the validity of the densification types and conflict profiles needs to be tested empirically, which will potentially allow for a more nuanced and jurisdiction-specific outlook on the conflict profiles.

We also note that procedural justice conflict is different from the other conflicts in that it focuses on the process of densification, and the assessment of procedural justice in itself comprises the land policy instrument or its elements (e.g., contracting, negotiations). In that sense, one can question whether it is a land policy conflict in the first place (something that land policy needs to address or solve in promoting densification objectives). However, the process is crucial in terms of the power distribution between actors, transparency, and public accountability, for example. It is about power relations and about the roles and rights of different actors in the process. We decided to include it in our analysis due to its relevance to the legitimacy and acceptability of densification policies.

6. Conclusions

This paper examined the land policy literature focusing on densification with a view to constructing land policy conflict profiles specific to different types of densification. To that end we constructed a typology of densification types and categorized associated land policy conflict dimensions in each type. We identified four densification types with unique land policy conflict profiles: 1) policy-driven large-scale brownfield development, 2) policy-driven large-scale densification of strategic areas, 3) owner-driven medium-scale densification of individual high-rise sites, and 4) owner-driven incremental-scale densification of low-rise sites. The conflict profiles address a variety of conflicts of interest between strategic actors and issues reflecting and challenging the legitimacy of land policy. The dimensions of land policy conflicts include the efficiency and effectiveness of the practiced policy, allocative justice, distributive and procedural justice, and contradicting policy outcomes.

The paper contributes to the literature on land policy in the context of densification. The inherent heterogeneity of densification calls for different approaches and instruments to address different land policy conflicts. Hence the main output of this study – the four land policy conflict profiles – contribute to a more nuanced understanding of the complexities of land policy in promoting and implementing densification. The profiles allow for the recognition of gaps, weaknesses, contradictions, and/or political indecisiveness in densification strategies from the perspective of land policy. Densification should not be approached as a single entity, especially as a political objective and when making strategic choices on land policy strategies to achieve policy objectives. As a practical contribution, the conflict profiles of different densification types can be used by municipal land use policy experts in outlining their strategies for densification.

The conflict profiles of densification provide many avenues for further research and empirical analysis. Potential topics include jurisdiction-specific empirical analysis of conflict profiles, the effectiveness and/or coverage of land policy instruments in solving conflicts in each densification type, and more in-depth analysis of the legitimacy of land policy promoting different types of densification from the perspective of different strategic actors.

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Conflict of interest

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Data availability

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Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at [doi:10.1016/j.landusepol.2022.106405](https://doi.org/10.1016/j.landusepol.2022.106405).

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