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EDITORIAL

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Suburban Development and City Extensions

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Abstract

This thematic issue focuses on newly planned and currently transforming districts at the outskirts of major metropolitan areas in Europe. After reurbanisation and inner development dominated urban research debates as well as planning practice from the turn of the century onwards, in the wake of continuing influx into large cities and a subsequent shortage of affordable housing, suburbanisation is coming back into focus. The contributions in this thematic issue are clustered within three key thematic areas: (a) sustainability and the planning of urban expansion, (b) planning imaginaries and the realities of suburban living, and (c) governance, conflict, and negotiation. The contributing authors have analysed case studies in Spain, Ireland, Poland, Hungary, and Germany. While each case is different and analysed through a variety of theoretical and methodological approaches, all show that suburbanisation is a timely and highly relevant topic that serves as a powerful lens for making current planning ideals and guidelines, contradictions and challenges, as well as societal power relations visible.

Keywords

city extension; governance; housing pressure; planning imaginaries; social infrastructure; suburban living; suburbanisation; sustainability; urban density; urban peripheries

1. Urban Peripheries Back in Focus

After decades in which "reurbanisation" occupied a prominent place in urban research and planning debates, urban peripheries have returned to the centre of attention. This is reflected both by the heterogeneity of developments in different parts of the world and by a growing awareness of the complexity of urbanisation phenomena. Whilst an initial schematic classification of the future challenges of urban development in a

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global context—set out around the turn of the millennium in the preparatory report for the Urban 21 World Conference on the Future of Cities in Berlin in 2000—assumed that cities could be broadly categorised into three groups ("developed and ageing," "dynamically growing," and "excessively growing"), the international debate on urban development paradigms has since proliferated.

The report succeeded in directing attention towards the clearly discernible—though often oversimplified—challenges posed by uncontrolled informal migration on the outskirts of the megacities of the Global South, and in identifying this as one of the key issues in urban development in the 21st century, with all the associated complex issues of governability, sustainable development, political dominance, alternative development paths, and much more. Furthermore, the classification at that time foreshadowed an in-depth examination of stagnating or even shrinking cities often undergoing comprehensive transformation in old industrialised regions across various continents. This gained momentum in many places, particularly in the 2000s, and not only transcended the limited scope of debate in the North of England or the Rust Belt in the USA, but has become one of the key paradigms of urban development worldwide.

Nevertheless, even at that time, the oversimplification and the associated over-emphasis on a model of "good governance" were evident limitations. Whilst this certainly directed attention towards successful model cities and the broader societal prerequisites for sustainable and future-proof urban development, it was nevertheless hardly capable of doing justice to the scale and diversity of the challenges. Since then, the global perspective has broadened enormously in the first decades of the new millennium. Concepts such as "planetary urbanisation" and, with regard to urban peripheries, comprehensive analytical efforts such as the in-depth study of manifestations of the "suburban planet" have made a significant contribution to this.

Alongside the aforementioned temporary shift in academic discourse towards "re-urbanisation" and infill development—particularly observable in Western industrialised countries—suburbanisation processes continued, even as urban expansion lost considerable momentum. At the same time, the foundations were laid for a more systematic understanding of urban peripheries and the developments taking place there. However, many of the insights generated in this context remained strongly influenced by geography and sociology, whilst the disciplines of urban design and planning appeared to show only limited interest.

To a certain extent, this can be attributed to the planning context in which the aforementioned developments took place: Reflections, guiding principles, and policy concepts aimed at exploring more sustainable spatial development centred on approaches and sets of strategies such as the energy optimisation of the building sector, the regeneration of existing neighbourhoods—and in particular their public spaces—steps towards a "mobility transition" and the scope for space-saving urban and infill development. However, these were frequently discussed specifically in inner-city settings or entirely independently of specific site conditions in variously characterised parts of metropolitan areas. To illustrate this point, two prominent examples among many are worth mentioning: firstly, the focus of the normative urban development debate on the "15-minute city"—a concept applicable across different urban contexts, but frequently discussed through examples of dense urban neighbourhoods—and secondly, the emphasis placed on ambitious schemes to curb motorised private transport in city centres from Paris to Barcelona.

2. Renewed Urban Expansion as a Planning Challenge

Against the backdrop of these trends, urban expansion has gained new significance in planning practice in many places. This can be seen, perhaps indirectly, or even coincidentally—in conjunction with a general political "shift to the right" and the associated increased attention to the concerns of residents of urban peripheries or rural areas. In any case, it may also be regarded as a paradoxical consequence of the "success story" of planning's focus on urban infill development, with its increasing conflicts arising from redensification measures and the exploitation of easily realised "potential."

This raises fundamental questions: In the face of mounting pressure on housing markets, particularly in metropolitan areas, to what extent are planning research and practice prepared to deal with a renewed surge in suburbanisation? Do they pursue normative sustainability goals or contribute to their implementation? This is where the current thematic issue comes in. It addresses issues that have been inadequately researched, ranging from the needs, lifestyles, and socialisation of today's suburban residents, to the ambitions, strategies, and courses of action of the stakeholders involved in planning new neighbourhoods on the outskirts, and processes involved in their realisation.

An international perspective seemed particularly fruitful in this regard, even though we, three editors, have, for the past three years, been part of a larger, DFG-funded research group that examines these developments primarily in German metropolitan areas, drawing on perspectives from landscape planning, urban planning and the social sciences. This research context also inspired and shaped the composition of this thematic issue. The call itself was deliberately international and also attracted proposals from contexts beyond Europe. The contributions eventually assembled in this issue, however, concentrate empirically on European cases. They range from Germany and Hungary to Ireland, Poland, and Spain, bringing different planning traditions, institutional settings, and trajectories of suburban development together.

3. Three Key Thematic Areas of Contemporary Suburban Development

Essentially, this has resulted in three broadly defined clusters of contributions: the first, which addresses planning principles and planning evaluation, with a focus on sustainability; the second, which, against the backdrop of the question of sensible approaches to contemporary urban expansion planning, examines the tension between planners and the imagined needs of (future) residents; and the third, which addresses the conflicts, negotiations and governance arrangements that arise during planning and implementation.

3.1. Sustainability and the Planning of Urban Expansion

The contributions in the first cluster show how discourses on, as well as planning and development of new suburban developments, are much more complex than they were in the 1990s or early 2000s. Planners nowadays justify the need to expand differently and more elaborately, aiming to navigate the inevitable contradictions and dilemmas between urban expansion and (ecological) sustainability concerns. These contradictions become especially obvious in the analysis of political discourses of urban expansion on hitherto unsealed green space. Using Munich and Hamburg as case studies, Bochinski et al. (2026) carve out three distinct discourses that frame the existing options differently. The dominant discourse is one that seemingly reconciles the need for new housing with the preservation of green spaces, thereby obscuring

some of the underlying conflicts and frictions. Swiacki et al.'s (2026) contribution compares suburbanisation patterns in five major German cities (Hamburg, Munich, Frankfurt, Berlin, Freiburg), again with a particular focus on the contradictions of development and sustainability concerns. They show a great variation, both between and within the cities, with regard to the containment of urban sprawl, the use and efficiency of materials, and the planned mobility infrastructure. Bornmann et al.'s (2026) article underpins the varied objectives and ambitions for new suburban developments. They analyse 69 city expansion projects in Germany that have been planned between 2008 and 2025. They conclude that sustainability concerns are more prominent nowadays, while at the same time a redefinition of sustainability is taking place in conjunction with the new developments. Hayes (2026) adds an Irish perspective to this cluster. His ex-post policy evaluation of the National Planning Framework of the Republic of Ireland shows that apparent policy conformance at the national level can conceal substantial variation at regional and settlement scales, and that the objectives of balanced regional growth and compact settlement development may come into tension with one another.

3.2. Planning Imaginaries and the Realities of Suburban Living

The second cluster brings together another set of contradictions, namely those between planning ideas, imagined (future) residents' needs and the realities of suburban living. Teske et al. (2026) look at children's wellbeing through the lens of suburban green space planning. While well-being is conceptualised as multidimensional and also includes aspects of personal growth and independence, agency, autonomy and identity, planners are most readily able to translate safety and security into planning practice, while agency, autonomy and identity are harder to operationalise. Bertram et al. (2026) contrast planning efforts to support the compatibility of paid and care work with residents' lived experiences in the newly built district of Munich-Freiham. Their findings suggest that planning is still mostly geared towards an imagined "standard" family and that the spatial interdependencies between caregiving, paid work and everyday mobility remain insufficiently addressed. Krüger's (2026) contribution similarly reveals uneven institutionalisation within social infrastructure planning: While schools and kindergartens are firmly embedded in legal frameworks and municipal planning routines, other youth facilities are less formalised, and provision for older people remains particularly fragmented and weakly integrated into spatial planning. The contributions by Keller and Jehnichen (2026) and Siedentop et al. (2026) shift the perspective from newly planned extensions to existing peripheral neighbourhoods. While the first explores frictions between planned goals and lived reality in a large housing estate from the 1990s in Berlin, the latter compares average rent levels in similar housing estates across Germany with the respective citywide average, highlighting the continuing role in the provision of comparatively affordable housing.

3.3. Governance, Conflict and Negotiation

The third cluster takes a closer look at conflicts and negotiations between different groups in transforming as well as newly emerging suburban developments. Große and Krüger (2026) as well as Wróbel and Lorens (2026) discuss suburbanisation as a governance issue. Große and Krüger focus on steering and decision-making before the start of the formal planning processes for new development projects in the Hamburg metropolitan region. They show how important parameters such as location, scale and density may already be pre-structured through informal negotiations before formal planning and public participation begin. Wróbel and Lorens look at three development projects in Gdańsk that make the interplay between

planning instruments, market dynamics and social acceptance visible. Their distinction between "wanted" and "unwanted" suburbanisation highlights how acceptance depends on the alignment—or misalignment—between municipal objectives, market interests and local expectations. Gorczyca et al. (2026) concentrate on redensification on urban green spaces in four major cities in Poland. They use environmental justice as an analytical framework to illustrate conflicts between the preservation of green areas and the construction of new housing in a post-socialist context. Their findings point in particular to procedural and recognitional inequalities, including weak recognition of community ecological knowledge and limitations of formal consultation processes. Crosas-Armengol et al. (2026) use two neighbourhoods in the Barcelona Metropolitan Area as case studies to make explicit the tensions that can arise between planning efforts to make established suburban areas more sustainable through upgrading, improved infrastructure and selective densification and residents' everyday priorities. Bagyura et al. (2026) describe and analyse transformation conflicts in the outskirts of Budapest. They show how, under particular institutional conditions, groups of higher socio-economic status use their political influence to redirect local development priorities to the detriment of long-term residents.

4. Varieties, Tensions, and Transformations in Contemporary Suburban Development

Across the cases from Germany, Hungary, Ireland, Poland and Spain, contemporary suburban development is less defined by a common spatial model than by a shared set of tensions that take different spatial and institutional forms.

Dense and compact development coexists with persistent low-density growth; large-scale new extensions stand alongside the incremental transformation of established suburban areas. In Germany, this heterogeneity is visible both between and within metropolitan regions (Swiacki et al., 2026), while the Irish case demonstrates that different spatial scales may follow quite different development logics even under a common national policy framework (Hayes, 2026). The Spanish, Polish, and Hungarian contributions further show how inherited settlement structures and planning systems continue to shape contemporary suburban development (Bagyura et al., 2026; Crosas-Armengol et al., 2026; Wróbel & Lorens, 2026). The cases also show that contemporary suburban development is not only about producing new urban extensions. Established peripheral areas are being upgraded, selectively densified or otherwise transformed (Crosas-Armengol et al., 2026), while older large housing estates are gaining renewed importance as comparatively affordable parts of metropolitan housing markets (Siedentop et al., 2026). Rather than returning to an earlier model of suburbia, current developments therefore combine and rework different urban and suburban principles under highly specific conditions.

Several contributions examine how sustainability is being rearticulated in the context of urban expansion. Sustainability has long served as a central normative reference in planning, yet what is changing is the way it is mobilised: Rather than functioning primarily as a rationale for limiting outward growth, it is increasingly used by planning and policy actors to frame, justify and shape new peripheral development itself (Bochinski et al., 2026; Bornmann et al., 2026). Compactness, mixed uses, sustainable mobility, green infrastructure and social inclusion become key elements through which city extensions are presented as compatible with broader sustainability goals (Bornmann et al., 2026). Yet this reframing does not dissolve conflicts over land consumption, housing provision or environmental protection. Instead, sustainability itself becomes part of the negotiation between competing objectives (Bochinski et al., 2026). In some cases, its meaning is

broadened or redefined in order to accommodate urban expansion; in others, different sustainability objectives come into conflict when translated across spatial scales or into particular development contexts (Bornmann et al., 2026; Hayes, 2026). The Barcelona cases make this dimension particularly visible: Densification is promoted as a means of improving the long-term sustainability and viability of low-density suburban areas, while residents may perceive this intervention precisely as a threat to the qualities they associate with suburban living (Crosas-Armengol et al., 2026).

The contributions on everyday life point to a different kind of selectivity. While the gap between planning intentions and residents' experiences cannot simply be attributed to planners being unaware of changing social needs, the cases in Germany show that some needs are more readily translated into planning instruments and practices than others. Requirements that can be linked to statutory responsibilities, established standards, benchmarks or clearly defined spatial provisions tend to become more visible and actionable. Needs that are relational, temporally changing or difficult to assign to a particular sector are more difficult to institutionalise. This can be seen in the planning of children's environments, where safety can be operationalised more readily than autonomy or appropriation (Teske et al., 2026); in the continued separation of care and paid work (Bertram et al., 2026); and in the very different institutional positions of schools, youth facilities and infrastructures for older people (Krüger, 2026). Planning therefore does not simply respond to social needs; it filters and translates them through existing institutional and professional structures.

Contemporary suburbanisation also reveals distinct patterns of governance and power. Important development parameters may already be negotiated before formal planning procedures begin, as the cases from the Hamburg metropolitan region show, where confidential negotiations among mayors, landowners and developers can pre-structure core project parameters and constrain later formal planning and public input (Große & Krüger, 2026). In these settings, private developers may also become important agenda-setting actors, particularly where smaller municipalities have limited land ownership, financial resources or planning capacity (Große & Krüger, 2026). In Gdańsk, the use of exceptional planning instruments such as the lex deweloper allows housing development despite provisions in binding local plans. It creates a dual planning regime and shifts the conditions under which municipal objectives, developer interests and local expectations are negotiated (Wróbel & Lorens, 2026). In the Budapest agglomeration, organised groups of higher-status newcomers can convert social, cultural and economic resources into political influence and redirect local development priorities, in some cases to the disadvantage of long-term residents (Bagyura et al., 2026). The Polish green-space cases show a contrasting pattern: Grassroots mobilisation can succeed in protecting contested sites, while activists may nevertheless remain outside durable governance arrangements and procedural and recognitional inequalities persist (Gorczyca et al., 2026). The Polish and Hungarian cases in particular show how institutional histories and fragmented governance arrangements shape who is able to influence suburban development, while the German cases reveal similar asymmetries within formally highly regulated planning systems. Governance therefore helps to produce, contest and stabilise particular forms of suburban development.

Returning to the questions raised at the beginning, the contributions show that planning research and practice are responding to renewed suburbanisation through context-specific strategies rather than a single model. Sustainability remains a central goal, but its meaning and implementation are negotiated alongside housing pressures, residents' everyday needs and institutional arrangements. Several questions remain open

for further research. Much of the existing debate, including several contributions to this issue, remains centred on metropolitan growth regions and large-scale city extensions. More comparative research is needed on suburbanisation in small and medium-sized cities, where development pressures, municipal resources, planning capacities and governance constellations may differ substantially from those of major metropolitan regions. At the same time, we still know comparatively little about who moves into, remains in, or leaves different types of suburban areas, and how spatial configurations are experienced in everyday life across different social groups and stages of life. This includes questions of health and well-being, stress and recovery, perceptions of density, access to open space, mobility, social infrastructure and belonging, as well as how these experiences change as neighbourhoods mature. The contributions in this issue already reveal gaps between planning intentions, built environments and lived practices (Bertram et al., 2026; Keller & Jehnichen, 2026; Teske et al., 2026), but these relationships require more longitudinal and comparative investigation across different settlement types and urbanisation contexts.

This shifts the focus from suburbia as a fixed settlement category to suburbanisation as a spatial, social and institutional process unfolding across territorial scales and over time. It also connects the study of newly produced urban extensions with the transformation of established peripheries and, importantly, with places beyond the large metropolitan regions that have so far dominated much of the debate.

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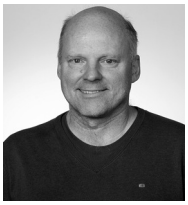
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ARTICLE

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The "Fine Art" of "Green" Land Sealing? Competing Discourses on Expansion-Oriented Suburban Planning

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Abstract

The growing populations of many of Europe's metropolises have intensified pressure on housing provision and renewed political support for large-scale urban expansions. This has sharpened conflicts between housing development and the preservation of green spaces, particularly in suburban landscapes. This article analyses how such conflicts are politically negotiated and rhetorically stabilised in Hamburg and Munich, two major German cities with highly strained housing provision. Drawing on poststructuralist discourse theory, the study examines political discourses on housing construction and green space policies, with particular attention to how tensions between them are reconciled. The analysis is based on policy documents, planning materials, media coverage, and semi-structured interviews. The findings identify three competing discourses that are articulated in largely similar ways in both cities: "preservation of all green spaces," "deregulation for a housing construction offensive," and "construction should continue, just not everywhere." While the first two discourses advance internally consistent but polarised positions and remain marginal, the third discourse has become hegemonic. It claims to integrate housing construction and green space preservation, yet does so by obscuring inherent contradictions through a set of recurring discursive strategies. The article argues that this hegemonic discourse enables a substantial political shift from prioritising inner-city development towards legitimising large suburban greenfield projects, while formally maintaining established sustainability goals. By exposing how growth-oriented rationalities are discursively stabilised, the study exposes the fragility of contemporary suburban greenfield development policies.

Keywords

discursive strategies; Germany; green space preservation; planning conflicts; suburban development; urban expansion

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1. Introduction

The tension between the growing demand for housing in many European cities and the limited space at central locations is once again drawing the attention of policymakers and planners alike to suburban areas, where swathes of farmland often lie directly beside motorways, commercial developments, nature reserves, and infrastructure facilities of all kinds. Their highly dynamic development prevents any easy categorisation as either "urban" or "rural," which has encouraged some authors to propose novel categories such as "landscape three" (Jackson, 1984), "Zwischenstadt" (literally "in between-city"; Sieverts, 2003), or "suburban cultural landscapes" (Schenk & Tillmann, 2018). This makes suburban landscapes not only of great interest to planners and developers but also a fascinating research topic.

Since 2017, there has been a significant increase in the size and number of urban expansion projects at the fringes of economically thriving cities in Germany. These projects are usually constructed on land previously used for agriculture (Bensch, 2020; Freudenau et al., 2021). Siedentop (2024) describes this as a "new wave of suburbanisation." Similar trends are evident in many other European countries such as the Netherlands, Poland, or the United Kingdom (Hesse & Siedentop, 2018; Schiavina et al., 2022), exacerbated in part by the Covid-19 pandemic, which boosted remote working (Gallent & Madeddu, 2021; Maginn & Anacker, 2022). Altrock (2022) speaks of a "new suburbanity," whereby the implication is intentionally *qualitative*: Advocates of current large-scale urban expansion projects explicitly wish to avoid the shortcomings of the satellite towns and *banlieues* of the past; instead, they promise innovative and allegedly more sustainable concepts (Biemann & Schulze Mönking, 2021; de Buhr, 2021).

While some authors have provided a descriptive overview of urban expansion plans in green spaces (e.g., Altrock, 2022; Hesse & Siedentop, 2018) and others have evaluated these developments in a generally positivist or even outright normative manner (e.g., Sieverts, 2003), our study reveals the semiotic processes through which suburban green spaces are socially constructed in the context of urban expansion planning. Hamburg and Munich are interesting cities in this regard due to the decades-long growth in their populations and their severely strained housing provision. As a state capital (Munich) or city-state (Hamburg), they aim for high standards in urban planning to ensure climate-friendly mobility, environmental quality, and social infrastructure. The suburban expansions currently being planned in both cities are among the largest in Germany, with over 5,000 new housing units each (City of Munich, 2023; de Buhr, 2021). Unsurprisingly, these projects have proved hugely controversial, exemplified by the many citizens' initiatives set up with the aim of stymying the developments in order to preserve green space.

This study will identify political discourses on green space and housing construction policies—especially in relation to large urban expansion projects—in Hamburg and Munich. As the goals of cutting housing shortages and preserving green spaces are both high on the political agenda, the particular focus is on how tensions between these political ambitions are "glossed over" (Molek-Kozakowska, 2024, p. 187). Referring to poststructuralist discourse theory (Laclau & Mouffe, 1985; Nonhoff, 2019), we understand discourses as contingent, relational, and thus potentially dynamic systems of meaning, in which social reality is constructed in specific ways. The findings rely on textual discourse analyses of published documents and semi-structured interviews, whereby we supplement discourse theory with rhetorical categories to elucidate how the respective discourses address contradictions.

In the following, we first give a brief overview of our analytical approach as well as previous studies which have explored urban development discourses in a similar way. After specifying our research questions, we proceed by introducing the cases as well as our empirical material and analytical methods, before presenting the results. We then discuss our findings and conclude with reflections on planning practice and potential avenues for further research.

2. Analysing Planning Conflicts From the Perspective of Discourse Theory

Poststructuralist discourse theorists such as Laclau and Mouffe (1985) and Nonhoff (2019) conceive discourses as contingent, supra-individual systems of meanings that relate linguistic as well as non-linguistic elements and via this "create" social realities. Poststructuralist thinking is post-foundational: It rejects the idea that meaning can be grounded in fixed relationships between signifier and signified. Instead, meaning is understood as resulting from an endless "flow of differences" (Laclau & Mouffe, 1985, p. 112), which is why meaning is always instable to a greater or lesser degree. Despite this fluidity, discourses do include privileged elements, called "nodal points," which temporarily anchor meaning by being articulated with many other elements.

For instance, the more conventional discourse on the "compact, green city" constructs "density" and "functional diversity" as the ideal of the "European city," while "suburban area" functions as a contrasting nodal point whose meaning is constructed through being articulated with "low density," "large infrastructure facilities," and "consumption of green space" (Hautamäki et al., 2024). In another discourse, the very same term of "suburban area" may be linked to "greenbelt," "scenic landscape," and "quality of life." This shows how fragile, context-dependent, and contested the meaning of any signifier in general and the relations between housing construction and green spaces in particular can be articulated. Those who produce and reproduce a specific discourse are referred to as a "discourse coalition" (Nonhoff, 2019, p. 77). Such a coalition may include policymakers, journalists, NGO representatives, researchers, and others—though its members do not necessarily know each other.

Discourses are constituted not only through positive relations between elements—what is called a "chain of equivalence"—but also through what is explicitly excluded or rejected by relations of contrariety. This excluded dimension is referred to as the "constitutive outside" (Staten, 1985, p. 16): It defines the discourse's identity by marking what it stands against. The discourse on the *Zwischenstadt* as a "new notion of cultural landscape" (Sieverts, 2003, p. 41) illustrates this dynamic. As a key proponent of this discourse, Sieverts (2003) articulates suburban spaces positively as, for example, "green spaces as man-made structures," a "new symbiosis of city and landscape," as well as a "conceptual unity of landscape planning, town planning and urban design" (pp. 40, 43, 115). The meaning of this rearticulation becomes clearer if we consider some relations of contrariety such as "consumption of landscape," "beloved traditional cultural landscapes," or "biodiversity offsetting" (Sieverts, 2003, pp. 9, 40, 41). Through this opposition, the plea is for suburban areas to be "new[ly] interpreted" (Sieverts, 2003, p. 69) as an independent spatial category, one that integrates economic, social, and landscape developments, rather than as a deficient transitional form. This highlights the fluidity in the meaning of suburban areas.

Analysing discourses has a practical application if we remember that discourses are inevitably linked to power. When a specific discourse is established and is taken up and reproduced by a broad range of actors, it has the

effect of normalising a certain worldview, including specific problematisations, normative criteria, and ways of doing things. This phenomenon is referred to as "hegemony" and often results in a discourse becoming "sedimented" (Howarth, 2010, p. 329) in the form of policies, practices, and institutions (Griggs & Howarth, 2013; Nonhoff, 2019). As this happens, the contingent origins of the discourse tend to be forgotten, which is why Laclau (1990, p. 60) describes hegemony as "a power whose traces have been erased." Thus viewed, any municipal planning concept is the manifestation of a discourse that has become more or less hegemonic.

For a discourse to become hegemonic, heterogeneous demands must be integrated around what are called "master signifiers," particularly important nodal points of a discourse. As a master signifier is linked to an ever-growing range of elements, it gradually becomes an empty signifier (Laclau, 1990; Nonhoff, 2019): a term so broad that it carries many different, even contradictory meanings. Leffers' (2015) analysis of urban intensification in Ottawa offers a concrete example: The term "sustainability" simultaneously serves ecological arguments, economic interests, and social demands—despite their partial contradictions. It is precisely this ambiguity that contributes to hegemonic success: Actors from different political positions are able to identify with and reproduce the same discourse: "No discourse and no hegemonic practice can exist without ruptures and internal contradictions, particularly because some contradictoriness can lead to greater success" (Nonhoff, 2019, p. 83). As more heterogeneous demands are integrated, "intradiscursive tensions" (Molek-Kozakowska, 2024, p. 183) increase. Yet so does consent, as former counter-discourses are absorbed into expanding equivalence chains. Griggs and Howarth's (2020) study of Nantes illustrates this dynamic: Even the construction of a new airport on suburban green space can be framed as "sustainable" when articulated in terms of inner-city redevelopment for residential areas and the ideal of the compact city.

To resolve such "intradiscursive tensions," there exist many "discursive strategies" (Nonhoff, 2019). For example, existing spatial concepts may be rearticulated with completely new demands, thereby silencing others (Griggs & Howarth, 2013). A telling example is the Swiss discourse on "compact cities," in which inner-city allotments are rearticulated as "land reserves" rather than in terms of social and ecological advantages as before. This redescription brings the concept in line with economic interests and makes relocation to the urban periphery appear logical—yet comes with an exclusionary effect as it ends previous place-based social practices (Tappert et al., 2018). Authors such as Finlayson (2025) call for discourse-theoretical analyses to be complemented with rhetorical approaches in order to capture diverse discursive strategies with greater precision. These discursive strategies ought to be viewed in relation to each other within a larger structure of meaning (discourse) to understand not only how they withstand inherent contradictions but also actively address them.

Building on these theoretical considerations, the present article addresses three research questions, all focused on discourses on green space and housing construction policies related to large urban expansion projects in Hamburg and Munich. Firstly: How are green spaces, housing construction policy, and suburban areas discursively constructed? Secondly: Who is (re-)producing these discourses, i.e., which discourse coalitions can be discerned? And thirdly: Which discursive contradictions can be found and how are these glossed over?

3. The Cases of Hamburg and Munich: Overview of Context and Analytical Methods

The populations, economies, and housing sectors of Germany's second and third largest cities, Hamburg and Munich, have seen several decades of growth. Both cities are enjoying economic growth above the national average, albeit in different sectors: Hamburg's boom is due to its role as Europe's third largest port along with thriving industries such as aerospace engineering and bioscience, while Munich's economy is rooted in the automobile sector as well as finance and high-tech. Since the 1990s, Hamburg has pursued growth-oriented urban development (Vogelpohl, 2017). This is reflected in the city's rising population, which is expected to increase by a further 80,000 (+4%) between 2022 and 2040, following an increase of 80,000 (+4%) between 2021 and 2025 (Statistisches Amt für Hamburg und Schleswig-Holstein, 2024). Of the housing stock in Hamburg, 28% is available as "affordable" subsidised housing for low-income households, who account for 36% of the population (City State of Hamburg, 2025). Based on this, the City State of Hamburg concluded in 2011 that there was a need for 10,000 additional homes per year (de Buhr, 2021). Munich's population has grown since the turn of the millennium, increasing by around 55,000 inhabitants (+3.8%) between 2015 and 2025. However, Munich already has the tightest housing provision in Germany (Bertram & Altrock, 2021). Based on this, in 2012 the City of Munich (2012) concluded that there would be a need for an additional 4,500 homes per year. Since then, the ratio of applications and allocations for subsidised housing has worsened, though. The municipal authorities estimate a major jump in the population of up to 220,000 (+14%) in the period 2023–2040 (City of Munich, 2025). Traditionally, both cities have stressed the importance of preserving green spaces in their urban planning: Munich's Englischer Garten is one of the world's largest inner-city parks, while Hamburg cultivates a self-image as "green metropolis" (Demaziere, 2020) and points to a long tradition of green space policies.

In recent years, however, there have been signs of shifting priorities in both cities. In 2020, the City of Hamburg revised its urban development concept to concentrate not only on "More city in the city" (urban densification) but also to consider "More city in new locations," i.e., large-scale residential development on suburban greenfield areas (City State of Hamburg, 2020). In total, five urban expansion projects are planned, creating homes for over 25,000 residents. At the same time, a new green space development strategy has been adopted, one that moves away from clearly delineated axes and belts towards a more flexible network of green spaces (City State of Hamburg, 2018). Similarly, the City of Munich has adopted new planning concepts for green areas and urban development that pursue inner-city development and urban expansion in equal measure (City of Munich, 2015, 2022). Seven urban expansion projects are planned on land currently used for agriculture, with the potential to provide homes for more than 32,000 citizens (City of Munich, 2021a). These political developments have led to public protests in both cities. Referendums have further politicised the protection of designated public green spaces, successfully pressuring both municipal administrations to make voluntary commitments in this regard.

The discourse analysis is based on textual material such as plans, policy documents, and newspaper articles, as well as press releases, videos, and position papers written by NGOs. Given the increased intensity of discourse production since 2017, the virtual corpus includes all published documents dealing with green space and housing construction policies—especially in relation to large urban expansion projects—from 2017 to 2024 (Hamburg: $N = 84$; Munich: $N = 83$). In a first step, 37 documents from the Hamburg corpus and 40 documents from the Munich corpus, all selected because of their political character, richness of content, cross-document references, and variance, were analysed in detail (Keller, 2016). A second step was to conduct six problem-oriented interviews (Döringer, 2021) per case with key actors from the municipal

administrations as well as local politicians and NGOs, aimed at exploring dense moments of discourse production and controversial interpretations (conducted between July 2024 and March 2025). The interviews also helped contextualise and condense the document analysis (Hughes et al., 2020). The material was coded using the MAXQDA analysis software in the following steps: Firstly, the material was empirically coded, using in-vivo codes, classifying the codes as belonging to the discursive inside or outside with regard to the topics of interest—planning of housing, green spaces, and suburban spaces (see Table 1). In a second step, relationships between the individual signifiers were examined for equivalence and contrariety in code-sets (Nonhoff, 2019). By means of typification, we identified different discourses. Subsequently, signifiers articulated with many others were identified as nodal points. Finally, the results for both cases were compared and synthesised.

4. Competing Discourses on Housing and Green Spaces in Hamburg and Munich

We identified three discourses in both Hamburg and Munich concerning the conflictual relationship between housing development and the preservation of green spaces, especially in relation to suburban areas, with significant similarities between the two cities. We named these three discourses "preservation of all green spaces," "deregulation for housing construction offensive," and "construction should continue, just not everywhere" (see Table 1 for an overview). The first two are rather radical in their orientation: In the discourse "preservation of all green spaces"—particularly suburban green spaces classified as valuable—housing is to be created solely through infill development, whereas the discourse "deregulation for housing construction offensive" calls for deregulating not only housing policy but also green space policy. In the latter discourse, suburban areas are downgraded to "mere farmland." The third discourse is more integrative, reflecting an attempt to reconcile conflicting demands. In describing the three discourses, we focus on the three themes of green space, housing, and suburban areas, on variations between the two cities, and finally on the coalitions that reproduce the respective discourse. All German quotes from the material in the following are translated by the authors. As the production and reproduction of a discourse are supra-individual phenomena without personal authorship, no references are provided for the discourse fragments quoted in this article.

4.1. "Preservation of All Green Spaces"

The central nodal point in this discourse is the safeguarding of green spaces in the city. They are depicted as living spaces for humans as well as for wildlife and plant populations. They are associated with a broad range of functions: supporting the microclimate, biodiversity, quality of life in the city, as well as climate-effective soils and CO_2 reservoirs. Crucially, however, it is claimed that these positive effects are not sufficiently taken into account by the municipal authorities. This perceived neglect forms a nodal point in the discourse's outside. The discourse also includes the idea of regulating the amount of green space to reflect the population size, i.e., increasing the extent of green space as the urban population grows. Green spaces are associated with a natural balance that is said to be maintained by reconnecting biotopes and reducing the intensity of use. Nature conservation law and cities' self-commitments to preservation of all green spaces are referred to as another rationale for safeguarding green spaces. Further, green spaces are set in a stark contrast to soil sealing, which forms a nodal point in the discourse's outside and is related to other, similarly negative elements such as concrete, asphalt, and climate change. The idea of design enhancement towards a greater multifunctionality of green spaces is also rejected as counterproductive and associated with overuse.

Table 1. Competing discourses on green space and housing construction policies—especially in relation to large urban expansion projects—in Hamburg and Munich.

	"Preservation of all green spaces"		"Deregulation for housing construction offensive"		"Construction should continue, just not everywhere"	
	Discursive inside	Discursive outside	Discursive inside	Discursive outside	Discursive inside	Discursive outside
Green spaces	"protecting biodiversity'' "quality of life in the city" "CO_2 reservoirs" "reconnecting biotopes"	"soil sealing" "climate change" "multifunctional green space" "overuse"		"preservation of all green spaces" "climate protection requirements"	"green infrastructure" "multifunctional green spaces for recreation and urban climate"	"preservation of all green spaces as restrictive and not holistic"
Housing	"affordable housing" "building for housing needs" "infill development" "sufficiency," "net zero of new soil sealing"	"greenfield development" "lost grey energy due to demolition" "profit-oriented real estate investors" "poor distribution of housing" "growth dogma"	"build, build, build" "important for economic development" "housing construction offensive" "deregulation of planning"	"high rents" "existing housing shortage" "exodus of the middle class" "enormously increased construction costs" "extreme bureaucracy"	"provision of housing" "creating building permits" "exhausting all legal remedies"	"capital accumulation in the real estate sector" "high land prices"
Suburban space	"valuable green spaces" "reconnect biotopes" "prospects for remaining agriculture"	housing in suburban areas: "outdated form of settlement development"	"settlement pressure" "growing metropolises" housing in suburban areas: "big leap"	"only cropland"	"the last large reserves of land" "improvement of desolate fringes" housing in suburban areas: "affordable," "sustainable," "in harmony with nature"	"current agricultural practices" "desolate fringes" housing in suburban areas: "potential for densification and infill development is exhausted"
Discourse coalitions	environmental and climate protection organisations smaller opposition parties in local parliaments actors of municipal environmental/climate agencies		actors from the real estate and construction sectors welfare associations		municipal administrations, including planning authorities members of majority parties in local parliaments state-owned or non-profit housing providers	

When it comes to development, the provision of affordable housing is generally advocated in this discourse as long as it is compatible with the preservation of green space. However, affordable housing is contrasted with greenfield development, which in turn is linked to soil sealing as well as to grey energy and climate change: "New construction is…never climate-friendly" and must "become the absolute exception" (Ulrich & Meyer-Wellmann, 2022, p. 7). The idea that housing is scarce is rejected. Instead, problems of affordability are attributed to the "poor distribution of existing housing". In Munich, small-scale housing projects are promoted and equated with densification—as long as designated green spaces are unaffected. Furthermore, a general rejection of new construction is articulated negatively. Instead, excessive zoning to create commercial areas is criticised. In Hamburg, the notion of sufficiency is a nodal point within this discourse's inside, equated not only with net zero of new soil sealing but also with social innovation and social change regarding structures and habits. The municipal administration's dogma of growth, which is allegedly not related to housing needs but to the wishes of profit-oriented real estate investors, is rejected as "based on forecasts that have not come true" (Klimabeirat Hamburg, 2021, p. 8).

In this discourse, suburban areas are described as valuable green spaces. Conversely, urban expansion is dismissed as an outdated form of settlement development. In Hamburg, the aim is to reconnect and maintain suburban biotopes, thereby equating suburban spaces with a net zero strategy. In Munich, the discourse is structured differently. The idea to preserve all green spaces is articulated positively alongside the current use of suburban areas. Existing garden cities and agricultural land used by agricultural businesses should be preserved. Rather than allowing these spaces to be built up with new constructions, farmers should be given the chance to maintain their livelihoods.

Overall, the discourse "preservation of all green spaces" is marginal in both cities; it is only (re)produced by environmental and climate protection organisations, smaller opposition parties in local parliaments, and actors of municipal environmental or climate departments. It was primarily (re)produced in press statements published by these organisations and parties, as well as in the local press and on local television. Hence, this discourse strongly opposes prevailing planning policies in Hamburg and Munich, which favour suburban expansion.

4.2. "Deregulation for Housing Construction Offensive"

As this discourse mainly centres on the slogan "build, build, build," there is hardly any discussion of green spaces. The element "preservation of all green spaces," which is articulated negatively, functions as a nodal point on the outside. The only action viewed as necessary for climate protection is the design and preservation of inner-urban green spaces.

When it comes to housing, a long list of elements are articulated as being equally problematic, including the ticking time bomb of high rents and existing housing shortages, potentially leading to an exodus of both companies and middle-class residents. Criticism is levelled at the enormously increased construction costs and higher interest rates, which are believed to discourage investors, companies, and housing cooperatives from investing in new housing. The main thrust of this discourse is on the construction of housing, which is articulated positively in regard to owner-occupied homes as well as to social housing. There is a relation of contrariety between social housing, on the one hand, and housing construction coming to a standstill along with hugely increased housing prices making it a "luxury good," on the other. Furthermore, new housing

construction is generally depicted as vital for the economic development of cities, yet also equated with the metaphor of a "tanker," which "takes a very long time to pick up speed" (Iken, 2023). This is part of an equivalential chain of elements including "housing construction offensive," "housing targets," "more realistic guidelines," and "subsidies for the construction sector provided by cities." Taking up the metaphor of the tanker, housing provision is contrasted with regulations imposed by local authorities, which can be regarded as another nodal point in this discourse's outside. In particular, climate protection requirements are criticised as extreme forms of bureaucracy; indeed, their usefulness is called into question on the basis that excessive summer heat is not yet a real problem and that climate protection requirements need to be streamlined.

Concerning complete urban agglomerations (i.e., including suburban areas), settlement pressure and growing metropolises are viewed positively as indicators of economic attractiveness. Support should be given to help metropolises grow. To this end, all available space should be utilised with no holds barred. Urban expansion is welcomed as a "big leap" and contrasted with restrictions and the current state of suburban areas, which are pejoratively described as mere "cropland." Any protest is dismissed as agitation by residents who have already settled comfortably in their affluent paradise, while the middle classes are facing the problem of high rents and may be forced to leave. Furthermore, municipal administrations are criticised for not daring to take the "big leap" of urban expansion due to their fear of protesting residents.

This discourse is articulated—homogeneously in both Hamburg and Munich—by actors from the real estate and construction sectors as well as from welfare associations. The latter advocate the concerns of those seeking housing more strongly than the former, who primarily address housing construction as an economic activity. It was primarily (re)produced in press statements by these organisations, as well as in local and national press. By focusing its criticism on the prevailing planning policies of the respective local governments, this discourse—like the previous one—remains marginal.

4.3. "Construction Should Continue, Just not Everywhere"

While the first two discourses are coherent and strongly biased towards either green space preservation or land consumption for new housing, this discourse is more conciliatory in tone, attempting to strike a balance between conflicting demands. Green space is equated with green infrastructure—a term which is said to make clear that green spaces are not a "dispensable luxury" (City of Munich, 2021a, p. 5). Green infrastructure clearly functions as a master signifier: It is articulated with many other elements such as recreation, urban climate, cold air supply, and water retention. For climate adaptation, which is seen as an essential task of urban development, green infrastructure should be mapped, measured, and qualified using various indicators. The claim that urban expansion leads to a major loss of green space is articulated as being untrue: Only carefully selected areas are said to be designated for construction. As a result, the demand to preserve *all* green spaces is positioned as a nodal point in this discourse's outside. It is articulated with attributes such as "restrictive" and "not holistic," thereby blurring the meaning of "green infrastructure." The central claim, therefore, is that "construction should continue, just not everywhere" (Heintze, 2021, p. 20).

The element "provision of housing for city dwellers" appears as another nodal point in this discourse. Estimates of population growth by the city authorities are frequently cited. Depoliticised as fact, these projections are linked to the demand for continued building and more building permits for "affordable housing," the latter being a nodal point in the discursive inside. The proponents of this discourse (mainly non-commercial actors)

articulate themselves as active in this regard, taking sufficient measures and providing a good example of housing promotion. Interestingly, private construction companies and investors are articulated in a relation of contrariety with public, welfare-oriented housing construction policy. Beyond these commonalities, some features are unique to each city. In Hamburg, for instance, the goal of building 10,000 new homes every year is frequently mentioned, which will require creating an alliance for housing between the city and the real estate industry. In contrast, the notion of lowering housing construction targets is rejected as being an irresponsible and negligent planning policy. In Munich, affordability through new construction is frequently articulated in a relation of equivalence with housing cooperatives, which are said to be in favour of new buildings yet opposed to exhausting legal remedies, high land prices, and close links to the market and capital accumulation; thus, they reject the discourse "deregulation for housing construction offensive" more directly.

As regards the relations between urban centres, suburban peripheries, and metropolitan development more broadly, the elements "infill development" and "re-densification" are articulated as elements of the discursive outside in both Munich and Hamburg. The respective chain of equivalence also includes "(inner-city) land potential as exhausted." By contrast, the discursive inside includes "growing city" as a nodal point, positively related to urban expansion in the form of housing construction on a larger scale, viewed as a necessity of urban planning, as well as the need to build housing in suburban areas, regarded as the last large reserves of land. These elements are also articulated as equivalents of "simultaneity," understood to mean the simultaneous realisation of housing that is affordable, high-quality, sustainable, and climate-neutral. In this case, planned large new residential quarters in suburban areas are said to be space-saving and in harmony with nature. However, suburban areas are also articulated as spaces for leisure and nature experiences, for example when designed as green corridors, and thus are compatible with green infrastructure. Yet the negative association with current agricultural uses and associated actors means that farmers would in any case be forced to rethink their agricultural practices. In Hamburg, urban expansion is additionally equated with the "improvement" of desolate urban fringes.

This discourse is widely (re)produced in both cities by powerful local actors, namely municipal authorities (including planning authorities), members of majority parties in local parliaments, as well as state-owned or non-profit housing providers. It dominates the city-wide understanding of the relationship between green space and housing construction planning (and the significance of suburban space for this) as it is (re)produced in both local and national media as well as in publications and policy documents by the city administration and governing parties, and has also precipitated current municipal policies, for which reasons it can be regarded as the hegemonic discourse.

Within this discourse, suburban areas are simultaneously articulated as the "last large reserves of land" for new housing and as green spaces for "recreation" and "urban climate." This creates an inherent contradiction: Green spaces are to be preserved while housing is at the same time to be expanded.

4.4. Discursive Strategies Glossing Over Contradictions of "Construction Should Continue, Just not Everywhere"

In order to maintain the hegemony of the discourse "construction should continue, just not everywhere," various discourse strategies have been devised that relativise, obscure, or seemingly resolve the contradiction between housing construction and green space policy. These can be categorised into three

groups: (a) relativisation of contradiction; (b) rearticulation of green spaces; and (c) commensurability (see Table 2 for an overview).

Table 2. Groups of discursive strategies in the discourse "construction should continue, just not everywhere" addressing the inherent contradiction of green space and housing construction policies.

Relativisation of Contradiction	Rearticulation of Green Spaces	Commensurability
Exceptionalism	Narrowing	Multifunctionality
Isolation and prioritisation of single problematisations	Place-agnostic articulation of green spaces	Sustainability fix
		Catachresis
Naturalisation of loss	Spatial rearticulation	

The first group of discursive strategies relativises the contradiction between green spaces and housing construction policies, for example by highlighting individual aspects of housing construction *or* green space policies as being exceptional, thereby placing the sealing of green spaces in perspective. In Munich, the crisis in housing supply is depicted as extraordinary, thereby prioritising it over other urban development objectives and legitimising further urban expansion. Another strategy in this cluster is to isolate and prioritise one single issue above all others. For instance, rights to housing and schooling are discursively contrasted with demands for green space preservation, whereby the latter is said to restrict the former. A third discursive strategy is to naturalise the loss of green space through urban expansion. In Hamburg, for instance, the initial supply of green space and woodland is described as being above average compared to other cities, a fact which then serves to justify the sporadic deforestation and soil sealing.

A second group of discursive strategies rearticulates green spaces by, for example, narrowing their functions to only one, such as temperature regulation or air exchange. Only this function is then considered worthy of protection, while other current uses such as agriculture or non-measured qualities such as carbon sinks are disregarded. Consequently, the nodal point of the discourse "preservation of all green spaces" is rejected: "If you compare the areas that are actually relevant [areas valuable for climate adaptation]…Munich is by no means the most sealed city in Germany" (Effern, 2023, p. 2). Another related strategy is the place-agnostic articulation of green spaces. This refers to the simple balancing of green space functions irrespective of local specificities. To this end, any understanding of open *areas* as specific places must be replaced with a focus on green space *functions*, which must be qualitatively safeguarded and adapted to changing conditions. Finally, there is the strategy of spatial re-articulation. This can mean the advocating of functionally-defined green networks (which are rather incoherent in spatial terms) rather than coherent green belts or corridors. However, spatial re-articulation can also simply be a form of rescaling: Regarding ecological contexts and the leisure behaviour of local residents, municipal boundaries are here articulated as part of the discourse's outside, implying, for example, that residents also fulfil their recreational needs in neighbouring communities. This discursive strategy is employed to justify flexibilised inter-municipal land swaps and the development (up to regional level) of green and landscape spaces beyond the city limits. However, the strategy neglects existing ecosystems and issues of accessibility. In combination, this group of discursive strategies tendentially empties the discourse's master signifier "green infrastructure" and consequently legitimises ongoing land sealing in suburban areas.

The focus of the above-mentioned discursive strategies is either on housing *or* green spaces. Conversely, strategies of commensurability articulate green space and housing construction policy within the same chain

of equivalence. Instead of justifying the contradiction between green space and housing construction policy (relativisation) or attempting to cover it up (re-articulation of green spaces), they try to eliminate it altogether. This can be done by referring to multifunctionality, by constructing a sustainability fix, or by using catachresis.

Multifunctionality is a term frequently used in association with green spaces or greenery on buildings to argue that densified green spaces still provide important ecological functions despite increased soil sealing: "Actually, it's important to create synergies, and that works, too: green roofs and photovoltaics or green facades, and so on" (interview M6).

The term "sustainability fix" is a catch-all for discursive strategies which assume that, with the right planning and architectural engineering, sustained economic growth can be stabilised through a process of ecological modernisation (Scanu et al., 2021). One such strategy equates new housing with positive effects on the urban climate—for example, through a good building culture that is more feasible in new constructions than in existing stock—and rejects binaries such as "grey vs. green" and "built space vs. green space." In these articulations, planning is presented as a "fine art" of sustainable development, although the terms used are vague and lack clear operational content.

Finally, some discursive strategies articulate housing and green spaces as inherently compatible, even without robust evidence or further explanations. Two examples portray Hamburg as a "national park of the future" or describe Munich's housing situation as a catalyst for "transformation processes in housing and land policy." Here, emblematic terms such as "national park" and "transformation" are rearticulated in new contexts without altering the underlying premises of planning. This strategy of commensurability corresponds neatly to what Howarth and Griggs (2006, p. 32) describe as catachresis, i.e., the deliberate misuse of a word.

These discursive strategies are employed cumulatively to support the central plea of the discourse "construction should continue, just not everywhere" for large new residential developments on suburban greenfield areas. The monofunctional characterisation of green spaces solely as water retention areas or reservoirs of cold air normalises place-agnostic land use accounting practices. Furthermore, the assumption that a sustainability fix can be achieved through planning is believed to lend more credibility to a catachresis such as "we must ensure that cities become the national parks of the future" (Knödler, 2021). These strategies go beyond articulation of equivalence or contrariety to secure the discourse's hegemonic status. They allow conflicting goals to be integrated while maintaining the appearance of making sustainability commitments, thereby ultimately legitimising urban expansion projects.

5. Discussion

Despite the specific, different spatial and institutional contexts of Hamburg and Munich, our analysis reveals three largely similar discourses on housing construction and green space policy in these two cities. The discourse "deregulation for housing construction offensive" primarily articulates housing construction with economic competitiveness and growth, alongside demands for reducing planning bureaucracy. It thus can be interpreted as a neoliberal discourse that legitimises—or better: makes invisible—the sealing of green spaces. At the same time, it adopts socio-political arguments such as the needs of the middle classes, thereby referencing a popular housing construction policy discourse (Schad & Sommer, 2025) that portrays the preservation of green spaces in cities as an unavoidable conflict of objectives.

Conversely, the discourse "preservation of all green spaces" attempts to harmonise housing construction policy with environmental and climate protection by proposing alternatives to growth-based thinking such as brownfield development, recycling land, and reducing living space per person. Interestingly, this radical environmentalist discourse articulates green space preservation with sufficiency instead of linking to regressive or indeed right-wing authoritarian discourses. In this regard, our findings differ from those of other analyses of discourses on preserving green spaces against large-scale, densified residential development in suburban areas (Dunn, 2024; Janssen et al., 2022). Especially in Hamburg, the respective discourse calls for progressive social change rather than a populist positioning of "us against them." In doing so, this discourse shows similarities to planning-related approaches to postgrowth (Savini et al., 2022).

While these two discourses are inherently consistent in terms of the radical nature of their demands, they have both remained marginal. The third (hegemonic) discourse "construction should continue, just not everywhere" differs from the others in that it attempts to integrate environmental concerns and growth-oriented politics, thereby epitomising the notion of ecological modernisation. In this discourse, "green infrastructure" appears as a nodal point that relates green spaces primarily to climatic and health functions, while cultural and subsistence practices remain invisible (Neidig et al., 2022; Warner & Meissner, 2025). It can be asked if this discourse is merely a form of "persuasive storytelling" (Mäntysalo et al., 2020) and whether planners are actually able to fulfil the demands they formulate. On the one hand, the discourse reproducers in the municipal planning administrations in Hamburg and Munich clearly verbalise their efforts to preserve the functions of green spaces in urban expansion planning via measures such as air cooling through greening, rainwater retention, and maintaining fresh air corridors. These efforts are neither rhetorical nor politically insignificant. However, fundamental conflicts between demands for affordable housing through new construction and the preservation of green spaces can only be partially resolved by planning. The loss of CO_2 storage capacity due to an area being sealed over cannot, in most instances, be compensated by well-maintained green roofs (Richter, 2022); and an area intended to fulfil recreational, construction, and compensation functions cannot simultaneously be regarded as a high-quality biotope, let alone a large protected area that would contribute to "national parks of the future."

The idea that technical solutions—such as green infrastructure, climate models, and compensatory measures—and planning as a "fine art" can together reconcile the conflicting objectives of housing construction and green space protection creates a powerful narrative. This discourse can be understood as an expression of entrenched planning ideologies that treat growth as a prerequisite for urban modernity and planning capacity (Harvey, 2001). The self-descriptions of both Hamburg and Munich as "growing cities" illustrate this nodal point.

This leads to contradictions in the relationship between housing and green space policy, which are particularly evident in the articulation of suburban spaces and their planning. Measures such as green roofs, multifunctional green spaces, or ecological compensation can only partially offset the ecological losses caused by large-scale sealing. It is precisely here that the ideological functioning of the hegemonic discourse becomes apparent, as inherent contradictions are only symbolically addressed through strategies of relativisation, rearticulation, and commensurability. Hence, the discourse is successful in presenting urban expansion as inevitable, and the provision of affordable housing through new construction as compatible with the preservation of green spaces, "incanting" (Glasson, 2022, p. 221) this in a mythical manner, whereby planning is described as "fine art" and a "catalyst" for transformation and "the political" is closed down (Shepherd et al., 2020, p. 10).

Most importantly, the discourse "construction should continue, just not everywhere" enables a substantial political shift from the prioritisation of inner-city development to the legitimation of suburban megaprojects while formally still adhering to well-established sustainability targets. Therefore, it is less a balanced middle ground between growth orientation and green space protection and more an expression of a deeper, hegemonic planning ideology of ecological modernisation as "sustainable non-sustainability" (Blühdorn et al., 2020) that orders contradictory social tendencies and stabilises political arrangements in the face of challenges. By "organising the complex and frequently contradictory terrain of popular common sense" (Inch & Shepherd, 2020, p. 62), the prevailing problematic development models can continue.

6. Conclusion

Our study aimed to identify political discourses on green space and housing construction policy regarding the planning of suburban areas in the context of large-scale urban expansion projects in Hamburg and Munich as well as to analyse their internal contradictions. This complements existing planning research by offering a perspective based on second-order observations to reveal the semiotic processes through which suburban spaces are socially constructed in concrete cases. The concept of "suburban" thus appears less as a topographical category and more as a projection surface for societal negotiations on growth, sustainability, and quality of life. Although our study is limited to two cities, the similarity of the deconstructed discourses provides novel insights into the mechanisms of hegemonic stabilisation beyond the basic relations of equivalence and contrariety. The discursive addressing of inherent breaks and inconsistencies greatly aids our understanding of hegemonic structures of meaning and significance. The fact that discursive strategies refer to these makes such structures insightful objects of study. The large number of discursive strategies found in combination indicates the challenge of fundamentally reassessing former "abolished" greenfield developments as "necessary" for the discourse "construction should continue, just not everywhere."

Our results show that the idea of growth is rarely questioned even in cities with ambitious climate policies such as Munich's declaration of a climate emergency (City of Munich, 2021b). The juxtaposition of a marginal "postgrowth" discourse and a dominant "ecological modernisation" discourse, which can also be observed in broader social debates, creates an ambivalent situation for planning practice. Planners are embedded in the hegemonic order of meaning, shaped by professional routines, institutional expectations, and dominant ideologies that determine which problems are considered relevant and which solutions appear realistic (Shepherd et al., 2020). Nevertheless, they have some discursive agency (Leipold & Winkel, 2017), which can be applied, in particular, to contradictions inherent in a discourse. They can shift meanings and disrupt existing discourses, thereby opening up spaces for new articulations. Reflexive planning practice, for instance in the sense of deliberate "non-solutions" (Heindl & Robnik, 2021), renders contradictions visible and insists on alternative forms of development, in the sense of destabilising "sedimented" discourses (Marttila, 2015, § 44). The politicisation of forecasts on housing demand from a sufficiency perspective or commercial space planning, as criticised in the "preservation of all green spaces" discourse, provides initial points of reference for strengthening postgrowth approaches in planning.

Two topics arise for further research. Firstly, the comparison of city-wide discourses with local articulations surrounding specific urban expansion projects would shed light on whether progressive discourses such as "preserve all green spaces" are also produced locally in addition to regressive anti-growth protests (Bertram, 2024; Dunn, 2024). If so, the question arises: Which place-specific constructs of suburban space do they

include? Secondly, it would be promising to examine how deeply sedimented discourses and demands, which are less verbalised and more evident in routines and norms, translate into concrete planning acts. By combining discourse-theoretical approaches with practice theories (Leibenath, 2025), it would be possible to analyse how actors deal with the inherent contradictions between housing and green space planning as well as to determine how to design "non-solutions" (Heindl & Robnik, 2021) for suburban spaces in growing urban regions.

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Conflict of Interests

The authors declare no conflict of interests.

Data Availability

Due to considerations pertaining to the protection of personal data and the intellectual property rights of the documents examined, the research data are not available for dissemination.

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In the process of writing the article, the DeepL translation model was used for translation purposes. No portion of the generated content was adopted directly.

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ARTICLE

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Patterns of Current Urban Expansion in Germany: A Comparative Analysis of Five City Regions

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Abstract

Following a period of reurbanization, recent studies have drawn attention to the resurgence of urban expansion processes in German metropolitan regions. However, empirical research demonstrates that the dynamics of urban expansion exhibit significant geographical variation in response to multiple determinants, including economic conditions, governance arrangements, and population change. Against this background, the present article examines processes of urban expansion in five major German city regions: Berlin, Hamburg, Munich, Frankfurt am Main, and Freiburg im Breisgau. For each case study, it undertook a GIS analysis of a particular focus area (transect) of the respective city regions where large greenfield projects are currently planned. This analysis reveals that development dynamics differ significantly, both between and within these five case studies, in terms of scale and building typologies. While urban expansion in some areas appears to be aligned with sustainability demands, with development becoming increasingly dense and compact, other areas continue to rely heavily on single-family housing. Drawing upon spatial data from the German census, this article provides a detailed account of the heterogeneity of urban expansion patterns in Germany with respect to population development and housing stock composition. Employing urban sprawl and material efficiency metrics, as well as a measure of the functional integration of mobility infrastructures, the observed patterns are assessed as to whether they meet sustainability criteria.

Keywords

accessibility analysis; GIS analysis; suburbanization; urban expansion; urban sprawl

1. Introduction

A range of contributions have described renewed dynamics of urban expansion in German metropolitan regions. Population trends (Adam, 2019), land-use change, and building statistics (Fina et al., 2019) all point

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to decentralization trends in several cities that have emerged after previously dominant, empirically documented processes commonly referred to as "reurbanization" (Brake & Herfert, 2012). These trends have been termed "fifth suburbanization" (Siedentop, 2024). This notion, however, does not imply a re-start of suburbanization, but reflects that the dynamics of urban land use change were largely unbroken during times of reurbanization (Nuissl & Siedentop, 2021). In this vein, many scholars point to the persistent construction of low-density single-family housing (SFH) on urban fringes (Ehrhardt et al., 2022), prompting calls for stronger conservation and densification strategies (Eichhorn, 2023; Jehling et al., 2018). Although the thorough monitoring of recent land use change in Germany largely supports this assumption and typically concludes that current urban expansion remains insufficiently dense and compact (Meinel & Behnisch, 2024), many authors have highlighted that the number of large-scale housing projects—previously low in Germany (Simon-Philipp, 2019)—has increased considerably in recent years (Altrock, 2024; Freudenau et al., 2021), leading to an increase in dense multi-family housing (MFH; Ammann & Müther, 2022; Fina et al., 2019). Studies have further emphasized that traditional urban–suburban dualisms fail to adequately capture the heterogeneity of contemporary development patterns (Frank, 2020; Hesse & Siedentop, 2018; Phelps & Wu, 2011), which makes an unambiguous assessment of current developments at the urban fringes challenging.

Given the somewhat ambiguous appraisals of both the "fifth suburbanization" (Siedentop, 2024) and the established categories of urban expansion analysis, we seek to provide a differentiated account of the patterns and characteristics of current urban expansion processes in German city regions and examine whether these processes meet sustainability criteria to a greater extent than earlier phases of suburbanization, which are notorious for their unsustainable and sprawling character (Benfield et al., 1999). To this end, we present the findings of a longitudinal analysis of population and housing dynamics in sections (i.e., transects) of the Berlin, Munich, Hamburg, Frankfurt am Main, and Freiburg city regions. Please note that, in the empirical section of this article, only the name of the respective major city is used to refer to these focus areas. Our study was conducted at the meso scale, comparing larger spatial units while remaining sufficiently fine-grained to allow validation through local knowledge and manual cartographic inspection. It highlights not only the differences in urban expansion processes between the studied cases but also the internal heterogeneity that these processes can take within a single city region. It then asks how far current dynamics meet different dimensions of sustainability, namely density and compactness, the efficient use of material resources, and accessibility to mobility infrastructure, thereby providing a more nuanced understanding of contemporary urban development processes.

2. Theoretical Background

2.1. Studying Urban Expansion Beyond Dichotomous Spatial Concepts

Urban expansion is usually most visible in the urban periphery. Therefore, it is typically associated with the suburban realm, if not equated with suburbanization as such. Accordingly, we examine population and housing dynamics in the periphery of city regions. However, when it comes to studying contemporary urban expansion, a move beyond a binary understanding of suburbanization (versus urbanization) seems advantageous. We place a particular focus on new residential development (NRD), i.e., housing developed on previously uninhabited sites. This twofold conceptualization of urban expansion (as suburbanization and NRD) draws on a broad range of conceptual concerns that have been raised in urban research, with respect to the operationalization and measurement of urban growth.

Suburbanization has long been a key concept in urban research. Its definition is usually based on the comparison of development dynamics between an outer and an inner urban area (which are often separated along administrative boundaries). While this allows an easy, unambiguous operationalization of suburbanization, it requires a clear-cut delineation and classification of spatial units, assuming a homogeneity of spatial structure both within and outside certain limits and dismissing the multifold character and heterogeneity of urban development patterns (Forsyth, 2012). In other words, the suburban space is often treated in a strikingly undifferentiated manner (Siedentop, 2024): as an unstructured entity absorbing outmigration, as a mere overflow space, or simply as "everything" that is "less than urban" (Phelps, 2017, p. 9). The difficulty in providing a spatially explicit operationalization of categories such as urbanization, suburbanization, or decentralization stems from the fact that spatial structure changes over time, is often difficult to compare across different contexts, and generally occurs as a continuum of patterns rather than as a clear-cut patchwork. Accordingly, the debate on post-suburbanism that emerged in the 1990s pointed out several specificities of contemporary urban development that further aggravate these challenges with respect to the delineation of spatial units in the suburban realm (Hesse & Siedentop, 2018; Keil, 2013; Phelps & Wu, 2011). Among these are polycentricity (Krehl & Siedentop, 2019), patchy settlement structures (Haase & Nuissl, 2010), a deviation of urban expansion processes from traditional horizontal growth patterns combined with an increased variety of building typologies (Frank, 2020), and the fact that the dynamics of de- or centralization in city regions occur simultaneously, rather than sequentially (Dembski et al., 2021; Humer et al., 2022). These factors make it difficult to tell urban expansion from infill development, let alone to provide a clear-cut delineation of suburbia. Against this background, we understand suburban space to be a continuum rather than clearly delineated, encompassing the peripheries of core cities, as well as the surrounding municipalities; it exhibits complex and nuanced settlement patterns, rather than a homogeneous structure.

In order to study urban expansion in Germany, we analyzed suburbanization and NRD in five meticulously defined focus areas that stretched across the peripheral parts of the core city, as well as the adjacent suburban municipalities, and included a great variety of building structures. We defined an increase in residential buildings or population within these focus areas as an indication of *suburbanization*. In addition, we examined NRD within these transects, which we defined as the residential development of land that was previously uninhabited, either because it comprised greenfields or was used for non-residential purposes. Both suburbanization and NRD are understood to be interrelated forms of urban expansion, the joint study of which yields deeper insight into contemporary urban development processes. This approach acknowledges that urban expansion entails different dimensions of urban development that are related to, but are by no means tantamount to, each other.

2.2. Urban Expansion and Urban Sprawl in Light of Sustainability Objectives

In planning practice and the spatial sciences, urban expansion is often regarded as "a significant challenge to sustainability that undermines efforts for efficient spatial development" (Eichhorn et al., 2025, p. 83), set against the "commonly cited goal [of a]…more contained, spatially compact, higher density urban pattern" (Siedentop et al., 2022, p. 664). Accordingly, a substantial body of literature has characterized the spread of land-extensive, low-density housing at urban fringes and its undesired environmental effects as "urban sprawl" (Gillham, 2002), giving rise to numerous tools for measuring the sustainability of urban expansion. In this article, we employed three such tools, which are (a) broadly established in the literature,

(b) implementable using available, comparable GIS data, and (c) representative of three salient dimensions of sustainability. Other sustainability dimensions frequently addressed in the literature—such as soil sealing, biodiversity, energy efficiency, social and functional mix, or social infrastructure—would either require more fragmented data or additional qualitative research beyond this article' scope.

Fragmentation versus compactness is probably the most salient issue in the urban sprawl debate. There is ample empirical evidence that the impact of urban settlements on issues such as car dependency, pollution, habitats, neighborhood cohesion, or public health is all the more detrimental, the more fragmented their structure is (Nuissl & Siedentop, 2021); further aspects of sprawling urban expansion include the inadequate provision of public open spaces and the high costs of community infrastructure (Angel, 2023). Therefore, we consider it essential to look beyond the mere extent of land consumption and to ask in which spatial configuration NRD takes place. To capture this, we drew on urban sprawl metrics developed to quantify the degree of fragmentation of settlement structures (Behnisch et al., 2022; Jaeger & Schwick, 2014).

With the resurgence of large housing estates in contemporary urban planning practice (Altrock, 2024), the provision of mobility infrastructures emerges as another dimension of sustainable urban expansion. Prominent planning concepts, such as transit-oriented development or the 15-minute city, emphasize accessibility to everyday destinations by public transport (Büttner et al., 2024). In contrast, previous phases of suburban expansion have frequently been characterized by deficits in public transport provision, resulting in a strong dependence on private car usage (Eichhorn et al., 2020; Krüger, 2024). Drawing on accessibility analyses that demonstrate the applicability of geoinformational methods (Köberl et al., 2024), we treat accessibility to rail-based public transport—a means to overcome the structural car dependency long characteristic of suburban settlement patterns—as one of our sustainability dimensions.

A third sustainability challenge of urban expansion concerns the material resource required for the construction of housing, which has been identified as a "key challenge for compliance with climate targets" (Krausmann et al., 2020). Given the immense contribution of building materials to global emissions (Schiller et al., 2024; Schug et al., 2023), together with the pronounced variation in per-capita material stocks across geographical contexts (Haberl et al., 2024), we regard material efficiency as a necessary complement to the conventional focus on land take and dispersion alone, since assessments restricted to newly sealed land remain blind to the resource implications of different building typologies (Blum et al., 2022). This dimension has only recently become empirically tractable through spatially explicit and freely available material stock data generated by novel remote-sensing-based methods (Schug et al., 2022, 2023).

3. Methods

The analysis of urban expansion processes was based on three different GIS datasets, as well as data from the most recent German census (see Table 1). In this section, we highlight the rationale for focus area delineation (3.1); we then elucidate how we pre-processed the data sets and clipped them to our focus areas (3.2); and, lastly, we explain how we conducted a data-based sustainability assessment of current urban expansion dynamics (3.3).

Table 1. Overview of utilized data.

Data	Time period	Resolution	Source
Spatial extent of agglomeration areas, municipalities, inner-urban sub-divisions	2024	Municipalities (Gemeinden), urban sub-divisions	BKG (2023, 2024); Statistische Ämter des Bundes und der Länder (2025)
Census: Population	2011, 2022	100 × 100m grid	Destatis (2025)
Census: Buildings	2011, 2022	100 × 100m grid	Destatis (2025)
GHS-BUILT-S (Global Human Settlement Layer)	2010, 2020	100m	Pesaresi and Politis (2023)
Historical material stocks	2009–2018	30m	Schug et al. (2022)
OSM data: Public Transport network and stops (track-bound)	2025		OpenStreetMap contributors (2026)

3.1. Delineation of the Focus Areas

The focus areas of our study were defined as (approximately wedge-shaped) transects that excluded the core city's densely built-up inner urban areas but stretched from the edge of these areas across the peripheral parts of the core city's administrative area into the adjacent suburban municipalities. The urban research literature includes a number of proposals for the delineation of such focus areas, e.g., functional approaches based on commuting distances (Fina et al., 2019), population density-based approaches (Ehrhardt et al., 2022), distance-based gradients (Lagarias & Stratigea, 2023), or mappings of urban–rural gradients using criteria such as imperviousness and building and population density (Haase & Nuissl, 2010). Building on this work, we accounted for seven criteria when delineating the focus areas in each of the five city regions under scrutiny (see also Figure 1):

- First, the five transects all host a major urban expansion project that is currently in the planning phase. These urban expansion projects are among the largest of their kind in Germany, and we regard them as reflecting the pressure for NRD and urban expansion, which makes the five cases particularly topical and relevant to the objectives of the research.
- Second, transects were designed to include the typical variety of settlement structures characteristic of the suburban realm (which were not bound by administrative limits or units).
- Third, it was essential that the transects covered both peripheral parts of the core city as well as adjacent suburban municipalities. The latter were roughly divided into two types according to their distance from the city centre. In Freiburg, Frankfurt, and Hamburg, where some municipalities extend from areas close to the city to areas further away from the city, the classification of municipalities is based on the location of density cores (see Figure 1). Whilst, in some cases, this classification corresponds to the density gradient of the urban region, in others, more remote suburban municipalities are denser than those bordering the core city.
- Fourth, although the transect-based approach was explicitly designed to overcome the limitations of an analysis based on administrative units, the delineation of transects accounted for administrative or statistical (sub-)divisions; otherwise it would not have been possible to use secondary data.
- Fifth, the number of suburban municipalities included in the transects was chosen on the basis of their comparability to the five transects. In some studied city regions, the size of the suburban municipalities

was rather modest, whereas in others they were larger; the number of suburban municipalities included varied from two extensive municipalities (in the case of Berlin) to six substantially smaller ones (in the case of Frankfurt).

- Sixth, the same consideration applied to the subdivision of the studied core cities (with rather small boroughs in Munich, Frankfurt, and Freiburg, and exceptionally large city districts in Berlin and Hamburg). Therefore, smaller statistical units were used in Berlin and Hamburg, whereas we included three "Ortsbezirke" in Frankfurt and four neighborhood units in Freiburg.
- Seventh, only areas belonging to the respective agglomeration areas (*Verdichtungsräume*), according to the German Federal Agency for Cartography and Geodesy (BKG), were included in the transects, which explains the somewhat peculiar shape of the Hamburg transect.

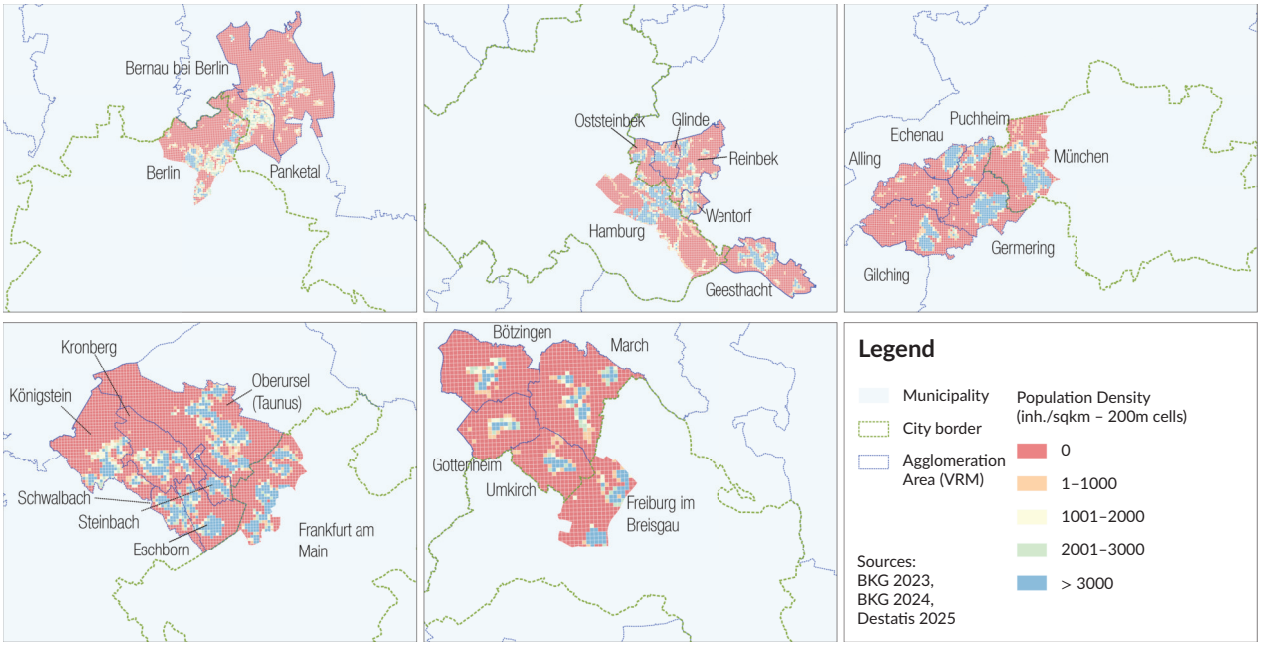


Figure 1. Overview of focus areas: transects.

3.2. Data Pre-Processing and Classification

The spatial extent of the agglomeration areas, administrative units, and subdivisions were downloaded from the BKG and regional statistical bureaus and subsequently clipped to the focus areas. Using fine-grained, grid-cell-based census data on population and building types from 2011 and 2022, all focus areas were divided into zones of different densities (see Figure 1). These data were only provided for cells with residential population, i.e., residential and mixed-use areas; all other cells were classified as uninhabited/non-residential. Cells were assigned to municipalities using the largest overlaps. The study areas included some land use types that fell outside our research scope. These included extensive allotment gardens (Berlin, in particular), alongside prisons and temporary refugee shelters, all of which introduce inconsistencies and implausibilities in the source data. Cross-referencing census records with satellite imagery (Google Earth), these anomalies were identified and removed during pre-processing. This resulted in the exclusion of 188 ha in Berlin (from a total of 1,630 ha), 42 ha in Hamburg (from 1,744 ha), and 3 ha in Munich (from 753 ha). The census data distinguished ten building categories, which were aggregated, for the

purposes of this study, into a reduced set of analytically comparable classes: (a) single-family-detached; (b) single-family-row/terraced; (c) multi-family-small; and (d) multi-family-large. The transects were further classified into zones by dominant building type, following the structure outlined in Table 2. In the absence of established thresholds, we developed a (customized and pragmatic) classification scheme reflecting the composition of urban building structures that remains feasible for GIS analysis across multiple complex case study regions. Exploratory analysis revealed that pure MFH zones are rare at the selected grid cell sizes, whereas exclusive SFH zones are prevalent throughout. Mixed and density-based categories were incorporated to reflect the mixed character of the urban fabric.

Table 2. Method of classification dominating building zones.

Zones of dominating building types	Threshold condition: shares of buildings within 100 × 100m cell
SFH-detached	>80% SFH-detached
SFH-terraced	>80% SFH terraced
SFH-mixed	>80% SFH-detached + SFH terraced
MFH-small	>50% MFH with 3–6 housing units
MFH-large	>50% MFH with 7–12 units or ≥ 13 units
MFH-mixed	>50% MFH (3–6 + 7–12 + ≥ 13 units combined), no single MFH size class dominating
Mixed housing (Mix)—low density	None of the other conditions met and population < average population
Mixed housing (Mix)—high density	None of the other conditions met and population > average population

3.3. Sustainability Assessment

A sustainability assessment of urban expansion processes was conducted in the five focus areas, by means of three analytical approaches: urban sprawl metrics, accessibility analysis, and material efficiency calculation.

Jaeger and Schwick (2014) introduced a comprehensive and comparatively easy-to-implement set of urban sprawl metrics, operationalized in a QGIS-compatible toolbox (Pourtaherian et al., 2023), which we applied here. The urban sprawl metrics toolbox requires three primary data inputs. The first is a binary layer distinguishing between built-up (1) and non-built-up (0) areas. For this purpose, GHSL-Built-S (the Global Human Settlement Layer—Built-up Surface) was used, specifically the interpolated data for the years 2010 and 2020. These data were reclassified so that pixels exceeding 500 m^2 of built-up surface (out of a maximum of 10,000 m^2) were classified as "built-up." Second and third, population data (2011, 2022) and the spatial extent of the delineated transects were used for the calculation. Urban sprawl metrics were calculated at two time points (2011 and 2022) for the entire focus areas to assess dynamics, noting a slight discrepancy with the built-up data reference years. The calculation did not incorporate employment data. Among the full set of urban sprawl metrics indicators, percentage built-up land (PBA), land uptake per person (LUP), dispersion (DIS), weighted urban proliferation (WUP), and weighted sprawl per capita (WSPC) were selected as metrics of interest. While the first two are self-explanatory, DIS refers to the distribution of built-up area in space (high values indicate spatial fragmentation and, therefore, the opposite of compact development). WUP is a landscape-oriented indicator that combines built-up land with DIS and LUP; high values indicate pronounced urban sprawl, expressed as urban permeation units per square meter of reporting unit (UPU/m^2). WSPC expresses WUP on a per-capita basis by relating total urban permeation to the number of inhabitants (UPU/inh.).

Accessibility to rail-based public transport was calculated by adopting a 1,000 m walking catchment, operationalizing the 15-minute city objective (Büttner et al., 2024), assuming this to be the distance coverable within 15 minutes at a typical walking pace of 4–5 km/h. OSM data on tram, subway, and railway stops and street networks were extracted for the focus areas. Using the census data, the number of inhabitants within these catchment areas was calculated for 2011 and 2022. It should be noted, however, that the calculation assumed a constant service frequency and does not allow for differences in the quality of public transport services. While this simplified operationalization of accessibility, focusing on proximity alone, cannot confirm good and accessible service, it is well suited to identify cases of poor accessibility and ensures tractability and cross-contextual comparability. Incorporating service quality would require more empirically demanding approaches and remains an avenue for future research.

Lastly, the dataset "Historic Material Stocks" (Schug et al., 2022) was used to assess the mass of resources bound in the building stock and used for newly built residential buildings. The data contains information about material mass (in tonnes) at a resolution of 30 m. It was incorporated for the years 2009 and 2018. In combination with the population data from 2011 and 2022, this allowed for an assessment of material efficiency. Despite the slight deviation in the reference dates of the two datasets, we contend that the analysis provides a valid overall insight into the efficiency of building, although minor inconsistencies at the level of individual cells cannot be ruled out.

4. Findings

4.1. Urban Expansion Regarding Population and Housing Dynamics: Suburbanization

Table 3 provides an overview of the changes in settlement density and population across all municipalities under scrutiny in our focus areas, distinguishing between municipalities adjacent to the core city and more distant municipalities. Settlement density refers to the number of people per unit of built-up area.

Table 3. Overview of municipalities in transects. Own calculations based on BKG (2024) and Destatis (2025).

Category	Municipality	Settlement Density 2011 (inh./km²)	Settlement Density 2022 (inh./km²)	%ΔDensity (2011–2022)	%Δ Population (2011–2022)
Urban (subsection)	Berlin	3868	4008	**3.63**	**7.5**
Adjacent	Panketal	2046	2228	**8.91**	**11.1**
Distant	Bernau bei Berlin	2964	3302	**11.41**	**19.6**
Total		3126	3344	**6.97**	**11.7**
Urban (subsection)	Hamburg	5630	5632	**0.04**	**2.7**
Adjacent	Oststeinbek	3557	3523	**–0.97**	**2.1**
Adjacent	Wentorf bei Hamburg	3616	3819	**5.60**	**13.3**
Distant	Geesthacht	3912	4245	**8.52**	**11.5**
Distant	Glinde	4717	4899	**3.86**	**9.1**
Distant	Reinbek	3602	3765	**4.53**	**6.9**
Total		4610	4726	**2.52**	**5.8**

Table 3. (Cont.) Overview of municipalities in transects. Own calculations based on BKG (2024) and Destatis (2025).

Category	Municipality	Settlement Density 2011 (inh./km²)	Settlement Density 2022 (inh./km²)	%ΔDensity (2011–2022)	%Δ Population (2011–2022)
Urban (subsection)	München	5178	6339	**22.42**	**28.4**
Adjacent	Puchheim	5134	5376	**4.72**	**6.8**
Adjacent	Germering	6511	6827	**4.85**	**5.4**
Distant	Alling	2458	2735	**11.27**	**16.2**
Distant	Eichenau	4346	4386	**0.92**	**0.9**
Distant	Gilching	4038	4408	**9.17**	**10.8**
Total		5045	5578	**10.56**	**13.1**
Urban (subsection)	Frankfurt am Main	7175	8490	**18.33**	**34.8**
Adjacent	Eschborn	6141	6468	**5.33**	**5.3**
Adjacent	Schwalbach am Taunus	6229	6496	**4.29**	**4.7**
Adjacent	Steinbach (Taunus)	7168	7534	**5.10**	**9.0**
Distant	Oberursel (Taunus)	5187	5366	**3.47**	**5.0**
Distant	Kronberg im Taunus	3980	4073	**2.32**	**3.8**
Distant	Königstein im Taunus	3407	3612	**6.00**	**6.9**
Total		5398	5880	**8.93**	**12.9**
Urban (subsection)	Freiburg	10246	10420	**1.70**	**3.6**
Adjacent	Umkirch	4929	5126	**4.00**	**11.5**
Adjacent	March	3896	4108	**5.44**	**7.4**
Distant	Bötzingen	4531	4482	**–1.08**	**1.5**
Distant	Gottenheim	3198	3574	**11.79**	**13.2**
Total		5614	5785	**3.05**	**5.8**

Notes: Settlement density is expressed as inhabitants per settlement area in km², calculated from all selected census cells; relative change (%) is expressed for both population and density.

Table 4 displays the aggregated growth rates of building types (classified according to Table 2) for the five transects.

Table 4. Building type growth rates by transect. Own calculations based on BKG (2024) and Destatis (2025).

Transect	SFH–detached	SFH–terraced	MFH–small	MFH–large	Buildings total
Berlin	12.9%	14.8%	48.6%	41.5%	15.9%
Hamburg	4.7%	10.9%	14.0%	40.5%	9.4%
Munich	7.6%	6.9%	24.6%	59.2%	11.5%
Frankfurt	6.2%	2.0%	7.7%	58.8%	8.1%
Freiburg	2.6%	25.5%	3.9%	53.0%	10.7%

Notes: The growth rates represent the change in building numbers, not housing units, owing to the source data's broad categorization of buildings by housing unit counts (e.g., 3–6 or 7–12 units).

Figure 2 illustrates the share of different building typologies in the five transects in 2011 and 2022.

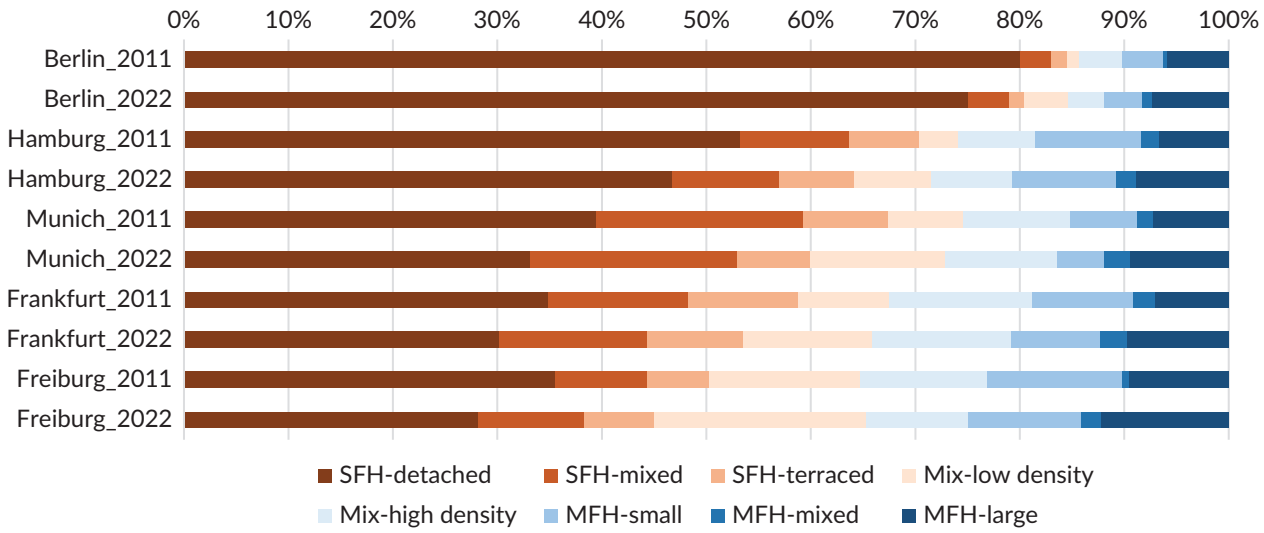


Figure 2. Composition of identified building zones within transects. Source: Own calculations based on BKG (2024) and Destatis (2025).

Across all transects, population and density increased between 2011 and 2022 (Table 3), clearly indicating suburbanization. With only two exceptions, this also holds at the level of individual administrative units. Consistent with this densification, the number of buildings also increased by between 8% and almost 16% in all transects (Table 4). The fastest-growing building type was MFH-large, whose share in the total building stock increased in prominence across all transects (Figure 2). This indicates a structural shift away from SFH, consistent with sustainability goals for land use efficiency and density. Nevertheless, SFH continued to dominate the building stock in all transects but to a lesser extent over time. Overall building dynamics show that new SFH was developed in all transects.

When comparing the five transects as a whole, a distinction can be drawn between the more strongly growing transects of Berlin, Munich, and Frankfurt—with Munich exhibiting the highest relative densification of the settlement area at around 11%—and the Hamburg and Freiburg transects that show lower growth rates and a densification of around 3% during the observed period. In all cases, however, a pathway of relative densification is discernible. Unsurprisingly but remarkably, a comparatively low density increase correlates with higher SFH growth rates (Hamburg, Freiburg, Berlin) while the highest density increases are associated with the high growth rates of MFH large (Frankfurt, Munich).

Examining the distance gradient of the Berlin, Hamburg, and Freiburg transects, the rates of change in settlement density are higher outside the core city—in both adjacent and distant municipalities—than inside, indicating a process of nivellization. This trend is less pronounced in Munich and Frankfurt, where suburban municipalities have long had a dense settlement structure. Nevertheless, all transects still share the common feature of a density gradient between their urban subsection and the surrounding municipalities. The clearest case of a monocentric settlement pattern with a strong decrease in density from the core to the periphery is Freiburg, where multiple dense MFH quarters exist in the urban part of the transect. In contrast, Frankfurt shows a rather polycentric structure, with several surrounding municipalities showing high density values.

Beyond the patterns identified between, and within, the transects studied, it is important to note that in some cases, we also found considerable heterogeneity within the non-urban part of the transects, i.e., between the suburban municipalities. While some cases appeared to follow similar growth rates (Berlin, Frankfurt), others showed strong fragmentation. The pronounced growth of municipalities such as Wentorf, Geesthacht, Alling, Gilching, Umkirch and Gottenheim might indicate spillover effects from the core cities of Hamburg, Munich, and Freiburg, and stand in contrast to places like Oststeinbek, Eichenau, Kronberg, and Bötzingen, which recorded exceptionally low growth rates. Moreover, among all of the spatial units studied, the urban subsections of the Munich and Frankfurt transects had extraordinary growth rates, attributable to exceptionally large residential development projects in Munich-Freiham and Frankfurt-Riedberg, respectively.

4.2. Urban Expansion on Previously Uninhabited Land: NRD

While the preceding subsection focused on suburbanization in terms of population and housing, we now turn to the extent to which urban expansion affected land that was previously uninhabited and not used for housing. Figure 3 shows the scale of NRD, displaying the absolute number of 100 m^2 cells that experienced NRD in each municipality studied. It provides an overview of the dominant building types within these NRD cells, differentiated by transect. In addition, it shows the proportion of total building increase occurring as NRD (as opposed to the densification of already built-up areas; see Figure 3, pink dots).

The transects vary considerably in terms of their NRD. While only 14 NRD cells could be identified in the entire Freiburg transect, 131 and 100 were identified in those of Berlin and Hamburg, respectively. Moreover, the composition of the NRD in the transects differ significantly in terms of housing typologies. More than 75% of NRD in Freiburg and Berlin predominantly consist of SFH, but in Munich, more than 60% of NRD cells are dominated by MFH of different sizes. Likewise, individual municipalities diverge markedly in how much NRD accounts for total development dynamics. All of the transects have municipalities where NRD accounts for a considerable share of new housing alongside others where this is not the case.

Across all transects, with the exception of Berlin, there is a marked gradient between the intra-urban subsection of the transect and its surrounding municipalities, in terms of the building typologies of NRD cells: those within the city limits display higher shares of dense MFH, whereas those in suburban municipalities are—sometimes almost exclusively—characterized by SFH. There are, however, notable exceptions in which municipalities have evidently pursued the objective of developing dense building typologies (Bernau, Reinbek, Puchheim, Oberursel). The contrast between the inner and outer parts of the transects is particularly pronounced in Munich, Frankfurt, and Hamburg. Berlin stands out in two respects: Not only is its NRD dominated by SFH in the intra-urban section of the transect, but it is also the only case where significantly more NRD is being realized outside, rather than inside, the administrative boundaries of the core city. The opposite pattern can be found in Munich and Frankfurt: NRD within the urban subsections of the transect far outnumbers that of the surrounding municipalities. This is partly attributable to the large Riedberg housing project in Frankfurt, which was largely realized during the observation period, and to the ongoing development of Freiham in Munich. In Hamburg and Freiburg, the intensity of NRD inside and outside the core city is more balanced, although with a very low overall dynamic in Freiburg.

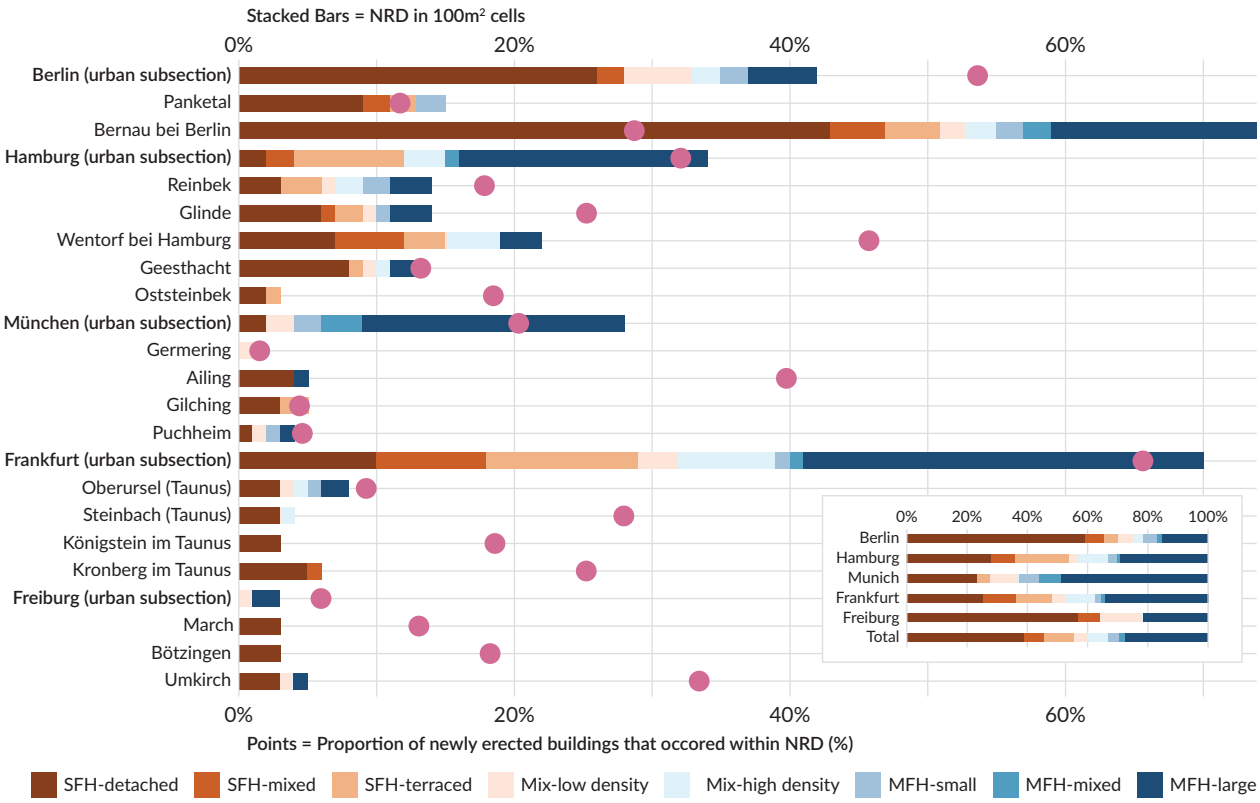


Figure 3. NRD differentiated by housing types in the municipalities: Stacked bars represent the absolute number of identified cells with NRD, differentiated by municipalities and housing types; points represent the proportion of newly erected housing that occurred within cells of NRD per municipality; the percentages represent the share of building types in NRD by entire transects. Source: Own calculations based on BKG (2024) and Destatis (2025).

4.3. Assessments of Urban Expansion Patterns: Urban Sprawl, Accessibility, and Material Efficiency.

The urban sprawl metrics for the five transects (Table 5) revealed a nuanced development pattern. Unsurprisingly, all transects show an increase in built-up areas (PBA). At the same time, DIS rises across all cases, indicating that built-up areas have become more spatially scattered over time, which runs counter to the objective of compact urban growth. The consistent increase in WUP across all transects further indicates an overall intensification of urban sprawl. When population dynamics are considered, however, a different picture emerges. The declining values of LUP and WSPC suggest that population growth has outpaced land consumption. Thus, despite increasingly dispersed settlement patterns, urban development has become more land-efficient overall. This points to a trend towards denser urban expansion driven by both densification strategies and the construction of new development at higher densities, which is reflected in the aforementioned growing prominence of MFH.

Nevertheless, the transects exhibit striking variation in their urban sprawl metrics. The gap in WSPC between Berlin and Freiburg illustrates the considerable variation in settlement patterns. Associated with a high prevalence of SFH, Berlin shows the most sprawled pattern, while Freiburg has a much more compact settlement area. At the same time, Berlin, starting from a rather patchy and scattered urban fabric, has seen the greatest progress in moving towards a more compact urban growth (as indicated by the strong dynamics

in its WSPC metrics). The most remarkable cases, however, are Frankfurt and Munich, as they already had relatively compact settlement structures at the beginning of the observation period but still managed to pursue compact growth trajectories (as indicated by their declining WSPC values).

Table 5. Results of the urban sprawl metrics calculation and accessibility analysis.

Transect	PBA 2010	PBA 2020	LUP 2010	LUP 2020	WUP 2010	WUP 2020	DIS 2010	DIS 2020	WSPC 2010	WSPC 2020	Access 2010	Access 2020
Berlin	27.94%	28.78%	459	398	16.02	16.43	48.00	48.04	26354	24210	41.6%	41.2%
Hamburg	36.17%	37.47%	308	286	19.80	20.50	48.08	48.15	16846	16487	25.0%	24.9%
Munich	27.18%	28.24%	281	243	13.53	13.83	46.98	47.12	13977	12635	63.0%	65.2%
Frankfurt	31.06%	32.26%	256	225	15.96	16.05	47.87	47.89	13156	11728	66.8%	68.8%
Freiburg	18.51%	19.49%	287	264	8.46	8.95	45.80	45.88	13096	13100	65.6%	65.0%

Notes: LUP = m²/inh.; WUP = urban permeation unit (UPU/m² in reporting unit); DIS = UPU/m² of built-up area; WSPC = UPU/inh., Access. = share of population within 1 km of track-bound public transport stops. Source: Own calculations based on Destatis (2025), OpenStreetMap contributors (2026), and Pesaresi and Politis (2023).

The last two columns of Table 5 show the percentage of the population with access to track-bound public transport within a 15-minute walking distance. The overall differences between the transects are immense. While in Munich, Frankfurt, and Freiburg around 70% of the population has access to public transport stops, in Hamburg this figure falls below a quarter. Examining how public transport accessibility has changed over time, we recorded a significant increase in the share of people living close to a public transport stop in Frankfurt and Munich and a slight decrease in the other cases. However, given that none of the transects saw the opening of new rail or tram stops in the observation period, despite significant concurrent urban growth, this result lends itself to a somewhat positive interpretation. Most new development has not been "scattered around" but was built, as far as the conditions allowed, within the catchment area of existing public transport stops.

The final dimension of the sustainability assessment presented here (material efficiency) is illustrated in Figure 4 and relates the calculated total material mass of the built environment in the five transects to the residential population. In general, the results reflect the well-established fact that there is a strong correlation between settlement density, building types and material efficiency (Blum et al., 2022; Schug et al., 2023). SFH zones have substantially higher material mass per capita than MFH zones. Considering NRD exclusively, SFH-dominated building cells recorded an average of 222 tonnes per capita, compared to 76 tonnes per capita for MFH-large.

A trend towards greater material efficiency was observable across all cases, as growth rates of the material stock fell below those of the population. This indicates a relative decoupling of material accumulation from demographic development and aligns with the observed increasing prominence of MFH. Particularly pronounced dynamics are apparent in Berlin, Munich, and Frankfurt, indicating shifts in building typologies and/or the densification of existing residential areas. The still comparatively high values in Berlin correspond to the peculiarity of the Berlin transect, which includes substantial shares of SFH, not only in the existing stock at the beginning of the observation period, but also among its NRD. Hamburg and Freiburg exhibit the lowest values, which are associated with their particularly large shares of existing MFH-dominated building zones.

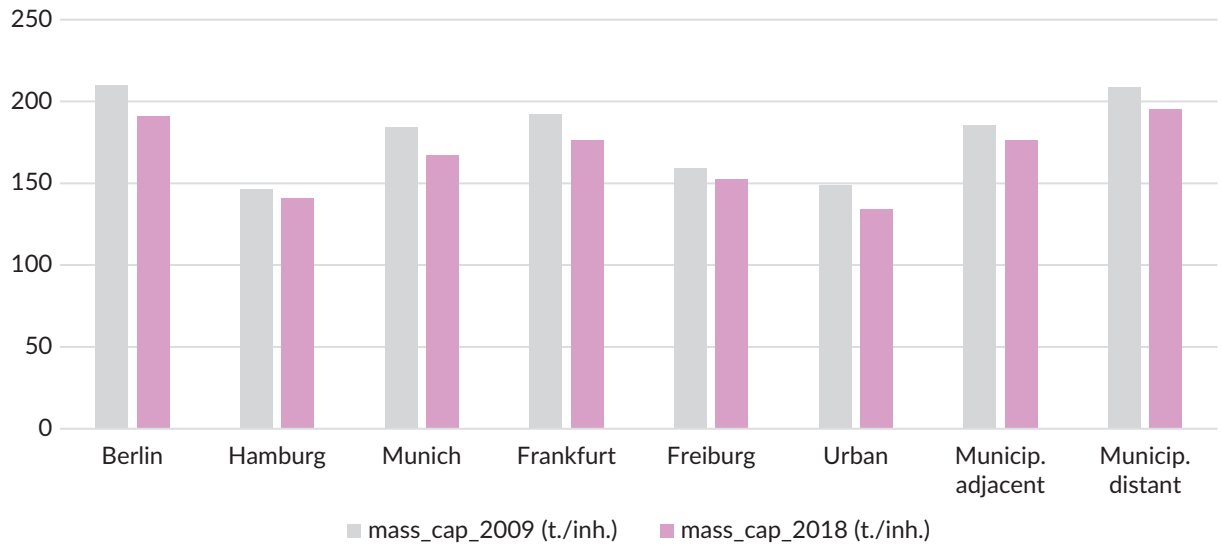


Figure 4. Material masses in tonnes per inhabitant. Source: Own calculations based on Destatis (2025) and Schug et al. (2022).

5. Discussion

The analysis of five urban–suburban transects revealed comparatively high dynamics of urban expansion in terms of both housing and population growth. While such dynamics usually conflict with existing sustainability goals, we found new urban developments in non-central locations to be comparatively compact and increasingly characterised by MFH. Some of the municipalities included in our study embody "urbanizing suburbs" (Frank, 2020), through significant multi-storey housing developments, lending credibility to concepts such as "fifth suburbanization" (Siedentop, 2024) and "new suburbanity" (Altrock et al., 2024). Given the negative environmental effects of land- and material-intensive SFH in decentralised locations (Benfield et al., 1999), these are encouraging findings which are further corroborated by the sustainability assessments presented. Despite an increase in built-up area, the density and material efficiency of settlement structures at the urban periphery tends to increase. Moreover, there is no evidence of scattered development distant from existing transport hubs.

However, it also became evident that, beneath the trend towards more sustainable forms of urban expansion, considerable diversity and heterogeneity emerged, as urban expansion takes markedly different forms—both between city regions and within the studied transects. Some areas show even and consistent growth; others display more fragmented patterns, where individual municipalities exhibit extraordinarily high dynamics while others stagnate. For example, Hamburg's suburban municipalities experience densification and housing stock diversification but show minimal public transit access, whereas Frankfurt's and Berlin's non-central locations demonstrate good public transport accessibility, although NRD is largely realized as SFH. Overall, our observations hint at the heterogeneous and partly fragmented dynamics of urban expansion—which is brought about by simultaneous, sometimes contrasting, development dynamics (Hierse et al., 2017) and which cannot be understood as a mere juxtaposition of reurbanization and suburbanization.

While the heterogeneity and "patchiness" of urban expansion have already been established in numerous studies and for a range of geographical contexts (Dembski et al., 2021; Ehrhardt et al., 2022; Humer et al.,

2022), the pronounced autonomy of local authorities in the German planning system probably contributes significantly to the diversity of urban "expansions" (Götze & Hartmann, 2021). Comparing the suburban municipalities of Hamburg, Frankfurt, and Freiburg—all facing relatively similar population dynamics—suggests that there are divergent local strategies for accommodating growth, from: (a) growing residential densities combined with diversified housing typologies (as in Hamburg), to (b) a dominance of SFH, which contrasts with the more compact settlement structure of the nearby parts of the central city (as in Frankfurt), to (c) a near-total lack of NRD (as in Freiburg), where population growth is primarily absorbed through the densification of existing structures. Whilst type (a) municipalities may be affected by spill-over effects from the core city, where comparable housing is unavailable and/or unaffordable, type (b) may point to deliberate local strategies of preserving the "rural" (i.e., non-urban) character of the place (Altrock, 2022). Type (c) may be attributed to a strong local planning department (calling for sustainable development). In its attempt to (further) increase the sustainability of urban expansion processes, regional planning needs to acknowledge and address these divergent local policy and planning approaches.

Overall, despite its German focus, the presented study yields several transferable insights:

1. Contemporary urban expansion takes a variety of forms and requires context-specific and multi-dimensional analysis that accounts for the simultaneity of divergent processes, rather than assuming a linear development (i.e., a sequence of urban development phases).
2. Compact and sustainable growth requires moving beyond core-periphery models and treating housing and population dynamics as being transboundary in both urban research and planning practice (since avoiding urban expansion entirely amid pressing housing demand seems currently inevitable).
3. Methodologically, we suggest that our approach entails a few suggestions for future quantitative accounts of urban expansion, including (a) the conceptualization of urban expansion as both suburbanization (reflected in the statistical analysis of geographical data) and NRD (reflected in the GIS analysis of land use change), (b) the case-study-based transect approach which allows a closer look at individual development patterns, and (c) the inclusion of freely available material stock data (Schug et al., 2022), which adds a fruitful additional dimension to the sustainability assessment of urban development.

In its attempt to analyse urban expansion in a non-dichotomous, context-sensitive, and fine-grained way, the presented study also incurs a few methodological limitations. Despite the high spatial and thematic resolution of the datasets used, their combined application required some simplifications because of differences in data formats, conceptual definitions, and temporal scales—most notably, the availability of census data in grid cells rather than building footprints. Consequently, the analysis emphasizes relative measures, ratios, and spatial patterns rather than absolute values. Moreover, region-specific contexts could not be fully accounted for, including regional economic conditions and geomorphological constraints on development, as well as atypical land-use patterns and existing housing structures that might have an influence on the feasibility and acceptance of particular development strategies. Finally, although multiple sustainability dimensions were considered, their selection remains contingent, to a certain extent. Future research could expand the scope to include additional mobility infrastructures and social facilities such as schools and kindergartens, and explore alternative accessibility assumptions (e.g., distance thresholds or the quality of public transport service).

6. Conclusion

By providing detailed empirical insight into contemporary urban expansion patterns across German city regions, our findings indicate that these patterns are, in sum, less scattered and fragmented than often feared. However, several substantial questions remain open for future research. First, the enduring shortage of housing, together with regulatory easing to overcome this shortage, creates a situation where an ongoing critical monitoring of urban expansion processes appears to be the key to sustainable urban development. Second, the factors underlying the heterogeneity of emerging settlement patterns warrant further investigation. While international debates on suburban development have long focused on localized growth-machine regimes, contemporary heterogeneity may increasingly reflect other localized strategies, including growing political dissent at the local level, strict NIMBY politics and powerful anti-growth coalitions, or nature preservation agendas (Siedentop, 2024), as well as varying levels of regional planning enforcement and municipal fiscal incentives for the building industry (Götze & Hartmann, 2021). Third, comparatively little is known about the socio-demographic composition of households moving into the new developments at the urban fringes. There is evidence that contemporary suburban growth may be driven by residents being displaced from core city locations more than in the past (Weck et al., 2023). Consequently, further research on urban expansion is needed that particularly highlights the roles of developers, political and administrative actors, and growth-opposing groups as well as the housing aspirations of those who actually move into the NRDs.

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Conflict of Interests

The authors declare no conflict of interests.

Data Availability

All data used in this article are freely available online. The statistical results presented in this article are available from the corresponding author upon reasonable request.

LLMs Disclosure

During the revision of this article, the DeepL translation model was used for translation purposes, and Kimi as well as Claude were used to selectively rephrase individual sentences for stylistic improvement. No generated content was adopted directly or without critical revision. Moreover, the text has undergone a final professional proofreading by a native speaker.

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ARTICLE

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Sustainable Urbanity at the Fringe? Principles of Present-Day Urban Expansions in Germany (2008–2025)

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Abstract

In recent years, Germany has experienced a significant number of large urban expansion schemes. These emerge despite strong policies for more inner-city development and against more land consumption. In this light, this article seeks to better understand these schemes. Of special interest are the sustainability ambitions that appear to be inspired by themes such as re-urbanisation, sustainability, and participation. In this light, we characterise the urban design and development principles underlying these projects. Building on previous studies, we analyse a sample of 69 larger projects, examining locations, spatial structures, social services, transport solutions, and planning processes. Our results illuminate the number, characteristics, and locational dynamics of the urban expansion projects in Germany. Overall, the findings reveal how a specific combination of sustainability-oriented and postmodern development and design principles is realised at the urban periphery. These findings provide a basis for examining the effectiveness of implementing contemporary planning and design principles as well as the procedural dynamics involved.

Keywords

housing; postmodern urban design; sustainable urban development; urban design principles; urban expansion

1. Introduction

This article focuses on the recent "wave" of large urban expansion projects in Germany. At first glance, these new projects at the urban fringe seem to contradict a planning and policy context that prioritises inner-city infill development, walkable and socially mixed 15-minute cities, the reduction of greenhouse gas emissions, and ecosystem preservation. In this sense, we aim to unpack this apparent "paradox" by promoting new insights on the motivations, characteristics, and effects of these schemes. We are interested particularly in better

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understanding the specific sustainability ambitions of planned projects, as these are instrumental in making the projects possible in the context of conflicting rationales and goals, and in what difference these new neighbourhoods make at the urban peripheries.

The "wave" mentioned above has evolved against a backdrop of changes in society and planning in view of an increasing housing shortage in conurbations. It could stand for a pivotal moment in German urban development: a strategic reconfiguration of an urban growth logic. While Germany had experienced a reurbanisation trend driven by population growth in many cities in the early 2000s, large cities then sought to avoid outward expansion to conserve natural resources and resistance from neighbouring populations to additional greenfield development. However, since the mid-2010s, Germany's population growth has accelerated, forcing many municipalities to pursue urban expansion to tackle their housing shortages. While inner-city re-densification projects have highlighted the appeal of reurbanising lifestyles—reflected in relatively dense, compact, functionally mixed, and walkable urban developments (Bundesinstitut für Bau-, Stadt- und Raumforschung [BBSR], 2014)—it remains unclear how these urban "ideals" will affect and be translated to the outskirts. They aim to reconcile the enduring demand for "suburban living concepts" with the need for sustainable, socially inclusive, and functionally diverse communities. This raises a critical question: How are the ideals of urbanity, sustainability, and social inclusion being realised in these suburban contexts?

Our analysis reveals that these contemporary projects are shaped by a convergence of interrelated forces: the legacy of reurbanising lifestyles, the growing imperative of sustainability, and an increasing role for participatory governance. This convergence is not uniform. While larger projects in major metropolitan regions frequently try to integrate high-density, mixed-use frameworks and multi-functional infrastructure, other developments remain anchored in low-density or residential-only models. Furthermore, the normative search for sustainable neighbourhoods on greenfield sites is no longer a contradiction but a redefinition of sustainability. It is no longer about avoiding development, but about shaping it to enhance ecological resilience, social cohesion, and urban vitality. The projects examined demonstrate a clear ambition to transcend mere regulatory compliance, aiming instead to pioneer new urban typologies that are both environmentally responsible and socially vibrant.

To address these dynamics, this study systematically analyses 69 major new construction projects on the peripheries of large German cities. We examine urban design principles—understood as general normative features related to urban form—within the broader context of urban development (encompassing broader characteristics like location, spatial structure, social services, transport, and planning processes) of the latest urban expansion projects. Furthermore, we connect this analysis to the normative search for sustainable neighbourhoods on greenfield sites.

The article proceeds as follows: Section 2 reviews the state of research and practice of current urban development principles, demonstrating a certain interest in sustainable urban development but only a limited focus on the specific conditions of urban expansions. Thereafter, we outline our aims and objectives (Section 3). Next, we introduce a method used to record and evaluate the prevalence of key urban development characteristics, based on the examination of 69 projects (Section 4). In Section 5, we present our findings on current urban planning and design characteristics. We then summarise and discuss the results (Section 6) before presenting the conclusion and outlook (Section 7).

2. State of Research

2.1. Criticism of Modernist Urban Design and Architecture and the Role of Postmodernism

Urban development at the end of the 20th century was marked by strong criticism of modern urban architecture and the land consumption of car-oriented single-family housing (Albers, 1997; Bruegmann, 2019; Squires, 2002). Embedded in broader urban transformations and debates on "postmodern urbanism" (Dear, 1986; Ellin, 1999; Hirt, 2009), this period marked a shift to "postmodern" urban design. Its key principles (see Table S1 in the Supplementary Material) include integration with the overall urban structure, pedestrian-friendly transport links, compact and dense development, demarcated public spaces through corridor streets and squares, intensive greening with separation of private and public open spaces and small-scale parcelling, and a partial return to traditional patterns of urban form (Zupan, 2018). There are also calls for functional mix and also for social diversity in neighbourhoods (Aelbrecht & Stevens, 2023; Geyer, 2024; Kuder, 2004; Peer & Psenner, 2024). This shift is embedded in a wider transformation of urban development principles characterised by brownfield redevelopment, inner-city development, and careful urban renewal.

In North America and Europe (for the debate outside these areas, omitted here for reasons of space, see Newman & Kenworthy, 1999), this transformation has given rise to a variety of approaches and debates at the end of the 20th century, from New Urbanism (Knaap & Talen, 2005) to the 15-minute city (Moreno et al., 2021). The respective principles have been applied to the transformation of brownfield sites (BBSR, 2024), occasionally to the conversion of modernist residential neighbourhoods (Edwards & Turrent, 2002), and to some master-planned expansions. Nevertheless, conventional urban growth dominated by single-family homes continues to take place in many smaller European cities and in the USA.

2.2. The International Debate on Postmodern Change in Urban Design

The US-American debates on the appropriateness of "New Urbanism" and "smart growth" (Bodenschatz & Schönig, 2004; Dierwechter & Coffey, 2017; Knaap & Talen, 2005) use similar themes to those in Europe in terms of structural and spatial typologies, densities, functional mix, quality of public open spaces, and connections to public transport (Calthorpe, 1993). However, these approaches have been widely criticised in the USA (Ellis, 2002; Gordon & Richardson, 1997; Roost, 2000) and the UK (Carmona & Tiesdell, 2007). In Germany, there are only a few loosely related debates on "postmodern" urban design principles (Siebel, 2004; Wentz, 2000; see Table S1). Some scholars claimed that postmodern principles are better suited to inner-city regeneration and that their promise of more environmentally friendly urban structures has so far only been fulfilled in isolated cases (Zupan, 2017). The practical appropriateness of (controversial) traditionalist principles and their application remain to be thoroughly researched (Kunzmann, 2020; Senatsverwaltung für Stadtentwicklung und Wohnen, 2018).

2.3. The Impact of the Sustainability Paradigm and Its Integration on Urban Design Principles

As environmental concerns have occasionally been discussed in urban development since the 1980s, sustainability debates raised issues such as land use efficiency and resource conservation (Edwards & Turrent, 2002; Koch, 2001). Still, urban expansion barely addressed sustainability issues (Calthorpe, 1993;

Potter, 1996). Due to the trend of reurbanisation (Brake & Herfert, 2012; Brombach et al., 2017) and the global financial crisis, which led to a slowdown in suburban development (Siedentop, 2024), sustainability targets were primarily applied to brownfield projects. Consequently, interest in urban design principles for new settlements temporarily waned.

Interest has been revived since the mid-2010s, as shown by new approaches and increased research, especially in suburban areas. In this context, the sustainability paradigm has also influenced debates on urban design by addressing broader issues such as climate and health (Calthorpe, 2011; Camerin & Longato, 2025; Carmona, 2009; Forsyth, 2020; Moreno et al., 2021). Moreover, an integrative approach to sustainable urban development is gradually emerging (Bentley et al., 2024; Kamalipour et al., 2023; Larco, 2016; Loukaitou-Sideris, 2020), with a far-reaching scope (Cozzolino et al., 2020). More flexible urban design principles are being promoted and partly combined with broader sustainability principles (Reicher & Söfker-Rieniets, 2022; Tarbatt & Tarbatt, 2020).

Perhaps the most comprehensive approach to conceptualising sustainable urban design encompasses issues of climate action, with their links to energy and water, ecology and biodiversity, as well as social sustainability and health, at various scales (Larco & Knudson, 2024). Interestingly, this "rich" sustainability approach draws on the principles of postmodern urban design mentioned above and supplements them, including sustainable transport. Principles of postmodern and sustainable urban design converge if traditional formal elements of urban design from the 1990s are disregarded. As those ideas transcend urban form, we argue that it seems appropriate to discuss postmodern urban development principles in this context.

2.4. The Impact and Implementation of Postmodern Urban Development Principles

Attempts to assess the outcomes of "postmodern" approaches so far have been rather fragmented and tend to have a narrow focus (Charmes, 2010; Garde, 2020; Trudeau, 2013; Xu, 2017). In Europe, there is a strong focus on inner-city development approaches (Watt, 2021), while in the USA, "New Urbanism" enjoyed particular attention until the mid-2000s (Bodenschatz & Schönig, 2004). Topics such as the quality and design of public spaces, pedestrian orientation, and transport issues are usually only indirectly related to urban expansion (Abass et al., 2020; Aelbrecht, 2022; Carmona, 2021; Currie, 2020; Ganji & Rishbeth, 2020; Larco et al., 2013; Piatkowski & Marshall, 2014; Podobnik, 2011; Sepe, 2025; Sohn et al., 2012; Stanislav & Chin, 2019; Wiersma & Bertolini, 2024).

The key themes of postmodern and sustainable urban development have mainly been played out in inner-city locations (Berding et al., 2018; Feldtkeller, 2018), where implementation has been easier. Planners and decision-makers tended to neglect the extent to which location factors influence practical feasibility (Altrock, 2022). On the outskirts, a high demand for single-family homes reduces the viability of public transport and other service outlets. Apart from residential facilities, private investors create only a few jobs in the service sector. Systematic links are rarely made between the intentional actions of key players and the resulting suburban morphology, open space and infrastructure provision, and functional, social, and transport structures (Adams et al., 2013; Barnett, 2023; Brandsma et al., 2024; Buckman et al., 2017; Perrin & Grant, 2014; Sorensen & Hess, 2015; Spellerberg & Woll, 2014; White et al., 2024; Yang & O'Neill, 2014).

2.5. The Current Wave of Urban Expansion Projects in Germany

Given the current wave of major new urban expansion projects, the question arises as to what extent these adhere to the normative principles outlined above. Recent analyses of large urban development projects have neither clearly distinguished brownfield and greenfield sites nor focused specifically on the recently planned projects in much detail (Freudenau et al., 2021; Spars & Guhl, 2021; Zupan, 2018). So far, research on large-scale urban expansions mainly focused on individual case studies (Förster & Schmitt, 2021). Few cases (Freudenau et al., 2021) demonstrate the extent to which "postmodern" principles have been consolidating and transforming, especially since the 1990s. Initial findings suggest that sustainability innovations are being incorporated into individual projects (Altrock, 2022) and build on factors like changing lifestyle preferences, among others. Nevertheless, a comprehensive understanding of the origins, protagonists of implementation, areas of application, and detailed characteristics in greenfield areas is still pending.

The debate on urban development principles is expanding to include issues of competitiveness, urban vitality, climate change, and energy transition (Jessen, 2021). Likewise, in addition to the classic formal categories of urban development (Reicher, 2019), social diversity and mixing, a diverse range of housing, different forms of ownership, strategies for land allocation, small-scale parcelling, innovative participation, and procedural structures are promoted (Bertram & Altrock, 2021; Selle, 2013). Likewise, the role of procedural elements in project statements has not been comprehensively researched.

3. Objectives, Questions, and Methods

3.1. Objectives and Guiding Questions

In response to the discussion and the research gaps identified above, this study aims to identify the development and design principles of large contemporary urban expansion projects in Germany. We assume that current large urban expansion projects differ from earlier projects, largely associated with postmodern urban design principles, nurturing innovations addressing the growing sustainability challenges. Inspired by catalogues of "extended" sustainability concepts as discussed above, we focus on their locational, physical, environmental, social, and procedural characteristics, exploring drivers and selected contextual factors. In doing so, we draw on recent literature on the principles of sustainable urban development playing out at the neighbourhood level.

The following research questions guide the inquiry:

- Where can we find large-scale urban expansion projects in Germany today, and why?
- How can these projects and the underlying key concepts be described?
- How do the projects (and the key concepts) relate to their context, considering variables such as project size, location, and political leadership?
- How do the main concepts compare with previous approaches? What is new?

3.2. Methods

The analysis is based on a systematic, internet-based survey of current urban expansion projects in German cities with more than 100,000 inhabitants (121 cities). The focus was on information on the project characteristics and on ambitions related to innovative sustainability-related plans. Data were retrieved from planning documents and reported decision-making processes, including design competitions, master plans, and accompanying explanatory reports. Project information was compiled from municipal and developer sources and complemented by competition platforms, real estate portals, press releases, and planning office websites. In addition, previous studies (Bertram & Altrock, 2021; Freudenau et al., 2021) were consulted.

In line with the objectives set out above, the projects had to be greenfield developments large enough to allow for the application of varied urban development principles. To this end, we restricted the sample to projects at the urban edge, comprising at least 500 residential units, on land that was at least 80% undeveloped. Moreover, meaningful urban development goals, reflecting concrete planning and design elements, approved by the municipality between 2008 and 2024 were required. The cut-off date of 2008 distinguishes the projects from earlier phases of urban development in Germany. Conurbations showed signs of a renewed housing shortage around 2008, when the international financial crisis changed property markets and when urban growth in the wake of German reunification was mostly complete.

The application of the above criteria led to a sample of 69 projects in 37 cities.

We compiled 100 urban development characteristics in a semi-standardised manner for each project through a structured online data collection form. Quantitative and qualitative methods were combined for analysis and interpretation. Descriptive methods and statistical tests with *p*-values (given the relatively small sample size) were used to identify basic trends in relationships and correlations. The fact that most of the projects are still in the planning stage resulted in varying information densities; the evaluations therefore refer to the data available in each case.

The analysis focuses on six analytical categories. These are relevant in the context of the issues discussed above and could be captured at the neighbourhood level. The results reflect planning objectives, not implementation or long-term impact (see Section 4 below, and also Table S5). The six categories are the following:

- Location: Here, we examine the occurrence and location of the projects at different scales—in Germany, in the respective city-regional context, and for the immediate environment of the planned project—asking, for example, which types of cities attract city expansions.
- Building structure and use: We suspect that there is a conflict between contradictory requirements—new neighbourhoods should create urban density, mixed use, and urban identity, but they must also relate to the suburban surroundings (including scenic landscapes). Therefore, we explore whether plans envisage a compact structure differing from previous "postmodern" principles. We also examine whether mixed-use, rather than purely residential, quarters are planned. Can we find typologies that are even similar to inner-city neighbourhoods?
- Open space, landscape, and nature: We assume that green corridors, public spaces, and landscape references are seen as crucial aspects of sustainability performing social and climatic functions. How

does the location on the urban fringe influence the structure and function of open spaces with respect to environmental sustainability and climate change?

- Social aspects and services: Social inclusion, mix, and diversity are key elements of sustainable urban development and design. Accordingly, we examine the role of planned diversity and social integration. We ask what the planned projects offer for poor, vulnerable, and marginalised populations and what is being done to promote conviviality and social cohesion.
- Mobility: Here we examine planned mobility approaches and especially alternatives to motorised individual transport that are being offered. We examine efforts to reduce parking spaces and to promote sharing solutions, walkability, and bike-friendly infrastructure.
- Planning and governance: This category examines the planning processes including the role of stakeholders. We ask for the relationship of public, private, and civil society actors in the planning, design, and development process and for/urge new forms of participation and co-production.

Finally, our aim was to characterise the aspiration of promoting innovative *sustainable urban development and design* solutions. For this purpose, we have developed a "tentative sustainable urban development ambition index" (TSUDAI) to approximate the cumulated sustainability efforts of new urban expansions. The index builds on a selection of key indicators, which are clustered into six main categories. It can reach a maximum value of around 7:

$$\text{TSUDAI} = \text{IF} + \text{ID} + \text{IM} + \text{IO} + \text{IH} + \text{IP}$$

Functional mix (IF) and residential density (ID) stand for space efficiency; mobility transition (IM) stands for the ideals of the 15-minute city and resource conservation; open space (IO) stands for ecological sustainability and quality of life; and housing (IH) and process quality (IP) stand for equity and social sustainability. Apart from the cardinal density measurement, values are calculated from simple ordinal assessments of subcategories (see Table S2).

4. Results

This section analyses the six categories of urban expansion projects and their sustainability ambition.

4.1. Profile and Location

Our findings indicate that, on a German scale, a total of 146,435 new homes are to be built on approximately 40,000 hectares. Assuming an average household size of 2.0, this corresponds to roughly three new large cities. The planned areas range from 6 to 600 hectares (ø58 hectares), while the number of planned residential units varies from 500 to 11,500 (avg. 2,122). Eleven projects account for half of the total land (2,054 hectares) and residential units (75,600). The total densities of the planned projects range between 11.4 and 123.1 residential units/ha, which is between those of single-family home areas and dense inner-city neighbourhoods (avg. 46.5 residential units/ha). Just over half of the projects were still in the planning stage at the cut-off date. This corresponds to the observation that planning large housing estates today takes up to 2.5 times longer than in the 1990s (BBSR, 2021, p. 70).

4.1.1. Spatial Distribution: Attachment to Booming Regions

Macro-scale analysis reveals that six (mostly large) cities host more than three projects, seven cities have two projects, and 24 cities only one each (see Figures 1 and 2a).



Figure 1. Location and size of recent urban expansion projects.

Geographically, with a few exceptions, the projects are distributed across all of Germany, with clear concentrations in growth centres stretching from Berlin westwards to the Ruhr area and along the Rhine corridor to Munich (Figure 1). The projects with over 5,000 residential units are located in large metropolitan regions except for Freiburg (Dietenbach). Nevertheless, significant projects also occur in smaller cities: Freiburg and Münster (rapidly growing university cities), Wiesbaden, Augsburg, and Kiel (administrative centres), and Wolfsburg (a car-production hub)—each with three major projects (Figure 2a).

It is also noteworthy that some economically strong cities that have extensive conversion areas and regions with stagnating or declining development remain significantly under-represented.

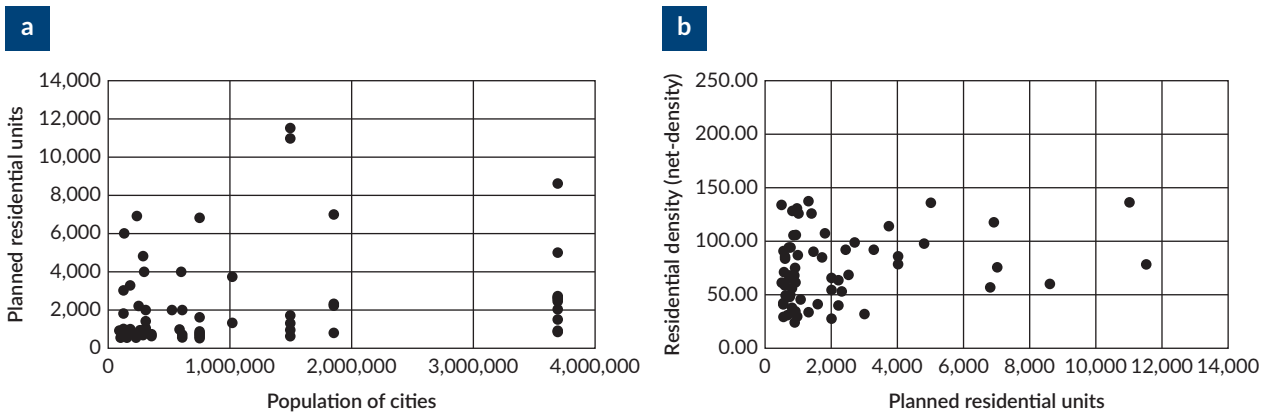


Figure 2. Scatterplots illustrating planned residential units by city population (a), and residential density by planned residential units (b).

4.1.2. Urban Environment and Previous Use: Controlled Expansion With Distinct Identity

The neighbourhoods are planned within heterogeneous environments. The majority (56/69) round up existing settlement edges ("growing the city"), sometimes using green buffer zones to separate them from neighbouring settlements and deliberately limiting road connections. This can be interpreted as a planning strategy to avoid protest but also to promote a distinct identity.

Building structures often blend with their surroundings through graduated zoning or visual references, mediating between the latter and the ideal of compact settlement expansion. "Solitary" extensions (4) or "filling in" of loosely built-up settlement edges (3) are the exception.

Most projects (53) are built on open, undeveloped, intensively used agricultural land, and in some cases on former sewage fields (3). In many places, these areas had been designated as residential building land for decades. A few are being built on undeveloped or sparsely developed military sites, industrial sites, horticultural businesses, allotment gardens, cemeteries, etc. In their immediate vicinity are single-family housing areas (62), agricultural land (55), nature and forest (21), large housing estates (17), commercial areas (15), and other uses (15). For details about the urban environment and previous use, see Tables S3a–c. For further details on the following subsections, see Tables S3d–l.

4.2. Building Structure and Use

4.2.1. Building Structures: Open Perimeter Blocks as Representation of Community

A characteristic feature is the prevalence of blocks with multiple openings (56 out of 67 cases). These promote a distinct spatial order (enclosed street spaces, green courtyards) with improved climatic and functional properties (ventilation, lighting, thoroughfares). At the same time, they allow a high degree of flexibility for arranging different building types and uses. In contrast to the more formalised "New Urbanist" perimeter block development of many 1990s housing estates, open blocks can be seen as a representation of community combining openness and diversity with unity and shared values. Open blocks are composed of individual forms. They offer many opportunities to arrange urban density, mix building types, and integrate

open spaces. Additional structures observed in the studied neighbourhoods include terraced and row housing (46), detached buildings (36), and isolated closed blocks (16).

Beyond the basic urban structures, specific building typologies characterise the new neighbourhoods. Multi-storey residential buildings dominate (34 of 66 cases). A wide variety of other building types such as terraced houses (61), terraced/row houses (47), city villas (23), and high-rise buildings (17) are used flexibly in different configurations (Figures 3a–f).

Although most current plans feature open blocks and multi-storey buildings (Figures 3a–f), divergent concepts also appear (Figures 3g–i). Some cases display blocks and open spaces as dissolved structures (Figures 3h and 3j). Others work with detached houses (Figure 3i).

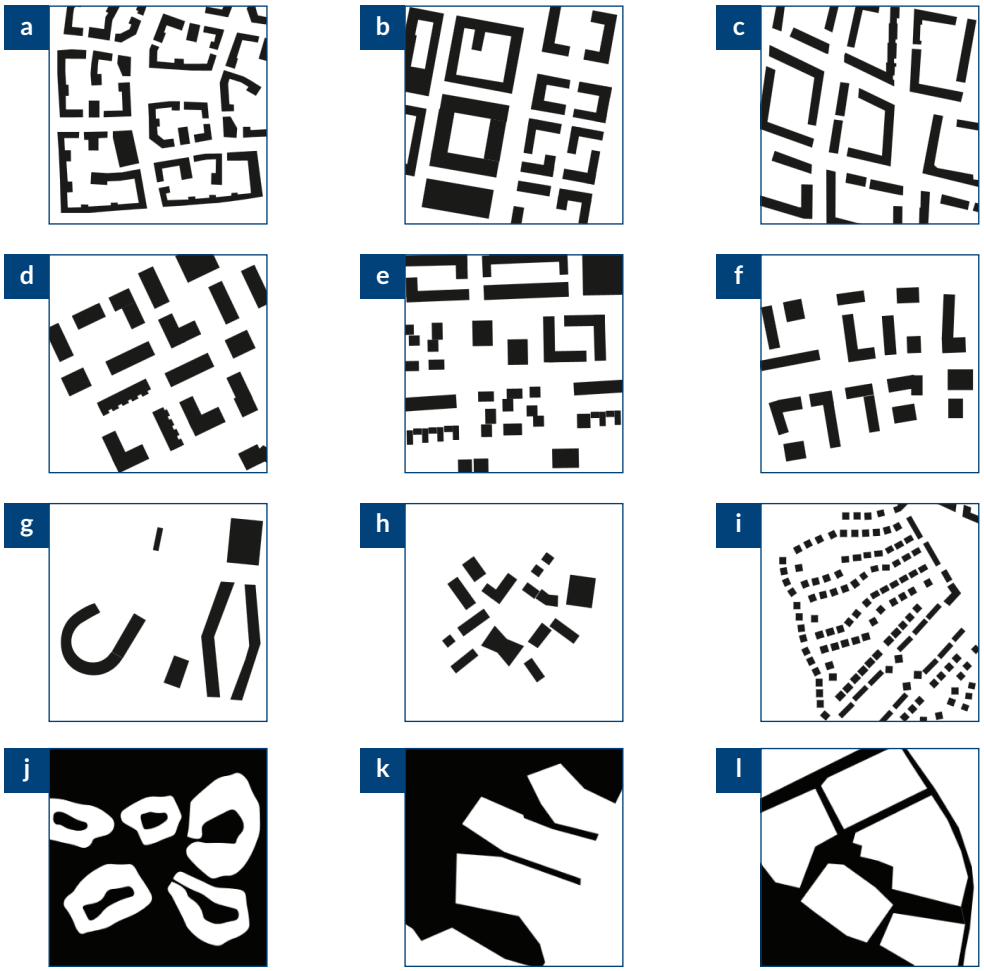


Figure 3. Examples of structural diversity of perforated and agglomerated blocks (a–f), other patterns (g—i), and three examples of intertwined urban and landscape relations (j–l): (a) Munich-Freiham 1. RA (Hild und K/Studio Vulkan, 2018); (b) Hamburg-Oberbillwerder (ADEPT/Karres en Brands, 2021); (c) Hanover-Kronsrode (ASTOC/West 8/SHP, 2017); (d) Saarbrücken-Im Kappenroth (MARS/GREENBOX, 2022); (e) Wolfsburg-Hellwinkel Terrassen (smaq, 2015); (f) Berlin-Buch am Sandhaus (Studio Wessendorf/Grieger Harzer, 2021); (g) Hamburg, Gartenstadt Öjendorf (BeL/URBAN CATALYST/PolinnaHauck/ARGUS/BWS, 2022); (h) Düsseldorf-Kalkumer Schloßallee (Venus/BeL/GREENBOX, 2024); (i) Krefeld-Fischeln Southwest (Christoph Kohl/KK, 2016); (j) Cologne The WoodHood (Karres en Brands/Metabolic/Argus, 2024); (k) Offenbach-Bieber Waldhof West (rheinflügel severin/[f], 2019); (l) Hildesheim-Wasserkamp (mla+, 2023).

4.2.2. Urban Density: Reaching Inner-City Levels

We observe that compact and dense structures, essential to "postmodern" urban development, are implemented in many places. High urban densities are intended to save space, thereby promoting sustainability, yet they can conflict with demands for climate-friendly and green neighbourhoods, as green infrastructure also requires land. The average neighbourhood-related density (or net-density) is 77 residential units/ha (Figure 2b). This corresponds to recent studies on new urban neighbourhoods in Germany (Freudenau et al., 2021, pp. 46–50, with an average density of 93 residential units/ha for projects in large and 51 residential units/ha in small cities, regardless of their location in the city). No statistically significant association was found between residential density and city size ($r = 0.15$, $p = 0.23$, $n = 69$). Even in the largest cities, individual lower density projects are being planned. A weak negative correlation was found between density and gross project area ($r = -0.28$, $p = 0.02$, $n = 69$; Figure 2b), suggesting a slight tendency for larger projects to be developed at lower densities. Although statistically significant, the effect remains limited. One explanation is the prevalence of large open spaces in large projects.

It should be noted that many neighbourhoods are zoned, with densities decreasing from the centre to the periphery. For example, in the Hellwinkel-Terrassen project, densities decrease from 3.6 to 1.2. The corresponding maximum floor area ratios (FAR) in the neighbourhood centre range from 0.4 (Bielefeld-Grünheide) to 7.2 (Munich-Freiham), while the average is 1.9 ($n = 40$). Eight projects achieve a value above 3.0. The peaks are usually due to higher-rise urban development accents, particularly evident in the largest cities. The corresponding minimum values at the edge of the settlement range between 0.3 and 2.75, with an average of 1.0 ($n = 30$).

Larger projects tend to accommodate denser areas, as indicated by a moderate but statistically significant positive correlation between maximum FAR and project size ($r = 0.42$, $p = 0.007$, $n = 40$). This suggests a tendency for larger projects to be associated with higher permitted densities, although the relationship is not deterministic. In contrast, no meaningful correlation was found between city size and maximum density ($r = 0.10$, $p = 0.535$, $n = 40$). This result supports our observation that larger projects tend to be more complex and diverse (see, for example, the next section).

4.2.3. Functional Mix and Defining Uses: Dominance of Serviced Residential Neighbourhoods

Since 2010, almost no purely residential areas have been planned on city outskirts, in contrast to the first decade of the 2000s (Freudenau et al., 2021, p. 54). The degree of mixed-use varies considerably and tends to increase with neighbourhood size. Nevertheless, only about a quarter of cases (17) features a more extensive mix with office and service space, educational or university uses, and, in some cases, manufacturing. In isolated instances, large-scale retail, hotels, trade fairs, clinics, and healthcare facilities also contribute to the mix.

Notably, larger cities tend to attract schemes with a higher degree of functional mix: 30% of projects in cities with more than 500,000 inhabitants envisage more extensive mixed-use concepts, compared with only 20% in smaller cities.

4.3. Open Space: Green and Multifunctional Streets and Places

Open spaces are a defining feature of many projects, encompassing extensive, sometimes dominant open corridors, parks, and other undeveloped areas. The peripheral location requires constant mediation between urban and suburban contexts. In 38 of 65 projects, open space networks are being created that allow the landscape to "flow" into the neighbourhood. The stronger focus on nature and landscape compared to the 1990s is reflected both quantitatively and in the structuring, arrangement, and design of networks and interconnections (Figures 3j–l).

Pedestrian-oriented green corridors are increasingly replacing car-oriented boulevards and streets. Another new feature is the multifunctional use of spaces serving as air corridors, infiltration area, play area, park, and urban gardening, as exemplified by the "Green Loop" in Hamburg-Oberbillwerder, a green lung, biotope, and place for sport, leisure, and relaxation (Figure 4).

New urban districts use a wide repertoire of open space types, forming an interwoven open space structure; green corridors (48) are employed to enhance landscape integration. Semi-public block-related communal areas (47) remain common, as are meeting places such as central (46) and decentralised squares (35) and some village green-style street spaces (9). Lakes (9) are also incorporated. Private garden areas are also common (39l). Overall, planning communal open spaces is seen as central to strengthening social cohesion and ensuring quality and diversity of use.

As with 1990s' projects, open spaces are grounded in postmodern concepts. Furthermore, quality of life and a wide range of recreational facilities are intrinsically linked to ecological functions (fresh air, circular economy, water retention, infiltration) and frequently impact project concepts (sponge city, animal-assisted design, etc.).

4.4. Social Aspects and Services: New Levels of Social Housing and Social Infrastructure

The projects examined demonstrate ambitions for innovation in social aspects. Social housing is not a new instrument. Nevertheless, following large-scale privatisation and a decline in occupancy rights, many cities have re-emphasised affordable housing provision as a core task, often exceeding respective legal requirements. Of the 54 sufficiently concrete projects, 27 provide for subsidised housing, 10 of which even have an above-average subsidy rate of more than 30%, which underlines the relevance in new neighbourhoods. Among special types of housing, senior citizens' housing dominates (26), followed by "mixtures of different types of housing" (18), "other innovative housing projects" (18), "multi-generational housing" (16), and student housing (14).

There is also a wide range of social infrastructure. The projects (65) provide for legally binding nursery schools, plan food retail outlets (42), and schools (38; especially in large neighbourhoods). This is complemented by facilities for children and teenagers (22), senior citizens and health infrastructure (18), and religious facilities (7).

Of particular note are more far-reaching contributions, which are supported by civil society promoting social cohesion. However, these are more difficult to grasp due to the projects' planning status and inconsistent terminology. These include neighbourhood meeting places (31/36), services for surrounding neighbourhoods (12), and rare but significant services such as "urban agriculture" and "workshops" (8).

Programmes like co-working, multifunctional rooms, and pop-up stores were observed occasionally, demonstrating considerable variety. Notably, the term "special social infrastructure" was often associated with the term "central" (21), for example to enrich neighbourhood centres.

New neighbourhood projects are increasingly integrating special forms of housing and a variety of "alternative" facilities. Their breadth reflects current trends such as individualisation, diversification, and ageing, combined with the demand for different lifestyles and household types with specific needs. The high proportion of cooperatives and building groups (see Section 4.6) corresponds to this observation.

4.5. Mobility: Streets to the People

Mobility has undergone considerable change since the 1990s, e.g., in terms of cycling, the 15-minute city, parking, and e-mobility. Car parking seems to be moving towards bundled, neighbourhood-based solutions. The most common (40/65) are neighbourhood garages. These are complemented by conventional underground garages (34), street-side parking (33), and parking on private plots (22), and sometimes collective parking in open spaces (4).



Figure 4. Integrating infrastructure and public spaces in the "Green Loop" (Hamburg-Oberbillwerder)—an attempt to promote "sustainable" solutions: (a) social and functional mix; (b) mobility; (c) open space; and (d) ecology. Sources: (a) and (b) by ADEPT/Karres en Brands/IBA Hamburg, (c) and (d) by Atelier Loidl/IBA Hamburg.

Today's neighbourhood garages are often planned as multifunctional "mobility hubs." They serve as car parks and offer additional services such as shared facilities, neighbourhood cafés, and delivery points. They can also be used as co-working spaces and hubs for the circular economy (see Figure 4, for example).

These new "centres" are sometimes linked to public spaces, with the aim of vitalising them and staging the routes to residential areas.

Even more important than parking solutions are integrated multimodal mobility options, linking attractive public transport with good cycling and pedestrian infrastructure. Public transport is usually already available (buses in 53 and rail in 30 cases). Many projects are planning intermodal "sharing hubs" (44) and mobility stations (34). For non-motorised private transport, measures to promote bicycle use (36), integration with existing cycling networks (28), and attractive footpaths (25) are planned.

4.6. Planning and Governance

4.6.1. Planning Processes: Informal Tools Managing Complexity and Citizen Engagement

An ambitious diversity of planning and governance instruments characterises the projects studied. In many cases, multi-stage urban planning competitions guide complex planning processes (19/59). Informal framework plans mediate between various interests and represent a central link to subsequent formal land-use planning.

The more prominent projects show that plans must be continually adjusted to diverging interests and framework conditions. Competitions allow designers (and people) to feed ideas into the debate. Moreover, development rights and subcontracts tend to be awarded using concept-based procurement—prioritising ideas over cost efficiency. Citizen engagement is also central: In addition to standard information sessions (59/63), multi-stage dialogue-oriented procedures, planning workshops (59), digital participation procedures (22), or other formats are employed to promote identification and shared ownership. For more details about planning and governance see Tables S4a–d.

4.6.2. Project Sponsors and Stakeholders: The Public Sector Steers, With Selected Partners

Municipal control forms the backbone of complex projects, yet often a diverse group of partners is involved. The leading role of the public can be attributed to the high demands on coordination, public welfare orientation, and long-term land availability. Other stakeholders playing a minor but vital role are large housing companies (37/59), ahead of construction companies (36), project developers (34), and private individuals (30). Building associations and cooperatives (40) underscore the importance of incorporating alternative housing and living models. The diverse parties involved point to a heterogeneous project culture, and to diverse target groups and implementation models.

4.7. Agglomerated Sustainability Ambition TSUDAI: A Diverse Field, but Larger Projects More Aspiring?

The analysis of the six criteria related to an agglomerated sustainability ambition index (TSUDAI, see Section 3.2, and Table S2) shows a broad distribution of both ambitious and "simpler" projects across the

entire spectrum of cities and project sizes. Sustainable urban design, being a relational concept based on integrated dimensions, manifests itself very differently at the local level, which leads to a mean TSUDAI of 2.7. We see that sustainability approaches are obviously being pursued selectively, but in many places and in various fields. A considerable variance and dispersion between the projects exist: Six achieve a TSUDAI of over 5 (Figures 5a–d).

The results were correlated with planned residential units, project size, and structural conditions such as city size, population development, and political context (n = 67). The planned number of residential units showed a strong and statistically highly significant positive correlation with the TSUDAI (r = 0.52, p < 0.001; Figure 5a). The planning of larger neighbourhoods, often in the hands of the local authority, allows sustainability dimensions to be addressed in parallel through different procedural steps. Moreover, high levels of public attention can facilitate housing subsidies and thematic grants promoting innovation.

A modest but statistically significant positive correlation is observed between TSUDAI and electoral support for parties focused on social justice and environmental issues (Greens, Left; r = 0.31, p = 0.012; Figure 5b). By contrast, no statistically significant correlation was found with the local proportion of conservative, business-friendly parties (r = −0.04, p = 0.743).

No statistically significant correlations were detected between TSUDAI and city size (r = 0.15, p = 0.23; Figure 5c), or long-term population development over the past quarter of a century (r = 0.06, p = 0.604;

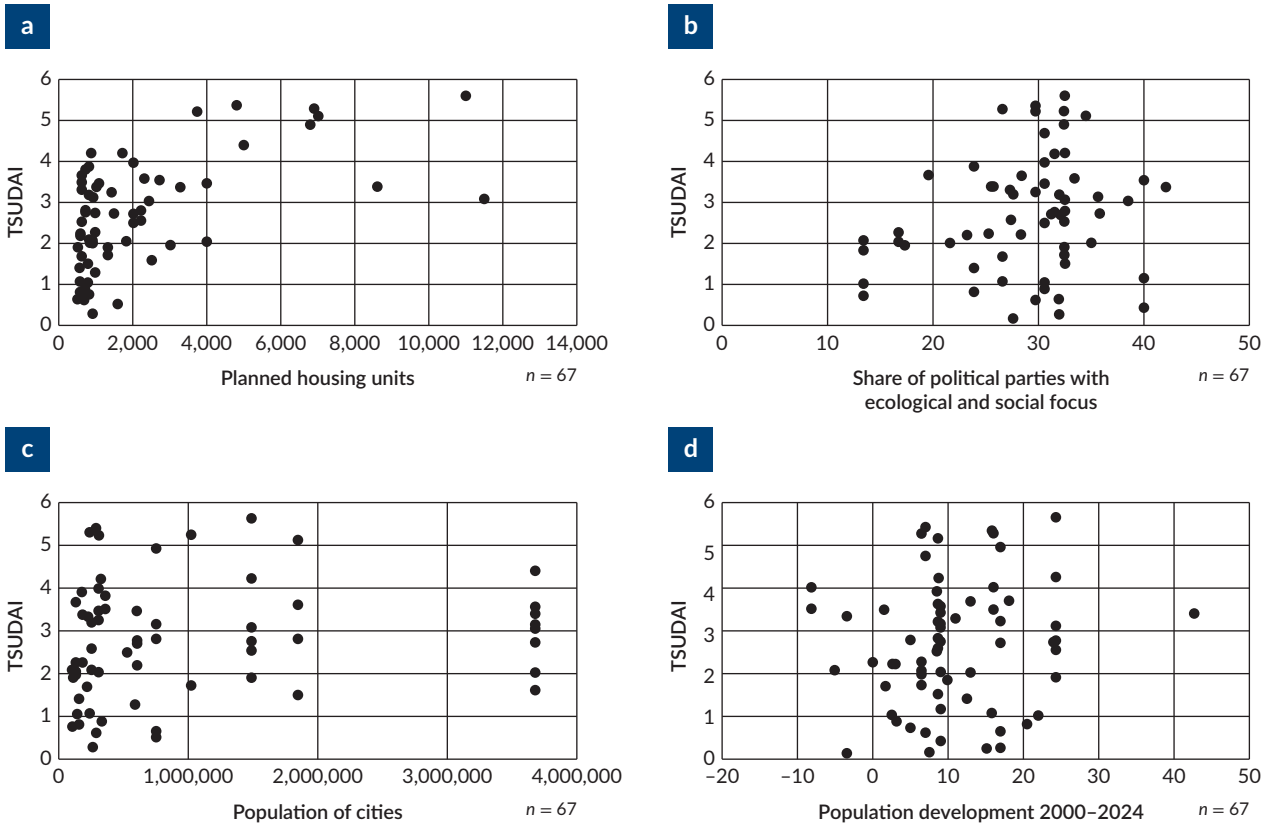


Figure 5. Project features and TSUDAI: The results were correlated with planned housing units (a), the political context (b), the host city population (c), and the population development from 2000 to 2024 (d).

Figure 5d). So, larger cities don't seem more committed to sustainability, and housing pressures in fast-growing cities don't seem to make much difference. A modest positive and statistically significant correlation was observed between TSUDAI and project size ($r = 0.32$, $p = 0.008$). This finding is in line with the results reported above (correlation with planned residential units) and in Section 2.2.2, which revealed a positive association between higher densities and project size. These results strengthen our observation that larger projects tend to be not only more complex and diverse but also enriched by more sustainability ambitions.

5. Discussion

This section tackles the initial research questions (Section 3) by providing a review of our six analytical categories and the agglomerated sustainability ambitions (see Table S5).

5.1. Location

Large urban expansion projects concentrate in booming metropolitan regions and particular medium-sized cities. Most projects emerge on agricultural land on the city outskirts previously marked for urban development. They are usually found in diverse environments, striking a careful balance between integration and separation while presenting a strong identity of their own. The projects pay attention to the surrounding fabric, for example through pedestrian links, buffer parks, or gradual zoning at the edges. Location is thus shaped both by structural demand (growth dynamics) and planning strategies, including considerations of identity formation and public acceptance.

5.2. Building Structure and Use

The results largely confirm the call for increased compactness and hybridity (Reicher & Söfker-Rieniets, 2022; Tarbatt & Tarbatt, 2020). Block-like structures, defined street spaces, and at least medium building densities are commonplace. These structures are broken up, loosened, and, in some cases, accentuated by modernist features (high-rise buildings, rows). Increased compactness and a net density matching values of inner-city neighbourhoods are no longer necessarily achieved through uniform, closed building typologies, but rather through spatial arrangements of varying degrees of density. Even so, typologies such as loosely composed open blocks dominate and configure public spaces. Although the neighbourhoods show greater diversity of uses than earlier suburban developments, larger concentrations of workplaces remain rare. Functional diversity is achieved through innovative social facilities, combinations of housing types, and a resurgence of flexible ground floors.

5.3. Open Spaces

The location at the urban edge, climate adaptation needs, and environmental standards explain a rising significance of open spaces and green landscape corridors. Landscape and topography are widely used as elements of local integration and structuring elements rearticulating the urban edge. Different from the "postmodern" 1990s' projects, green is the dominant colour of the designs, and green spaces are omnipresent. Water management, energy concepts, habitats, leisure, mobility, and social interaction are integrated into so-called "multi-coded spaces." The green street emerges as a new urban typology, still awaiting full appreciation. Pedestrian-oriented green corridors increasingly replace car-oriented street

spaces, reflecting changing urban design priorities, echoing calls in the literature (Aelbrecht, 2022; Carmona, 2021; Larco et al., 2013; Sohn et al., 2012).

5.4. Social Aspects and Services

Many plans embrace principles of social inclusion, diversity, and co-production. They demonstrate ambitions for affordable and inclusive housing through measures such as flexible building structures, diversity of providers, binding subsidy quotas, and occupancy restrictions. New housing options and corresponding infrastructure go beyond standards to address trends such as ageing, individualisation, and social diversity. Numerous projects are setting standards by including diverse, often civil society-run facilities—from edible gardens and workshops to community centres—to promote social cohesion. However, these attempts merely represent limited approaches to achieving equity and health as called for in the literature (Larco & Knudson, 2024).

5.5. Mobility

Guided by principles such as "city of short distances," and the 15-minute-city, the transition from car-dominated to pedestrian spaces has become a defining characteristic of contemporary urban expansion projects (Larco, 2016). Mobility hubs emerge as integrative new types of service buildings, contributing significantly to the realisation of visions of sustainable mobility, representing a radical departure from modernist car-centric structures (Carmona, 2021; Sepe, 2025). Likewise, the transition from car-dominated streetscapes to pedestrian-oriented green corridors, a defining characteristic of postmodern neighbourhoods, is now signalling a broader shift towards more walkable, environmentally-responsive urban forms.

5.6. Planning Processes and Actors

Urban expansion is increasingly characterised by many institutional actors and formal and informal procedures and intricate governance arrangements. However, there is a growing role of small-scale urban producers such as building groups and cooperatives, as the "icing on the cake." This is a significant difference to both large publicly-controlled modernist projects or the private sector-centred "postmodern" schemes from the 1990s. Planning processes experience increasing complexity, as a wide range of issues and competing interests—including sustainability goals, public acceptance, mobility, environmental protection, and land-use conflicts—are negotiated. This leads to new informal instruments, transdisciplinary cooperation arrangements, and new forms of citizen engagement. Whether the new projects will be truly co-produced remains to be seen.

5.7. Sustainability Ambition

In our exploration of the sustainability ambition (TSUDAI), we observe a broad and diverse distribution, indicating that sustainability approaches are being pursued in many places and in various categories. Most clearly, the level of sustainability ambition seems to increase with the number of planned units. The presence of governments that focus on social and environmental goals also appears influential. The impact of the planned units on ambition levels can be explained by the scale and complexity of these projects and the attention these receive, including protests and needs for justification. City population, project area, and long-term population dynamics do not appear to impact sustainability ambitions.

6. Conclusion and Outlook: Towards Convergence of Postmodern and Sustainable Urban Design Principles?

Our results clearly show that the current phase of urban expansion in major German cities constitutes more than a continuation of postmodern principles prominent in the 1990s. Previous approaches are merged with typological, process, and sustainability-oriented innovations. Urban planning and design combine elements from the "catalogue" of older periods (modernist architectural language, postmodern organisation of space) with recent innovations (multi-coded areas, mobility-hubs) for increasingly complex and ambitious ends: housing production, urbanity, ecosystem preservation, mobility, social integration, acceptance, and identification.

The outcomes follow a distinct design approach resulting in a seamless whole with a distinct urban "grammar": Open perimeter-blocks dominate most of the urban fabric; green dominates the open spaces; projects are intertwined with green landscape corridors as structural backbones and connectors; streets are for pedestrians; parking is organised in mobility hubs; social housing takes a significant share; the public sector steers the process. Additionally, alternative elements are sometimes added, such as building rows, towers, townhouses, alternative apartment types and layouts, non-residential uses, neighbourhood bureaus, community farms, private electric buses, spontaneous transdisciplinary coordination groups, etc. This complementary blending promotes a controlled, organised level of mix and diversity different from earlier periods. Not least, the careful localisation and integration into the local context, graded buffers, transition zones, and consideration of landscape and topographical features are important components of the language of new urban expansions.

Overall, new urban expansion projects in Germany adopt an integrative approach to sustainable urban development. The ambition of this approach varies significantly, as does its manifestation in social, technical, energy, and transport systems. Spatial and morphological implications are evident in the heterogeneity of districts and diverse green open spaces. Climate protection and adaptation, along with their links to energy, water, ecology, biodiversity, social sustainability, and health, are addressed at various scales. A wide range of elements relating to sustainable transport is also included. The flexible combinations are far from random, and their distinctive grammar is distinct from previous phases and project types such as infill and conversion projects.

In this context, design principles function less as coherent programmes and more as discursive frameworks structuring complex decision-making processes. The sustainability paradigm in particular acts as a catalyst, shifting the focus from purely morphological issues to technical, energy, and infrastructural systems and producing new combinations of density, mobility, and open space. The transformation of urban development principles is thus less a linear paradigm shift than a selective, project-related recombination of elements of postmodernism and the sustainability agenda—enriched by features already used in modernism. The special location conditions on the outskirts do, however, resist a comprehensive implementation of these principles and shape change in a particular way. The outskirts are thus important arenas where current shifts in principles are materialising in concrete terms in space and in planning processes.

A more precise understanding of these shifts will require further in-depth research, especially when it comes to the specific connection between sustainability ambitions and urban planning principles. Due to the early

planning stage of many of the projects, this article could only document preliminary results. Against this background, the future implementation of the numerous planned urban expansion projects should be carefully monitored. Questions regarding local variations, the feasibility of high sustainability standards, their adaptability, and acceptance will play a role, as will the extent to which many innovative approaches that have not yet been tested can prove their worth in practice.

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Conflict of Interests

The authors declare no conflict of interests. In this article. Editorial decisions were undertaken by Henriette Bertram (TU Braunschweig) and Angela Million (TU Berlin).

LLMs Disclosure

The AI-based language model (DeepL) was used exclusively for translation purposes, in compliance with data protection regulations. Cross-checks were always performed, and adjustments were made as necessary; none of the generated content was used without being reviewed first.

Supplementary Material

Supplementary material for this article is available online in the format provided by the authors (unedited).

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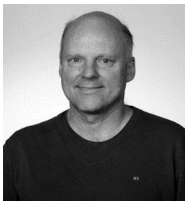
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Compact or Balanced: Evaluating Spatial Contradictions in Population and Housing Objectives Within Irish Planning Policy

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Abstract

Following publication of the National Planning Framework, over the past decade, Irish urban design and planning policy has increasingly embraced the language and strategies of compact growth. This shift has occurred within the context of a much longer history of national spatial planning, in which the objective of "balanced" regional development has persisted despite changing ideas about the spatial form that balance should take. This article argues that the National Planning Framework represents a multi-scalar reorientation in Irish planning policy, promoting regional concentration with settlement-scale compaction, in contrast to previous strategies of decentralised sprawl. Yet little attention has been given to whether these objectives are mutually consistent, or to how they are shaping actual patterns of development. To address this gap, the article evaluates recent population and housing outcomes against stated policy targets and maps urban expansion across Ireland's three regions. It asks what spatial forms are emerging, whether planning objectives are being met, and whether these outcomes align with Ireland's compact growth ambitions.

Keywords

compact growth; regional development; spatial policy; urban expansion

1. Introduction

Since the mid-20th century, the Irish state has pursued a policy of "balanced" regional development. This objective has been pursued through government Acts, agencies, committees, and reports that have sought to control or mitigate the growth of the Dublin region in favour of less concentrated development at the national scale (Walker, 1987). National spatial plans have had the role of recommending a future physical pattern of settlement concentration and distribution that might best deliver on these ambitions.

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The National Planning Framework (NPF), first published in 2018, is the most recent iteration. Since its adoption, national planning policy in Ireland has increasingly embraced the language and strategies of compact growth (Department of Housing, Local Government and Heritage, 2024; Department of Housing, Planning and Local Government, 2018; Government of Ireland, 2024).

The NPF combines two related but distinct spatial objectives. At the regional scale, it seeks to concentrate population and employment growth towards select centres. At the settlement scale, it seeks more compact, contained forms of urban expansion.

Prior research has examined the NPF in relation to its historical significance, statutory framework, governance arrangements, and wider policy context (Kayanan et al., 2025; Lennon et al., 2018; Russell & Williams, 2021; Walsh, 2019; Williams & Nedović-Budić, 2023). Few have evaluated the plan's objectives within an explicitly spatial framework (with the exception of Cahill, 2025; McCafferty, 2019). Consequently, there is limited evidence as to whether the strategy's goals are internally consistent, in terms of their projected impacts, or externally feasible, given the structure of the existing Irish urban system.

This article addresses the issue by asking: To what extent is the NPF delivering its objectives of "balanced" growth through concentrated regional development and compact settlement form?

To answer this question, the study undertakes a conformance-based ex post evaluation of the NPF's core spatial objectives—the first to systematically do so—and presents a unique multi-scalar conceptual framework for this purpose.

The article makes a key methodological contribution in proposing a simplified, accessible measure of settlement-scale compactness that can identify whether new development is increasing density and reducing fragmentation, or contributing to more dispersed urban form.

Results demonstrate that policy conformance at the national level can obscure substantial variation across regional and settlement scales. They also show how "balanced" growth targets can undermine compact settlement objectives in cases where the existing urban system is unable to accommodate allocated benchmarks.

The article proceeds as follows. Section 2 situates compact growth within international and Irish spatial planning debates, and introduces a multi-scalar spatial framework that provides the conceptual basis for the research question. Section 3 evaluates recent population and housing outcomes against relevant National Policy Objectives (NPOs). Section 4 develops and applies a method for assessing settlement-scale compactness. Section 5 discusses the implications of the findings for Irish spatial policy and for the evaluation of compact growth objectives more broadly.

2. Policy Context

2.1. International Adoption of the Compact City

The compact city is typically described as a spatially contained or contiguous urban settlement comprising mid- to high-density built form, a diverse mix of land uses within close proximity to residential units, and extensive

public transport provision (OECD, 2012; Thomas & Cousins, 1996). This definition is occasionally extended to specify morphological features such as building/plot structure and street network connectivity (Ahlfeldt et al., 2018; Neuman, 2005).

A primary justification for the promotion of compact city principles is the potential to reduce human-induced carbon emissions due to an associated adoption of less energy-intensive activity patterns (Frey, 1999). This conclusion is based on a number of interrelated impacts, drawing a link between settlement form and inhabitants' actions. In short, urban containment is intended to encourage proximity, while protecting undeveloped lands; density supports the provision of public transport and a diversity of services—and vice versa. Together, these properties are expected to result in the preservation of rural areas, improved accessibility, a decrease in the average number and length of journeys, and a reduction in greenhouse gas emissions per km travelled (Ahlfeldt et al., 2018; Burton, 2002; Frey, 1999; Jabareen, 2006; Thomas & Cousins, 1996).

Historically, claims to such impacts have been perceived to lack empirical research (Breheny, 1996; Jenks et al., 1996), yet this has not prevented the compact city from becoming embedded in spatial policy internationally in recent decades.

In the European context, the early promotion of the "'traditional' dense and mixed-use European city" (Frey & Yaneske, 2007, p. 34) emerged as a formal design response to the Brundtland Report (Brundtland, 1987) via the publication of the *Green Paper on the Urban Environment* (Commission of the European Communities, 1990) by the European Commission. Concurrently, compact city principles have been translated into distinct policies and practices at national level since the 1980s (de Roo, 2000; Ding et al., 2018), proliferating up to the present day (Büttner et al., 2024; OECD, 2012).

Similarly, the compact city remains a core component of European spatial policy (Katurić, 2025), while it continues to be promoted by a range of global organisations (Goddard et al., 2024; Yemeru et al., 2024). Such that compact city policies are arguably established as the hegemonic model of sustainable urban form (Haarstad et al., 2023).

2.2. The Compact City in Irish National Spatial Policy

Relative to this international policy context, Irish spatial planning has followed a similar, if specific, path towards the adoption of compact city principles.

Recommendations for compact, mixed-use city centres, with access provided through improved public transport links, stretch back to at least the 1980s (Bannon & Eustace, 1981).

A number of features common to the compact city have "enjoyed a central place in policy discourses on sustainable urban development" in Irish spatial planning at national and regional scales since the 1990s (McInerney & Walsh, 2009, p. 208). However, application has tended to emphasise a singular aspect—urban containment (Department of Environment, Heritage and Local Government, 2009; Government of Ireland, 2002).

This remains the case within the current spatial policy framework, enacted following publication of the NPF (Government of Ireland, 2018). An understanding recently codified, with compact growth now defined in Irish planning law as any form of development located within an existing settlement boundary (Government of Ireland, 2024).

Significantly, while the NPF was not the first Irish spatial policy document to reference compact city ideas, it has reframed the question of settlement-scale growth from local development planning to a national objective (Williams & Nedović-Budić, 2023).

Within this reframing, compact growth is presented as an antidote to more de-concentrated forms of urban expansion (Department of Housing, Local Government and Heritage, 2024; Department of Housing, Planning and Local Government, 2018). A response to Ireland's well-documented association with sprawl, particularly during the 1990s and 2000s (OECD, 2018; Siedentop & Fina, 2012).

In large part, the suburbanisation of recent decades has been associated with the expansion of Dublin and its surrounding hinterlands (for example, see McDonald, 2006; O'Brien, 2007). As such, strategies to contain sprawl are implicitly linked to a longer-term national objective concerning "balanced" regional development. In this context, compact city principles within Irish planning can be interpreted in terms of debates regarding the optimum spatial pattern to support more equitable growth at the inter-regional level.

2.3. The Origins and Implementation of "Balanced" Growth

From the 19th century onwards, an increasing concentration of population to the east of the country has occurred, largely driven by growth in the capital and its hinterlands (Brady Shipman Martin, 2000; Hayes, 2025). The extent of this movement has historically raised concerns regarding rural depopulation and an "unbalanced increase" in urban settlements, particularly Dublin (Newman, 1967, p. 13).

Strategies to underpin more even regional growth have oscillated between "centralist" and "dispersionist" camps (O'Neill, 1973). The centralist approach is evident in national spatial plans, wherein a select number of larger settlements are identified in which to concentrate growth.

For example, the country's first national-scale spatial policy, *Regional Studies in Ireland* (Colin Buchanan & Partners, 1968), incorporated a "growth pole" paradigm; widely adopted by international planning practice at that time (King & Golledge, 1978). The plan identified centres with the objective of strengthening regional urbanism and offering improved opportunities to the surrounding hinterland (Turpin, 1967). The report proposed a five-level grouping of towns—in addition to the cities of Dublin, Cork, and Limerick—based on their development potential.

Similarly, Ireland's second national-scale plan—the National Spatial Strategy—proposed a settlement hierarchy of Gateways and Hubs, defined according to population size and service provision. This included five "Existing Gateways" (equivalent to the five cities), eleven "New Gateways," and five "Hubs" (Government of Ireland, 2002). The approach was influenced by contemporary European spatial policy concerns related to regional clusters and polycentricity (Doyle, 2025).

Both national-scale spatial plans were commissioned or published by the state, yet neither was issued on a statutory basis. Consequently, their realisation was limited, and even undermined by subsequent government policy that prioritised regional dispersion (MacFeely et al., 2011; Walsh, 2019).

This dispersionist approach was pursued through more sectoral and employment-focused policies, distributing potential growth over a much wider area to include small and medium-sized settlements (for examples, see: Department of Economic Planning and Development, 1979; Houses of the Oireachtas, 1999; Industrial Development Authority, 1972).

Viewed in this light, the National Planning Framework may be understood as the most recent iteration of the centralist approach. Just like its predecessors, the NPF adopts the strategic goal of "balanced" development, seeking to achieve this by focusing growth within the nation's five cities, alongside the identification of five Regional Growth Centres (Figure 1).

If centralist and dispersionist policies are viewed as a continuum (O'Farrell, 1974), the NPF is the most "centralised" of Ireland's three national spatial strategies in that it designates a total of 10 settlements for growth. This is compared to 34 (Colin Buchanan & Partners, 1968) and 21 (Government of Ireland, 2002), respectively.

2.4. A Spatial Framework for Interpreting Planning Policy

The preceding discussion has identified the primary spatial scales and patterns that have emerged as the preserve of national-level planning policy in Ireland.

These two dimensions provide the basis for the spatial framework used in this article (Figure 2). Regional centralisation and settlement compaction together describe the model of compact, concentrated growth now promoted by the NPF. Regional dispersion and settlement sprawl describe the "deconcentrated and decentralised urbanisation" of past policy and practices (McCafferty, 2019, p. 82).

This framework thereby situates the NPF within the wider history of Irish planning policy while also providing a basis for evaluating its contemporary objectives. It emphasises the multi-scalar nature of the NPF and the degree of change required to deliver the strategy's spatial ambitions.

Since evaluation requires attention to both dimensions simultaneously, this article asks: To what extent is the NPF delivering its objectives of "balanced" growth through concentrated regional development and compact settlement form?

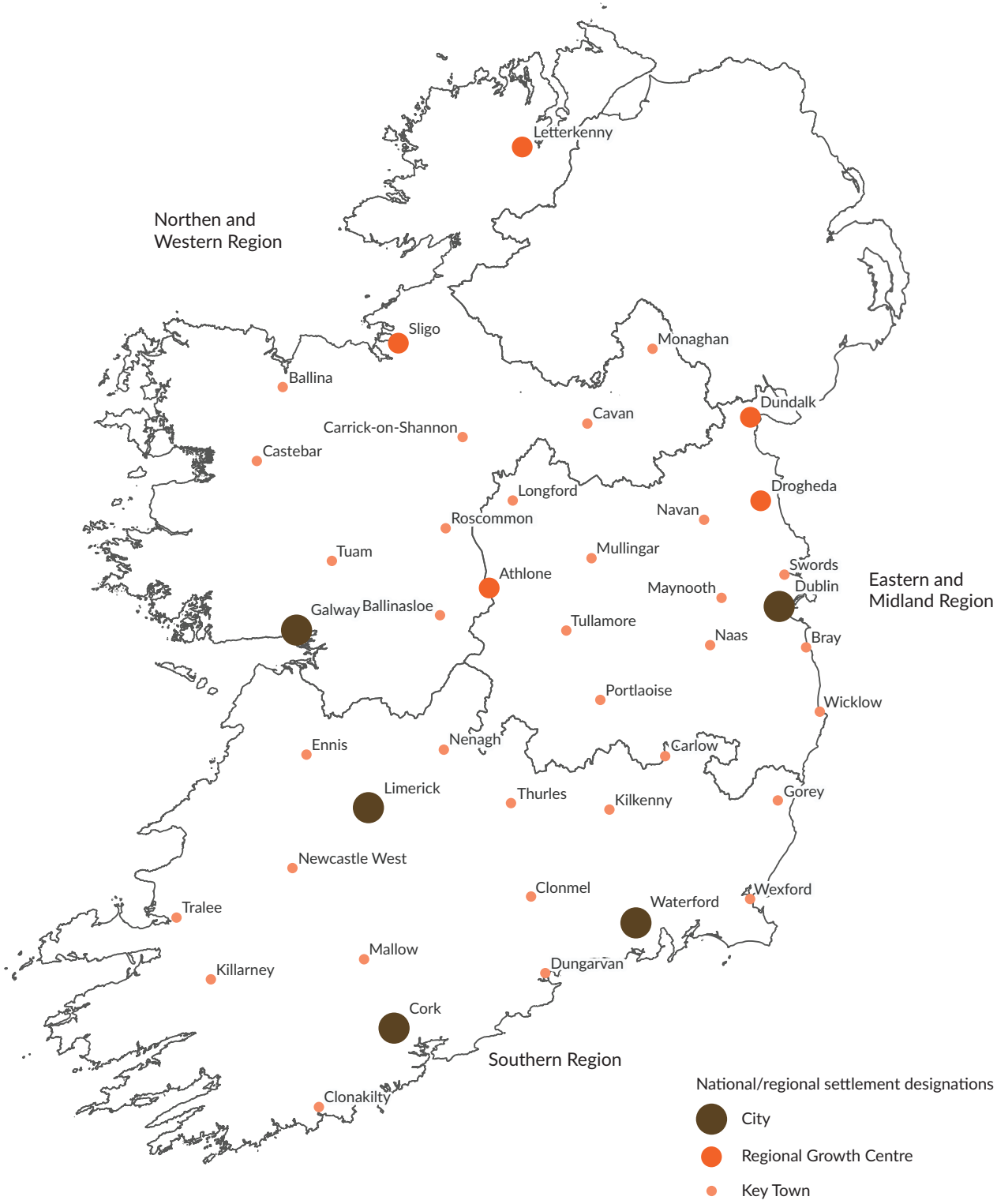


Figure 1. Map of current national and regional settlement designations. In total, 32 Key Towns have been assigned by the three regional authorities.

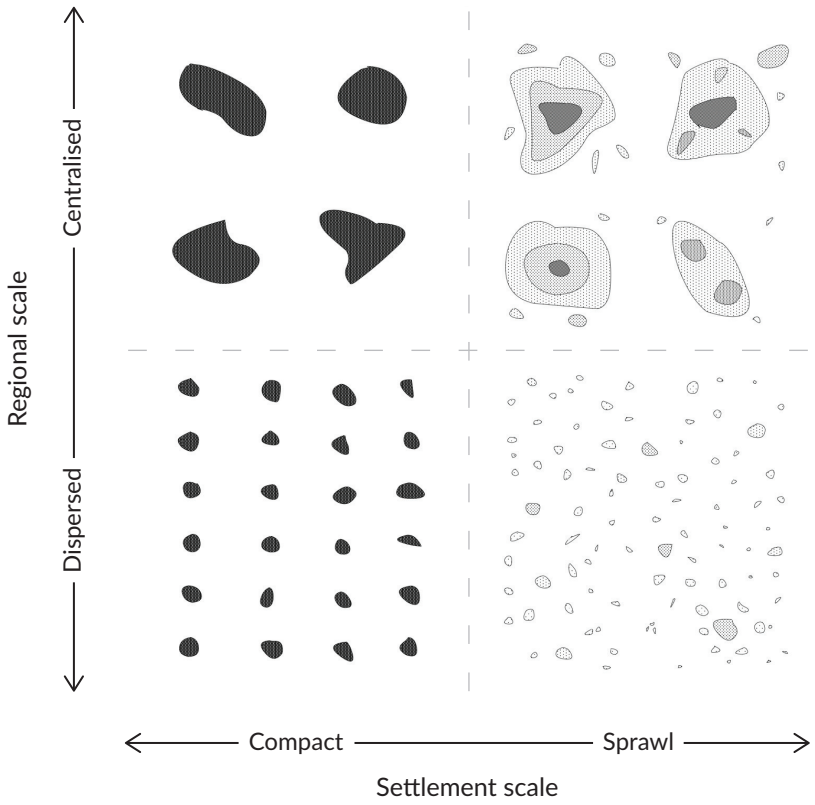


Figure 2. Multi-scalar spatial framework diagram, illustrating growth patterns according to regional-scale centralisation/dispersion and settlement-scale compactness/sprawl. Note: Darker tones represent higher densities.

3. Plan Evaluation

3.1. Method Overview

To answer this question, the article follows a conformance-based approach to ex post plan evaluation.

Planning evaluation, in general terms, involves "the systematic assessment of plans, planning processes, and outcomes compared with explicit standards or indicators" (Laurian et al., 2010, p. 741). Ex post evaluation is focused on plans after implementation and seeks "to determine whether the plan achieved its stated goals and objectives" (Guyadeen & Seasons, 2018, p. 101). One approach to ex post evaluation is conformance-based assessment, which focuses on the alignment between a plan and subsequent physical development patterns (Laurian et al., 2004; Mastop & Faludi, 1997).

Conformance-based evaluation is deemed particularly appropriate for morphologically related research (Talen, 1997), providing information that can be reviewed for the purposes of amending policy (Shahab et al., 2019).

The method undertaken in this article involves two parts. First, the three NPOs concerned with "balanced" growth, regional centralisation, and compact settlement form are identified. These are analysed using recent population and housing data to confirm the level of conformance achieved. Second, where policy metrics are unable to measure intended outcomes (i.e., compact growth), a new method for quantifying changes in

urban compactness/sprawl at the settlement scale is proposed. The results of this analysis are discussed in the final section.

3.2. Data

3.2.1. Population Data

Population data are sourced from the Central Statistics Office (CSO) and based on national census results. Total population figures have been collected at the sub-regional (NUTS3) level and aggregated at the regional (NUTS2) scale (CSO, 2022a, 2023b). Urban population figures have been collected for individual settlements and aggregated at the regional (NUTS2) scale (CSO, 2022b, 2023c).

3.2.2. Urban Area Data

In Ireland, the CSO classifies all settlements with a population equal to or greater than 1,500 as "urban." This definition is adopted for the purposes of this article.

The study adopts the 2016 CSO definition of an "urban area," involving a minimum cluster of 50 occupied dwellings, with a maximum distance of 100 m to the nearest building, and evidence of an urban centre (in terms of service provision; CSO, 2017).

The standardised CSO method of boundary delineation in 2016 involved the extension of existing "urban areas" where an occupied dwelling lay within a 100 m proximity threshold (CSO, 2012). Although the CSO approach to boundary delineation changed in 2022, population data from 2022 have been made available for the 2016 boundaries. For consistency, the 2016 settlement boundaries are the version referenced in this article.

3.2.3. Housing Data

The assessment of dwelling completions, 2016–2024 (Section 3.4.2.3), refers to CSO tables NDA02 (dwelling completions by type per county) and NDA12 (dwelling completions by type per settlement).

For the settlement compactness analysis (Section 4), Geodirectory's GeoBuilding Intel dataset is used (GeoDirectory, 2025). This provides geolocated point data for each individual address in the country with key variables including unit and building use (commercial or residential) and year of construction. This information was overlaid with NUTS2 regional boundaries (https://data.gov.ie/dataset/nuts2-boundaries-ungeneralised-national-statistical-boundaries-2015) and CSO settlement boundaries (per the 2016 census), provided by Táilte Éireann and available for download (https://data.gov.ie/dataset/settlements-ungeneralised-national-statistical-boundaries-2015).

3.3. The NPF

The NPF sits at the highest level of Ireland's hierarchically structured plan framework (Office of the Planning Regulator, 2022). Notably, the NPF is the first national spatial plan to be issued on a statutory basis,

underpinned by legislation (from 2010) that requires local development plans to align with national and regional strategies (Russell & Williams, 2021). This places it in a relatively unique position, historically, to deliver a coordinated, multi-scalar planning strategy.

The NPF sets out National Strategic Outcomes (NSOs) and associated investment priorities until 2040. These goals are outlined in terms of NPOs, of which there were 75 in 2018. This article will focus on those NPOs concerned with "balanced" regional development (NPO 1); the centralised distribution of population (NPO 2a); and compact settlement-scale growth (NPO 3).

These NPOs are significant in introducing performance-based metrics to Irish national spatial planning, utilising multi-scalar indicators across two key areas: population targets and housing location benchmarks.

3.4. Review of NPOs

3.4.1. Description of Measures and Goals

3.4.1.1. NPO 1: Regional Population Targets

NPO 1a requires that population and employment growth in the Eastern and Midland Region will be equal to growth in the Southern Region and Northern and Western Region combined. NPO 1b sets out projected future population figures for each region, while NPO 1c provides the same detail for employment.

3.4.1.2. NPO 2a: City Population Targets

NPO 2a states that 50% of national population and employment growth must be situated within the five cities of Dublin, Cork, Limerick, Galway, and Waterford. The NPF provides the exact population ranges per city in section 2.6 (Government of Ireland, 2018, p. 29).

3.4.1.3. NPO 3: Housing Benchmarks

NPO 3a requires that 40% of all new dwellings nationally be located within the built-up area of existing settlements. NPO 3b requires that 50% of new dwellings allocated to the five cities must be within their existing built-up area. NPO 3c requires that, for all other categories of settlement, 30% of new dwellings must be located within their existing built-up area.

The link between population targets and housing location benchmarks is interpreted to mean that 25% of new dwellings nationally must be developed within the five cities, and 15% of new dwellings nationally must be developed in other settlements (Government of Ireland, 2018, p. 176).

3.4.2. Policy Evaluation

3.4.2.1. NPO 1: Regional Population Targets

In applying a 50/50 split to future regional population growth, the goal of NPO 1 reflects the long-term spatial planning ambition of ensuring "balanced" development. Given the current distribution of population across

the three regions, if achieved, the policy would result in the maintenance of the status quo, with regional shares of national population unchanged.

Regarding recent performance, for the 2016–2022 period, growth in the Eastern and Midland Region was 54.7% of the national total. This was in line with multiple population projection studies, predicting that the Eastern and Midland Region will account for between 55.6% (Bergin & Garcia-Rodriguez, 2020) and 58.5% (Morgenroth, 2018) of total population growth to 2040. These projections mirror growth rates over recent 20-year cycles as well; between 2002 and 2022, the Eastern and Midland Region accounted for 55% of national population increase; between 1981 and 2002, it was 56.25%.

Population targets for each region also contrast significantly in relation to their respective urban systems. Removing city populations and targets from the analysis, the NPF proposes population growth equivalent to 59.1%–66.5% of the 2016 urban population for the Northern and Western Region, 34.1%–36.3% in the Southern Region, and 34.8%–35.5% in the Eastern and Midland Region.

The greater figure ascribed to the Northern and Western Region can be linked to differences in the urban system of each region (Table 1), where significant contrasts in settlement size and density combine with distinct patterns of concentration and dispersal (Figure 3).

Table 1. Regional-scale review of the Irish urban system by settlement size, 2016.

Region	Settlement type								
	1,000,000+	200,000+	100,000+	50,000–99,999	20,000–49,999	10,000–19,999	5,000–9,999	1,500–4,999	Non-urban
	Settlement count								
Eastern and Midland	1	0	0	0	12	11	17	38	152
Southern	0	1	0	2	5	8	15	45	312
Northern and Western	0	0	0	1	0	5	8	31	182
	Average population density of settlements (persons/km²)								
Eastern and Midland	3,677	—	—	—	2,704	2,441	2,920	1,595	1,028
Southern	—	1,197	—	1,349	1,545	1,928	1,572	1,093	991
Northern and Western	—	—	—	1,475	—	1,495	1,030	999	747
	Percentage of settlement population								
Eastern and Midland	59.1%	—	-	—	16.8%	7.4%	6.7%	5.3%	4.6%
Southern	—	21.7%	—	15.4%	12.5%	11.1%	11.4%	12.3%	15.7%
Northern and Western	—	—	—	21.1%	—	18.9%	13.9%	20.8%	25.4%

Notes: Settlement data are provided for three properties—the number of each settlement type within a region, the average population density of each settlement type, and the percentage of population distributed by settlement type relative to the total settlement population; settlement classes follow the size category structure found in prior research (McCafferty, 2019) and policy (Department of Housing, Local Government and Heritage, 2024).

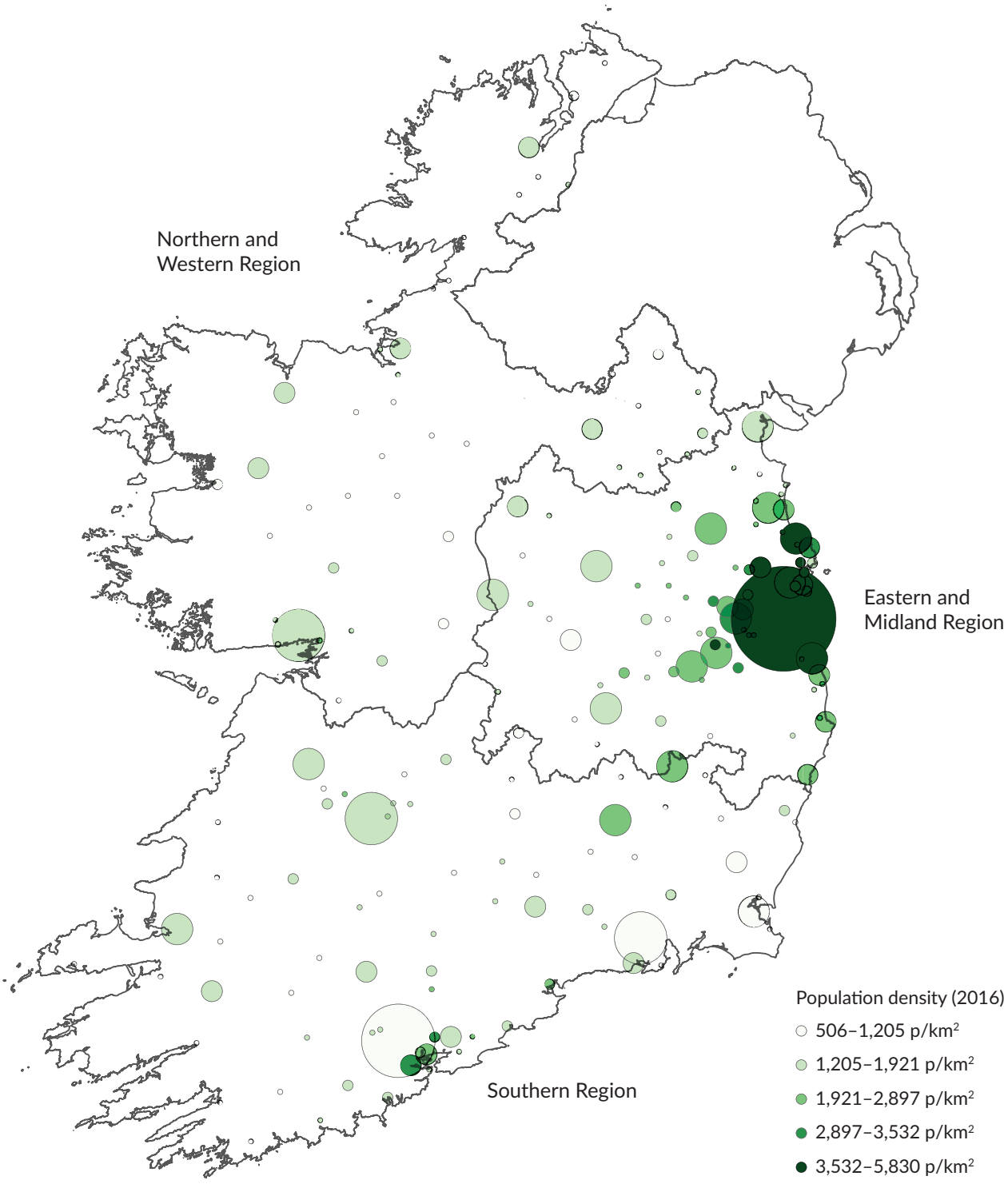


Figure 3. Map of population density for all urban settlements, 2016. Note: Area of circles represents settlement population size.

This suggests a spatial policy objective that has failed to acknowledge existing differences across regional urban systems. A likely consequence is that the majority of growth allocated to the Northern and Western Region will occur in peripheral or rural locations, thereby undermining compact growth.

This outcome is reinforced by the NPF's settlement-scale housing targets (NPO 3), wherein lower urban containment requirements are associated with smaller settlements (15% for towns versus 25% for cities). Regions with more dispersed urban systems are therefore granted an allowance to disperse further, in contrast with more concentrated regions.

3.4.2.2. NPO 2a: City Population Targets

Between 2016 and 2022, 32% of national population growth occurred within the built-up area of the five cities, falling substantially short of the 50% target set out by NPO 2a. Growth in Dublin accounted for 71.2% of all city increases, which is reflective of its starting share of 72.9% of total city population and demonstrates little change in development between the capital and the second-tier cities.

In comparison to the five cities, 45.5% of national population growth took place in towns (1,500–50,000 in size) and 22.4% in non-urban areas during the 2016–2022 period, illustrating the continuation of population trends since the 1960s (McCafferty, 2019).

At an individual settlement level, the most ambitious population growth targets set out by the NPF are for the cities of Cork, Limerick, Galway, and Waterford, equalling a 50%–60% increase to 2040 or "two-and-a-half times the long-term historical growth rate of these centres combined" (McCafferty, 2019, p. 86). If 2016–2022 growth rates were to continue, only Dublin, Limerick, and Waterford would be on track to attain their allocated population increases.

3.4.2.3. NPO 3: Housing Benchmarks

Between 2016 and 2024, the percentage of dwellings built within existing settlements has averaged 75.5% nationally. The result is that the target set by NPO 3a has been easily met. However, it should be noted that these figures are for all settlements, regardless of size (i.e., both "urban" and "rural" classified settlements are included).

For all urban settlements, between 2016 and 2024, 69.7% of dwellings were completed within existing built-up footprints. For all settlements with a population of 5,000 or greater, this figure was 62.24%.

The national benchmark also obscures significant regional differences, with these disparities widening as settlement size increases (Table 2).

Table 2. Regional differences for dwelling completions within built-up footprints, 2016–2024.

Region	All settlements	Urban settlements	Settlements >5,000
Eastern and Midland	85.9%	82.6%	73.6%
Southern	65%	55.1%	46.8%
Northern and Western	45.7%	36%	24.4%

This suggests that national-level benchmarks are ineffective at promoting settlement-scale compactness, with the Eastern and Midland Region achieving double the target figure, and the Northern and Western Region four percentage points below for urban settlements.

Similarly, while NPO 3b has been achieved—in that 36.8% of national dwelling completions occurred within existing city boundaries between 2016 and 2024—the Southern Region and Northern and Western Region failed to meet the benchmark. For the Eastern and Midland Region, 48% of dwelling completions were located within the Dublin built-up footprint. In the Southern Region, 23.4% took place across Cork, Limerick, and Waterford cities. In the Northern and Western Region, 9.3% of dwellings were built in Galway city. These results illustrate that regional-scale concentration has yet to materialise beyond the east of the country.

The difference in dwelling location figures between Dublin and the second-tier cities may be linked to apartment construction. Dublin accounted for 77% of all apartment construction nationally between 2016 and 2025. In comparison, approximately 6% of all apartment construction took place within the remaining four cities over the same period.

This may also relate to the dwelling location figures for other settlements (NPO 3c), which were more evenly spread (Table 3), due perhaps to less deviation in the size and density of dwelling type across Ireland's towns. While the target was reached—with 38.1% of dwellings completed within the built-up footprint of non-city settlements between 2016 and 2024—the difference in performance when limited to "urban" settlements suggests substantial development is taking place in small "non-urban" settlements in the Southern Region and Northern and Western Region. This points to a further undermining of regional centralisation objectives.

Table 3. Regional differences for dwelling completions within non-city built-up footprints, 2016–2024.

Region	Non-city settlements	Non-city urban settlements
Eastern and Midland	37.9%	34.6%
Southern	41.7%	31.8%
Northern and Western	36.3%	26.6%

4. Assessing Settlement Compactness

4.1. The Need for Better Compact Growth Indicators

The preceding analysis demonstrates that benchmarks aggregated at the national level or by settlement type (as per NPO 3) are unable to document variations in growth trends for individual urban areas.

Limitations to this approach have been noted previously; in the 1990s, the UK published similar targets for compact settlement growth based on a percentage of new housing located on brownfield sites (Brown et al., 1998). This metric has been criticised for failing to quantify the compactness of new development, as well as being unable to describe the impact of development trends on changes to aggregate compactness at the individual settlement level (Burton, 2002).

To better record and investigate settlement-scale growth trends, this article proposes a new method of measurement. In doing so, it responds to recent government proposals to establish new approaches to monitoring compactness (NPO 106; Government of Ireland, 2025).

4.2. Indicator Requirements

The method survey focused on settlement-level indicators of urban containment relevant to NPO 3, in line with the interpretation of compact urban development in Irish spatial policy.

Previous reviews suggest two primary dimensions of morphological compactness/sprawl common across the literature: density and fragmentation/contiguity (European Environment Agency & Swiss Federal Office for the Environment, 2016; Galster et al., 2001; Jabareen, 2006). (Note that the terminology used varies across studies, though principles are similar.)

While a certain degree of agreement is evident regarding the categories of measurement, less clear are the precise metrics that ought to be adopted. To guide the process of developing density and fragmentation indicators, established suitability criteria for urban sprawl/compactness indicators were followed.

These include requirements that metrics be intuitively understandable; mathematically simple; modest in their information demands (Jaeger et al., 2010); relevant to policy; analytically sound; and based on retrievable data (OECD, 2012).

4.3. Method

The method of measuring settlement compactness comprises two indicators: "unit density" and "cluster density." Measurement was restricted to the unit of residential dwellings per hectare (dph) due to its integration in Irish spatial policy as a primary descriptor of compact growth. The period of evaluation was 2020–2025 to allow for a natural delay in the potential impact of the NPF since 2018.

Values for each indicator were calculated for all urban areas as identified in the 2016 census, equating to 200 settlements. Variables were calculated for the pre-2020 and 2020–2025 periods. Values were compared between both datasets. Degrees of difference were used to identify the extent to which a settlement had become more or less compact during this time. These data are available to view as Supplementary Material.

4.3.1. Compactness Indicators

"Unit density" measures the aggregate number of dwellings for all clusters within a settlement boundary relative to the total area of all clusters. It acknowledges that infill development will increase the overall unit count with little or no increase in cluster area. Peripheral expansion will increase unit count alongside a greater increase in cluster area. Leap-frog development will increase unit count but will result in the greatest relative increase in cluster area.

At the settlement scale, the aggregation of unit density alone can conflate differing development scenarios. A leap-frog development with high unit density could result in a similar value to an infill scheme with an associated lower number of units.

To account for this, the "cluster density" metric measures the number of residential clusters per square km within a settlement boundary. This indicator has some precedent within the literature (OECD, 2018; Schneider & Woodcock, 2008). It assumes that an increase in the number of clusters points to a more fragmented settlement form, while a decrease demonstrates compaction as existing clusters combine due to infill development.

4.3.2. Cluster and Boundary Definitions

The method for defining clusters and settlement boundaries is adapted from the CSO's current "built-up area" approach to delineation (CSO, 2023a) and amended for the purposes of this study.

Clusters were defined as residential units within 65 m of each other. The minimum cluster size was one unit (i.e., a single one-off house). Clusters within a shared settlement boundary were joined. A new settlement boundary was established by setting a 500 m buffer around each grouping of settlement clusters. Any additional clusters within this area were added to the settlement for evaluation (Figure 4). The new boundary was intended to ensure that non-contiguous development was included in the compactness metrics (Figure 5).

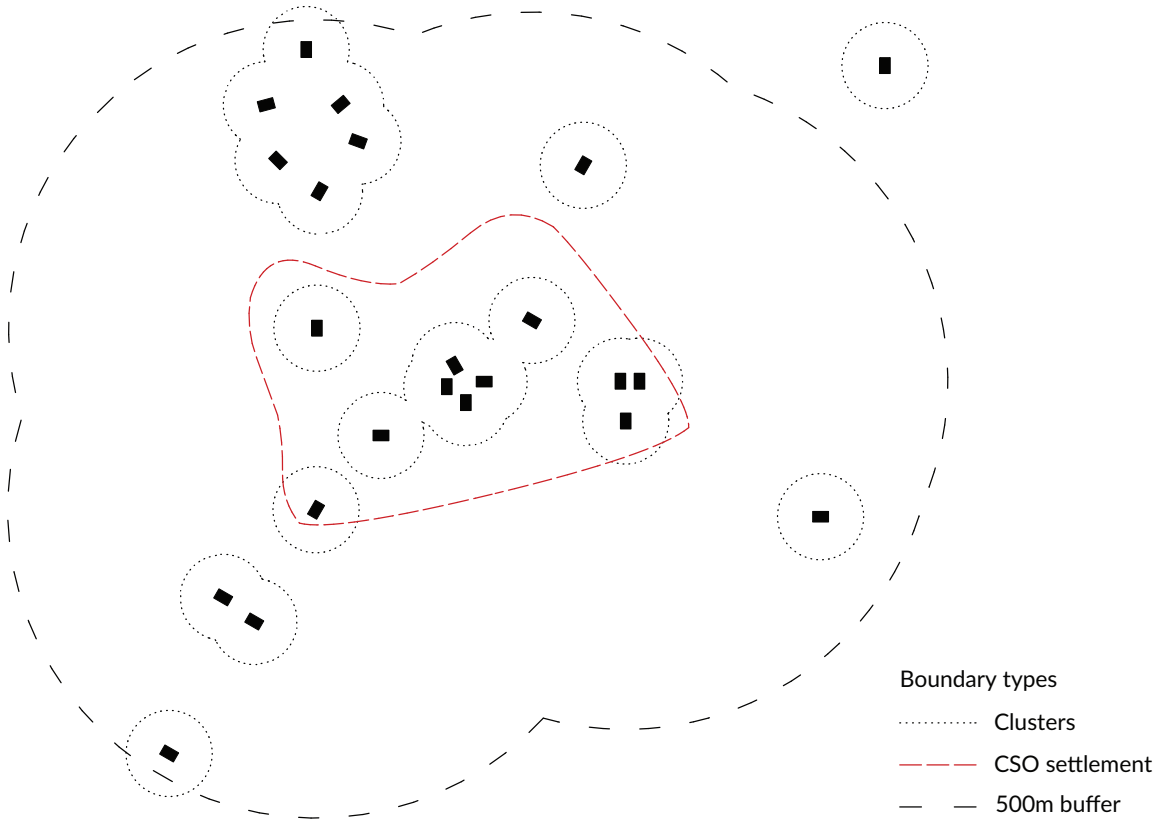


Figure 4. Diagram illustrating the method used for defining clusters and settlement boundaries.

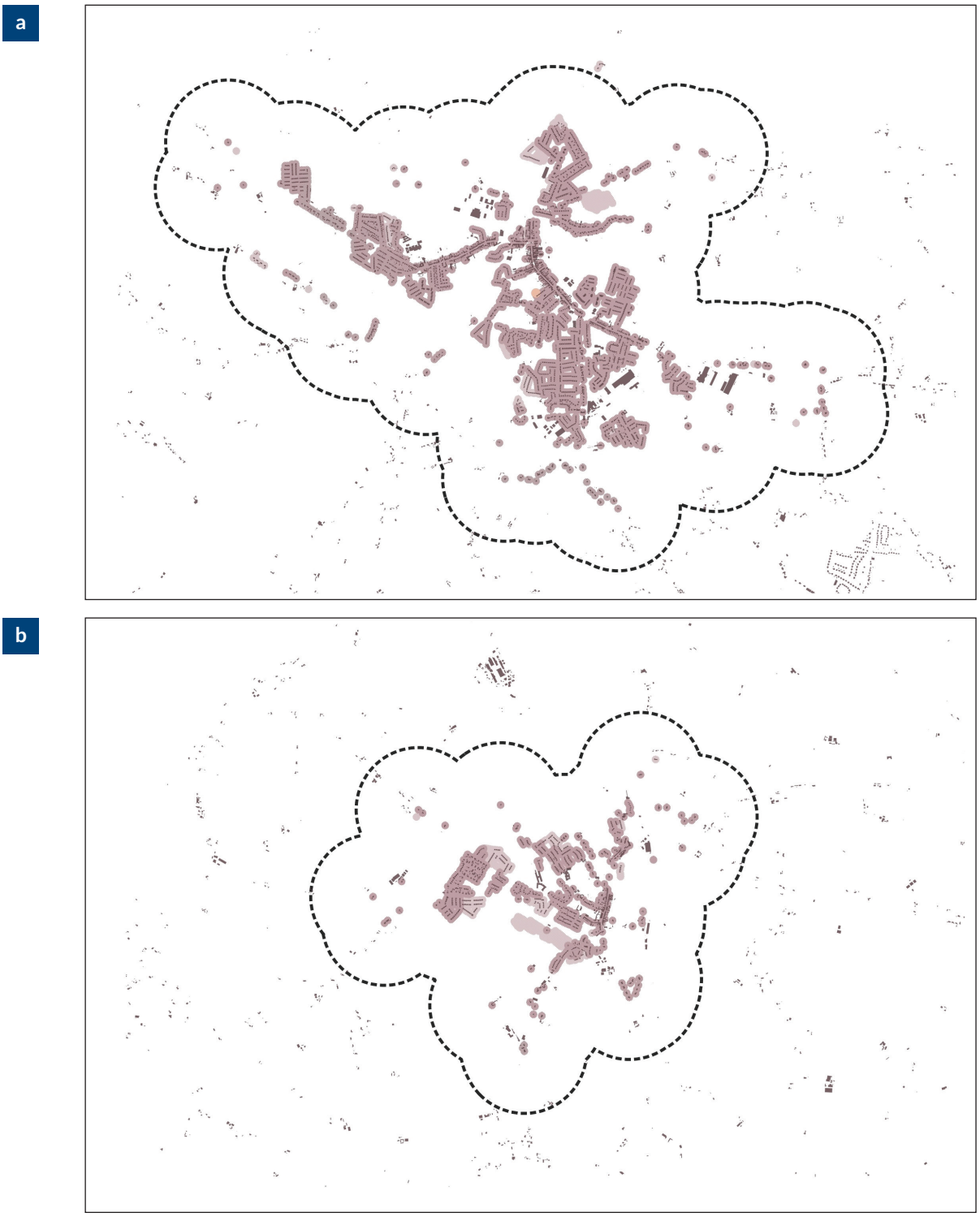


Figure 5. Examples of settlement clusters generated by the compactness assessment method (darker areas represent development pre-2020): (a) Portarlington, a mid-sized town (5,000–9,999) in the Eastern and Midland Region that has exhibited little change in unit density (+0.45 dph) alongside greater fragmentation (0.47 clusters/km^2); (b) Rathdrum, a small settlement (1,500–1,999) approx. 45 km south of Dublin city centre that has registered a significant unit density increase (+2.5 dph) alongside further concentration (−1.13 clusters/km^2).

4.4. Limitations

The proposed method is limited to the measurement of residential units to conform with existing targets and definitions in Irish spatial policy. However, for a more complete picture of morphological compactness, the method could be extended to all building types, depending on available data.

The focus on residential units may also impact results. It is likely, for example, that more significant growth in dwelling construction will be evident in commuter towns within proximity to major centres. That said, while that may bias aggregate figures for individual settlements, it should not determine the degree to which development expresses density or fragmentation characteristics.

For consistency, proximity thresholds are adopted from the CSO "built-up area" methodology of settlement boundary delineation. Different proximity thresholds may, however, provide different results, but are unlikely to influence overall trends.

Finally, it should be emphasised that the method is unable to describe specific patterns of urban expansion but can point to aggregate settlement-scale trends only.

4.5. Results

The greatest increase in unit densities was found in Dublin and the surrounding area. Evidence of this phenomenon is also present in the commuter towns of Cork, to a lesser extent. Much weaker unit density increases took place outside of Dublin and surrounding counties, generally beyond a certain distance from established urban centres. This finding aligns with prior studies on the population growth rates of Irish towns in proximity to larger centres, with adjacency to Dublin being particularly impactful (Cawley, 1991; Lutz, 2001; McCafferty, 2019; Quinn, 1971; Williams & Shiels, 2000). In many cases, it is the densest settlements that are showing the highest rates of unit densification (Figure 6).

Ten settlements showed reduced unit densities: four in the Eastern and Midland Region, five in the Southern Region, and one in the Northern and Western Region. Eight of the 10 towns had populations below 5,000, pointing to size as a factor—there being a lower bar for aggregate unit densities to be negatively altered at this smaller scale.

Fifty-four settlements (27% of the total) show signs of fragmentation: 22 in the Southern Region, 18 in the Northern and Western Region, and 14 in the Eastern and Midland Region (Figure 7). Most towns had a population under 10,000. The distribution of fragmenting settlements does not display a shared locational pattern. Evidence of the highest rates of infill/defragmentation is in settlements adjacent to cities (particularly Dublin, Cork, and Limerick).

Notably, although Waterford recorded the highest percentage population growth of the five cities between 2016 and 2022, it also exhibited negligible alteration in cluster concentration (−0.07 clusters/km^2) and unit density (+0.23 dph).

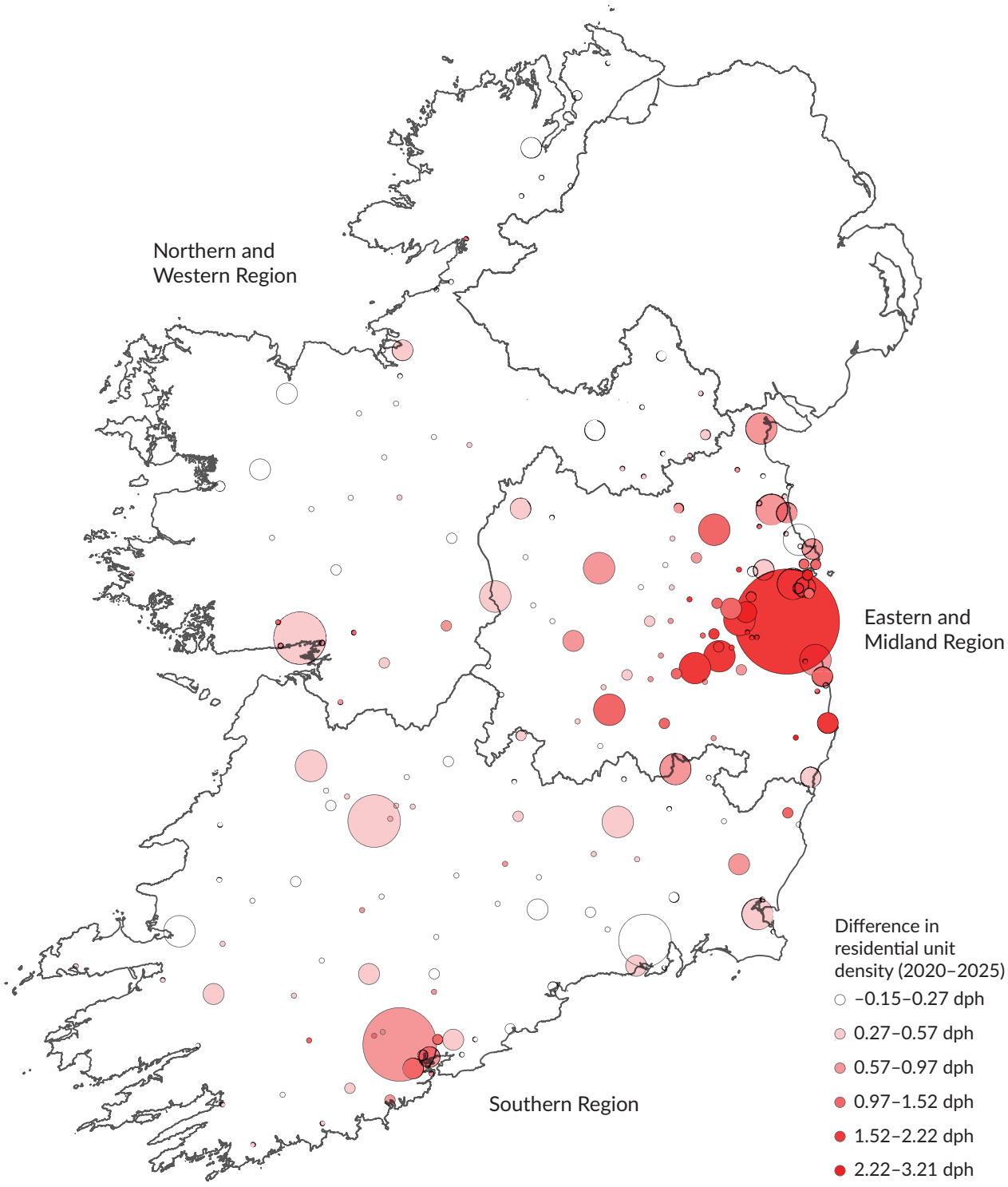


Figure 6. Difference in residential unit density for all urban settlements, 2020–2025. Note: Area of circles represents settlement population size.

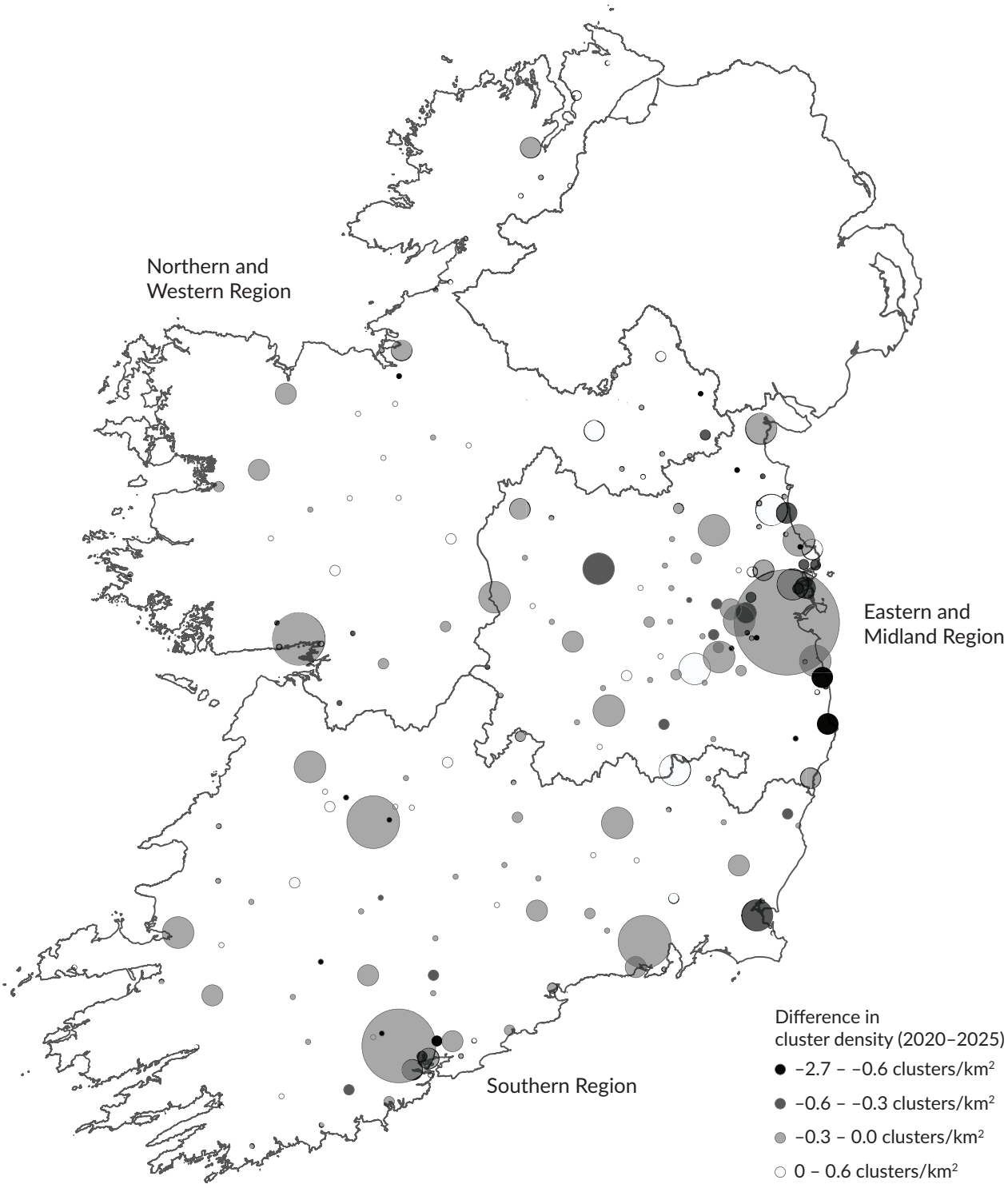


Figure 7. Difference in cluster density for all urban settlements, 2020–2025. Notes: Area of circles represents settlement population size; positive values equate to greater levels of fragmentation.

Lack of significant unit densification or cluster concentration in the Northern and Western Region demonstrates that current dwelling completion location targets, as per NPO 3, can be achieved with little change to the actual residential compactness of existing settlements.

In the Southern Region (with the exception of Carlow town) and Northern and Western Region, settlement fragmentation is accompanied by lower unit densities, implying the spread of one-off housing in the immediate urban periphery (Figure 8).

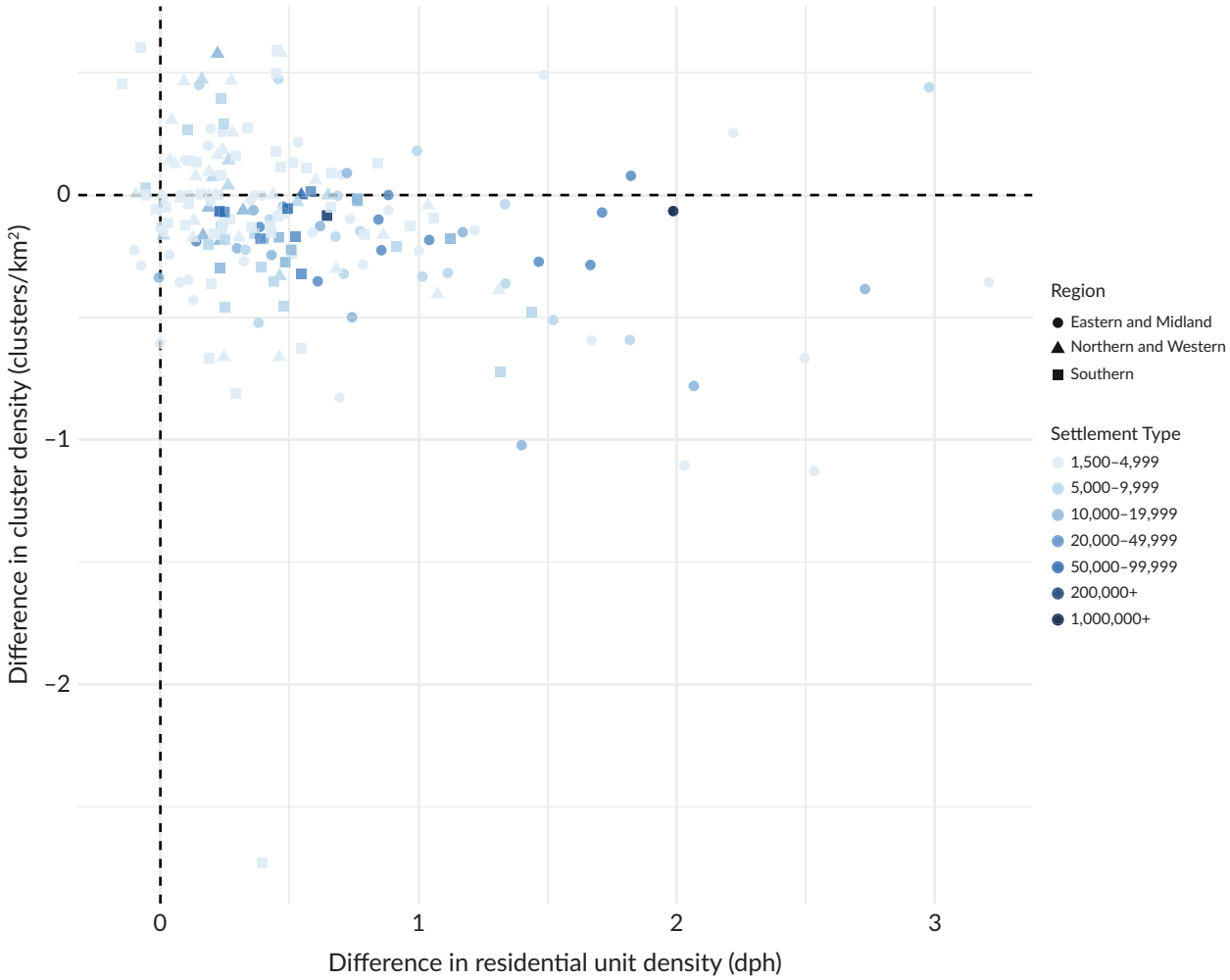


Figure 8. Plot of 200 urban settlements, measuring changes in residential unit density and cluster density, 2020–2025. The majority of settlements display levels of unit densification between 0.0 and 1.0 dph and cluster concentration between −0.5 and 0.0. Location of settlements is shown to have an impact on unit density levels, with all of the 15 settlements above 1.5 dph in the Eastern and Midland Region. Size is shown to be more significant in relation to cluster density, with just five (of 46) settlements in the 10,000+ category displaying evidence of fragmentation.

In general, the results show that compact growth—both densification and concentration—at the settlement-scale has occurred for the majority (66%) of urban areas in Ireland between 2020 and 2025. Individual performance is shaped by settlement size (Table 4), the relevant regional settlement hierarchy (Table 5), and position within the urban system.

Table 4. Compact growth indicators, performance by settlement type.

Settlement type	No.	Median unit density	Median cluster density	% compact growth	% high compact growth
1,000,000+	1	1.99	−0.07	100%	0%
200,000+	1	0.65	−0.08	100%	0%
50,000–99,999	3	0.49	−0.06	100%	0%
20,000–49,999	17	0.61	−0.17	82%	47.1%
10,000–19,999	24	0.47	−0.18	88%	50.0%
5,000–9,999	40	0.45	−0.16	70%	37.5%
1,500–4,999	114	0.27	−0.04	57%	21.2%

Notes: "% compact growth" denotes combined increase in unit density and decrease in fragmentation; "% high compact growth" denotes settlements where both compact growth indicators are above the national median.

Table 5. Compact growth indicators, performance by region.

Region	No.	Median unit density	Median cluster density	% compact growth	% high compact growth
Eastern and Midland	79	0.69	−0.17	73.1%	44.9%
Southern	76	0.34	−0.10	67.1%	23.7%
Northern and Western	45	0.23	0.00	53.3%	13.3%
National	200	0.39	−0.10	66.3%	29.6%

Notes: "% compact growth" denotes combined increase in unit density and decrease in fragmentation; "% high compact growth" denotes settlements where both compact growth indicators are above the national median.

5. Conclusion

In 2025, the first revision to the NPF was published. Despite recommendations to increase the housing location benchmarks set by NPO 3 (Ruane et al., 2023), no changes were made. Nor was there any revision to the population targets in NPO 2. However, as the findings of this article have shown, such national-scale measures are ineffective policy instruments in the implementation of compact growth, regardless of performance thresholds.

This study has demonstrated substantial differences in the percentage of new dwelling completions by region and settlement size. The aggregation of these differences at the national level or across settlement categories can overlook more localised disparities. Similarly, shared population targets for all five cities ignore significant variations in historical and recent growth trends.

Given the data presented, it is clear that a lack of geographic specificity has resulted in national targets that are unable to direct the location or extent of compact growth at scales where it might have meaningful impact—at the settlement level. The results reveal that gaps remain between policy compliance and policy effectiveness.

This aligns with recent research regarding the inability of "one-size-fits-all" approaches in Irish planning policy to acknowledge existing spatial diversity within the country's urban system (Ji et al., 2026)—an issue unlikely to be resolved in light of the continued centralisation of planning powers (Williams & Nedović-Budić, 2023).

A failure to recognise existing settlement patterns is also evident in the NPF's regional population targets (NPO 1). This article has documented the inadequacy of the Northern and Western Region's settlement structure to accommodate its planned population growth. As a result, the majority of new development is taking place outside of urban areas. This dispersed pattern is evident too in the number of towns displaying increased fragmentation. It is reasonable to conclude that regional population targets—established for the purpose of "balanced" growth—are undermining broader compact growth ambitions.

To address this, population distribution figures need to be calculated relative to the existing urban system of each region. These should be assessed relative to existing urban populations, plus the number and size of existing settlements that could accommodate future growth. In addition, differences in dwelling location requirements according to settlement size (towns vs cities) should be removed.

This insight is of particular relevance to international debates on compact growth policies, with the Irish case highlighting the potential disparity between concerns for regional equity and urban containment unless such objectives are measured and managed across a multi-scalar framework that acknowledges the possible direction imposed by existing spatial patterns.

Despite such policy gaps, compact growth is occurring in most settlements. The potential drivers behind these findings remain open to speculation. Though beyond the scope of this study, it is suggested that fragmentation levels could be primarily attributed to land zoning practices and settlement size, while unit densification could be linked to regional housing markets and site-level design. Both aspects point to the need for localised settlement-scale plans to direct growth towards more compact forms. Yet regional and metropolitan planning structures remain weak in Ireland (OECD, 2023; Walsh, 2019), as they have historically (Breathnach, 2013). This is despite the advantages demonstrated by more decentralised governance at these scales in terms of improved compact growth outcomes and greater regional equity (Ahrend et al., 2014; OECD, 2012).

Given the inadequacy of current measures, more direct metrics for compact growth are required (Cahill, 2025). The research presented here is the first attempt to quantify the degree to which Irish settlements have become more or less compact since the adoption of compact growth targets in national spatial policy.

Previous quantitative examinations of physical change in Irish urban development have focused on a single settlement—typically Dublin (see: Hayes, 2021; Horner, 1990; McInerney & Walsh, 2009; Nedović-Budić et al., 2016; Van de Voorde et al., 2011). This is the first study to assess variation in the morphological properties of Irish settlements across multiple regions.

To build on this morphological focus, further research is needed regarding the potential performance of different settlements within the urban system as sustainable locations for future development. An analysis of settlements, classified in terms of their compactness trends, alongside access to public transport, active travel potential, and provision of services could assess whether the Irish interpretation of compactness is producing the sustainability benefits promoted by national policymakers.

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Conflict of Interests

The author declares no conflict of interests.

Data Availability

The data used to measure the compactness indicators for Irish urban settlements (2020–2025) are available at https://doi.org/10.5281/zenodo.21535831

LLMs Disclosure

ChatGPT was used to check for errors or inconsistencies in spelling and grammar in the preparation of this manuscript.

Supplementary Material

Supplementary material for this article is available online in the format provided by the author (unedited).

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Between Commitment and Constraint: Children's Well-Being in New Suburban Open Space Planning Practice

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Abstract

This article examines how planners conceptualize and design open spaces for children in large-scale suburban housing developments on the fringes of German metropolitan areas. Drawing on children's subjective well-being research—specifically three interrelated domains identified by Fattore et al. (2017): agency and autonomy, safety and security, and self and identity—we use these domains as an analytical lens to explore where professional planning perspectives align with, diverge from, or structurally limit children's well-being priorities, and how planning structures limit their translation into practice. Through interviews with 13 planners, we investigate how they conceptualize open spaces for children, how regulations shape their design decisions, and how children's needs are incorporated into their work. Our findings show that planners do not ignore children; many describe them as active spatial agents who need freedom, manageable risk, retreat, and informal appropriation. However, these commitments are translated unevenly into planning terms: Safety/security are most readily operationalized, while agency/autonomy and self/identity prove harder to embed within standard procedures and project timelines. This tension becomes visible across four themes: open space design, participation formats, mobility infrastructure, and schools as contested semi-public spaces. The analysis reveals how child-oriented professional reasoning is narrowed, displaced, or made actionable through the structural conditions of planning practice.

Keywords

children's participation; children's well-being; open spaces; planning practice; suburbia

1. Introduction

Since the 2010s, large-scale suburban housing developments on the edges of German metropolitan regions have re-emerged, driven by the difficulty of mobilizing inner-city densification potentials. They are often

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debated in terms of housing pressure, infrastructure provision, and land take (Bundesinstitut für Bau-, Stadt- und Raumforschung, 2021). Yet these projects are not simply a continuation of post-war suburban expansion. They are planned under the conditions of reurbanization, sustainability agendas, and renewed expectations towards compactness, social diversity, mixed uses, traffic reduction, educational and care infrastructure, and multifunctional green spaces (Altrock et al., 2024; Bertram et al., 2026). At the same time, they retain a suburban orientation: providing family-friendly environments with access to landscape, safe mobility, and nearby open spaces. These developments also shape the everyday environments in which children grow up. For children aged 7–13, neighborhood open spaces and routes connecting them form key settings for play, encounter, and spatial experience. In this age range, children's independent use of space typically expands, making neighborhood open spaces and routes particularly consequential for their everyday autonomy and well-being, while adult oversight becomes more negotiated and situational (Marzi & Reimers, 2018; Qiu & Zhu, 2021). In new suburban housing areas, open spaces are expected to serve multiple roles: providing recreation, supporting microclimate regulation and stormwater management, connecting housing areas with surrounding landscapes, and contributing to a family-friendly image. Their realized form, however, is shaped by standards-based requirements, implementation deficits, and resource-bound maintenance regimes that tend to favor clear allocation and controllability over everyday appropriability (Apel, 2010; Bundesinstitut für Bau-, Stadt- und Raumforschung, 2021).

Children's well-being has also become a prominent research and policy framework in the post-pandemic period (Cortés-Morales et al., 2022). Child-friendly city agendas, alongside this growing well-being discourse, have brought children's everyday environments into urban planning debates, highlighting the built environment as part of children's everyday life and well-being—including in suburban and peripheral development contexts (Million et al., 2024). At the same time, review work suggests that "child-friendly" approaches often remain weakly anchored in strategic planning and can narrow attention to selected themes, such as designated play areas, with limited influence on broader urban development decisions, including new large-scale housing projects (Cordero-Vinueza et al., 2023). Taken together, this points to a translation challenge in planning practice: Even when children are acknowledged as important, their needs are mediated through standards, project routines, participation formats, and inter-professional negotiation (Bundesinstitut für Bau-, Stadt- und Raumforschung, 2021; Cordero-Vinueza et al., 2023). This is particularly relevant in new suburban housing developments, where children are central to the family-friendly promise of the district but often absent as actual users during early planning phases. Long planning and implementation horizons intersect with children's comparatively short and dynamic life phases (Ben-Arieh, 2006). Children who move into newly built districts at age seven may be adolescents or young adults by the time open spaces, schools, and social infrastructure reach their intended quality. This temporal mismatch raises fundamental questions about how planning can better anticipate the needs of first residents, for whom the neighborhood will never be fully finished.

This article addresses this gap by examining how planners conceptualize children's well-being when planning open spaces in suburban housing developments at the metropolitan fringe and under the specific conditions of new suburbanity: family-oriented development expectations, long project timelines, infrastructural prefiguration, traffic-reduction ambitions, and multifunctional open-space systems. We focus on planners, broadly understood as professionals involved in spatial planning and design (e.g., urban designers, landscape architects). We use a child-standpoint conceptualization of well-being as an analytical lens, drawing on three domains identified in research with children by Fattore et al. (2017): agency and autonomy, safety and

security, and self and identity. These domains enable a systematic interpretation of whether, how, and under which constraints planners' professional rationales resonate with children's well-being priorities. Our aim is not to measure children's well-being outcomes in the studied developments. Rather, we use the three children-derived conceptual categories to identify alignments, divergences, and blind spots in professional planning perspectives. The guiding research question is: How do planners conceptualize children's well-being when planning open spaces in new suburban housing developments, and how do these conceptualizations align with or diverge from children-derived domains of well-being? We further ask how these perspectives become embedded in design choices and how planners negotiate practical constraints related to master planning, infrastructure requirements, and participation formats.

2. Conceptual Framework and Theoretical Background

2.1. Children's Well-Being as an Analytical Framework

Children's well-being has emerged as an international, interdisciplinary field assessing children's quality of life across everyday settings such as family, education, and community (Fattore et al., 2017, 2021; Fegter & Fattore, 2024). The field has shifted from objective indicators towards qualitative approaches that understand well-being as a dynamic social practice (Fegter & Fattore, 2024; Keller, 2014). Yet quantitative, adult-centric perspectives remain dominant, raising questions about whether research truly captures children's own views (Ben-Arieh et al., 2014).

To operationalize children's well-being as an analytical lens, we draw on Fattore et al. (2017), who conducted a large-scale qualitative study with children aged 8 to 15 across New South Wales, Australia, treating them as co-constructors of knowledge through open interviews and task-oriented methods such as drawing and photography. Key well-being domains emerged inductively from the narratives of 127 children. The framework has since been extended through the multinational Children's Understanding of Well-Being project in more than 30 countries, affirming its cross-cultural applicability (Fattore et al., 2019).

We use Fattore et al.'s (2017) domains—agency/autonomy, safety/security, and self/identity—as analytical lenses through which to read planners' accounts, not to represent children's voices. These domains are not children's own words, but analytical categories derived by researchers through qualitative analysis of what children across diverse everyday contexts made relevant in their accounts of well-being. Our use of this framework is not premised on direct engagement with children, but on its status as an empirically derived, internationally recognized benchmark. This framing positions planner reasoning, rather than children's experience itself, as the empirical focus of this article. By adopting this framework, we aim to move beyond a purely descriptive use of well-being domains. Following Fattore et al. (2019), well-being domains serve as a means to examine the assumptions built into planning practice—not to claim that planners' accounts reflect children's well-being directly, but to examine how planners conceptualize children's well-being, whether their reasoning recognizes children as experts of their own lives, or whether it defaults to adult-centric concerns such as protection and behavioral regulation.

Following, we will explore the domains (Fattore et al., 2017). Within the domain of agency and autonomy, children's agency is understood as their capacity to make choices and exercise self-determination. Rather than being an individual attribute, agency emerges through negotiations with others, particularly adults, in contexts that structure participation, and is thus relational and contingent on available opportunities.

The second domain of safety and security concerns children's everyday sensations of comfort, inclusion, restriction, or anxiety. While spaces such as the home are often associated with security, this is not universally the case, and both private and public environments can shape children's experience in enabling or constraining ways, highlighting that safety is relational and socially produced.

Within the third domain of self and identity, the significance of "being-me" is fundamental to children's well-being. While childhood is often framed as "becoming" rather than "being" (Holloway, 2014), children experience identity as both evolving and present, constructed within social interaction. Privacy and solitude play a key role, as quiet or private spaces enable reflection and support children's sense of self.

Taken together, these domains provide a sensitizing analytical framework for understanding children's well-being as relational, situated, and multidimensional—emerging through everyday social relations and contextual conditions rather than individual attributes.

2.2. Children, Participation, and Planning Practice

Building on this child-centered understanding, Corsaro (1997) conceptualizes children not as passive recipients, but as active social actors. Through "interpretive reproduction," Corsaro argues that children collectively appropriate and reshape peer cultures and spaces rather than being passively shaped by adult expectations. A key milestone for children's integration into planning is the work of Hart (1979, 2013), who, building on Sherry Arnstein, developed the "ladder of children's participation" (Hart, 2013, p. 41), ranging from manipulation and tokenism to child-initiated, shared decisions with adults.

Despite growing recognition of children as active social actors, planning practice often relegates them to passive or marginal roles. In Czechia, children are mainly included symbolically, reflecting tokenistic participation (Kaplan & Janečko, 2026, p. 10), while elsewhere policies tend to be supply-driven through infrastructure rather than environment-oriented (Cao et al., 2025, p. 15). More broadly, planning processes themselves often determine at which stages and to what extent children's perspectives are incorporated at all (Castillo Ulloa et al., 2023; Katsavounidou & Sousa, 2024). Planning disciplines have increasingly attempted to incorporate children's needs, as exemplified by UNICEF's Child-Friendly Cities initiative in 1996, which aims to improve urban environments for children's well-being (Malone, 2006; Million et al., 2024). Nevertheless, the Child-Friendly Cities concept has been criticized for reproducing a segregated, adult-led perspective (Kaplan, 2024; Pitsikali et al., 2020). By allocating children to designated spaces such as playgrounds—described as "fenced islands in public spaces" (Pitsikali et al., 2020, p. 151) or "ghettos" (Kaplan, 2024, p. 2)—planning practices risk marginalizing children's participation in broader urban life. In response, multigenerational approaches plead for more inclusive and shared (sub)urban spaces that refuse to isolate children in specific zones (Kaplan, 2024).

How planners position themselves professionally shapes whether and how these tensions are navigated. Forester (1999) argues that planners are not neutral technical experts but communicative actors who actively shape whose knowledge counts and whose perspectives are incorporated. Fox-Rogers and Murphy (2016) show that planners see themselves as either mediator or administrator and argue that a more critical reflection on power structures is needed. In the German context, Levin-Keitel et al. (2019, p. 122) find that planners operate across a broad range of fields simultaneously, reinforcing a generalist self-image that leaves

little room for specialist engagement with specific target groups such as children. In German practice, instruments such as *Spielleitplanung* and structured youth participation frameworks provide tools for integrating children's spatial needs into municipal planning. However, their application remains uneven and dependent on local political will (Edelhoff, 2024). At the same time, planning professionals hold inconsistent understandings of what children's participation requires, and specific competencies to meaningfully integrate children's perspectives remain largely absent (Cele & van der Burgt, 2015).

Beyond designated play areas, semi-public threshold spaces play a more important role in children's lived experience of the city. These semi-public "in between" zones facilitate children's transition, social interactions, and play (e.g., Bazaiou, 2024; Weir, 2023). They have fluid boundaries and are categorized as "third spaces"—informal settings distinct from home or school—emphasizing social cohesion and children's agency (Bazaiou, 2024, p. 1; Weir, 2023, p. 171). Harber (2021) argues for opening schools and school grounds to the local community, advocating for smaller neighborhood schools more connected to their surroundings. Bazaiou (2024) emphasizes the concept of "architecture of the threshold," which turns schools and their grounds into open meeting places, where the school actively becomes socially relevant to the surrounding city.

Threshold spaces are closely linked to children's wider mobility patterns. "Children's independent mobility," established by Hillman et al. (1990), captures how children travel and play in their neighborhoods without parental supervision. Recent studies indicate a continued and dramatic decline (Marzi & Reimers, 2018; Michail et al., 2025; Qiu & Zhu, 2021) with independent mobility increasingly confined to short distances and specific destinations, most commonly friends' and relatives' homes, rather than open-ended roaming (Qiu & Zhu, 2021, p. 12). Michail et al. (2025) argue in a study that addresses suburban sprawl rather than newer, more compact planned districts, that small-scale, accessible green spaces can provide informal social settings that foster autonomy and community interaction—precisely the kinds of spaces that car-centric planning and long distances to destinations tend to foreclose. Newer suburban developments move away from car-centered planning toward rail-based transit, cycling infrastructure, and mixed-use public space centered around mobility hubs linking individual and collective modes of transport (Bertram et al., 2026). Traffic calming measures such as car-free residential streets reduce collisions and encourage active, independent mobility, particularly supporting children's safety, autonomy, and comfort in residential environments (Bertram et al., 2026; DaCoTA, 2012).

Yet physical space is only part of the picture: Children's online and offline lives are increasingly intertwined, shaping how they experience and navigate space, a dimension that planning approaches—primarily oriented toward physical environments—have largely overlooked (Castillo Ulloa et al., 2023; Livingstone & Third, 2017; Yin et al., 2024).

These structural constraints are compounded by adult risk perceptions that further limit children's spatial autonomy. Drawing on Ulrich Beck's concept of the "risk society" (Beck, 2022), in which managing risk becomes a central organizing principle of modern life, children's spatial autonomy can be understood as increasingly constrained by adult risk assessments rather than children's own needs, interests, and capacities. This may be exemplified in the context of outdoor play, as Visser and van Aalst (2022) show that parents' safety concerns significantly limit children's independent access to neighborhood spaces. They argue that children's outdoor play emerges from the interplay of child, parent, and neighborhood characteristics.

Although children's emancipation and equal participation in urban life are increasingly recognized as planning goals, risk-driven adult gatekeeping often curtails their spatial agency.

3. Research Design and Empirical Context

This article focuses on how children's well-being is conceptualized and interpreted within planning discourse and interrogates the assumptions that underpin these interpretations. Our empirical basis consists of semi-structured interviews with 13 planners involved in seven suburban housing developments in Germany built since 1990. The interviews focused specifically on residential open spaces that were newly designed and central to the everyday neighborhood use of children aged 7 to 13.

The case studies were selected not only as housing developments located at the metropolitan fringe, but as examples of new suburbanity: large-scale urban expansion projects in which suburban family-oriented expectations are combined with contemporary planning objectives such as compactness, mixed uses, sustainable mobility, integrated educational infrastructure, and multifunctional open space. They span early projects initiated in the 1990s as well as developments currently in planning. This temporal spread allows for an analysis of suburban housing provision under varying historical and governance conditions. The selected suburban areas cover a broad spectrum of contexts, including population size, metropolitan–regional positioning, location within Germany, as well as development strategies and stages of implementation. This heterogeneity strengthens the comparative potential of the sample. Due to data security considerations, the case studies are anonymized, as only a few planning offices are involved in large-scale suburban developments. However, general information is provided to give an overview of their characteristics (see Table 1).

3.1. Research Design

The semi-structured interviews, conducted between 2024 and 2025, examined how the interviewed planners conceptualize open space, with a specific focus on the spatial needs for children aged 7 to 13, and how these considerations are translated into design outcomes and everyday planning practice. During the interviews, planners reflected on a specific suburban project, explaining their design principles through sketching on plans. Through qualitative analysis, we assess the extent to which the domains regarding children's well-being (Fattore et al., 2017) are reflected within open space planning.

3.2. Sampling

For the interviews, we talked with 13 planners (nine men and four women, between 37 and 79 years old), who were recruited through purposive expert sampling—targeting only planning offices actively involved in the spatial design and development planning of the selected suburban areas—and are therefore indicative rather than representative.

The 13 planners form a relatively uniform group, mostly middle-aged men from advantaged backgrounds, reflecting the demographics of decision-making authority in planning rather than sampling limitations. This aligns with professional demographics: 61% of members of the German Chamber of Architects are male (Bundesarchitektenkammer e.V., 2024). The sample was constrained by the focus on specific developments

Table 1. Case studies.

Case ID	Metropolitan context	Development period	Scale (approx.)	Child-related planning beyond formal requirements	Child participation status	Interviews per case study
A	peripheral new housing district on former irrigation fields	completed (in 1997)	9,000 residents; 5,200 living units; 100 ha	public green spaces with integrated play areas; sports facilities; green spaces (informal play)	only indirectly represented through standards/municipal advocacy	2
B	extension at the edge of existing suburban sprawl on a former sewage field	masterplanning (ongoing)	20,000 residents; 8,600 living units; 159 ha	four design proposals with different ideas, e.g., nature experience spaces, safe car-free routes	outreach-based participation of children through municipal actor (online)	4
C	extension at the edge of the existing suburban settlement	under construction (since 2016)	25,000 residents; 11,000 living units; 140 ha	integration of a new semi-public educational campus; skatepark; public green spaces with play areas; sport fields; pump track	intensive citizen participation with future scenario workshops	3
D	urban fringe of large metropolitan area	masterplanning (ongoing)	23,000 residents; 8,000 living units; 550 ha	agricultural spaces serving educational purposes; school grounds open to landscape; child-friendly mobility network	so far, only indirectly represented through standards/municipal advocacy	2
E	urban fringe of large metropolitan area	completed (in 2017)	15,000 residents; 6,000 living units; 266 ha	large parks and recreational areas connected by car-free routes	only indirectly represented through standards/municipal advocacy	1
F	peripheral new housing district	under construction (since 2024)	15,000 residents; 7,000 living units; 118 ha	activity-focused parks connected by car-free routes	school-based youth participation (no children)	1
G	peripheral new housing district	completed (in 1999)	23,000 residents; 5,600 living units; 420 ha	leisure and play spaces for children; implementation of a car-free street throughout the area	only indirectly represented through standards/municipal advocacy	1

Note: One planner contributed to two case studies, hence 14 interview references.

in four metropolitan areas over three decades. Analytical saturation was reached, with later interviews refining rather than extending the thematic framework. To ensure anonymity in this specialized field, participants are identified only by occupation, age, and gender.

Furthermore, the study is limited to the perspectives of planning offices. Municipal administrators who frequently engage with questions of stationary traffic, liability, and maintenance would likely offer a different account of how child-related concerns are negotiated in practice. Future research should therefore include administrative actors alongside planning professionals.

3.3. Analysis Procedure

Interview transcripts were coded digitally via MAXQDA using an initially inductive approach with multiple iterative cycles. We developed a coding framework collaboratively through continuous negotiation. To ensure a consistent coding application, each code was described in detail using exemplary textual and visual anchors, and data sessions allowed for discussion and refinement of the codes and framework. As outlined above, we used Fattore et al.'s (2017) domains of children's well-being as an analytical framework to examine how our empirical findings relate to established conceptualizations. Relevant remarks and quotes concerning children's well-being in master planning were then reorganized and categorized in an internal expert workshop to address the study's research question.

3.4. Empirical Context

All selected suburban developments follow broadly similar planning processes combining formal and informal steps. Large-scale residential suburban developments for up to 10,000 residents typically begin with pre-formal and informal conceptual phases—such as feasibility studies—before entering formal planning procedures (Altrock et al., 2024). All recent developments investigated in this study emerged through design competitions that generated master plans, following legally required decisions (e.g., local council votes on development plans). In the German planning culture, children's participation is formally anchored through legal frameworks and standards—e.g., *United Nations Convention on the Right of the Child*, *German Federal Building Code* (BauGB), *Social Code* (SGB), *DIN 18034-1* (Norm for Playgrounds and outdoor play areas)—and is primarily administered at the municipal level (Edelhoff, 2024, pp. 13–17). Across the seven housing areas examined, only two integrated children's participation (Table 1). Within the procedural constraints and predefined forms of participation of large-scale housing developments, meaningful inclusion remains limited. Children's perspectives are mostly curated in planning processes, advocated for by adults rather than directly expressed by children themselves. What this article reveals is how planners navigate this gap in practice: the informal strategies they develop, and how they argue and justify design decisions when confronted with the question of children's perspectives.

4. Findings and Discussion

Based on interviews, data sessions, and literature engagement, we identified four key themes relating to planners' conceptual and design approaches to suburban open space and children's well-being. Emerging inductively from the interview material and refined in an internal expert workshop, they are not direct translations of Fattore et al.'s (2017) three domains, but analytically distinct findings read against them.

The themes mark the points at which new suburbanity becomes relevant for children's well-being: Open spaces are expected to combine recreation, ecological functions, and landscape identity; participation often takes place before future users are present; mobility concepts promise autonomy while remaining embedded in car-oriented metropolitan regions; and schools operate as key social infrastructures in emerging neighborhoods.

Arranged from professional imaginaries of children's open-space needs to the procedural and spatial fields in which these are translated—participation, mobility, and school grounds—the themes show what planning can address, what remains structurally difficult, and what is left to future everyday practice. Across these fields, planners spoke of children not only as vulnerable users to be protected, but also as active spatial agents who need room for movement, noise, manageable risk, retreat, and appropriation.

4.1. Planners' Perspective

4.1.1. Beyond Playgrounds: Envisioning Child-Friendly Open Spaces

During the interviews, we asked planners what activities they envision children doing in open spaces, and how they consider children in their planning practice. Their responses portrayed children as active, loud, and imaginative, associating them with open spaces such as streets, forests, and wild meadows. For them, children's needs center on the ability to experience spaces without strict public–private boundaries and to explore independently, away from parental supervision. One landscape architect (male, 57) explained: Child-friendly spaces should enable children "to develop a strong sense of self and also overcome their own limitations, alone or in a group, to have this experience, even independently of their parents." Notably, children appeared in planners' accounts not only as a vulnerable group, but as spatial actors whose well-being depends on autonomy, friction, and informal use. This view led some planners to question conventional design approaches centered on play equipment: Children do not stick to age-appropriate apparatus, and playgrounds alone cannot accommodate the full range of autonomous play.

In the context of new suburban developments, this understanding was closely tied to the spatial resources and imaginaries of the metropolitan fringe. Planners located children's autonomy in peripheral areas of settlements, along forest edges, and within green corridors and semi-natural areas—spaces where wild, free, and unobserved play and appropriation become possible, and which function as a connector linking different parts of the neighborhood. New suburbanity thus appears not only as a development context but as a spatial imagination associating children's freedom with landscape proximity, openness, and family-friendly life at the urban edge. Accordingly, planners describe open spaces as flexible settings for encounter, discovery, retreat, and informal appropriation, embracing complexity and mixed use. As one landscape architect (male, 55) put it: "It's always about overlap; it's not about who plays where, who sits where, but rather the attempt to enable and encourage overlap. Including conflicts."

These accounts align with literature on threshold and shared spaces that emphasizes children's agency within fluid and multifunctional environments rather than within strictly designated play areas (Bazaiou, 2024; Weir, 2023).

Nature experience spaces (*Naturerfahrungsräume*) exemplify this approach. Recognized in German nature conservation law, they are minimally designed, semi-natural open spaces, typically without play equipment,

intended for children aged 6 to 12 to play independently, fostering informal learning (Molitor, 2024). Planners often sought to integrate such spaces into their design, allowing to interact playfully with materials and structures while engaging in multigenerational learning about the landscape (Kaplan, 2024).

4.1.2. Fostering Children's Autonomy in Open Spaces

Planners recognize freedom of action as central to children's well-being: Children need spaces to make noise, experience manageable risk, play without adult surveillance, experiment, explore, and claim spaces as their own. Most described such freedom as essential for independence and self-confidence. Open spaces should also support privacy by providing areas for unobserved activity and solitude. These qualities—autonomy, competence in navigating risk, and opportunities for both social interaction and solitude—align with key domains as identified by Fattore et al. (2017).

While safety remains important in other contexts (see Section 4.3), planners framed children's use of open space less through protection than through experiential learning and discovery, including the acceptance of manageable risk. As one landscape planner (male, 79) explained:

> Children also have to learn to deal with danger, even if they fall in [the water] sometimes. I think that's important too. But you can't plan for it, not with each individual child [laughs]. Some parents are very strict about it, and others say, "Well, we'll see…"

This perspective acknowledges both the developmental value of manageable risk and the variability in parental attitudes toward children's spatial freedom. At the same time, planners' accounts revealed tensions between children's autonomy and adult risk governance, echoing broader debates on parental gatekeeping and the restriction of children's independent mobility within contemporary "risk society" conditions (Beck, 2022; Visser & van Aalst, 2022).

Child-dedicated spaces are often mandatory planning requirements, yet they are not always environments where autonomy and agency can flourish. Under standardized requirements, safety regulations, and age-specific equipment logics, planners instead emphasized the importance of designing for ambiguity: spaces flexible enough to accommodate changing uses, moods, and social configurations. Planners' emphasis on green spaces may overlook other autonomous behaviors, such as seeking out commercial spaces, using digital technologies, or frequenting informal, unsanctioned spaces absent from planning documents but crucial for children's independent social development. This selective focus reflects the generalist self-image of planners described by Levin-Keitel et al. (2019), in which children rarely become a sustained focus of professional attention, and echoes Forester's (1999) reminder that planners actively shape, often implicitly, whose needs count in spatial decisions.

4.2. Children's Participation

4.2.1. Values and Barriers to Children's Participation in Suburban Housing Areas

Given the central role of participation in shaping planning processes (Altrock et al., 2024), we asked in the interviews how children were involved, particularly given that dedicated participation formats for children

were largely absent. Many interviewees understood open spaces as interactive settings not specified for a singular user group. As one landscape architect (male, 60) stated: "I actually build for everyone, not for specific people." This universalist understanding reflects the generalist self-image of planners described by Levin-Keitel et al. (2019) in which planning is framed as serving broad publics rather than specific target groups such as children. However, this approach coexisted with statements emphasizing children as particularly relevant. Planners stated that in "open spaces, children are of course also very important…and usually use them more than others" (landscape architect, male, 79).

All interviewees acknowledged citizen participation as important in principle. Regarding children specifically, planners acknowledged their value but emphasized practical barriers, especially given the early stage of newly built neighborhoods at the urban fringe. As one landscape architect (male, 55) explained: "That's always the problem with these new neighborhoods. You can't really carry out participatory processes because there [aren't yet] any participants." This points to a specific temporal dilemma: Children are central to the imagined future community, yet those who will later inhabit the neighborhood are often absent when key spatial decisions are made. Even where children are present as early residents, the neighborhood's full spatial and social offer may only materialize once they have outgrown the life phase it was designed for.

In the absence of direct participation, planners relied on surrogate mechanisms—standards, municipal advocacy, professional judgement, and personal experience—which kept children on the agenda but filtered their perspectives through adult-defined categories. An urban planner (male, 57) acknowledged that team members "with different experiences, with and without children" bring broader perspectives, though "which aspects of this child and youth participation actually make it into the tender and planning process is another question."

Children's participation was most visible for child-designated spaces, but it varied considerably across projects and planning periods. An urban planner (female, 64) recalled a project from the 1990s where "playgrounds [were planned] without any involvement from children." By contrast, in a more recent project, children were actively consulted during the preliminary design phase:

> During this…phase we…prepared different play elements. We then brought them along to a participation process on site, and the good thing is, of course, that…[in the area] many children already lived….That means there are…already quite a few users that we could really consult on site. (architect, male, 51)

Some planners articulated a preference for intuition over participatory approaches. A landscape architect (male, 57) explained: "Children were not explicitly [the focus]. Intuitively, we always considered these things as well, including special places and opportunities. And sometimes it's also helpful not to just negotiate everything." Several interviewees also mentioned a temporal mismatch between planning cycles and childhood as a practical challenge. As planning processes can extend over years or decades, children involved in early participation phases may have outgrown the relevant life stage by the time of implementation.

4.2.2. Children's Role in Participatory Planning Approaches

On an individual level, planners mostly have children's well-being in mind. However, they are significantly constrained by the planning processes and institutional frameworks, which shape how and to what extent children can be involved.

This becomes particularly evident in the division of labor within planning processes. The interviewed planners, or more precisely the commissioned planning offices, were hired by municipalities to develop master plans. Usually, participatory processes are designed and implemented by other teams or the municipality itself. This separation means that those who design the spaces are often not those who engage with future users. Combined with rigid timelines, technical requirements, and administrative hierarchies, this systematically reproduces power imbalances. As an urban planner (female, 37) observed: "We talked a lot about roads and permits, etc., and who can clarify what, and where a crosswalk is possible and where it is not. And then the child's perspective sometimes gets lost." This illustrates how these technical and regulatory concerns can dominate planning discussions, pushing children's needs to the margins even when planners express commitment to them.

Children's participation was mostly focused on spaces explicitly designated for children rather than other open spaces. This limits children's input to specific spaces rather than the broader suburban fabric. As Fattore et al. (2017, p. 64) connect self-determination directly to decision-making, the capacity for extending children's range of action onto the entire neighborhood is important to their well-being. By limiting participation to playgrounds and schoolyards, planning practice reinforces spatial hierarchies where certain areas "belong" to children and others do not. This reproduces the segregated spatial logic criticized in debates on child-friendly planning, where children's agency becomes acknowledged, yet spatially contained within designated environments.

The intuitive approach some planners described carries the risk of selective integration, potentially reducing children to objects of planning rather than dialogue partners. Similar to the critique of tokenistic participation (Hart, 2013; Kaplan & Janečko, 2026), children's involvement often remained consultative and adult-mediated rather than genuinely shared or child-initiated.

This gap becomes evident in the planners' emphasis on nature-based learning while overlooking digitally mediated practices through which children organize encounters, mobility, autonomy, and belonging in physical space. It suggests that adult definitions of children's well-being may differ from children's actual interests and practices. Engaging children as dialogue partners rather than as objects of planning may support a more nuanced understanding of children's use of open space, informing designs that are genuinely child-friendly.

4.3. Mobility

4.3.1. Mobility, Traffic, and Children's Safety

Children are featured prominently in mobility-related planning considerations, particularly in efforts to develop low-traffic neighborhoods. Planners therefore sought to enable children's autonomous mobility via

strategies ranging from restricting motorized traffic on specific streets to creating intersection-free pathways and establishing route connections through open spaces.

The associated spatial elements included low-traffic and car-free open spaces such as parks, green corridors, and dedicated cycling and pedestrian routes to provide children with safer and broader mobility options throughout the neighborhood. For example, an architect (male, 51) explained: "It is precisely these informal opportunities for children to move around between the blocks, where there are no cars and where they can meet each other, that are included in almost all of our planning." Path connections influenced the strategic placement of social infrastructure—particularly schools—and open spaces, to encourage movement into the neighborhood. Similarly, mobility hubs with integrated children's facilities were increasingly incorporated into suburban planning and positioned with spatial connectivity in mind. By combining alternative transport modes with public transit access and social infrastructure, these hubs aim to reshape mobility habits while creating public spaces that prioritize safety, comfort, and inclusion. Safety emerged as a paramount concern, with planners adopting pedestrian perspectives and anticipating potential hazards, including less obvious dangers affecting children's movement through space.

However, formal planning requirements sometimes constrained these child-centered mobility considerations. While mobility objectives were often explicitly integrated into planning requirements, such as connections to open space systems or the provision of neighborhood garages, creating child-friendly mobility options was not always compatible with these mandates. As one planner noted: "This road was…a given, so there was nothing I could do about it, with a width of over 30 meters…four lanes, a tram….Basically, impossible for children to cross." (architect, male, 46). This highlights the challenges planners face in realizing autonomous mobility for children within existing urban frameworks.

4.3.2. Children's Mobility in Car-Dominated Cities

Mobility was where children's well-being became most readily actionable, as safety, routes, crossings, and traffic reduction translate into planning requirements more easily than privacy, appropriation, or self-directed play. Traffic limits children's autonomy because spatial freedom depends on moving freely. Although planners employ various strategies to create traffic-calmed areas with children's autonomous mobility in mind, cities remain dominated by cars. Heavily trafficked streets and major roads undermine children's sense of security and limit their autonomous behavior in public space (Fattore et al., 2017, pp. 100–101). Beyond direct safety risks, unsafe traffic conditions often lead to heightened parental supervision (e.g., Visser & van Aalst, 2022), with busy streets functioning as spatial boundaries that confine children's movement. This resonates with findings on independent mobility, where accessible informal green spaces within low-traffic environments support autonomy and peer interaction—conditions that a car-dominated suburban fabric structurally undermines (Hillman et al., 1990; Michail et al., 2025). Importantly, mobility challenges extend beyond moving traffic. Parked cars also constrain children's spatial possibilities, obstructing sightlines, occupying potential play areas, and creating additional navigation barriers. While neighborhood garages, mobility hubs, and reduced on-street parking address this issue structurally, in practice, planners' discussions focused predominantly on moving traffic.

4.4. School Grounds

4.4.1. Schools as a Semi-Public Space: Tensions Between Access and Safety

Besides daycare centers and playgrounds, schools and their grounds were one of the first sites mentioned by the planners when asked about children's spaces in suburban developments. These facilities are not only central to children's daily routines but also form essential nodes in the planning of suburban housing areas, not least because the school's catchment radius functions as both an evaluative criterion and a design benchmark for residential neighborhoods, as one landscape architect (male, 51) elaborated: "We're measuring and checking how far it is from the school to the house at the far end."

In new suburban developments, schools are more than educational facilities; they are planned as early anchors of neighborhood formation. Because everyday social infrastructures have not yet fully emerged, school grounds, daycare facilities, parks, and mobility routes are expected to structure future routines, encounters, and community life. Schools and their grounds emerge as fundamentally semi-public spaces, caught between planning ideals of openness and institutional concerns about liability. This reflects broader debates on threshold and "in-between" spaces, which conceptualize schools not only as educational institutions but as socially shared environments mediating between neighborhood, open space, and community life (Bazaiou, 2024; Weir, 2023).

A recurring theme in the interviews was the question of public accessibility. While some planners advocated for opening school grounds with few or no fences—"so that they do not become gated communities" (landscape architect, male, 55)—others noted strong administrative resistance on liability grounds. Rather than balancing risk against children's autonomy and spatial freedom, the question of public accessibility was frequently managed through institutional precaution and liability avoidance, a dynamic central to Beck's concept of risk society (Beck, 2022).

A further design aspect concerned the location of schools and their integration with the surrounding public green and wider landscape. In several designs, schools and school grounds "were oriented towards the public green space" (landscape architect, male, 57). One architect (female, 45) described the integration in more detail:

> There is this connection between the facilities and the public open spaces. And here there is also a primary school…which is then connected to this…park. And here there is an existing school…and they are also connected via the…[park], via this existing avenue, which runs right through here.

This spatial openness, however, raises questions about control and boundaries. As one landscape architect (male, 51) noted: "Ultimately, these schools are mostly closed districts. We thought it was a good idea to place them on the outside so that they have a connection to the landscape." The statement illustrates the ambivalence already identified in literature on semi-public school environments: Schools are simultaneously conceived as protected institutional spaces and as socially open interfaces connected to neighborhood and landscape (Bazaiou, 2024; Harber, 2021).

The question of whether school spaces should be open or enclosed remains contentious in developing new neighborhoods (Klepp & Million, 2022). Planners must balance liability concerns against the desire for multifunctional use of the space by the wider community. Despite these institutional barriers, interviewees emphasized the pedagogical value of landscape connections. One landscape architect (male, 51) describes schools as "very closely linked to [the landscape], because…this is also a very important educational topic." Another (landscape architect, male, 79) highlighted how teachers can integrate landscape and "wilderness" into their curricula. This pedagogical perspective also informs ideas about temporal flexibility in access:

> I'll also include the playground right next door, so that this area is expanded. The difference between school and after-school hours is somewhat fluid, or there are transitions. So that I then end up with relatively large open spaces in the school areas. (landscape architect, male, 79)

This concept suggests that schools could function differently at different times—more controlled during school hours, more publicly accessible afterwards—thereby embodying their semi-public character through temporal rather than just spatial boundaries (Bazaiou, 2024). Overall, the interviews suggest that planners increasingly consider permeable boundaries between schools, open spaces, and surrounding landscapes as an important component of suburban child-friendliness, particularly in peripheral contexts where proximity to agricultural and cultural landscapes can be integrated into everyday routines and learning practices.

4.4.2. School–Landscape Connection for Children's Well-Being

Opening school spaces to their surrounding landscape and understanding school grounds as semi-public spaces may support children's self-determination (Fattore et al., 2017, p. 64) by expanding their choices about where to go and what to do. However, public spaces are not generally seen as safe by children or their parents, and schools with clear demarcations function as a relatively risk-free environment. At the same time, children's well-being is related to challenges that they set for themselves—more formal and designed spaces are sometimes not those where children gather, as they seek unexplored spaces discovered and claimed over time.

The developmental need for spaces without adult supervision, where children can test boundaries and negotiate rules among peers, may be compromised by certain planning approaches. In one examined design, the concentration of children's infrastructure in a designated campus area where supervision becomes omnipresent and hideouts scarce limited informal, unsupervised interactions. While not representative of all planning practices observed, this example illustrates an inherent area of tension: Planning supports the physical conditions for a looser use, but it cannot fully reproduce the unsupervised and sometimes transgressive qualities children seek. Such spaces emerge through physical design conditions combined with factors beyond the control of planning, including children's own agency, community norms, and cultural attitudes towards children in public space.

The pedagogical benefit of landscape connection that the planners emphasized reveals the ambivalence of adult proxy knowledge: Landscape and nature-based learning are legitimate spatial qualities, but their prominence may underplay other contemporary practices through which children organize autonomy, sociability, and belonging, including digitally mediated meeting practices and commercial destinations.

5. Conclusion

This article asked how planners conceptualize children's well-being when planning open spaces in new suburban housing developments, and how these conceptualizations align with or diverge from children-derived well-being domains—agency/autonomy, safety/security, and self/identity. Applying this lens, we identify alignments, divergences, and blind spots in professional planning perspectives.

Overall, planners described children's well-being as a relational and spatial matter that is supported by everyday access, freedom of action, and opportunities for appropriation. Yet across the interviews, it was often translated into proxies that are easier to plan for—most consistently safety/security—while agency/autonomy and self/identity were harder to operationalize within standard procedures and timelines. This uneven translation became visible across open space design, participation, mobility, and school grounds. These fields differ, but they point to the same underlying pattern: Children's well-being enters planning most easily where it can be attached to recognizable instruments, responsibilities, and spatial typologies. It becomes more difficult to sustain when it depends on openness, informal appropriation, unsupervised peer life, or uses that remain ambiguous from an adult planning perspective. The material also points to a bias in adult imaginaries of childhood, especially where nature- and pedagogy-oriented ideas of good childhood risk overlooking children's contemporary lifeworlds and less sanctioned forms of spatial practice. The central issue is therefore translation, not visibility.

New suburbanity intensifies this difficulty. The family-friendly promise of suburban development makes children highly visible as imagined users, while long timelines and early-stage development conditions often make them absent as actual participants. At the same time, the ambition to create urban qualities at the metropolitan edge places particular pressure on open spaces, schools, and mobility systems: They must support everyday urbanity, compensate for peripheral location, and organize care, education, recreation, and movement at once. The suburban legacy of safety, landscape proximity, privacy, and controlled residential environments remains powerful, even where planners seek density, mixture, openness, and autonomous mobility. New suburbanity, therefore, creates both opportunities and constraints for children's well-being: It can provide open-space networks, traffic-calmed routes, and integrated educational infrastructures, but it can also translate children's needs into managed, programmed, and adult-defined environments.

The three well-being domains make this uneven translation visible. Safety and security fit most readily with existing planning rationales because they can be formalized through regulations, responsibilities, and spatial safeguards. Agency and autonomy require more than access or movement; they depend on the possibility of appropriation, negotiation, and unsupervised use. Self and identity are least directly addressed, because privacy, withdrawal, peer culture, and informal belonging rarely become explicit planning categories.

Ongoing research with children in these suburban housing areas will allow us to relate these professional rationales to children's own open-space needs and practices.

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Conflict of Interests

The authors declare no conflict of interests. In this article, editorial decisions were undertaken by Henriette Bertram (TU Braunschweig) and Uwe Altrock (University of Kassel).

Data Availability

The data supporting the findings of this study are not publicly available due to confidentiality agreements with participants and the risk of identifying individual respondents. Anonymized data may be available from the corresponding author upon reasonable request, subject to ethical considerations.

LLMs Disclosure

During the preparation of this work, the authors used DeepL Translator, Claude.ai, and ChatGPT to improve sentence style, grammar, translation, linguistic elaboration, and refinement of English text.

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ARTICLE

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Combining Paid Work and Care Work in Suburbia? Planning Perspectives and Everyday Experiences in Munich-Freiham (Germany)

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Abstract

The compatibility of caring responsibilities and paid employment (or lack thereof) has been subject to debate in urban planning and related disciplines for decades. In short, criticism from a feminist perspective is that urban planning privileges the spatial needs and demands of paid employment over those of caregiving, thereby discriminating against caregivers. This was especially true for—often mono-functional and insufficiently connected—suburban settlements and was seen as an expression of societal power relations mediated through (sub)urban planning. In our contribution, we analyse planning efforts for compatibility and contrast them with the daily life experiences of employed caregivers in Munich-Freiham, Germany. We ask whether and how planners and other local actors in Freiham reflect on and address the compatibility-related problems of earlier suburban developments and how planning measures and intentions relate to daily life experiences. We draw on document analysis and interviews with planning experts and residents with care responsibility. Our data reveal that care and paid work are still planned for separately, which means that households that deviate from an implicitly imagined "standard" experience significant and unintended friction in daily life.

Keywords

feminist planning; gender equality; infrastructure; paid work; suburbia; unpaid care work

1. Introduction

This article explores the compatibility of paid work and care work in newly planned suburban districts through the lens of feminist scholarship. Space and (sub)urban planning are inscribed with societal values

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and reflect (gendered) power relations, so that both the planning of spaces and daily life within them can reveal tensions, forces of change, or forces of inertia (Lorde, 1984; Massey, 2004; McDowell, 2004; Spain, 2014). Space connects "the everyday and the structural" (Appelhans & Schramm, 2023) and demonstrates how decisions and valuations of planners and administrators directly impact everyday choices and chances.

Suburban settlements have been criticised for various reasons. One criticism is that their layout and infrastructural equipment discriminate against caregivers in general, and, in particular, household forms other than a stereotypical, heteronormative two-parent family. Suburbia, it was argued, mirrors and perpetuates unequal societal and gendered power relations more than any other spatial category (Frank, 2009). Even without a decidedly feminist lens, Keil and Young (2011, p. 13) reach the conclusion that suburban infrastructure "fails many people most of the time and some people sometimes."

On a wider societal level, gender relations have changed recently but are still far from equal. One of the markers for this is the distribution of care tasks and hours spent in paid employment, especially between different-sex couples with children (Fernandes, 2025), even though an increasing number of households aspire to share caregiving and breadwinning tasks equally. We henceforth use the term employed caregivers to refer to people of all genders who combine care tasks and paid work on a regular basis (Bertram et al., 2025).

In this article, we ask how the requirement to combine care tasks and paid employment is discussed and taken into consideration by planners as well as put into daily practice in the newly built suburban district of Munich-Freiham. Freiham is one of five new suburban districts studied within the research group New Suburbanity, of which the present authors are part (Altrock et al., 2024), and, due to its comparatively advanced development stage, presents a unique research context. We make three contributions. First, we strengthen an intersectionally informed feminist perspective in planning science and demonstrate how powerful and normative, yet not fully conscious imaginaries about suburbia and task distribution within suburban households influence contemporary suburban planning. Second, by contrasting planning intentions with experiences of residents, we provide a nuanced account of the complexities of combining paid work and care work and uncover "blind spots" of planning and everyday struggles of suburbanites. Third, our findings suggest that planners are more aware of employed caregivers' needs than previously, and that layout and infrastructure in suburban districts can support compatibility to a certain extent. Through the contrast with everyday experiences, however, it becomes clear that the implicitly imagined target groups are often still narrowly defined.

In Section 2, we discuss space and planning as mediators of the structural and the everyday and relate this discussion to feminist critique on suburbia. Our methodology is explained in Section 3, followed by the presentation of results in Section 4. We discuss and contrast the two perspectives of planners and residents in Section 5 before drawing a conclusion in Section 6.

2. Care, Paid Employment, and Power Relations Mediated Through (Suburban) Space

In this section, we explain our theoretical and conceptual foundations and summarise the main points of critique on suburbia as a spatial category perpetuating gendered and intersectional inequality. Although we acknowledge that care is multidimensional (de la Bellacasa, 2012; Fisher & Tronto, 1990), this article focuses on care responsibilities for family or community members and the strategies used to combine these with

paid work. In patriarchal and capitalist societies, these indispensable tasks are often undervalued (Binet et al., 2023), although theories of social reproduction have conceptualised them as the foundation of economic activity (Biesecker & Hofmeister, 2022; Haubner, 2024). We consider paid employment and care tasks to be two sides of the same coin (Oberhauser et al., 2017) that have to be aligned by people living together in a household. We draw on Fraser's (1994) universal care giver model, which posits that care tasks and paid work should be compatible for all. Implementing this model would make it necessary to "redesign…institutions so as to eliminate the difficulty and strain," and "integrate activities that are currently separated from one another, eliminate their gender coding, and encourage men to perform them too" (Fraser, 1994, p. 611).

The debate on how society and space co-construct each other is not exclusively led by feminist scholars (Harvey, 2003; Lefebvre, 1974), but they first brought questions related to the household, family, and reproductive tasks to an academic audience (Domosh, 1998; Jarvis et al., 2009). The ways in which gender roles and inequalities are reflected by space and urban design and vice versa have been described with emphasis on a variety of topics that range from public memory and representation (McAtackney, 2018), use and perception of public space (Shirgaokar & Lanyi-Bennett, 2020), housing (Pereira & Rebelo, 2024), or mobility (Hirt, 2008; Parker & Rubin, 2023). How some of these play out in suburban spaces will be elaborated on in the following paragraphs.

Suburban living became a mass phenomenon in Europe after the Second World War and was framed as ideal for families (Bertram et al., 2026). However, it soon became clear that the spatial layout and socio-structural composition presented some residents with severe restrictions (Fainstein & Servon, 2005). In a North American context, one of the early accounts of this was Friedan's (1963) *The Feminine Mystique*, in which she documents the dissatisfaction of women with narrow role assignments, not only but especially so in suburban surroundings. Friedan was later criticised as too focused on the realities of white, middle-class women, but her work remains an important reference (Henderson, 2007). Similarly, in Germany, the strict separation of public (male/city) and private (female/suburb) spheres was identified as both basis and outcome of the gendered division of labour and inequality (Terlinden, 2003). Although suburban locations in Europe were never as mono-functional as their North American counterparts, pursuing a career was usually only feasible for one of the adults in a household with dependents (Terlinden, 1990).

From a feminist viewpoint, the shortcomings of (sub)urban planning and form that failed to address the needs and daily realities of women especially, but also children, youth, older adults, and others not in full-time employment were clear and manifold (England, 1996): Suburban mobility allowed for efficient commuting to inner-city workplaces, but did not accommodate the needs of caregivers and their small-scale mobility patterns. Safe, independent mobility for care-receivers was rarely available due to the car-oriented nature of suburban areas (Baumgart, 2004; Keil & Young, 2011). Adequate employment close to home was difficult to find, and longer commutes were impossible due to the scarcity of day care. Accessibility and variety of workplaces were found to be the most profound inhibiting factors for employment opportunities for main caregivers (Rahn, 2011).

According to Bain and Podmore (2024), academic debates on gender equality, feminism, and suburbia are currently somewhat unconnected. Still, there are a number of publications not explicitly set within a feminist framework that conclude that modern family life and a suburban home are not well suited (Häußermann, 2009; Menzl, 2007; Shirgaokar & Lanyi-Bennett, 2020). With regard to out-of-home household activities,

Schwanen et al. (2007) found that different-sex couples share them more equally if the household location is within a densely populated, multifunctional area. Other research in the European and North American contexts reveals that intra-familial reasoning on the ideal residential location often highlights other aspects such as affordability, child-friendliness, or security that can be seen as arguments for moving out of the city (Karsten, 2020; Kern, 2021).

Feminist spatial scholarship has become more differentiated and more theoretical over the decades and shifted towards intersectionality and other forms of societal power imbalances (Valentine, 2007). One of the sacrifices of this has been its close alignment with planning practice. In the academic debate, it is criticised that planning practice pursued only "tactic" improvements of the built environment, but had no interest in transforming societal power relations (Tummers-Mueller et al., 2019).

Planners, however, are not the only people shaping space. More than 30 years ago, England (1993, p. 25) proposed to view "suburban women…as active and strategizing people able to alter their sociospatial relations and create neighborhood support networks to better meet their needs and those of their families." The same, one should add, goes for suburban residents of other genders. Mlejnek and Lütke (2023, p. 301) argue that "practices of everyday life are the central elements for understanding the (sub)urban," and are in turn shaped by "broader forces." They describe everyday struggles as "points of friction" overcome by "everyday adaptations" (Mlejnek & Lütke, 2023, p. 302). These everyday struggles are therefore an insightful complementary lens to understand power relations and to observe wider societal change as well as forces of inertia in suburban surroundings. If, as explained above, we regard space as socially constructed and planning as a lens revealing hegemonic societal ideals, we must assume that the groups whose needs are met by planners and other local shapers of space experience fewer points of friction and less need for adaptation than others.

3. Case Study and Methodology

3.1. Munich-Freiham as an Exemplary New Suburban District in Germany

Munich is one of the fastest-growing metropolitan regions in Germany. Rents and property prices are among the highest in the country. Freiham presents a unique research opportunity: It is still being developed, with about half of the district built or under construction. This means that the complexities of everyday life can already be studied there, but the process is still relatively recent (Landeshauptstadt München, 2019b). Freiham is situated in the west of Munich and consists of a commercial area in the south and a residential area in the north of a newly built railway station (Landeshauptstadt München, 2016). Around 25,000 people will be living there upon completion (Landeshauptstadt München, 2025). It is promoted as inclusive and barrier-free (Landeshauptstadt München, 2018), and its design follows Munich's general guiding principles "urban, compact, green" (Landeshauptstadt München, 1995).

As with all districts studied in the New Suburbanity research group, Freiham was decidedly planned as different to earlier suburban settlements. Although there is great difference in detail, the districts are connected through general planning principles that borrow from the "city of short distances": varied social and green infrastructure, relatively high density to avoid unnecessary sprawl, and excellent mobility options to lower car use and carbon emissions. Freiham offers different housing forms, including social housing, cooperatives, housing for refugees or students, and a variety of floorplans (Landeshauptstadt München,

2024). A “green strip” is already built and a 58-hectare landscape park—set to become the largest in Munich—is planned (Landeshauptstadt München, 2019a). The mobility concept envisages Freiham to be car-reduced, focused on sharing concepts, with two rail connections to the city centre; daily amenities will be within walking or cycling distance (Bitter et al., 2019). The district’s educational infrastructure includes a campus with primary and secondary schools, and a special education support centre. The district features two more primary schools and 13 day-care centres (Landeshauptstadt München, n.d.). Most employment opportunities are service-oriented, which caters to local needs such as retail, childcare, and schools.

3.2. Document Analysis and Semi-Structured Expert Interviews

As a first step, 126 planning and media documents relating to Munich-Freiham (masterplans, brochures, political statements, newspaper articles, press releases, website texts) were analysed in a qualitative content analysis. As a preliminary coding system, we used five fields of action of compatibility-oriented planning according to Bertram (2023) with a number of more concrete planning measures as subcategories. These fields comprise (a) housing and housing environment, (b) green and public spaces, (c) facilities and infrastructure, (d) mobility and transport, and (e) employment opportunities and commerce. The underlying aims for all fields are to foster exchange and community, to reduce accompanying mobility and car-dependency through short distances, and to provide infrastructure for everyday needs and a safe and secure environment. Further aims, situated on a structural rather than a material level, are to improve conditions for employed caregivers, to challenge the gendered imbalance, and to elevate the visibility and valuation of care across society (Bertram et al., 2025).

The refined codes were used to prepare the guide for the semi-structured interviews with planners and residents of Freiham. All interviews were recorded, transcribed, and are provided in a repository (see Data Availability). All interviews were conducted in German (English translation of quotations in all cases by the authors).

3.2.1. Interviews With Planners and Local Stakeholders

We interviewed 12 people participating in the planning process (see Table 1). The average length of the interviews was 1 hr 36 min. Most interviews were conducted in person in Munich; three online. The interviews allowed us to understand the planning process and envisaged outcomes in more detail and to learn about imagined target groups, self-perception of planning actors, as well as restrictions and obstacles. As the gender of the interviewees was not explicitly sampled, our assessment is based on appearance and other attributes like first name or social role.

3.2.2. Interviews With Residents With Care Responsibilities

In July 2025, semi-structured interviews with 10 residents with care responsibilities were conducted. This enabled us to further differentiate the fields of action and present a more nuanced understanding of the requirements of employed caregivers in suburbia (see Figure 1).

Table 1. Planners and local stakeholders interviewed.

Interviewee (Planner no.)	Interview date	Assigned gender	Role in planning process/employer (anonymised)
P1	24/07/2024	male	Association of urban renewal
P2	30/07/2024	female	City planning office
P3	30/07/2024	female	City architect
P4	30/07/2024	female	City of Munich
P5	31/07/2024	male	Architectural office
P6	14/10/2024	male	City of Munich
P7	16/10/2024	male	City of Munich
P8	18/10/2024	female	Social space developer
P9	22/10/2024	female	District committee, member
P10	30/10/2024	male	City of Munich
P11	30/10/2024	female	City of Munich
P12	09/12/2024	male	City of Munich



Figure 1. Care in Munich-Freiham in summer 2025. Photo by Johanna Niesen.

Interviewees were recruited via leaflets, addressed in public spaces, through website advertisements, and newsletters with a small financial incentive. The average interview length was 37 minutes. Interviews were conducted in playgrounds, courtyards, parks, and homes, some with children present. Most interviewees live in housing cooperatives, both public and private housing sector. Work–life arrangements of interviewees can

be found in Table 2. Although small in number, the sample represents a range of different situations but also allows the identification of common themes and patterns.

From this three-step analysis, we derived a detailed coding system showing examples, quotations, and quantitative relevance for each field of action. The results are presented in Section 4.

Table 2. Interview partners of the everyday life perspective.

Interviewee (Resident no.)	Interview date	Assigned gender	Family form
R1	01/07/2025	female	Lives with husband (pensioner), mother, and two adult children; main caregiver; 30 hr employment
R2	02/07/2025	female	Lives with husband (40 hr employment) and three children aged 1 to 8; main caregiver; parental leave
R3	04/07/2025	female	Lives with husband (40 hr employment) and one child (3 years), mother lives next door; 25 hr employment
R4	07/07/2025	female	Single parent, one child (9 years); 20 hr employment
R5	07/07/2025	male	Lives with wife (main caregiver) and toddler; 30 hr employment
R6	09/07/2025	female	Single parent with disabled child (5 years); not employed
R7	09/07/2025	female	Lives with ex-partner (40 hr employment), two teenagers, and one younger child; 24 hr employment
R8	10/07/2025	female	Single parent, lives with four children aged 4 to 15; not employed
R9	10/07/2025	female	Single parent, one child (9 years); ~35 hr employment
R10	10/07/2025	female	Lives with husband (40 hr employment) and four children in nursery and primary school; 35 hr employment

4. Results

In this section, we carve out aspects of compatibility-oriented planning that have been implemented and draw conclusions regarding the self-perception of planners as well as their imagined target groups. This section reveals which groups are confronted with which everyday struggles. We aim to describe the results and bring the two perspectives into dialogue before we discuss the findings in Section 5. The planning perspective is presented relatively briefly as the authors have previously published on these aspects (Bertram, 2023; Bertram et al., 2025), whereas the residents' perspectives are presented for the first time.

4.1. General Observations

As a general question, we asked planners about their knowledge of brochures on guiding principles for gender- or care-related topics. Some mentioned a user analysis for public spaces in Munich by Danish urban consultancy Gehl (Landeshauptstadt München, 2023) as well as a brochure on inclusion (Landeshauptstadt

München, 2018). Neither focuses on compatibility, and they are not binding (P3, P4). Gender equality, care responsibility, or compatibility were not explicitly discussed during the planning process and were not included as criteria in the design brief for the district or the selection of architects. One interviewee stated that these principles might be regarded as implicit planning goals:

> I would rather say that it is written in very small print; the headings were sustainability, accessibility, city of short distances, residence, quality, and inclusivity. And because we've thought about these things…we've covered a great deal in terms of care work. (P10)

When asked about their perspective on the role of planning for compatibility or gender equality, interviewees mentioned their own care responsibilities, which highlights the importance of personal experience in shaping professional perspectives. Still, many did not refer to their scope of action with regard to the topic of gender-sensitive planning.

Although Freiham was considered "family-friendly" by the interviewed residents, all reported compatibility struggles. Care biographies and everyday routines of interviewees are diverse, reflecting unique experiences, needs, and circumstances. Still, some topics were addressed in several interviews.

4.2. Housing and Housing Environment

Housing cooperatives are pioneers for compatibility by providing shared spaces and strengthening community (Bertram et al., 2025), but they remain a niche format in Freiham. Especially in housing cooperatives, close-to-home public space, private, and semi-public interior areas were planned to connect residents:

> [We wanted] real laundry rooms in the sense of: This is the meeting room because I go there to do laundry. But there are also laundry rooms that are somewhere in the last corner of the basement…that I can somehow reach via the underground car park, but it's not nice. (P1; see Figure 2)

The indoor common spaces provide play areas, fitness or co-working spaces, workshops, craft areas, guest apartments, or laundry cafés. They are situated on ground floors and are of high spatial quality (daylight, seating). Common outdoor spaces comprise playgrounds, kitchen gardens in the courtyards, and rooftop gardens (R4, R5). The inner courtyards are highlighted as a positive feature, as caregivers can keep an eye on playing children and know that they are safe (R2, R7). The combination of neighbourhood network and the favourable spatial situation represents added value:

> The great thing is we have a view of the playground and part of the courtyard from up here. It gives us a full 360° outlook so we can just relax upstairs and watch the older kids play. Plus, you know the other parents—everyone knows you and knows which child is yours. (R10)

The common spaces serve as extensions to the living area and facilitate and shape community networks (R5). The interviewees described different grades of use of the common spaces (R4, R5): Some use the spaces regularly, whereas others hardly find time to use them (R4). Individual interest seems to be as important as time availability and mental load (R3). "In-between" spaces also offer relief and quality for caregivers, for example when strollers and scooters could be stored in building entrances (R5).



Figure 2. Laundry café in a housing cooperative. Photo by Johanna Niesen.

The outside areas were considered generous (R7), while the layout of the apartments was perceived as cramped and restricted. The open-plan kitchens as well as the small bedrooms were criticised repeatedly (R1) and considered inflexible.

Residents noticed significant differences between buildings of housing cooperatives and those of other developers. Housing cooperatives had a more explicit focus on community relations, supported by networks and spaces which are often conducive to compatibility. Residents help each other with meals (R6), oversee homework, or look after an unwell child while parents work in their paid job (R4). Neighbourhood networks also seem to work for older people who move to the district: "My mom has been really welcomed as the oldest person in our little block….She already has a few neighbour ladies who look after her….They just hang out…or meet up here and do things together" (R1). The close community is a great relief for employed caregivers as they can rely on neighbours in case of an emergency or incompatibility.

The perceived invitation to engage is partly reflected in statements by planners. In their view, an appropriation of spaces beyond the private realm would be desirable, but residents so far seem hesitant: "Everything is designed for that. We just realise that people aren't used to it…they don't dare to do it or are completely alienated" (P1).

While holding great inclusive potential for the residents, housing cooperatives create exclusions for outsiders: They select members and residents to fit their organisation. To join a housing cooperative, people buy shares and agree to participate in community tasks (R3), which not everyone is able to. One cooperative member claims that there are endeavours to become more inclusive (R10). Still, the average resident of a housing cooperative seems to hold substantial social, cultural, and/or financial capital.

4.3. Green and Public Spaces

The green strip connects the railway stations of Freiham and the neighbouring district within a 15-minute walk. Playgrounds for small children are "distributed throughout the neighbourhood within sight and sound of the residential buildings" (Landeshauptstadt München, n.d.). This was explicitly done with a view to connecting caring residents: "the opportunities it offers and the exchange between parents…there are simply a lot of playgrounds…there are no cars nearby…parents with children can meet up" (P6).

Interviewees acknowledge the number and quality of green spaces but also state that they are still insufficient. On days with good weather conditions, parks are perceived as overcrowded (R3, R5). Playgrounds in different shapes and sizes are placed alongside pedestrian routes and are well-used. One interviewee said that planning afternoon activities was unnecessary as they would just stop at different playgrounds on the walk home and always meet someone (R8). Another interviewee, however, commented on the lack of barrier-free playgrounds tailored to different needs of children with and without disabilities (R6).

Yet another interviewee criticises the lack of public spaces that are not designed with families and young children in mind (see Figure 3). The interviewee felt overlooked in her need for peace and quiet: "You just can't find a shady spot to sit….It's either baking in the sun or being surrounded by non-stop screaming" (R1). The lack of shade is a concern shared by caregivers for older adults and for children (R4, R5). Trees have been planted but are not yet fully grown.



Figure 3. Housing environment in Munich-Freiham connecting private and public green spaces. Photo by Johanna Niesen.

The community gardening project in the park, according to interviewees, is a place where people of different age groups and backgrounds gather (R3, R5, R6). Involvement can vary between participating on a regular

basis and only joining for the weekly open gardening hours. Generally, green spaces are perceived as spaces of play and communication but also conflict and constant negotiation.

4.4. Facilities and Infrastructure

A number of facilities for everyday needs are planned or already exist, namely a shopping centre with supermarkets, shops, and cafés in the district centre. A library will also be built soon. Each neighbourhood provides kindergartens, schools, and sports facilities as well as medical care within short distances of the residences. Health advice is available, and also spatially integrated practice rooms for doctors, but practice availability may not always meet the demands of nearby residents: "The very doctors we need here, general practitioners and paediatricians, are not getting any new accredited licences for this region" (P1). Residents confirm that medical care such as nursing homes and medical practices are still lacking (R2, R4) as well as specialist medical trades such as opticians (R2).

Interviews with residents focused mostly on childcare and school, leisure and sports, as well as local food supply. Reliable childcare was described as a basic requirement that enables the compatibility of paid work and caregiving (R9), which mirrors planning priorities. Despite their best efforts, however, families still found themselves without childcare after moving to Freiham (R8). All places in local nurseries were allocated as soon as they opened, and parents had to commute long distances to facilities elsewhere before going to work themselves. One childcare facility was unable to open due to a shortage of educators (R8). One caregiver was unable to take up paid work as she could not find adequate support for her child with special needs (R6).

While social infrastructure seems sufficiently provided for and there is a wide range of offers especially for families with children (activities/playgroups, youth farm, sports programmes), the interviewee without small children laments that participating in cultural activities requires a commute to the centre of Munich (R1). Aside from that, interviewees criticised having too few options for affordable dining, structured afternoon activities, or retail (R1, R2, R6, R7). A lack of places where caregivers could recover from their daily demands was communicated by one interviewee: "I really miss having a nice, cosy, inexpensive café. I think I would actually sit down there….And that would be my me-time" (R4).

4.5. Mobility and Transport

Children in Freiham can be independently mobile: "All children from Freiham…come to school on their own, because there is a large campus with everything, deliberately also with support centres [for disabled children]…[parents] do not have to take their children anywhere" (P10). Care-related mobility with multiple stops, however, seems not to be actively taken into account, as one local actor admits:

> It doesn't help me if I talk about the city of short distances and then there is no bus or only one express bus or only one underground train from A to B, when I actually have three destinations in between. (P11)

Carsharing services are planned, but commercial enterprises are responsible for implementation. Public transport is experienced as crowded: "We don't have enough buses and…we don't have enough bus drivers, and you can't spread the school times so far apart that it would work for all pupils" (P11).

Perhaps unsurprisingly, commuting and transporting are the most relevant mobility aspects for caregivers (R2, R8). The mobility concept of Freiham was generally seen as positive, but not without ambivalences. Especially car reduction, which results in safe unguarded mobility for children, was highlighted multiple times (R2, R4, R10; see Figure 4): "At 7.40 am, [my daughter] leaves for school. She goes there on her own. She meets up with neighbouring children and then runs off. I then drive straight…to work" (R4). Car reduction was also beneficial for children's independence: "The children couldn't be as independent and free [where we lived before]….In the first few weeks…you could really see how they grew inside because they were…able to do things that they couldn't do before" (R2).



Figure 4. Bicycle lane and pavement to support the mobility concept. Photo by Johanna Niesen.

Still, the reduced number of parking spaces that are part of the mobility concept are seen as an unnecessary complexity for visitors who arrive from outside of Freiham or Munich (R6) or parents who drop their child off at the nursery before commuting to work by car: "On the one hand, [parking restrictions are] good, but on the other hand, it's a problem for those who have to go straight to work" (R8). Some have tried out shopping and running errands by bike and then switched back to using the car for convenience (R8). Others claim that sharing offers as well as switching between different transport services do not work reliably (R5, R8).

4.6. Employment Opportunities and Commerce

The two parts of Freiham, commercial and residential, were planned separately and without expectation of any overlap of residents and employees. Interviewees addressed the locally available opportunities of paid work, commuting, and remote work. Enabling remote work was not considered at the time of planning, and its rise in popularity during and after the Covid-19 pandemic was not foreseeable. Remote work is both convenient and challenging for people with care responsibility: It saves commuting time but also means having to do care and paid work simultaneously. Single parents in particular had difficulties fitting commuting and the work itself into the hours of childcare (R4). Not all employers offer choice in that respect: "That makes everyday life much more

difficult and exhausting, because I have to travel an hour by public transport to get to the office. And that's just time that's gone" (R10). Being able to work from home on some days, however, enables both parents to work (close to) full-time and remain somewhat flexible in case of children being unwell (R10). However, one caregiver stated that they prefer to work in the office as a more productive work environment (R9). Another caregiver tolerates a long commute because she feels supported by her current employer with regard to her caring duties (R4). Especially in the interviews with single parents, the difficulties or even impossibility of combining paid work and care were raised. When neither responsibility can be shared, the strains of combining become even more visible. Single parent networks and neighbourhood networks accessible in housing cooperatives are highly important (R4).

Interestingly, caregivers saw minimal links between planning or the built environment and compatibility and also ranked their own influence very low. This is again reflected in the interviews with planners and local actors: Employment opportunities and commerce, as shown in Bertram et al. (2025) , is a field of action that planners do not hold themselves responsible for—"I don't think anyone is monitoring and controlling the issue of jobs now, because these are private-sector decisions" (P11); another stated, "Whether we can achieve equal distribution [of care work and paid work between the genders] through planning, not really. I think that's more of a labour market policy issue" (P10; Bertram, 2023; Bertram et al., 2025).

5. Discussion: Planning Perspectives and Everyday Lives in Suburbia

Our results reveal how suburban space and life nowadays are imagined by planning actors and how they relate to the everyday struggles of suburban employed caregivers. Planning actors showed some awareness of the decade-long feminist critique but saw very little or no connection to their own professional responsibility or even possibilities. Existing supportive resources were unknown or unused. Some planning measures implemented under the headlines of sustainability or inclusion, however, inadvertently benefit caregivers. Freiham is experienced as "family-friendly" by planners and residents alike; thus, a general devaluation or lack of awareness of caring responsibilities cannot be asserted. Family-friendliness, however, is not the same as compatibility-orientation and the use of the first term rather than the second indicates that caring and employment are still seen as and planned for as separate entities.

Planning principles like the city of short distances, car-reduction, or a varied supply of social and green infrastructure are perceived to make everyday life easier. Planners attend to their "core business," the material dimensions of everyday life such as housing, outdoor spaces, mobility, and (social) infrastructure. They do so with certain target groups—children, youth, elderly people—in mind, but not necessarily thinking about care as a system of caregiver(s), care-receiver(s), and the conditions in which they perform care tasks imposed by a patriarchal and capitalist society. The field of action "work and commerce" is only superficially addressed by planners, which leads to an improvement of fundamental care infrastructure rather than an inclusion of requirements for combining care work and paid work. Another indicator for this is the mobility concept: Car-reduction functions well for caring purposes and other daily needs within Freiham, but less so when leaving the district for work or expecting visitors from outside. The planning outcome therefore falls short of comprehensively accounting for the temporal, organisational, and relational demands associated with combining paid work and caregiving responsibilities in a way that values both caregivers and their dependents, and, at the same time, acknowledges their need to be economically active. Fraser's concept of the universal care giver society (1994) seems far from being implemented.

In all the households we had insight into, women were the main caregivers even in the case where the husband was a pensioner. With few exceptions, they were also employees working between 25 and 40 hours outside the home. Although the sample is not representative, it illustrates that suburban caregiving remains a highly unequal and gendered task. Household form and intersectional aspects play a crucial role (Bain & Podmore, 2024; Crenshaw, 1991), as those families who fit an implicit norm experience fewer struggles and less friction in everyday life than others (Mlejnek & Lütke, 2023). This is exemplified by the carer of an elderly parent who feels that most activity options are geared towards young families. In single-parent families, where the only breadwinners are also the only carers, combining care work and paid work is extremely strenuous. Commuting, work hours, and all other appointments have to fit within childcare hours, which, of course, also have to be adjusted to the children's endurance and capacity. Often, lower financial and temporal resources make it harder for single-parent families to buy property or shares for housing cooperatives and benefit from the qualities they provide.

When a care-receiver has special needs, professional care is hard to organise. Caregivers need special knowledge, and facilities have to be specifically equipped. Our sample only comprises one caregiver for a disabled child, but her experience of having to give up paid work is not a singularity. Whether this would have been easier to manage in an inner-city environment cannot be known. Interestingly, even though Freiham was explicitly planned as an inclusive district, this caregiver does not feel that disability needs were sufficiently considered during the planning process.

Housing cooperatives are seen as "islands" of community-led housing by planners and residents, which raises questions of privilege. The relief that emanates from belonging to such community networks highlights the need for family and neighbourhood support to facilitate compatibility. It also shows that extending childcare hours is not sufficient as a measure and that additional, private networks of individuals have to be organised to complement them.

Generally, work and employment as a field of action receives little attention in both the planners' and residents' perspectives. This is despite the fact that having varied, qualified, and flexible work opportunities nearby has long been identified as one of the most important factors for gender-equal compatibility (Bauhardt, 2003; Rahn, 2011). The complexity and individuality of the best way to structure employment and care became clear in the interviews: Neither remote work nor presence in an office, neither long commutes nor close-to-home workplaces, neither full-time nor part-time work were preferred by all interviewees.

Some unforeseen topics arose in interviews with residents: Problems such as the insufficient transport infrastructure or the nursery without staff can be interpreted as growing pains, but also as an expression of structural neglect for public transport and the caring and educational sectors that goes beyond local administrators' or planners' responsibilities. At the moment, life in Freiham resembles "living on a building site," as several residents phrased it. This poses a challenge especially for people with care responsibilities and their dependents who spend a lot of time close to home. To a certain extent, this is to be expected in a new and evolving neighbourhood (see Figure 5) but still increases difficulties for those who already experience friction. Planners' professional role entails overlooking long timespans, so their evaluation of these situations is different: They see them as momentary problems that have to be weathered through. For residents, it is where the larger issues—gender inequality, housing shortage, lack of skilled labour, and climate change—intersect with their daily lives.



Figure 5. Building site Munich-Freiham in summer 2025. Photo by Johanna Niesen.

All planners interviewed came across as committed and concerned individuals who strive for the best possible outcome of their work. All have or have had care responsibilities in some measure themselves. When asked about the needs of employed caregivers, personal experiences were a valuable resource. Some interviewees, however, only thought about this connection during the interview, not necessarily during the planning process. With regard to their professional responsibility for compatibility or even gender equality, answers remained vague and defensive. It may be concluded that they never acquired a professional approach towards planning for these goals or for reflecting their own power position as shapers of (sub)urban spaces and mediators of structural issues. We see more institutionalised exchange between planning research and practice and an integration of these issues into planning education as well as the active and conscious inclusion of people with (former) care responsibilities and characteristics of intersectionality into powerful (planning) positions as necessary steps to overcome this gap.

Our research has some limitations. Making appointments with planners proved difficult as their daily schedules allow for few activities other than "core business." This may also be one reason for the low level of reflection and sense of responsibility, especially for the integration of workplaces. Instead, we were able to involve other local actors, and this ultimately widened perspectives on compatibility. With regard to the everyday perspective, an inclusion of more diverse residents was limited by language barriers, time constraints of caregivers, and hesitancy from people not familiar with academic processes. Still, our interviews reflect different life courses and family forms. Regarding planners' notion of their own non-responsibility for the field of work and commerce, further research is needed to address the entanglement of societal norms, national law-making, local leverage for working opportunities, working conditions and fairer time politics for caregivers.

6. Conclusion

Combining paid work and care work is a structural requirement as well as one of the most strenuous facts of life for many people. We have asked how this requirement is discussed by planners and other local actors in the suburban context of Munich-Freiham, how they see their own role in enabling the reconciliation of the two realms, and how, in contrast, everyday life realities with regard to this challenge are perceived by residents. As suburbia as a spatial category has long been criticised for perpetuating a societal devaluation of care work and gender inequality, this analysis allows for conclusions as to wider societal power relations that are made visible through planning and (sub)urban space.

Our main findings suggest that compatibility, while not as devalued and overlooked as in earlier suburban settlements, is still not a planning priority and not acknowledged as a system comprising various human, material, and institutional actors. Intersectional aspects such as disability, age, or caring alone for a family exacerbate these challenges, compared to the needs of perceived "standard" households for which a general notion of "family friendliness" plays out well enough. Therefore, newly planned suburban districts produce less friction for households that need less support from outside anyway. Looking at the everyday life perspective in detail, it becomes evident that societal values and imaginaries of ideal family life powerfully, and oftentimes unreflectedly, influence planners' work.

Although our results relate very specifically to Freiham, they also show that compatibility-oriented planning has the potential to contribute to a broader vision of (sub)urban sustainability and inclusiveness. Astonishingly, many material aspects that foster compatibility are achieved without an explicit planning debate or effort towards this goal. It is also noteworthy that more structural goals such as achieving gender equality in caring and paid work or a "universal care giver" society are unlikely to be implemented. Although these goals are an all-encompassing effort and can, of course, not be met by planning alone, necessary first steps would be to include these topics in planning education and give planners more time and space for reflection.

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Conflict of Interests

The authors declare no conflict of interests. In this article, editorial decisions were undertaken by Angela Million (TU Berlin) and Uwe Altrock (University of Kassel).

Data Availability

The data are made available in the LeoPARD repository of the Technische Universität Braunschweig. Interviews of the everyday perspective are available here: https://doi.org/10.24355/dbbs.084-202602170927-0. The planning perspective has not been uploaded in a repository yet.

LLMs Disclosure

DeepL was used to assist translation, while Meta Llama 3.1 was utilised to selectively reformulate individual sentences and to find synonyms. No portion of the generated content was adopted directly.

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ARTICLE

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Governing Social Infrastructure in New Urban Quarters: Youth, Ageing, and Socio-Spatial Asymmetries in Germany

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Abstract

This article examines how German metropolitan municipalities plan and allocate social infrastructure for youth and older adults in large newly built urban quarters. Focusing on projects in the outskirts, it combines governance analysis with mobile spatial methods in a multi-sited study of Berlin, Hamburg, and Munich. The findings reveal a structural asymmetry in socio-spatial governance: Youth-related infrastructure is institutionally embedded in welfare legislation and planning routines, while senior-related provision remains fragmented and weakly anchored. Across the cases, the everyday functioning of social infrastructure is shaped less by formal planning standards than by access to space, sectoral routines, and governance arrangements. The article argues that understanding social infrastructure as a relational and processual resource is essential for explaining divergent social outcomes in similarly-built environments.

Keywords

ageing; Germany; social infrastructure; socio-spatial governance; suburbanisation; youth

1. Introduction

1.1. Research Question

Young families are usually regarded as the core target group for residential developments on the urban fringe as starting a family constitutes a key reason for moving house (Bertram et al., 2026; England, 1993; Keil, 2018). Against this backdrop, the strong emphasis on child- and youth-oriented social infrastructure in newly developed suburban quarters appears, at first glance, largely self-evident. However, demographic change and ageing populations have shifted the attention in planning. Children leaving the parental home also constitute significant moments that may prompt residential relocation (Bertram et al., 2026; Münter,

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2014), and an increasing proportion of older single-person households changes the resident population's infrastructure needs.

This article therefore argues that existing urban research does not sufficiently examine why, in planning practice, infrastructure aimed at children and young people in the outskirts of conurbations is systematically given higher priority than services geared towards older people. Within the youth sector, kindergartens and schools play a dominant role compared with other youth-related facilities. The article thus addresses a research gap concerning the limited understanding of the administrative motivations and institutional frameworks that shape the governance mechanisms for cross-sectoral social infrastructure.

Rather than attributing these patterns solely to differences in societal discourse, the analysis foregrounds the planning practices of metropolitan administrations. It is precisely in these contexts that urban policy debates on demographic change, ageing, and the healthy city (Marsch, 2025; Woods, 2025) tend to be treated in relatively deterritorialised and programmatic terms, while kindergartens and schools as core elements of child and youth provision are framed as spatially-fixed requirements within neighbourhood-based development processes. This asymmetry points to underlying administrative rationalities rather than merely divergent policy priorities.

At the core of this asymmetry lies the question of location and real estate. Social infrastructure depends on immobile assets to be secured, developed, and operated within specific property markets. The following discussion therefore focuses on patterns of real estate allocation that underpin social infrastructure provision at the metropolitan fringe. In an environment characterised by increasingly complex governance constellations, infrastructure provision is no longer the exclusive domain of the (local) state. Forward-looking infrastructure planning thus involves (often informally and strategically) identifying potentially relevant real estate actors who may enable the provision of spaces for socio-cultural use. The following question then becomes highly relevant: How do administrative actors navigate these property-economic constraints when shaping collaborative governance arrangements?

1.2. Research Framework and Hypotheses

To highlight the diverse demands placed on social infrastructure in newly emerging quarters in the 21st century, this article adopts a perspective that considers both the institutional logics of planning and everyday spatial experiences of people living there. Based on an analysis of governance practices in Berlin, Hamburg, and Munich, the article examines how social infrastructure for young people and senior citizens is planned and implemented in large-scale German urban development projects and why the respective mechanisms differ significantly, even though both types address central needs of key target groups. The complexity of those mechanisms that play out in the development of the largest new quarters on the outskirts of the biggest German cities helps to explain the sectoral governance logics, institutional frameworks, and planning processes behind the contemporary production of socio-cultural infrastructure.

The study is based on the observation that the spatial provision of social services is a result of complex collaboration practices involving various departments of municipal administrations and reflecting how civil servants conceive of the needs of the future residents. We aim at drawing a multifaceted picture of the reality of how social infrastructure is realised. Using the example of important, yet distinct, areas of social

policy, the article examines in detail how the responsible stakeholders deal with dilemmas and uncertainties, and how they aim at ensuring that infrastructure of sufficient quality is in place at an appropriate time. It puts an emphasis on the local level. Educational institutions such as schools (or universities), which are deliberately planned on a strongly supra-local basis, are intentionally excluded from this analysis as they are planned according to entirely different principles. The article illustrates how the legal framework governing provision entitlements translates into the actions of the stakeholders, as well as what other principles they employ to equip neighbourhoods as sensibly as possible, given manifold uncertainties in forecasting, numerous changes in long-term development processes, and competition for land and services.

Our hypotheses are:

- The traditional approach to planning social infrastructure based on the setting of quantitative provision standards and catchment area sizes has lost much of its significance compared with post-war modernism and remains confined to a number of cases in which they are legally binding.
- The otherwise observable decoupling of infrastructure planning from these standards leads to significant coordination challenges and fuzzy governance arrangements, which make the early and comprehensive provision of social infrastructure in the planning of large new residential developments very difficult.
- Youth is systematically given greater consideration than the elderly in socio-infrastructural planning of new residential areas because central facilities for young people (schools, kindergartens) represent infrastructure elements that can be directly or indirectly provided by local authorities and/or benchmarks. In contrast, services for senior citizens (usually understood as those beyond the retirement age of 65) tend to be planned and provided by specialist authorities and agencies that have only loose links with local planning authorities.
- In particular, the establishment and spatial distribution of healthcare facilities are governed by mechanisms that are not integrated into spatial planning, reducing the planning influence of local authorities. Furthermore, the relevant legislation in Germany—laid down in the so-called Social Code Books (SGBs)—stipulates that facilities for children and young people must be located largely on the basis of socio-spatial criteria, whereas this is less the case for the corresponding infrastructure for older people.

The empirical findings of this study demonstrate that youth-related infrastructure, supported by comparatively clear legal frameworks, can be more readily integrated into planning processes, whereas support for senior-oriented infrastructure remains more fragmented. The latter is embedded in heterogeneous and partly market-based systems of provision, including health care, retail-oriented services, and care-related housing, which limit direct administrative steering. This asymmetry does not reflect differing levels of social relevance or even create a contradiction between youth and seniors, but rather reveals structural differences in governance capacity across sectors.

1.3. Structure of the Article

The next section develops the theoretical framework, drawing together relational perspectives on infrastructure, practice-oriented accounts of everyday urban life, and scholarship on governance and spatial provision. It chooses its perspective deliberately by using the German administrative frame to contextualise theoretical discussions. For impact-driven research, this provides the lens through which the subsequent

empirical analyses are interpreted. The third section outlines the methodological design, emphasising the multi-sited nature of the research and the combination of actor-focused workshops with mobile methods. This mixed-methods approach allows for capturing both institutional rationalities and situated spatial practices that typically remain fragmented across planning documents, codified welfare governance, and on-the-ground experiences.

The fourth section is the empirical core of the article. It brings the different sites into a collated dialogue, tracing how spatial availability, organisational logics, and user needs interact in the production of youth- and senior-related infrastructure. Rather than presenting the cities as isolated snapshots, this section highlights transversal patterns, tensions, and spatial contingencies that only become visible through a multi-locational and mobile engagement with the field. The fifth section integrates these findings into a broader discussion, demonstrating how planning instruments, welfare arrangements, and everyday uses co-produce infrastructural possibilities and limits in newly built quarters. It synthesises the key contributions of the study, reflects on implications for planning and urban governance, and identifies avenues for future research on the socio-spatial formation of urban infrastructure.

2. The Changing Modes of Social Infrastructure Planning in Germany

2.1. Historical Background

With the emergence of the modern welfare state, infrastructure planning in the context of urban expansion underwent radical change in Germany. Whereas previously, in the context of industrial urbanisation—which was characterised by a rather liberalist approach and influenced by the police state—the state's role had been limited to ensuring the basic functionality of new urban quarters, as enshrined in the earliest textbooks and manuals on urban planning (Baumeister, 1876; Stübben, 1890), from the interwar period onwards the state assumed a considerable number of new responsibilities, such as those relating to social and housing policy. In the context of the emergence of modernist urban planning and architecture, hierarchical and functional structures for growing cities—conceived systematically for the first time—assigned facilities for the supply of goods and services, as well as for the reproduction of urban sub-units (Perry, 1929; Schöning & Borchard, 1992; van Laak, 2017). Discrete infrastructure was organised into tiered centres, and the "basic school unit" and "settlement cells" emerged as "neighbourhoods." The principles of urban expansion built upon this—which shaped post-war modernism internationally and, in particular, in both parts of Germany, with the construction of large-scale social housing estates (in the West) and complex housing developments (East)—saw in this welfare-state tradition the state's responsibility for providing infrastructure—which, as a public good, could not be adequately supplied by the private sector. Whilst, for example, large sections of the retail sector remained in private hands—for which the task was simply to plan suitable centres—sophisticated catalogues containing guidelines and reference values were developed. Based on a projected population structure in a new development, these catalogues specified per-capita space requirements for education, health, culture, open spaces, and much more. These were regarded as quality benchmarks for the provision of facilities in urban quarters and were translated within cities into concrete mechanisms for determining needs by defining appropriate facilities and their sizes, site requirements, catchment areas, and forms of operation. Working in conjunction with specialised planning authorities responsible for their respective policy areas, district planners and urban expansion planners were thus able to put the appropriate infrastructure in place alongside the development of housing.

This logic has now fallen apart for many reasons, with the result that the traditional welfare-state model of infrastructure planning is no longer applied—and not even primarily or solely because the tasks of the welfare state have fundamentally changed in the wake of the neoliberal challenge to it. Broader societal debates on the affordability and sustainability of municipal infrastructure play an increasing role, not in the dramatic form of international debates on urban austerity (Peck, 2015), but in the public-interest claims of market-oriented infrastructure provision from a political-economic perspective (Scheller, 2017). It is true that the privatisation of many public utilities (railways, telecommunications, energy, etc.) has also placed public responsibilities in private hands. However, this has affected the neighbourhood-based infrastructure under consideration here—comprising educational, social, cultural, and healthcare facilities, as well as open spaces—only to a limited extent. The changes in these areas are more closely linked to altered demographic conditions (ageing population, reduced fertility, ethnic immigration) and the resulting shifts in needs—for example, in education and care—as well as to rising social expectations and welfare state guarantees (nursery places, school places, youth support, etc.). They are reflected in legislation—albeit very selectively—and lifestyles characterised by individualisation and similar trends (changes in leisure behaviour due to digitalisation, the declining importance of clubs, home care rather than "sending people off" to nursing homes, etc.), urban planning paradigms (de-standardisation and decoupling from strict catchment areas, etc.), changes to the operational structures of social services and their organisational forms, changes to social structures and the associated needs arising from the maturation process of neighbourhoods over time, and similar developments. Added to this are the indirect effects of neoliberal trends, such as partnership-based models of urban development organisation—within which developers sometimes take on at least the construction of infrastructure—as well as the limited capacity of local authorities to act due to budgetary and staffing problems. They, for example, make it difficult to consistently set aside land for infrastructure facilities over a longer period or to plan strategically in anticipation of urban expansion measures.

Against this backdrop, the question arises as to how, and indeed by whom, infrastructure facilities are planned today in the context of the governance of urban expansion, given the highly differentiated administrative structures and complex web of responsibilities at local and regional levels. Numerous negative examples make it clear that a departure from the rigid logic of calculating provision standards and translating these into facilities—for which land is set aside at an early stage as part of the development of the urban structures of new quarters—can significantly impair their functionality, at least in the initial phase, if not over longer periods. This is evident, for example, from the fact that in some large housing estates, even half a century after their construction, rail-based local transport links originally planned have still not been built; or that in new residential quarters, shortly before residents move in, the future residents still do not know where they will send their children to school.

2.2. Formal and Informal Aspects of the Planning of Social Infrastructure

For urban infrastructures and local amenities, the German language uses the administrative term *Wohnfolgeeinrichtungen*, literally: residential follow-up facilities. They constitute a key governance interface between demographic expectations, social policy objectives, and urban planning practice (Le Galeés, 2003; Pierre, 2011). In this context, assumed population structures, derived from household projections, age cohorts, or migration scenarios, are traditionally translated into quantitative spatial claims on land for social infrastructure via benchmarks, as explained above, that are supposed to guarantee a localised implementation of social policies. As such, benchmarks are not merely technical tools but instruments of

governance that stabilise particular imaginaries of urban life and legitimate specific allocation decisions, yet they differ significantly in terms of their legal binding force and their influence on planning decisions. From a political-economic perspective, benchmark-based planning privileges forms of social infrastructure that can be standardised, quantified, and legally defended (Miller, 2004).

Benchmarks should be understood as recommended quantitative standards that are usually proposed by experts (Jochimsen, 1966; Libbe et al., 2010; Miller, 2004). They have no legal force and, unlike limit values, do not represent a binding standard laid down in a law or regulation. However, they can be utilised to specify targets and serve as a control mechanism for comparing demand with the actual situation and for comparing cities (Blum et al., 2023). A number of new residential units will "require" a certain amount of square meters of sports facilities, as well as a certain number of kindergarten places (to take just two examples). It remains up to decision-making in the planning process and the implementation of social policies to what extent one of the two will be prioritised or if both can be realised. If a municipal body or another administrative department is able to translate its specific claim by formulating it into the form of applicable and accepted benchmarks, it may be included in the local budget, one expert claimed (B_O), thereby making the "fight" for its implementation easier.

The governance effect of benchmarks is not limited to what they measure, but also to what they exclude. Relational, informal, and preventative forms of social infrastructure, often central to everyday social reproduction, resist translation into fixed ratios. As a result, they are structurally disadvantaged within land allocation processes, particularly in large-scale new developments characterised by high land values and competitive uses.

For what concerns the role of the German planning system, its Section 1 (6) 3. of the Federal Building Code (BauGB) requires basic services to meet social and cultural needs, in particular the needs of families, young and old people, as well as people with disabilities, different impacts on women and men, as well as the needs of the educational system and of sports, leisure, and recreation.

In this context, municipalities rely on sectoral planning documents that quantify the additional demand (Blum et al., 2023; Jochimsen, 1966). Concisely, the relevant sector within administration provides benchmarks. Under Section 11 BauGB, the City Council may adopt a plan linked to an urban development contract which ultimately makes the provision of the necessary social infrastructure a prerequisite for the granting of a planning permission to a private developer.

Additionally, we have to deal with the German SGBs that codify a variety of social policy standards. The socio-spatial orientation (Keenan, 2025) of parts of the municipal administration having evolved in the last decades was taken up in them to varying degrees. Overall, the SGBs reveal a clear asymmetry: Youth services are structurally socio-spatial, whereas senior-related infrastructures rely on indirect, dispersed, and weaker regulatory foundations—an imbalance with tangible consequences for the planning and allocation of social infrastructure.

The strongest and most explicit integration can be found in SGB VIII (on Children and Youth), where multiple provisions (Sections 1, 11, 16, 78, 80) systematically align services with everyday life contexts, local resources, and neighbourhood environments. With the so-called Federal Participation Act, socio-spatial

orientation was also explicitly introduced into SGB IX. Here, the social environment is framed as a key reference for participation, although the overall logic remains strongly case-based, leading to primarily indirect implications for urban planning.

In contrast, socio-spatial steering mechanisms for older adults have remained comparatively weak. SGB XI and XII are dominated by insurance- and benefit-oriented logics. Socio-spatial approaches appear mainly in model programmes (e.g., Sections 45f, 123 SGB XI). Only Section 71 SGB XII explicitly refers to facilities for social, cultural, and educational activities of older people. As a result, legal support for neighbourhood-based prevention and participation is fragmented. Social work uses the term *fallunspezifische Hilfe* (literally: case-unspecific help) to distinguish it from individual social service for distinct persons. Indeed, their *fallunspezifische Hilfe* is socio-spatial orientation and eventually local amenities for planners.

The preceding sections have conceptualised social infrastructure as a governance-dependent and politically contested field shaped by benchmarks, property relations, and intermediary actors. Rather than treating planning instruments, non-profit providers, or mixed-use strategies as isolated variables, we developed an integrated analytical lens that foregrounds how social infrastructure is produced through social policy systems, urban development governance, and everyday spatial practices. At the same time, the section resonates with political-economic perspectives that highlight the changing role of land, property relations, and calculability in shaping urban development trajectories and allocation decisions (Harvey, 1989). From this viewpoint, social infrastructure provision is not merely a question of technical planning or social work, but a contested outcome of governance arrangements operating under conditions of land scarcity, fiscal pressure, and growth-oriented urban strategies. Sectoral logics and institutional configurations systematically privilege certain forms of provision while marginalising others (Peck, 2015). Building on this theoretical framing, the subsequent empirical analysis examines how these governance dynamics materialise in everyday planning practices and spatial arrangements within large newly built urban quarters.

3. Methods

Research on governance processes that shape the spatial allocation of social infrastructure requires a mixed-methods approach. This study combines (a) a general orientation building on quantitative information about new-build quarters, (b) conventional qualitative social-science methods like expert interviews and focus group discussions, (c) mobile spatial research methods, and (d) an analysis of administrative regulations, most notably the German SGBs; their discussion structured both the preparation and interpretation of the empirical material (see above).

Firstly, there are quantitative findings from the New Suburbanity research group. Structured desktop research was triangulated on the basis of a standardised questionnaire (on all new, larger quarters in all the bigger German cities). Among other things, types of urban expansion, scale and density, building typologies, open space and access structures, and social and functional mix were recorded. We used data on social infrastructure provision here.

Key findings are based on statements from expert interviews, the central qualitative survey method for tapping into context-specific, experience-based knowledge in governance and planning processes (Döringer, 2021; von Soest, 2023). Expert interviews were carried out with municipal administrative personnel in

Berlin, Hamburg, and Munich from different departments responsible for the allocation of infrastructure (not for shaping them in terms of content) and the planning of new residential areas themselves. A series of three focus group discussions (Johnson, 2021) was conducted between November 2024 and January 2026, one in each city; transcripts having undergone structured content analysis (Kuckartz, 2012; Mayring, 2020; Sheydayi & Dadashpoor, 2023). We understand expert knowledge as perspective-bound, contextual knowledge to be analysed reflexively (Johnson, 2021; Schreier, 2012). For this reason, interview sources are ordered by relevance, not by alphabet (the letters were disgnated randomly). The location is still traceable in the interview statements anonymised for this text (by letters HH [for Hamburg], B [for Berlin], M [for Munich]). For each focus group discussion, 10–15 participants from administration and up to five external experts, i.e., scholars (e.g., members of the research group) or specialised practitioners (housing, welfare), were invited to provide interdisciplinary debates. Given the differences in governance structures, planning procedures, and stages of development in the metropolises under study, we are drawing on the expertise of both internal experts—from the public sector and the service sector—and external experts—from academia (von Soest, 2023). The main reason for taking a closer look at Germany's three largest municipalities is simple: Their local authorities are also the largest and, consequently, the most sophisticated and specialised in terms of local government; they therefore have the greatest need to establish a specific system of governance in order to manage their urban development.

For the location analysis, the article draws on mobile methods that specifically expand on classic instruments of qualitative empiricism (Burckhardt, 2019; Naumann & Strüver, 2025). Based on the assumption that spatial perception is always a physically situated and movement-based cognitive process (Burckhardt, 2019), our location analyses were designed as systematic go-alongs. Where the location of the workshop (Hamburg) allowed, we carried out these go-alongs on the same day as the workshop; otherwise, on some other day in 2023 and 2024. The physical presence of the researchers, when being on location—even if it's a planned, not yet built one—is understood as constitutive for the understanding of spatial allocation logics (Naumann & Strüver, 2025). In the interest of this deepened understanding, various groups of participants from the research group regularly visited the relevant areas of the cities in question. Empirically, we take advantage of the fact that large new residential developments in Berlin, Hamburg, and Munich are located in proximity to older large housing estates, allowing for collated observation of historical and current developments.

Nominal surveys (present/not present) are supplemented by jotting and headnoting (Eckhardt, 2025). Mobile methods extend classical tools such as urban surveys and site analysis by systematically capturing embodied and situated spatial experience (Burckhardt, 2019; Naumann & Strüver, 2025). Visibility, accessibility, walkability, locational advantages, construction quality, and spatial centrality can thus be analysed in situ and linked to subjective experiences of use. Subjective perceptions of accessibility are therefore not merely illustrative but constitute a methodologically legitimate component of structural spatial analysis. Two examples from the research: The emerging role of ground-floor uses was always a subject of reflection and discussion in the research group (e.g., the possibility of collecting that circumstance as data), in the locational analyses in situ, and on the agenda of the group discussions.

4. Facilities for the New Outskirts

4.1. New Residential Areas and Follow-Up Facilities?

We now turn to the empirical question of what shall happen in new quarters beyond housing. As outlined above, the research group underlying this study examined all suburban development projects with more than 500 housing units (Altrock, 2022), focusing on greenfield developments at the metropolitan fringe (Bornmann et al., 2026). Purely residential areas have become rare (5%). The vast majority of projects include housing-related infrastructure (61%), while 29% explicitly aim at mixed-use quarters whose infrastructural functions are expected to exceed local demand (all numbers: Bornmann et al., 2026). Prominent examples include the planned university campus in Hamburg-Oberbillwerder, alongside the—here not further examined—creation of work spaces (see Figure 1)

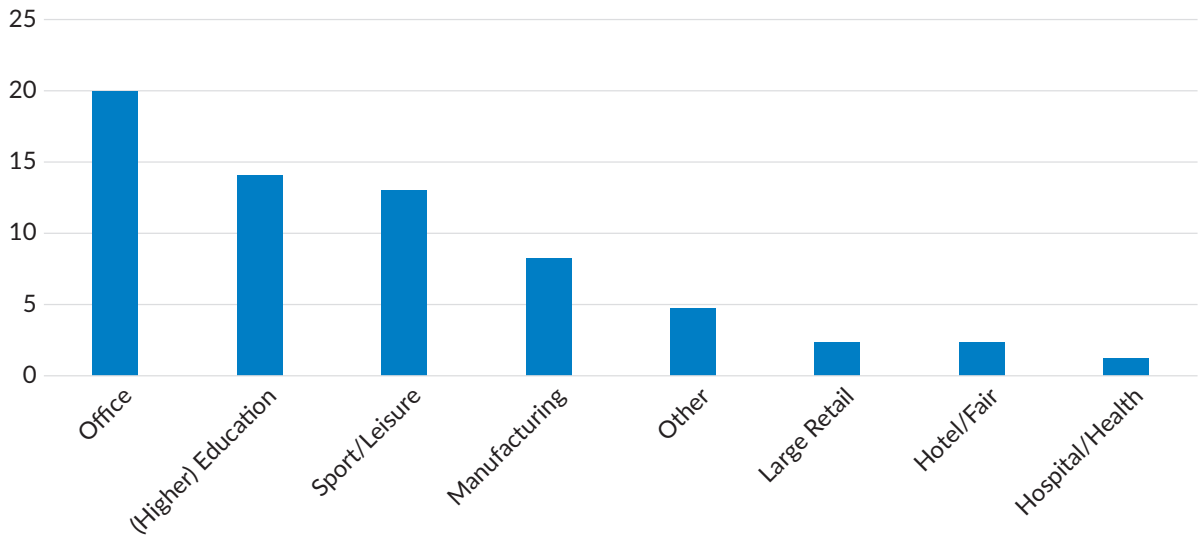


Figure 1. Mixed-use items in suburban development projects with more than 500 housing units. Source: Own compilation based on data from Bornmann et al. (2026).

A closer look at basic infrastructure provision reveals a differentiated picture. School construction (59%) is almost as prevalent as the integration of local food retail (62%). Youth facilities (38%) and senior facilities (34%) appear at similarly moderate levels, even though, as shown above, governance arrangements in the youth sector are institutionally easier to implement than in the senior sector. This underlines the analytical value of including both sectors, even though the empirical density is considerably higher for youth-related infrastructure (see Figure 2). Unsurprisingly, kindergartens dominate by far (93%). In larger new quarters, they have become such a standard component of contemporary German residential development that they can largely be taken as a given in the remainder of the analysis. Accordingly, kindergartens serve here primarily as an illustrative case for distinguishing necessary from sufficient conditions of urban infrastructure governance.

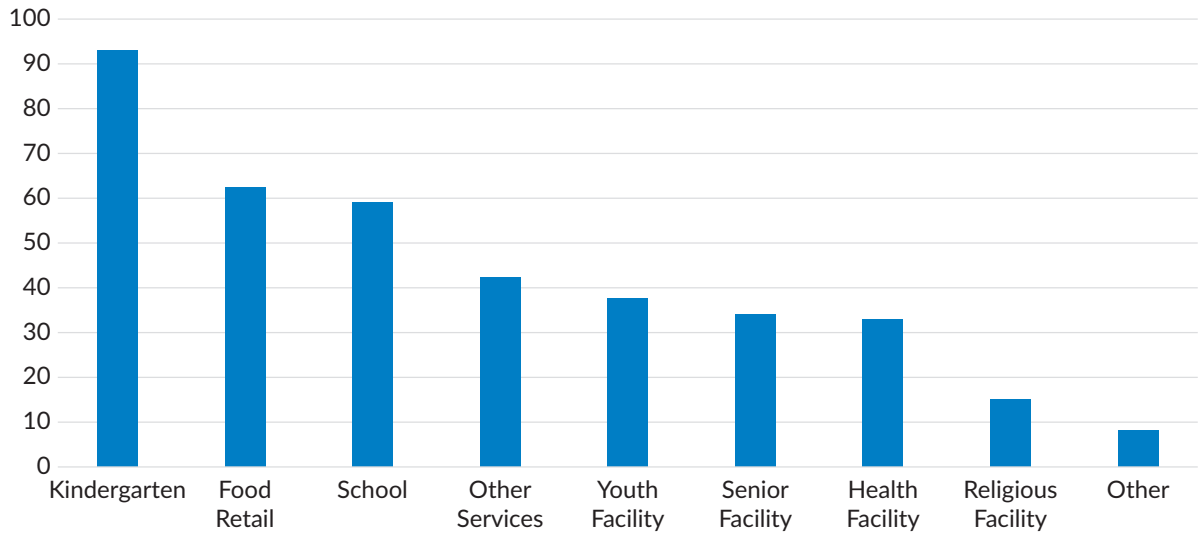


Figure 2. Follow-up facilities in suburban development projects with more than 500 housing units. Source: Own compilation based on data from Bornmann et al. (2026).

Branding and imaging of new quarters often suggest that, beyond kindergartens, community-oriented and urban social infrastructure constitutes the most prominent feature of new social infrastructure. In urban design terms, this typically refers to small spaces such as ground-floor units or multifunctional rooms. They are relatively prominent (Figure 3), yet their comparatively low spatial requirements mean that their implementation usually occurs at the level of individual sites, often as a component of a specific third place (Mattern, 2014). In planning processes, they tend to be integrated later than the infrastructural elements

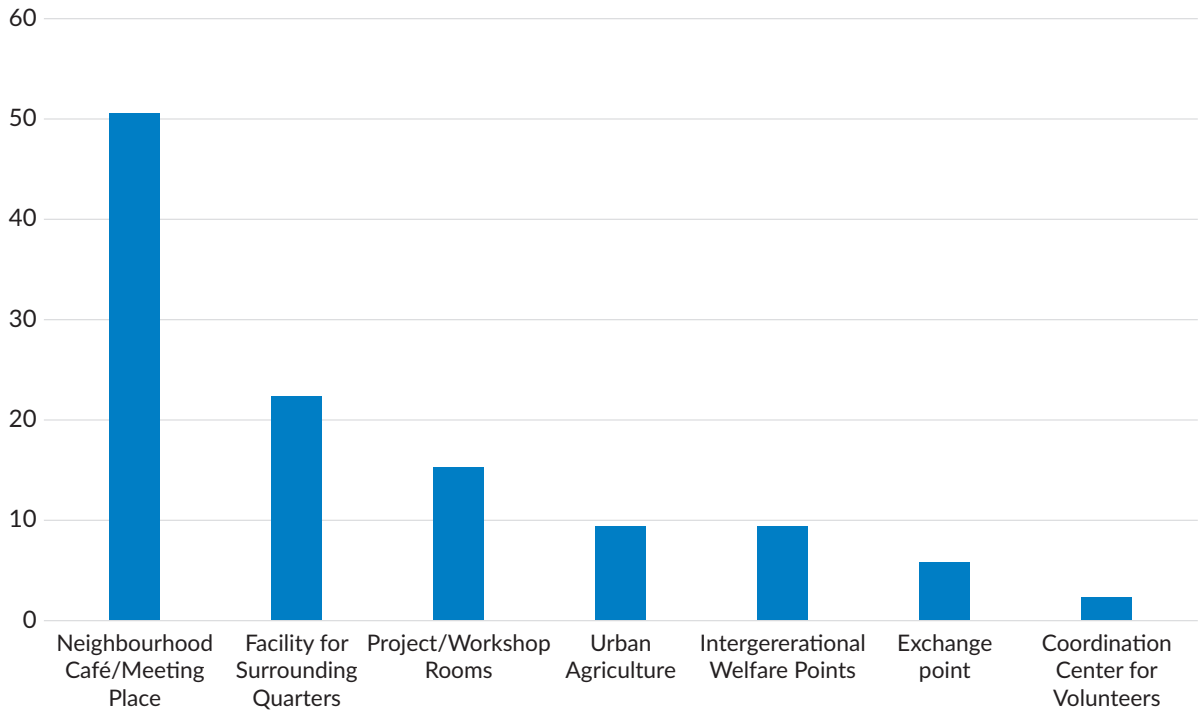


Figure 3. Facilities for a third place or community-oriented use suburban development projects with more than 500 housing units. Source: Own compilation based on data from Bornmann et al. (2026).

listed in Figure 2 and often reflect the initial ambition to establish any target-group-specific or cross-cutting third place at all. They can be seen as add-ons, e.g., like a corner café in a building.

The creation of urban and green public spaces is a core element of contemporary neighbourhood visions, as demonstrated by Bornmann et al. (2026) in this thematic issue. Around two-thirds of the quarters feature either central squares or green corridors (67% each), while nearly half (49%) extend these into networks of public spaces beyond the quarters themselves. Social infrastructure is distributed across neighbourhoods in ways that create focal points without neglecting the distinct functional logics of different infrastructure sectors. How Germany's largest cities address this challenge in their largest new quarter developments is the question to which the following section turns.

4.2. Providing Youth-Oriented Services

A key finding from the focus group workshops is that opportunities for the establishment of services for adolescents primarily emerge where organisations working in that field have access to their own or reliably usable spaces. Ownership, long-term leases, or contractually secured uses enable low-threshold, flexible, and even spontaneous use (M_Z, B_S). This responsiveness is essential, as needs arise at short notice and target groups change rapidly. Organisations possess extensive experiential knowledge regarding spatial requirements; quantitative standards can at best define minimum thresholds (B_N, B_B). More decisive is the ability to spatially bundle different activities in adaptable spaces (HH_A, M_Z).

Youth-related infrastructure is considerably less programmable than educational infrastructure. While kindergarten and school provision is clearly defined in planning terms, youth work under Section 11 SGB VIII remains open and adaptable. Spaces derive their meaning from the activities taking place within them; changes in programming can quickly increase or diminish their relevance for young people (M_K). This explains the comparatively fuzzy character of youth infrastructure beyond schools and kindergartens (B_R, B_B). Moreover, usage regimes differ: Facilities attached to schools or public institutions are often perceived by their users as a form of control (HH_O), creating a demand for spaces with varying degrees of autonomy, appropriation, and social regulation (M_K).

Beyond indoor spaces, open spaces and parks play a central role (M_H, B_M, M_S). They function as informal spaces for appropriation, often used temporarily and inofficially. Such places typically evolve through social practices rather than deliberate design. These functions are often substituted by designated youth spaces such as skate parks, which are recognisable from the outset and used both locally and citywide (M_H, B_M, M_S).

This refers to a structural tension: Whilst young people's use of space is flexible and difficult to plan for, socio-pedagogical support requires long-term administrative preparation (M_Z, M_H, M_W). Young people are intensive users of open space, move independently, and rely on both outdoor and indoor settings (M_S, M_F, M_Z, HH_S, B_N). For many, particularly those in crowded housing or with migrant backgrounds, such spaces function as a "second living room" (M_Z, M_K). Pure open-space solutions are therefore insufficient; proximity to facilities or temporary structural additions to buildings is often required. Overall, youth-related infrastructure proves most effective when characterised by functional openness, social integration, and rapid adaptability rather than rigid standards.

4.3. Urban Health, Countering Isolation, and Comparable Issues of an Ageing Society

Population ageing poses growing challenges for urban and neighbourhood planning (Münter, 2014). Senior-friendly infrastructure is gaining importance in light of rising care needs, post-Covid effects, risks of loneliness, and increasing care work (Bertram et al., 2026; Potz & Scheffler, 2023). Health and care systems follow market-based allocation logics that frequently generate spatial inequalities, for example between socioeconomically strong and weak neighbourhoods (Brokow-Loga & Eckardt, 2021; Klinenberg, 2018; Scheller, 2017). As senior-related infrastructure in Germany is institutionally organised distinctly, we address only selected aspects.

We structure senior-related infrastructure along three dimensions. First, neighbourhood-oriented services function as prerequisites for social participation and help prevent isolation (B_K). Second, we stress care issues as collective social resources rather than purely private responsibilities, contributing fundamentally to social stability (HH_A). Third, with declining mobility, the neighbourhood gains importance as the central sphere of everyday life, integrating care, social interaction, and daily routines (B_L).

In Germany, key day-to-day requirements for age-friendly infrastructure are provided as part of the retail sector, rather than as part of other social infrastructure. Pharmacies, for instance, operate as independent market actors and their location follows retail-oriented principles (Stark et al., 2012). Urban planning can, at best, create favourable spatial conditions, such as providing suitable commercial units in new quarters (B_M), without exerting direct control. At the same time, health-related issues are becoming more relevant for integrated neighbourhood development. Climate adaptation, open-space design, and local mobility significantly affect health outcomes, particularly for older people and vulnerable groups (Marsch, 2025).

Compared to youth-related socio-spatial services, work with older people can be conceptualised as non-case-specific, neighbourhood-oriented infrastructure. However, beyond SGB VIII, Germany lacks consistent socio-spatial guidelines for this field. Loneliness has emerged as a key challenge, particularly in large cities, and seems to have been intensified by the Covid-19 pandemic (Brokow-Loga & Eckardt, 2021; Krüger, 2020; Potz & Scheffler, 2023). Volunteering remains important but insufficient to address complex social and psychological needs (B_K). With advancing age, mobility decreases, and participation increasingly depends on accessible, nearby meeting places (HH_E). This creates a planning task to provide small-scale, walkable, and emotionally accessible spaces such as neighbourhood meeting points or professionally supported third places (B_L). Berlin, for example, has expanded funding, strengthened existing facilities, and made use of rented retail spaces for this purpose. Senior-oriented infrastructure therefore requires spatially flexible locations that enable encounters, counselling, prevention, and, where necessary, care services. Comprehensive accessibility is more decisive than quantitative provision, as even short distances can become barriers (B_K). Digital mapping tools, such as those utilised by the Berlin Senior Citizens' Network, further reveal that many services operate in third places and resist strict systematisation (B_L, B_K).

Overall, senior-friendly neighbourhood development depends on hybrid concepts that integrate housing, social interaction, care, and local amenities (Klinenberg, 2018). Independent meeting places for older people and intergenerational neighbourhood centres fulfil complementary functions: The former provide target-group-specific support, while the latter foster multifunctionality and social mixing. Together, they form the basis of a socio-spatial infrastructure that enables participation and counteracts isolation in later life.

5. Discussion

Social infrastructure in new urban quarters extends far beyond the provision of housing-related follow-up facilities. It cannot be reduced either to the basic services provided by the public sector, such as kindergartens and schools, or solely to the fulfilment of quantitative standards. Rather, neighbourhood-based social infrastructure constitutes a central instrument for translating "urbanity" from a masterplan into a built environment: to put life between the buildings, to reframe Gehl's (2016) dictum. Social infrastructure takes the form of a place-specific and relational mix of services addressing different target groups, most prominently children, young people, and older adults. From a planning point of view, it is not worthwhile to prioritise one target group over another. The demands of many target groups will have to be considered, and ultimately stricter and less strict means to meet demands will have to be applied. Stricter demands are represented by individual entitlements and met by infrastructure facilities (like a kindergarten). Beyond those, other demands are taken care of by the welfare state system in the form of non-individual helping structures and are more weakly embedded into the municipal administration. Approaches to link the demands of different generations may, however, be fruitful when planning infrastructural facilities, especially when they are designed to make age groups meet in a dialogic manner (Freutel-Funke & Wanka, 2024). Whether from a disciplinary point of view of education or planning science, the allocation of social infrastructure therefore exceeds classical sectoral boundaries and must be understood as a complex mode of governance.

At the same time, infrastructure sectors rarely decide on their allocation mechanisms in a fully strategic or explicit manner. In most cases, allocation decisions are implicit, shaped by pre-existing spatial and institutional conditions. Site development often takes place in a path-dependent environment—whether this concerns a concrete property, a long-established location, or a budgetary title that has historically covered rental costs for youth work under Sections 11, 13, or 16 SGB VIII and is channelled to non-profit providers (Bauer et al., 2012). The providers frequently operate in the same neighbourhoods over long periods, even if addresses change. Besides taking urban governance arrangements into account, they look for sites as retailers, not as planners. Therefore, it is necessary to understand how they can be integrated into allocative governance schemes.

5.1. Time: Phasing, Anticipation, and Institutional Lag

Temporal dynamics emerge as a central yet often underestimated dimension of social infrastructure governance in new urban quarters. Planning and administrative practice frequently respond to temporal uncertainty through interim uses or transitional arrangements. The gradual build-out of new quarters and the corresponding evolution of infrastructure needs are generally treated as a manageable challenge. Empirically, however, temporal mismatches repeatedly surface. In family-oriented new-build quarters, it can appear economically and socially rational to locate social infrastructure temporarily in ground-floor retail units of early construction phases. These are spaces that are unlikely to attract viable commercial uses until the population of the quarter reaches a critical mass. Yet, by the time such commercial demand materialises, demographic pressures for family-oriented infrastructure may already have subsided.

Such arrangements depend crucially on property owners' temporal horizons. Municipal housing companies and cooperatives—whose business models typically prioritise long-term stock stabilisation over short-term returns—are particularly well positioned to accommodate temporally shifting uses of ground floors. This echoes a key insight from urban regeneration: The adaptive reuse of commercially zoned spaces for

socio-infrastructural purposes marked a formative moment in the development of integrated neighbourhood planning (Krüger, 2019). Since the 1970s, numerous kindergartens have operated as *Kinderläden* (Kinder = Children; Läden = Shops), embedding social infrastructure directly into everyday urban spaces. What initially emerged as a pragmatic response later became an intentional strategy of cautious urban renewal, strengthening ground-floor activation as a collateral effect of socio-infrastructural provision.

From a governance perspective, we must therefore understand time as a condition of institutional capacity. Planning systems are required to anticipate uneven and non-linear processes of social reproduction. Institutional lag reveals the limits of bureaucratic temporality and highlights the need for flexible and adaptive governance mechanisms. Early-phase provision, temporary yet reliable spatial arrangements, and anticipatory programming emerge as key strategies to mitigate temporal mismatches.

5.2. Place: Location, Accessibility, and Steering

Spatial conditions are equally decisive for the everyday functioning of social infrastructure. Across the analysed cases, access to suitable and adaptable premises emerged as a key determinant of whether services could operate in a low-threshold, inclusive, and responsive manner. Location within the urban fabric, visibility in public space, and proximity to everyday routines all shape patterns of use and accessibility.

In planning practice, the spatial clustering of social infrastructure such as the "neighbourhood house" (*Nachbarschaftshaus*, cf. Böcker, 2010) plays an important role: an entire building dedicated to community-oriented uses, acting as a third place. In new-build quarters, such spaces often exist initially as architectural shells whose programming aligns over time through neighbourhood management processes, procedural instruments largely inherited from urban regeneration, again (Krüger, 2019; Walther, 2008). This approach aligns urban design with flexible allocation practices across administrative sectors.

A second, though currently less prevalent, type of cluster is the educational landscape (Coelen et al., 2019). Its limited presence in contemporary new-build quarters reflects pressures toward standardised school construction. Mobility hubs constitute a further emerging type, combining large infrastructural structures with small-scale services and public activation. Although frequently included in master plans, their transformation into genuine socio-infrastructural clusters remains uncertain (Krüger & Altrock, 2023).

Importantly, we shall not understand clustering solely by looking only at a single plot. It is useful as an urban design practice, too. Where central infrastructure buildings generate public meeting points, complementary uses can emerge in small-scale ground-floor units. Non-profit providers act as commercial tenants (Bauer et al., 2012), enabling allocation mechanisms often inaccessible to municipal administrations. Services beyond schools and kindergartens, particularly senior-oriented, cultural, educational, and neighbourhood libraries, benefit from such proximity. This spatial logic connects everyday administrative practice in Germany with regard to *Wohnfolgeeinrichtungen* to international debates on social infrastructure (Klinenberg, 2018; Latham & Layton, 2019; Mattern, 2014). Our findings underscore the relational character of space. Space is not a neutral container for services but a contested resource shaped by property relations, land values, and planning priorities. Control over space and its stabilisation over time is thus central to explaining optional societal outcomes in new quarters.

5.3. The Role of Benchmarks

Benchmarks still play a powerful role in legitimising social infrastructure provision within planning and administrative processes. In German municipalities, they translate demographic projections into spatial requirements and budgetary commitments. Their strength lies in administrative clarity and legal defensibility, particularly for basic infrastructure like schools and kindergartens (HH_S, B_B, B_S, M_B).

From a governance perspective, benchmarks function as selective visibility devices. They privilege needs that can be quantified while marginalising those that resist standardisation. The challenge is not to abandon them but to critically reflect on their limits and complement them with qualitative, process-oriented assessments of needs for services. Increasingly, benchmarks have become objects of negotiation rather than fixed standards (Krüger, 2025), reflecting demographic change and spatial variation across territories (Blum et al., 2023; Libbe et al., 2010). Crucially, these negotiations are anchored not in social but in planning law as explained above. Site-specific urban development contracts, for instance, give cities the capacity to ensure the provision of socio-infrastructural services beyond minimum legal requirements.

6. Conclusion

The analysis of three metropolitan regions' administration practices demonstrates that sectoral logics, institutional routines, and property-economic availability decisively shape which allocation mechanisms are applied and how flexibly they can be translated into urban development processes. The analysis shows that socio-spatial requirements become operationally relevant only through a complex process of translating them into spatial categories. It is the physical localisation within the quarter—through urban design—that renders needs addressable and governance decisions observable.

Effective governance thus requires an understanding of both sector-specific logics and property-related allocation patterns. This entails recognising actors in their dual roles as service providers and as tenants (e.g., of ground-floor shops) as well as landlords (e.g., of third places). Non-profit welfare organisations and housing companies function simultaneously as operators, lessors, and civil-society actors demanding space.

Despite divergent legal frameworks, youth and senior infrastructure exhibit structural analogies, particularly regarding encounter-based, leisure, and preventative services beyond case-specific assistance. Low-threshold spaces and flexible uses emerge as central prerequisites for participation across target groups. While youth infrastructure benefits from stronger institutional anchoring under SGB VIII, senior-oriented provision remains more weakly codified (Table 1).

For new urban quarters, the findings underscore that the integration of urban design, benchmark logics, and governance structures is essential. Time, location, and institutional responsibility (measured by benchmarks) constitute necessary but not sufficient conditions. Integrating intermediary actors, welfare organisations, and municipal administrations into spatial development processes is key to the fine-grained management required to move beyond minimum standards.

Table 1. Different dimensions of youth-oriented and senior-oriented infrastructure planning.

Dimension	Youth	Seniors
Legal Basis	Clear (SGB VIII)	Fragmented (multiple SGBs)
Steering Competence	High (municipal responsibility)	Low (often market-based)
Flexibility	High	Medium
Spatial Logic	Multifunctional rooms (e.g., in educational landscapes or youth clubs)	Hybrid: care, health, encounter
Actor Constellations	Structured (often already in networks by Section 78 SGB VIII)	Heterogeneous, care & health-dominated

Although the specifics of German regulation are not directly transferable, the German case contributes to international debates by illustrating how to systematically engage with the socio-infrastructural "software" while planning the urban "hardware." What German administration conceptualises as case-unspecific work in social departments and follow-ups in the planning departments corresponds closely to what international literature describes as third places. This translation renders German social law analytically productive for global discussions on social infrastructure and urban planning.

The analysis further demonstrates that senior-oriented infrastructure encompasses a broad spectrum of mobility, local supply, loneliness prevention, health services, and care provision. Its concrete manifestation at the neighbourhood level is less the outcome of abstract need profiles than the result of spatial accessibility, real-estate availability, and the governance capacities of specific actor constellations (see Table 1). The fact that senior-related needs are addressed less explicitly in planning processes thus points not to a lack of societal relevance, but rather to the absence of coherent regulatory frameworks that can be operationalised within spatial planning. These could be benchmarks—as long as a quantitatively based regulation leaves necessary flexibility for welfare actors.

Social infrastructure in new-build neighbourhoods thus requires a consistent approach that aligns legal frameworks, real-estate realities, and social work's rationales (Krüger, 2025). While youth-related infrastructure is comparatively easier to integrate into planning processes due to clearer regulatory mandates and institutional responsibilities, senior-oriented infrastructure must largely be structured through spatial availability and intermediary actors, particularly those rooted in organised welfare provision (Table 1). Both fields benefit from flexible, low-threshold, and spatially well-embedded formats that systematically connect urban design as "hardware" with the "software" of social work. Achieving this in new urban quarters presupposes a locally embedded form of governance (Figure 4) that may explicitly draw on instruments and procedures developed in urban regeneration and adapt them to the planning of new urban quarters.

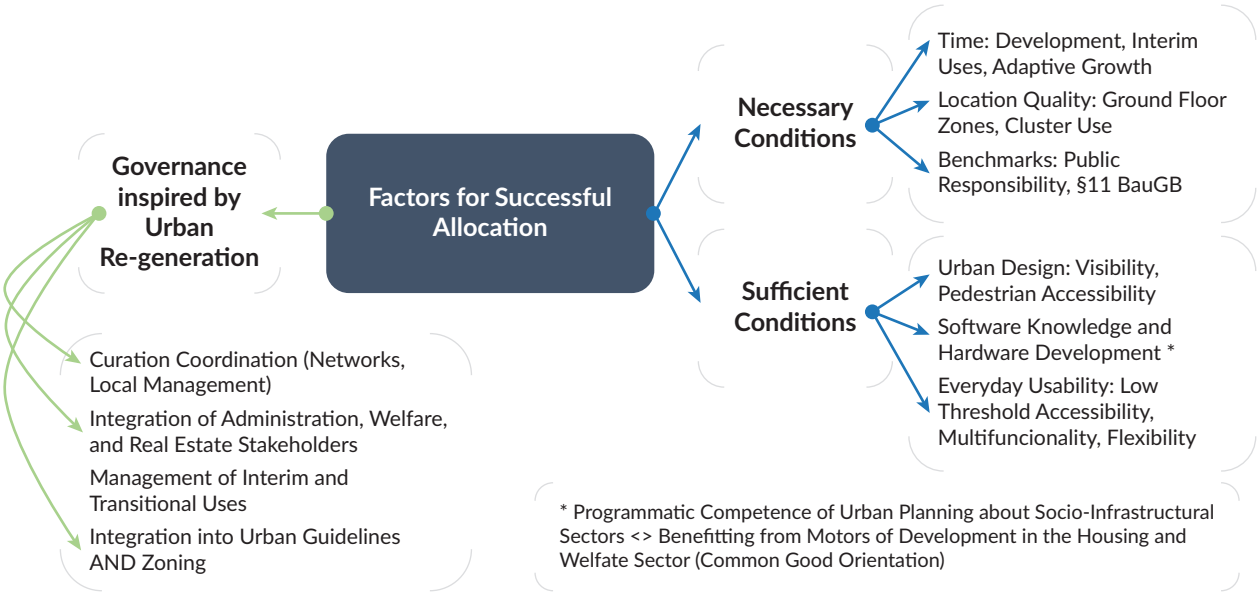


Figure 4. Conditions for an allocation of punctiform social infrastructure.

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Conflict of Interests

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Planning and Living Suburban Urbanity: A Berlin City Extension Revisited

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Abstract

To avoid the shortcomings of large, postwar-era housing developments, city extension planning has shifted towards ideals of social and functional mix, referred to as "urbanity." In Germany, this shift can be observed since the 1990s, when a new phase of city extensions started as research simultaneously began to focus on the diversification of suburbia. The extent to which the guiding principles for new city extensions have been implemented and their contribution to diversification remain open research questions. In this article, we investigate the relationship between planned goals and lived reality in the first city extension of post-reunification Berlin: Karow-Nord. The estate was planned under the guiding principle (*Leitbild*) of a "new urban periphery" (*Neue Vorstadt*). Based on a qualitative case study, we examine the *Leitbild*'s aims, the assessment of its realization, and residents' perspectives. The study reveals a discrepancy between the ideal communicated to the public and the actual planning, as the social and functional mix has been subordinated to other goals. Although the neighborhood today is socially mixed, residents do not perceive it as particularly urban. Instead, they value its position between city and countryside, and describe it as village-like. The urban features of Karow-Nord, however, give rise to challenges in the more classic suburban surrounding areas. We discover processes of symbolic boundary-making that are fueled by negatively labelled features of the city and political mobilization against new city expansions. The study contributes to conceptual debates about suburbia and to a reflection of contemporary city expansion planning.

Keywords

boundary-making; city extension; diversification; everyday life; planning ideals; residents' perspectives; suburban urbanity

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1. Introduction

Since the 1990s, research on suburbia has experienced a shift (Brake et al., 2001; Brauer, 1993; Phelps et al., 2006). Processes of social and functional diversification and trends toward independence of suburbia from core cities are coming into focus, and the historical heterogeneity of the settlement areas is highlighted (Harris & Larkham, 1999; Hayden, 2004; Lütke & Wood, 2016). Almost parallel to the diagnosis of diversification, many local governments in Germany were planning new city extensions. As urban planning has moved away from the paradigm of functional separation and towards compact urban development, objectives such as functional and social mix, referred to as urbanity, were articulated for the new settlements (Altrock et al., 2024; Dembski et al., 2021; Feldtkeller, 2018; Schmitt, 2021).

As a result of these developments, research is investigating the diversity of suburbia and identifying different forms such as "suburban urbanities" (Vaughan, 2015) and "inner-city suburbanization" (Frank, 2016), with some even questioning the term "suburbia" in general (Forsyth, 2012). On the other hand, the contemporary planning of city expansions in Germany breaks with earlier concepts of monofunctional housing estates by aiming at a functional and social mix. The extent, however, to which life in suburbia is becoming more diverse and urban remains an important question for research in many respects. Studies on social structure, lifestyles, and residents' perspectives are rare and often continue to focus on "classic suburbia" with detached housing (Hesse, 2012; Keil, 2018; Nijman, 2020; Walks, 2013). Furthermore, valid social geodata at the small-scale level are not available for the entirety of Germany, hindering quantitative research on this subject (Kiesler et al., 2024). A relevant question thus emerges: To what extent have the guiding principles for new city extensions been realized? Do they actually contribute to an "urbanization of the outskirts"?

In this article, we look at one of the first city extensions of the 1990s in Germany. Located in the northeast of Berlin, it was planned under the banner of a "new urban periphery" (*Neue Vorstadt*) with the goals of functional and social mix (Hesse & Wolf, 2005). Almost 30 years after completion, we ask: How do planned ideals and lived reality relate to each other? To investigate, we first analyze the implementation and the relevance of the guiding principles from the perspective of planning actors. Then, the perspectives of residents are examined. Building on the discussion of suburban urbanity, we ask: To what extent is the settlement perceived as urban, and which of its characteristics do residents value most? Before examining the model and its implementation (Section 4), and the residents' perspectives (Section 5), we review research on social diversification and conceptual debates on urbanity in suburbia (Section 2) and explain the data basis (Section 3). The conclusion reflects the central outcomes of the case study (Section 6).

2. Urbanity on the Outskirts? The Diversification of Suburbia

This diagnosis of diversification has profoundly affected the debate on the definition of "suburbia." Some scholars even question the relevance of the term "suburbia," given the diversity of suburban spaces (Forsyth, 2012). Alternative approaches move beyond the location-based definition, such as Walks' (2013) proposition of a three-dimensional framework based on centralization, differentiation, and functional orientation, allowing for a more nuanced understanding of space on a spectrum between urban and suburban. Frank (2016) introduces the concept of "inner suburbanization," describing how suburban-like enclaves, characterized by middle-class families and newly built, monofunctional residential areas, are emerging within city centers. At the same time, the concept of "suburban urbanities" (Vaughan, 2015) points

out the importance of infrastructure in suburban areas that can lead to forms of social interaction with urban characteristics. The growing emphasis on diversification has highlighted the importance of the concept of urbanity, typically defined in terms of size, density, and heterogeneity (Wirth, 1938). In Germany, Burdack and Hesse (2006) diagnose a growing resemblance of suburban areas to the city, as they are increasingly dense, socially diverse, and functionally mixed. The shift toward urbanity is reflected in the emergence of the "new urban periphery" concept, which explicitly aims to integrate urban qualities into new city extensions (as discussed in Section 4.1).

While the debate on concepts is quite extensive, there are not many empirical studies on the topic of diversification in Germany. With regard to the "classic suburbia" characterized by detached housing at cities' fringes, studies assume that the suburban way of life continues to differ from the city and is oriented towards the private family (Menzl, 2017). Czekaj et al. (2003) suggest that in monofunctional suburban quarters, residents' communication is more restricted to immediate neighbors than in inner-city, mixed-use areas, where street-level publicness fosters casual contacts. Göb (2019) points out that suburban residents primarily feel a sense of belonging to their own homes and families, while the identification with their neighborhood plays a secondary role. These findings echo Fava's (1956) description of a village-like lifestyle among middle-class suburban families. However, this view has been challenged by research diagnosing a process of social and functional diversification in suburban areas (Brake et al., 2001; Burdack & Hesse, 2006; Siedentop et al., 2006).

Some studies on the regional level investigated social structural diversification. Based on official data, they show that, since the 1990s, more single and older households have been moving to the suburbs, and rental housing has gained in importance (Aring & Herfert, 2001; Friedrich et al., 2013). According to an evaluation of a Germany-wide survey, the distribution of educational and occupational groups has not changed between large cities and suburbia from 2004 to 2018, and suburbs remain the predominant residence for higher income groups, despite lower educational levels compared to large cities (Kiesler & Keller, 2019). Kiesler et al. (2024) use commercial grid data (*Microm*) for German metropolitan regions to identify changes in age structure—which has trended slightly younger in cities compared to suburban areas since 2015—but no change in terms of income groups. Interestingly, the proportion of people without German citizenship increased significantly in both area types since 2012. An evaluation of census data from 2011 and 2022 indicates that the proportion of non-Germans in the suburbs rose from 6.4 to 13.2 percent, compared to 13.0 to 21.6 percent in large cities. Overall, the studies indicate that the outskirts of cities remain the preferred place for higher-income groups. Household and age structures are diversifying moderately, and since the 2010s, there has been a significant increase in non-German citizens. While empirical studies documenting urban lifestyles in the suburbs are hard to find, one exception is Ströbele's (2017) quantitative analysis of political orientations, which suggests a dominance of urban lifestyles because occupations in the suburbs do not differ fundamentally from those in the city, and many residents commute.

It is unclear whether diversification in Germany's suburbs is taking place via larger-scale contrasts and forms of segregation, such as between single-family homes and housing estates, or whether there are smaller-scale trends toward mixing. How new city extensions contribute to these dynamics and how urbanity is reflected in the suburbanites' lived experience remain open questions. A survey among experts in Germany suggests that city extensions built since the 1990s predominantly consist of mid- to high-end, monofunctional residential areas (Freudenau et al., 2021). In terms of infrastructure, these extensions are often hubs for daily needs,

offering better access to services and public transport than traditional detached housing areas (Krüger, 2024). Studies on residents' perspectives, however, are largely missing. While Matthiesen (2002) found resistance to densification among long-time residents in the outskirts of post-reunification Berlin, Basten (2004) highlighted the contrast between planners' and residents' perceptions of space in a city extension of Potsdam. In our study, we ask how far the aim of urbanity in terms of functional and social mix has been realized, and to what extent living in a new urban periphery is perceived as urban. By analyzing the relation between planning and living in a long-term perspective, we contribute to the debate on diversification as well as on concepts of suburbia.

3. Method

This case study draws on semi-structured interviews with experts and residents in Berlin-Karow, supplemented by participant observation. In May 2025, seven interviews with eleven experts were conducted, including former and current key planners for Karow-Nord and northern Berlin. Additionally, we interviewed social workers, local cultural organizers, members of civic associations, and a local politician, recognizing that individuals with role-specific knowledge can be considered experts (Przyborski & Wohlrab-Sahr, 2014). The interviews centered around the planning processes and characteristics of the neighborhood. Duration ranged from one to three hours.

Some experts facilitated access to residents for a field phase in July 2025. Contact was also established through newsletters, local notices, and personal approaches in public settings like the local library. Snowball sampling was used to get in contact with contrasting groups (Small, 2009). In total, 28 interviews with 34 residents were carried out, including a group discussion among six participants. The topics of conversation revolved around the characteristics of the neighborhood, sense of community, everyday life, infrastructure, use of public space, and the relation to other neighborhoods and the inner city. To contrast perspectives from Karow-Nord with those from the adjacent, older neighborhood, the sample comprises ten residents from Alt-Karow (Table 1). Although women and older individuals are overrepresented, a diverse range of perspectives and residents, including those with migration backgrounds and varying lengths of residence in the neighborhood, is captured in the sample.

Table 1. Demographic characteristics of the resident sample.

Residence		Gender		Age		Migration Background	
Karow-Nord	24	*female*	24	*18–40*	5	*yes*	7
Alt-Karow	10	*male*	10	*41–64*	16	*no*	27
		diverse	0	*65+*	13		

During the fieldwork, participant observation was incorporated. We also took part in an official event on citizen participation for a new city extension in northeast Berlin. Observations and reflections were documented in field notes. With participants' consent, the interviews were audio-recorded and transcribed, anonymized or pseudonymized. A structured qualitative content analysis was carried out (Kuckartz, 2018). The analysis involved category-oriented structuring of the data, enabling an examination of sample members' statements on specific topics. Two separate category systems were developed for the expert and resident interviews, with some categories overlapping. In the following sections, quotations from the interviews are numbered and identified (e.g., E01 for experts and R02 for residents).

4. Karow-Nord as a "New Urban Periphery": Guiding Principle and Implementation

4.1. Three Phases of City Extensions and The Neue Vorstadt

Berlin is one of Germany's cities that have been planning large-scale city expansions since the 1990s, thereby entering a new phase of densified settlement construction on the outskirts. Since World War I, three phases of city extension can be distinguished in Germany (Peterek & Bürklin, 2018). The first phase covers the period of prosperity during the Weimar Republic in the 1920s, when modern settlement concepts were implemented. The extensions were planned in contrast to the functionally mixed, rampant industrial city, and were influenced by the model of the garden city. In terms of size and floor height, the buildings are significantly smaller and lower than those built from the late 1950s onwards. The second phase of city expansion lasted until the 1970s in West Germany and until the fall of the Iron Curtain in East Germany. In West Germany, it was initially guided by the concept of the "gegliederte und aufgelockerte Stadt" ("articulated and decentralized city"), later shifting toward "urbanity through density." In East Germany, the guiding principle was "complex housing construction." This phase saw the emergence of densified, high-rise housing estates, particularly from the 1960s onwards. Architecture, the single-purpose focus on housing, and a one-sided occupancy by low-income groups through a large share of social housing units have given these estates a bad reputation and turned them into a symbol of failed social housing policy in the 1980s in West Germany (von Saldern, 1995).

In anticipation of growing populations, large cities in western Germany such as Frankfurt am Main, Munich, Hamburg, Freiburg, and Hanover planned new housing developments on their outskirts in the 1990s and initiated a third phase of city extension (Freudenau et al., 2021; Peterek & Bürklin, 2018). A key factor was the distinction from the "mistakes" of the second phase of urban expansion. Social and functional mix as well as moderate density thus became visions for this ongoing phase of city extensions (Altrock et al., 2024; Bornmann et al., 2026; Freudenau et al., 2021, p. 6). In East German cities, the construction of detached houses on the outskirts—discontinued during the GDR era—was catching up during the 1990s. Berlin and adjacent cities, however, planned large-scale urban expansions, as they anticipated strong population growth in this metropolitan region and sought to counteract urban sprawl caused by the catch-up suburbanization. Two housing estates—the garden city of Falkenhöh in Falkensee (1.450 residential units) and Kirchsteigfeld in Potsdam (2.680)—were started, while in Berlin, Karow-Nord was planned with 5.000 residential units, and construction began in 1994 (Basten, 2004; Hesse & Wolf, 2005).

Simultaneously and on the basis of planning Karow-Nord and Kirchsteigfeld, the Berlin Senate developed the *Leitbild* of the *Neue Vorstadt* for new city extensions (Senatsverwaltung für Stadtentwicklung und Wohnen [SenStadt], 2018, p. 86–88). This guiding principle was promoted by Stimmann (1993), Senate Building Director, as specific to Berlin, since it intended to tie in with older structures of Berlin in the spirit of a "European city" (SenStadt, 2018). However, with the principles of functional and social mix, an even explicit relation to "urbanity" with the word "Stadt," and moderate density, the concept formulated objectives that are common for the third phase of city extension. As one member of the Berlin Senate stated, its genesis was strongly influenced by the second phase of city extensions: "Those responsible here were primarily concerned that the model of new housing construction—in terms of design and ideology—was far enough away from the 'Platte' [epitome of settlements of the second phase]" (SenStadt, 2018, p. 86).

4.2. Two Assessments: Good Urban Design and Infrastructure, but no Functional and Social Mix

The question of Karow-Nord's ideal and reality has been addressed by Hesse and Wolf (2005), who praise the architectural quality of the expansion, particularly with regard to the design of green spaces, and the provision of social infrastructure. However, they conclude that urbanity in terms of functional and social mix was not achieved (Hesse & Wolf, 2005, p. 20). Given the reluctance of investors and the district government to allocate 20 percent of floor space to services and commerce, the mix of uses was reduced to local amenities. Social mix was sought through different types of housing in terms of floor plans and ownership (Hesse & Wolf, 2005, p. 19). Particularly in the areas adjacent to the detached housing in Alt-Karow, condominiums in low-rise buildings were planned, also to create a smooth transition to the average four-story buildings in Karow-Nord. But low demand, which began about two years after construction started, has torpedoed the realization of further condominiums. New residents came mainly from East Berlin, from large housing estates and surrounding areas, and included fewer young families than expected, so that an older population with an above-average proportion of welfare recipients emerged (Hesse & Wolf, 2005, p. 20).

Ten years after Hesse and Wolf's assessment, the Berlin Senate commissioned a study evaluating 15 housing estates built since the 1990s in terms of aspirations and reality. Karow-Nord receives special attention as a so-called "prototype" of the *Neue Vorstadt* (SenStadt, 2018, p. 86–139). Similar to Hesse and Wolf, the architectural qualities are described as successful, as is the provision of daily infrastructure (Figure 1). For the non-achievement of functional and social mix, the contextual factors since reunification are cited. After euphoric years of change following reunification, when an economic and population boom was expected and the "new urban peripheries" were planned, disillusionment set in (SenStadt, 2018, pp. 26–28). This began with Berlin's failed candidacy for the Olympics in 1993. The "phase of disillusionment" was exacerbated in 1995 with a decline in population and an economic recession lasting several years. This



Figure 1. Central square in Karow-Nord (photo by the authors).

prompted a change in strategy: Hans Stimmann announced in 1996 that the concept of the *Neue Vorstadt* was no longer valid and that inner-city development would take priority. The model of the "European city" was transferred from the periphery to the center, under the slogan *Planwerk Innenstadt*.

The previous studies cite the miscalculation of population growth as the main reason for the failure to achieve urban qualities. In 1996, significant vacancy in the rapidly constructed Karow-Nord emerged, and instead of the planned 5.000 apartments, only 4.505 were ultimately built (Hesse & Wolf, 2005, p. 19). The lower population growth also put further planned city extensions on hold, and building densities of the realized projects were reduced (SenStadt, 2018, pp. 90–93). According to both studies, a functional and social mix was hardly feasible in a context in which suburban areas were less densely populated than expected, networking effects with surrounding "new urban peripheries" were lacking, and socially privileged groups preferred detached housing.

4.3. Housing Supply and a Compact Alternative to Detached Homes

What do local government planners have to say about the ideal and reality of Karow-Nord almost 30 years after completion? We interviewed three planners: the former chief planner and a planner of another city expansion who later headed a new Senate department for housing projects in the mid-2010s—both were identified as central figures in the planning process and, despite their retirement, remained accessible to provide rare, first-hand insights—alongside a third planner currently responsible for projects in northeast Berlin. Firstly, the interviews with the two now-retired planners reveal that the implementation of Karow-Nord followed a pragmatic approach, and urbanity in terms of social and functional mix only played a secondary role. Following the chief planner of Karow-Nord, the model of the "new urban periphery" was rather a byproduct:

> We didn't have a deductive urban planning and design concept. There were projects in the city center or related to transportation, the fastest ones, we always looked at them and asked: What are the consequences for the overall urban discussion? And since Karow was really the fastest project, Stimmann said: "Hey, I can't sit in all these design meetings, let's make some guiding principles so that it can be generalized." (E01)

He emphasizes a pragmatic planning approach, which was supported by the fact of tumultuous change and a public debate focusing on broader issues:

> We were always glad that we were able to work on our projects in the shadow of the big decisions: Brandenburg Gate open or closed? Or how does the government axis look like?...We were lucky in some cases to be able to make our Senate decision after the decisions of these federal institutions: Should we build Karow-Nord or not? It was more by chance, but that's why the public hardly noticed what we started in the northeast. (E01)

Both of the former planners we interviewed highlight quick housing construction, derived from the growth expectations, and a compact settlement structure with a good quality of housing and infrastructure as central goals. A planning team composed of members from East and West Berlin searched along the five large star-shaped S-Bahn transport axes running outwards from the city within a radius of two kilometers for locations. For the field on which Karow-Nord was built, development plans for single-family and terraced

houses from the 1930s were found. “But it was clear to us that we weren’t going to build detached houses, but apartments. And then we discussed floor area ratios and a few test designs, and we said: Okay, 5.000 apartments would have to go there” (E01). The former head of the department for larger housing projects emphasizes that a good quality of architecture, urban design, and infrastructure were intended to dissuade people from single-family homes and “classic, randomly placed row houses” (E05). They were aware of the reservations about compact settlement forms in the surrounding area, hence why they wanted to convince people with the “neighborhood benefits” (E05) of compactness. The organization of a civic participation process for Karow-Nord, however, was only minimal. According to the chief planner, there was an informal event in Alt-Karow described as a casual gathering with “beer tables.” The wishes of local residents were taken into account, and they reportedly concerned design qualities such as pointed roofs, courtyards, and open spaces.

That urbanity has been a subordinated goal of the planning of Karow-Nord stems from the fact that functional and social mix have been abandoned as soon as obstacles occurred. The chief planner speaks about a lack of interest by investors. Regarding social mix, investors did not want to construct unsubsidized dwellings. Coming from a Berlin system in which, until 1990, housing construction was almost exclusively state-subsidized due to rent controls (even in the western part), only five percent of the apartments were agreed to be privately financed. As a resident monitoring study conducted until 2002 shows, of the 4.505 apartments completed by 2000, indeed 196 (5%) were not built with the first (1.948 units, 43%) or second (2.361 units, 52%) subsidy programs (*Förderweg*) for social housing (Senatsverwaltung für Stadtentwicklung, 2002). This surprisingly high proportion of social housing clearly contradicts the idea not to repeat the mistakes of the second phase of city extension, even though the availability of social housing at that time might have been less socially selective than today.

In their overall assessment, both planners rate Karow-Nord quite positively. Again, they speak primarily about qualities of architecture, housing, and design, as well as the availability of everyday amenities. The main critical point in their view is the traffic connectivity. A better transport infrastructure in terms of a second S-Bahn station and a connecting road to the Federal Highway was never realized, and both are skeptical that this will be improved. The perspective of the planner who is currently in charge of city expansion in northeast Berlin differs significantly from that of the two retired urban planners:

> So, in the 1990s, housing estates were built; they were all criticized. We have examined them critically, and that’s why we no longer talk about estates [*Siedlungen*]. There is also a brochure….The term “estate” implies a residential area, only living, whereas with “quarter” or “new urban quarter,” we like to strengthen both…we wanted to create a neighborhood where people live and work. (E06)

The quote sounds as if functional mix is a new planning goal—but, like social mix, it was already part of the *Neue Vorstadt* concept. By “a brochure,” the planner refers to the Senate study we mentioned (see Section 4.2), which cites the false expectation of population growth as the main reason why urbanity was not achieved. It is unclear whether the concept of “new urban quarter” (*Neue Stadtquartiere)*, which the planner stresses—because the term “quarter tends to evoke the hope of an urban quarter” (E06)—actually represents a useful innovation for the planning of city extensions. We come back to this question after the analysis of the resident perspectives.

5. Suburbanites' Perspectives on Urbanity

5.1. Enjoying the "In-Between" and "Village-Like"

When we asked inhabitants of Karow-Nord how they would describe it to outsiders, the respondents paint a fairly consistent picture. One person who has lived in the area since its completion says: "I find it a pleasant place to live, because you can get into the city quickly and also to the countryside very quickly" (R08). Another resident elaborates:

> It's a bit like a village in itself. We have pretty much everything we need for basic necessities. But if you think a little further, about cultural institutions, variety, if you want to go out for a meal or something, it's completely different from Mitte or Friedrichshain, Kreuzberg [districts of the inner city]. (R04)

Described as "village-like" or "small-town," the location of the settlement between the center of Berlin and rural Brandenburg is an integral part of living there (see Figure 2). For access to a wider range of cultural activities, goods, and services, residents rely on the inner city. At the same time, Karow-Nord is noted for its good supply of everyday necessities and social infrastructure, such as schools and doctors. This intermediate position is described as contributing to a great satisfaction with the living situation. As one resident puts it: "We say, we live in Berlin, but we live in a small village. And we also say, our village is beautiful" (R16). The city is an option at hand, and on the outskirts one can enjoy quietness, safety, proximity to nature, relatively affordable housing costs, and family-friendliness. Almost everyone in the sample—with or without children—emphasizes the good



Figure 2. Aerial view of Karow-Nord (center) next to parts of Alt-Karow (left). Source: Roletschek (2009).

facilities for families, including playgrounds, kindergartens, and schools. Residents with children often mention that they moved to Karow-Nord because of the family-friendliness, which is also associated with the qualities of tranquility, safety, proximity to nature, and short distances in everyday life.

The perception of living in Karow-Nord comes much closer to the descriptions of classical suburbia as described by Fava (1956) than living in an urban area. The qualities which are appreciated on site are overwhelmingly not related to urbanity; rather, they are articulated in contrast to living in the city. The city is appreciated as a nearby opportunity and variety. On the other hand, the perception of living in Karow-Nord differs from what Göb (2019) describes for settlements of detached homes, where inhabitants primarily identify with their family and home. The residents mostly feel a sense of belonging to Karow-Nord, which offers an infrastructure for daily needs—apart from jobs—and is described as "village-like" or "small-town" because of the manageable scale, short distances, and social legibility in terms of social relations. Asked if Karow-Nord is more urban or rural, a resident describes it as more urban because there is still something going on in the streets until the late evening. However, it is not really urban either, "because somehow there are connections. As I said, you know one or the other by sight. And you also know roughly where they belong. In which corner." In summary, the resident calls Karow-Nord a "something in-between [*Zwischending*]" (R08). This position "in-between" is also supported by daily routines of commuting to work. Interestingly, only a few respondents describe the lack of functional mix in terms of job opportunities as a deficit; rather, they see their routes to work as alternation.

5.2. Challenges of Social Mix: Symbolic Boundaries and the Fear of Negative Features of the City

Alt-Karow, the adjacent neighborhood of Karow-Nord with a historical village center (parts of it seen in Figure 2, left side), is characterized by detached housing and had a population of around 5.000 inhabitants at the time of reunification. As Table 2 shows, the population of Alt-Karow has grown over the past 35 years—primarily due to the construction of single-family homes—and the residents there can be described as belonging to an (upper) middle class. There is a clear status gap between Alt-Karow and Karow-Nord, with the former being equipped with more economic capital (ownership of homes, income). In Alt-Karow, the proportion of single parents, welfare recipients, and people with a migration background is also significantly lower, whereas the proportion of married couples and the average age are higher—even compared to Berlin as a whole. In contrast, the social structure of Karow-Nord comes much closer to the average of Berlin. Deviations indicated by Table 2 concern primarily a lower proportion of persons with a migration background and single persons, but more single parents. If the population of Berlin is taken as a benchmark, it can be said that the social structure of Karow-Nord is relatively mixed.

Residents also generally describe the population of Karow-Nord as "mixed" and (lower) middle class. When speaking about the social composition of the neighborhood, an influx of people with a migration background over the last few years is often reported. The "internationality" of the settlement is an important issue in Karow as a whole. The prominence of this issue is also due to refugee housing, partly located in Karow-Nord, but also in the direction of Buch, in large housing estates a few kilometers north of Karow. Even though some challenges related to the rising share of migrants reported by the interviewees (e.g., language barriers in schools) are plausible, it seems that migrants often serve as a kind of scapegoat for a broad range of criticised aspects. We interpret the distancing from migrants as one crucial element of processes of symbolic boundary making in Karow (cf. Lamont & Molnár, 2002; Wessendorf & Monson, 2023).

Table 2. Socio-structural data of Karow.

Residence	Karow-Nord	Alt-Karow	Berlin total
Population	11.764	8.421	3.897.145
Average age	40.15	47.43	42.8
Residents without German citizenship	17.2%	6.1%	24.9%
Residents with migrant background	27.1%	12.9%	41.1%
Persons with 5 or more years of residence (as of 2022)	66.4%	78.6%	65.5%
Single persons	22%	16.3%	32%
Married couples	38.6%	53.6%	35.9%
Single parents	14%	4.7%	7.3%
Median income of full-time employees (as of 2023)	€3.611	€4.428	€4.190
Unemployment rate	4.6%	1.4%	5.1%
Full-time employees in the lower pay bracket	14.5%	8.2%	14.8%
Social welfare recipients (SGB II & XII)	10.7%	2.1%	10.7%

Notes: Values as of 2024, unless stated otherwise; median income for Alt-Karow: weighted average of the median incomes of planning areas Karow Bahnhof and Karow Ost; lower pay bracket defined as less than two-thirds of the median pay of all full-time employees. Source: Amt für Statistik Berlin-Brandenburg (2025a, 2025b, 2025c), Bezirksamt Pankow (2023), and Senatsverwaltung für Stadtentwicklung, Bauen und Wohnen (2025).

The most evident is the distancing from migrants in the form of discrimination, as noted by experts, but particularly by two interviewed residents of African descent. They report regular and sometimes severe experiences of discrimination, such as comments on the street or while shopping. A mother recounting an episode with a store clerk who yelled at her and harassed her while paying, says: "People just get annoyed. They think you're having children for money" (R16). The distancing from migrants is then verbally evident in some resident interviews:

> Those who don't go to work get an apartment. They get a WBS [certificate of eligibility for social housing]….And they all run around here with their cell phones, speaking foreign languages, and get an apartment. And those who go to work earn too much for a WBS. And they have to look for an apartment on the free housing market. And I think you know what's going on there. (R06)

The quote comes from one of the few residents who is not satisfied with living in Karow-Nord. Interestingly, the "dissatisfied" in our sample share the perception of being financially tied to the neighborhood and having already moved there as a choice between lesser evils (cf. Karsten, 2020). The resident is complaining that low-income households and people with migrant backgrounds have been "pushed out" of the inner-city in recent years and made Karow-Nord "full"—in contrast to the "emptiness" he experienced as one of the first residents. He complains about many phenomena, such as increasing littering, a rise in violence in schools, and overcrowded public transport systems and streets. The distancing from migrants is thus intertwined with further qualities such as low social status and the image of fullness or overcrowding, which leads to problems in infrastructure such as schools, traffic, or waste management. We interpret this overlapping of attributions as symbolic boundary-making, where negative labels of the "city" or "urbanity" are being fused. In a way, it is the "urban" character of the social mix of Karow-Nord which provokes further fear of negative features of the city like insecurity, crime, overcrowding, or density.

Also, rising anonymity—another feature of "the city"—is attributed to migrants. This holds true for some older, single households. They argue that the international residents and their languages cause them to lose familiar points of reference and are one reason for growing loneliness. In comparison to the last quoted resident, they formulate the symbolic boundary moderately, and underline that they primarily lack infrastructure in Karow-Nord which enables meetings and community building. The desire for more community-building amenities is shared by some other single households and single mothers in our sample—household groups which are typically at risk of loneliness (Bundesministerium für Bildung, Familie, Senioren, Frauen und Jugend, 2024). It is probable, however, that the symbolic boundary-making in Karow reinforces the wish for more community. For example, some residents with an immigrant background express this desire, coupled with a sense of alienation stemming from experiences of discrimination.

Finally, symbolic boundaries are drawn between Alt-Karow and Karow-Nord. One long-term inhabitant, who is also active in local politics, describes Karow-Nord as follows:

> A UFO on a green field, with a very, very high proportion of social housing, architecturally and urbanistically, in my opinion—well, that's how they built back then—completely misplanned….The effect was that, after it was finished, there were many vacancies, up to ten percent, and then around 2000, a very large Russian-German community settled in Karow, which then left again after ten to fifteen years….Nothing has grown together there….You have a family house, one and a half or two stories, and then you put a five-and-a-half-story building 20 meters next to it, so, no, that's an urbanistic separation, clearly recognizable, old and new. Karow still suffers from this today. (E07)

The metaphor of a UFO for Karow-Nord was not invented by this resident—it is a recurring term. Symbolic boundaries from Alt-Karowers do not only address the social structure, but typically the building height and density of the settlement, which are considered incompatible with the single-family homes. Of course, not every resident in Alt-Karow is drawing boundaries; e.g., we interviewed a person who moved to Karow-Nord whose parents still reside in Alt-Karow. Residents from Alt-Karow also regularly use infrastructure like kindergartens, schools, supermarkets, or the public library in Karow-Nord.

5.3. Anti-Urbanization Discourse and Political Mobilisation

The symbolic boundaries which are drawn from Alt-Karowers towards the "UFO" as well as between residents of Karow-Nord have a political dimension. The planning of city extensions, which were put on hold during Berlin's "phase of disillusionment" in the mid-1990s, has been revived due to the shortage of affordable housing and renewed population growth. A significant proportion is planned in Pankow, a large district in the northeast where Karow is located and which still features a high proportion of undeveloped land (Gerlach, 2021). "New urban quarters" on a scale comparable to Karow-Nord are also planned for the green spaces directly adjacent to Karow, including former sewage fields (Stadtentwicklungsamt Pankow, 2021).

The planning of city extensions in northern Pankow is a hotly debated political issue. Numerous citizens' initiatives have formed, mobilizing with varying but essentially consistent arguments. An initiative was launched in Karow, registered in 2021 as the association Wir für Karow e.V. ("We for Karow"). It explicitly opposes development forms similar to Karow-Nord, advocating for the preservation of the village structure and green spaces, as well as infrastructure measures, especially regarding transportation. According to

participants of the initiative, it was formed in response to a "token citizen participation" by the Senate in 2018:

> There was a framework plan for the construction areas here, and there was great agitation in the spot. The final result was, they presented options that would have allowed 12- and 13-story buildings in the middle of single-family home areas. (E03)

The main arguments against city expansions are listed:

> Märkisches Viertel, Gropiusstadt: There are twelve-story buildings right next to single-family homes on the other side of the street. Impossible! For both sides, impossible. People are being robbed of their homes [*Heimat*], so to speak. And those who move in, Märkisches Viertel is a great example of this, they've been promising to build a subway there for 50 years; it wouldn't have been a big deal, it's not far. Do you think it's there? (E03)

Large housing estates of the second phase of city expansion serve as a specter of immense density and height, but also—as is often revealed later—of a low-status and international population that "overloads" infrastructures such as the transport system. The initiatives' demands for adequate transport infrastructure, citizen participation, or nature conservation do indeed address weaknesses in the implementation of Karow-Nord. However, the decisive factor here is the logic of exaggeration, which also fuels the boundary-making in everyday life. As one resident of Alt-Karow, who had purchased a plot of land adjacent to a field during the GDR era, explains: "Then, wherever there are still open fields, real monsters will be put up. And we don't yet know whether it will stop at ten stories. Because we're being taken for a ride without end" (R14). He goes on to explain that the construction of new housing estates will lead to a strengthening of the right-wing populist AfD party: "So if anything is boiling up here, it's the AfD….They were the only ones who stood up back then when Buch and Karow were basically flooded with foreigners" (R14).

The anti-urbanization discourse against new city extensions is indeed adaptable to mobilizations of the populist radical right party AfD, and coalitions between both are likely to form (Domann, 2024). These coalitions are mentioned by the interviewed planner responsible for city extensions in Pankow as one reason why he resigned from some projects. Interestingly, the anti-urbanization discourse does not cite the image of the city when qualities like congestion, insecurity, poverty, or destruction of nature are labelled, but rather of city extensions of the second phase. This image seems to be quite effective, as it was used already in the 1980s as a persuasive argument against state-subsidized social housing and revived in debates over the reintroduction of a nonprofit housing sector in Germany (Voigtländer, 2016).

6. Conclusion

This article has examined Berlin's first city extension in the post-reunification period from the perspective of how planned ideals and lived reality relate to each other. The re-examination of the planning process has shown that urbanity in terms of social and functional mix was a subordinated goal, despite being officially highlighted by the concept of the "new urban periphery." This result points to a discrepancy between the vision communicated to the public and the actual planning that may often apply to city expansions since the 1990s in Germany, as one of the few existing studies indicates that they are predominantly neither socially

nor functionally mixed (Freudenau et al., 2021). Concerning social mix, the planning of Karow-Nord was influenced by a path dependency on a governance constellation, as housing construction in Berlin was subsidized by the state until reunification. Although social housing in Germany experienced a resurgence in the post-reunification period, a subsidy rate of 95 percent of apartments is unlikely to be found in other city expansions. Paradoxically, Karow-Nord's social structure is relatively mixed today. But as social housing in Germany is predominantly a temporary arrangement, only parts of the first subsidy programs remain as social housing, which made up 43 percent of the whole stock during construction. In addition, the architecture, urban design, and provision of daily infrastructure contribute to the attractiveness of the settlement for a wider range of social status groups today.

The case study demonstrates how the urban characteristics of relative social mix and density give rise to challenges on the outskirts of the city, where traditional village and classic suburban structures predominate. Watt (2009) has shown in his research on a newly built single-family housing development on the outskirts of London, which is embedded in an area with public housing and lower-status groups, that the affluent middle-class residents develop a selective sense of belonging to their "oasis." They draw symbolic boundaries to the surroundings, whose infrastructure they do not even use. In a way, we see an inverse situation in our case study. Residents of the surrounding areas of Karow-Nord draw boundaries to the so-called "UFO" and articulate a selective sense of belonging to their "village." But differently from what Watt describes, we also observe symbolic boundary-making *within* the different neighborhoods, particularly in Karow-Nord, where migrants and lower-status groups are associated with negative aspects of the city such as insecurity, congestion, and anonymity. The frontiers are not as clear as the juxtaposition of "new" and "old" suggests, and Karow-Nord serves as a new hub of infrastructure also for residents of the surrounding areas.

Remarkably, residents of Karow-Nord also describe their neighborhood as village-like. They appreciate characteristics like tranquility, family-friendliness, security, nature, social legibility, and manageable size, which they see as contrasting with life in the city. However, they also highly value the inner city as a source of variety at hand. Hence, transport infrastructure is crucial for them, apart from the fact that commuting is the norm. Even though Karow-Nord is a different type of suburb than a historic village, a detached housing area, or a city extension of the second phase, the description of its intermediate position between city and countryside by residents underlines the significance of geographical location. In light of the ongoing debate on concepts, this finding suggests that location remains a key factor in defining suburbia, and that living on the outskirts of a city is already a quality in itself. Regarding the concept of "suburban urbanity," it can be said that suburbanites in this study value urbanity particularly in terms of infrastructure for basic needs, social interaction, and good transportation links to the inner city.

Finally, the case study suggests that planning urbanity on the fringe of cities might not always be the best option. At the least, the notion of urbanity should be reconsidered, since it risks provoking resentment among a population that appreciates living outside the center but with the city at hand. In the Berlin context, we actually see an emerging coalition between anti-urbanisation discourses and right-wing populism (Domann, 2024), which Dunn (2024) also describes in a case study from Sweden. The actual concept of the "New urban quarter" in Berlin might better be replaced, for example, by a term connecting to the model of the garden city. This is, of course, no argument against the aims of social, functional mix and compactness. These goals make sense, but their implementation should be adapted through civic participation and to the specific location. Due to rising housing costs and increasing social diversity, city expansion planning has become more challenging and

requires greater negotiation than it did 30 years ago, also given that the suburbs remain the preferred location for high-income groups.

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Data Availability

Data will be made available on request, depending on interviewees' consent.

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Large Housing Estates in Germany's Major Cities: A Last Bastion of Affordable Housing?

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Abstract

The affordable housing crisis in many major German cities has sparked a new wave of suburbanization. In thriving cities such as Berlin, Cologne, Munich, Frankfurt, and Hamburg, rental prices in central locations have reached unprecedented highs. Amid this situation, large housing estates (LHEs) built between the 1950s and 1980s on city outskirts are often regarded as the last strongholds of affordable housing. The sharp rise in housing prices within Germany's major cities has reshaped the traditional perception of these residential areas as centers of social disadvantage and conflict. Nevertheless, rents within these LHEs have also been increasing over the years due to neoliberal policies promoting financialization and privatization. In this context, this article analyzes rent levels in LHEs across major German cities and compares them to the average rents within their respective urban areas. Using a geodata-based methodology, we first identify LHEs that were built between 1949 and 1990 and that meet a minimum threshold of 1,000 inhabitants. Our study covers all German cities with populations exceeding 100,000 residents. Subsequently, fine-grained raster data from the 2022 census is employed to calculate average rent levels at settlement scale. Our analysis revealed statistically significant differences between the average rent levels in LHEs and the overall citywide average. The article concludes with reflections on strategies to preserve affordable housing in the affected urban areas.

Keywords

Germany; housing affordability; housing rents; large housing estates; post-war planning

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1. Introduction

Large housing estates (LHEs) built between the 1950s and 1980s form a distinctive legacy of modernist urban planning. In many European cities, they remain among the most visible manifestations of post-war planning and continue to shape the character of urban peripheries (Wassenberg et al., 2004). It is estimated that around 40 million Europeans live in such estates, including roughly 34 million in Central and Eastern Europe, excluding the former Soviet Union (Wassenberg et al., 2004). Their development was motivated not only by the desire to alleviate the acute housing shortage caused by rapid population growth and economic expansion in the post-war era. Large-scale estates also embodied a social reform agenda; they stand as material expressions of built societal utopias.

The construction of these kinds of settlements—in the literature also referred to as mass housing or high-rise housing—was guided, on the one hand, by the objective of producing housing on a large scale, and on the other hand, by the ambition to provide high residential quality for lower- and middle-income groups (Jessen, 2000; Musterd et al., 2009). The planning concept emphasized modern, well-lit apartments with high density and ample green spaces—reflecting the modernist ideal of "spacious, green, light"—alongside strong infrastructural connections to the city center and a mix of functions within neighborhoods (Dekker & van Kempen, 2005, p. 21; Reicher et al., 2023). LHEs continue to constitute an important component of national and metropolitan housing stocks, even though their significance varies considerably among European countries (Hess et al., 2018, p. 7). Due to substantial public subsidies and the application of principles of rational and serial construction, it was possible to significantly expand the stock of affordable rental housing—a development that continues to shape urban housing markets to this day.

However, the initial enthusiasm among urban planners during the planning and development phases of these estates soon gave way to a certain disillusionment. On the one hand, serious planning deficiencies became apparent, such as their spatial isolation within the urban fabric, the mono-functional orientation toward residential use, uniform building typologies, and undifferentiated green spaces (Reicher et al., 2023). On the other hand, low levels of management and maintenance investment often resulted in poor physical conditions and a negative image of the estates (Dekker & van Kempen, 2005, p. 25). Consequently, many developments experienced significant vacancy rates and socially selective in-migration patterns, which further reinforced processes of concentrated poverty and stigmatization affecting both the estates themselves and their residents (Dekker & van Kempen, 2005, pp. 36–37). Moreover, their often peripheral location and limited access to public transport—in contrast to planning aims—have created major obstacles to employment integration and contributed to social exclusion (Dekker & van Kempen, 2005). Musterd et al. (2009) note that the political and societal debate on the condition and future of LHEs was for a long time characterized by a predominantly negative tone.

Since the 2000s, scholarly and policy discourses have adopted a more nuanced perspective on LHEs. This shift is partly attributable to empirical research demonstrating the considerable heterogeneity of their physical configurations and social compositions (Hess et al., 2018; Musterd et al., 2009). Evidence indicates that residents frequently report high levels of satisfaction with their dwellings, neighborhood environments, and the overall living conditions within these estates (Breuer, 2015; Reicher et al., 2023). At the same time, the deepening crisis of housing affordability across many European metropolises has renewed attention to one of the core attributes of LHEs—their capacity to provide comparatively low-cost accommodation within

the public rental sector. Although successive waves of housing market financialization and privatization since the 1970s have contributed to rising rent levels and to the conversion of rental units into owner-occupied dwellings (Bernt et al., 2017; Kabisch & Grossmann, 2013; Murie et al., 2005), LHEs continue in many contexts to function as vital reservoirs of affordable housing for lower- and middle-income households. The price differentials between housing in large estates and the open market are significant. Dekker and van Kempen (2005, p. 26) found that rents in 30 LHEs across various European cities were between 30% and 70% below the respective citywide average levels. However, to our best knowledge, no studies have yet systematically analyzed rental price differentials between LHEs and other segments of the housing market beyond individual case studies, in order to assess the specific market position of large estates.

Against this background, in this article we analyze rent levels in LHEs across major German cities and compare them to the average rents within their respective urban areas. Using a geodata-based methodology, we first identify LHEs built between 1949 and 1990 that meet a minimum threshold of 1,000 inhabitants. Our study covers all German cities with populations exceeding 100,000 residents in 2022. Subsequently, fine-grained raster data from the 2022 census is employed to calculate average rent levels within these estates. This approach enables us to assess the relative appeal of high-density living in LHEs for individuals with lower incomes.

We are expanding knowledge in this topical area in two ways: First, we are developing a novel geodata- and census-based approach for the systematic spatial delineation of LHEs in Germany. This is of particular significance, as there is no official national inventory of LHEs in Germany that an empirical study on rental prices could draw upon. Our concept enables classification by estate size, density, population structure and change, as well as rent level. Second, we show whether and in what ways LHEs from the 1950s to 1980s exhibit contrasting housing costs compared to other residential areas, which enables new assessments of their significance in terms of housing policy in the context of tight housing markets.

The article proceeds as follows. Section 2 outlines the development trajectories of LHEs in Germany, distinguishing between the contexts of West and East Germany. Section 3 presents the methodological framework, centered on a geodata-based spatial filtering approach that enables the spatial identification of housing estates exceeding a defined minimum size threshold. The empirical results are then discussed in Section 4, followed by an examination of policy implications in Section 5. Finally, Section 6 offers concluding reflections on strategies for preserving affordable housing within the affected urban areas.

2. LHEs in Germany

LHEs represent a significant component of Germany's national housing stock. In 2015, approximately eight million people lived in four million dwellings classified as part of LHEs (Hunger, 2015). A government report published in 1994 identified a nationwide total of 240 estates with a size of more than 2,500 housing units respectively and around 1.6 million dwellings (Bundesministerium für Raumordnung, Bauwesen und Städtebau [BMBau], 1994). However, due to the country's 40-year division and the markedly divergent housing policies pursued in the Federal Republic of Germany (West Germany) and the German Democratic Republic (East Germany), the significance of LHEs varies considerably between both parts of the country (Knorr-Siedow, 2004). In 1994, one in four residents in East Germany lived in an LHE, compared to only 1 in 60 in West Germany (BMBau, 1994).

Pronounced East–West differences can be observed not only in quantitative terms but also in the planning approaches, locational patterns, and current housing policy relevance of LHEs (Grunze, 2017; Jessen & Willnauer, 2020; Reicher et al., 2023). Whereas housing policy in the German Democratic Republic was almost exclusively oriented toward large-scale, state-organized construction of prefabricated estates and primarily focused on quantitative building output (Hannemann, 2000), the development of LHEs in West Germany was economically less significant and characterized by far greater heterogeneity in terms of actors, financing models, and construction types (BMBau, 1994).

With regard to the developments that have taken place since their construction in the 1950s, 1960s, and 1970s—and in East Germany also throughout the 1980s—similar trends can be observed. Periods of population decline, strong competition from revitalized inner-city housing and single-family homes (Hannemann, 2000; Simons, 2012), as well as the aforementioned image problems, led to high vacancy rates during the 1990s and early 2000s. Around the turn of the millennium, several 100,000 housing units stood vacant in East German LHEs (Grunze, 2018), prompting federal and state governments to launch large-scale demolition programs. In East Germany alone, more than 330,000 dwellings were demolished (Milstrey, 2017).

Today, hardly any significant vacancies can be observed in LHEs (Krüger, 2019)—a development attributable not only to urban renewal and upgrading efforts but also to the increasing pressure on housing markets in metropolitan regions. On the contrary, many of these neighborhoods have undergone densification in the past (Hunziker, 2016; Kompetenzzentrum Großsiedlungen, 2021). The long-standing deficit-oriented perspective of policy, society, and academia on LHEs has in recent years given way to a more pragmatic view that acknowledges their importance as providers of moderately priced housing (Loeser, 2014). Numerous studies have demonstrated that average rents in these settlements remain considerably below citywide levels (Hunger, 2015; Kompetenzzentrum Großsiedlungen, 2021), though their residents often face higher rent-to-income burdens than the national average (Kompetenzzentrum Großsiedlungen, 2015).

However, as noted in the introduction, Germany also experienced a wave of housing privatization during the 1990s (Neugebauer et al., 2011), which had tangible effects on rent levels and reduced the stock of rental housing through the conversion and sale of owner-occupied units. In East Germany in particular, large portfolios previously held by municipal or cooperative housing providers were acquired by national and international financial investors. This trend was further intensified by the low-interest environment following the global financial crisis, which triggered a veritable boom in property acquisitions (Bernt, 2021; Bundesinstitut für Bau-, Stadt- und Raumforschung, 2025a). Due to the massive rise in real estate prices since the 2000s, these investments turned out to be extremely lucrative.

This relatively high profitability for investors can be partly attributed to a so-called "Hartz IV" business model (Bernt, 2021; Krüger, 2019, pp. 37–39; Milstrey, 2017), where dwellings are offered at comparatively low rents while expenditures for maintenance and modernization of the housing stock remain minimal (Bernt et al., 2017). This particular strategy primarily targets welfare recipients whose housing costs are covered through transfer payments, thereby providing landlords with a stable, state-backed rental income. Empirical studies on modernization levels in LHEs accordingly point to persistent underinvestment across substantial parts of the stock (Hunger, 2015). At the same time, Hunger (2015) notes that, despite an estimated annual investment requirement of €3.3 billion, the quality of living conditions in large German housing estates remains comparatively high in international perspective.

In West Germany, former social housing stocks were likewise subject to privatization. In addition, the specific model of public subsidy in the social housing sector contributed to a gradual decline in the supply of affordable dwellings. Public funding schemes typically included a time-limited rent control period after which rents could be adjusted to prevailing market levels (Kofner, 2017). A federal government report published in 1994 observes the following:

> At the time of first occupancy, rents in large housing estates were substantially below market levels for comparable new dwellings due to public subsidies within the social housing framework. The subsidy regime, however, was structured on a degressive basis, premised on expectations of rising household incomes and permitting relatively rapid increases in the legally regulated cost rents. Over a reduction period of roughly ten to fifteen years, net rents were thus projected to rise to two or three times their initial level, ultimately reaching—and frequently surpassing—market rates for comparable units. (BMBau, 1994, p. 15, translation by the authors)

In political and public debates, the shrinking stock of social housing is widely regarded as a major concern. This development is commonly attributed to the expiration of rent and occupancy controls, the large-scale privatization and sale of formerly subsidized dwellings since the 1990s, and persistently insufficient levels of new social housing construction. As a result, it is estimated that around 900,000 social housing units are currently missing, and at least two million will be needed by 2030 to cope with the housing crisis, since the existing stock has fallen to only about one million units (Verbändebündnis Soziales-Wohnen, 2024).

The worsening housing supply crisis in German major cities is not only due to the decline in affordable social housing, but is also driven by rising rents in non-subsidized housing stocks and the construction of high-priced new apartments. This has led to accelerated suburbanization in all major urban regions of Germany in recent years (Siedentop, 2024; Stawarz et al., 2022). In particular, families with greater space requirements, as well as elderly people and low-income earners, are population groups driving suburbanization processes—accompanied by urban sprawl in surrounding areas and increasing traffic burdens.

In response to tight housing markets and to mitigate gentrification dynamics, the German government introduced a rent control instrument in 2015, allowing municipalities in designated high-pressure housing markets to regulate rent increases. However, this regulation does not apply to dwellings that have undergone extensive refurbishment (Baye & Dinger, 2024, p. 844). Consequently, in the context of large-scale renewal processes, legal regulation can only limit rent increases to a certain extent. The overall effectiveness of this instrument therefore remains subject to ongoing debate (Deschermeier et al., 2017). In addition, municipalities can issue so-called social preservation ordinances pursuant to § 172 (1) BauGB (Federal Building Code). These are intended to counteract social upgrading and displacement. Social preservation ordinances are not an instrument of active tenant protection, but rather an urban planning tool aimed at preserving established sociodemographic structures. In social preservation areas, both demolition as well as structural alterations and changes of use on a property require a permit. In this way, for example, luxury renovations can be actively counteracted.

Against this background, we hypothesize that rent levels in LHEs are lower than in other segments of the housing market, although this price differential has likely decreased over time. To the best of our knowledge, however, there are currently no studies that allow for a systematic quantitative analysis of such rental price

differentials. While some local case studies exist—such as a study for Berlin conducted in 2021, which found that average rents in large estates amounted to approximately 75–80% of the citywide asking rents (Kompetenzzentrum Großsiedlungen, 2021)—a comprehensive analysis at the national level in Germany is still lacking. This is partly due to the absence of a national inventory of LHEs and the limited availability of high-resolution data on existing rents, which only became accessible with the 2022 census. The government report *Großsiedlungsbericht* from 1994 provided a comprehensive survey listing 240 estates across Germany; however, it applied a comparatively high size threshold of 2,500 housing units, meaning that many smaller settlements were not included (BMBau, 1994). In addition, a list maintained by a private association contains 204 entries, but the available data do not have official status (see Section 3).

To conclude, LHEs have gained renewed attention in recent years as an important component of affordable housing provision for low-income households within increasingly tight urban housing markets across Germany. Nevertheless, a comprehensive and geodata-based inventory of currently existing LHEs remains absent. Consequently, systematic analyses comparing rent levels within these estates to average rents within their respective urban areas have not yet been undertaken—a gap that the methodological approach outlined in the following section seeks to fill.

3. Data and Methods

In this study, LHEs are defined as extensive complexes of apartment buildings built from the 1950s until the 1980s, conceived as a single planned development, situated on greenfield land at mostly peripheral urban sites, and accommodating more than 1,000 residents. We have deliberately chosen an intentionally broad definition, as LHEs in Germany display considerable heterogeneity—for example, regarding the size of the settlements, the number of building floors, or their functional structures (mono- or multifunctional).

The identification procedure is based on German census data from 2011 and 2022. The census provides—among many other indicators—information on population, housing units, and buildings below the municipal level. Since 2011, census data have also been published nationwide in a georeferenced format at the level of 100-meter grid cells, enabling detailed spatial analyses and temporal comparisons. The data used in this study stem from a special evaluation conducted by the Statistical Office of North Rhine-Westphalia, ensuring that identical confidentiality procedures were applied for both 2011 and 2022, and that housing unit data are fully available at the 100-meter resolution. In addition to data on housing units and population, the net cold rent (indicating the total rent minus utilities and service charges) and the year of construction are particularly relevant for this study. However, rent information is not available for all rented dwellings in the national dataset. This forced us to use a threshold to ensure that only those LHEs were included in the analysis for which at least 75% of their constituent grid cells contain rent price information. This explains why some well-known German LHEs, such as Nürnberg-Langwasser, were not captured in our study (see Section 4 and Figure 2).

Since LHEs were built during a specific period in planning history, information on the date of construction of residential buildings is required. These data were obtained from the 2011 census, in which construction years are categorized according to the relevant German census periods. This makes it impossible to establish an exact, year-based delineation of the study period. As an approximation, the period from 1949 to 1990 was defined as a historical phase characterized by the construction of LHEs. Construction year data are available

for about 90% of inhabited cells in 2011. Due to these dataset-related limitations, the methodology presented cannot fully capture all LHEs in Germany.

The identification of LHEs follows a multi-step procedure. First, grid cells were filtered based on a minimum density threshold of 50 housing units per cell (with each cell covering an area of one hectare). This threshold is based on the literature regarding the urban densities typically found in LHEs. To assign cells to the relevant construction period, a further threshold was applied requiring that at least 90% of the housing units in a cell were built between 1949 and 1990. To exclude inner-city post-war reconstruction areas, all cells within a radius of 3 km from the city center were excluded. We assume that LHEs were typically developed in outer areas.

The filtered grid cells were then aggregated into estates if at least four adjacent cells met the specified criteria. Adjacency was defined to include both edge- and corner-sharing neighbors. The resulting estates were required to have a minimum size of 4 hectares and a minimum population of 1,000 residents. As mentioned above, rent information had to be available for at least 75% of the cells that compose an LHE. This approach allows for the possibility that major infrastructure elements may spatially separate LHEs while still forming a functionally coherent settlement. Consequently, fragmented LHEs located less than 200 m apart were merged and treated as a single LHE. Figure 1 shows two examples for the delineation of LHEs according to the above-described filtering process.



Figure 1. Grid-based spatial boundaries of the LHEs: (a) Cologne Chorweiler; (b) Dresden Gorbitz. Source: Based on data from the 2022 census and aerial images (DOP) from GDI.NRW and GeoSN.

Since no comprehensive inventory of LHEs in Germany exists, validating the identification approach remains challenging. As a reference, a citizen-science dataset from the website grosswohnsiedlungen.de was used. This inventory, characterized by its strong bottom-up nature, includes housing estates constructed after 1945 that are dense, homogeneous, and functionally self-contained. Each listed estate comprises at least 1,000 housing units and predominantly consists of social housing. However, the operators of this website do not claim that the list is complete. Comparison with this reference yields a true-positive rate of 81%. When the analysis is restricted to LHEs for which sufficient rent data are available, the true-positive rate decreases to 64%. The false-positive rate is approximately 70%, indicating that our approach identifies significantly more settlements than those listed in the reference database. This discrepancy can be attributed to the fact

that smaller estates are largely underrepresented in the grosswohnsiedlungen.de collection. Overall, however, the approach presented here offers a sufficient level of accuracy in identifying LHEs.

For rent level analysis, a housing-unit-weighted average rent was calculated for each LHE and for spatial aggregates such as West or East German LHEs (see Section 4). Weighting by the number of housing units ensures that the values of LHEs contribute to the overall averages in proportion to their size. This approach prevents small LHEs from being overrepresented in the analysis. The rent price ratio (Q_{LHE}) between the average rent of estates and the citywide normalized average rent indicates whether LHEs fall below ($0 < Q_{LHE} < 1$) or exceed the overall urban rent level ($Q_{LHE} > 1$). This leads to the following formula, which calculates the weighted rent price ratio for cities that contain LHEs within their boundaries. The ratio is obtained by dividing the sum of housing-unit-weighted rents of all associated LHEs by the weighted rents of all corresponding cities. In this context, w_i and w_j denote the number of residential units in a grid cell, while m_i and m_j represent the respective residential rent values:

$$Q_{LHE} = \frac{\sum_{i \in LHE} m_i \times w_i \Big/ \sum_{i \in LHE} w_i}{\sum_{i \in city} m_j \times w_j \Big/ \sum_{i \in city} w_j}$$

4. Empirical Findings

4.1. Number of LHEs and Morphological Features

Using the approach presented above, 353 LHEs were identified in the 80 major cities included in our analysis, representing a housing stock of 790,000 dwellings and a population of 1.38 million inhabitants (Figure 2). Table 1 provides an overview of key characteristics of these estates. On average, an estate covers roughly 20 hectares and includes about 2,200 housing units with around 3,900 inhabitants. As expected, the population density—at around 180 inhabitants per hectare as a mean value of all 353 estates—is significantly higher than the citywide average. Moreover, the calculated number of housing units per residential building allows conclusions to be drawn about the size of the structures. On average, we calculated 13.8 housing units per building, indicating that German LHEs are predominantly composed of medium-sized building types.

When distinguishing between West and East Germany, as well as by city size or estate size, significant morphological differences become apparent: LHEs in East Germany are considerably larger than those in West Germany, and their population density is also higher (Table 1). A similar pattern applies to large estates in metropolitan areas with populations exceeding one million and to large estates with more than 5,000 housing units. Population density is significantly higher here than in smaller cities or smaller estates. The relatively high population number of LHEs in smaller cities can be explained by the fact that East German cities (with LHEs in their territory) are overrepresented in this population size category. In these East German cities, there are numerous large LHEs such as Halle-Neustadt or Rostock-Lichtenhagen.

It is remarkable that, despite the widespread negative image of LHEs, population development in the 2010s was slightly positive. On average, the 353 estates recorded a population increase of 2.1% between 2011 and 2022, highlighting the importance of this type of settlement for providing housing to lower-income

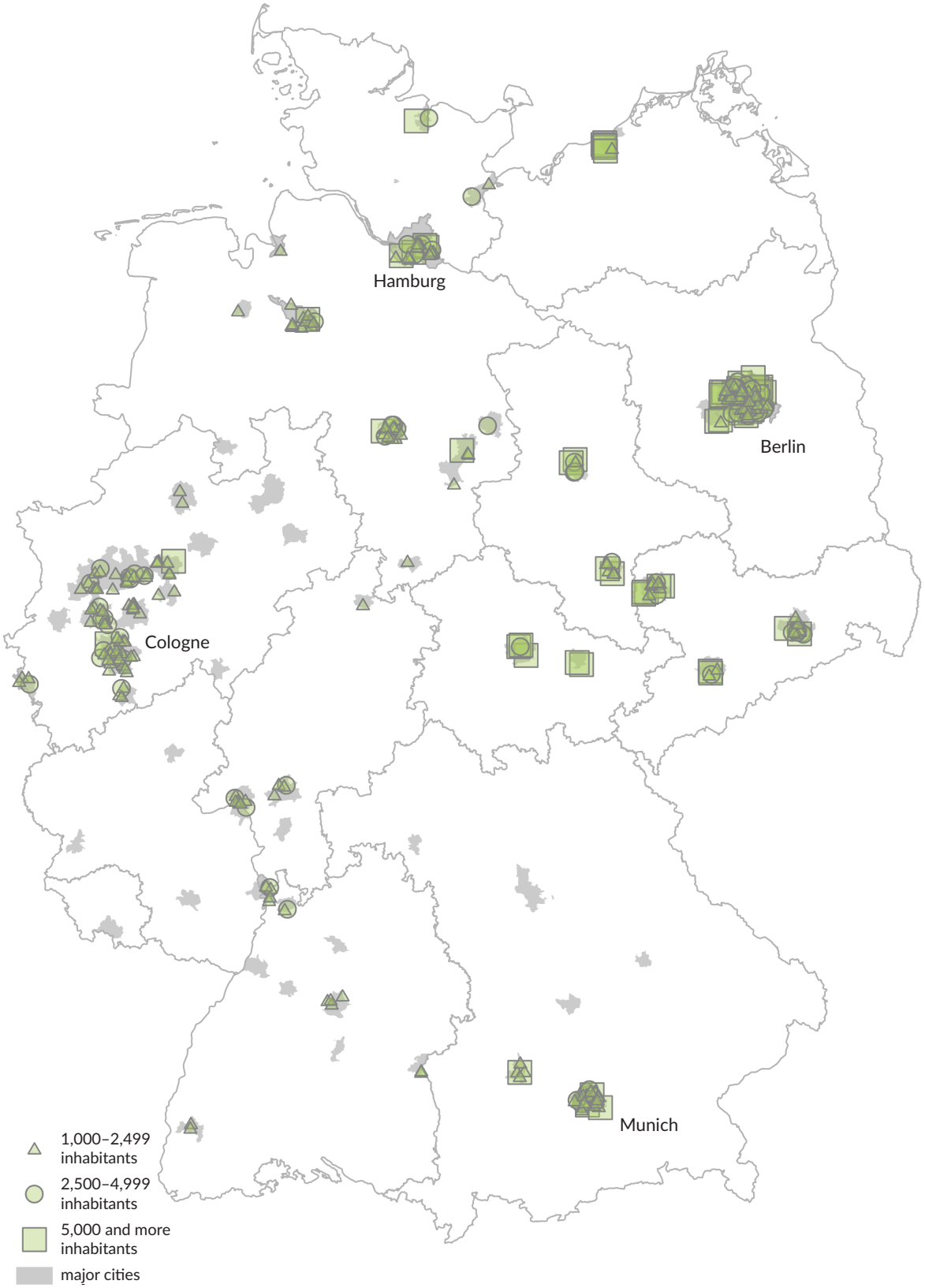


Figure 2. Location of all identified LHEs in German major cities by population size (2022, *n* = 353). Source: Based on data from the 2022 census.

households. Only in LHEs of smaller large cities (100,000–250,000 inhabitants) was a slight population decline observed (–0.6%). Moreover, we found significant West–East differences in the average age of LHE residents. In eastern German settlements, the average age is 47.5 years, whereas in western German LHEs it is 43.2 years. This indicates that residents of eastern German settlements are, on average, considerably older, while those in western German settlements are slightly younger than the national average (44.5 years). This pattern suggests that western German LHEs have experienced increased immigration of younger migrants in recent years. Location-specific dynamics of immigration from abroad can also be seen in the pronounced West–East differences in the shares of the foreign population in LHEs. While in West German LHEs an average of 25.3% of the population does not have German citizenship, in East German LHEs the figure is only 15.2% (see Table 1).

Table 1. Descriptive statistics for the identified LHEs (values for 2022).

LHEs	Mean area size (ha)	Mean population number (inh.)	Mean population density (inh./ha)	Mean number of housing units	Mean number of housing units per building	Share of foreigners
All LHEs (n = 353)	21.9	3,912	178.6	2,242	13.8	20.6
LHEs in West Germany (n = 263)	15.9	2,787	175.1	1,489	12.1	25.3
LHEs in East Germany (n = 90)	39.4	7,197	182.8	4,442	15.9	15.2
LHEs in cities 1 M inh. and more (n = 154)	24.5	4,709	192.5	2,650	15.1	19.6
LHEs in cities 0.5–< 1 M inh. (n = 96)	17.4	2,887	165.9	1,638	11.4	25.1
LHEs in cities 0.25–< 0.5 M inh. (n = 44)	11.9	2,091	176.0	1,050	11.5	25.7
LHEs in cities 0.1—< 0.25 M inh. (n = 59)	30.0	4,853	161.9	3,047	14.2	16.9
LHEs with 5,000 inh. and more (n = 64)	65.2	12,403	190.1	7,211	16.0	18.8
LHEs with 2,500–< 5,000 inh. (n = 78)	19.3	3,420	177.6	1,902	13.5	22.7
LHEs with 1,000–< 2,500 inh. (n = 211)	9.7	1,517	156.0	860	10.4	23.1

Note: The share of foreigners is a population-weighted mean. Source: Own calculation based on data from the 2022 census.

4.2. Rental Price Differentials

In line with the literature, our data (see Table 2) show that in the census year 2022, average cold rents in LHEs were about €1.50 per square meter of living space lower than the citywide average. This corresponds to a price advantage of approximately 19%. In East Germany, the average difference between rents in LHEs and the urban average is significantly higher—€1.68 (23%)—than in West Germany (€1.00; 13%). This can be explained by the differences in the financing of large-scale housing construction (see Section 2), particularly by the expiration of rent control regulations.

Table 2. Rent differences of LHEs and city means.

Indicator	LHEs	Cities	Rent price ratio
All LHEs (n = 353)			
Mean rent (€/m²)	6.27	7.77	0.81
Share of owner-occupied units (%)	13.3	28.0	—
LHEs in West Germany (n = 263)			
Mean rent (€/m²)	6.92	7.92	0.87
Share of owner-occupied units (%)	17.3	30.9	—
LHEs in East Germany (n = 90)			
Mean rent (€/m²)	5.77	7.45	0.77
Share of owner-occupied units (%)	1.6	19.6	—

Source: Own calculation based on data from the 2022 census.

This corresponds to rent price ratios (Q_{LHE}) of 0.81 (all estates), 0.87 (estates in West Germany), and 0.77 (estates in East Germany). If the median is considered instead of the average value, the ratios are lower for Germany (0.78) and East Germany (0.74), which suggests that the distribution of values is right-skewed, meaning that average values are distorted by areas with high rents. The median for West German LHEs is slightly higher than the average value (0.89).

The comparison of rent levels categorized by city size shows no significant differences. The price variations—ranging between 13% and 19%—fall within a relatively narrow corridor (Table 3). However, Table 3 indicates that price differences for LHEs with populations exceeding 5,000 residents are greater than those observed in smaller settlements. While the price advantage in LHEs with more than 5,000 inhabitants amounts to 22%, it is only 12% in smaller areas (with less than 2,500 inhabitants). This could be due to the fact that larger LHEs have struggled more with image problems and vacancies than smaller areas have.

Contrary to the assumption that the rent price gap is positively correlated with the share of foreigners due to stigmatization effects, our data suggest a negative relationship (Table 3). In LHEs with the highest share of foreigners (measured by the top quartile), the gap relative to the citywide average rent is the smallest. This pattern is largely driven by the markedly different degrees of demographic internationalization in West and East Germany. The findings may indicate that potential stigmatization effects play only a limited role in shaping rent price dynamics. At the same time, they suggest that potentially marginalized groups, such as the foreign population in West German LHEs, do not strongly benefit from the price effects associated with living in an LHE. However, further studies should be conducted on the specific relationships between international migration, image effects, and rent levels.

Table 3. Rent differences of LHEs and city means according to city and estate size.

LHEs	LHEs	Cities	Rent price ratio
LHEs in cities 1 M inh. and more (n = 154)	6.53	7.82	0.83
LHEs in cities 0.5–< 1 M inh. (n = 96)	6.22	7.3	0.85
LHEs in cities 0.25–< 0.5 M inh. (n = 44)	7.25	8.99	0.81
LHEs in cities 0.1–< 0.25 M inh. (n = 59)	5.58	6.45	0.87
LHEs with 5,000 inh. and more (n = 64)	5.99	7.64	0.78
LHEs with 2,500–< 5,000 inh. (n = 78)	6.53	7.77	0.84
LHEs with 1,000–< 2,500 inh. (n = 211)	6.89	7.83	0.88
LHEs with a high share of foreigners (n = 78)	6.70	7.83	0.86
LHEs with a rather high share of foreigners (n = 78)	6.77	7.87	0.86
LHEs with a rather low share of foreigners (n = 78)	6.15	7.79	0.79
LHEs with a low share of foreigners (n = 78)	5.88	7.55	0.78

Source: Own calculation based on data from the 2022 census.

The boxplots of the rent price ratio (calculated as the quotient of the weighted LHE rent and the city-wide rent, Figure 3) furthermore show a considerable range of values for individual settlements, which suggests the influence of strongly context-dependent factors such as ownership structures, local housing market policies, and relative attractiveness assessments with regard to rent levels. The remarkable outliers—with rent price ratios well above 1.0 in smaller LHEs—could be the result of revitalizing replacement constructions, which then turn out to be significantly more expensive.

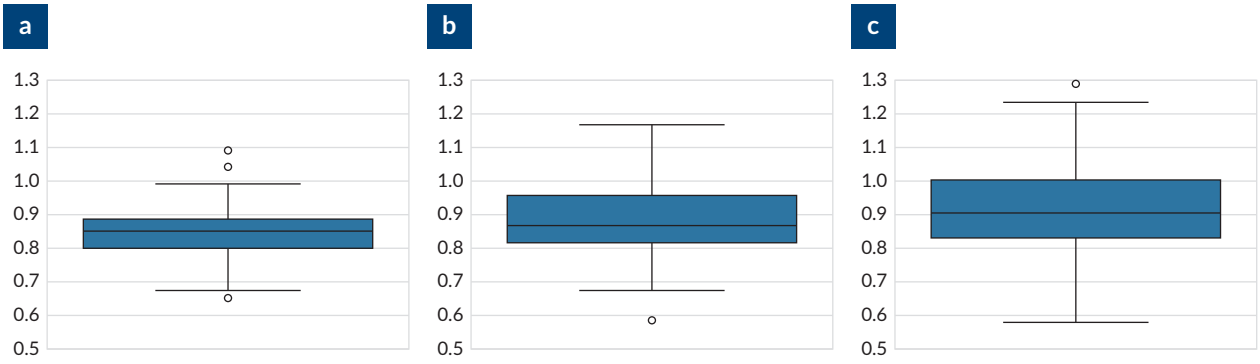


Figure 3. Boxplots of rent price ratios according to estate size (values for 2022): (a) large LHEs (n = 64); (b) medium-sized LHEs (n = 78); (c) small LHEs (n = 211). Source: Own calculation based on data from the 2022 census.

Our data also show that the ownership rate in LHEs is very low (Table 2). For all estates combined, the average is 13.3%, which is clearly below the citywide average of about 28%. The East–West differences observed here are also noteworthy: In 2022, the ownership rate in West German LHEs was 17.3%, whereas in East German areas it was only 1.6%. This reveals different—and strongly path-dependent—strategies of stock management, with varying importance placed on privatization measures.

5. Discussion

5.1. Relevance of LHEs in the Context of National and Local Housing Policy

Over the past 15 years, the crisis of affordable housing has intensified in almost all major German cities. High levels of immigration—particularly from abroad—combined with insufficient new construction activity and liberal housing market policies have led to a sharp increase in asking rents. Since 2010, these have grown nationwide by roughly 83% in nominal terms; in prosperous cities such as Berlin, Frankfurt a.M., Munich, or Stuttgart, asking rents in 2024 were at €14 per square meter or higher (Bundesinstitut für Bau-, Stadt- und Raumforschung, 2025b). This development has caused an increased suburbanization in favor of lower-cost housing regions like suburban areas or even rural regions (Siedentop, 2024). In particular, low-income households and families with greater housing space requirements are increasingly struggling to find affordable accommodation in large cities. This corresponds with debates on a novel suburbanization of poverty (Weck et al., 2023)—a phenomenon that has so far received little attention in Germany—and a dynamic pattern of migration from metropolitan areas into peripheral suburban or even rural regions (Steinführer et al., 2024).

In this context, our findings highlight the renewed importance of LHEs within German housing markets. Although rent levels in LHEs have also increased over time (Kompetenzzentrum Großsiedlungen, 2015), they have remained significantly below the respective citywide averages. In combination with previous research on rent levels in LHEs, this supports the view that these estates continue to serve as key providers of affordable housing for low-income households (Kompetenzzentrum Großsiedlungen, 2015). In contrast, newly developed urban areas built since the 1990s—where rising land and construction costs have predominantly produced housing in higher rent segments—have offered limited affordable options (Bundesinstitut für Bau-, Stadt- und Raumforschung, 2021). LHEs therefore function as counterweights to ongoing market-driven exclusion processes affecting low-income households in urban housing markets.

Our findings show that rent levels and ownership structures reveal significant differences between LHEs in eastern and western Germany. Due to less tense housing markets in eastern Germany, rents are generally lower than in western cities. Moreover, the relative gap between LHE rent levels and the city-wide rent average is more pronounced in East Germany. These patterns can be traced back to distinct historical trajectories shaped by divergent political frameworks before and after reunification. In West Germany, many LHEs were subsidized under social housing programs with rent controls that have largely expired since the early 2000s, whereas in East Germany such estates were state-built and managed before reunification and later transferred into private ownership rather than classified as social housing. Although extensive privatization was pursued during the 1990s and early 2000s, ownership remains highly concentrated among a small number of commercial or cooperative actors (Grunze, 2017, pp. 76–77), resulting in a low proportion of owner-occupied units (see Table 2).

Pronounced West–East disparities are also evident in the differing intensity of international immigration and the resulting increase in demand for affordable housing. While migration has long been part of the history of West German estates, East German estates have followed more discontinuous trajectories, shifting from state-built housing to phases of shrinkage and vacancy, and later to renewed demand driven by migration (Helbig, 2022). Despite persistent public narratives that associate these neighborhoods with stigmatization

and social problems, research such as the long-term case study of Leipzig-Grünau LHE suggests that such interpretations are often overly simplistic and do not necessarily reflect residents' levels of satisfaction or identification with their neighborhoods (Kabisch & Pössneck, 2022).

With the given structural deficits and high vacancy rates during periods of demographic decline, many LHEs have become the subject of urban redevelopment projects and have benefited from public funding programs in recent decades. A nationwide survey among housing companies found that around 40% of responding companies had participated in such programs or utilized related funding instruments (Deutsches Institut für Urbanistik & Kompetenzzentrum Großsiedlungen, 2015, pp. 7–8). Within the framework of the program Stadtumbau Ost, several areas in LHEs were formally designated as restructuring zones to manage oversupply through selective demolition while preserving the functional core for future use. Between 2002 and 2013 alone, more than 330,000 housing units were demolished using funds provided through this program (Milstrey, 2017). These interventions were primarily aimed at stabilizing neighborhoods and responding to long-standing vacancies. Although this figure illustrates the extensive scale of demolition activities, many LHEs were only partially demolished (Altrock et al., 2018, p. 1)—an outcome that has proved advantageous under current housing market conditions. Extended periods of vacancy and persistent structural deficiencies within LHEs have meanwhile generated considerable investment backlogs. Nationwide estimates assume a total investment requirement of around 90 billion euros for LHEs by 2030—a figure that significantly exceeds the estimated total investment of around 67 billion euros (Hunger, 2015). The modernization of properties that is therefore to be expected could lead to significant rent increases in the near future.

The resurgence of investment interest and public interest—as mentioned in Section 2—indicates that LHEs are increasingly recognized not only as physical assets but also as socially relevant components within urban development strategies. Given their critical role in accommodating lower-income households, research has indicated potential pathways for densification and qualitative improvements in neighborhood environments (Böger, 2014; Grunze, 2017; Hunziker, 2016; Loeser, 2014). However, modernization must proceed under socially responsible conditions. Excessive rent increases would undermine affordability goals and risk triggering gentrification processes.

A negatively connoted point of reference in this context is the privatization and sell-off of council estates in London undertaken in the name of renewal, which has been associated with processes of social cleansing and described as a "new accumulative form of (state-led) gentrification" (Lees & White, 2020, p. 1717). Similarly, the qualitative study by Baeten et al. (2017) demonstrates that housing estate renewal measures accompanied by substantial, profit-driven rent increases may lead to the actual or potential displacement of existing tenants. Similar experiences have been observed in the Netherlands, where the conversion of former social rental housing into owner-occupied dwellings has led to significant changes in the social and ethnic composition of the population. However, the extent of these socio-demographic changes varies considerably depending on the location of the estates, particularly between inner-city and peripheral areas (Boterman & van Gent, 2014). In contrast, our data show that a far-reaching wave of privatization in LHEs has not occurred so far (see Table 2). Germany therefore provides a certain counterpoint to experiences in other European countries with more liberal housing policies.

5.2. Limitations of the Employed Geostatistical Method

At this point, we explicitly point out the limitations of our methodological approach. Using the multi-criteria, census-based method presented here, LHEs can only be identified approximately. This is due, first of all, to the ambiguity of the term "large housing estate," which is not legally defined and therefore lacks any official listing at the national level. Secondly, it results from the use of threshold values (such as minimum density and population size), whose setting has a significant influence on the final outcome. A particular difficulty lies in distinguishing LHEs from post-war reconstructions of late 19th-century urban quarters, since both types of settlements exhibit similar building densities.

Moreover, a grid-based approach means that LHEs cannot be represented in their precise settlement boundaries. Although the resolution of the data used here—with a 100-meter grid—is very high, it cannot be ruled out that some grid cells classified as belonging to LHEs may also capture non-estate areas (such as adjacent single-family home neighborhoods). Conversely, parts of LHEs may fall within grid cells not interpreted as LHEs because their population or density falls below the set thresholds. Owing to the incomplete rent price information in the census, not all identified LHEs could be included in the analysis. Nevertheless, we consider our method's overall identification of LHEs in German cities to be sufficiently accurate for answering the research question posed.

It should also be acknowledged that, with the research approach used here, we are not able to assess in detail the specific effects or relative influence of the factors shaping rent developments in LHEs—such as ownership structures, infrastructure provision, or local stigmatization. This should be the subject of future research in this field.

6. Conclusions

We were able to show, using a novel methodological approach, that LHEs play a significant role in providing affordable housing in large German cities. On average, cold rents paid in these areas are about 19% below the average rents in the cities studied. This price effect is especially pronounced in large LHEs and in LHEs situated in East Germany. For low-income earners, such areas therefore often represent the last bastions of affordable housing within city limits. However, the developments outlined in Section 2 in the context of neoliberal urban and housing policies—particularly the privatization of former social housing—pose enormous challenges for urban housing and social policy aimed at preserving affordable living space.

The German experience suggests that LHEs require targeted rent protection and development strategies to preserve their original function of providing affordable housing for broad segments of the population. To maintain their integrative role in increasingly polarized urban housing markets, policies should promote socially balanced regeneration that combines modernization with safeguards for affordability and explores cross-subsidization models integrating lower- and higher-priced segments within the same developments. Such approaches can support social diversity while maintaining accessibility for economically disadvantaged households. At the same time, many estates are marked by concentrations of poverty, social disadvantage, and stigmatization. While our study highlights the positive role of LHEs in metropolitan housing markets, it does not overlook the presence of significant social challenges in some estates. Future housing and urban

policy must therefore strike a careful balance: improving living conditions without triggering processes of upgrading and displacement.

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Conflict of Interests

The authors declare no conflict of interests.

Data Availability

The employed data are publicly available under the following source: https://ergebnisse.zensus2022.de/datenbank/online

LLMs Disclosure

We used ChatGPT in the TU Dortmund University Campus KI Environment for language polishing.

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Preliminary Decision-Making Processes in Suburban Residential Developments

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Abstract

German metropolitan regions experience simultaneous reurbanisation in core cities and intensified suburbanisation in surrounding municipalities. Given limited peripheral administrative resources and complex land availability, a fundamental question arises: Who actually steers urban development in suburban areas? While the Federal Building Code requires formal urban land-use planning, pivotal preliminary decisions on location, scale, density, and actors occur informally beforehand. This study examines how these early decision-making processes in suburban residential area development are shaped by informal negotiations among public and private actors. The theoretical framework integrates Kingdon's multiple streams framework, Sorensen's critical junctures, Sydow's path dependency theory, real estate project logic, Flyvbjerg's concepts of rationality and power, and Heurkens' typology of private-led urban development. This study combines 12 overarching expert interviews with seven in-depth case studies in the Hamburg metropolitan region, capturing perspectives from municipal stakeholders, private urban planning consultancies, district administrations, and project developers. Analyzed alongside official planning documents through qualitative content analysis, the findings reveal a distinct preliminary phase dominated by confidential, small-scale negotiations among mayors, landowners, and developers. These processes predefine core project parameters, creating path dependencies that significantly limit subsequent formal planning flexibility and public input, visualised in a multi-level, phase-based actor model. Ultimately, the findings highlight structural asymmetries that challenge systematic public steering and sustainable development in suburban areas. The study concludes with recommendations for a more proactive municipal land policy, enhanced institutional capacity-building, and supportive regional frameworks to secure long-term environmental and spatial objectives.

Keywords

informal negotiations; land availability; path dependency; preliminary decision-making; suburban development

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1. Introduction

Since the Second World War, settlement development in the Global North has been characterised by substantial suburbanisation, which occurred earlier and more intensely in North America than in Western Europe (Hesse & Siedentop, 2018). In Germany and other European countries, this trend was temporarily overshadowed in the 2000s by significant growth in the core cities of metropolitan areas, driven primarily by younger cohorts and high levels of immigration from abroad. However, as early as the 2010s, suburbanisation intensified again through out-migration—particularly of households with children, but also of older demographics—to the immediate and even more distant outskirts of the core cities (Siedentop, 2024; Volgmann et al., 2022). This shift caused residential growth in the 2010s to expand increasingly into suburban municipalities (Ehrhardt et al., 2022, pp. 529–535). As a result, population numbers and dwelling completions in the catchment areas of major cities rose at a similar pace to those in the core cities (Siedentop et al., 2024, pp. 27, 37). This newly utilized land area is significantly larger due to lower peripheral densities, as over 60% of new German urban expansion developments consist of detached houses (Swiacki & Agista, 2025).

The development of residential areas in metropolitan regions is increasingly shifting to suburban areas, a trend now also evident in Eastern Europe (Taubenböck et al., 2019). Unlike core cities, where new developments are restricted to predetermined conversion or peripheral sites, smaller municipalities are often surrounded by open spaces offering multiple spatial planning options. Crucially, while large cities engage in complex planning procedures, smaller peripheral administrations often lack the capacity and resources to evaluate projects in such depth. Land availability also varies: central city projects usually utilize publicly controlled land, whereas suburban authorities develop private land or acquire it late in the process, resulting in fundamentally different framework conditions.

Metropolitan housing market pressures will remain high due to diverse employment and educational opportunities, driving larger households—particularly families—to seek affordable options in surrounding areas. This trend is reinforced by digitalisation and soaring core-city housing costs (Siedentop, 2024).

Given these persistent suburbanisation pressures, how can suburban residential developments be managed to achieve sustainable development? Considering the limited resources of smaller towns, it is critical to understand how these highly consequential developments are initiated and driven forward. To date, there has been insufficient research into the specific actors and informal processes that shape these developments before they are publicly discussed or officially processed. Hence, the impact of these preliminary decision-making processes on subsequent planning and implementation remains unclear. This study addresses this gap by examining how preliminary planning decisions arise and what role actors, power relations, and negotiation processes play. To this end, Section 2 first outlines the theoretical foundations and the current state of research. Section 3 then details the methodological approach, followed by the empirical analysis of actors, processes, and development paths in the early phases (Section 4). Finally, Section 5 presents the conclusions and implications for future suburban residential developments.

2. Theoretical Framework and State of Research

2.1. Problem Definition and Subject of Investigation

In Germany, land-use planning is regulated as the self-governing responsibility of local authorities in the Federal Building Code (Baugesetzbuch [BauGB], 2017). Section 1, Paragraph 3 of the BauGB obliges local authorities to prepare land-use plans "as soon as and to the extent that these are required for urban development and order." It distinguishes land-use plans into preparatory land-use plans (*Flächennutzungsplan*) and legally binding land-use plans (*Bebauungsplan*).

The formal start of a land-use planning procedure is a local council resolution on the preparation of a land-use plan for a defined area (*Aufstellungsbeschluss*). This is followed by a comprehensive planning and participation process involving public authorities and other public agencies (*TöB*) and civil society actors. Once the feedback has been documented and considered, the legally binding land-use plan is revised where necessary and ultimately adopted by the local council as a by-law (*Satzungsbeschluss*). Given the extensive formal and time-consuming effort required for these procedures, municipalities generally only initiate land-use planning when a project's realization prospects appear sufficiently secure during an upstream conceptual phase (Langenbrinck et al., 2025).

In reality, however, the development of new residential areas does not begin with this formal land-use planning procedure under the BauGB. As a rule, two key prerequisites are assessed beforehand:

The first prerequisite is to clarify the political viability of the project. In German local government studies, the term pre-decision-makers (*Vorentscheider*) is used in this context. This refers to senior administrative officials (mayors, municipal directors, and heads of planning departments) as well as key political figures (party group leaders, committee chairs, and specialized politicians) who are involved at an early stage and informally in the preparation and coordination of planned projects (Banner, 1972; Bogumil, 2002, pp. 33–37). In some cases, powerful actors outside the administration and local council, such as large companies, are also involved in this early coordination (Naßmacher & Naßmacher, 2007, pp. 245–255; Schneider, 1977). Anglo-American community power research, which examines local political decisions (Stoker, 1998), arrives at a similar assessment.

The second prerequisite is the availability of the necessary land. As landowners in Germany can only be compelled to sell or allow development under strict legal conditions, local authorities are reliant on their cooperative participation. As a rule, therefore, the conditions and key parameters of a new development area are broadly assessed at an early stage. This includes, in particular, the price expected by the landowners, which in turn depends primarily on the potential scale of the planned development.

The preliminary decision-making processes described represent a challenging subject of investigation because they take place informally and are not public. Nonetheless, they are of great significance, as they shape the subsequent manner in which residential areas are developed. Their analytical relevance lies in this combination: even before the formal land-use planning procedure begins, key decisions are made that significantly determine the scope of subsequent action. In this early phase, key parameters such as site selection, development density and ownership structure are pre-determined. At the same time, fundamental

conditions such as purchase price, development volume, and feasibility are often clarified in discussions with landowners and project developers.

From a governance-theoretical perspective, this reveals an asymmetry between formal legitimacy and actual decision-making. While the land-use planning process is characterised by participation, coordination with authorities, and documented deliberation, preliminary decisions are based primarily on informal coordination between a small number of key actors. As a result, part of the substantive and political decision-making shifts to a phase preceding the formal land-use planning procedure.

Against this background, preliminary decision-making processes were examined; the key findings are summarised in this article. Section 2.2 draws on various explanatory approaches from the literature, which should be understood as complementary, as individual approaches can only partially capture the diversity of these processes. The strength of these approaches lies in their combined presentation; accordingly, they are consolidated and presented as pre-decision mechanisms. This is followed in Section 2.3 by a brief description of the actors involved and their motives. This description is closely linked to the processes and is intended to supplement the presentation by illustrating the range of actor constellations. Combining the content from Sections 2.2 and 2.3, a conceptual, analytical model with key questions for the empirical study is derived in Section 2.4. This serves as a basis for, and facilitates a better understanding of, the results presented in Section 4.

2.2. Mechanisms of Preliminary Decision-Making

2.2.1. Agenda or Opportunity-Based Logics to Which Project Ideas Are Subject

While classical policy cycle models (Easton, 1965; Lasswell, 1936/1958) depict political processes as a linear sequence of problem definition, formulation, and decision-making, the complementary agenda-setting theory (McCombs & Shaw, 1972) explains why certain issues reach the political agenda in the first place. Building on these insights, Kingdon (1995/2014) developed the multiple streams framework (MSF) to conceptualise the various influences on decision-making processes. By viewing these processes as non-linear and accounting for elements of chance, the MSF is highly suited to analysing political decisions on complex, far-reaching urban interventions, such as new residential development areas.

Although Kingdon originally formulated the MSF to analyse the US political system, it has since been widely applied to other contexts, including the German political system (Zohlnhöfer & Herweg, 2024). The framework distinguishes between three independent streams that can converge at an opportune moment (Kingdon, 2014, pp. 86–89):

- Problem stream: the perception and definition of problems, for example via indicators or feedback from existing processes.
- Policy stream: a “primeval soup” of existing solutions developed by experts, administrations, and think tanks. Here, solutions often exist independently of problems, effectively floating around within the political sphere until they attach to a fitting problem or opportune event (Kingdon, 2014, p. 172).
- Politics stream: political power relations, public sentiment, and changes of government, which collectively determine whether an issue reaches the agenda.

A “policy window” arises when a crisis, a shift in public sentiment, or an institutional change causes the problem, policy, and politics streams to align. In such situations, “policy entrepreneurs”—leveraging their resources, contacts, and persistence—can successfully link their solutions to a problem, thereby driving decisions or agenda shifts (Kingdon, 2014, pp. 165–170).

Applied to urban planning, the MSF illuminates the process logic of linking a problem or strategic opportunity to a concrete proposed solution under given political conditions. Central to this framework are policy entrepreneurs, such as leading local politicians, project developers, or administrative actors, who drive these connections. This creates windows of opportunity where prepared conceptual ideas enter the local decision-making process, gaining relevance for the subsequent formal land-use planning process. Consequently, preliminary decision-making processes represent those early phases where such linkages are established—ultimately determining which project ideas are given a realistic chance of realisation.

2.2.2. Development Paths and the Consolidation of Project Ideas

Sorensen’s concept of critical junctures, which draws on historical institutionalism (Mahoney, 2000), highlights decision-making and conflict situations in which spatial development pathways appear comparatively open and several alternatives are possible. In such phases, often within limited timeframes, directional decisions are made that remain effective in the long term because they structure, restrict, or favour subsequent options (Sorensen, 2023, pp. 932–937). With regard to urban and land policy processes, Sorensen describes how critical junctures frequently occur not in major political debates, but in technical meetings between administration and planning bodies. While decisions in these arenas are ostensibly made only on technical issues, such as procedures, instruments, or infrastructure solutions, their outcomes shape the long-term development path of new residential areas (Sorensen, 2023, pp. 941–943).

Against this backdrop, preliminary decision-making processes governing new residential areas can be interpreted as critical junctures. It is within these early phases that the choice of location, the broad outlines of the urban development concept, and key framework conditions are effectively locked in for the first time.

In conjunction with this, path-dependence theory as described by Sydow et al. (2009), drawing on pioneering economic work on lock-ins and increasing returns (Arthur, 1994; David, 1985) as well as institutional approaches (North, 1990), explains the longer-term process that follows such critical junctures. The starting point is an initially open field of possible courses of action, within which certain decisions are made that—via self-reinforcing mechanisms, such as investments, organisational routines, legal provisions, and expectations—increasingly stabilise a specific development path. This multi-phase process model distinguishes between initial openness, the path formation phase, and potential lock-in situations where alternatives can only be realised at high cost or under specific conditions (Sydow et al., 2009, pp. 691–696).

For urban development, this means that decisions made in preliminary decision-making processes significantly influence the scope for further action. These include, for example, choices regarding the type of land use, infrastructure deployment, or land ownership structure—specifically, whether the land is to be sold to many individual owners, transferred to an investor, or retained by the local authority. Such decisions can reinforce themselves through investment and legal commitments, thereby setting subsequent residential development on a specific course.

A complementary approach arises from the project logic of property development. The literature on project management, particularly regarding the development of complex property projects, emphasises that early definitions of objectives and key parameters are central to further planning and implementation. This process carries its own logic, especially in large-scale, investment-intensive projects, where decisions on approach and design are made early on and have a cascading effect on subsequent steps. If significant changes become necessary later, they can lead to considerable delays, additional costs, or even jeopardise the entire project (Kinateder, 2017, pp. 527–529; Paulson, 1976).

This illustrates why preliminary decision-making processes are so crucial in the development of new residential areas: if key parameters are established at an early stage, this significantly restricts the scope for subsequent changes in later planning phases. This applies, for example, to the selection of specific plots of land earmarked for development, the density of development, and the question of what infrastructure is to be provided. Such early preliminary decisions act as cornerstones for the subsequent formal land-use planning process.

The approaches of Sorensen and Sydow complement this project logic: Sorensen focuses on the critical junctures where decisions diverge between different development paths, whilst Sydow describes the subsequent consolidation. The project logic further explains why early decisions in complex property projects are particularly consequential. Preliminary decision-making processes in suburban residential development can therefore be understood as critical junctures where core parameters, such as location, density, infrastructure, ownership structure, and the fundamental project framework, are determined. In the sense of path dependency, these early mechanisms ultimately shape political decisions and subsequent planning law.

2.2.3. The Influence of Power and Interests on Project Ideas

Power and interpretative authority play a central role in planning processes. Particularly during the early phases of the land-use planning process, it is often individual key figures who influence how problem situations are framed and which planning options are actively considered. They do so on the basis of their formal positions, their specialized knowledge, and their extensive networks. In the German context, Reuter has examined the influence of power in urban development in depth and embedded it firmly within planning theory (Reuter, 2000, 2023).

In an international context, Flyvbjerg (1998) has particularly elaborated on the power dynamics within the land-use planning process. The starting point for his central observation is that actors with power define what is considered rational and real. Accordingly, it is not only arguments that count in the planning process, but also communication, position, and demeanour. These determine which interpretations of need, location, or benefit prevail—and which options are excluded at an early stage. He also highlights that powerful actors construct justifications post hoc for decisions that have already been made. Flyvbjerg refers to this mechanism as rationalisation. In his empirical studies, this was observed among all key actors: decisions were subsequently presented as rational, necessary, or without alternative. Yet these rationalisation processes do not necessarily amount to deliberate manipulation; rather, stakeholders often classify their own decisions as rational, and believe in their own justifications. Furthermore, the actual power struggles are played out backstage—in preliminary discussions, bilateral consultations, and internal meetings. Public statements and procedures then merely document the positions that have already been rationalised in this way (Flyvbjerg, 1998, pp. 227–229).

Preliminary decision-making processes can therefore be interpreted as those path-setting decisions in which it is determined which project ideas appear rational and legitimate, and which options—despite the formal openness of the procedures—are in fact weeded out at an early stage. These processes are shaped in particular by the key players. Depending on the power they wield within the specific institutional context in which the project is being developed, and how they exercise it, they have a decisive influence on the early planning phase.

2.3. Constellations of Actors in Development Processes

In addition to the mechanisms, the actors involved are crucial to understanding preliminary decision-making processes. In suburban communities in particular, private companies often take on the development and implementation of housing projects, as public resources and implementation capacities are limited. These actors usually operate on a project-by-project basis and with a strong focus on economic viability and feasibility. For an understanding of preliminary decisions, it is therefore not only relevant which institutional procedures are in place, but also which actors are involved at an early stage in the development of project ideas and what interests and resources they bring to bear.

Heurkens (2018, pp. 111–117) categorises these private actors into four basic forms of project development. Although this typology emerged against a market-driven backdrop, where local authorities in these contexts play a less interventionist role than those in continental Europe, it effectively structures private agency. The first is *developer-led urban developments*, where traditional developers finance land using equity and debt to implement projects independently. The second encompasses *investor-led* forms, where institutional investors develop or acquire property for their own portfolios. The third includes *community-led* developments, where residents, landowners, or local entrepreneurs initiate smaller projects on their own land. Finally, *corporation-led* developments involve non-property corporations influencing urban growth, historically through company housing, and today via smart city initiatives. This typology illustrates the diverse range of private influence in preliminary decision-making.

Crucially, private actors do not merely emerge in later planning phases, but frequently act early on as policy entrepreneurs (see Section 2.2.1). Their role spans beyond providing capital or project concepts to the active framing through which project ideas appear realistic, compatible, and deserving of support (see Section 2.2.3). Simultaneously, their impact depends on their relationships and negotiating position vis-à-vis municipal decision-makers (see Section 2.1).

Local actors, such as mayors, department heads, or party group leaders, are not passive recipients of private initiatives, but actively help shape the interface between private interests and public planning requirements. They decide which projects are politically supported, administratively pursued, or informally pre-structured. The specific constellation of local and private actors thus has a decisive influence on which project ideas emerge, are adapted, and ultimately formalised during the informal phase.

2.4. Conceptual Analytical Model and Derivation of Key Analytical Questions

The theoretical perspectives outlined in Sections 2.2 and 2.3 demonstrate that preliminary decision-making processes in suburban residential development should not be viewed merely as a preliminary stage of formal land-use planning. Rather, they constitute an independent phase of decision-making in which key directions

for subsequent planning are already set. This phase is characterised by informal consultations, limited transparency, and specific actor constellations. In order to systematically capture these processes empirically, these theoretical approaches are synthesised below into a conceptual analytical model based on five analytical dimensions:

The first dimension concerns the initiation of a project. The literature on agenda-setting and the multiple-streams framework highlights that new residential developments in suburban municipalities are rarely the result of systematic, needs-based planning. Instead, they are typically triggered by specific site opportunities, political windows of opportunity, and strategic actors. It is therefore crucial to determine what triggers a preliminary decision-making process and from whom the initial initiative originates.

The second dimension involves identifying the key actors who shape the process in its early phase. Theoretical approaches to power, rationality, and private actor constellations show that, in preliminary processes, only certain actors possess the capacity to substantially structure the outcomes. For the analysis, it is therefore necessary to identify which actor groups play a leading role in individual cases and how their scope of influence differs.

The third dimension examines the respective negotiating arena. The literature suggests that crucial consultations often take place not in formal planning procedures, but in informal and sometimes confidential settings. For the analysis, it is therefore necessary to clarify in which constellations preliminary decisions are prepared or made, and how these arenas influence subsequent planning.

The fourth dimension identifies the decision-relevant parameters that are already established or pre-structured in the early phase. The discussions on critical junctures, path dependency, and project logic show that early decisions can significantly limit the subsequent scope for action. It is therefore relevant for the analysis to determine which parameters are established right at the outset and what significance this has for the further course of the planning process.

Finally, the fifth dimension examines the path effects of early decisions on subsequent planning. Preliminary decision-making processes are not merely preparatory steps; they often shape the content of the subsequent procedure. For the analysis, it is therefore necessary to examine how early determinations structure or restrict subsequent formal decisions, participatory processes, and opportunities for change.

This five-dimensional framework guides the systematic analysis of the case studies, evaluating them according to a uniform scheme to highlight both differences and shared structural features.

In summary, the following key questions for the empirical analysis can be derived from the conceptual model:

- How is a preliminary decision-making process initiated?
- Which actors play a decisive role in the early phase?
- In which arenas are preliminary decisions prepared or made?
- Which parameters are established or pre-structured at an early stage?
- What effects do these early determinations have on subsequent planning?

3. Methodological Approach and Study Area

Based on the analytical model, the empirical analysis examines these five dimensions through a comparative case-study design. Investigating preliminary decision-making processes requires a detailed chronology of the developmental stages leading up to formal planning. This involves identifying the specific actors involved and their influence on the process. Given the informal, undocumented nature of these early phases, an exploratory research design was employed, which is particularly suitable for such under-researched phenomena (Döring, 2023).

The study area covers the Hamburg surrounding region, comprising the districts of Pinneberg, Segeberg, Stormarn, Lauenburg, Harburg, and Stade. The Free and Hanseatic City of Hamburg itself was excluded, as this major city, with a population of 1.9 million, has fundamentally different framework conditions to those in the surrounding municipalities. These include, among other things, hierarchical control, its own land holdings, substantial financial resources, and extensive planning capacities (BSW, 2024).

The investigation of the preliminary decision-making processes was conducted using two empirical approaches. Firstly, the development of individual or multiple building sites in seven municipalities was examined in depth through research into all available information. Publicly available planning documents, such as resolutions relating to the land-use plan, minutes, concepts, or newspaper articles, were used as a basis for this. These results were verified and refined through interviews with municipal planning stakeholders in the respective case-related municipalities. Secondly, 12 interviews were held with experts who have extensive and varied experience in the development of new building sites in suburban municipalities. These included, firstly, officials in the districts responsible for many municipalities in the areas of district development and regional planning; secondly, owners of established private urban planning consultancies; and thirdly, private-sector developers and promoters of new building sites.

The experts interviewed and the planning projects examined thus represent a spectrum of contexts and perspectives. The interviews with municipal stakeholders were not all case-specific. While some of them referred to concrete planning processes in individual municipalities, others provided broader practice-based assessments drawn from professional experience. During the analysis, case-specific statements were treated separately from broader practice-based assessments in order to preserve the different epistemic value of the two types of interviews. Planning projects with a start date from 2010 onwards were examined, so that those involved could clearly recall the planning process. The empirical material comprises seven anonymised case studies selected to capture variation in municipality type, development dynamics, spatial position, and project scale. Table 1 summarises the main characteristics of the cases and the respective data basis used in the analysis.

Table 1. Structural characteristics and data basis of the investigated suburban case studies.

	Case	A	B	C	D	E	F	G
Municipality	Type	medium-sized city	medium-sized city	medium-sized city	medium-sized city	small town	small town	rural community
	Development 2018–2023 (BBSR)	above-average growing	growing	above-average growing	above-average growing	above-average growing	growing	growing
	Location	central	central	central	central	peripheral	peripheral	peripheral
	Tight housing market area (§ 201a BauGB)	designated	designated	designated	designated	designated	—	—
Project Details	Project location	integrated	outskirts	outskirts	integrated	outskirts	integrated	integrated
	Development stage	planning phase	planning phase	implementation phase	completed	completed	planning phase	planning phase
	Area (Size class)	> 30 ha	> 30 ha	10–30 ha	> 30 ha	10–30 ha	< 10 ha	< 10 ha
	Housing units (Size class)	> 250 units	> 250 units	> 250 units	> 250 units	50–250 units	> 250 units	< 50 units
	Developer/investor	municipal development company/private developer	private developer/urban development contract	private developer/urban development contract	private developer/urban development contract	private developer	private developer/urban development contract	private developer

All interviews were conducted as semi-structured expert interviews, before being recorded, transcribed, and analysed using MAXQDA. The framework for the interviews was formed by the five guiding questions derived from the theory. These also served as the basis for the creation of a coding system, which was used to carry out a qualitative content analysis. During the text analysis, further codes were added inductively.

The overarching aim was to record the chronology of individual cases and the experts' assessments across all cases in a differentiated manner within a database. The material was analysed in an iterative and interpretive manner. Rather than applying a rigid pre-defined typology, the analysis aimed to identify recurring themes, patterns, and contrasts across the interviews and documentary evidence. These observations were then condensed into analytical categories that help structure the empirical findings and support the synthesis of the process model presented in the following section. This approach reflects the exploratory nature of the study and the fact that the interview material combined case-related insights with broader professional experience, which was taken into account in the interpretation.

4. Empirical Results: Actors, Processes, and Development Paths in the Early Phases

4.1. A Process Model of Actors and Phases in Suburban Residential Developments

The analysis of the interviews and documentary evidence shows that the development of new residential areas does not begin with the formal land-use planning procedure but is already shaped in an upstream phase by informal consultations and preliminary decisions among specific constellations of actors, operating within higher-level planning frameworks. Across the cases examined, recurring patterns can be identified regarding five analytical dimensions: project initiation, the key actors involved, the informal arenas of negotiation, the early definition of core parameters, and the subsequent path effects on formal planning. These patterns form the basis of the synthetic model presented in Section 4.2.

The model is structured on two levels: the actor level and the process level. At the actor level, the groups that are consistently significant throughout the development of new building areas are depicted. Six groups were identified from the interview material: mayors, local politicians, and the local authority administration on the public sector side; alongside landowners, project developers, and, where applicable, commissioned planning consultancies on the private sector side. In addition, further actors may be involved in individual phases who may be relevant to the process at specific points but do not play a defining role throughout; they are therefore not listed as constant components in the model.

At the process level, the model depicts the development and planning process as a chronological sequence of phases and procedural steps. To ensure that the empirical findings are compatible with the institutional framework of urban land-use planning, this structure is fundamentally based on the sequence of the land-use planning procedure under the BauGB. However, the interviews clearly showed that key decisions are made even before the formal procedure begins, exerting a decisive influence on the subsequent course of planning. For this reason, the following analysis focuses on these processes preceding the formal planning procedure. A distinction is made between two phases: the initial phase and the concept phase, which are described in more detail in Sections 4.2.1 and 4.2.2.

Figures 2 to 4 in Section 4.2 present these two levels in a standardised graphical format (see Figure 1 for the legend). The groups of actors are positioned in the same places in all figures; only the style of presentation varies. Highlighting is used to indicate which actors are particularly influential in the respective phase (the actor type) and which forms of collaboration were central to the progress of the process (the intensity of collaboration). In addition, the actors are colour-coded to highlight their group affiliation (the actor group). In this way, the figures visualise the recurring constellations across the cases on which the model is based.

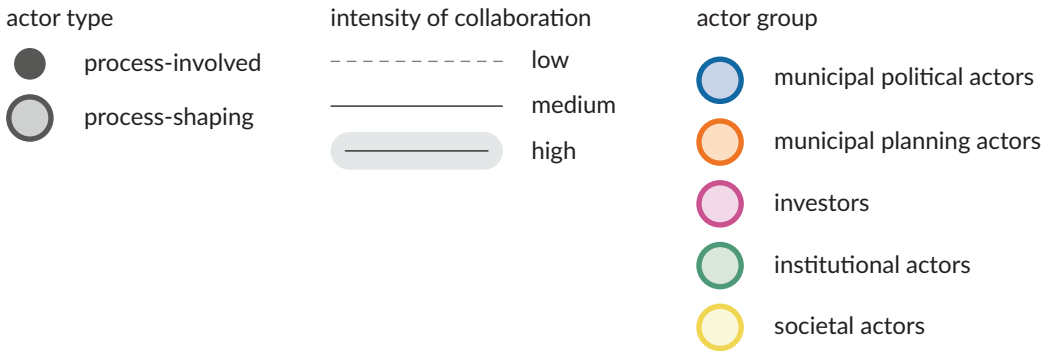


Figure 1. Legend for the process model.

The analytical value of the model lies in the fact that it does not isolate the significance of individual groups of actors but rather reveals their phase-specific impact on the overall process. For each phase, it becomes clear which actors shape the process in a particular way and which relationships between them are central to the progress of the development. This makes it possible to understand how influence, coordination, and decision-making power shift over the course of the process, thereby revealing at which points the subsequent development of a building site is substantively shaped.

4.2. Initial and Concept Phase Before the Official Start of Planning

4.2.1. Initial Phase

To analyze the structural dynamics of the initial phase, this section examines how the process of project initiation unfolds, tracing how specific key actors navigate informal arenas to negotiate core parameters and manage early path effects. During the initial phase, the fundamental parameters of a potential project are determined: whether and where a new residential development area is to be created, and the approximate scale of the planned construction. Chronologically, this phase is bounded by higher-level legal and material filters; regional planning frameworks and the municipal preparatory land-use plan act as structural preconditions, systematically filtering out environmentally protected or restricted land from the start. This structural grid heavily determines how land becomes available and which plots can realistically be optioned or acquired by developers. Within this pre-filtered framework, the immediate momentum for a project relies on specific resource interdependencies between public and private actors. Based on the tension between developer-led and community-led urban development (Heurkens, 2018), the empirical material highlights three distinct pathways of project initiation within the region:

- Scenario 1 (developer-led initiation; see Figure 2): In this highly prevalent scenario, private project developers act as strategic policy entrepreneurs (Kingdon, 2014). They identify market opportunities,

secure land parcels, and subsequently introduce these assembled sites into the municipal arena. This dynamic was the defining force in cases B, C, E, and G (see Table 1). In these instances, the developers exploited local growth pressures by presenting pre-packaged development concepts to the local administration, effectively utilizing their control over the land to open a policy window and persuade the municipality to initiate formal planning. In practice, developers secure these sites by purchasing land "subject to conditions precedent," requiring that the "binding land-use plan (Bebauungsplan) must have entered into force…and the corresponding development agreements, infrastructure contracts, and associated agreements…be signed for the contract to take effect" (Interview with project developer).

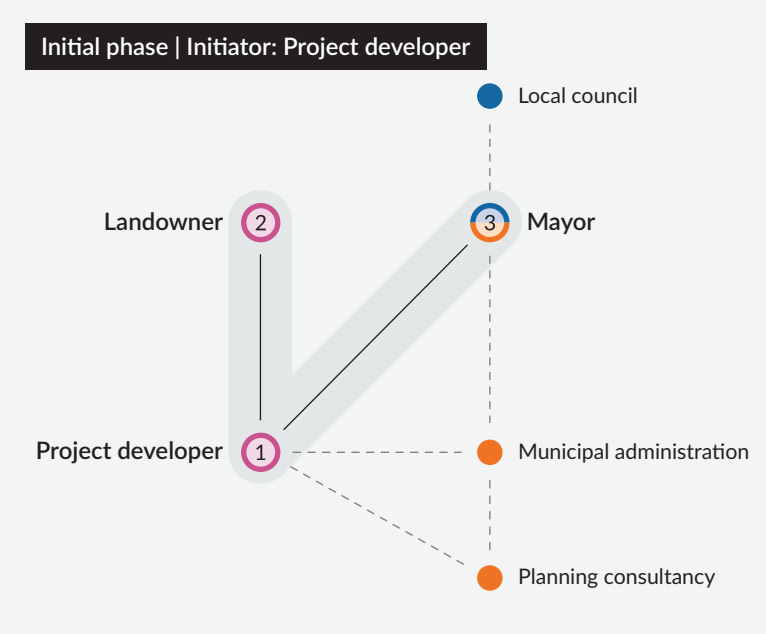


Figure 2. Developer-led initiation.

- Scenario 2 (Municipality-led initiation; see Figure 3): Conversely, the impetus can originate from the public sector, typically spearheaded by the mayor and technically supported by the local administration. In this community-led pathway, observed in cases A, D, and F (see Table 1), the municipality actively shapes the problem and political streams (Kingdon, 2014). The local authority actively addresses housing shortages or strategic urban growth by exploring land purchase options, building political consensus within local councils, and subsequently inviting private developers to execute the municipal vision.

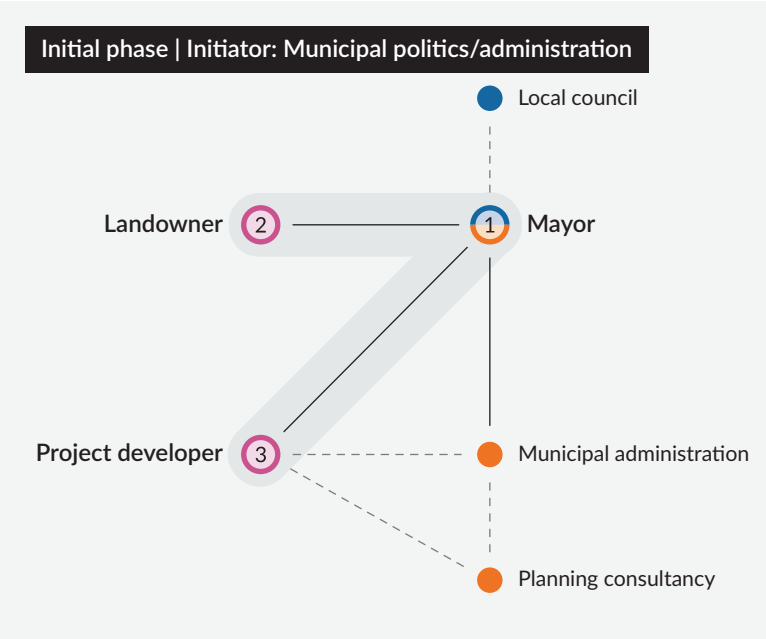


Figure 3. Municipality-led initiation.

- Scenario 3 (Landowner-driven initiation; see Figure 4): In addition to these highly institutionalised pathways, the cross-case interviews reveal a third dynamic where the impetus originates directly from private landowners or local farmers. This highlights that even outside of large-scale corporate development, local land asset holders can trigger the initial phase by introducing their resource—land ownership—into the political arena.

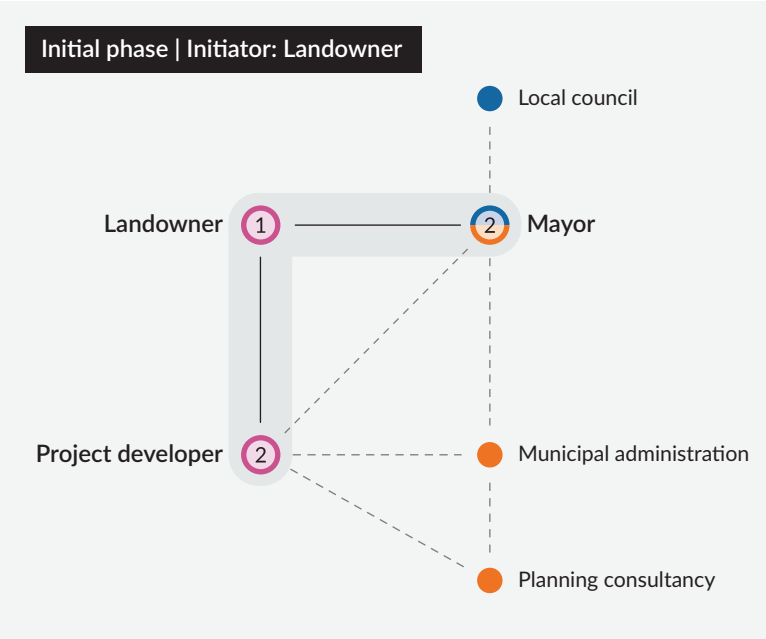


Figure 4. Landowner-driven initiation.

Regardless of which scenario triggers the process, the initial phase is characterised by a structural asymmetry. The availability of plots of land, coupled with the early establishment of the economic framework, is, in effect, a prerequisite for the commencement of the subsequent formal planning process. The conclusion of conditional contracts of sale, or at the very least the alignment of expected purchase prices—based on early informal agreements regarding building densities and typologies—effectively provides the foundational framework for all subsequent planning.

From an analytical perspective, this confidential, highly personalised stage relies entirely on informal coordination. These preliminary agreements effectively rule out alternative options and predetermine the subsequent formal planning path.

4.2.2. Concept Phase and Transition to the Planning Phase

The concept phase serves to flesh out the fundamental development idea in terms of space, content, and organisation (see Figure 5). Whilst the initial phase focuses primarily on land availability and basic feasibility, the concept phase develops the project's content sufficiently to serve as a basis for further municipal consultation and the subsequent formal procedure. The analysis of the concept phase shows how, building upon the established parameters, the configuration of key actors shifts within formalised informal arenas, thereby cementing specific core parameters and long-term path effects.

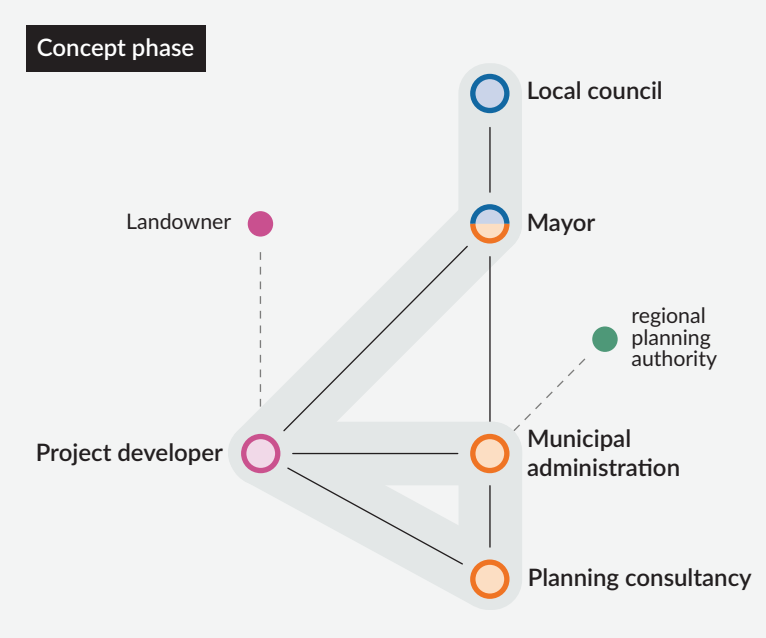


Figure 5. Actor constellations in the concept phase.

In contrast to the initial phase, the circle of stakeholders expands slightly, though key consultations remain small-scale. The local authority, particularly the mayor, remains the central figure who aggregates interests, assesses political feasibility, and coordinates internally with the administration. Depending on the circumstances, private stakeholders, landowners, project developers, and planning consultancies are already involved, contributing initial urban design concepts or land-use ideas. In practice, developers do not commission drafts without securing a preliminary assessment from the local leadership; they require "some

signal from the political factions or the mayor [that] 'it is not forbidden to think about it.'" Only after this informal clearance do they approach a planning consultancy to draft concepts, with the planner noting that "then they come to us and we draw something up, and if the administration likes it, you then proceed to the committee, to the non-public section" (Interview with planning consultancy).

The local authority also plays a role in this phase, either as the implementing body or as an interface where planning details are generated, and initial consultations with regional planning authorities take place.

From an analytical perspective, the crucial aspect of this phase is that the initial idea consolidates into a robust plan. This shifts the focus from whether a development is possible to how it should be specifically designed and which requirements need to be reconciled. By consolidating these key parameters, the concept phase marks the transition from informal agreements to the substantive preparation of the formal procedure. This structural pattern is further validated by the broader urban planning expertise gathered in the study—as one interviewed planner observed: "There is already a [fixed] preconception at the very beginning, usually via the development contractor or the administration. That is often the case, actually a rule. And only rarely is this [early phase] open" (Interview with planning consultancy).

In planning procedures, particularly for new development areas, public criticism regarding the project's necessity or design is increasingly common. The overarching background interviews with district administration planners, planning consultancies, and project developers reveal that this rise in critical voices appears to be largely determined by two factors:

- Municipality size: The size of the population dictates the size of the administration and the number of political decision-makers. In smaller municipalities, a smaller circle of preliminary decision-makers leads to greater individual influence and a more pragmatic approach. As one planner observed regarding these small-scale political dynamics:

> The smaller the municipality, the more successful the negotiation process in the political arena...The committee has five people, (...) they come together, the mayor explains it to them, and then someone says, 'this is important to me,' and then there is a brief negotiation... There is a certain willingness to compromise, but the core objective is not abandoned. And if there is anyone in such a 5,000-inhabitant municipality who opposes it, they are very quickly sidelined if it aligns with the municipal interest. (Interview with planning consultancy)

  Conversely, the interviewed experts observe that the potential for political and public opposition grows with the size and complexity of a municipality's political structures.

- Planning culture: The nature of a municipality's planning culture—whether pragmatic or ambitious—considerably influences the political discourse. The interviews with these district planners, private offices, and developers highlight that mayors in larger towns or municipalities with a strong planning culture tend to act more cautiously, often delaying decisions, which extends the planning timeline compared to smaller, more pragmatic municipalities.

Overall, across the cases examined, the key parameters developed during the initial and concept phases were successfully carried through into the formal planning and implementation stages. Although individual adjustments had to be made later due to newly emerging problems or changes in framework conditions (which usually only come to light during the planning phase once authorities and other public interest bodies become involved), the core projects were implemented as initially outlined. Neither the local council nor public participation led to any significant changes to the planning. This stability is underscored by planners who emphasize that once an initial consensus is reached in the informal arenas, the formal process rarely derails:

> If there is basic goodwill in this non-public part, then the project runs through to the end, and all parties stick to it… Once the fundamental decision is made, it runs; the project developers have invested, and they need a return, [with another practitioner noting that they] have never experienced a project actually failing at the end. (Interview with planning consultancy).

5. Conclusions for Suburban Residential Developments

5.1. Key Findings on Preliminary Decision-Making Processes

The empirical analysis demonstrates that the development of new residential development areas in suburban municipalities does not begin with the formal land-use planning procedure. Instead, it commences during an earlier phase of informal preliminary decision-making. This early phase clarifies whether a specific development area will be pursued, the spatial and substantive key parameters for the planning, and the political and economic conditions under which it appears feasible.

The findings can be structured along the five analytical dimensions developed in Section 2.4:

- Project initiation: New residential projects emerge from specific constellations where land availability, municipal development interests, and the initiative of individual actors interact. The initiation of new residential areas should therefore not be understood solely as the implementation of planning-based needs and pre-existing concepts. To a significant extent, it results from opportunity structures that set specific projects in motion.
- Key actors: The early phase is characterised by a comparatively small circle of key actors. Depending on the case, the initial impetus comes from landowners, project developers, or local stakeholders, with mayors always closely involved alongside the municipal administration. However, these actor constellations are asymmetrical—influence is concentrated among stakeholders who possess crucial, project-defining resources, namely political access, land, capital, or project development expertise.
- Negotiating arenas: Key consultations take place in informal and non-public forums. Even before a project becomes visible to the local council or the public, key issues are clarified in confidential discussions, bilateral consultations, and small coordination meetings. These forums are not merely preparatory in an organisational sense; they actively shape the content of the subsequent planning process, as it is here, early on, that decisions are made regarding which options to pursue and which to rule out.
- Key parameters: Key parameters of the subsequent development are already established, or at least heavily pre-structured, during the initial and conceptual phases. These include, in particular, the location,

the approximate scale of the development, the securing of land, economic expectations, and initial ideas regarding the implementation strategy. Once agreed upon by the key stakeholders, these parameters form a highly stable framework for the subsequent formal procedure.

- Path effects: These early decisions generate significant path effects. The cases examined show that the basic assumptions established in the preliminary decision-making phase are rarely questioned to any significant extent in later planning stages. Although subsequent adjustments are made due to technical requirements, public comments, or minor conflicts over details, the fundamental logic and scope of the project generally remain intact. The results thus confirm the assumption developed in Section 2 that preliminary decision-making processes constitute a distinct early phase that significantly shapes subsequent development paths in advance.

5.2. Placing the Results Within the Discussion of Early Planning Processes

Above all, the findings contribute to a more precise understanding of early planning processes in suburban residential development. They demonstrate that the emergence of new development areas cannot be adequately explained by looking exclusively at the formal land-use planning procedure. Instead, a significant part of the decision-making takes place beforehand, a phase in which these areas are initiated, examined, coordinated, and gradually consolidated.

At the same time, the findings confirm the validity of the theoretical perspectives outlined in Section 2. The multiple-streams framework explains why certain project ideas are pursued under specific local conditions, while others fail to materialize. Similarly, the concepts of critical junctures and path dependency illustrate why early decisions regarding land use, the scope of development, and implementation logic have long-term consequences for subsequent planning steps. Furthermore, the findings on actor constellations and informal negotiation arenas underscore that these early processes are heavily shaped by position-bound resources, institutional roles, and strategic options for action.

Beyond the specific study area, the results point to a broader issue in planning theory. Whenever local authorities rely on the participation of private owners and, frequently, private project developers when developing new residential areas, informal coordination in the early stages becomes critical. While the institutional framework may vary, the fundamental phenomenon of early pre-structuring of subsequent planning through decisions on land, stakeholders, and development parameters remains universally relevant.

5.3. Methodological Reflection and Limitations of the Study

As an exploratory qualitative investigation, this study does not aim for statistical representativeness, but to reconstruct typical constellations, process patterns, and decision-making logics. Case selection was structured to identify recurring structures across different municipality sizes and project scales.

However, the generalizability of the results is limited in several respects. Firstly, only projects that were actually pursued and realised were considered. The study thus provides insight into realized development pathways, but not into projects that failed at an early stage or were abandoned during the process. The analyzed cases are therefore restricted to contexts where no major discrepancies with overarching planning documents occurred, or where any such misalignments could be resolved without significant obstacles.

Secondly, the cases analysed predominantly involve developments with relatively few conflicts, in which the fundamental legitimacy of the new sites was not massively contested. Cases involving significant ecological, legal, or political conflicts may exhibit different dynamics. Thirdly, the findings relate specifically to growing municipalities in the Hamburg region and cannot, therefore, be readily transferred to other spatial or institutional contexts.

These limitations qualify the scope of the findings but do not fundamentally undermine their analytical value. The interview material displays a high degree of consistency across the individual cases, and the reconstructed patterns have been confirmed by stakeholders with experience in a large number of planning processes. In particular, the assessments from planning consultancies, district administrations, and developers support the central observation that land availability, informal coordination, and early political endorsement are of considerable importance for the development of new building areas.

5.4. Implications for Planning and Settlement Development

Our results demonstrate that the spatial form and location of suburban residential developments are significantly shaped before formal planning begins. When pivotal structural decisions are made informally within small circles of actors through a largely pragmatic approach, sustainability requirements—across environmental, social, and spatial dimensions—are likely to receive less consideration. Consequently, integrating these aspects into subsequent planning processes becomes considerably more challenging.

To counteract this, strengthening municipal agency during these formative stages is critical. Local authorities require resources to guide concept development before land transactions, design proposals, or political commitments entrench path dependencies. This necessitates proactive land policies, cooperative frameworks, and institutional structures that align suburban growth with long-term spatial and environmental objectives. In Germany, federal states and districts could operationalize this by establishing building land funds and regional development companies to support smaller authorities in this ecological optimization.

Overall, our findings underscore that private land ownership remains a decisive factor in urban development. In Germany, legal interventions or expropriations are restricted to major infrastructure or highly resource-intensive urban development measures (*Städtebauliche Entwicklungsmaßnahmen*), which smaller municipalities rarely have the capacity to deploy. In practice, formal project planning is contingent upon securing land availability—or fails entirely if land issues are ignored. While this political-economic reality applies worldwide, land availability is rarely addressed in spatial science curricula or standard planning concepts. Given pressing ecological and socio-economic challenges, spatial research must focus more intensively on instruments that improve land availability for sustainable development and inner-city regeneration.

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Conflict of Interests

The authors declare no conflict of interests.

Data Availability

The qualitative data generated during this study cannot be shared publicly due to the personal data and privacy restrictions agreed upon with the participants.

LLMs Disclosure

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ARTICLE

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"Wanted" vs "Unwanted": Different Faces of Suburbanisation in Polish Cities—The Case of Gdańsk

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Abstract

Suburbanisation in Poland intensified alongside the socio-political and economic transformation after 1989. While urban expansion had also occurred earlier, the post-socialist transition fundamentally reshaped its mechanisms through market liberalisation, the emergence of private developers, and the growing importance of planning regulations. A key feature of this transformation is the emergence of a dual planning regime, in which statutory zoning coexists with special-purpose legal mechanisms that allow residential structures to be developed despite the specific character of binding local plans, subject to municipal approval and negotiated public-benefit investments. These changes have produced contradictory outcomes, including increasing pressure to urbanise agricultural land and growing resistance to suburban densification. This article examines the evolution of suburbanisation in Poland through three case studies in the city of Gdańsk: Olszynka, Klukowo (a subarea in Matarnia), and Błonia (a subarea in Rudniki), which represent contrasting suburbanisation trajectories. Using a qualitative comparative case study approach, the study conceptualises suburbanisation as a governance process shaped by the interaction among planning instruments, market dynamics, and social acceptance. By introducing the distinction between "wanted" and "unwanted" suburbanisation, the article contributes to debates on suburban development and city extensions in post-socialist Europe, showing how suburbanisation is selectively promoted, contested, or negotiated depending on the alignment between institutional strategies, market pressures, and local expectations.

Keywords

city extensions; planning regulations; post-socialist cities; suburbanisation; urban conflicts; urban development; urban governance

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1. Introduction

Suburbanisation has become one of the key areas in which contemporary European cities negotiate housing needs, environmental limits, and changing governance arrangements. In many Western European contexts, metropolitan expansion has been gradually framed by compact city agendas, transport-oriented development, and strong multi-level planning systems. In post-socialist countries, by contrast, suburbanisation has unfolded amid institutional rupture, market liberalisation, and fragmented local planning capacity. Poland represents a particularly dynamic variant of this transformation, where inherited socialist planning frameworks intersect with new legal instruments and strong market pressures at the urban fringe. In this context, suburbanisation is closely linked to post-1989 planning reforms, which have resulted in highly differentiated suburban landscapes, ranging from dispersed low-density housing in former rural areas to more compact extensions associated with new transport and employment nodes. At the same time, climate adaptation, flood risk management, and soil protection policies increasingly constrain where and how suburban growth can occur, adding a further layer of complexity to suburban governance.

A distinctive feature of recent suburbanisation in Poland is the growing importance of exceptional legal instruments, particularly the Ustawa z dnia 5 lipca 2018 r. o ułatwieniach w przygotowaniu i realizacji inwestycji mieszkaniowych oraz inwestycji towarzyszących (Act of 5 July 2018 on facilitating the preparation and implementation of housing investments and accompanying developments; Sejm Rzeczypospolitej Polskiej, 2018), hereafter referred to as the Special Housing Act (commonly known in Poland as *lex deweloper*). This instrument allows residential structures to be developed despite the provisions of binding local plans. This has led to the emergence of a dual planning regime, reducing the predictability of zoning and intensifying negotiation and conflict in development decision-making.

Building on existing research on suburbanisation and planning conflicts, this article introduces a conceptual distinction between "wanted" and "unwanted" suburbanisation. It assumes that suburbanisation is context-dependent and shaped by the alignment between institutional frameworks, environmental conditions, and stakeholder expectations. The study addresses the following research questions: (a) how suburbanisation is constructed as "wanted" or "unwanted" within different governance contexts; (b) which configurations of planning instruments, environmental constraints, market dynamics, and stakeholder expectations shape these outcomes; and (c) how exceptional planning instruments reconfigure these relationships and influence suburbanisation trajectories.

The empirical focus is on the city of Gdańsk and three of its districts: Olszynka, Klukowo (in Matarnia), and Błonia (in Rudniki), which represent contrasting suburbanisation trajectories within a shared institutional framework. Although all three cases are located within the city's administrative boundaries and thus are not suburban in the classical sense, they are examined as urban-fringe areas exhibiting suburbanisation-like dynamics, including low-density development, land-use change, and planning conflict. They therefore differ from peri-urbanisation as defined in the Central and Eastern European literature, which typically refers to more distant zones beyond the suburban belt (Zborowski et al., 2023). The term suburbanisation is retained here as a functional and planning category that describes processes at the urban edge of the city.

This article examines selected cases of suburbanisation, although it is not intended to provide an exhaustive or comprehensive account of the phenomenon. Instead, it focuses on the broader conceptual and governance

dimensions of suburbanisation, with particular emphasis on zoning and other planning instruments and their role in shaping development processes in the suburban areas.

The article is structured as follows. It first outlines the theoretical background and then discusses the evolution of suburbanisation and planning in Poland. The final section provides a comparative analysis of the cases to identify distinct suburbanisation regimes, understood as configurations of relationships among planning policy, market dynamics, and social acceptance that extend beyond the specific case of Gdańsk.

2. Theoretical Background

2.1. Historical Trajectories of Suburbanisation in Europe and Post-Socialist Countries

Suburbanisation has long been a central force reshaping European urban regions, although its trajectories have varied significantly across national and regional contexts. In Western Europe, suburban growth since the mid-20th century has been closely linked to welfare-state expansion, mass motorisation, and modernist planning that promotes functional separation (Hall, 2014). In the following decades, environmental regulation, integrated transport policies, and compact-city agendas have moderated outward expansion, supporting more polycentric and transit-oriented development patterns (Albrechts et al., 2003; Goess et al., 2016; Knowles, 2012). In Southern Europe, suburbanisation was characterised by a shift from compact urban growth to more dispersed and irregular forms, and by the expansion of intermediate-density areas beyond the urban core (Ciommi et al., 2018; Leontidou, 1990, 1993; Salvati et al., 2013).

Post-socialist Europe follows a distinct suburbanisation trajectory shaped by systemic transformation after 1989. Under state socialism, strong land-use controls, limited private ownership, and state-managed housing production constrained peripheral growth, concentrating development in large, centrally planned housing estates rather than dispersed suburban forms (Cirtautas, 2013; Kotus, 2006; Sailer-Fliege, 1999). Following liberalisation, a rapid release of land to the market coincided with restitution processes and the state's withdrawal from housing provision (Hirt, 2012; Hirt & Stanilov, 2009; Kryczka et al., 2025; Tsenkova, 2009). This led to accelerated, market-driven suburbanisation in which private developers and individual households became key actors. In the post-socialist context, suburbanisation is not only a gradual demographic shift but also a structural reorganisation of space, conditioned by the collapse of centralised planning, institutional uncertainty, and the new political economy of land (Kubeš, 2013; Leetmaa et al., 2009; Schneider-Sliwa, 2006).

These trajectories have produced persistent differences in suburban development across Europe. Rather than following a uniform model, suburbanisation is shaped by planning traditions, land-use systems, and state–market relations, which continue to structure contemporary planning challenges, particularly in post-socialist contexts such as Poland.

2.2. Contemporary City Extensions: Governance, Planning Regulations, and the Power of Zoning

Contemporary suburban extensions develop under conditions of tension shaped by planning regulations, policy priorities, socio-economic pressures, and environmental constraints. As a result, suburbanisation increasingly emerges as a negotiated process rather than a linear form of spatial expansion, often producing

discrepancies between planning assumptions and actual outcomes, which in turn generate social and political conflict (Hesse & Siedentop, 2018). These dynamics are widely discussed in the literature on planning conflicts and contested urban development, which emphasises that spatial decisions reflect competing interests, values, and expectations (Gualini, 2015). In this perspective, suburbanisation becomes a site of negotiation among institutional actors, market forces, and local communities, where conflicts concern not only land use but also legitimacy, fairness, and the distribution of costs and benefits.

Among planning instruments, zoning plays a key role in shaping future spatial development, although its influence varies across national and local governance contexts (Nadin & Stead, 2008). In Western Europe, it operates within multi-level planning systems linking regional strategies and local plans (Cotella et al., 2021). In post-socialist countries, zoning gained renewed importance after the collapse of centralised planning systems in 1989, when local authorities became responsible for spatial regulation under market conditions (Hirt & Stanilov, 2009). This transition, combined with land commodification and decentralised planning competencies, often introduced regulatory instability. As a result, zoning increasingly functions as an arena of negotiation, mediating between market pressures, infrastructural constraints, and environmental considerations.

Suburbanisation also exposes persistent mismatches between development and infrastructure provision. Growth often outpaces the delivery of essential services, generating fiscal pressures, uneven service levels, and disputes over the distribution of costs (Hortas-Rico, 2014; Muñoz Gielen & Lenferink, 2018). At the same time, environmental governance introduces additional constraints, as decisions on land allocation increasingly intersect with climate adaptation and the protection of ecological systems (Bahers et al., 2022; Oliveira et al., 2019).

Recent research further highlights the role of remote and hybrid work in intensifying suburban demand, reducing the importance of commuting distance, and increasing pressure on peripheral areas (Kuźmar et al., 2026). This shift challenges existing planning assumptions and reinforces the complexity of suburban governance.

Zoning is therefore neither merely a technical regulation nor a deterministic constraint. Instead, it functions as a dynamic governance instrument shaped by political interests, institutional arrangements, and market dynamics. Understanding how zoning enables, constrains, and mediates suburban development is essential for analysing contemporary city extensions and for explaining why similar planning instruments can produce markedly different spatial outcomes.

2.3. Conceptualising "Wanted" and "Unwanted" Suburbanisation

The literature on suburbanisation has extensively addressed conflicts surrounding spatial development, including planning conflicts and, in particular, the concept of NIMBY (Not In My Back Yard), originally associated with resistance to locally undesirable land uses (Dear, 1992). The concept is now also used more broadly to describe conflicts surrounding urban development, including both densification and suburban expansion. However, NIMBY-type responses should not be understood as simple or irrational opposition to change. Such resistance is often rooted not only in perceived environmental or infrastructural impacts, but also in concerns over planning legitimacy, distributive fairness, and the disruption of established socio-spatial expectations.

These approaches conceptualise suburbanisation as a negotiated process shaped by competing interests, values, and expectations among institutional actors, market forces, and local communities. At the same time, research on urban governance emphasises the role of institutions and planning legitimacy in shaping the acceptability of development. However, while these perspectives provide important insights into the emergence of conflict, they offer limited explanation as to why similar forms of development are accepted in some contexts and contested in others.

To address this gap, this article introduces the distinction between "wanted" and "unwanted" suburbanisation as a relational analytical category. In this framework, "wantedness" is understood as the degree of alignment or misalignment between three actor positions: municipal objectives, market or developer interests, and local community expectations. These positions are examined in relation to planning and regulatory frameworks, environmental and infrastructural conditions, and the perceived benefits or costs of development. A process may therefore be interpreted differently by different actors, depending on their interests, expectations, and understanding of local conditions. The distinction between "wanted" and "unwanted" suburbanisation shifts the analytical focus from the mere presence of conflict to the conditions under which development gains or loses institutional, market, and social support. It therefore provides the conceptual framework for the comparative analysis presented in the following sections.

3. Empirical Background: The Evolution of Suburbanisation and Planning in Poland

Suburbanisation in Poland follows a broader post-socialist trajectory shaped by the transformation after 1989 (Schmidt et al., 2015). Restitution and reprivatisation of the land resulted in fragmented ownership patterns, while a highly decentralised planning system transferred responsibility for spatial planning to local governments operating with limited institutional capacity (Wagner, 2017). These changes, combined with market liberalisation and rising household incomes, released previously suppressed demand for suburban living (Pichler-Milanović et al., 2007). An attempt to stabilise the planning system was the introduction of binding local spatial development plans. While areas covered by local plans became subject to clearer zoning rules, large portions of suburban territory remained unplanned and highly responsive to market pressure (Lackowska & Zimmermann, 2011; Mikuła, 2023, 2024).

A significant shift occurred with the introduction of the Special Housing Act, which allows residential development outside binding local plans in exchange for negotiated public-benefit investments. Initially intended for post-industrial redevelopment, this instrument has also been widely applied in suburban areas, weakening the determinacy of local plans and increasing the role of discretionary decision-making (Parysek, 2017). Recent studies indicate that the scale of its application varies across Polish cities, yet the instrument has substantially altered the mechanisms of spatial governance. At the same time, its implementation has generated new arenas of conflict, particularly where development is perceived as misaligned with local spatial, environmental, or social conditions (Nowak & Tasan-Kok, 2025).

As a result, the Polish planning system operates within a dual structure in which statutory planning coexists with exceptional mechanisms enabling selective development. This configuration allows similar forms of suburbanisation to be evaluated differently depending on their implementation and level of social acceptance. It also provides the basis for analysing the Gdańsk case studies, in which suburbanisation emerges as a differentiated governance process shaped by planning instruments, development pressures, and stakeholder responses.

4. Methodology

The study adopts a qualitative comparative case study approach. The analysis focuses on Gdańsk, one of Poland's largest cities, with a population of 489,160 (City of Gdańsk, 2025). Since the 1990s, the city has undergone major socioeconomic and spatial transformations linked to systemic transition, the restructuring of heavy industry, and the diversification of the economy towards services, logistics, tourism, and high-tech sectors. These changes have increased development pressure on peripheral and previously undeveloped areas.

The case selection followed a purposive sampling strategy. Three areas were selected to represent different suburbanisation trajectories within the same legal and institutional framework. The selection criteria included environmental conditions, development pressure, planning status, and the presence or absence of social and institutional conflicts related to land-use change. The cases were selected to reflect clear variation, resulting in distinct development configurations. At the same time, they represent some of the most recent examples of suburbanisation processes in Gdańsk, allowing the analysis to capture the current planning context.

The analysis combines institutional sources, independent materials, and author-conducted analyses. Institutional sources include planning documents, strategic materials, environmental and hydrological studies, and reports from participatory processes. One of the authors was involved in the preparation of these participatory reports, which were used as one type of publicly available institutional source. This involvement provided contextual knowledge of the institutional setting, but it may also have increased familiarity with official planning perspectives. For this reason, the reports were not treated as neutral accounts or as the primary empirical basis of the study; rather, they were critically compared with independent materials and author-conducted analyses. Independent materials, including press articles, published interviews, and discussions in local online communities, were used to reconstruct stakeholder perspectives. Field observations, geological and hydrological map analyses, and the authors' spatial and land-use analyses were used to assess current development patterns and to compare official planning frameworks with observable spatial and environmental conditions.

The empirical material was analysed using framework-based qualitative content analysis combined with cross-case comparison. The analysis followed several steps. First, the material was collected and reviewed to establish familiarity with the empirical context. Second, a thematic framework was developed based on the research questions. The framework included five categories: (a) environmental and infrastructural conditions, (b) planning and regulatory framework, (c) municipal position, (d) development and market pressure, and (e) community responses. Third, the source material was systematically classified according to these categories. Fourth, the results were organised in a comparative matrix, allowing the same dimensions to be compared across all three cases. Finally, the material was interpreted by identifying patterns of alignment and misalignment between municipal authorities, developers or market actors, and residents. "Wanted" and "unwanted" suburbanisation were operationalised as relational outcomes defined by the degree of agreement or conflict among these actor positions, while environmental and infrastructural conditions were treated as factors that shaped, enabled, or constrained them.

The study has several limitations. It does not include independent stakeholder interviews, surveys, or in-depth fieldwork with local actors, reflecting its focus on formal planning processes and publicly articulated stakeholder positions. Since official planning documents reflect institutional framings of

development problems, they were not treated as neutral accounts but were compared with independent materials and author-conducted analyses. The use of diverse source types enabled comparisons between official narratives and publicly expressed social perspectives, thereby partially mitigating this limitation.

5. Results and Analysis

The following three case studies examine contrasting trajectories of suburbanisation on the fringes of Gdańsk and serve as an empirical test of the distinction between "wanted" and "unwanted" suburbanisation. Olszynka, Klukowo (a subarea in Matarnia), and Błonia (a subarea in Rudniki) are all located within the city's administrative boundaries, yet differ in the mechanisms that shape the alignment or misalignment among planning policy, market dynamics, and social acceptance. The rationale for case selection, including variation in spatial position, regulatory context, and development pressure within a shared municipal framework, is summarised in Table 1. Their location within Gdańsk's urban structure is illustrated in Figure 1.

Table 1. Case selection criteria and analytical dimensions.

Dimension	Olszynka	Klukowo (in Matarnia)	Błonia (in Rudniki)
Position within the city structure	Eastern peripheral zone, directly adjacent to the historic city centre	Western metropolitan fringe, airport-adjacent zone	Eastern industrial periphery, strategic gateway corridor, directly adjacent to the historic city centre
Initial dominant land-use profile	Agricultural and low-density residential polder landscape	Suburban low-density residential area	Industrial and logistics district
Strategic role in municipal spatial policy	Agricultural protection and flood-risk management area	Metropolitan growth area linked to the airport and employment zones	Industrial and port-related zone with potential for functional transformation
Planning and regulatory baseline	Low coverage by local plans; strong agricultural designation	Medium coverage by local plans; stabilised suburban zoning	High coverage by local plans; strong industrial designation
Presence of exceptional planning instruments	No binding exceptional instrument at the time of analysis	Application of the Special Housing Act for residential densification	Application of the Special Housing Act for mixed-use redevelopment
Type of development pressure motivating the selection	Latent suburban demand constrained by environmental and planning conditions	Strong residential pressure linked to metropolitan infrastructure and the labour market	Transformational pressure linked to the redevelopment of underused industrial land

The selected cases represent three distinct configurations of suburbanisation: an underused inner-fringe polder area constrained by environmental and planning conditions (Olszynka); a rapidly developing metropolitan fringe zone characterised by conflict over densification (Klukowo, in Matarnia); and an industrial district undergoing policy-supported functional transformation (Błonia, in Rudniki), as summarised in Table 1.

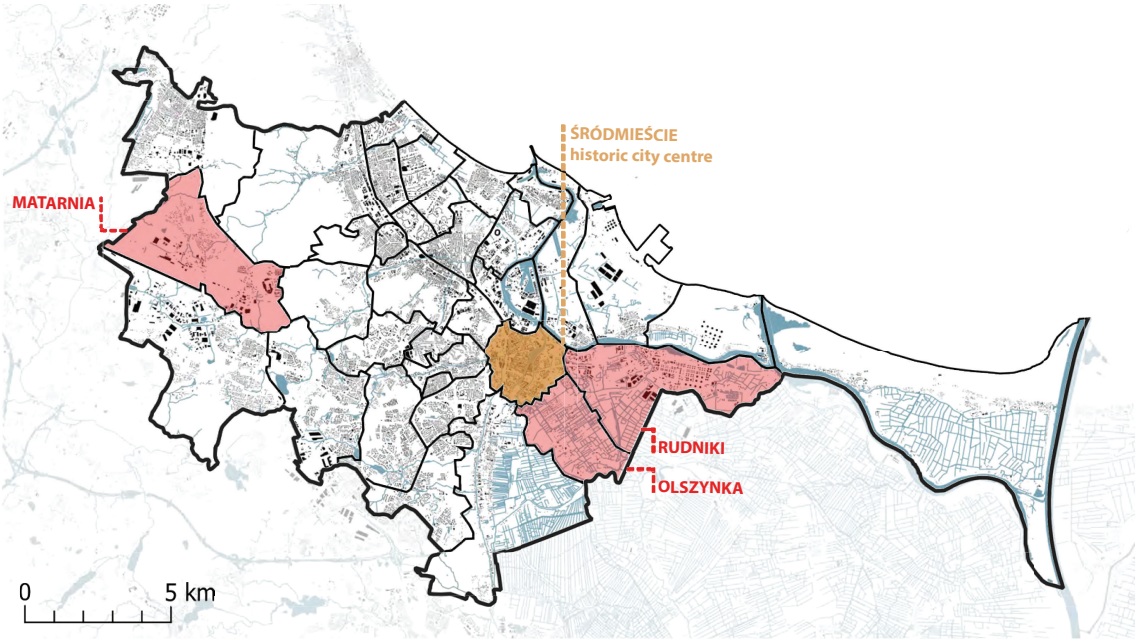


Figure 1. Schematic location of case study districts within Gdańsk.

Each case is analysed using a consistent set of dimensions: spatial and functional conditions, environmental and infrastructural constraints, planning and regulatory mechanisms, and stakeholder positions. This framework enables identification not only of whether suburbanisation is "wanted" or "unwanted," but also of the mechanisms that produce these outcomes, including environmental constraints, plan instability, and exceptional regulatory interventions.

5.1. Case Study: Olszynka

Olszynka is located directly east of Gdańsk's historic centre, within the Żuławy Gdańskie (the Gdańsk Żuławy lowland). Separated from Śródmieście (the central district) by the Motława River Moat, the district remains physically and functionally linked to the city core, while simultaneously retaining extensive agricultural land and low-density development (Figure 2). This land-use structure reflects its origin as a polder landscape, historically adapted for agriculture, and its infrastructure remains ill-suited to more intensive urban development. As a result, any transition towards residential or mixed-use functions requires significant infrastructural upgrades. The district covers 7.85 km² and had a population density of 351 inhabitants per km² at the end of 2025, with a gradual decline in the number of permanent residents between 2015 and 2025 (City of Gdańsk, 2025).

Spatially, Olszynka is characterised by a clear division between dispersed single-family housing interspersed with allotment gardens in the northern part (between the Motława River Moat and the railway line) and extensive agricultural land in the central, southern, and eastern areas (Figure 2). Services are limited, reinforcing the district's semi-rural character despite its proximity to the city centre. Recent residential development, driven by individual investors, remains below the city average, reflecting environmental and planning constraints.

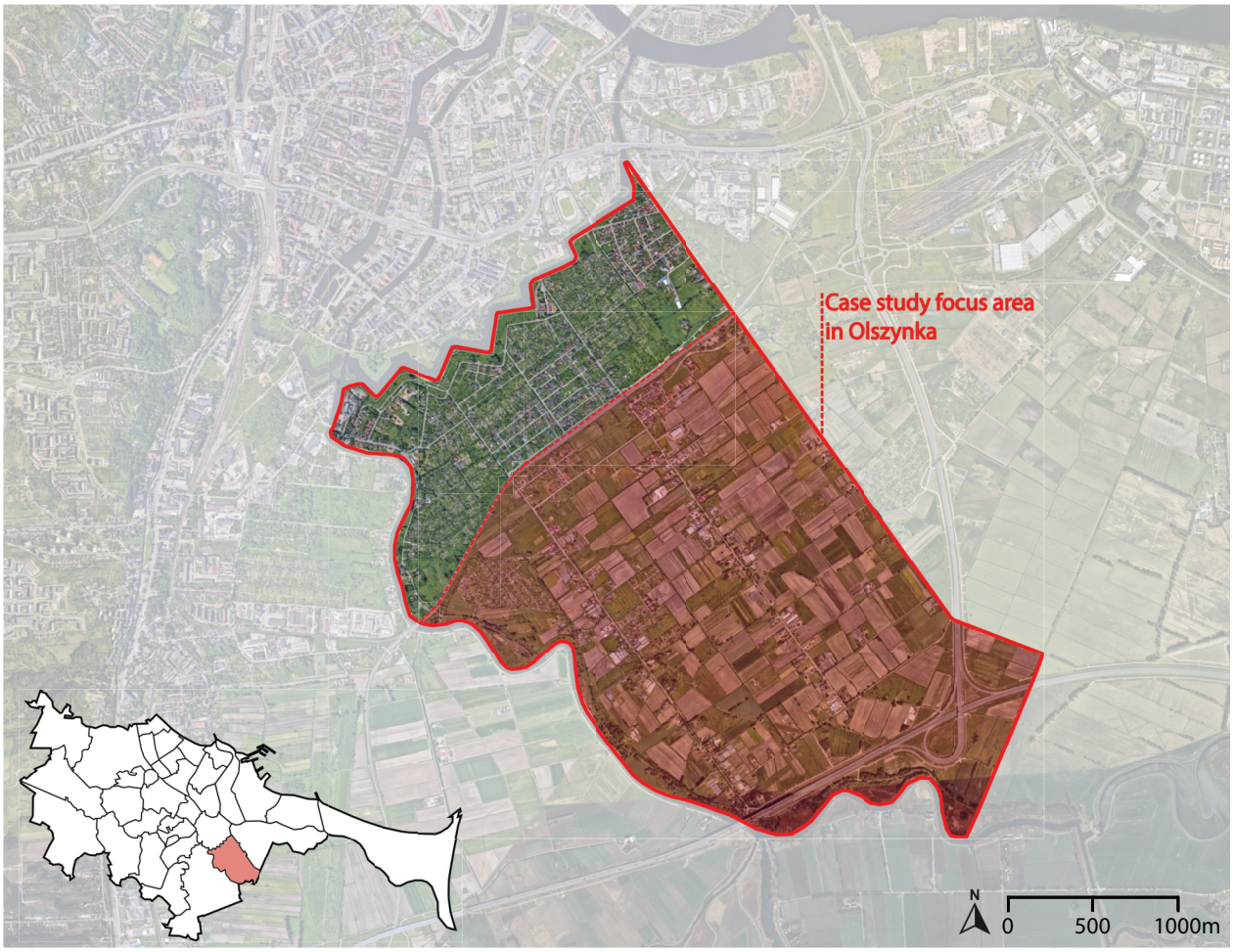


Figure 2. Spatial structure of the Olszynka district and the location of the case study area.

Olszynka lies entirely within the Żuławy Gdańskie and is characterised by high-value alluvial soils (Polish Geological Institute – National Research Institute, 2022). The area is largely below sea level and therefore highly susceptible to waterlogging. Extensive artificial drainage, supported by a dense network of ditches and mechanical pumping, is required to maintain current land use. Sea-level rise is an inherent condition of this polder landscape, yet planning responses focus primarily on maintaining existing systems rather than on adaptive transformation strategies.

The Motława River and the Motława Moat form part of the Ogólnomiejski System Terenów Aktywnych Biologicznie (City System of Biologically Active Areas, hereafter referred to as OSTAB), an organised network of ecological connections and green spaces supporting environmental continuity in urban areas, as defined in the *Studium uwarunkowań i kierunków zagospodarowania przestrzennego miasta Gdańska* (*Study of Conditions and Directions of Spatial Development of the City of Gdańsk*; Biuro Rozwoju Gdańska, 2018). Together with allotment gardens, green corridors, and drainage canals, these elements structure the city's ecological system. Landscape protection applies to parts of the inter-embankment zone. Infrastructure provision is uneven and reinforces development constraints: Service networks are concentrated in the northern, more urbanised part, whereas agricultural areas have significantly weaker provision and lack key utilities. Additional constraints include waste management deficits, evidenced by illegal dumping near allotments.

The planning framework further constrains development. The *Study of Conditions and Directions of Spatial Development of the City of Gdańsk* designates Olszynka primarily for agricultural use, allowing only limited residential development in its northern part. Local plans cover only 29.4% of the district (City of Gdańsk, n.d.-a), and the area is not prioritised for intensification, which corresponds with limited public investment. As a result, planning policy reinforces the existing low-intensity land-use pattern despite increasing development pressure.

In response to these constraints, residents have submitted a formal request, through their district councils, for the municipality to prepare a comprehensive master plan for the Żuławy Gdańskie, including Olszynka. This civic initiative prompted the municipality to begin drafting a document intended to revise planning policy for these areas and to allow the development of housing structures. While this reflects growing demand for functional transformation, the proposed document has not yet been adopted and therefore has no regulatory effect.

Stakeholder perspectives indicate a clear misalignment between local demand and the existing planning framework. Civic participation in Olszynka is comparatively high, reflected in strong engagement in local governance and planning processes. Residents consistently support improvements in environmental quality and everyday services, while advocating selective reclassification of agricultural land for residential and service uses. This position is also shared by local farmers, who increasingly question the viability of agricultural use due to soil contamination associated with the area's proximity to the city centre and major transport corridors. A collective letter, signed by approximately 150 residents in 2023, emphasised the district's urban character and its integration with Gdańsk, contrasting it with the surrounding rural areas (Grzenkowska, 2023). At the same time, infrastructural deficits and limited drainage capacity constrain development, as localised water accumulation results from system inefficiencies.

Private real estate investors consider Olszynka one of the most attractive inner-fringe locations in Gdańsk, thanks to its proximity to the historic core and the availability of large undeveloped plots. Although polder conditions increase construction and site-preparation costs, they do not eliminate market interest. However, the feasibility of large-scale residential development is substantially constrained by the need for comprehensive infrastructure transformation. The area is currently primarily used for agricultural purposes, and the introduction of residential development would require extensive upgrades, including reconfiguring drainage systems, providing sewerage and water supply networks, and constructing roads. These requirements generate exceptionally high costs, which, combined with limited municipal support, significantly constrain development. For municipal authorities, Olszynka therefore presents a planning dilemma: maintaining existing agricultural and hydrotechnical functions versus responding to increasing pressure to transform them.

Olszynka thus represents a case of "wanted" suburbanisation that remains structurally constrained. While residents and market actors support development, it is constrained by environmental conditions and reinforced by restrictive planning frameworks, resulting in a misalignment between demand and institutional capacity and in increased intervention costs.

5.2. Case Study: Klukowo (in Matarnia)

Matarnia, located in western Gdańsk, is a key component of the metropolitan fringe known as Gdańsk West, as shown in Figure 3. The district covers 14.48 km^2 and has a population density of approximately 418 inhabitants per km^2 (City of Gdańsk, 2025). It comprises several historically distinct settlement units, among which Klukowo plays a central role in understanding the dynamics of contemporary suburbanisation. The district's spatial structure and Klukowo's location within the metropolitan context are illustrated in Figure 3. The area is spatially differentiated, with medium-rise housing in the north and low-density suburban development in Klukowo and adjacent Rębiechowo.

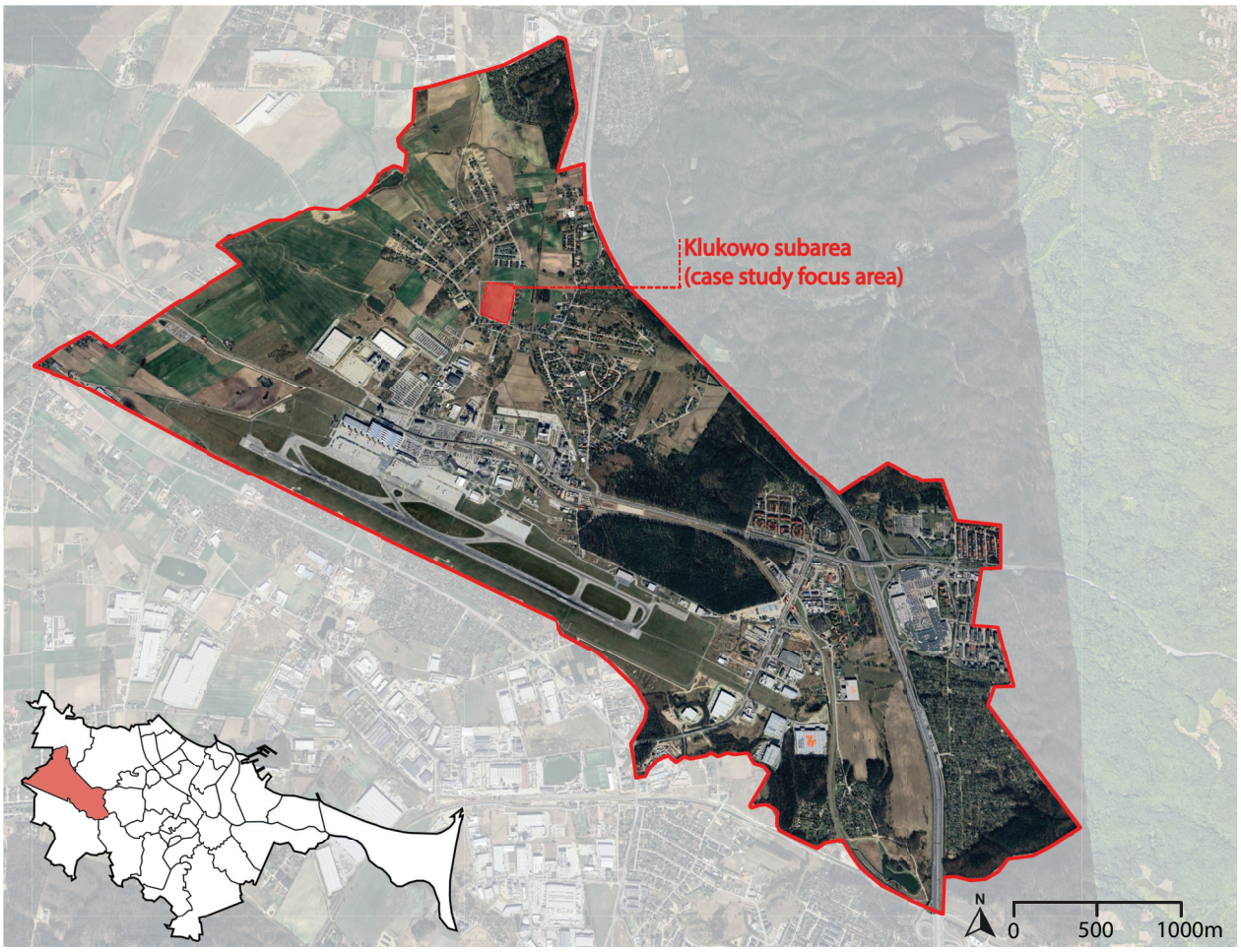


Figure 3. Spatial structure of the Matarnia district and the location of the Klukowo case study area.

Around the airport and its transport junction, extensive clusters of production, logistics, and service facilities have developed, forming one of the principal employment centres on the city's upper terrace. The expansion of Gdańsk Lech Wałęsa Airport and the Airport City complex has reinforced Matarnia's role as a metropolitan economic node supported by strong transport connectivity.

Klukowo itself, incorporated into Gdańsk in 1973, has transitioned from an agricultural village into a suburban neighbourhood shaped predominantly by individual housing development (Klukowo, n.d.).

Although agricultural land persists, it has gradually been converted into residential plots, reinforcing a low-density model embedded in the local plan and shaping resident expectations.

At the scale of the Matarnia district, environmental and infrastructural conditions both enable and constrain development. The district lies primarily on the Wysoczyzna Gdańska (Gdańsk Upland), with smaller areas located in valley zones. Forest patches and allotment gardens form part of the ecological network within OSTAB, while agricultural land remains a reserve for potential urbanisation. Hydrological management relies on a system of streams, drainage infrastructure, and retention reservoirs, which has been expanded to accommodate increasing runoff from new development. Infrastructure provision is generally strong, but rapid growth in Klukowo generates pressure on roads and social services. At the same time, environmental constraints, particularly aircraft noise and height restrictions within airport corridors, limit development options and influence residential quality standards.

According to the *Study of Conditions and Directions of Spatial Development of the City of Gdańsk*, Matarnia is designated as a multifunctional district where further development of housing, production, service, and transport functions is expected. Agricultural use is projected to decline, except for selected permanent allotment gardens. Klukowo (in Matarnia) is intended to remain a low-intensity residential area, with a planning strategy aimed at maintaining a high standard of living to ensure competitiveness relative to neighbouring municipalities. In parallel, the airport zone is designated for intensive service and production development associated with Airport City and related economic functions.

Local spatial development plans cover approximately 64.5% of Matarnia (City of Gdańsk, n.d.-b). A key shift occurred with the application of the Special Housing Act, under which a private developer proposed a multi-family housing project of approximately 600 dwellings, increasing the building area ratio from about 0.5 to 0.8. The final decision rests with the Gdańsk City Council (Office of the Gdańsk City Architect, 2025a).

This proposal sparked a conflict among residents, developers, and municipal authorities. Residents perceive the project as a breach of established low-density planning expectations. A letter signed by around 480 residents and public meetings attended by approximately 100 participants confirmed strong opposition, citing concerns about compliance with the binding local spatial development plan, infrastructure pressure, and changes to the area's character (Office of the Gdańsk City Architect, 2025a). For developers, Klukowo has clear market appeal due to its proximity to the emerging high-tech cluster and strong links to metropolitan transport, including the Pomorska Kolej Metropolitalna (Pomeranian Metropolitan Railway). Higher-density housing is presented as compatible with the 15-minute city concept and necessary to support the growing workforce in the airport-related economic zone. The municipal administration views the investment favourably. Although it conflicts with the local plan, it aligns with the strategic vision outlined in the *Study of Conditions and Directions of Spatial Development of the City of Gdańsk*. The Special Housing Act enables such deviations by allowing negotiated public-benefit investments, including the transformation of the primary school building, the development of public green space, and upgrades to transport infrastructure.

The conflict centres on the mismatch between statutory planning expectations and more recent strategic development objectives, amplified by the use of the Special Housing Act. Although residents' opposition has elements of a NIMBY-type conflict, it should not be reduced to resistance to densification. It also expresses a

critique of planning instability, as the project departs from low-density development expectations established by the existing local plan.

In synthesis, Klukowo illustrates a contested form of suburbanisation shaped by conflicting governance logics. Metropolitan growth pressures and strategic planning objectives favour intensification, while local planning frameworks and community expectations support low-density continuity. The Special Housing Act acts as a catalyst, enabling deviations from statutory plans and intensifying conflict. Suburbanisation in Klukowo is therefore "wanted" from a metropolitan and economic perspective but "unwanted" by the local community.

5.3. Case Study: Błonia (in Rudniki)

Rudniki is located between the Martwa Wisła River and the eastern administrative boundary of Gdańsk and comprises several subareas, such as Błonia (Figure 4). The district covers approximately 14.66 km² and has a population density of about 60 inhabitants per km², the lowest in Gdańsk (City of Gdańsk, 2025). Its spatial structure is dominated by production, logistics, and storage functions, concentrated along major transport corridors, with only small, dispersed residential clusters characterised by limited supporting infrastructure and restricted access to services. Błonia (in Rudniki) is primarily used for service and industrial purposes,

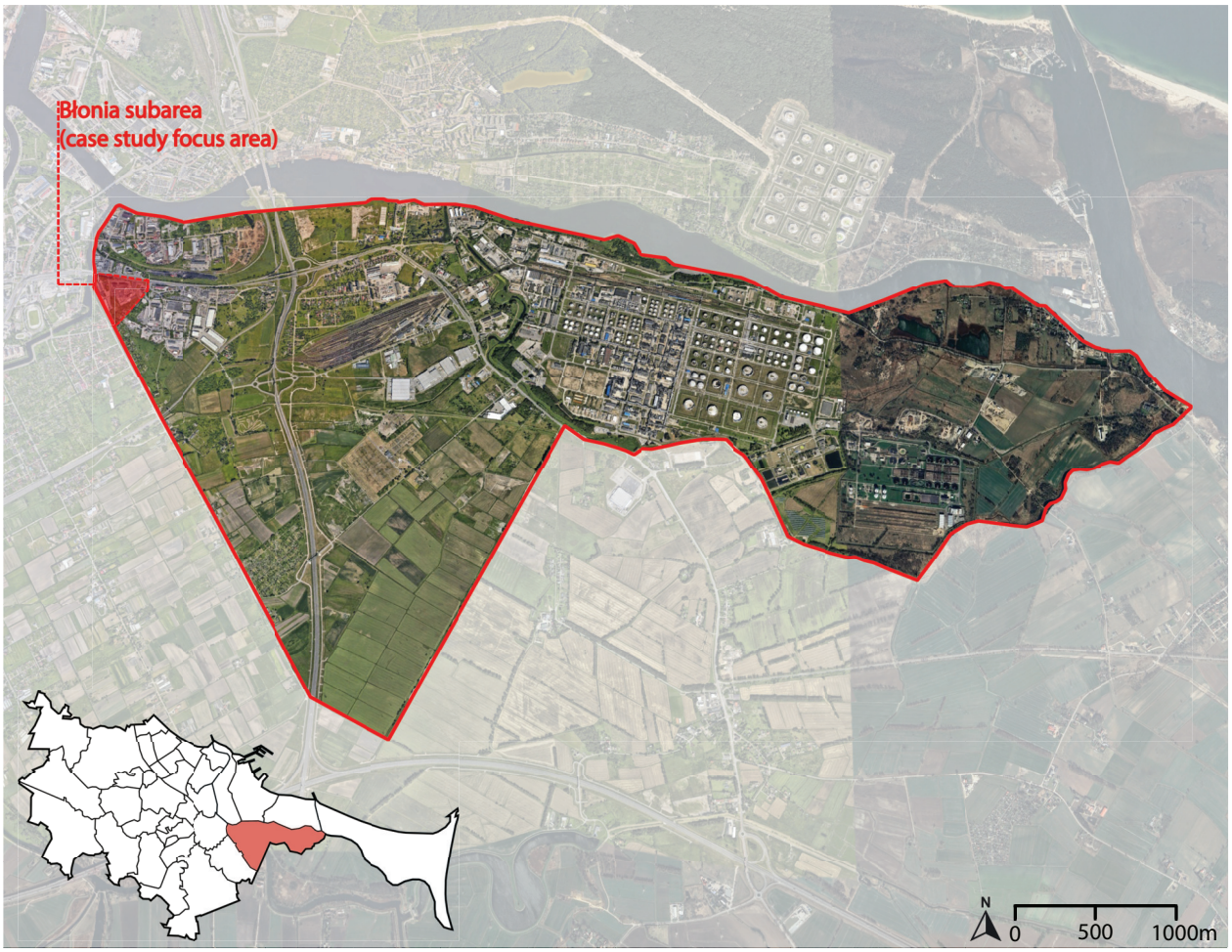


Figure 4. Spatial structure of the Rudniki district and the location of the Błonia case study area.

including car dealerships and automotive workshops, and is complemented by allotment gardens. Although these functions remain active, the site's proximity to the historic core repositions the area as a potential inner-city extension, generating pressure for functional transformation.

Environmental and infrastructural conditions illustrate the fragility of the district's spatial system. Rudniki is entirely situated within the Żuławy Gdańskie, with high groundwater levels and high susceptibility to waterlogging. These characteristics require a complex drainage system supported by multiple pumping stations. While sufficient for industrial use, existing infrastructure limits the feasibility of residential development, especially where networks are ageing or unevenly distributed. Noise and air pollution from industrial activity and transport corridors further reduce residential quality.

Planning documents reinforce Rudniki's industrial role. The *Study of Conditions and Directions of Spatial Development of the City of Gdańsk* designates the district almost exclusively for industrial, service, and port-related activities. Coverage of Rudniki in local spatial development plans is high, at approximately 77.2% (City of Gdańsk, n.d.-c). This regulatory consistency stabilises the industrial function and limits the scope for functional transformation.

A key shift occurs with the proposal for the Błonia site, submitted under the Special Housing Act, in which the earlier planning framework is confronted with a more recent interpretation of the site as a strategically located part of the district. A private consortium proposed a mixed-use development comprising 16 buildings of five to seven storeys and approximately 521 dwellings (Office of the Gdańsk City Architect, 2025b). The Special Housing Act enables such proposals by allowing deviations from local plans in exchange for negotiated public-benefit commitments, effectively creating a parallel decision-making pathway.

Public engagement reveals a distinct pattern. Despite the small population, consultation meetings gathered more than 50 participants, and an online survey attracted 49 responses, a relatively high rate given Rudniki's limited residential base. Most participants expressed support for the proposed functional change, framing it as an opportunity to improve environmental quality, accessibility, and service provision (Office of the Gdańsk City Architect, 2025b).

The developer proposed a substantial package of public-benefit investments, including educational facilities, community infrastructure, and improvements to public space. These commitments played a key role in securing social acceptance and reframing the project as local improvement. For municipal authorities, the proposal offers an opportunity to transform Błonia, a strategically located part of Rudniki near the historic city centre, adjacent to residential and service areas, and situated along an important entrance corridor. In this context, mixed-use redevelopment is understood as a continuation of the surrounding urban structure and as a means to improve the image of this gateway area. The Special Housing Act thus enables a selective departure from the established industrial zoning framework.

In synthesis, the Rudniki case illustrates a distinct form of suburbanisation driven by negotiated transformation. It represents an emergent pathway enabled not only by market demand or community pressure, but by the convergence of municipal ambitions to improve the city's image and regulatory flexibility.

5.4. Comparative Interpretation

The three cases illustrate distinct configurations of suburbanisation within the same municipal framework, enabling comparison under consistent institutional and governance conditions. Since all cases are located in Gdańsk, differences in outcomes cannot be attributed to different administrative structures or planning cultures, but to local configurations of planning instruments, environmental constraints, market dynamics, and stakeholder expectations. Despite these shared conditions, the cases follow markedly different trajectories, as summarised in Table 2.

Olszynka represents demand-driven but constrained suburbanisation. Development is supported by residents and market actors, but limited by environmental conditions and a restrictive planning framework. High groundwater levels, polder infrastructure, and agricultural designations reduce the feasibility of intensification despite favourable location and demand. Suburbanisation is therefore "wanted" socially and economically, but "unwanted" institutionally due to high infrastructural costs and the limited capacity of existing systems.

Klukowo (in Matarnia) represents contested suburbanisation. Intensification is promoted through metropolitan strategies and enabled by the Special Housing Act, while residents oppose higher-density housing as inconsistent with established expectations. Suburbanisation is "wanted" institutionally and economically, particularly by municipal authorities and developers, but "unwanted" by local communities, who perceive it as a disruption of planning stability and neighbourhood identity.

Błonia (in Rudniki) represents a form of "wanted" suburbanisation, as mixed-use redevelopment is supported by municipal authorities, market actors, and residents as an opportunity to improve a strategic gateway area near the historic city centre.

Table 2. Key comparative dimensions of suburbanisation in the three case studies.

Dimension	Olszynka	Klukowo (in Matarnia)	Błonia (in Rudniki)
Type of suburbanisation	Constrained	Contested	Aligned
Main development driver	Social and market demand	Institutional pressure	Institutional and redevelopment-driven
Environmental and infrastructural constraints	High (polder system, groundwater, drainage dependency)	Moderate (airport noise zones)	High (groundwater)
Planning stance	Restrictive (agricultural designation)	Mixed (plan stability vs intensification)	Flexible (exceptional instruments)
Community response	Supportive	Oppositional	Supportive
Developer/market interest	Strong	Moderate	Strong
Mechanism of alignment/misalignment	Regulatory stability constrains development	Regulatory override generating conflict	Regulatory flexibility enabling alignment
"Wanted" vs "unwanted"	"Wanted" socially and economically; "unwanted" institutionally	"Wanted" institutionally and economically; "unwanted" socially	"Wanted" institutionally, economically, and socially

The comparison reveals that similar structural conditions do not yield similar outcomes, and that identical mechanisms may operate differently across contexts. Klukowo demonstrates that infrastructural investment can justify intensification despite local opposition and a relatively peripheral location, while in Olszynka, development remains restricted despite its central location and clear demand. Another inconsistency becomes visible when comparing Olszynka and Błonia. Both areas are located within the Żuławy Gdańskie and face comparable hydrological constraints, yet they are treated differently in planning practice. In Olszynka, environmental conditions are used to justify the preservation of agricultural functions, while in Błonia, similar constraints do not prevent residential development.

The divergence suggests that planning decisions are shaped not only by environmental risk or technical feasibility but also by the interaction among land-use designation, prior infrastructural investment, and strategic development priorities. In Błonia, the industrial character allows constraints to be reframed as manageable within a redevelopment logic. In contrast, in Olszynka, they are institutionalised to maintain the existing land-use structure.

6. Discussion and Conclusion

The article's starting point was the assumption that suburbanisation is context-dependent and shaped by the alignment or misalignment among institutional frameworks, environmental conditions, market pressures, and social expectations. The analysis confirms this assumption, showing that "wantedness" is not a fixed attribute, but depends on which interests, arguments, and instruments become dominant in the decision-making process.

In addressing the research questions formulated in the introduction, three main conclusions were drawn. First, planning instruments do not operate as neutral and uniform regulatory frameworks. They are applied selectively in line with the city's strategic priorities, as outlined in the Special Housing Act, which allows departures from local spatial plans in some areas. Second, environmental and infrastructural conditions do not automatically determine development trajectories. Their significance depends on planning interpretation, as similar constraints may either justify limiting urbanisation or be treated as manageable within functional transformation. Third, social acceptance depends not only on building density but also on the alignment of development with local expectations, perceived benefits, and trust in planning procedures.

The findings, therefore, confirm that the same form of development may be interpreted as "wanted" or "unwanted" depending on who evaluates it. In this sense, the distinction between "wanted" and "unwanted" suburbanisation helps explain why similar development processes are accepted in some cases, while in others they are restricted or contested.

The findings align with the literature on post-socialist suburbanisation, which emphasises the importance of systemic transformation, land market liberalisation, and the weakening of planning stability after 1989. They are also consistent with studies on planning conflicts, which show that local opposition should not be reduced to NIMBY attitudes. The case of Klukowo demonstrates that residents' resistance may result not only from reluctance towards densification, but also from a perceived violation of planning predictability.

At the same time, the article develops existing approaches to suburbanisation as a process negotiated between institutions, the market, and local communities. While the literature explains the sources of planning conflicts, it pays less attention to why similar development processes are accepted in some contexts and contested or restricted in others. The comparison between Olszynka and Błonia is particularly important, as it shows that environmental and infrastructural arguments are not applied neutrally or uniformly. Similar hydrological constraints may lead to different planning outcomes depending on the strategic interpretation of the area.

The main contribution of the article is the proposed distinction between "wanted" and "unwanted" suburbanisation as an analytical tool for examining the selective acceptance of urban development. This concept moves beyond a simple division between desired and conflict-generating development, showing that the acceptance of suburbanisation emerges at the intersection of interests, regulations, and planning narratives. The article also contributes to the discussion on exceptional legal instruments, such as the Special Housing Act, which not only accelerates investment processes but also alters the relationship between urban development strategy and the negotiation of the public interest. If departures from local spatial plans are possible, they should be based on clear evaluation criteria, including their impact on trust in the planning system and the social legitimisation of development.

Although the analysis is situated in Gdańsk, its relevance extends beyond a single case study. Similar tensions between planning stability, housing pressure, environmental constraints, and flexible development instruments occur in many contemporary urban regions, particularly in post-socialist cities. The proposed concept may therefore support a more precise diagnosis of planning conflicts by identifying whether tensions result from the built form itself, the application of legal instruments, infrastructural deficits, local expectations, or mismatches between strategic and regulatory documents.

However, the study has several limitations. As discussed in the methodology section, these concern the scope and character of the source material. In addition, the study focuses on three cases within one city. This enables in-depth identification of mechanisms shaping the relationship among planning, the market, and social acceptance, but does not capture the full spectrum of possible suburbanisation trajectories. Further research should examine whether similar mechanisms of selective acceptance occur in other cities and how exceptional planning instruments affect planning stability, public trust, and the legitimisation of urban development processes over time.

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Conflict of Interests

The authors declare no conflict of interests.

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Conflict or Collaboration in the Management of Urban Green Areas: Activists vs. Decision-Makers

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Abstract

Recent decades have been marked by a growing prominence of grassroots initiatives to protect urban green areas (UGAs), bringing into view a persistent divergence between activists and decision-makers in post-socialist cities undergoing socio-ecological transitions, in particular a tension between development pressure and the need to protect valuable UGAs. These conflicts are especially pronounced in contexts of internal suburbanisation, where peripheral green land is converted into development reserves faster than planning systems can respond. Using environmental justice (EJ) as the analytical framework, this study examines how grassroots activists challenge governance processes around UGA protection in Polish metropolitan areas: Warsaw, Kraków, Wrocław, and Gdynia (the Tricity). The research is based on a qualitative analysis of four case studies of local grassroots initiatives, drawing on in-depth interviews with activists, focus group interviews with decision-makers, and a review of planning documents. The findings show that conflicts over UGAs reflect compound environmental injustices across distributive, procedural, and recognitional dimensions, shaped by post-socialist planning legacies and suburbanisation pressure. Performative consultations and the marginalisation of community ecological knowledge recur as systemic rather than case-specific failures. Activist campaigns do produce results, but the gains are uneven: Green spaces get partially protected, yet the underlying procedural and recognitional injustices rarely get resolved. Rather than being integrated into governance, activists remain on the outside, compensating for gaps that formal planning systems and participation mechanisms leave unaddressed. The findings also suggest that spatial location, not only socio-economic position, functions as an independent axis of environmental marginalisation in post-socialist suburban contexts.

Keywords

environmental governance; environmental justice; environmental planning; grassroots movements; urban green areas

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1. Introduction

Projects led by urban activists to protect urban green areas (UGAs) have been very evident in cities in recent decades. Local environmental conflicts often arise as a culmination of long-standing social injustices or environmental degradation (Boone & Modarres, 2006) and are particularly intense when differing visions of UGA management, expressed by local activists and municipal authorities, collide. Such tensions reflect broader challenges that post-socialist cities face during socio-ecological transitions, namely balancing economic investment pressures with the protection of valuable UGAs.

Over the last few years, environmental justice (EJ) has received growing attention in Central and Eastern Europe (CEE; Steger & Filčák, 2008). Studies have explored struggles over green spaces as expressions of EJ in various contexts (A. Haase et al., 2022; Kronenberg et al., 2023; Onose et al., 2023). Research on EJ has also highlighted the importance of procedural justice, for instance by analysing how environmental NGOs have gradually influenced post-socialist environmental policy (Szulecka & Szulecki, 2019). Alongside distributive questions of who has access to green space, the procedural and recognitional dimensions of EJ—whose voice counts in planning decisions, and whose values and ecological knowledge are acknowledged—have emerged as particularly significant in contexts where formal participation mechanisms remain weak or inconsistently applied.

Despite growing interest in EJ, research on residents' and activists' involvement in related movements remains uneven across spatial contexts. While existing studies shed light on environmental struggles in Western Europe (e.g., Olsson et al., 2020) or changes in the policy of environmental NGOs or grassroots movements (e.g., Buzogány et al., 2022; Sotiriou & Petropoulou, 2022), there is still a significant gap in the literature regarding local activism around UGAs in post-socialist cities. Although EJ provides the broader conceptual framework for this study, the analysis focuses primarily on grassroots activists shaping governance processes around UGAs. Activists are increasingly recognised as important actors in environmental governance: They may influence decision-making processes, community mobilisation, and the protection of UGAs. Their activities therefore offer an important lens through which to examine procedural justice, understood as the fairness and inclusiveness of decision-making processes affecting UGAs. Understanding activists' strategies, motivations, and interactions with municipal authorities is crucial for explaining how EJ is negotiated and enacted in post-socialist cities.

The main objective of the study is to analyse the forms and mechanisms of civic engagement in the protection of green spaces in Polish metropolitan areas. The research addresses the following questions:

1. How do grassroots movements challenge planning and governance processes concerning the protection of local green areas?
2. What factors trigger conflicts over UGAs?
3. How do activists and decision-makers differ in their views on the management and protection of UGAs?

We define UGAs as vegetated spaces located within urban environments, including both natural and semi-natural areas irrespective of their size, ownership, and land-use designation. This definition is situated within the broader conceptual framework of green infrastructure applied in European Union policy documents, where green infrastructure is understood as a spatially integrated network of natural and

semi-natural areas including natural features containing water, such as lakes, rivers, wetlands, and coastlines, strategically planned and managed to enable multifunctionality and the provision of diverse ecosystem services (ESPON EGTC, 2019).

The study adopts a qualitative research design to explore the complex processes of environmental activism and decision-making concerning the management of urban greenery. Our material combines various data sources, including in-depth interviews, focus group interviews, field observations, and content analysis of strategic and planning documents as well as media discourse concerning local conflicts.

2. Theoretical Framework

2.1. Urban Conflicts and EJ in Post-Socialist Cities

The clash of different interest groups and the occurrence of conflicts in a relatively small space is a natural dynamic of social processes taking place in cities. As geographers and planners currently point out, cities are complex phenomena constituted of ever-changing relations (Healey, 2007). Conflicts over UGAs typically emerge where competing visions of land use collide: Between residents who attach environmental, recreational, or place-based value to particular spaces and decision-makers or investors who prioritise their development potential. These tensions tend to concentrate where rapid urban growth creates sustained pressure on green land that formal planning systems have not adequately protected. Understanding such conflicts requires both a spatial and a justice perspective to attend to the conditions that produce them and to the inequalities in power and recognition they express.

One of the phenomena that strongly contributes to the growing spatial and environmental conflicts in post-socialist cities is the expansion of urban development into UGAs as a result of urbanisation and suburbanisation processes. In post-socialist conditions, this phenomenon has a specific character shaped by many years of functioning in a centrally planned economy. During that period, spatial development did not reflect the real locational value of land or market pressures. Change only occurred after systemic transformation, when the shift to a capitalist model triggered simultaneous processes of suburbanisation, deurbanisation, and reurbanisation (Lorens, 2005).

After 1989, Poland and all other post-socialist countries introduced a spatial planning system based on good European practice, incorporating a municipal planning authority, public participation, respect for property rights, and environmental protection. However, the legacy of socialist planning with its particular approach to private property, the market and spatial conflicts, results in inconsistent responses of public authorities towards capitalist economic forms such as land speculation (Nowak et al., 2022).

A major challenge observed in Polish metropolitan areas in the early 21st century was the limited coverage of local zoning plans, with spatial development often regulated through individual planning decisions. In addition, the planning system remains fragmented due to frequent legislative changes and the introduction of so-called “special laws” targeting specific sectors (e.g., infrastructure or multi-family housing), which often bypass standard planning procedures. This reactive rather than active character of post-socialist urban planning seems to be one of the main barriers to an integrated spatial and transport planning system (Taczanowski et al., 2026) and contributes to the escalation of conflicts related to anthropogenic pressure.

Population concentration in Poland has increasingly occurred in major urban centres and their suburban zones, with the highest growth rates observed in the most attractive metropolitan areas, including Warsaw, the Tricity, Poznań, Wrocław, and Kraków (Węcławowicz et al., 2006). This concentration is particularly pronounced in suburban areas, where migration rates remain high and positive. As a result, suburbanisation and metropolisation processes have often been rapid, spatially chaotic, and weakly coordinated (Śleszyński et al., 2020).

One manifestation of these dynamics is internal suburbanisation, involving the relocation of residents from densely populated districts to peripheral areas still located within the city's administrative boundaries. Unlike classical suburbanisation, which typically extends beyond the city limits, internal suburbanisation takes place inside the administrative borders of the city, often on previously undeveloped green or open land. This was possible due to a large supply of land suitable for development, which previously—often as green areas, wasteland, or zones with extensive functions—had not been intensively used (Lorens, 2013). However, this expansion generated numerous spatial conflicts related to land use change, as rapid suburbanisation transformed poorly developed areas into urbanised zones, creating tensions between residential and industrial development and the preservation of green space, while also contributing to habitat fragmentation and the degradation of ecosystem services (Le et al., 2024; Mazur, 2022; Yu et al., 2023). These changes also generated social and economic tensions. In post-socialist cities, the dominance of property rights and individual interests over collective needs—such as maintaining access to recreational green spaces—became a key source of conflict (Mantey, 2016). Suburbanisation brought economic benefits by stimulating development and investment activity, but often also resulted in environmental degradation and worsened living conditions due to poor management (Le et al., 2024). A noticeable gap emerged between planning policy objectives and actual practice, leading to chaotic land development and increasing functional conflicts (Dörder, 2025; Tiitu et al., 2018).

These conflicts can be interpreted through the lens of EJ, which emphasises equitable access to environmental goods across socio-economic groups, particularly those most vulnerable to exclusion. EJ encompasses three interrelated dimensions: distributive justice (fair allocation of resources), procedural justice (inclusive decision-making), and recognitional justice (recognition of diverse values and needs within non-discriminatory social relations; see Low, 2013; Schlosberg, 2009; Walker, 2012). In this perspective, conflicts over UGAs reflect not only competing land-use interests but also broader inequalities in access to environmental resources and participation in decision-making processes.

2.2. Equal Access to UGAs as a Dimension of EJ

Ensuring equitable access to UGAs is a key dimension of EJ. Biernacka et al. (2020) stress the importance of assessing both the availability and quality of UGAs for a range of different social groups. While people may live with varying amounts of green space, everyone should have access to a minimum level of it (Walker, 2012). Studies have explored disparities in the distribution and accessibility of green areas (Olsson et al., 2020; Wolch et al., 2014), showing that the spatial distribution of environmental amenities often mirrors broader patterns of social inequality.

This issue is particularly acute in post-socialist countries, where rapid transitions from state regulation to highly liberal economies profoundly reshaped power relations and urban planning priorities (Kronenberg et al., 2020).

In many post-socialist cities, accelerated urban development led to the loss of green and blue spaces, triggering social tensions and, in some cases, the emergence of urban activism (Onose et al., 2023; Sechi et al., 2022).

Research indicates that the availability, accessibility, and attractiveness of UGAs remain low priorities in policy agendas, while procedural justice—citizens' participation in planning processes—remains limited (D. Haase et al., 2017; Kronenberg et al., 2023). In post-socialist countries, the importance of UGAs is downplayed in legal documents and in governance (Kronenberg et al., 2020). As a result, excessive urban investment and privatisation have intensified spatial inequalities, noise, and congestion, and reduced opportunities for informal social interaction (Kabisch & Haase, 2014; Westerink et al., 2012).

2.3. Grassroots Initiatives and EJ in Urban Greenery Governance

Grassroots urban initiatives increasingly respond to long-standing forms of environmental injustice. Research shows that bottom-up mobilisation can promote more just and sustainable neighbourhoods, influence urban policy, and support equitable access to urban greenery (Anguelovski, 2015; A. Haase et al., 2022; Hess & Satcher, 2019; Olsson et al., 2020; Oscilowicz et al., 2025; Sotiriou & Petropoulou, 2022).

In post-socialist cities, civic activism has evolved from limited participation into a more dynamic form of urban citizenship (Buzogány et al., 2022; Domaradzka, 2022). In Poland, this trend is reflected in the rise of new urban activism, which broadens the social base for non-professional civic organisations and creates new opportunities for EJ-oriented movements (Szulecka & Szulecki, 2019).

Grassroots struggles for the protection and equitable governance of urban natural resources gain significance in the context of climate change. Urban greening efforts undertaken by residents often go beyond conventional mitigation and adaptation approaches, challenging existing power relations and emphasising the needs of vulnerable groups (Bahadur & Tanner, 2014). Studies underscore the need to integrate nature-based solutions, maintain green infrastructure, and involve communities in adaptation planning to address social inequalities and strengthen resilience (De Rosa et al., 2022).

3. Material and Methods

This research is based on a combination of various data sources, including in-depth interviews, focus group interviews, field observations, analysis of planning documents, and media discourse.

A comprehensive review of grey documents from each selected city was conducted to understand the formal processes and frameworks governing UGAs. Documents analysed included city development strategies, studies of the conditions and directions of spatial planning, provisions for urban greenery, and local spatial development plans. The analysis focused on finding references to case studies and policies related to the management of UGAs. Additionally, local news articles on the cases selected were collected and analysed to gather public opinion and media framing of the environmental conflicts investigated. Field observations were carried out for a deeper understanding of the local environmental context.

Four Polish metropolitan areas—Warsaw, Kraków, Wrocław, and Gdynia (the Tricity)—were selected for analysis due to the high intensity of social conflicts over UGAs, which provide a relevant context for

examining the dynamics of bottom-up environmental initiatives and emerging adaptive responses to climate change. The selection is further supported by the rapid development of these areas, ongoing suburbanisation processes, population growth, and a broader shift towards a neoliberal spatial economy (Figure 1).

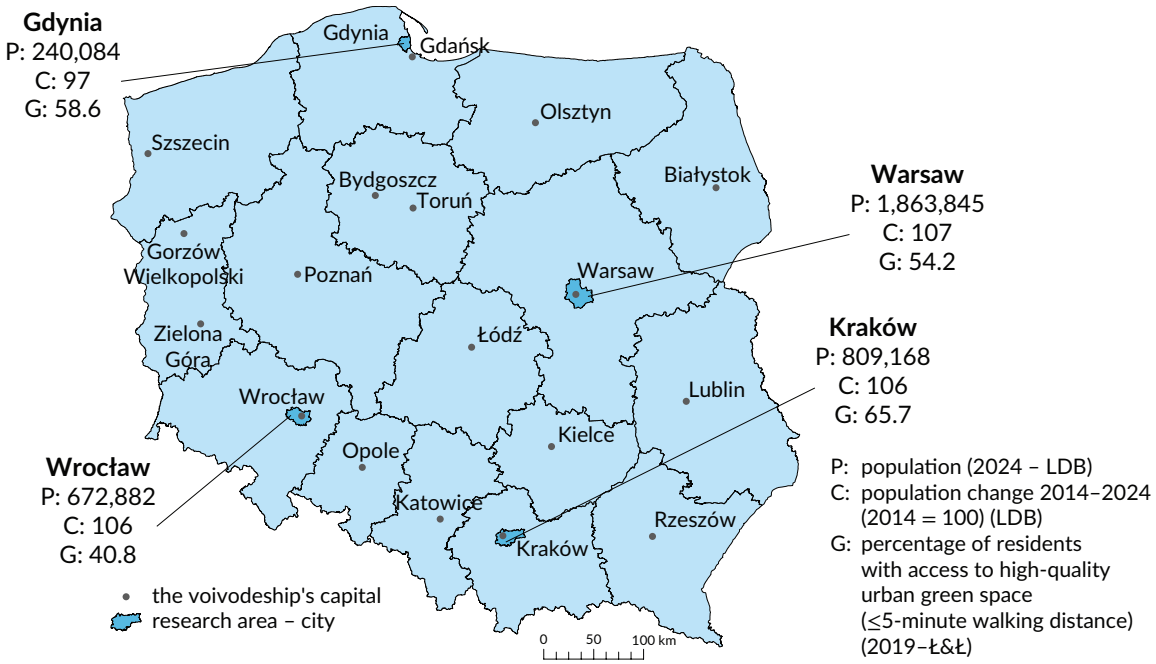


Figure 1. Selected case studies in Poland. Notes: High-quality urban green space is defined by Łachowski and Łęczek (2020) as biologically active areas with remote sensing vegetation index NDVI >0.6. Source: Based on data from Statistics Poland and Łachowski and Łęczek (2020).

The empirical component focuses on four case studies located in major Polish urban areas: Kraków (Kliny Meadows), Warsaw (Wawer Bend), Wrocław (Mokrzański Forest), and Gdynia (Redłowska Meadow). The cases investigated show how differently conflicts over and collaboration activities on UGAs unfold in post-socialist landscapes (Figure 2). Most cases emerge in urban peripheral zones affected by ongoing suburbanisation processes and the fragmentation of governance, where development pressures and land-use competition are particularly intense. In Kraków, the case of Kliny Meadows shows how hard it can be to balance new housing development with the protection of ecologically valuable green areas on the city's southern and western edges: Places affected by suburban growth and housing sprawl. In Warsaw, the dispute over the Wawer Bend reveals the everyday complexity of defending wetlands in a rapidly changing city, where fragmented land ownership and speculative investments often override environmental concerns. In Wrocław, the Mokrzański Forest example captures how urban fringe communities are still fighting against tree felling and the spread of suburban development. The Redłowska Meadow in Gdynia highlights the vulnerability of coastal and riverine greenery to metropolitan expansion and commercial redevelopment. The analysis of the case studies also included spatial data analysis using GIS techniques based on planning documents.



Figure 2. Case studies: Main problems.

From 2022 to 2024, we conducted 12 in-depth, audio-recorded interviews with environmental activists representing local initiatives, environmental organisations, and grassroots movements. Four respondents were interviewed in Kraków (R1–R4), representing Rescue Action for Kraków, Green Kliny, and the Society for Nature Conservation; four in Warsaw (R5–R8), representing the Zakole Group, the Wetland Protection Centre, and The City is Ours; three in Wrocław (R9–R11), representing Save Mokrzański Forest, the Wrocław Climate Protection Coalition, and the Foundation for Sustainable Development; and one in Gdynia (R12), representing Meadow for Everyone. Participants were recruited through local grassroots initiatives and social media platforms. Each interview lasted approximately 90 minutes and followed a semi-structured format. The research protocol was approved by the Scientific Research Ethics Committee at the Jagiellonian University (decision number 11/KEBN/WGiG/2023). An operational model of the analysis is presented in Figure 3.

The study also involved three focus group interviews with municipal authorities, supplemented by three individual interviews where scheduling conflicts prevented participation in the group sessions. Participants included city councillors, representatives of municipal green-space authorities, urban forests administrations, and departments responsible for environmental management, climate policy, sustainable development, and spatial planning. Respondents represented institutions in Kraków (R13–R19), Warsaw (R20–R23), and Wrocław (R24–R29). Each session lasted approximately 60 minutes and was conducted using a pre-planned discussion guide.

Interviews with activists focused on how they became involved in defending UGAs, what motivated them, and which strategies they found most effective. They described their actions, key turning points, and their interactions with local authorities, including whether their ideas were reflected in city policies. Focus groups with decision-makers explored their perspectives on managing and developing UGAs, including everyday constraints such as limited budgets, investment pressure, and the need to balance environmental goals with urban growth. The material was analysed using inductive thematic coding in MAXQDA. The coding covered themes such as activities, motivations, tools, challenges, success factors, environmental awareness, cooperation, and perceptions of activism, as well as broader changes in urban greenery management.

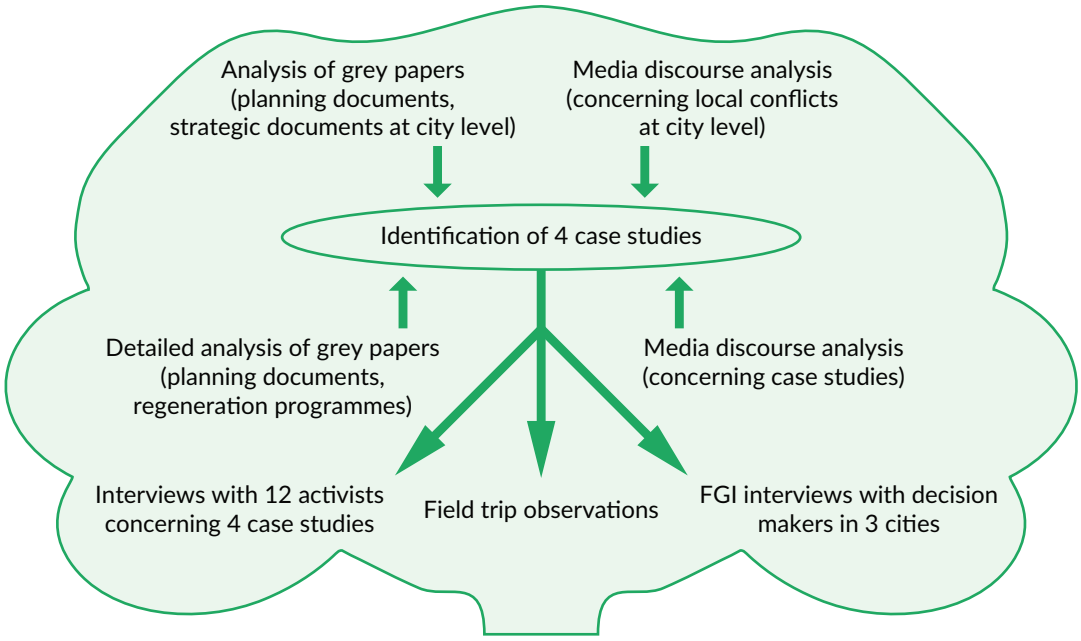


Figure 3. Operational model of analysis.

Environmental advocacy was carried out by diverse actor constellations (Figure 4) rather than by homogeneous activist groups. Participants included local residents, neighbourhood associations, informal grassroots initiatives, environmental NGOs, experts, and, in some cases, local politicians. Many activists were residents directly affected by the anticipated loss of UGAs and were motivated by concerns related to quality of life, access to nature, environmental protection, and neighbourhood identity. While the study did not systematically collect socio-economic data on participants, Figure 4 illustrates the main actor groups involved in the analysed conflicts and their relationships.

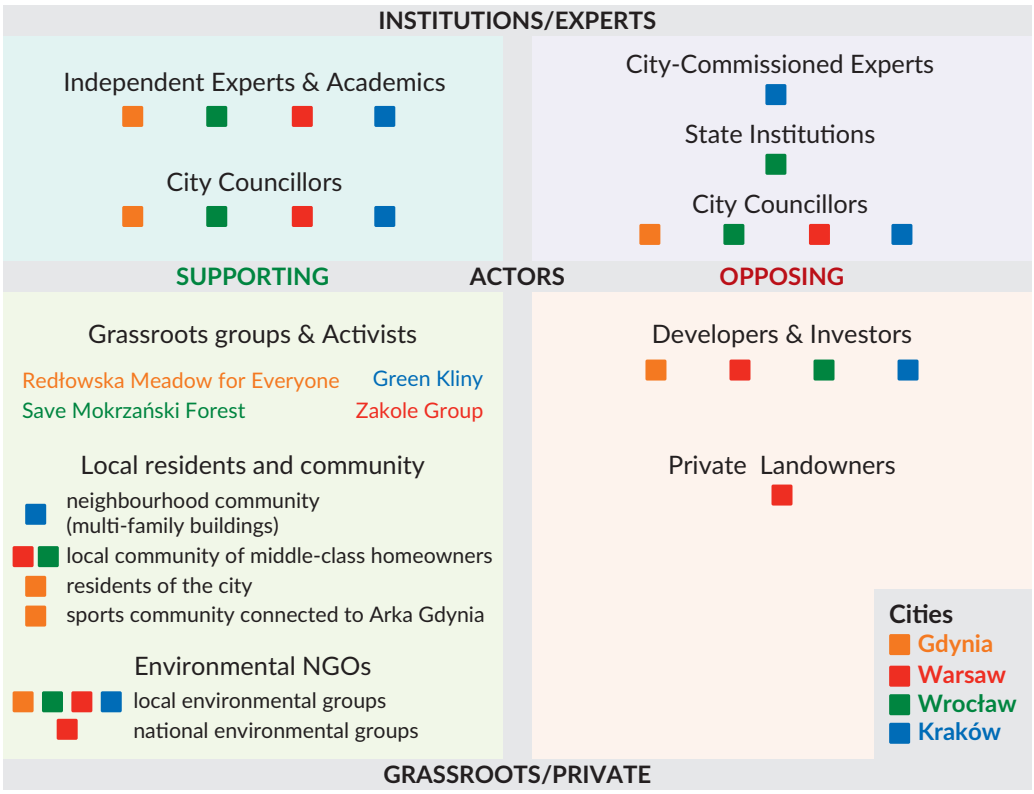


Figure 4. Actor constellations involved in the analysed conflicts.

4. Case studies and Results

4.1. How Do Grassroots Movements Challenge Planning and Governance Processes Concerning the Protection of Local Green Areas?

The four cases examined capture different types of UGAs and conflict settings, ranging from peri-urban meadows and forests to wetlands and river landscapes. Despite these differences, grassroots mobilisation usually emerged in response to the same problem: development pressure combined with limited everyday access to green space. Over the past two decades, local plans tended to favour new housing and commercial projects, while UGAs and social infrastructure were often left out or treated as secondary. As one activist put it: "The south of Wrocław is a concrete desert, factories, apartments, and no forest or larger park on that side" (R10). We have heard similar stories in Kraków, Warsaw, and the Tricity, where new districts keep growing. The situation is worsened by this attitude: "We've also encountered a reaction such as, well, these urban wetlands are obviously not as valuable as those outside the cities" (R5). This framing points to recognitional injustice: the systematic subordination of ecological and social values attributed to urban-fringe green areas to development-oriented priorities.

This way of thinking reinforces spatial inequalities as peripheral neighbourhoods are often sacrificed to development, while access to nature remains a privilege of older, better-planned parts of the city. In such conditions, residents often try to defend the remaining green spaces and secure their access to nature through social campaigns. Grassroots movements blend mobilisation activities (protests, petitions), educational and informational activities (educational walks, billboard campaigns, blogs, popular science

conferences, etc.), pro-environmental activities (cleaning up UGAs, conducting a nature inventory), along with creative and artistic tools (exhibitions, happenings, songs, podcasts). In addition, residents engage in legal activities and develop maps of areas which, in their view, should be legally protected.

One of the key strategies used in Wrocław involved a highly successful social billboard campaign, which resonated with great social support due to its bold and controversial messaging. The slogan designed to preserve the natural forest and meadow landscapes of Mokrzański included playful yet provocative sexual connotations, which brought attention to the cause. The Kliny Meadows case shows how these tools worked in practice. As the area was gradually opened to residential development, residents argued that the remaining meadows were not empty land waiting for investment, but one of the few accessible green spaces in this part of Kraków and a habitat for valuable species. Since the ecological value of the area was not sufficiently recognised in planning decisions, activists tried to produce and circulate their own evidence:

> It was us, the residents, who had to prove that the protected species found there [in the Kliny area] during the development of actual vegetation maps in 2008 were still there in 2016. Well, it was odd for us, but we had to do it to move forward with it [to get the attention of the authorities and the media]. (R3)

This reflects a recurrent pattern across the cases: The burden of producing technical evidence that authorities should have commissioned falls instead on residents, whose findings are then contested or ignored in formal procedures, which is an expression of procedural and recognitional injustice.

In addition to public engagement, the residents took part in formal consultations. Thus, the activists arguing for additional legal protection of Zakole, the Wawer Bend, in Warsaw emphasised that:

> We participated in the online consultations of the Green Warsaw programme, and at every opportunity we reminded the decision-makers about Zakole, since there is no point in creating blue-green infrastructure from scratch when we have a complex of wetlands that we just need to take care of. (R5)

These cases demonstrate that, with different efforts to mobilise the population accompanied by education and creative tools, the residents showed a deep commitment to the protection of threatened UGAs and to raising consciousness of their environmental importance.

4.2. What Factors Trigger Conflicts Over UGAs?

The study examined the extent to which the planning context and spatial conditions determine the development of a given area and whether they may have influenced the existing conflict (Table 1 and Figures 5–8).

Table 1. Structural factors underlying conflicts over UGAs in selected case studies.

Characteristic	Kliny Meadows (Kraków)	Mokrzański Forest (Wrocław)	Wawer Bend (Warsaw)	Redłowska Meadow (Gdynia)
Location within urban structure	South-western periphery	Western urban fringe	South-eastern periphery	Peripheral coastal zone
Relevance to suburban development	Internal suburbanisation treating UGAs as development reserves, generating green infrastructure deficits	Fragmented governance: The central forest authority manages the forest for timber production, ignoring the recreational needs of new suburbs	Mismatch between planning and fragmented land ownership, threatening degradation of natural buffer zones	Commercial pressures on public green space; market interests prevailing over residents' needs
Relationship to suburbanisation	Internal suburbanisation; intensive multi-family residential development on former green land	Urban fringe affected by rapidly expanding suburbs, mostly low-density housing	Urban fringe with intensive low-density residential expansion	Recreational and tourism-oriented urban fringe; interface between built-up area and nature reserve
Development pressure type	Multi-family residential and service development	Suburban residential expansion; commercial forestry	Dispersed single-family housing; land speculation	Tourism
Planning status	Development permitted under existing plans; environmental protection introduced partially and belatedly	Forest protected under planning documents; recreational infrastructure and buffer zones absent	Designated for green space and water retention; implementation constrained by fragmented private land ownership	Hotel designation reversed to public green space following resident pressure
Ownership structure	Predominantly private; development permits issued before protective measures adopted	Public (state treasury/state forests); centrally managed	Highly fragmented private ownership; prevents establishment of a public park	Municipal; facilitated commercialisation attempts
Ecological and recreational value	High biodiversity; recreational and climate-regulation functions	Natura 2000 forest complex; key recreational and ecological functions	Wetlands and peatlands; ecological connectivity, water retention, ecosystem services	High landscape value; adjacent nature reserve; city-wide recreational function

In the spatial development plans for the Kliny area in Kraków (Figure 5), land designated for multi-family housing and services predominates, while UGAs are limited and fragmented. Despite strong investment pressure, part of the area was granted environmental protection following campaigning by residents, although this only covered a reduced section of the site originally proposed. As a result, planning decisions reflect a negotiated compromise between development priorities and the protection of valuable natural

fragments, raising concerns about insufficient everyday access to green and recreational spaces for a rapidly growing population.

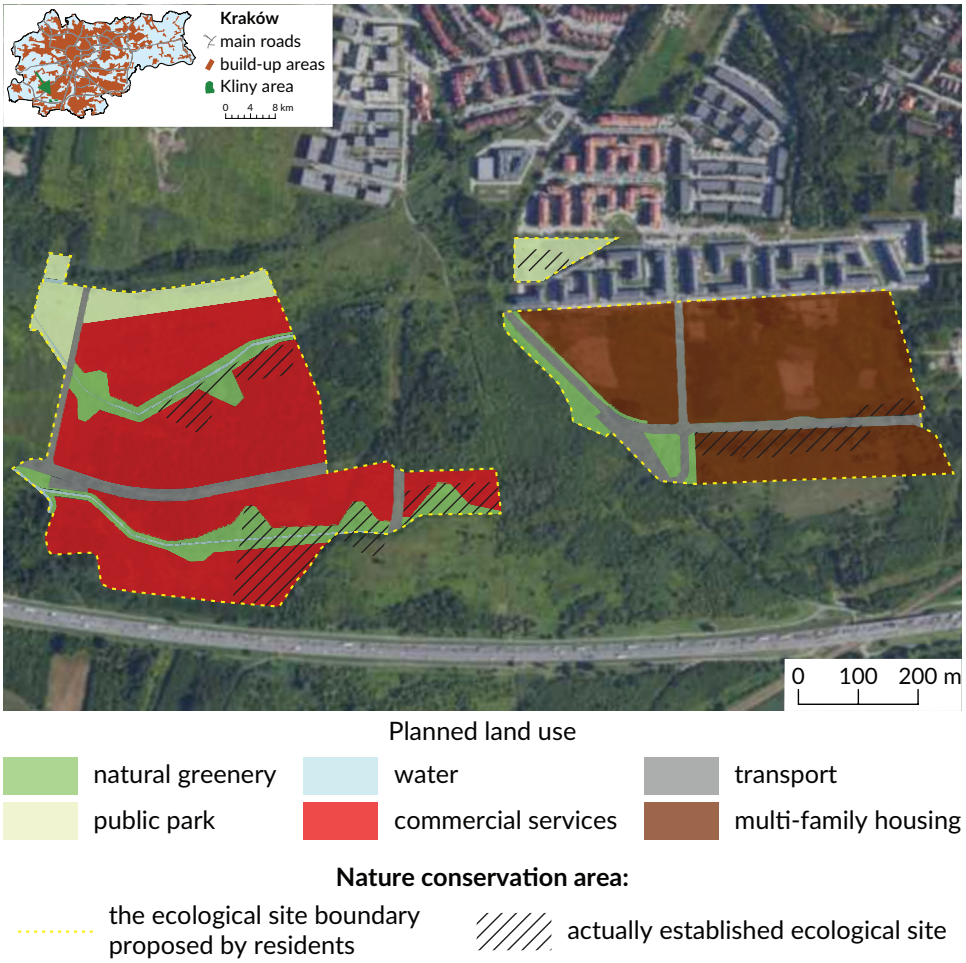


Figure 5. Planned land use in the Kliny area (Kraków). Source: Own appraisal based on the following local spatial development plans: "Kliny Południe," "Kliny Gadomskiego," and the Polish Central Register of Nature Conservation Formats.

In the Mokrzański Forest area in Wrocław (Figure 6), a large forest complex directly borders single-family housing, creating tensions between conservation and residential expansion. Although the forest remains accessible, the area lacks park and service infrastructure. Planning documents protect a substantial part of the forest, but conflicts focus on tree felling and the encroachment of development into adjacent areas.

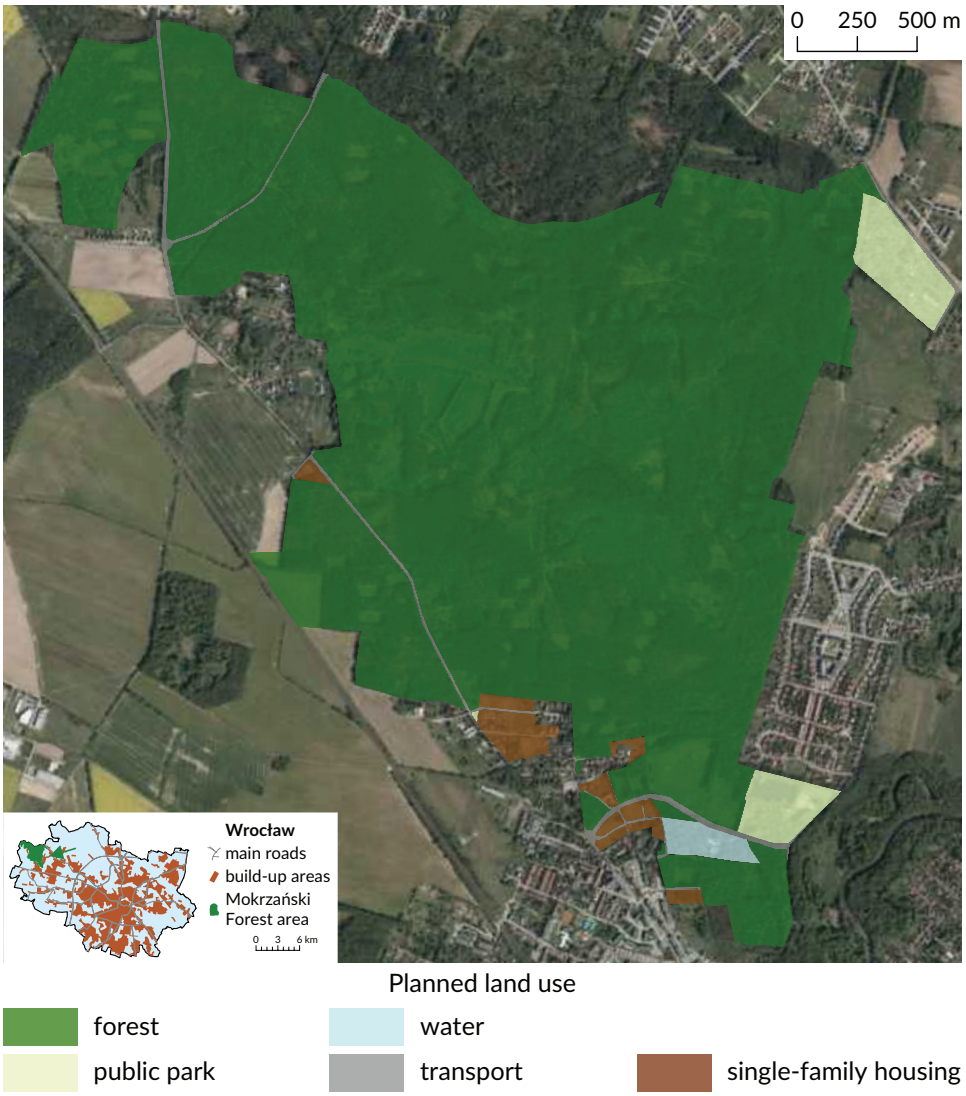


Figure 6. Planned land use in Mokrzański Forest (Wrocław). Source: Own appraisal based on the local spatial development plan "Części zespołu urbanistycznego Las Mokrzański we Wrocławiu."

In the Wawer Bend area in Warsaw (Figure 7), most land is designated as publicly accessible greenery, including a wetland area providing key ecosystem services. Despite its recreational and environmental importance, much of the protected land is privately owned, increasing development pressure. Conflicts arise between private owners and efforts to preserve the area and initiatives to open it for educational and recreational use.

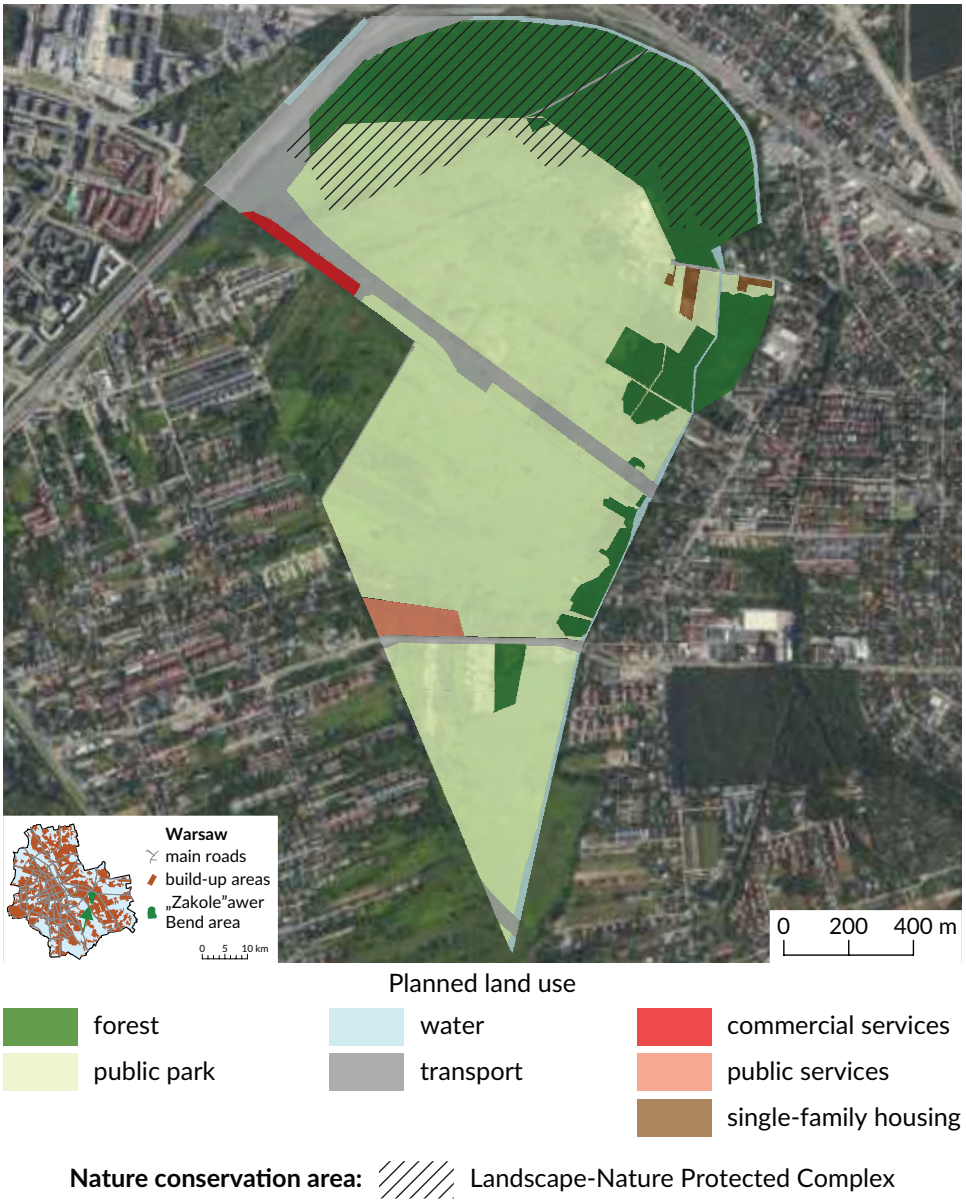


Figure 7. Planned land use in the "Zakole" area on the Wawer Bend (Warsaw). Source: Own appraisal based on the following local spatial development plans: "Zakole Wawerskie," "Kadetów," and the Polish Central Register of Nature Conservation Formats.

In the plans for Redłowska Meadow in Gdynia (Figure 8), a large complex of UGAs and forests is designated directly adjacent to dense single- and multi-family residential development and the shoreline of the Gulf of Gdańsk. The entire forest area is protected as a nature reserve, creating a clear interface between built-up and environmentally valuable land. This results in tensions between conservation requirements and investment pressure. Conflicts primarily concern development in the vicinity of the reserve, fragmentation of UGAs, and competing expectations regarding the use of protected spaces in relation to residents' needs.

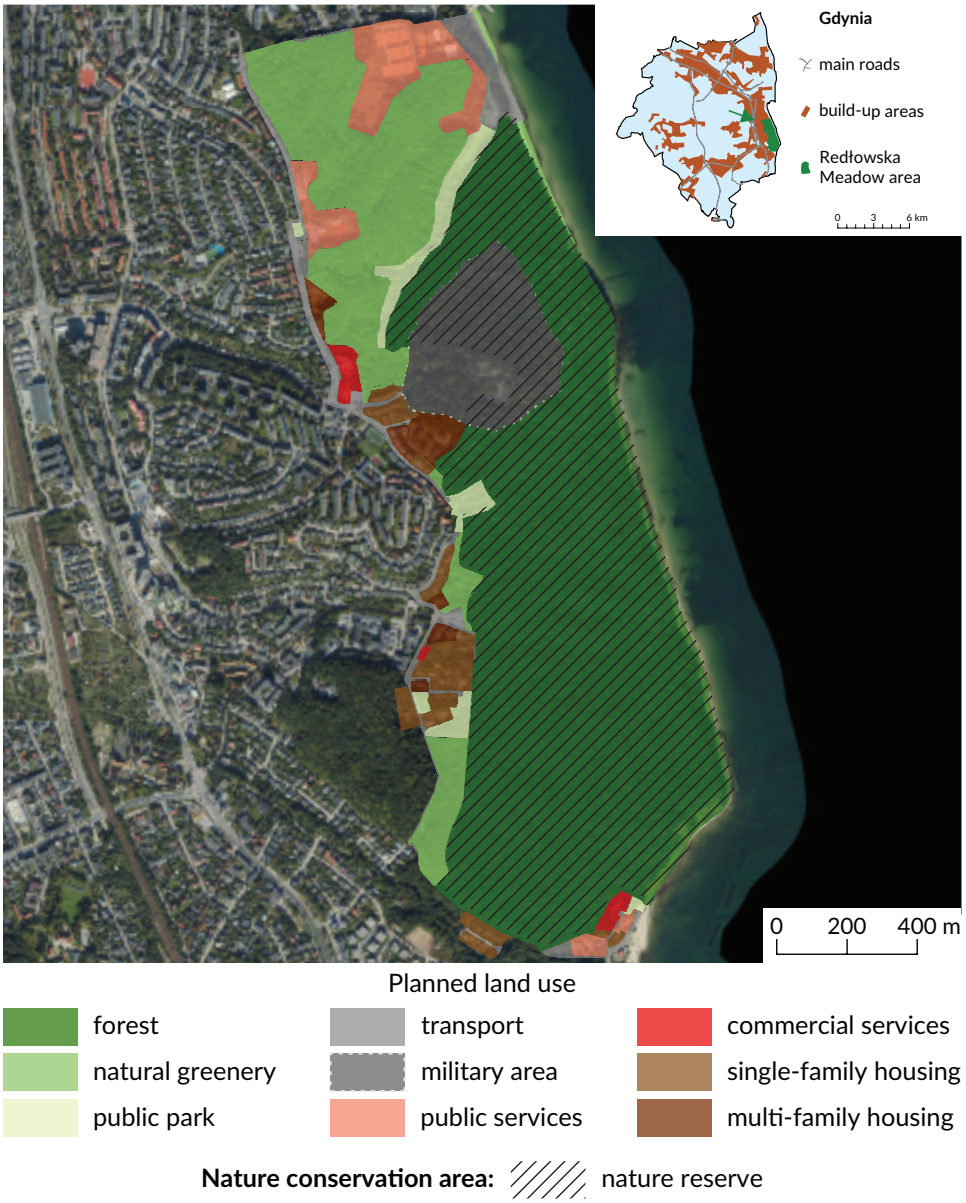


Figure 8. Planned land use in the Redłowska Meadow area (Gdynia). Source: Own appraisal based on the following local spatial development plans: "Rezerwat Kępa Redłowska" and the Polish Central Register of Nature Conservation Formats.

These four cases reflect the environmental and social consequences of internal suburbanisation, in which pressure to accommodate housing and commercial investment at the urban fringe has repeatedly collided with the imperative to protect ecologically valuable green land. Table 2 presents the three EJ dimensions evidenced in the cases, providing a comparative overview of the distributive, procedural, and recognitional injustices.

Table 2. EJ dimensions in selected case studies.

Case	Distributive injustice	Procedural injustice	Recognitional injustice	Empirical evidence	Planning outcome
Kliny Meadows (Kraków)	Potential loss of meadows, biodiversity, recreation, and climate-regulation functions through residential development	Residents perceived limited influence over planning and development decisions	Ecological and recreational values of the meadows were subordinated to development priorities	Residents self-funded a species survey to re-establish what city-commissioned maps had already documented in 2008; objections submitted during plan-making were not reflected in the adopted plan; a building permit was issued just before the local plan's adoption	Increased public visibility and political attention; partial nature protection (5.82 ha of the nearly 60 ha advocated by residents); conflict remains partly unresolved
Mokrzański Forest (Wrocław)	Threats to forest ecosystem services, recreation, and surrounding meadows from forestry and development pressures	Residents reported limited influence over forest management and planning decisions	Local ecological and social values attached to the forest were often subordinated to production-oriented and development-focused perspectives	Residents' standing to participate was formally questioned by forestry authorities; residents collectively self-funded a Natura 2000 habitat inventory that authorities should have commissioned	Forest management plan revised; logging reduced; efforts to protect surrounding meadows continue
Wawer Bend (Warsaw)	Threats to wetlands, biodiversity, and ecosystem services from urban development	Residents challenged planning processes perceived as favouring development interests	Wetlands were often treated as undeveloped land despite their ecological and social value	The city announced a future wetland park while internally acknowledging no concrete action was planned due to the private ownership problem	Increased recognition of wetland values; comprehensive protection remains unresolved due to fragmented ownership
Redłowska Meadow (Gdynia)	Potential loss of public green space and recreational benefits through hotel development	Residents perceived participation as insufficient and decisions as predetermined	Community values and place attachment were subordinated to development priorities	The city listed the site on its investment portal as a development asset, then denied this when challenged; resident survey findings were dismissed as politically motivated by the mayor; the decision was later reversed without acknowledging residents' role	Hotel project abandoned; green-space functions retained, though long-term protection remains uncertain

Content analysis of the interviews revealed that conflicts over green space management often stem from differing perceptions of the role that UGAs should play for local communities. The first and most significant aspect of the struggle for UGAs emerged directly from the concept of EJ. Activists emphasised that access to UGAs constitutes their right to the city. They also noted the weaknesses of institutions responsible for environmental protection and urban spatial policies:

> The right to a clean environment is a human right…the right to information is a human right….These are the municipality's own tasks, to take care of greenery. (R12)

> We knew that without some lobbying from residents, nature would not defend itself. (R2)

Respondents also observed that conflicts concerning green spaces have intensified in recent years, which both groups—activists and decision-makers—associate with a shift in the awareness of urban residents. According to the respondents, this change in awareness arises from a growing recognition of the value of UGAs following the pandemic and in the context of climate change.

The struggle for UGAs in Polish cities also stems from structural limitations of the spatial planning system. The lack of adequate protection in planning documents and prolonged procedures reduce their effectiveness, leading residents to perceive protest as more effective than formal participation:

> Sometimes it's not about the fact that collectively we have different worldviews…how we would see this greenery and nature in the city. Sometimes…planning in the city doesn't keep up with our change in awareness; we pass local plans, and then it turns out that even after a decade they are no longer relevant, and it is very difficult to change them. On the other hand, they are binding for us, and we have to make certain decisions based on what we have just passed. (R21)

Decision-makers frequently emphasised that all land-use changes were carried out in accordance with planning procedures and were subject to public consultation. Activists, however, pointed to the performative nature of these consultations, which often involved the city authorities pushing through pre-determined projects, reducing residents' input to minor details, and accepting actions that negatively affected the environment during project implementation (e.g., lack of environmental supervision during construction, excessive tree cutting and similar practices, token consultations):

> Once even he [the decision-maker] said at a public discussion: "If you want a park here, please buy this plot and make a park." This has already deprived us of any illusions that the city will cooperate with us. (R12)

A comparison of the four cases highlights both shared mechanisms and specific dynamics unique to each context. In all cases, consultations were conducted to satisfy formal planning requirements, while residents had little influence on project outcomes. Local communities frequently perceived participation as symbolic, since key decisions had often been made before the consultation process began.

The suburban and urban-fringe position of all four cases intensifies these systemic weaknesses in specific ways. Peripheral UGAs sit where planning coverage is thin, ecological designations are least consolidated,

and development pressure is high. Communities in these locations typically have fewer alternative green spaces to fall back on, which raises the distributive stakes of each conflict, while the relative political invisibility of urban-fringe neighbourhoods reduces the institutional responsiveness that more central or higher-profile areas might command.

The procedural impasse at Wawer Bend, however, has a different structural character: It is not primarily the unwillingness of authorities to engage but the fragmented private ownership of the wetland that prevents planning from delivering protective outcomes: a governance problem that procedural reform alone cannot address. Redłowska stands apart as the only case in which sustained activist pressure produced a clear reversal of a municipal decision, though the absence of formal acknowledgement of residents' role suggests that the recognitional dimension of the conflict remains unresolved even where the distributive outcome was secured.

In response to these pressures, residents often seek to strengthen protection through environmental conservation instruments, particularly where planning regulations are perceived as insufficient to prevent development. The establishment of an ecological site designation in Kliny and efforts to protect Wawer Bend through a landscape-nature complex illustrate how conservation measures can become important tools for safeguarding UGAs against residential development. The result is that general procedural failures produce disproportionate consequences in suburban contexts, encouraging communities to pursue alternative forms of protection outside the conventional planning system.

4.3. How Do Activists and Decision-Makers Differ in Their Views on the Management and Protection of UGAs?

Divergent visions for the management and development of UGAs often arise from differing conceptions of urban policy. One of the challenges most frequently identified by policymakers concerns the need to reconcile the interests of multiple stakeholder groups, including residents and investors, within the planning process. Conversely, activists have drawn attention to excessive urbanisation of green areas and to the prevailing perception among city residents that municipal authorities tend to be more responsive to the voices of investors and developers than to those of the inhabitants. This perception is further reinforced by high real estate prices and the limited availability of new park and recreational areas: "Unfortunately, it is still a city where developers rule, at least that is how it looks from the perspective of an ordinary resident" (R10).

An illustrative example is the Redłowska Meadow in Gdynia, where mobilisation extended beyond typical protest activities and involved a broad coalition of local residents, activists, and informal groups. The campaign combined public events and symbolic actions, including expressions of long-term commitment, such as tattoos in the case of the meadow. For many participants, the area was not only valued for its ecological and landscape qualities but also functioned as an important everyday and identity-forming space. This contrasted with planning discussions that continued to frame the site primarily in terms of its development potential.

A major dividing line between the two groups relates to the financial dimension of the creation and management of new UGAs. Decision-makers primarily emphasised the need to forgo municipal revenue and to allocate public funds for the development of green areas. The designation of such areas was thus perceived mainly as an expense rather than as a resource or a form of socially responsible investment.

Activists, in turn, argued that in times of climate crisis, it would be advisable to expand green spaces through minimal intervention in existing vegetation to reduce excessive expenditure. Their criticism also frequently addressed the allocation of substantial financial resources to the maintenance of recreational greenery at the expense of the natural values that tend to be lost through such investment projects:

> This protection does not have to be expensive at all, quite the opposite, and we try to show this to the city in these conversations, that often the things they do in these forests, building concrete paths there…and protection in fact is often very low-cost, at least such passive protection….We often simply ask for no action at all, and no further funding. (R11)

Policymakers also stress the importance of long-term thinking in urban planning, noting that activists and residents sometimes overlook the fact that municipal investments require foresight and advanced planning. Both groups also highlighted that during the 2000s, metropolitan cities experienced an intense phase of urban development, during which insufficient areas were reserved for green spaces.

Despite their divergent perspectives, the relationship between the two groups is marked by both tension and mutual dependence. Activists are sometimes perceived as politically engaged people, haters of the particular political arrangement in the city, or romantics with an unrealistic view of city management, while policymakers and officials are accused of bad intentions, favouring developers, or lacking genuine environmental commitment. On the other hand, both sides acknowledge the necessity of cooperation. Activists observe that once local politicians become involved in the protection of particular UGAs, it becomes significantly easier to ensure their comprehensive preservation. Policymakers likewise emphasised that when it is necessary to reconcile the interests of various stakeholders, the protection of specific green spaces is facilitated if activists engage in campaigns aimed at safeguarding those areas.

5. Discussion

This study contributes to debates on urban conflicts by demonstrating how geographical location shapes the emergence of environmental conflicts in post-socialist cities. Development pressures associated with suburbanisation and urban expansion increasingly target UGAs valued by local communities, while fragmented and reactive planning systems fail to provide effective protection (Lorens, 2005; Nowak et al., 2022). The findings reveal a persistent mismatch between planning objectives and outcomes, particularly in Polish urban-fringe areas where development pressures are strongest. Consistent with Healey (2007), conflicts over UGAs emerge where development-oriented land-use priorities collide with residents' environmental, recreational, and place-based values.

Beyond opposing specific development projects, grassroots movements challenged existing governance arrangements by producing ecological knowledge, mobilising local communities, participating in consultations, and advocating for additional conservation measures. In line with previous research, these initiatives extended beyond protest and resistance, acting as important producers of environmental knowledge and introducing alternative perspectives into planning and decision-making processes (Anguelovski, 2015; Hess & Satcher, 2019; Oscilowicz et al., 2025).

A persistent source of conflict is recognitional: Activists and authorities differ not only in tactics but in how they value UGAs and perceive participation. Activists' preference for low-intervention approaches sits in direct tension with authorities' tendency to favour extensive, costly projects. This divergence is not merely technical but reflects competing understandings of what urban nature is and who has the right to define it.

The EJ framework reveals three interconnected dimensions of injustice across the four cases. Procedural injustice appears where residents describe participation as late, selective, or merely formal, reflecting broader critiques of tokenistic participation in planning. Recognitional injustice becomes visible when natural ecosystems such as wetlands, meadows, or forest-edge zones are treated as less valuable than designed greenery, or when community ecological knowledge and local assessments are dismissed or treated as secondary in formal procedures. Distributive injustice is evident in the peripheral and urban-fringe districts examined, where residents face limited everyday access to green spaces and where the consequences of planning failures are spatially concentrated.

These patterns align with earlier EJ work that emphasises distributive, procedural, and recognitional dimensions (Low, 2013; Schlosberg, 2009; Walker, 2012). However, our findings complicate the assumption that EJ falls primarily along lines of socio-economic marginalisation. The activist coalitions documented here share spatial marginalisation: location in peripheral zones where development pressure is structurally high. This suggests that procedural and recognitional injustice are not exclusively a function of social position but can be produced by the spatial configuration of planning systems: a distinction that post-socialist suburban contexts make particularly visible, and one that challenges EJ scholarship to attend to geography as an independent axis of marginalisation alongside class.

This argument extends recent post-socialist EJ work demonstrating that justice concerns in CEE often stem from institutional capacity and governance deficits rather than discrete policy conflicts (Kronenberg et al., 2020; Onose et al., 2023; Sechi et al., 2022). Our findings further suggest that these deficits acquire a distinct spatial dimension in the context of internal suburbanisation, affecting residents of peripheral communities with limited access to UGAs.

As our cases show, grassroots initiatives play a crucial role in strengthening environmental protection and sustaining public attention around threatened UGAs (see also A. Haase et al., 2022; Hess & Satcher, 2019). Activist engagement improved distributive outcomes to varying degrees: Green space was retained or partially protected. However, procedural and recognitional justice remained structurally compromised even where distributive outcomes were secured. Residents won the argument about whether a site mattered; they did not win recognition as legitimate co-producers of planning knowledge, nor were they integrated into governance processes in any durable way. Measuring the success of grassroots activism primarily through distributive outcomes may therefore underestimate the degree to which the underlying injustices remain unresolved. A fuller account of what activism achieves requires attending to all EJ dimensions, not only the most visible one.

The relationship between activists and authorities, however, is not one of straightforward opposition: Both sides acknowledge the practical necessity of cooperation. Our research shows that grassroots activism emerges as a response to procedural shortcomings in urban governance, mobilising communities and generating protective actions in situations where formal planning mechanisms fail to respond quickly

enough to development pressures affecting valuable UGAs. This reflects broader concerns about procedural justice and meaningful participation in environmental decision-making (Schlosberg, 2009; Walker, 2012). The findings suggest that conflicts over UGAs in post-socialist cities should be understood not only as disputes over land use, but also as spatially situated struggles over recognition, participation, and the right to shape urban nature.

6. Conclusion

This study demonstrates that conflicts reflect fundamentally different understandings of UGAs, particularly pronounced in suburban and peripheral contexts, where limited everyday access to nature intensifies local mobilisation. At its core, this is a recognitional conflict: Residents tend to perceive UGAs as shared community and ecological spaces, while decision-makers often frame them as land for development or infrastructure.

The findings show that these conflicts are shaped by the interaction of spatial, institutional, social, and economic factors, which together generate persistent pressures on UGAs. Rapid development at the urban fringe, weak environmental oversight, top-down decision-making, and merely symbolic participation formats undermine trust and limit real dialogue. Growing environmental awareness and the increasing recognition of the value of accessible green space have made residents more alert to decisions that affect their immediate surroundings. Conversely, the study highlights that collaborative engagement between residents, experts, public officials, NGOs, and media actors can transform conflict into an opportunity for more sustainable urban policy.

The policy implications of this study extend beyond technical fixes and point to several needs: Local spatial plans should explicitly protect ecologically valuable urban-fringe green land rather than leaving it exposed to ad hoc development decisions; participation should move beyond formal consultation toward early, predictable and meaningful engagement; cities should treat green infrastructure as an interconnected system and take seriously low-intervention approaches that deliver substantial ecosystem services; and planning processes should recognise community ecological knowledge as a legitimate input rather than treating it as a challenge to administrative authority.

The study shows that the fight for UGAs in Polish cities is not only about saving particular sites. It reflects broader debates about the future direction of urban development, how environmental benefits are shared, and how local communities can influence the places where they live.

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Conflict of Interests

The authors declare no conflict of interests.

Data Availability

The data that support the findings of this study are available from the corresponding author upon reasonable request, provided that access complies with the participants' consent and institutional data protection regulations.

LLMs Disclosure

The authors used Grammarly and ChatGPT to correct spelling and grammar, edit, and improve clarity in preparing the manuscript. The final manuscript was reviewed, edited, and approved by all authors.

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ARTICLE

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Suburbanization in Metropolitan Barcelona: Contradictions Between Ideals, Ownership, and Sustainable Urbanism

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Abstract

Since the 1960s, the suburbanization of Barcelona Metropolitan Region has unfolded under ideals of an "American dream" transplanted into a Southern European context characterized by limited resources and a dispersed network of small urban settlements. This process has produced only a small number of true "garden cities," alongside a much larger share of scattered single-family housing developments, many of which still suffer from significant infrastructure deficits. This article examines the contradictions and tensions between residents' expectations and rights, and public policies and regulatory frameworks that have often adopted restrictive rather than constructive approaches. It develops a critical retrospective analysis at two complementary scales in the Barcelona Metropolitan Region. At a large scale, the extent of the urbanization phenomenon is presented through general data, outlining how urban policies over the past three decades have managed to "prevent" new developments of this type. At a more detailed scale, it presents and analyses two contrasting planning experiences co-led by the authors, aimed at upgrading suburban areas located less than 30 minutes from the city center. These case studies include diagnostic assessments, participatory processes, and planning proposals addressing micro-densification, mobility improvements, urban infrastructure upgrading, and the provision of basic services. Finally, the article discusses the need to contain further suburban expansion, including through the reassessment of developable land allocations, while also exploring the consolidation of existing suburban developments by defining urban strategies for their legalization, improving their services, and examining the potential for minimal densification that would enhance the sustainability of these areas.

Keywords

Barcelona; micro-densification; planning processes; suburban developments; urban upgrading

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1. Introduction

The major cities of Southern Europe developed during the 20th century by combining compact growth models with extensive low-density suburban expansion. The American model of urban sprawl was not reproduced with identical forms. Instead, pre-existing settlements gave rise to distinct suburbanization patterns, which expanded significantly from the 1960s onwards with widespread automobile use. Territorial development patterns remained diverse, as noted since the 1980s through terms such as the "diffuse city" (Indovina & Istituto universitario di architettura di Venezia, 1990), the "explosion of the city" (Font-Arellano, 2007), and genuine "after sprawl" scenarios (De Geyter, 2002). In this way, shared or context-specific measures, densities, land occupations, and settlement patterns were parameterized, to qualify and characterize the European city–territory (Charmes, 2019; Charmes & Keil, 2015).

This article aims to contribute to the contemporary discussion on the relevance and future of this phenomenon in one of the major urban regions of the Western Mediterranean: the Barcelona Metropolitan Region (BMR). Since the 1960s, large low-density residential areas based on single-family housing plots have been offered as a housing solution for a significant share of the population in the BMR. Prices in these areas were initially lower than in traditional urban centers, and they offered access to lower-density environments closer to nature. Soon, suburbia evolved from a housing solution into an aspirational model, associated with second homes and higher environmental quality, suitable for weekends or holidays. In this way, suburbia shifted from a marginal position to a more privileged status of desirability.

What had been shaped by necessity and opportunity began to be reassessed by planning from the late 1980s onwards. This was due to the emergence of early principles of sustainable development, growing awareness of the need to contain land consumption, and recognition of the negative externalities of these low-density urban growth models, including a lack of planning, occupation of ecologically fragile areas, and deficiencies in the basic complements that should accompany housing, such as safe access, urbanization of roads and public spaces, and the provision of facilities and essential services, among others.

In this framework, the present research does not question whether this type of growth should be limited, since for years there has been a social and political consensus in the country that has led to restraint in territorial planning guidelines. Instead, it examines how contemporary planning can address a model that maintains a persistent appeal, especially given the post-pandemic (Covid-19) shift towards anti-urban preferences. In this context, suburban environments can be understood not only through their negative externalities or in opposition to the compact city model, but also as established territories requiring context-sensitive transformation strategies. Consequently, the research question is: How do sustainable development principles redefine the critical dimensions of planning interventions in established suburban territories?

From this perspective, the research engages with principles of sustainable and inclusive urban development (associated with SDG 11) through an integrated eco-social framework that encompasses environmental and social dimensions. This approach structures the analysis of the case studies around key planning dimensions including the containment of land consumption, the efficiency of infrastructure and mobility systems, the environmental preservation of surrounding landscapes, and their balanced integration with existing urban fabrics. Ecological continuity, accessibility, proximity, and public space quality are treated as key components

of urban sustainability. The research also examines how these spatial and environmental strategies interact with social objectives, including social diversity, access to housing and urban services, and the provision of collective spaces that support social interaction and cohesion. Through a comparative analysis of the two cases, the article explores how sustainability principles become operational, contested, and locally negotiated in the transformation of established suburban territories.

The analysis, conducted at two scales in the BMR, seeks to engage with broader debates that are commonly addressed in the scientific literature (Dunham-Jones et al., 2021; Rubiera-Morollón & Garrido-Yserte, 2020). Through an in-depth examination of local realities, including the local situated knowledge derived from planning practice in two specific suburban areas, the research aims to bridge the gap between a predominantly critical stance towards suburban growth in the literature and the perceptions, concerns, and everyday priorities of local residents, which are often centered on practical and regulatory issues. This approach highlights how universal insights are not reached through detachment, but rather through a deep, localized engagement with reality (Haraway, 1988). By embracing this situatedness, the study moves beyond a purely normative critique to provide a more robust and ethically grounded understanding of suburban transformation.

The article is structured as follows. It begins with a general overview compiling data and findings from various studies at the regional scale, highlighting specific impacts, forms, and spatial structures within a planning framework shaped by particular logics, regulations, and instruments. The third section presents an in-depth analysis of two representative case studies, grounding the broader discussion in specific contexts and incorporating both theoretical and regulatory perspectives, as well as input from local stakeholders. The fourth section organizes the discussion around five key issues: the legalization of existing buildings and plots, the need for urbanization upgrades, the provision of public facilities and open spaces, the controversies surrounding mobility improvements, and alternative approaches to micro-densification. The article concludes by summarizing the main findings and outlining potential directions for future research and policy.

2. Suburban Development in the BMR

The BMR is characterized by its historic polycentric structure, based on a constellation of towns surrounding the central city. The region covers a geographic area of 3,200 km² and comprises 164 municipalities belonging to seven *comarques* (administrative divisions). It is home to nearly 5 million inhabitants. In this territory, beyond the central city, which is compact, continuous, and diverse, numerous historical centers and their modern extensions are scattered, forming a fragmented structure interspersed with open spaces and strongly shaped by geographic features.

Barcelona's role as an economic hub in Catalonia and Spain has driven population growth, urban expansion, and metropolitan integration, including the proliferation of suburban residential areas around the central city, near intermediate towns and in more isolated locations (Figure 1). In this region, the phenomenon of these suburban developments (*urbanitzacions* in Catalan) proliferated spontaneously. They are generally unplanned, located on irregular terrains with steep slopes, and typically consisting of detached single-family homes on individual plots. Suburban developments have reached a massive scale throughout the metropolitan region, covering approximately 20,000 hectares or 6% of the region's total land (Barba &

Mercadé, 2006). They accommodate slightly over 3% of the total population of the BMR, as estimated from recent demographic data.

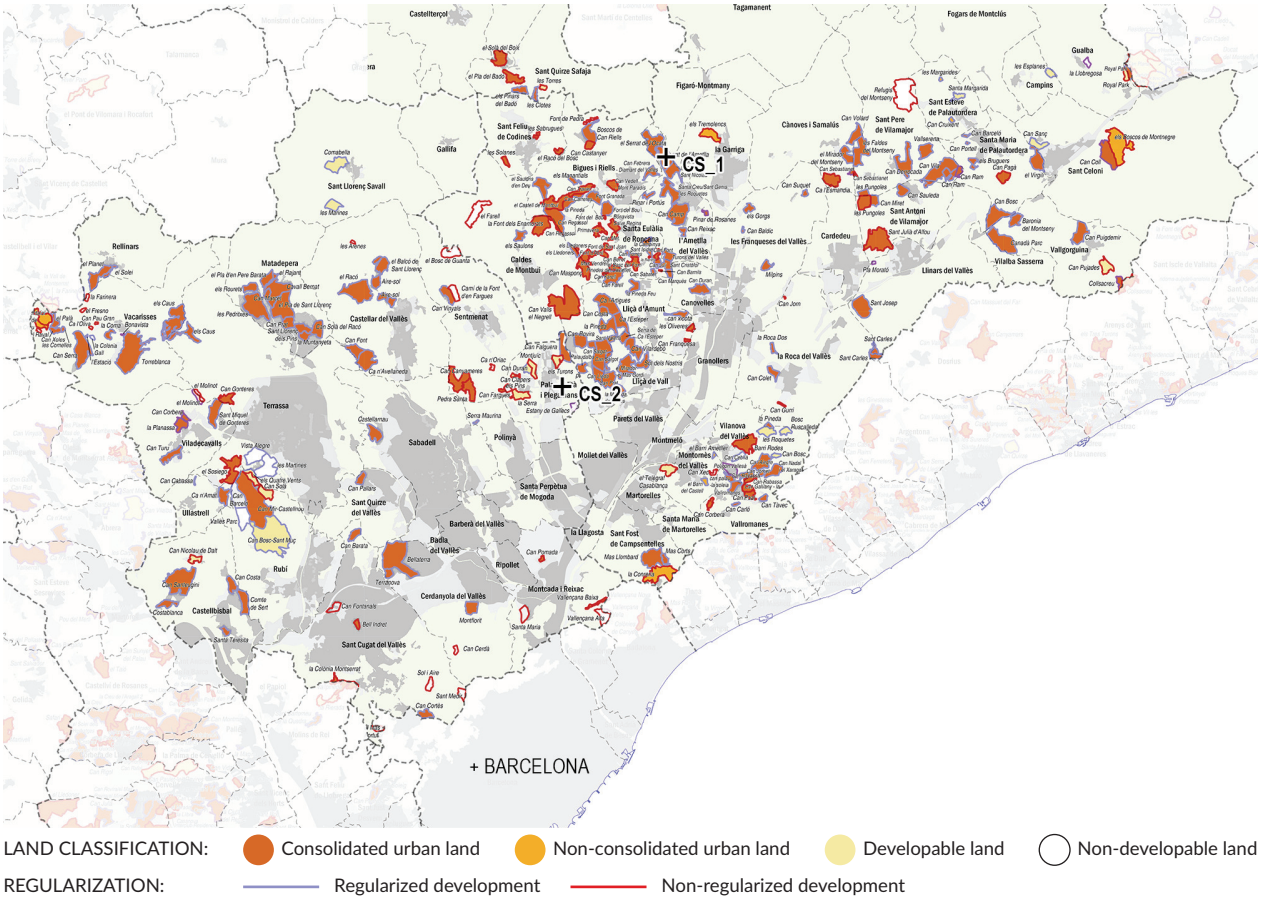


Figure 1. Suburban developments in the Eastern and Western Vallès districts. Distribution, land classification, and regularization status. Notes: CS_1 = Ametlla del Vallès; CS_2 = Palau-solità i Plegamans. Source: Compiled by the authors based on data from the Departament de Territori i Sostenibilitat (2016).

Due to their scale, these suburban and peri-urban developments have been a subject of study and a focus of policy for a range of actors, including academic institutes and public administrations such as the Àrea Metropolitana de Barcelona, the Diputació de Barcelona, and the Generalitat de Catalunya. Numerous studies have sought to precisely define the scope, distribution, and particularities of the process in the BMR (Barba & Àrea Metropolitana de Barcelona, 2018; Barba & Mercadé, 2006; Busquets, 1999; Font-Arellano et al., 1999; Indovina, 2007), while also considering it a local expression of broader global dynamics. Comparable patterns of dispersed suburban growth have been widely documented in international literature, as synthesized in recent reviews addressing the environmental, social, and economic implications of urban sprawl across diverse contexts (Rubiera-Morollón & Garrido-Yserte, 2020). In parallel, contemporary planning scholarship highlights the importance of context-sensitive interpretations, stressing how concepts and strategies related to dispersed urbanization evolve through their adaptation to specific territorial and institutional settings (Vicenzotti & Qvistrom, 2018).

The mid-20th-century urban revolution linked to the spread of the automobile disrupted previous balances in Barcelona. From the 1960s, the ideal of living close to nature, together with expanding road networks,

popularized second residences far from urban agglomerations, known among Catalan working classes as the culture of "la casa i l'hortet" (the house and the garden; Di Giacomo, 1987), revisiting earlier holiday models associated with the railway (Capel, 2011; Cayón et al., 2002). In addition, land competition in central cities and homeownership aspirations (Keil, 2018; Taricat, 2013), along with growing appreciation of coastal, rural, and mountain landscapes, stimulated scattered residential developments. In the BMR, these suburban developments emerged in the 1960s, became consolidated in the 1980s, were partially regularized by democratic municipalities, and between 1990 and 2000 shifted from seasonal to permanent use.

From the 2000s onwards, many scientific studies and public policies have agreed on the need to contain the spread of this type of territorial occupation, with a focus on improving residents' quality of life and metropolitan balance (Barba & Àrea Metropolitana de Barcelona, 2018). A shift from "containment to management" is needed (Muñoz, 2011), requiring legal, economic, social, urban, and architectural approaches. Research approaches range from developing transferable general guidelines (Muxí, 2013) to studies focused on specific projects adapted to the urban singularities of each development (Martín-Ramos et al., 2021; Vall-Casas et al., 2016). This also involves municipal planning processes, which address the management of suburban developments in their jurisdictions.

Data from the Generalitat de Catalunya and the Diputació de Barcelona indicate that nearly 600 suburban developments are located in the BMR, accounting for about 40% of all cases in Catalonia. Around half, in terms of both number and surface area, are regularized. The rest are still pending regularization. They are spread across 111 municipalities, meaning that just over two-thirds of municipalities contain at least one settlement. Overall distribution is relatively even, though some districts show stronger concentrations (Table 1).

In the Garraf district, all municipalities are affected and up to 10% of land is occupied. In Barcelonès, impact is minimal (0.4%) due to Barcelona's dominance. In Alt Penedès, the lower figure (2.6%) reflects the distance from the metropolitan core and agricultural specialization, especially viticulture. The Eastern and Western Vallès districts have the highest number and extent of developments, approaching 100 km², and have comparatively higher regularization rates (Figure 1).

The article analyses the challenges associated with suburbanisation in the BMR in-depth through two case studies, one from each Vallès district, selected for the authors' recent planning experience and their complementarity, which makes them representative of broader dynamics.

3. Research Design and Methods: Case Study Approach in Suburban Areas of El Vallès (BMR)

The two case studies are not presented as isolated planning experiences, but as analytical cases through which broader dynamics of suburbanization in the BMR can be examined. The research adopts a comparative case study approach to explore how legal and socio-spatial conditions shape the challenges and potential transformation pathways of consolidated suburban areas.

The selected cases correspond to residential developments that originated as urban subdivision projects on former agricultural or forested land (Figure 2). Initially conceived as peripheral neighborhoods offering improved environmental quality and housing conditions, these settlements have evolved over time into two

Table 1. Overview of residential suburban developments (SD) in the BMR.

District / *Comarca*	Municipal indicators			Suburban developments (SD)			Spatial extent indicators					
	Number of municipalities	No of municipalities with suburban developments	Share of municipalities with SD (%)	Number of SD in the district	No of regularized developments	No of non-regularized developments	District area (ha.)	Suburban developments area (ha.)	Regularized developments area (ha.)	Regularized area (% of total)	Non-regularized developments area (ha.)	Non-regularized area (% of total)
Alt Penedès	27	13	48.10%	35	12	23	59,270	1,522	397	26.10%	1,125	73.90%
Baix Llobregat	30	22	73.30%	103	54	49	48,600	4,035	1,906	47.20%	2,129	52.80%
Barcelonès	5	2	40.00%	4	0	4	14,580	63	0	0.00%	63	100.00%
Garraf	6	6	100.00%	65	19	46	18,510	1,878	899	47.90%	979	52.10%
Maresme	30	22	73.30%	132	64	68	39,850	3,318	1,693	51.00%	1,625	49.00%
Vallès Occidental	23	18	78.30%	98	54	44	58,310	3,885	2,917	75.10%	968	24.90%
Vallès Oriental	43	28	65.10%	161	98	63	85,100	4,768	2,962	62.10%	1,806	37.90%
TOTAL BMR	164	111	67.70%	598	301	297	324,220	19,469	10,774	55.30%	8,695	44.70%

Source: Compiled by the authors based on data from the Departament de Territori i Sostenibilitat (2016).

complementary models of suburban development, reflecting broader patterns of transformation between 1956 and the present day. Today, both areas face challenges that are representative of a significant share of suburban growth in the region, particularly in relation to socio-ecological performance and land-use legality.



Figure 2. Chronological timeline of urban evolution: 1956, 1970–1977, and 2025. Top: Case Study 1, El Serrat. Bottom: Case Study 2, El Castell. Source: Compiled by the authors based on data from the Institut Cartogràfic i Geològic de Catalunya (2024).

The rationale for the case selection is twofold. First, in terms of legal status, the cases represent the two contrasting situations identified in Section 2: "regularized" versus "non-regularized" developments. Second, from a socio-ecological perspective, both occupy an intermediate position. They are neither low-density areas with high transformation capacity linked to public transport accessibility, nor precarious settlements where de-urbanization might still be considered. Instead, both have a high degree of consolidation, making them particularly relevant for analyzing incremental improvement strategies.

From a comparative perspective, the two cases share several structural features, including: a similar distance from central Barcelona (25–35 km, or 30 minutes by car); subdivision processes initiated in the 1960s, with consolidation occurring in subsequent decades; proximity to small historical towns with populations of around 10,000 to 15,000 inhabitants; a high degree of built consolidation, with few plots remaining undeveloped; and a predominance of permanent residences.

At the same time, they differ in some aspects that enable a more nuanced understanding of the challenges associated with suburbanization in the BMR. These include: legal land-use status, which is consolidated urban land in the first case and non-consolidated land in the second; scale and spatial configuration; and degree of connectivity to and accessibility of surrounding urban centers. Together, these differences allow an examination of how distinct regulatory and spatial conditions influence planning responses in consolidated suburban environments.

Figure 2 illustrates the historical evolution of both case studies. The first (CS_1, El Serrat) is located in a forested area characterized by steep slopes and a relatively isolated spatial structure. The second (CS_2, El Castell) developed within an agricultural context, later becoming embedded in a more fragmented peri-urban mosaic. These differing environmental and spatial conditions have shaped both their initial formation and their subsequent trajectories.

3.1. Case Study 1 (CS_1): El Serrat Residential Area, Ametlla del Vallès (41.69750° N, 2.23735° E)

L'Ametlla del Vallès is located 35 km from Barcelona at the northern periphery of the metropolitan region. Geographically, it serves as a transitional zone between the Vallès plains and the pre-coastal range, situated at the Congost Pass adjacent to the Cingles de Bertí (Montseny) Natural Park. While its origins are medieval, the town emerged as a prominent seasonal retreat in the early 20th century. The main catalyst for modern expansion was the upgrading of the highway network connecting to Barcelona in the 1970s, which acted as a powerful stimulus for the development of 10 suburban residential areas. These now cover 325.95 hectares, representing 70% of the municipality's total urban land.

Drawn up in 1969, the original planning documents for El Serrat Residential Area emphasize the opportunity to repurpose land "with low agricultural yield" into a premium residential zone, given its "ideal residential characteristics." Features that are highlighted include panoramic views of the Vallès plain, surrounding forests, and optimal conditions for sun exposure and natural ventilation. The original plan provides for the development of a 31-hectare plot intended for approximately 140 dwellings, resulting in a very low density of fewer than five dwellings per hectare. Following this first development, adjacent large-scale rural estates underwent a similar urbanization process, with closely comparable morphology and density. This eventually formed a continuous urban fabric with other residential areas (La Miranda, La Fustera, and Sant Nicolau), which were formally recognized as consolidated urban land under the 1987 General Master Plan (Pla General d'Ordenació). The master plan is still in effect and currently under revision.

3.1.1. Data Collection and Mapping

An exhaustive data collection process, complemented by extensive fieldwork and subsequent data processing using GIS and CAD software, enables a precise analysis of the current state of these residential developments, through works commissioned by the administrations. For the first case study, the research was conducted as part of the ongoing revision of the municipal master plan (Preliminary Plan, 2020–2022, and Master Plan, 2024–present).

The suburban development under planning covers a total surface of 84.33 ha, which is three times the original rural plot. It is comprised of 467 detached single-family dwellings, 22 semi-detached units (Figure 3a), and

114 vacant plots or undeveloped units (Figure 3b), resulting in a current density lower than six dwellings/ha and a potential density of eight dwellings/ha (the maximum development capacity permitted under current land-use regulations).

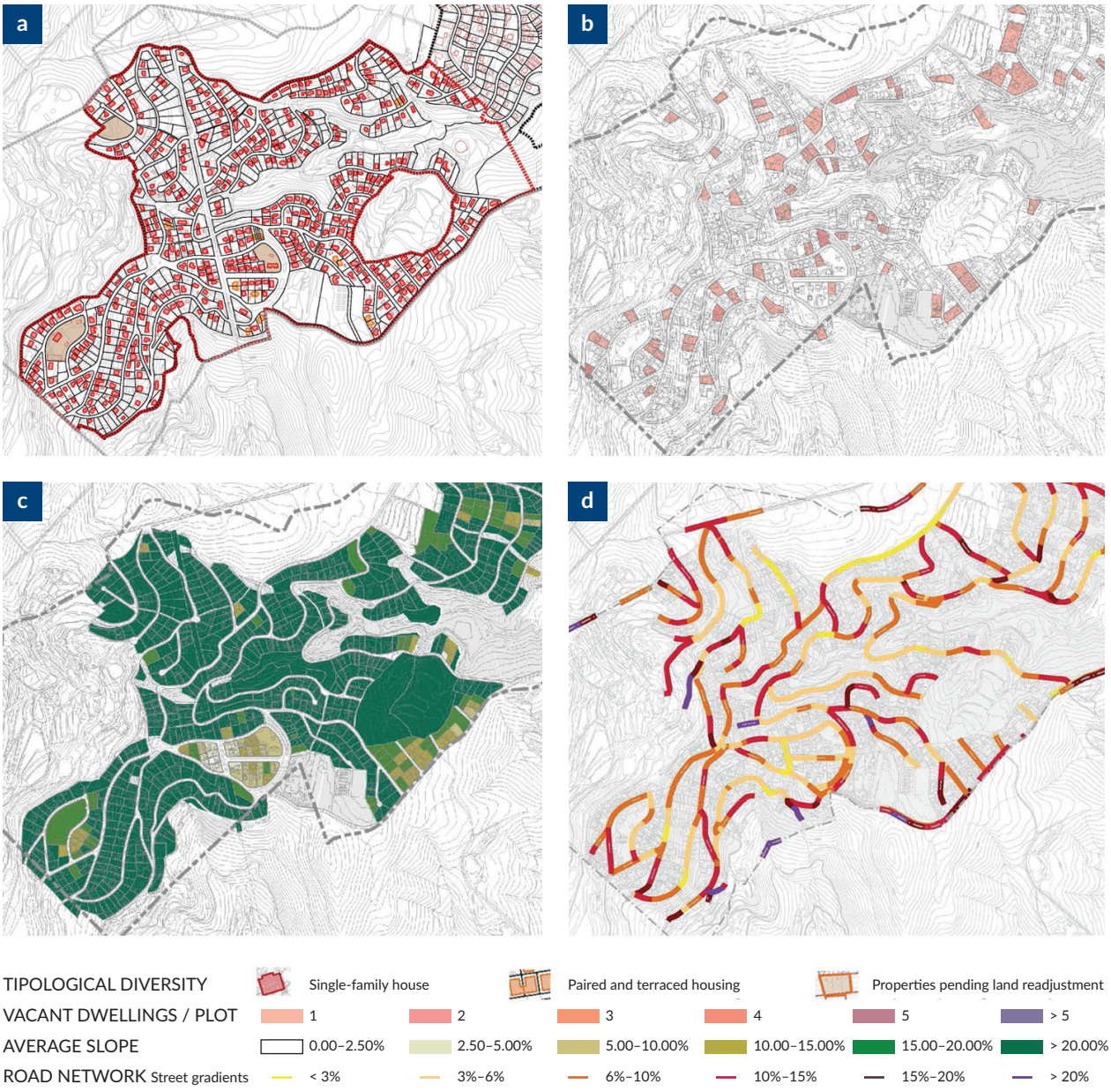


Figure 3. CS_1 mapping characterization: (a) typological diversity; (b) vacant dwellings; (c) average plot slope; (d) street gradients.

The urban analysis reveals a relatively uniform fabric. The construction of the dwellings was made compatible with the preservation of certain trees and permeable soil, providing environmental quality to the surroundings, despite the very basic level of street urbanization and a low sense of security due to the poor relationship between houses, gardens, and the street, as homes remain hidden behind opaque fences.

Due to the original ownership structure and the organic street layout, plot sizes show considerable variation, corresponding to the minimum plot regulations in each sector: 400 m² in some areas and 600 m² in others, while the largest plots are over 8,000 m².

Over 90% of plots in El Serrat exceed a 20% slope (Figure 3c), a condition now considered excessive for new developments but typical of earlier hillside suburban developments. This creates major technical and regulatory challenges for integrating buildings into the natural landscape. Accessibility and mobility are also constrained, as many streets have slopes exceeding 10, 15, and even 20% (Figure 3d), with significant access difficulties.

3.1.2. Participatory Processes

The urban planning for the improvement of these sectors is closely linked to the desires and difficulties expressed by their inhabitants. In general, these processes require a phase of guidance and clarification of technical and legal terms so that residents understand two key issues: first, the gap between the rights they perceive as owners and their actual legal status; and second, the equally significant distance between the comforts of their lifestyle model, associated with relatively low costs, and the actual cost of the low-density model in terms of public service demands, resource consumption (water, energy, and goods), and CO_2 emissions.

Citizen participation in this case was carried out as part of a broader discussion on the municipal master plan. The participatory process included three types of activities: thematic presentations and debates (three), participatory walks (two), and an open survey. Notably, the survey (June–August 2021) attracted 300 participants, 25% from the northern district where El Serrat is located. It comprised 42 questions structured around four pillars: the growth model, the social impact, the economic scope, and the urban and territorial framework.

The Diagnostic Results Memorandum indicates that residents value the low-density model primarily for its tranquility, convenience, and privacy, and often use the term “quality urbanism” to describe it. Conversely, it is recognized that this model exacerbates individualism and correlates with deficits in road safety and increased risks of residential burglary. A notable controversy exists on two specific issues: the opportunity to foster a more transparent and less restrictive relationship between the private homes and the public street, and the absence of dedicated spaces for community gatherings and social interaction. Both aspects reflect broader debates about how suburban residential areas can balance individual privacy with social cohesion and public accessibility.

Paradoxically, in these participatory processes, half of the respondents expressed that future growth should continue to favor the detached single-family house model. However, a smaller percentage (17%) advocated for maintaining the typology while permitting internal densification within the plots. An almost identical percentage emphasized the need to promote the construction of multi-family blocks for affordable housing. As other participatory experiences reveal, across all these issues, both supporters and opponents emerge, combining a collective view of the neighborhood with their own individual needs and preferences (Ruming et al., 2024).

3.2. Case Study 2 (CS_2): El Castell Residential Area, Palau-Solità i Plegamans (41.57983° N, 2.18469° E)

The second case study exemplifies a semi-consolidated, low-density suburban development. While the area is largely built and subdivided, persistent deficits in infrastructure, including paving, sewerage, and service supply networks, have prevented plots, long developed and occupied, from achieving legal urban land status. The El Castell sector began its subdivision process in the late 1960s through a largely unregulated parcellation model, originally applied to 14 rural plots for subsequent subdivision (Figure 4a). Although this produced a fully consolidated built environment, the area remains legally precarious, with numerous streets and green spaces still lacking essential infrastructure. With the arrival of democracy, municipal planning regulated sectors according to their degree of consolidation, either recognizing them as urban land or setting the conditions for attaining this status.

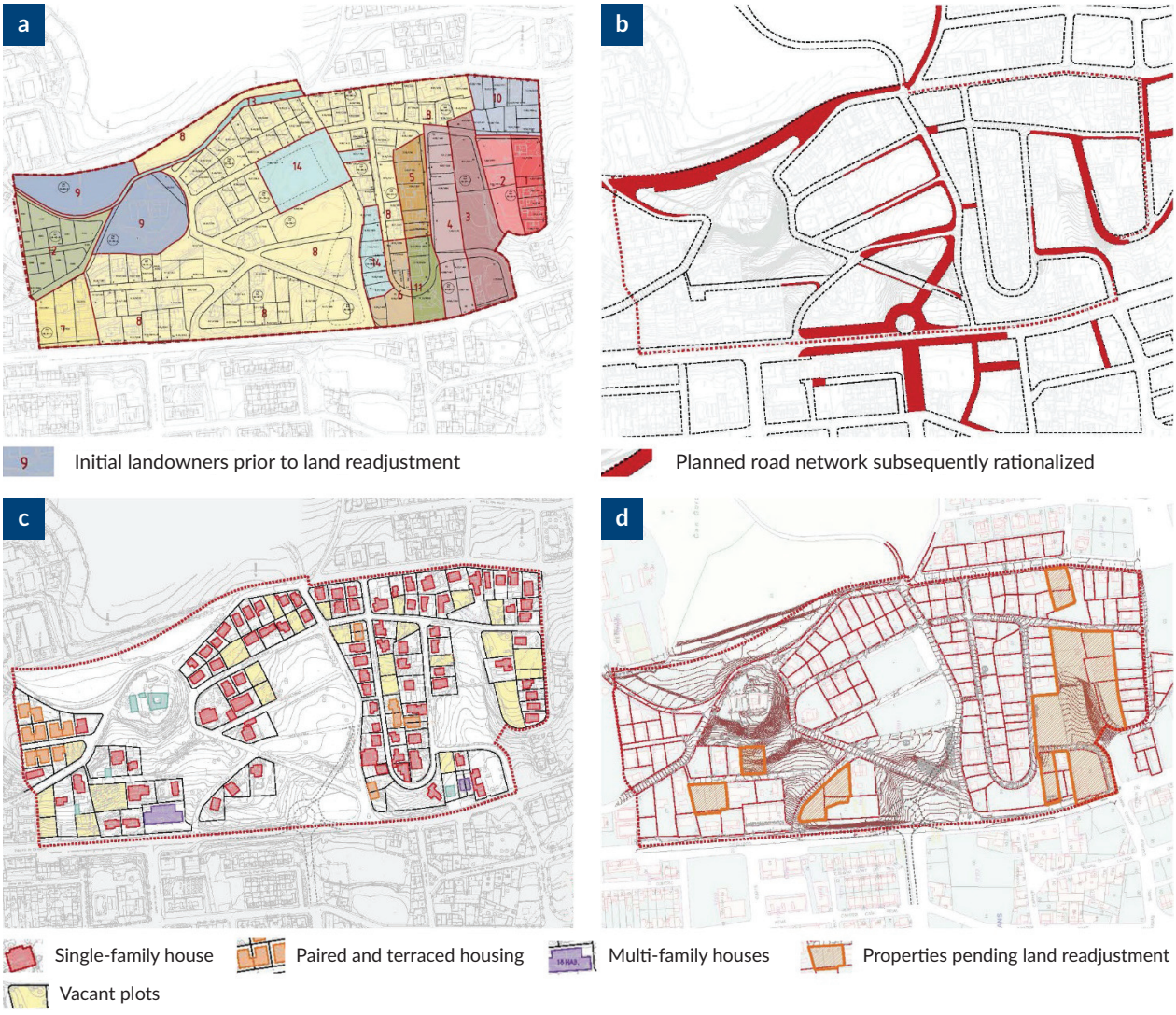


Figure 4. CS_2 mapping characterization: (a) ownership structure; (b) street-space deficits; (c) typological diversity; (d) vacant plots.

Successive planning efforts, including the 1978 General Plan (Pla General d'Ordenació de la comarca de Sabadell), followed by the drafting and approval of the 1984 Detailed Plan (Pla Parcial) and the corresponding 1986 Urbanization Project, attempted to legalize the sector through required land cessions and pending infrastructure works. However, legal disputes and disagreements among property owners ultimately led to the judicial annulment of the final parcellation process. The vicissitudes associated with this case are highly representative of the inherent complexity of urban planning processes in the Spanish legislative framework. This complexity stems from the intricate interrelationship between housing building permit approvals, land subdivision (parcellation), and urbanization projects, all of which must align with the protracted administrative procedures for detailed sector planning and municipal-scale master planning. The contradiction between licenses that are "legally" granted by municipal authorities and the nullity of the overall planning for the area leads to a legally ambiguous situation. Rather than strictly illegal, it should be considered "alegal" or existing in a legal vacuum, as it stems from conflicting layers of administrative validity.

Following the latest revision of the municipal master plan (Pla d'Ordenació Urbanística Municipal; Ajuntament de Palau-solità i Plegamans, 2015), the area was designated as a specific Urban Development Unit (Polígon d'Actuació Urbanística – PAU 09 El Castell). This designation has initiated a new phase of urban studies and community engagement seeking to provide definitive resolution to the sector's long-standing technical and legal challenges.

3.2.1. Data Collection and Mapping

The comprehensive assessment of the existing condition of this suburban development stems from a regional administrative commission established in 2022. The main features of the sector are as follows. First, it covers 15.93 ha, according to Pla d'Ordenació Urbanística Municipal sectorization, with 10.11 ha of private land and potential for 277 dwellings (223 free-market and 54 public housing). The maximum density is 17.38 dwellings/hectare, 0.39 floor area ratio, plus 1,248 m^2 allocated for non-residential use. Second, in total there are 144 plots, of which 103 are already built, representing a consolidation rate of 71.5%. Third, street analysis shows clear differences in hierarchy and levels of urbanization. These variations make a uniform, high-cost approach unnecessary and instead support tailored standards, especially for streets with significant deficits (marked in red in Figure 4b). Fourth, street parking frequently encroaches on pedestrian space. Future urbanization must determine whether on-street parking is essential (due to limited space on private plots) or whether street design should be adapted to prioritize off-street parking areas. Fifth, housing is primarily single-family (96 isolated, 17 semi-detached) with only two multi-family buildings (20 units), creating minimal diversity in terms of typologies (Figure 4c). There are 127 existing homes and 101 yet to be built (in the plots marked in orange in Figure 4d), totaling 228. This represents 82% of the planned capacity (277 units), a discrepancy that will be analyzed in the discussion section.

Following an initial phase focused on preliminary studies supported by the Diputació de Barcelona (January–October 2022), the process has now entered the executive stage. This current phase is centered on drafting a technical amendment to the master plan aimed at the area's full consolidation. By approving the necessary planning instruments, the legal status of the sector will be regularized, finally allowing for the development of vacant plots and the fulfilment of the original density and zoning goals.

3.2.2. Participatory Processes

In the second case study, participatory activities included a survey and an "active walk" (11 February 2023) to discuss initial planning efforts (Figure 5). Fifty residents joined a 1.5 km route highlighting key issues, providing oral and written feedback at designated stops. A total of 41 people completed the survey, most of whom were long-term residents with primary homes in the neighborhood.

The survey results show that over 95% of residents are satisfied with their home, and 52% are very satisfied with neighbor relations. Key positives in Castell are tranquility and low traffic (70%), followed by proximity to nature and green areas (40%), plus lower density and distance from industry. Residents stressed that street and public space design should not be uniform and suggested defining sub-areas with similar conditions. Some also proposed restricting access to residents only, though this was debated due to the public role of streets and access needs.

There was broad consensus that the planned fast peripheral road is unnecessary, as are new streets or the widening of existing ones. Instead, priorities included lowering speed limits, rationalizing the road network, and avoiding further loss of farmland. Residents also called for infrastructure upgrades, such as burying overhead cables and improving the sewerage system. Regarding green spaces, many residents supported concentrating the planned green areas into a single central park.

On densification, there was a general consensus against multi-family housing, except along the main artery (Avinguda Catalunya), where two- to four-story buildings were considered acceptable. Finally, most also favored keeping undeveloped plots as green areas.



Figure 5. Participatory process: urban walk, 11 February 2023, in Palau-solità i Plegamans.

4. Discussion

CS_1 and CS_2 illustrate typical scattered suburban developments in the BMR. They also reveal considerable differences in scale, density, and spatial conditions (Table 2). Although the two cases differ substantially in overall size (84.3 versus 15.9 ha) and number of dwellings (496 versus 127), they share relatively similar land distribution, with approximately 65% private land ("zones") and 35% public land ("systems"). Other parameters diverge more significantly. Maximum housing density in CS_2 is approximately twice that of CS_1, while the amount of private land per inhabitant remains considerably higher in the first case (436.19 versus 318.45 m^2/inhabitant). However, the most substantial contrast lies in topographic accessibility conditions, with average slopes of 14.71% in CS_1 and 2.93% in CS_2.

Table 2. Parametric comparison of the urban features and standards of both case studies.

	Case study 1: El Serrat			Case study 2: El Castell		
Urban development land area	Area [Ha.]		%	Area [Ha.]		%
Private land	54.10		64.10%	10.10		63.50%
Public land (streets)	12.60		14.90%	3.00		19.10%
Public land (parks and facilities)	17.70		21.00%	2.80		14.40%
Total	**84.40**		100.00%	**15.90**		**100%**
Plots and dwellings	No. of plots	No. of dwellings existing	No. of dwellings potential	No. of plots	No. of dwellings existing	No. of dwellings potential
Single-family units	467	467	467	98	98	133
Semi-detached units	5	22	22	18	11	37
Multi-family units				2	18	107
Large single-family units	7	7	75			
Empty plots	114	0	114	37		
Total	**593**	**496**	**678**	**155**	**127**	**277**
Urban standards	Existing		Potential	Existing		Potential
Density dwellings/hectare	5.88		8.04	7.98		17.41
Private land m^2/inhabitant	436.19		319.01	318.45		146.01
Estimated Population (2.5 inhabitant /unit)	1,240		1,695	318		693
Accessibility	Elevation max/min [m.]	Elevation difference / distance [m.]	Average slope	Elevation max/min [m.]	Elevation difference / distance [m.]	Average slope
Distance/elevation to the urban centre	565 / 315	250 / 1,700	14.71%	171 / 130	41 / 1,400	2.93%

The two case studies, based on the authors' planning experience, help identify key issues shaping the future development of similar suburban areas. These debates, which are common in technical, political, and civic spheres, are relevant to areas near small, consolidated settlements dominated by primary residences, as in both cases. This distinguishes them from larger suburban areas dominated by second homes that are weakly

connected to compact urban centers, which are also common in the BMR and along the Catalan coast. In these cases, diagnosis and improvement strategies would require additional, complementary approaches.

The discussion is framed from an urban-planning perspective, focusing on low-density areas that nonetheless require stronger territorial integration and more sustainable ways of living. Issues such as the energy efficiency of housing originally designed as seasonal residences, the per-dwelling impact of infrastructure networks, mobility patterns, and the provision of public space and facilities must be understood within broader territorial needs.

Based on the analysis of the two case studies, the research question can be addressed more explicitly by identifying the critical dimensions through which sustainable development principles become concrete, contested, and locally negotiated in established suburban territories. The discussion is therefore structured around five complementary dimensions. These are legalization, urbanization upgrades, public facilities and open spaces, mobility, and micro-densification. They are understood not as isolated planning problems or prescriptive guidelines, but as interconnected analytical lenses through which the challenges and opportunities of suburban transformation can be interpreted. Together, these dimensions reveal how environmental, social, legal, and spatial objectives must be continuously negotiated and balanced to support more sustainable forms of suburban development.

4.1. Legalization of Existing Buildings and Plots

The cases analyzed reveal the centrality of legal ambiguity as a structuring condition of suburban development in the BMR. Rather than exceptional situations, irregular or non-regularized developments emerge as a widespread outcome of fragmented planning processes and longstanding misalignments between legal frameworks and urbanization practices.

In this context, CS_2 illustrates how legalization is not a linear administrative procedure but a negotiated and technically mediated process, in which planning instruments must reconcile existing built realities with regulatory requirements. More broadly, these findings suggest that legalization should be understood not merely as a corrective action, but also as an integral dimension of suburban transformation.

The suburban lifestyle model centered on the single-family house and garden has frequently conflicted with planning legislation in Spain, resulting in deficiencies related to land classification, infrastructure provision, and building permits. As illustrated by CS_2, the regularization of these situations often depends on flexible planning mechanisms, including the redefinition of intervention areas and the adjustment of urbanization standards to reduce implementation costs. In this respect, the analysis highlights both the adaptability and the limits of existing regulatory frameworks when confronted with historically informal suburban development.

4.2. Urbanization Upgrades

The upgrading of street infrastructure emerges as a key entry point for the transformation of consolidated suburban areas. The cases show that existing urbanization patterns are largely based on outdated mobility paradigms that prioritize vehicular circulation over environmental performance and pedestrian use.

In this context, proposed changes need not entail increased costs and may even reduce infrastructure demands. The analysis highlights the potential of more flexible street design approaches, including permeable surfaces and shared-space streets with strict speed limits to enhance pedestrian safety. The cases also identify parking demand as a key constraint in reconfiguring street space, revealing a tension between existing mobility practices and alternative urbanization models. While part of this demand could be absorbed in private plots, some collective parking solutions would still be required.

In CS_2, the retrofitting proposal differentiates between streets primarily oriented towards vehicular circulation and others conceived as shared-space environments. In parallel, the CS_1 plan highlights the opportunity to improve pedestrian walkability through alternative paths running parallel to streams (Figure 6a), which are particularly suited to leisure and recreational uses.

Taken together, these findings suggest that street upgrading should be understood not only as a technical intervention, but as a reconfiguration of the spatial and functional logic underpinning suburban mobility.

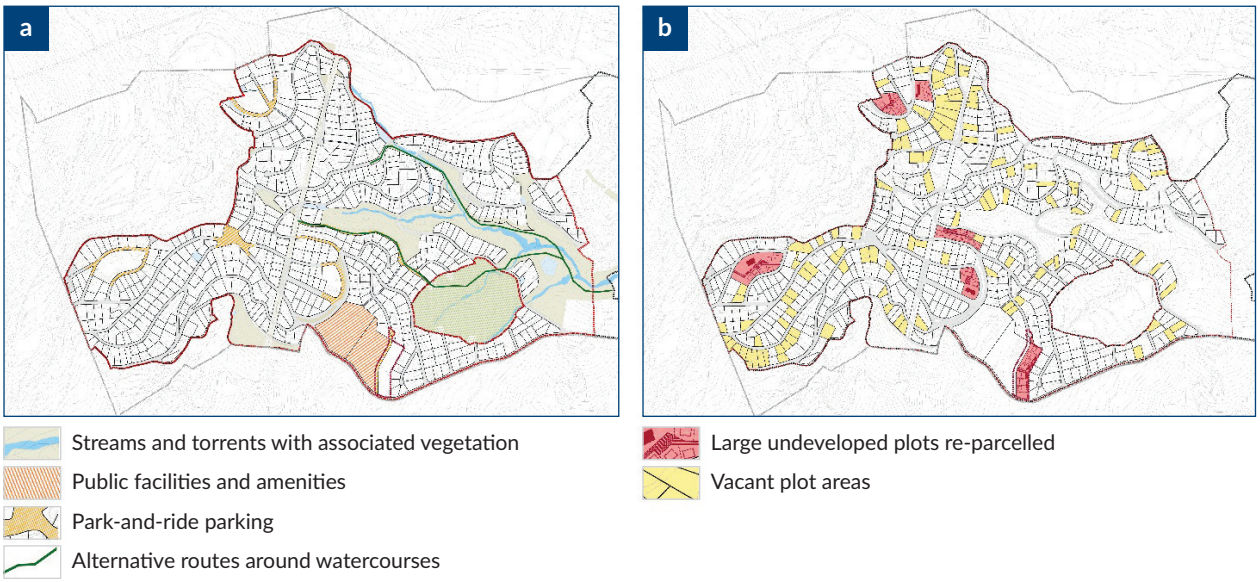


Figure 6. CS_1 urban strategies: (a) green spaces, ecosystemic services, and street pattern interventions; (b) micro-densification.

4.3. Provision of Public Facilities and Open Spaces

The provision of public facilities and open spaces highlights a fundamental ambiguity in the suburban model between individualized and collective forms of amenity. The cases show how early developments relied on private or semi-private facilities as substitutes for public infrastructure, shaping long-term patterns of service provision and social interaction.

As a direct import from the Anglo-Saxon model, many residential developments were originally organized around "social clubs" associated primarily with leisure activities rather than basic public services. Typically centered on swimming pools and sports facilities, these clubs functioned as shared amenities and informal social hubs fostering neighborhood interaction.

The CS_1 case illustrates how some of these collective functions have progressively shifted towards more individualized forms of use, particularly through the widespread incorporation of private pools. Furthermore, certain facilities such as sports clubs have adapted to changing recreational practices, maintaining their role as spaces of social interaction.

Determining which facilities these developments require today remains a central issue. The analysis suggests that this question is conditioned not only by changing demographic and social demands, but also by structural limitations including low density, spatial fragmentation, and limited integration with surrounding urban systems. While residents often demand additional services, many developments lack the critical mass required to sustain them.

Public space provision is similarly contested. Green areas designated in planning documents frequently respond to regulatory requirements rather than broader urban or social objectives, and are often poorly integrated into everyday use patterns. This raises questions regarding the viability of collective public space within residential environments where "green space" is already embedded in the private dwelling through gardens and pools.

In addition, the cases indicate that these spaces should not be understood solely in terms of social use, but also as components of broader ecological systems contributing to environmental quality and ecological connectivity (Figures 6a and 7a).

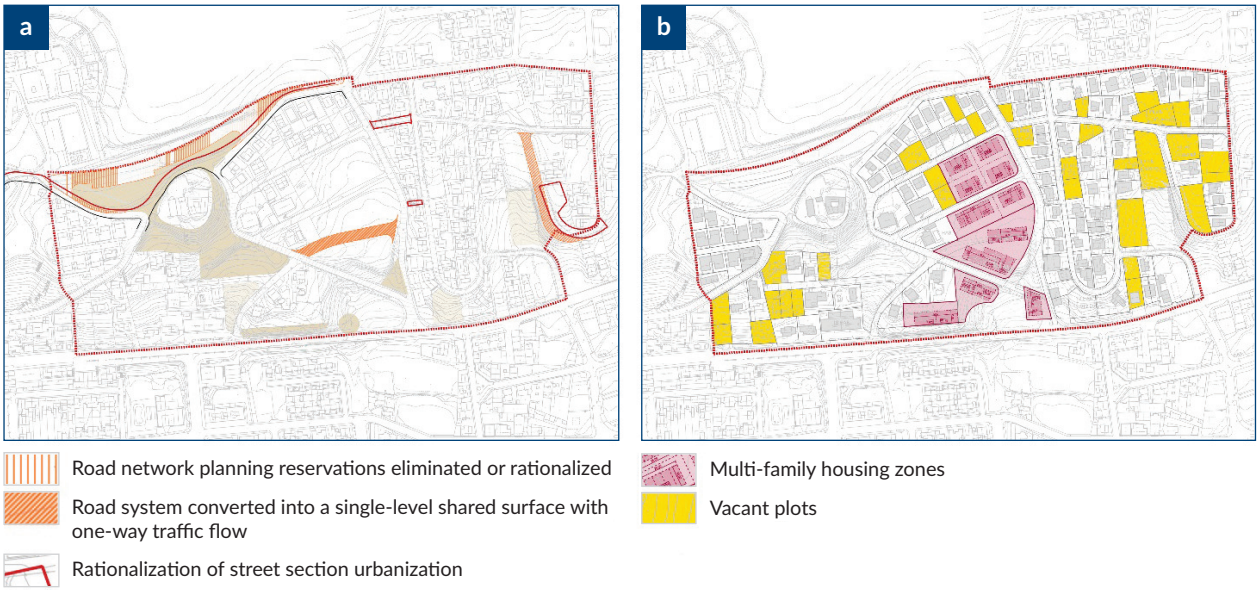


Figure 7. CS_2 urban strategies: (a) green spaces, ecosystemic services, and street pattern interventions; (b) micro-densification.

4.4. Mobility Improvements

The cases reinforce the well-documented dependency of low-density suburban environments on private vehicles, while also illustrating the structural constraints that limit the viability of conventional public

transport systems. Empirical evidence from both case studies confirms the predominance of car-based mobility, which reflects the combined effects of low density, spatial dispersion, and limited service provision.

In CS_1, mobility audits and participatory processes reveal a strong dependence on private vehicles and a very limited role of active or public transport modes in everyday practices. Similarly, surveys conducted in CS_2 indicate that most local journeys are made by car. They also reveal moderate openness among residents towards alternative mobility arrangements and changes in street configuration.

The analysis suggests that low-density suburban environments may require more flexible and hybrid mobility solutions than those provided by conventional public transport systems. Existing European and regional initiatives point towards alternatives such as demand-responsive transport, shared mobility systems, and the promotion of active mobility.

In this respect, while the predominance of private car use remains evident in both case studies, there is also a growing recognition that street space could be reconfigured to support more diversified mobility patterns.

Taken together, these findings suggest that mobility in low-density suburban areas should be understood not only as a technical or infrastructural issue, but also as a socio-spatial practice deeply embedded in the logic of the suburban model, and therefore resistant to rapid transformation.

4.5. Micro-Densification

The analysis of both case studies reveals what can be described as a "densification paradox," in which densification is simultaneously recognized as a necessary condition for improving the sustainability and long-term viability of low-density suburban areas, while also being perceived by many residents as a threat to the established suburban lifestyle. This resistance persists despite the progressive ageing of the original population and the growing difficulties faced by younger households in accessing these environments due to high housing costs and dependence on private vehicles, factors that reinforce social homogeneity.

Dwelling density should not be understood as a universal or infallible indicator of urban quality, since it only partially reflects the intensity and diversity of social life (Pafka, 2013). In this respect, the findings suggest that the retrofitting of suburban developments cannot be interpreted as a straightforward transition towards a conventional "compact city" model (Rice, 2010). Rather, the cases point towards more incremental and context-sensitive forms of intensification that can increase demographic diversity and improve the economic viability of services and infrastructures without radically transforming the existing urban fabric.

From this perspective, micro-densification emerges less as a singular planning solution than as a set of differentiated strategies conditioned by local spatial, legal, environmental, and social factors. The cases analyzed illustrate three complementary approaches that are currently under consideration.

4.5.1. Occupation of Vacant Land

The persistence of vacant plots in both case studies highlights the limits of interpreting available land reserves as immediately mobilizable resources for densification. Although both cases contain a significant number of

undeveloped parcels (114 plots in CS_1 and 37 plots in CS_2), their activation for urban development is highly constrained in practice.

The analysis suggests that the viability of this strategy is shaped less by physical availability than by the logic of fragmented private ownership and individual decision-making. Vacant plots often remain undeveloped due to diverse owner strategies, including the consolidation of larger garden areas, long-term land reservation, or speculative holding patterns.

These dynamics illustrate how property regimes can act as a structural constraint on densification processes, limiting the capacity of planning instruments to mobilize land in consolidated suburban environments.

4.5.2. Sector Densification via Horizontal Property Subdivision

Horizontal property subdivision illustrates a form of incremental densification that seeks to reconcile increased residential intensity with the preservation of the morphological identity of low-density fabrics.

The analysis explores the potential of this mechanism to increase the housing stock while maintaining the fine-grained character of suburban environments, without substantially increasing built volume. In the Spanish context, "división horizontal" is the legal mechanism that enables a single building to be subdivided into multiple independent units, combining individual ownership of dwellings with shared ownership of common elements. Beyond increasing density, this approach may also support greater social diversity through more varied housing typologies and tenure arrangements.

The cases also reveal considerable regulatory and spatial constraints. Densification processes remain tied to statutory requirements on public amenities and infrastructure provision, although current regulations establish some exceptions for affordable housing (Generalitat de Catalunya, 2012, Art. 100.2). Likewise, the adaptability of existing buildings to subdivision varies significantly depending on architectural configuration and accessibility conditions. In this respect, the strategy prioritizes the retrofitting of existing housing stock over more intensive redevelopment models, in line with broader concerns about carbon reduction and architectural renewal (Sauquet et al., 2019).

The applicability of this approach differs substantially between the two case studies. In CS_1, implementation is limited by environmental risks and accessibility constraints, whereas in CS_2 horizontal subdivision is considered a key mechanism for increasing residential intensity without altering the neighborhood's low-rise character. However, the viability of this strategy ultimately depends not only on regulatory flexibility, but also on the willingness of residents to renegotiate established forms of domestic space and property use.

4.5.3. Insertion of Small-Scale Multi-Family Developments on Vacant Plots

The insertion of small-scale multi-family developments is the most explicit form of intensification examined in the case studies, and consequently the one that generates the greatest tensions in terms of landscape character, accessibility, and neighborhood identity.

In the remaining undeveloped areas of these suburban fabrics, the cases indicate that coordinated planning may create opportunities for targeted intensification. This approach introduces a minimal density framework that seeks to improve environmental performance while supporting connections with adjacent green infrastructure. Rather than a purely quantitative increase in density, the strategy is associated with broader objectives related to mobility diversification, social interaction, and environmental resilience (Figures 6b and 7b).

The CS_1 case reflects a predominant resistance to the introduction of multi-family housing, justified by accessibility constraints and landscape considerations. Within this context, a specific initiative proposes the re-parceling of large vacant plots (Figure 6b), despite existing regulatory frameworks that limit changes to parcel structure. This proposal is framed as an attempt to reconcile housing provision with environmental and social objectives.

In contrast, CS_2 illustrates a more favorable planning context, where multi-family housing was already envisaged in the original plan, particularly in central areas and along main access corridors (Figure 7b). Current studies focus on defining appropriate building envelopes to ensure compatibility with the existing urban fabric.

The contrasting reception of this strategy across the two cases highlights how the social and political acceptability of densification is strongly conditioned by local spatial configurations and collective perceptions of urban change.

5. Conclusions

This article, within the broader framework of the thematic issue on suburban development and city extensions, addresses the urban planning challenges associated with suburban growth in a Southern European metropolis throughout the case of BMR. To this end, it adopts a dual approach based on two contrasting scales. Firstly, it provides a general contextualization of the phenomenon at the regional scale, drawing on previous studies. Secondly, it develops a more novel, fine-grained perspective through a practice-based approach bridging research and professional practice. While intermediate scales were considered throughout this process, the scope of this article did not allow their explicit inclusion. Nevertheless, this dual approach, combining general data with in-depth, case-based knowledge, is particularly valuable for advancing discussion on the topic. Its relevance extends beyond the specific geographical context and may be transferable to other suburban growth contexts, such as smaller metropolitan regions without a dominant central city, or to other European and international settings.

The study reveals notable differences between professional and resident perspectives. Commonly accepted assumptions in academia or professional practice do not always align with residents' own assessments of the shortcomings in the suburban development model they inhabit. This observation calls for careful reflection: On the one hand, there is a need to better communicate the technical perspective to residents; on the other, the insights and experiences of residents should be incorporated into academic and professional deliberations. In both case studies, the Participatory Processes sections, complementing the Data Collection and Mapping analysis, highlight the role of participatory approaches as a means of accessing situated local knowledge. Through a combination of methods (including workshops, site walks, and surveys), these

processes also allow citizens to become familiar with the technical rationales behind the unsustainability of certain urban forms and the legal ambiguity of specific situations. This is particularly relevant in contexts where divergent perceptions between residents and planning professionals shape both the interpretation of existing conditions and the scope of potential interventions.

More broadly, the research suggests that the transformation of established suburban territories cannot rely exclusively on standardized sustainability frameworks or rigid planning regulations originally conceived for different urban conditions. While the maintenance of fundamental legal and environmental principles remains essential, the case studies highlight the importance of context-sensitive and adaptive approaches to urbanization standards, densities, public space provision, and certain building regulations. The challenge is not only technical, but also cultural and institutional: how to progressively reconcile residents' lived perceptions and expectations with planning frameworks often shaped by highly normative assumptions, to make the sustainable transformation and territorial integration of these suburban areas realistically achievable.

Further research could build on this framework in two complementary directions. First, it could develop comparative analyses across regions and contexts, at both scales, to identify patterns of similarity and difference. Second, future research could deepen the practice-based dimension of the approach by incorporating additional case studies derived from professional planning work, to further test, refine, and expand the methodological and conceptual insights proposed here. In this respect, the article emphasizes how diagnosis emerges from context-sensitive analysis, in which situated knowledge plays a central role.

The findings are not intended to be directly generalized, as they stem from highly specific local conditions and from the planning framework of the BMR. Nonetheless, the case studies provide broader lessons for debates on suburban transformation. In particular, they highlight the importance of combining containment and regeneration strategies, the central role of legal regularization and resident acceptance, and the need for incremental, negotiated, and context-sensitive interventions rather than large-scale or purely normative retrofitting models. More broadly, the cases also suggest that future demographic transformations may create opportunities for redefining the long-term viability and social composition of established suburban territories. These contributions are synthesized in four main insights:

- The Imperative for Containment and Regeneration: In the BMR, a consolidated planning consensus has emerged centered on the strict containment of the low-density model. This paradigm shift is robust enough to support the active deprogramming of developable land previously zoned for such development. However, given the sheer scale of the existing suburban footprint, containment alone is insufficient. Proactive management of these areas is also required. In this context, the analysis underscores the relevance of emerging planning instruments and experimental interventions aimed at addressing the systemic inefficiencies of these areas.
- A Combinatorial Approach to Heterogeneity: The structural heterogeneity of the suburban developments renders one-size-fits-all solutions ineffective. A combinatorial strategy, tailoring interventions to local needs, is therefore recommended. In some cases, priority should be given to urgent administrative resolutions, such as legalizing land tenure regimes. In others, the focus should shift to short-to-medium-term qualitative improvements, such as street urbanization and the provision of public facilities, which are generally well received by residents. These "soft" interventions contrast with the more controversial, yet essential, structural reforms associated with densification.

- The Densification Paradox: Densification is a central challenge and a cornerstone strategy for transitioning low-density suburbs towards a sustainable economic and environmental model. Although there is broad technical consensus on its efficiency, implementation faces significant barriers and is often perceived by residents as a threat to their established lifestyle in the case studies analyzed here. This perception is consistent with findings reported in other international contexts (Ruming et al., 2024). Case studies testing strategies such as infill development on vacant plots, horizontal subdivision of existing dwellings, and micro-densification reveal a clear tension between planning objectives and community acceptance. Effective deployment of these strategies therefore requires robust regulatory and fiscal incentives to mitigate resistance.
- Demographic Evolution as a Catalyst for Change: Ultimately, the intersection of the current housing emergency and the progressive aging of the population in low-density areas may create opportunities to overcome this impasse. Even small, targeted adjustments to existing development patterns, limited in scale but capable of triggering meaningful change, could support greater social diversity and more efficient service provision. Taken together, these shifts suggest pathways to enhance the resilience of these areas and improve their functional integration in the broader urban and social system.

Taken together, these insights contribute to a more nuanced understanding of suburban transformation processes in contexts characterized by regulatory ambiguity, socio-spatial heterogeneity, and competing planning rationalities.

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Conflict of Interests

The authors declare no conflict of interests.

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ChatGPT (OpenAI) was used exclusively for language editing and for the translation of selected passages and expressions within the manuscript. All intellectual content, analyses, interpretations, and conclusions were developed by the authors. The final proofreading and language editing were undertaken by a professional editor.

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The Rise of Newcomer Governance: Local Power, Participation, and the Contradictions of Suburban Growth

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Abstract

This article analyses how, under specific local and institutional conditions, some newcomer-led or newcomer-influenced coalitions may gain disproportionate influence in suburban governance, and how this can reshape development priorities in ways that disadvantage other residents and complicate metropolitan coordination. The rapid expansion of the Budapest agglomeration since the 1990s has brought an influx of upwardly mobile residents to small towns, yet the political implications of these socio-economic shifts remain underexamined. This explorative study employs a qualitative approach to present cases when newcomers assume power and redefine development priorities of the given settlement. Our findings reveal that some organised higher-status in-migrant groups can leverage social, cultural, and economic resources to influence planning debates and promote selective quality-of-life agendas, which in the examined cases often sidelined the needs of long-term residents and hindered metropolitan-level cooperation. These examples present a central contradiction of suburbanisation: Beyond expansion, these political changes simultaneously fuel exclusivity and governance challenges that eventually work against metropolitan development. They also show that active engagement in local politics and issues of planning and development can lead to exclusive and unsustainable results, and one-sided political representation only causes further conflicts and social problems. The study contributes to international debates on suburban governance by illuminating the contradictions between local democracy and sustainable growth in expanding metropolitan regions. How to channel these local power shifts toward inclusive, sustainable urban development is an issue that needs to be dealt with by researchers, practitioners, and politicians alike.

Keywords

Budapest; local democracy; metropolitan growth; suburban governance

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1. Introduction

Since the early 1990s, the Budapest agglomeration has undergone one of the most intensive suburbanisation processes in Central and Eastern Europe. Following the collapse of state socialism, large-scale residential decentralisation reshaped the spatial, social, and institutional landscape of the metropolitan region (Bagyura, 2020). Population growth in suburban municipalities was driven not only by housing market liberalisation and expanding private car ownership, but also by the search for improved living environments, residential autonomy, and perceived distance from the social and infrastructural problems of the capital city. These motivations were diverse: For some households, suburban relocation meant access to more affordable family housing, while for others it was linked to more exclusive expectations of residential quality, tranquillity, and social distinction. As a result, formerly rural settlements and small towns were rapidly transformed into suburban municipalities integrated into the daily functional space of Budapest.

In many cases, this suburban expansion was accompanied by a profound socio-economic transformation. Middle-class, higher-status households—highly educated, professionally mobile, and economically resourceful—often became an important in-migrant group, reshaping the social composition of suburban settlements. This influx brought fiscal resources, skills, and new forms of civic engagement. In certain instances, however, it also altered local power relations, governance practices, and development priorities. In many municipalities, socio-economic growth coincided with increasing pressure on infrastructure, public services, and land use, intensifying political conflicts over development, environmental protection, and competing visions of suburban life (Csizmady et al., 2022).

Despite extensive research on post-socialist suburbanisation as a spatial and socio-economic process, its political implications remain insufficiently understood. Existing studies have largely focused on patterns of residential mobility, housing markets, and socio-spatial differentiation, often treating suburban municipalities as passive recipients of metropolitan growth (Ekers et al., 2012). Less attention has been paid to how socio-economic change can translate into political influence at the local level, or how particular newcomer-led or newcomer-influenced coalitions reshape local governance structures, participatory processes, and development agendas. This gap is particularly striking given the institutional characteristics of post-socialist governance systems, where fragmented metropolitan coordination, strong municipal autonomy, and uneven administrative capacity create fertile ground for the politicisation of social change. Under such conditions, quality-of-life claims may in some cases become connected to exclusionary agendas and NIMBYism (Not In My Backyard). The concept of NIMBYism suggests that citizens object to facilities being in their neighbourhood mainly out of self-interest. In the cases examined here, such dynamics could hinder service provision and other developments and could support regulatory changes disadvantageous for residents who lived there before suburbanisation (Kajdanek, 2014).

To capture these dynamics, we examine how socio-economic change may translate into local political influence, how particular coalitions redirect development agendas, and how these shifts affect long-term residents and metropolitan-scale sustainability. The analysis first focuses on capital mobilisation, institutional positioning, and legitimacy construction. It then examines how post-socialist institutional fragmentation, quality-of-life-oriented planning, and participatory expectations created arenas in which higher-status residents were often especially active. Finally, it analyses exclusionary development agendas and their consequences for political representation, resource allocation, and socially inclusive development.

This connects social change, local political influence, and planning outcomes in a context where privilege depends not only on economic status but also on political ties. It also shows that participatory processes may privilege higher-status actors when participation is socially selective, even when participation is formally open and framed as democratic inclusion.

The article's use of "newcomer governance" is therefore analytical rather than categorical. It does not imply that newcomers always share the same interests, motivations, or political orientations, nor that middle-class in-migration necessarily produces exclusionary outcomes. Rather, the concept refers to cases in which newcomer-led or newcomer-influenced coalitions acquire agenda-setting power under specific local and institutional conditions. The analysis focuses on these situations precisely because they reveal how classed resources, participatory institutions, and planning conflicts may interact in suburban municipalities.

While previous studies use newcomer governance mainly to describe the institutional incorporation of migrants into urban citizenship regimes, this article extends the concept to suburban political reconfiguration associated with middle-class in-migration. Newcomer governance operates through three interrelated dimensions. First, uneven political influence refers to the conversion of socio-economic change into formal or informal authority, as resourceful actors enter local decision-making through elections, civic engagement, and agenda-setting. Second, agenda redirection captures the reorientation of planning priorities towards quality-of-life concerns—environmental protection, development control, and residential order—that may privilege organised higher-status groups while marginalising long-term residents. Long-term residents are those who lived in the settlement before recent waves of middle-class suburban in-migration and the associated political and social transformation of the locality; in the examined cases, they are often older and occupy relatively lower socio-economic positions. Third, institutional embedding describes how such priorities become stabilised through participatory mechanisms, discursive strategies, and regulatory practices that can favour already advantaged groups.

Understood in this way, newcomer governance is neither a general feature of newcomers nor a necessary stage of suburban transition. It is a possible outcome of suburban political economy under conditions of rapid socio-economic change, fragmented metropolitan governance, and unequal access to political resources. The concept foregrounds the classed and relational nature of political influence and shows that suburban settlements actively shape, rather than merely receive, metropolitan growth. This also keeps the analysis focused on governance mechanisms rather than on newcomers as a homogeneous social group.

The study makes three contributions. First, it addresses the political dimension of suburban growth by showing how, in certain cases, socio-economic change reshapes local power relations. Second, it identifies a contradiction of suburban expansion: Higher-status in-migration can bring resources and civic engagement, but particular forms of newcomer-influenced governance can also generate exclusionary dynamics. Third, it contributes to debates on governance, participation, and inequality by highlighting unequal political and participatory representation. By linking these issues to the Budapest agglomeration, the article also adds evidence from a post-socialist metropolitan context where municipal autonomy, weak coordination, and informalised governance make local power relations especially consequential.

2. Literature Review

2.1. Suburban Growth and Governance

Suburban growth is neither linear nor universal, but highly contingent on governance configurations and broader political and economic contexts (Csizmady et al., 2022; Olt et al., 2024). The interaction and division of power between state institutions, local governments, market actors, and residents can play out differently by context. Besides market forces or planning rationales, political interests can determine the processes too (Maloutas, 2003).

Suburban governance varies across welfare systems, planning traditions, and intergovernmental relations (Ekers et al., 2012). North American suburbanisation has often been shaped by market-oriented governance, while Western European contexts have stronger vertical coordination, as municipalities depend more heavily on regional or national authorities (Hanlon et al., 2010). Housing regimes, legal frameworks, and planning cultures further mediate how suburban growth unfolds (Keil, 2018). Post-socialist suburbanisation followed a distinct trajectory rooted in state-socialist legacies and post-1990 transformation. Under socialism, housing construction was largely state-led, while detached-house suburbanisation to small towns and villages was not actively promoted. Later suburbanisation therefore remained closer to self-led models in which private property acquisition became a central motivation (Bučaitė-Vilkė & Krukowska, 2020; Csizmady et al., 2022).

After the regime changes, suburbanisation became increasingly market-driven in the absence of effective regional planning. Housing privatisation, deregulated land markets, and weakened strategic planning created a fragmented institutional environment in which suburban expansion often outpaced regulation (Csanádi & Csizmady, 2002; Z. Kovács & Tosics, 2014). These conditions produced uneven development paths across post-socialist countries (Ekers et al., 2012; Hirt, 2007; Leetmaa et al., 2009). Limited public resources, weak coordination, and institutional uncertainty constrained policy interventions, leaving many suburban municipalities unprepared for population inflows. Consequently, infrastructural deficits persisted, suburban centres remained underdeveloped, and dependence on the core city continued to characterise post-socialist metropolitan regions (Bučaitė-Vilkė & Krukowska, 2020; Hirt & Kovachev, 2015). At the same time, the expansion of built-up areas frequently outpaced population growth, indicating extensive land consumption and low-density development even in the absence of strong socio-economic pressure (Hardi, 2022; Z. Kovács et al., 2019; Pénzes et al., 2023).

Post-socialist urban sprawl is marked by weak development control, fragmented land ownership, and limited metropolitan coordination (Kübler, 2012; Stanilov & Sýkora, 2014). In Hungary, municipalities have significant formal powers over planning, but fiscal dependency and national regulatory frameworks constrain effective autonomy. This produces a system in which suburban development is formally decentralised but shaped by uneven power relations and selective intervention (Kőszeghy & Csizmady, 2019; Olt & Lepeltier-Kutasi, 2018). Similar political reconfigurations linked to in-migration have been documented in the Budapest agglomeration (Bagyura, 2020).

2.2. Local Democracy and Political Participation

Local democracy and political participation are widely conceptualised as normative pillars of decentralised governance (Barber, 2013), particularly in suburban and small-town contexts where spatial proximity between decision-makers and residents is assumed to enhance accountability and responsiveness (Fung, 2006). However, a substantial body of critical scholarship questions whether local arenas automatically produce more democratic outcomes, especially under conditions of social inequality and uneven access to political resources (Purcell, 2006). Rather than functioning as neutral spaces of representation, local political arenas often reproduce or intensify existing power asymmetries.

Purcell's (2006) critique of the "local trap" demonstrates how decentralisation may reinforce hierarchical power relations when access to participatory mechanisms is uneven. Institutional design plays a decisive role: Participation tends to privilege actors with greater time resources, organisational capacity, and institutional literacy (Fung, 2006). From this perspective, participation operates less as a universal channel of representation than as a selective governance tool that amplifies certain voices while marginalising others. Higher-status actors have become disproportionately dominant in local political and associational life, even within formally open democratic systems (Silver et al., 2010).

In post-socialist contexts, these dynamics are intensified by low institutional trust, weak civic cultures, and enduring informal power relations (Kębłowski & Van Criekingen, 2014; Olt & Lepeltier-Kutasi, 2018). EU accession reinforced participation as a normative requirement, but participation often remained limited to consultation with little effect on substantive decisions (Barta, 2009; Kőszeghy & Csizmady, 2019). Local democracy is therefore not a panacea. In post-socialist settings, it is further shaped by neo-feudal relations between national power and local political and economic actors (Szelenyi & Csillag, 2015).

In the absence of strong institutions representing disadvantaged groups, the engagement, resources, and connections of higher-status actors can become decisive. Drawing on Bourdieu, this can be understood as capital conversion: Economic, cultural, and social resources are transformed into political authority (Bourdieu, 1986). Yet this conversion depends on local power relations, established elites, newcomers' motivations, and settlement structure. Newcomer governance is therefore not an automatism of suburbanisation. At the same time, middle-class newcomers may possess advantages in local politics because of professional status, educational credentials, and institutional familiarity (Benson & Jackson, 2013; Savage et al., 2005). The key point is that local political influence remains unevenly distributed, shaped by social inequalities, institutional design, and context-specific power relations rather than by formal democratic access alone.

2.3. Planning and Development Priorities: Exclusionary Residential Politics and the Reconfiguration of Local Interests

Urban and suburban planning priorities are increasingly understood as outcomes of contested social processes rather than neutral technical responses to growth, reflecting the interests of actors best positioned to define land use, allocate resources, and legitimise particular visions of place (Fainstein, 2010; Logan & Molotch, 2007). In suburbanising regions, these dynamics are intensified by socio-economic change, as the in-migration of higher-status populations reshapes not only the social composition of settlements but also the normative frameworks through which development priorities are articulated and contested.

Higher-status suburban residents can mobilise around exclusionary residential politics: a political orientation prioritising environmental protection, low-density development, traffic regulation, and residential order (Tissot, 2015; A. Walks, 2013). Such priorities may express legitimate concerns about liveability, environmental quality, and the management of rapid growth. Yet when advanced by socially advantaged groups with disproportionate influence, they can become embedded in classed notions of space and belonging (Benson & Jackson, 2013; Savage et al., 2005). In these cases, environmental and quality-of-life claims can become strategies for controlling development trajectories, regulating social composition, and protecting property values. They can also support conservative or NIMBYist approaches that portray certain social groups as sources of problems and oppose services or developments needed by lower-status residents, such as those without access to private cars (Csizmady et al., 2022).

Fischel's (2001) "homevoter hypothesis" conceptualises homeowners as actors seeking to protect perceived property values through local regulatory control. In suburban settings, this logic can support growth restrictions and resistance to developments seen as threatening residential stability or neighbourhood character. Although developed in a different institutional context, it helps explain how owner occupation intersects with local political power in fragmented governance systems (R. A. Walks & Maaranen, 2008). In practice, exclusionary residential politics may operate through intertwined discursive, participatory, and regulatory mechanisms. Development restrictions can be legitimised through environmental and community-based narratives, while organised resident groups may dominate participatory arenas and influence zoning and regulatory decisions. Together, these mechanisms enable socially advantaged actors to shape suburban development trajectories in ways that protect residential order, status, and property values (Tissot, 2015; A. Walks, 2013).

In post-socialist contexts, planning priorities are further shaped by institutional legacies, fragmented governance, and dependence on external funding. Hungarian urban planning has often been dominated by project-based logics that privilege visible interventions over long-term social objectives (Barta, 2009; Kőszeghy & Csizmady, 2019). In suburban municipalities with limited capacity and fiscal vulnerability, socially resourceful actors may therefore become important agenda-setters (Hirt et al., 2013; Stanilov & Sýkora, 2014).

The capacity of newcomers to redirect planning priorities is closely linked to unequal patterns of participation. Empirical research on participatory planning in Hungary and other post-socialist contexts has shown that, as anywhere, formal participation mechanisms tend to privilege actors with higher levels of education, institutional literacy, and time resources, thereby reproducing social inequalities within ostensibly inclusive governance frameworks (Csanádi et al., 2010). Participation thus operates as a selective filter rather than a neutral channel of representation, enabling socially advantaged groups to exert disproportionate influence over agenda-setting when no strong countervailing institutions are present.

2.4. Exclusionary Outcomes and the Limits of Social Sustainability

Exclusionary residential politics may enhance satisfaction for some higher-status groups, but it can also narrow local development and undermine social sustainability. Narrow ideals of middle-class residential life can produce specialised settlement functions, high turnover, and limited urbanisation. Comparative studies show that exclusionary outcomes often emerge not through direct displacement but through restrictive

land-use policies, selective service provision, and resistance to socially mixed development (Tammaru et al., 2019). In this sense, suburban planning can become a mechanism of social closure, normalising particular priorities while marginalising groups with weaker political voice or fewer resources (Csanádi et al., 2010).

This tension is central to suburban growth in post-socialist contexts. The capacity of resourceful newcomer groups to redirect development agendas reflects not only socio-economic status but also the ability to mobilise resources, participate effectively, and legitimise selective outcomes through environmental and community-based narratives. These processes are reinforced by weak metropolitan coordination, fragmented municipal authority, and limited regulatory enforcement (Csizmady et al., 2022).

3. Context: Budapest Agglomeration

3.1. Post-1990s Suburbanisation Trends

Budapest concentrates economic activity, high-order services, and employment, making surrounding municipalities functionally dependent on the capital despite formal autonomy. The collapse of centrally planned housing, privatisation, and land-market liberalisation reshaped residential mobility. While suburbanisation existed at a limited scale during late socialism, its intensity, social selectivity, and territorial consequences increased substantially after 1990 (Csanádi & Csizmady, 2002).

From the mid-1990s, suburban expansion accelerated. Budapest lost population while the agglomeration grew, producing a territorially expansive but differentiated metropolitan region (Hungarian Central Statistical Office, 2025). Built-up areas often expanded faster than population, reflecting low-density development and weak planning coordination, a pattern consistent with broader Central European trends (Hardi, 2022; Pénzes et al., 2023). Growth was uneven. Western and north-western sectors of the agglomeration attracted many in-migrants, while eastern and south-eastern areas followed slower and socially distinct trajectories. Rather than reducing inequalities, suburbanisation reinforced settlement hierarchies: Higher-status areas consolidated advantages, while lower-status zones faced infrastructural and social pressures (Z. Kovács & Tosics, 2014).

Suburban migration was linked to family formation, housing aspirations, and improved living environments, but access to desirable locations remained socially selective. Higher-status households were better positioned to translate preferences into spatial advantage, while lower-status groups often moved to peripheral or weakly regulated areas (Csanádi & Csizmady, 2002; Vasárus & Lennert, 2022). This also produced unequal political opportunity structures (Bagyura, 2020; Csizmady et al., 2022).

Formerly rural settlements gradually assumed suburban functions while remaining dependent on Budapest. Population growth, land-use change, and pressure on services often outpaced institutional capacity, producing long-term governance challenges rather than short-term adaptation (Hardi, 2022; Vasárus & Lennert, 2022). These pressures also reshaped local politics by changing who had the resources and legitimacy to influence decisions.

3.2. Local Governance Structure

Local governance in the Budapest agglomeration operates within a formally decentralised but substantively constrained political-administrative system. Municipalities retain elected councils and mayors; however, their effective autonomy has been progressively limited by fiscal centralisation, regulatory restructuring, and the re-scaling of competencies to the national level since the 2010s (I. P. Kovács, 2020). Municipal government is centred on directly elected mayors with strong executive authority. In suburban municipalities, limited administrative capacity and small councils often intensify personalised decision-making and increase the importance of informal coordination (Csanádi et al., 2010). This gives strategic importance to organised local actors able to mobilise resources, networks, and public visibility.

Electoral systems further structure suburban politics. Mayors are elected through single-round, majoritarian elections, while councillor systems vary by settlement size. In rapidly growing municipalities, socio-economic change can alter electoral balances and create opportunities for newcomer groups where they mobilise effectively around development control and quality-of-life concerns (Csanádi & Csizmady, 2002). Municipalities remain responsible for development plans and zoning, but their room for manoeuvre is limited by national regulations, building permits issued by governmental offices, fiscal dependency, and weak metropolitan coordination. Planning decisions are therefore often negotiated through informal channels and ad hoc arrangements rather than comprehensive strategic frameworks. This governance environment reinforces actor-driven practices and amplifies the political relevance of organised groups able to access decision-making processes (Csanádi et al., 2010; Olt & Lepeltier-Kutasi, 2018). In the post-socialist neopatrimonial context under study, the primacy of personal networks over formal procedures is not an anomaly but a structural feature of local governance (Olt et al., 2024).

Fragmented metropolitan coordination, limited institutional capacity, and personalised local leadership created conditions under which organised newcomer groups could exercise disproportionate influence over planning agendas and local political competition. Suburban political transformation in the Budapest agglomeration is therefore not only a demographic outcome, but also a governance process shaped by unequal capacities for participation and mobilisation.

4. Methodology

This study employs a qualitative research design combining semi-structured interviews with a longitudinal dataset on municipal councillors. It analyses how socio-economic change is translated into political representation and local governance in a sample of seven suburban municipalities in the Budapest agglomeration (Figure 1).

Municipalities were selected purposively from the Budapest agglomeration based on predominant middle-class in-migration since the 1990s. The selected cases capture variation in the political consequences of suburbanisation, including municipalities where newcomer governance became politically significant and others where representation remained more balanced. They therefore serve as analytically informative rather than statistically representative cases for examining broader processes of suburban political reconfiguration. The aim is exploratory and conceptual: Rather than identifying universal causal mechanisms, the study examines recurring tendencies and the local conditions under which these dynamics may emerge.



Figure 1. Settlements analysed in the Budapest agglomeration.

The empirical material consists of 50 semi-structured interviews conducted in 2017–2019 and 2022–2024 with mayors, deputy mayors, councillors, planning officials, other local decision-makers, and residents. Interviewees were recruited at settlement events and through snowball sampling. Interviews covered the following topics: trajectories into local politics, interpretations of socio-economic change, participatory practices, and narratives of development priorities and planning conflicts. To protect interviewees, settlements have been anonymised, and pseudonyms are used throughout the text.

Because local political conflicts in small municipalities are sensitive, further details on interviewees' occupations, roles, or residential histories could compromise anonymity. Interview excerpts are therefore used mainly to illustrate broader analytical patterns, while respondent protection is prioritised.

A longitudinal dataset on the residential backgrounds of municipal councillors in seven suburban settlements (1994–2024) is used to trace changes in political representation over eight electoral terms. Councillors are classified as original residents, suburban newcomers from Budapest, or rural in-migrants, with the analysis focusing on the first two categories that are most closely linked to middle-class suburbanisation. The dataset is compiled from multiple public and archival sources, and councillor composition is standardised to a uniform council size to enable comparison across municipalities.

Hungarian local electoral systems vary according to settlement size. Municipalities with fewer than 10,000 inhabitants operate under an individual-list electoral system, whereas municipalities above this threshold

use a mixed electoral system combining single-member districts and compensation lists. These institutional differences may influence patterns of political representation and the opportunities for newcomer groups to gain local political influence. Among the examined settlements, only Diósd exceeded the 10,000-inhabitant threshold, and this occurred by the 2019 and 2024 municipal elections.

5. Results

The cases examined in the Budapest agglomeration show that suburban in-migration reshaped local politics in uneven ways. In some municipalities, newcomers gradually became important actors in local councils and planning debates, while in others original residents retained stronger positions or political representation remained more mixed. These differences suggest that newcomer governance depends on how social change intersects with local political trajectories, institutional arrangements, and conflicts over development.

Across the cases, however, a recurring pattern can be observed. Where higher-status newcomers or newcomer-influenced coalitions became politically influential, their growing role was not limited to electoral representation. It also affected how local problems were defined, which development goals were prioritised, and whose interests were treated as legitimate in planning and everyday governance. The following sections examine these dynamics through the changing composition of local councils, the pathways through which some newcomers entered and consolidated local influence, and the development conflicts that followed.

5.1. From Socio-Economic Change to Local Political Influence

The first dimension concerns the uneven conversion of middle-class in-migration and associated forms of economic, cultural, and social capital into formal and informal authority within local governance. The empirical material shows that this conversion was neither automatic nor uniform. Rather, newcomer political influence depended on the timing and intensity of suburbanisation, the social profile of in-migrants, the capacity of newcomers to organise locally, and the extent to which existing local elites could maintain their positions.

5.1.1. Uneven Trajectories of Political Representation Across Seven Settlements

Analysis of councillor composition across seven suburban settlements over three decades reveals marked heterogeneity in the political trajectories of suburban municipalities. The longitudinal data demonstrate that rapid demographic growth does not in itself produce political dominance by suburban newcomers. Instead, representation patterns reflect interactions between migration intensity, settlement characteristics, local electoral dynamics, and the organisational capacity of newcomer groups (Tables 1 and 2).

The data reveal three main trajectories of local political influence. In settlements characterised by early, intensive suburbanisation and strong high-status in-migration, most notably Telki and Páty, newcomers from Budapest established decisive council majorities relatively early. Telki represents the clearest case: After the population increased threefold between 1990 and 2001 and nearly doubled again by 2011, councillors from Budapest reached 60% in 2002–2006, peaked at 100% in 2019–2024, and remained at 86% in the most recent term. Páty followed a similarly consolidated trajectory: Budapest-origin councillors constituted at least two-thirds of the council from 1998 onward, indicating that newcomer presence was translated into stable political representation.

Table 1. Composition of municipal councils.

	Csobánka		Leányfalu		Páty	
Period	Original Resident	From Budapest	Original Resident	From Budapest	Original Resident	From Budapest
1994–1998	50.0%	10.0%	60.0%	40.0%	16.7%	41.7%
1998–2002	41.7%	16.7%	60.0%	30.0%	33.3%	66.7%
2002–2006	33.3%	41.7%	40.0%	50.0%	50.0%	42.9%
2006–2010	25.0%	66.7%	50.0%	50.0%	14.3%	64.3%
2010–2014	28.6%	42.9%	57.1%	42.9%	33.3%	44.4%
2014–2019	42.9%	28.6%	42.9%	42.9%	22.2%	66.7%
2019–2024	28.6%	42.9%	42.9%	42.9%	22.2%	66.7%
2024–2029	14.3%	42.9%	0.0%	57.1%	22.2%	55.5%
	Telki		**Szada**		**Diósd**	
Period	Original Resident	From Budapest	Original Resident	From Budapest	Original Resident	From Budapest
1994–1998	37.5%	25.0%	70.0%	0.0%	91.7%	0.0%
1998–2002	37.5%	37.5%	80.0%	0.0%	58.3%	8.3%
2002–2006	0.0%	60.0%	66.7%	0.0%	71.4%	7.1%
2006–2010	20.0%	70.0%	75.0%	0.0%	57.1%	14.3%
2010–2014	14.3%	85.7%	71.4%	14.3%	44.4%	22.2%
2014–2019	14.3%	57.1%	100.0%	0.0%	22.2%	66.7%
2019–2024	0.0%	100.0%	55.6%	33.3%	54.5%	9.1%
2024–2029	14.3%	85.7%	55.6%	33.3%	66.7%	33.3%
	Délegyháza					
Period	Original Resident	From Budapest				
1994–1998	80.0%	10.0%				
1998–2002	70.0%	20.0%				
2002–2006	60.0%	20.0%				
2006–2010	40.0%	30.0%				
2010–2014	57.1%	28.6%				
2014–2019	57.1%	28.6%				
2019–2024	71.4%	14.3%				
2024–2029	44.5%	22.2%				

Table 2. Population at each census (persons) and population change compared with the previous census.

	1990		2001		2011		2022	
Csobánka	2,040	100.0%	2,840	139.2%	3,153	111.0%	3,562	113.0%
Leányfalu	1,603	100.0%	2,412	150.5%	3,385	140.3%	4,099	121.1%
Páty	4,006	100.0%	5,264	131.4%	7,009	133.1%	8,620	123.0%
Telki	629	100.0%	1,892	300.8%	3,661	193.5%	4,577	125.0%
Szada	2,215	100.0%	3,174	143.3%	4,721	148.7%	6,293	133.3%
Diósd	3,719	100.0%	5,785	155.6%	9,056	156.5%	11,627	128.4%
Délegyháza	1,821	100.0%	2,412	132.5%	3,378	140.0%	5,912	175.0%

A second trajectory is more gradual and less complete. In Csobánka and Leányfalu, both located in the northern sector of the agglomeration, newcomer representation increased over time but did not stabilise into the same level of dominance. Csobánka experienced a rise from 10% Budapest-origin councillors in 1994–1998 to 67% in 2006–2010 but subsequently fluctuated between 29 and 43%. Leányfalu similarly stabilised around 40–50% newcomer representation for most of the observation period. These cases show that newcomer influence can remain partial even under sustained suburban growth.

A third trajectory is characterised by the persistence or recovery of original-resident dominance despite substantial population growth. Szada maintained original-resident majorities through most of the period, even as its population grew by 184% between 1990 and 2022. Diósd also maintained original-resident dominance through 2010–2014, experienced a notable newcomer shift in 2014–2019, and then reverted to original-resident majorities. Délegyháza similarly shows that intensive growth does not necessarily produce newcomer political control. These cases qualify any deterministic account of suburbanisation: Demographic transformation creates opportunities for political influence, but local histories, institutional arrangements, and coalition-building determine whether those opportunities are realised.

Across the cases, political transformation generally lagged socio-economic change. Where newcomers achieved dominance, it usually occurred several electoral cycles after the onset of intensive population growth. This time lag indicates that political influence requires more than residential presence: Newcomers had to acquire local legitimacy, enter public debates, form networks, and convert social status into electoral support. The non-linear patterns in several settlements further show that newcomer governance is reversible and contested rather than a simple demographic effect.

5.1.2. Capital Conversion, Social Positioning, and Legitimacy

Interview data clarify the mechanisms behind these divergent trajectories. Increased newcomer influence rarely occurred through sudden electoral ruptures. More often, newcomers gradually embedded themselves in local public life and benefited from professional status, institutional literacy, and confidence in administrative settings. Interviewees repeatedly described a shift in who was perceived as a competent or legitimate local actor, linking political authority to education, occupation, and lifestyle:

> Mostly, those who have entered the representative body in recent years have actually been able to contribute something in terms of quality, based on their appropriate qualifications, experience and commitment. (Resident, Naphegy)

Such accounts show how socio-economic change altered not only the population of suburban settlements but also the symbolic hierarchy of local political life. In some cases, newcomers were increasingly treated as actors with the skills, networks, and cultural authority required for local decision-making, while long-term residents often experienced a declining capacity to define the settlement's future.

A central mechanism was the conversion of economic and cultural capital into political influence. In several cases, the social profile of incoming residents was shaped by developers, land markets, and municipal actors even before newcomers entered formal politics. Earlier interview material from the 1990s documented selective admission practices by investors, showing that the social selectivity underpinning

newcomer governance was present from the beginning of post-socialist suburbanisation rather than being a recent development:

> Among the buyers of the housing development, we do not find representatives of big entrepreneurs; the dominant group consists of highly qualified managers and executives in well-paid positions in the competitive sector….The managing director assesses whether the potential buyer is able to adapt to the elite residential lifestyle before deciding whether to offer instalment payment. (Developer interview cited in Váradi, 1999)

Municipal actors could also contribute to the same process by informally screening incoming residents and aligning local development with a preferred social profile:

> Before buying a municipal property, the mayor interviewed us to see who wanted to move to the settlement. Only after a successful interview was the property sold. (Resident, Naphegy)

These practices indicate that later political influence was prefigured by socially selective residential strategies. Newcomer authority was therefore not only acquired after settlement; it was made more likely by the production of an affluent and institutionally confident local population whose members could later claim competence, responsibility, and legitimacy in public affairs.

Legitimacy claims were closely tied to the protection of local character. The authority of newcomer-influenced coalitions was often framed through narratives of competence, engagement, and responsibility, but long-term residents experienced these claims as a form of symbolic exclusion. Their historical attachment and practical knowledge of the settlement carried decreasing political weight as local debates became organised around middle-class visions of liveability and residential quality:

> After the regime change [1989], our village had the reputation that rich people moved here. That's basically what I knew about it. (Resident, Naphegy)

> That's not what I signed up for. When we moved here, it was a quiet village where even a bird wouldn't pass. If a car went down our street, I knew it was coming to us. And then suddenly they inflated it. (Resident, Naphegy)

High residential turnover further supported the consolidation of socially selective local governance in some cases. Continuous in- and out-migration sustained the elite profile of certain settlements while weakening stable cross-generational ties that might otherwise have counterbalanced political concentration:

> Honestly, this is a transit house. Everyone comes, then leaves. I don't think people live here for very long. (Resident, Naphegy)

> Those people who mattered for us disappeared, and they were not reproduced. That's why we were here. (Resident, Naphegy)

Taken together, the council data and interviews show local political influence as a cumulative process: Selective in-migration, capital conversion, lifestyle-based legitimacy, and weakening older local networks created conditions under which some higher-status newcomers could gain authority. This authority then became the basis for the second dimension of newcomer governance: the redirection of development agendas.

5.2. Agenda Redirection: From Growth and Service Provision to Quality-of-Life Governance

Agenda redirection refers to the reorientation of planning and policy priorities towards quality-of-life concerns such as environmental protection, development control, tranquillity, and residential order. These goals were usually presented as universal interests of the settlement and could express genuine concerns about the effects of rapid growth. In the examined cases, however, they often reflected the preferences of organised higher-status groups and narrowed the range of development claims considered legitimate. The empirical material shows a shift from earlier growth- and supply-driven priorities towards selective restriction, anti-densification narratives, and the defence of a particular middle-class residential ideal.

5.2.1. Preserving Tranquillity, Low Density, and Residential Status

Before the rise of exclusionary residential agendas, local development in suburban municipalities was largely shaped by the need to address housing shortages, extend basic infrastructure, and deliver visible project-based investments inherited from late socialist and early post-socialist planning logics. Contemporary quality-of-life governance appeared to continue these concerns by emphasising liveability, environmental protection, and local character. Yet in the examined cases it often marked a partial rupture: Planning was redirected from expansion and service provision towards restriction, exclusivity, and the defence of a narrow residential status.

In several settlements, development agendas increasingly centred on preserving an imagined rural or semi-rural character: low density, low traffic, and natural surroundings, but without the agricultural or industrial activities historically associated with rural settlements. Interviewees described how planning rhetoric shifted from growth and service expansion towards restraint, framed as the protection of tranquillity, nature, and liveability:

> From 2014 onwards, the official position was always about preserving the tranquillity and the village-like character—at least at the level of words. (Resident, Sasliget)

The narrative that the settlement was already "full" became a political instrument. In Sasliget, it appeared as an explicit campaign message in the early 2000s; by 2023, similar exclusionary logics had materialised as formal construction restrictions in other suburban municipalities as well:

> Sasliget is full—became a campaign message. (Resident, Sasliget)

These discursive shifts did not necessarily halt development. Rather, they redefined acceptable development by judging projects according to their perceived effects on residential calm, environmental quality, and property-related status. Housing, services, and infrastructure were thus increasingly filtered through a particular vision of what the settlement should remain.

5.2.2. Selective Infrastructure and the Management of Suburban Side Effects

The redirection of agendas was especially visible in the treatment of infrastructure and services. Interviewees repeatedly pointed to a paradox: Although quality of life was prioritised rhetorically, everyday services and basic infrastructure often lagged population growth. The lack of local services was not simply an administrative failure; it was also connected to resistance against developments associated with densification, traffic, or social diversification:

> In terms of services, the settlement is extremely weak. There is basically only one grocery shop. No drugstore, no other shops, and even government services are not available locally. (Resident, Sasliget)

Despite these deficits, service expansion was not always supported by higher-status residents, including some newcomers, who associated it with unwanted urbanisation and the erosion of exclusivity:

> High-status groups are openly hostile to the development of services in the village, because they want to preserve its exclusive character. (Local expert, Naphegy)

When infrastructure investments did occur, they were often framed as environmentally responsible or community-oriented interventions, but their scope was limited to managing the side effects of an already suburban lifestyle. Local car-sharing initiatives or P+R (park and ride) facilities, for example, addressed traffic and environmental concerns without challenging car dependence, low density, or the limited service base of the settlement:

> We see the convoys of cars leaving the settlement every morning….This is why the municipality introduced the free local car-sharing service. (Resident, Sasliget)

Agenda redirection therefore did not simply replace development with non-development. It selected certain investments while excluding others. Projects compatible with the residential ideal of tranquillity, environmental responsibility, and social exclusivity could be legitimated, whereas services, density, and social infrastructure needed by less mobile or lower-status residents remained politically weaker claims.

5.3. Institutional Embedding: Participation, Regulation, and Exclusionary Outcomes

Institutional embedding refers to the ways in which newcomer-influenced priorities become stabilised through formal and informal arrangements that can reproduce the influence of already advantaged groups. The findings show that once particular coalitions gained political authority and redirected agendas, their priorities were sustained through participatory practices, fiscal choices, regulatory restrictions, and everyday narratives of legitimate belonging. This third dimension links local political influence and agenda redirection to longer-term outcomes: symbolic exclusion, unequal resource allocation, and reduced prospects for socially inclusive and metropolitan-scale sustainable development.

5.3.1. Participatory Mechanisms and Unequal Voice

Participation played an ambivalent role in the examined municipalities. Formally, participatory arenas and online public debates were open to residents. In practice, however, they often amplified the voices of those with greater time, institutional literacy, communication skills, and confidence in public conflict. This made participation a mechanism through which the priorities of more active and resourceful residents could appear as the general interest of the settlement.

Long-term residents frequently reported declining opportunities for meaningful participation. Local debates increasingly shifted to online platforms, where polarisation and personal attacks discouraged less confident participants and narrowed the scope of deliberation:

> On Facebook, the tone has become increasingly radical, often personal and insulting. (Resident, Sasliget)

This dynamic institutionalised unequal voice without necessarily requiring formal exclusion. Those best positioned to speak in public forums could define the problems of growth—traffic, density, noise, loss of village character—while other concerns such as affordability, access to services, or the needs of older and lower-status residents became less visible.

5.3.2. Fiscal and Regulatory Practices as Instruments of Social Closure

The embedding of newcomer-influenced governance was also visible in fiscal and regulatory decisions. In several settlements, interviewees linked rising local taxes to the pressures generated by continuous in-migration, perceiving these burdens as disproportionate and unjust. Although tax increases affected all residents formally, their consequences were socially uneven because decision-making was dominated by those least constrained by rising costs:

> In the 2000s, the property tax was 400 forints per square metre; by 2020, it was well over 1,000. People who have lived here for a long time feel this happened because of the newcomers. (Resident, Sasliget)

Regulatory practices had a similar effect. Anti-growth rhetoric, construction restrictions, and selective development controls were justified through environmental and community narratives, but interviewees also described a disconnect between official restraint and informal development interests:

> Everyone complains about newcomers—even those who moved in recently. But when someone wants to buy a plot, they [the local government] sell it happily a few months later. (Resident, Sasliget)

These examples show how institutional embedding works through selective application rather than simple prohibition. Formal restrictions and informal flexibility can coexist, privileging actors with better access to information, networks, and local decision-makers. As a result, governance practices can reinforce the social closure generated by unequal political influence and agenda redirection.

5.3.3. Marginalisation of Long-Term Residents and Metropolitan Consequences

Across settlements, long-term residents described how their everyday concerns—affordability, access to services, and the preservation of older ways of life—were increasingly sidelined. Several respondents interpreted development decisions as prioritising high-status residential separation over broader social sustainability:

> The only political rationale was high-status self-segregation. (Local expert, Naphegy)

The marginalisation of long-term residents was therefore not only material but also symbolic. Their settlement knowledge, memories, and needs were displaced by a newer image of the locality as a protected residential environment for higher-status households. This produced feelings of exclusion even when direct displacement did not occur.

Institutional embedding also had consequences beyond individual settlements. By privileging low-density residential order, anti-densification politics, and selective service provision, newcomer-influenced governance could weaken the capacity of suburban municipalities to contribute to metropolitan-scale solutions. Affordable housing, effective public transport, service accessibility, and coordinated land-use planning were de-emphasised in favour of localised protection of residential status. Thus, the outcomes analysed here were not limited to conflicts between newcomers and long-term residents; they also constrained more inclusive and sustainable development across the Budapest agglomeration.

Overall, the results demonstrate the interdependence of the three dimensions of newcomer governance. Uneven political influence explains how some newcomers obtained authority; agenda redirection shows how that influence reshaped planning priorities; and institutional embedding reveals how these priorities became stabilised in participatory, fiscal, and regulatory practices. This sequence also explains the central contradiction identified in the article: Local democratic engagement and quality-of-life planning can produce exclusionary and socially unsustainable outcomes when participation and representation are structured by unequal access to resources and political voice.

6. Discussion and Conclusion

In this article, we analysed cases in which suburbanisation was shaped not only by market processes, planning systems, or demographic growth, but also by local political reconfiguration. The findings show that, in the Hungarian context of strong municipal autonomy, weak regional-level coordination, fiscal constraints, and informalised governance, some newcomer-led or newcomer-influenced coalitions were able to become politically consequential in suburban municipalities (I. P. Kovács, 2020; Olt & Lepeltier-Kutasi, 2018; Stanilov & Sýkora, 2014). This does not mean that newcomers as a group are inherently exclusionary or self-interested. Rather, it shows how particular social groups, when advantaged by education, income, institutional familiarity, and local networks, can gain disproportionate influence over planning and development debates.

In the cases examined, some influential coalitions sought to preserve the image of the settlement that had made suburban relocation attractive: a low-intensity residential environment with tranquillity, green space,

and limited urban functions. These aspirations were often framed as quality-of-life and environmental goals, and such concerns should not be dismissed as illegitimate. The problem arises when these goals are translated into selective development control, NIMBYist politics, and the neglect of the needs of earlier, lower socio-economic status residents (Tissot, 2015; A. Walks, 2013). These cases therefore show how local democracy, participation in local issues, and deliberation are not by themselves sufficient to ensure just representation of social, economic, and political interests, especially when participation and representation are biased toward higher-status groups (Fung, 2006; Olt & Lepeltier-Kutasi, 2018; Purcell, 2006; Silver et al., 2010).

Yet, as our data show, newcomer influence is far from necessary or uniform. Simple deterministic logics, such as the idea that higher status and more disposable income mean unconstrained access to political power, do not apply. The earlier development trajectory of the settlement, the size of the village or city, the social composition of newcomers, the strength of established local elites, and the motivation for moving (for example, affordability versus an idealised image of a certain way of life) all shape whether newcomer governance emerges. Further research is needed to explain how and why, in certain contexts, newcomer-influenced governance becomes dominant, while in other cases the political representation of earlier residents remains stronger, or representation becomes more balanced (Stanilov & Sýkora, 2014; Sýkora & Bouzarovski, 2012).

The exclusionary, anti-investment, and anti-development logic found in some examined settlements can decrease quality of life and contribute to high residential turnover. However, these outcomes should be understood as the result of specific coalitions, institutional conditions, and planning conflicts rather than as the general motivation of newcomers. In these cases, the imagined ideal way of life for certain high-status families with small children, and the perceived requirements of this imagined way of life, can be more important than the simple financial logic of land rent (Benson & Jackson, 2013; R. A. Walks & Maaranen, 2008). The article also identifies a specific form of symbolic displacement, in which, beyond economic pressures such as affordability of real estate and higher taxes, the loss of political representation adds a further dimension of feeling out of place, excluded, or invaded (Fainstein, 2010; Tissot, 2015).

These dynamics also make cooperation among settlements more difficult and hinder metropolitan-level inclusive and sustainable development. The issue is therefore not a moral opposition between newcomers and long-term residents, but a governance problem: When one socially advantaged segment becomes disproportionately influential, issues such as affordable housing, effective transport connections, accessible services, and coordinated land-use planning can be de-emphasised. In the long run, this may harm long-term residents, newcomers, and the wider metropolitan society alike. The article therefore points to the need for stronger metropolitan coordination and more inclusive local institutions. Yet, in the Hungarian institutional context, there are few political or planning tools to counteract such disproportionate representation of socially advantaged residents in local decision-making (I. P. Kovács, 2020; Olt & Lepeltier-Kutasi, 2018).

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Conflict of Interests

The authors declare no conflict of interests.

Data Availability

The data used in this study are available from the corresponding author upon reasonable request.

LLMs Disclosure

Large language models (Grammarly, Claude.ai) were used solely for language editing and proofreading, as well as for formatting the reference list. They were not used for data analysis, interpretation of the results, or the generation of scientific content.

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