

Article

Experiences of Using Urban Growth Agreements to Influence Local Land Use Policy and Stop Sprawl

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Abstract: Urban growth agreements are key tools for achieving the goal of zero growth in passenger road traffic volumes in Norwegian metropolitan areas. Agreements are negotiated in multi-level and cross-sectoral processes where local politicians meet strong expectations and incentives to alter their land use policies and stop sprawl. This paper analyses the effectiveness of the policy instrument in influencing local land use policy, whereby key issues were raised in the negotiations concerning land use, local politicians' reflections on changing their policies and why they were reluctant to stop sprawl. This research was designed as a comparative case study with three negotiation processes as cases. Data were collected through document studies and interviews with 36 professionals and politicians. Key issues in the negotiations over land use regarded principles of authority in land use planning and decision-making and substantial disagreements concerning land use policies. Local politicians saw sprawl as necessary for attaining local objectives. Conflicting framings of the policy issue, namely 'stopping sprawl to achieve zero traffic growth' and 'continuing sprawl to attain local objectives', explained the policy controversy that made discourse difficult. The resulting agreements did not directly influence local land use policies but might have an effect in the longer term.

Keywords: sustainable land use policy; local politicians; municipal self-governance; sprawl; urban growth agreements; land use negotiations; framing; sustainable mobility

Academic Editors: Vida Maliene, Andreas Hendricks, Armands Auziņš and Francesco Botticini

Received: 10 January 2025

Revised: 30 January 2025

Accepted: 5 February 2025

Published: 6 February 2025

Citation: Tennøy, A.; Hanssen, G.S.; Leknes, E. Experiences of Using Urban Growth Agreements to Influence Local Land Use Policy and Stop Sprawl. *Land* **2025**, *14*, 333. <https://doi.org/10.3390/land14020333>

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1. Introduction

1.1. Sprawl

This paper studies policy controversies concerning sprawl and why local politicians are reluctant to stop sprawl. It does so through an examination of negotiations over land use issues in urban growth agreements in three Norwegian metropolitan areas and the potential effectiveness of this policy instrument in influencing local land use policy and reducing sprawl. Sprawl causes negative consequences for the environment, the economy and society. They include increased CO₂ emissions, land take, traffic volumes and costs for social and physical infrastructure, as well as reduced accessibility to activities, active transport and vitality of urban centres, as documented in studies in cities across the world [1–10]. The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services [11] and the Intergovernmental Panel on Climate Change [12] have stated that

sprawl contributes to the global climate and nature crises, and it makes several of the United Nations' [13] sustainability goals hard to reach.

There is no consensus on a definition of the term 'sprawl' [10,14]. In this paper, sprawl describes the processes where land use development takes place in localisations situated relatively distant from the main city centre or a centre offering daily services and excellent public transport services to the main city, with a relatively low overall population density and usually on green land.

The OECD [9], the European Environment Agency [15] and the Norwegian Environment Directorate [16] have presented documentation that sprawl and land take continue, and they have called for better regulation and management of land use development to stop this trend. In most European countries, including Norway, municipal councils make decisions concerning land use policy, plans and development [9,17–19], meaning that sprawl is approved by local politicians. Land use plans adopted by Norwegian municipalities are required to be in accordance with regional plans and with laws, white papers, expectations and central government planning obligations by the Ministry of Local Government and Regional Development [18,20–22], which aim to reduce sprawl. National and regional authorities have measures to overrule municipal decisions to enforce this, like formal objections, but national and regional politicians respect municipal autonomy in land use issues and are reluctant to use the available instruments [23,24].

Several countries have attempted to stop sprawl through various initiatives and policy instruments. Previous studies have attributed the lack of goal achievement regarding stopping sprawl and attaining sustainability goals to the complexity of the planning and decision-making processes, spanning multiple levels, sectors and geographical areas, as well as to goal conflicts and the lack of accountability, financial incitements and long-term perspectives [1,24–40]. The explanations often imply a lack of political will to prioritise sustainability goals.

1.2. Urban Growth Agreements

In 2017, the Norwegian government introduced the policy instrument of 'urban growth agreements' in the national Transport Plan as a key tool for steering land use and transport development in directions contributing to attaining the so-called zero-growth objective [41]. This goal states that increasing transport demand caused by rapid population growth in the most populous metropolitan areas will not cause growth in passenger road traffic volumes (total vehicle kilometres travelled by private cars). The objective was introduced by the Ministry of Local Government and Regional Development in 2012 [42] and it has been upheld as an important objective by the Ministry of Transport in later national transport plans [41,43–45], as well as in other relevant national, regional and municipal policy documents.

Urban growth agreements are a further development of the former 'urban environment agreements' introduced in 2014 [43]. The former urban environment agreements were collaborations between the city municipalities, the county authorities and the Norwegian Public Roads Administration, and they were mainly concerned with developing and financing sustainable transport measures. The subsequent urban growth agreements developed from this transport package approach a more integrated land use and mobility planning approach. Land use planning was formally included in the agreements, and suburban municipalities neighbouring the core cities were invited as partners, together with the county governors and the railway authorities. These changes were motivated by the understanding that car-dependent sprawl in the suburban municipalities bordering the cities is an important source of traffic growth in metropolitan areas and that these municipalities need to stop or reduce sprawl to attain the zero-growth objective. The influence

of land use development on car dependency and traffic volumes is well-documented in cities across the world [9,10,46–50] and in Norway [51–55].

Through urban growth agreements, national, regional and municipal authorities commit to developing and financing sustainable transport solutions and to ensure land use development that reduces transport demand and stimulates shifts from car usage to sustainable modes of transport [30,40,45,56–58]. The responsibilities and contributions of the different stakeholders are negotiated in processes where the relevant authorities across levels, sectors and geographical areas are actively involved in developing strategies and measures to attain the zero-growth objective. All involved partners sign the agreements and have responsibilities for their implementation over the following 10 years. There are strong financial incentives related to the national financing (a combination of state grants and road-tolling) of more efficient and sustainable transport systems in the metropolitan areas if local and regional partners contribute to attaining the objective. This includes the state financing 70% of the annual costs in the development of large public transport projects in the metropolitan areas [45].

The Norwegian urban growth agreements share similarities with agreements aimed at coordinating land use and transport development to attain defined goals in other European countries, often discussed as ‘contractual agreements’, as discussed in previous papers [30,58–60]. These are political or juridical agreements between public authorities, which commit to collaborating to attain defined goals and involve financial incentives, and the agreements are reached through different forms of negotiations. The Norwegian urban growth agreements stand out by aiming to attain only one defined goal (the zero-growth objective) by formally including text about land use policy, including neighbour municipalities to the cities as partners (as do the Finnish land use, housing and transport (MAL) agreements [59]) and the state financing high shares of public transport projects.

1.3. Aims, Novelty and Contributions to the Literature and to Practice

In this paper, urban growth agreements are studied as an innovative policy instrument through which national and regional authorities aim to influence suburban municipalities to alter their land use policies and stop or reduce sprawl to attain zero growth in traffic volumes. Local politicians meet strong expectations and incentives to change their land use policies and stop sprawl during the negotiation process, and the urban growth agreement negotiations are understood as providing excellent cases for studying how local politicians respond to this [61].

We studied urban growth agreement negotiations over land use issues in three Norwegian metropolitan areas with a twofold aim. One was to examine the potential effectiveness of the policy instrument in influencing local land use policy and contributing to reducing sprawl. The other was to develop novel insights regarding policy controversies concerning sprawl as well as deeper and more nuanced understandings of how local politicians reflect upon their land use policies and why they are reluctant to stop sprawl.

This paper is novel by, to our knowledge, being the first to study the negotiations over land use issues in the Norwegian urban growth agreements and examine their potential effectiveness in influencing local land use policy, although other papers have studied these agreements from different perspectives [30,40,56–58]. The paper is also novel in using the negotiations over land use issues as cases to gain new insights into policy controversies concerning sprawl, how local politicians reflect upon their land use policies and why they are reluctant to stop sprawl. We have not found studies of contractual agreements in other countries concentrating on these issues.

This paper contributes to the current literature in several ways. First, the paper contributes nuanced and context-related descriptions and analyses of how situational and contextual factors influenced the level of challenges in the different negotiations, what

became the key issues in negotiations over land use, how these issues were solved and what influence the resulting urban growth agreements might have on local land use policy. Such analyses are rare, and the results contribute relevant insights and understanding for those designing similar policy instruments or instruments that attain the same goals, mainly in countries with land use policy frameworks comparable to those of Norway. Second, the paper contributes novel and nuanced insights into local politicians' reflections on their land use policies and why they were reluctant to change their land use policy and stop sprawl. This makes a significant contribution to the sparse literature analysing land use planning and policy from the perspective of local politicians. Even though a lack of political will has been identified as an important explanation as to why sustainability goals are not attained, few studies have enquired deeper into local politicians' understandings of and reflections on land use policies resulting in sprawl. This might be essential insights for local professionals and others striving to facilitate more sustainable land use policies. Third, the cases were analysed from a frame-critical perspective inspired by Rein and Schön [62] to contribute to an improved understanding of the policy controversies concerning sustainable land use development and how this can be attained.

Regarding this, the paper responds to the call from Marsden and Reardon [63], who identified a strong need for more research concerning how and why we have the policies we have today and why other policies have not been chosen as a foundation for discussing how necessary policy transitions might be achieved. They called for more studies of real-world planning and decision-making processes that include dialogue with both professionals and politicians and that engage with current governance issues and debates. This is exactly what this paper contributes.

2. Materials and Methods

This research was designed as a comparative case study, corresponding to qualitative research. This research design was chosen to allow for investigating the contemporary phenomena in their real-life contexts and engage with current governance issues in dialogue with the involved actors [61,63–65]. Each case was analysed internally to develop context-related descriptions and explanations, and these analyses were used as the basis for cross-case analyses aimed at explanation building and generalisation [65,66].

The cases were processes related to negotiations of urban growth agreements in three of the four Norwegian metropolitan areas engaged in urban growth agreements at the time, namely the Bergen, Trondheim and Nord-Jæren metropolitan areas. The far more populous Oslo metropolitan area, which was the fourth potential case, was understood as less comparable to the three selected cases and was excluded due to limited resources. After Oslo, these are the most populous metropolitan areas and the most important economic and administrative centres in Norway, and they are important university cities. They are 'the city' for large regions, and they offer most amenities and activities. Table 1 displays key data about the three metropolitan areas.

Table 1. Key characteristics of the metropolitan areas.

| | Bergen Urban Area | Trondheim Urban Area | Nord-Jæren Urban Area |
|--|---|--|---|
| Urban area structure | Monocentric, with Bergen as the only larger city in the metropolitan area | Monocentric, with Trondheim as the only larger city in the metropolitan area | Polycentric, with Stavanger as the largest city in the metropolitan area and Sandnes as a twin city |
| Population (2021 ¹) in municipalities involved in the negotiations in the metropolitan areas | Bergen (285,601), Øygarden (38,664), Askøy (29,594), Alver (29,337), Bjørnafjorden (25,094) | Trondheim (207,595), Stjørdal (24,283), Melhus (16,949), Malvik (14,334) | Stavanger (144,147), Sandnes (80,450), Sola (27,547), Randaberg (11,315) |

| | | | |
|--|---|--|--|
| Percentage of employed inhabitants commuting to the core city (2021 ²) | Øygarden (36%), Askøy (47%), Alver (28%), Bjørnafjorden (39%) | Stjørdal (22%), Melhus (48%), Malvik (58%) | Sandnes (28%), Sola (35%), Randaberg (44%) |
|--|---|--|--|

¹ Statistics Norway [67]; ² Statistics Norway [68].

Data were collected through document studies and interviews. The documents studied were urban growth agreements, regional and intermunicipal plans and relevant municipal planning documents. Documents were studied to provide background understanding before the interviews and retrieve written information, including the actual text in agreements and relevant policy documents. The interviews were conducted in two rounds. One concentrated on the negotiations over land use and the other on the local democratic anchoring and follow-up of the urban growth agreements (see interview guides in Appendix A). A total of 36 in-depth, semi-structured interviews with key actors in the negotiations were conducted: 11 with municipal politicians, 16 with high-level municipal professionals and 9 with representatives from regional and national authorities (Norwegian Public Roads Administration, the county governors, the county administrations and the county councils—see the list of interviewees in Appendix B). Participants were selected because they had been directly involved in the negotiations. The aim was to interview political negotiation leaders (normally mayors) and the administrative staff supporting them in all involved municipalities, but this was not achievable. Some political negotiation leaders were no longer in office after the elections or they were unavailable for other reasons, and we interviewed 9 out of the 16 political negotiation leaders that had been involved in the negotiations. In some municipalities, politicians in opposition were also interviewed. All but two of the administrative staff supporting the politicians in the negotiations were available for interviews. The number and mix of interviewees were understood as sufficient to provide a balanced and nuanced understanding of the cases and a deeper understanding of how the municipal representatives experienced the negotiations and the agreements. Two interviews were conducted face-to-face, but most interviews were conducted via video link due to the pandemic or long travel distances in the period from October 2019 to January 2021. The interviews concerned complex issues and lasted between 1 and 2 h. The interviews were systematically summarised by the researchers in accordance with the structure of the interview guides, and the interviewees were asked to read the summaries and correct them if necessary.

In the analyses of each case, the answers from different interviewees to each interview question were organised in a table. The researchers used this as a basis for writing nuanced and context-related answers to each question, which also displayed differences and similarities in the experiences and understandings of the different actors. The three cases were conducted and analysed by different teams. When analysing findings across cases, the lead researchers sat together to critically discuss, compare and interpret findings, with the aim of answering the research questions in stringent and nuanced ways and understanding and explaining the differences between the cases.

3. Results

3.1. Organisation and Implementation of the Negotiation Processes

The urban growth agreement negotiation processes studied here took place between May 2018 and December 2019. The aim was to reach agreements on how the national, regional and municipal authorities would contribute to achieving the zero-growth objective in the three metropolitan areas. All processes concerned renegotiations of existing agreements, but this was the first time neighbouring municipalities of Bergen and Trondheim participated in negotiations and the first time land use issues would be formally included in the agreement texts. High-level representatives from the Norwegian Public

Roads Administration, representing the Ministry of Transport, led the negotiation committees [69–71]. The committees also included administrative representatives from the county governors' offices, representing the Ministry of Local Government and Regional Development in land use matters and the Railway directorate, as well as the mayors or deputy mayors of the counties and municipalities involved, supported by high-level administrative personnel. The negotiations were carried out through a series of 12–14 meetings in each case, where pre-prepared texts were discussed, negotiated and adjusted. Negotiation meetings were open to all, including the press, in the Bergen and Nord-Jæren areas, while they were closed in the Trondheim area. The final agreements were signed by the above-mentioned authorities, and they were formally adopted by the municipal and county councils by ordinary procedures [69–71].

3.2. Situational and Contextual Factors Influencing Negotiations

Interviewees across cases, governance levels and roles described the negotiations concerning the formulation of the agreements on how the municipalities would contribute to achieving the zero-growth objective through their land use policies as tough and difficult. There were, however, clear differences in the levels of challenges, frustration and time consumed between the cases, mainly due to situational and contextual factors not directly related to the negotiations.

In the Bergen and Nord-Jæren areas, the negotiations took place over a long period of time, with interruptions, disagreements, conflicts and uncertainty. One explanation for this was that the negotiations coincided with municipal elections. Discussions regarding road-tolling, negotiated as part of the urban growth agreements, became a hot and highly disputed topic in the election campaigns in both metropolitan areas. This aggravated the tensions and conflict levels in the urban growth agreement negotiations in general, including those regarding land use issues. In the Bergen area, there were also parallel processes with municipal mergers, which increased uncertainties among municipalities and made the negotiation procedures more complicated than in the other cases. This resulted in a highly time-consuming process for those involved. Negotiations in the Trondheim area started ahead of the others, and those involved said they worked to ensure a fast and efficient process to finish before the election campaigns started.

Differences between negotiations were also explained by the levels of underlying tensions and disagreements and how these had been dealt with in the latest planning processes regarding regional and intermunicipal plans (see details in Table 2). The regional plans define overall provisions and guidelines that municipal plans need to be in accordance with, and hence they influence what municipal authorities can approve and decide in municipal plans. The regional plan processes were meant to facilitate arenas for discussions and vision building concerning how land use and transport systems in the metropolitan areas ought to be developed to achieve the zero-growth objective, in preparation for the urban growth agreement negotiations. In the Bergen and Nord-Jæren areas, the county administrations led comprehensive, thorough and long-lasting processes, where the involvement of affected municipalities was strongly emphasised. The resulting plans were approved by the county councils [72–74]. In the Trondheim area, the mayor of Trondheim led the process in which 10 municipalities (including the four involved in the urban growth agreement negotiations) together with the county administration developed a more strategic and less detailed intermunicipal plan that was adopted by all municipal councils and the county council in parallel [75].

Results of cross-case analyses revealed that the comprehensive processes related to regional plans in the Bergen and Nord-Jæren areas had not resulted in common visions and understandings among all municipalities. Disagreements included definitions of the centre structure, formulations stating that new development should mainly take place in

and close to defined centres, the postponement and rezoning of some already zoned development areas and principles for parking requirements. The processes also displayed tensions between main city municipalities and (some) neighbouring municipalities with respect to land use policies. These tensions and disagreements were not resolved in the regional planning processes, and they were strongly present in the urban growth agreement negotiations. Several municipalities had not revised their municipal master plans during the period between the adoption of the regional plan and the negotiations, meaning that the local politicians had not discussed the implications of the regional plan for their land use policy.

In contrast, the intermunicipal plan in the Trondheim area seemed to be well-anchored among the municipalities and to have facilitated common vision building, despite a rather short and shallow process. All four municipalities involved in the negotiations had revised or were in the final stages of revising their municipal land use master plans, and interviewees said these plans were in accordance with the intermunicipal plan. The positive experiences from this process contributed to trust and cooperation among the municipalities in the negotiations of the urban growth agreement. The municipal interviewees talked about the intermunicipal plan as their common strategy for developing the metropolitan area, and they saw the urban growth agreements as a way of inviting national and regional authorities to help implement this strategy. The mayor of Trondheim explained that this was particularly due to the bottom-up approach to the process. She said that a regional plan made by the county administration and approved by the county council could not have resulted in the same level of local ownership and trust.

Interviewees in all three cases explained that most municipalities were inexperienced in this type of negotiation and that many had not prepared properly. The municipal negotiators had not made the necessary internal clarifications on their mandate, and they had not familiarised themselves with the urban growth agreement system, resulting in greater time usage and higher levels of uncertainty. In the trusting environment of the Trondheim area, the Trondheim municipality initiated collaboration between the municipalities and took on the responsibility of explaining how the system worked and suggesting common strategies. This relieved the smaller municipalities. Due to the tensions and disagreements described above, Bergen and Stavanger municipalities could not take on the same role.

Informants in all three cases explained that the complexity of the steering system and the financial structure of the urban growth agreements caused uncertainty in the negotiations and made it difficult to anchor the agreements locally. This was also referred to as a democratic problem because few elected representatives could make themselves familiar with how the system worked. Administrative staff in all three metropolitan areas said they spent a lot of time comprehending the system and explaining it to the politicians. This was more challenging for the smaller municipalities with smaller administrations than for the larger municipalities.

Table 2. Overview of regional and intermunicipal plans and planning processes in the metropolitan areas.

| | Bergen Metropolitan Area | Trondheim Metropolitan Area | Nord-Jæren Metropolitan Area |
|-----------|--|---|---|
| Plan type | Regional plan for land use and transport in the Bergen area, regional plan for attractive centres in Hordaland | Intermunicipal plan for the Trondheim region (10 municipalities, including the four municipal partners in the urban growth agreement) | Regional plan for land use and transport in Jæren |

| | | | |
|---|---|---|---|
| Process leadership (PL), decision authority | County administration (PL), county council | Municipalities (Trondheim PL), city councils and county council | County administration (PL), county council |
| Characteristics of the process | Long and thorough process emphasising involvement of affected municipalities | Not much process but more than in the previous plan | Long and thorough process emphasising involvement of affected municipalities |
| Level of detail | Different opinions concerning whether the plan is too detailed | Not so detailed | Detailed; a long tradition of detailed plans |
| Level and content of conflicts | Conflicts regarding land use development, disagreements concerning what the plans imply | No substantial conflicts between municipalities | Conflicts regarding land use development, plan adopted against the will of Sandnes Municipality |
| Anchorage of regional plan | Weak anchorage; most municipalities had not revised their municipal land use master plans since the adoption of the regional plan | Strong anchorage and legitimacy, presented as a joint vision they have developed together | Strong anchorage and legitimacy in some municipalities and weak anchorage in others |

3.3. Key Issues in Negotiations over Land Use

During negotiations over land use, the county governors (representing the state in land use matters) in all three cases suggested including text in the agreements that would commit the municipalities to stopping or reducing sprawl. This concerned, for instance, drawing a 'green line' defining the urban growth boundaries, stating that a certain percentage of all new development should take place within already built-up areas and rezoning unbuilt areas approved for development in municipal master plans to areas where development is not allowed. These suggestions were promptly and sternly dismissed by the municipal negotiators with reference to two key issues.

One concerned the principles of land use planning and decision making and municipal self-government in land use issues. According to the Norwegian Planning and Building Act (PBA) §3-2, the municipal councils make decisions concerning land use within the frames, guidelines and provisions defined by the government and in accordance with regional plans. The mayors could therefore not, in the role of negotiators, accept text in the urban growth agreements that conflicted with the formally adopted municipal master plans, for instance, drawing a 'green line' defining the urban growth boundaries. Changes in their land use policy, as suggested in the negotiations, would need to be discussed and decided in processes required by the PBA, and changes would be adopted only if approved by a majority of the municipal council. Furthermore, agreement texts could not delimit the authority of future municipal councils to decide on different land use policies. The municipal negotiators also found it unnecessary to introduce another layer of requirements and provisions concerning land use planning, in addition to the PBA, governmental planning provisions and regional plans. Across the three cases, interviewees said that this would cause more bureaucracy, uncertainty and confusion. They were particularly worried that national and regional authorities would use texts of the urban growth agreements as arguments for raising formal objections to municipal land use plans (PBA §5-4), and there were lengthy discussions concerning whether this would be the case in the Bergen and Trondheim cases. Municipal negotiators suggested using texts from existing central government planning provisions and regional and intermunicipal plans in the agreements instead of introducing new texts and requirements in the agreements.

Substantial disagreements about land use policies presented the other key issue. The neighbouring municipalities of Bergen wanted to continue their current land use policies

involving car-dependent sprawl, and they would not agree to restrict land use development in the less central municipalities that were in the process of being merged with municipalities located closer to Bergen. In the Nord-Jæren area, one municipality wanted to continue large-scale car-dependent greenfield developments, while the other three municipalities acknowledged the necessity of reducing sprawl. Neighbouring municipalities of Trondheim were clear that the agreements would not influence their current land use policies. These discussions and tensions were largely the same as those found in the processes regarding intermunicipal and regional plans. Substantial disagreements concerning land use policies were hardly surprising since the main reason for including land use and neighbouring municipalities of the cities in the urban growth agreements was the need to make these municipalities alter their land use policies and reduce car-dependent sprawl.

Leading municipal politicians and professionals also criticised national authorities for acting in ways that facilitated sprawl and made the zero-growth objective harder to attain, as well as reducing the legitimacy of the agreements. Almost all municipal interviewees in the Trondheim area mentioned that national railway authorities cordon off the land around railway stations in their main centres, thereby hindering densification close to these stations, which is crucial for reducing sprawl and attaining the zero-growth objective. They said there had been a dialogue concerning this over a long period of time, and that this had been an important issue in discussions concerning land use policy in the negotiations. This was confirmed by regional and national authority interviewees. Interviewees in the Nord-Jæren area said that the relocation of the state hospital to a car-dependent area outside the city, despite strong protests from Stavanger, would induce car-dependent sprawl and traffic growth and make the busway financed through the urban growth agreement more expensive to build. The practice of locating state enterprises and workplaces with many employees and visitors in car-dependent locations is well documented [76]. It has been strongly criticised by the larger cities over time, and this practice was also criticised by several interviewees in the Bergen and Trondheim areas. Municipal interviewees from all three cases said national road authorities increased the pressure for sprawl and the competitiveness of the private car by expanding the main road capacity between the cities and their hinterland. They pointed to the large road capacity expansion projects under planning or construction in the Bergen and Trondheim metropolitan areas as problematic in terms of attaining the zero-growth objective. Municipalities in the Trondheim area had long been clear that the rail services should be improved first and that road capacity expansion might not be necessary. Across the three cases, municipal actors had insisted that the urban growth agreements included text committing national authorities to act in ways that would help to attain the zero-growth objective.

3.4. How Key Issues Were Solved in the Resulting Urban Growth Agreements

In all three cases, the *principal issues* concerning land use planning and decision-making were solved by the national and regional negotiation partners accepting the municipalities' understandings and agreeing to use texts from existing central government planning provisions and regional and intermunicipal plans in the agreements (see the examples of texts in Table 3). They also clarified that urban growth agreements cannot be referred to as a reason for formal complaints against municipal land use plans. This implies that the urban growth agreements did not extend the power of national or regional authorities to influence the municipalities' land use policies directly and that the municipal self-governance in land use issues (as defined in the PBA) was not challenged. The national authorities also agreed to include text committing national authorities to contribute to the desired land use development (Table 3). The *substantial disagreements* concerning land use policies were not resolved in the processes, and the municipalities seemed unwilling to change their land use policies and reduce or stop sprawl.

As a result of how the key issues were solved, the negotiations and the resulting urban growth agreements had no direct influence on local land use policies and did not influence the suburban municipalities to alter their land use policies to stop sprawl. However, the texts in the agreements (and in the plans and provisions from which they were extracted) require procedures intended to alter local land use policies, plans and development. Several professional municipal interviewees said they believed that the mayors' signatures on the urban growth agreements would be understood as a commitment to adjusting the municipalities' land use policy to some extent. Interviewees in the Trondheim area said the long-lasting collaboration regarding the intermunicipal plan had improved the overall understanding of these issues among professionals and politicians and thought the negotiation process had added to this. Interviewees in the Bergen and Nord-Jæren cases also said that participating in the negotiations had contributed to learning and new insights. Municipal professionals expressed hope that urban growth agreement negotiation experiences, insights and commitments would be helpful in their efforts to facilitate more sustainable land use plans and development and support for local politicians aimed at changing land use policies in those directions.

Table 3. Key texts in the urban growth agreements concerning municipal and national land use planning and policy commitments [69–71], translated from Norwegian by the authors.

| | Bergen Urban Area | Trondheim Urban Area | Nord-Jæren Urban Area |
|------------------------------------|---|--|--|
| Municipal authorities' commitments | <p>Housing, retail, service, offices and other activities attracting many people should mainly be located in defined growth zones. Outside the defined growth zones, limited development can be approved to sustain existing local communities.</p> <p>There must be high densities in development areas close to the main centres and high quality in all urban development.</p> <p>Smaller hamlets and settlements with good and stable local communities are positive assets to the region.</p> <p>In the revision of the municipal land use plans, areas designated for development, but where detailed zoning has not been approved, will be reconsidered if they are not in line with the goals, strategies and provisions in the regional plan, or in line with the zero-growth objective. If they are kept in the plan, this must be justified.</p> | <p>Land use development in the municipalities must take place in such a way that it helps in achieving the zero-growth objective. This implies that the majority of land use development shall take place in the prioritised conurbation areas.</p> <p>Major parts of the land use development in Trondheim shall take place in central urban areas, in local centres and close to well-served public transport stops.</p> <p>In Stjørdal, Malvik and Melhus, the main parts of the land use development shall take place within biking and walking distance of centres defined as part of the centre structure in the intermunicipal plan or within walking distance of well-served public transport stops. The ABC principle will be used as the basis for assessing zoning for business development. This means that visitor- and workplace-intensive businesses must be located in the municipal main centres.</p> <p>When revising their land use plans, the neighbouring municipalities shall define long-term and predictable development</p> | <p>Through this urban growth agreement, all contracting parties commit to actively contributing to the realisation of the (regional) plan.</p> <p>The municipalities commit to revising their current plans in accordance with the goals and strategies of the regional plan and the urban growth agreement.</p> <p>When revising municipal plans, land use strategies and proposals shall be assessed against the zero-growth objective, national planning provisions and the regional plan.</p> <p>Undeveloped development areas that conflict with the zero-growth objective shall be awaited or postponed in accordance with the regional plan.</p> <p>When revising current plans, the geographical distribution of new housing and workplaces must be planned on the basis of proximity to city and town centres or to stops and stations along the busway and railway, contributing to the objectives of the agreement.</p> |

| | | |
|-----------------------------------|--|---|
| | boundaries, and Trondheim shall define prioritised development areas. | |
| National authorities' commitments | State offices and visitor-intensive state enterprises and services shall be located in defined centre areas and in close proximity to public transport nodal points, in accordance with the central government planning provisions for coordinated housing, land use and transport planning, the regional plan for land use and transport development for the Bergen area and the regional plan for attractive centres in Hordaland. | National authorities are obliged to follow the Regional Plan Jæren 2050 and the action plan. Localisation of state visitor-oriented offices and services shall be in accordance with central government planning provisions. In 2020, the state, represented by the county governor, shall prepare a proposal for a long-term strategy for the localisation of state enterprises and offices on self-owned and rented premises. |

3.5. Reflections on Land Use Policy Changes by Local Politicians

To obtain a deeper understanding of why local politicians were reluctant to change their land use policies and stop sprawl and how they thought the municipality would nevertheless contribute to achieving the zero-growth objective, they were invited to reflect upon this in interviews. The interviews enquired into what objectives, interests and values local politicians were seeking to achieve and protect by continuing sprawl and what understandings and knowledge causally linked sprawl to the achievement of the prioritised objectives. We thus followed Rein and Schön's [62] (p. 148) advice of listening to the 'problem-setting stories' actors about the policy problem, which 'link causal accounts of policy problems to particular proposals for action'.

3.5.1. Sustaining Vital Hamlets and Reducing Centralisation Tendencies

The interviewed politicians across most municipalities said that 'making all parts of the municipality good places to live' was essential for them and the community. When elaborating on this, they talked about using all parts of the municipality, sustaining vital hamlets and villages, ensuring good living conditions and services in all parts of the municipality and stopping centralisation tendencies within the municipality and in the urban area. Across the three case areas, sustaining vital hamlets seems to be a deeply rooted aim. The interviewed politicians said they do not want the depopulation of hamlets and settlements in less central parts of their municipality, followed by the closing of shops and schools and a steady increase in 'houses with dark windows'. One politician explained that this does not benefit the quality of life and well-being of those living there. Regional centralisation is an ongoing trend in Norway [77] and might be understood as a problem that some local politicians feel they need to solve. Politicians argued for the necessity of facilitating and allowing housing development aimed at stabilising the number of inhabitants in hamlets by offering modern housing options, often termed 'maintenance growth' in planning documents. For instance, the municipal land use plan for Stjørdal Municipality [78] specifies the goal of 40% of new dwellings to be developed outside their main centre. To stimulate this, they have defined 'hamlet estates' where up to 10 new housing units can be zoned and built as one project to make construction more rational and the dwellings more attractive. Prohibiting maintenance growth, as several politicians said the suggested (but dismissed) urban growth agreement texts implied, was therefore not accepted. Politicians claimed that maintenance growth would result in a low number of new

dwelling and hardly influence traffic volumes. The interviewed professionals largely agreed with this understanding. They said the interest in developing new housing in these areas is low among developers and inhabitants, and they expressed that prohibiting maintenance growth would cause unnecessary problems for politicians.

3.5.2. Multiple Arguments for Keeping and Approving Greenfield Development Zoning

The intermunicipal and regional plans and urban growth agreements largely require that municipalities stop zoning land for development in car-dependent locations. They also recommended that municipalities consider rezoning development areas in car-dependent locations to help achieve the zero-growth objective and reduce the overcapacity of development areas. This has been achieved in some Norwegian municipalities and has proven troublesome for local politicians, for instance, in Bergen [79]. In the interviews, leading politicians across municipalities presented multiple arguments for keeping existing or approving new large development areas in car-dependent locations in their municipal land use plans. Some referred to the aim of 'using all parts of the municipality' in line with what is described above. Some presented practical explanations, such as the need to complete a planned area to fill up a new school. Another concern was that rezoning land would make the municipality appear unpredictable. Some politicians said the aim of approving new greenfield developments was to ensure sufficient areas ready for development to facilitate the construction of detached dwellings and rowhouses in less expensive areas and to attract young families from the core city. They argued that municipalities outside the core cities should also be allowed population growth, that this is one way of working against centralisation tendencies and that there is a demand for the housing they provide that cannot be met within the core city. Most of the interviewed politicians expressed that they were aware that this kind of development could cause traffic growth and make it harder to achieve the zero-growth objective, but they argued that there were ways around this. A recurrent argument was that traffic growth could be avoided by improving park-and-ride options serving commutes to the core city. Some said that regional authorities, who are responsible for local public transport services, should serve the areas municipalities wanted to develop with competitive public transport services rather than expecting municipalities to locate new development areas close to existing or planned (as part of urban growth agreements) high-frequency bus stops. The interviewed professionals emphasised that politicians and political parties had different opinions about continuing greenfield development. Local professionals in some municipalities said that leading politicians want to change policies but are struggling to obtain a majority in the municipal council.

3.5.3. Claims That Current Plans Steer Development in Desired Directions

Several politicians claimed that their current plans steer land use development in ways that will help reduce car dependency and traffic volumes. Statements in the interviews indicated that this would include what is understood here as car-dependent sprawl. An interviewee claimed, for instance, that a planned housing estate detached from any local centre was not car-based as it was located within walking distance of a bus stop served by one bus departure per hour. Studies of adopted municipal land use plans confirmed that they include large development areas representing car-dependent sprawl [78,80–82]. Representatives of the three municipalities neighbouring Trondheim explained that their municipal master plans would contribute to achieving the zero-growth objective because they would steer most of the development towards their main centres. They had prioritised developing plans for their main centres that could accommodate most of [83] or more than [84,85] the expected population growth in the coming decades. They said this would also bring benefits for the existing inhabitants, such as a more attractive and vital main centre offering most amenities and services and a greater offering of

flats within walking distance of shops, services and public transport stops with excellent connections to workplaces and amenities in the core city. The development of their main centres was also understood as a way of attracting new inhabitants and businesses. The professionals interviewed in these municipalities said they were not too worried about sprawl as the location in their main centres is clearly what the market demands. Professional interviewees in other municipalities also see their ongoing centre plan processes as an important instrument for reducing sprawl [86,87].

4. Discussion

4.1. Policy Controversies Explained by Conflicting Framings of the Policy Issue

The aim of including land use policy and the neighbouring municipalities of the cities in the urban growth agreements was to influence these municipalities to alter their land use policy and reduce car-dependent sprawl, understood as necessary to attaining the zero-growth objective. The negotiations failed to attain this due to policy controversies concerning land use issues, as described. Rein and Schön [62] (p. 146) explained policy controversies as a result of the involved actors' different ways of framing the policy issue, defining framing as 'a way of selecting, organising, interpreting and making sense of a complex reality to provide guideposts for knowing, analysing, persuading, and acting'. Following Rein and Schön, the results were analysed to uncover conflicting framings that might explain the controversy. Across the three cases, two conflicting framings of the policy issue stood out as prominent.

One was the 'stopping sprawl to achieve zero growth in traffic volumes' framing, representing the national authorities' understanding, which can be summarised as follows: stopping traffic growth in metropolitan areas is important and necessary for several reasons. Car-dependent land use development is an important source of traffic growth, and cities as well as their neighbouring municipalities need to stop sprawl to reach the zero-growth objective. This is clearly in accordance with research-based knowledge, as well as with long-standing central government land use planning provisions. As in previous transport packages, state, county and municipal authorities negotiate and agree on how transport systems, and now land use also ought to be developed to reach zero traffic growth in the metropolitan area. The urban growth agreements describe how each partner shall contribute through finances, regulations and land use development in the following 10 years. They clarify responsibilities and facilitate long-term and strategic planning, decisions and implementation concerning, for instance, steering land use development towards areas served by public transport infrastructure and services financed through urban growth agreements. It is therefore important and necessary that municipalities define and decide how they will steer their land use to contribute to achieving the zero-growth objective from a 10-year perspective and commit to this through binding formulations in the agreement texts.

Across the cases, actors representing municipalities bordering the core cities displayed an alternative framing, here named 'continuing sprawl to attain local objectives', which can be summarised as follows: stopping traffic growth in metropolitan areas is important and necessary for several reasons and shifts in municipal land use policies towards stopping sprawl will contribute to achieving this. However, local objectives, values and interests must also be considered. Achieving some of the local objectives requires allowing land use development in areas that (here) would be defined as sprawl, and development in these areas is therefore approved in the adopted municipal land use plans. The necessity of considering local objectives, interests and values is a key reason why the PBA requires that land use policy be developed by the municipalities in dialogue with the local society and be adopted through formal processes in the municipal council. In their role as negotiators, the mayors could not accept text in the urban growth agreements conflicting with the formally

adopted municipal master plans or delimiting the authority of future municipal councils to adopt different land use policies. Due to national authorities' practices of facilitating sprawl and making the zero-growth objective harder to attain, local and regional authorities cannot be held responsible if the zero-growth objective is not attained.

4.2. Potential Ways Forward

It is not obvious how this policy controversy can be solved and what could make local decision-makers alter their land use policies and stop or reduce sprawl. The analysis displayed that the controversy was partly caused by the goal conflicts experienced by the local politicians. This is not unexpected as goal conflicts are understood to be naturally embedded in planning processes, and processes concerning municipal plans, regional plans and urban growth agreements might be understood as arenas for battles and conflict resolution that do not necessarily arrive at a consensus [24,28]. The controversy was also related to the distribution of power, a factor that often is relevant in analyses of policy controversies [24,28,88]. The PBA structures the distribution of responsibilities and power concerning decisions related to land use planning. The majority in the municipal councils are given the direct power to make the decisions, within the frameworks defined by regional and national authorities. Municipal authorities saw texts suggested in the negotiations as involving the redistribution of power and causing confusion concerning power distribution.

The negotiations clarified that national and regional authorities, in reality, have no power measures available to make local authorities alter their land use policy and that urban growth agreements did not alter this, meaning that such changes would need to result from processes within the municipalities. This could, in Rein and Schön's [62] terminology, happen if local decision-makers reframe the policy problem through frame reflection. Rein and Schön [62] (p. 163) see social learning and adaptation as mechanisms through which frameshifts might occur and explain that 'It is in the course of the participants' conversation with their situation that frame reflection and a resulting shift of frame may occur'. Social learning might take place in conversations where actors are exposed to new objectives, knowledge and requirements that might display inconsistencies and ambiguities in their framing. This might result in adaptation to the new realities and insights by reframing of understandings and shifts in policies.

Local professionals hinted in the interviews that reframing through the mechanisms of social learning and adaptation could be likely. They said that some politicians had already pursued more sustainable land use policy goals that involved stopping or reducing sprawl, but they struggled to convince the majority in the municipal councils to agree to this. Interviews with leading local politicians revealed that they reflected on their land use policies and understood that they might need to change them. Several professionals across cases claimed that the negotiation processes had contributed to new knowledge and learning concerning the negative effects of sprawl among politicians as well as professionals. They said the descriptions of procedures in the urban growth agreement texts intended to alter local land use policies and plans could contribute to reflection and change, and they believed that the mayors' signatures on the urban growth agreements would be understood as a commitment to adjusting the land use policies, at least to some extent. Some hoped the experiences, insights and commitments made in the negotiations and agreements would empower local politicians to change land use policies in more sustainable directions. They also expressed that they, as professionals, have a responsibility to facilitate such changes.

From this perspective, urban growth agreements have the potential to influence land use policies towards reducing sprawl in the longer term. The agreements represent arenas where involved authorities across levels, sectors and geographies will have to discuss challenges and potential solutions over at least 10 years. This will facilitate continuous

conversations where new knowledge, objectives and requirements are introduced and discussed and where social learning could take place, which might result in reframing among some politicians. This could result in a shift in the understanding of the majority in the municipal councils, resulting in different decisions concerning land use development and sprawl.

5. Concluding Remarks

Sprawl causes negative consequences for the environment, society and the economy. There are strong calls to reduce sprawl, but the sprawl continues. This paper contributes to the understanding of how necessary policy transitions might be attained by presenting results from studies of real-world planning and decision-making processes that are aimed at understanding why current policies have been chosen instead of others, as Marsden and Reardon [63] emphasised a strong need for. This paper has examined urban growth agreement negotiations in three Norwegian metropolitan areas where local politicians in municipalities bordering the cities met strong incentives and expectations to alter their land use policies and stop sprawl.

One aim of this study was to examine the effectiveness of the negotiations and the urban growth agreements in influencing land use policy and contributing to reducing sprawl in the neighbouring municipalities of the cities. The results showed that the negotiations were not effective in influencing local land use policies towards reducing sprawl, despite the favourable conditions for attaining this described in Section 1, and they did not extend the power of national or regional authorities to directly influence the municipalities' land use policies. The results showed, however, that the urban growth agreements have the potential to influence local land use policy towards reducing sprawl in the longer term by facilitating arenas for continuous conversations and social learning that might result in changes in land use policies. Local professionals acknowledged that they have a responsibility to facilitate such changes.

The second aim of this study was to develop a deeper and more nuanced understanding of how local politicians reflect upon their land use policies and why they are reluctant to stop sprawl. The results showed that local politicians were unwilling to take action to stop sprawl because they saw land use development as sprawl necessary for achieving locally prioritised objectives, such as making all parts of municipalities good places to live, maintaining vital hamlets, facilitating population growth and being understood as predictable. They were also highly concerned with the principles of municipal self-governance in land use issues and emphasised that local authorities have the responsibility to develop and decide how they will contribute to attaining the zero-growth objective.

The last aim of this study was to gain novel insights regarding policy controversies concerning urban sprawl. Analyses of the policy controversy from a frame perspective revealed that two conflicting framings of the policy issue—'stopping sprawl to achieve zero traffic growth' and 'continuing sprawl to attain local objectives'—made discourse difficult.

The results of this study are important contributions to the literature and practice discussions concerning how necessary policy transitions resulting in reduced sprawl and more sustainable land use development might be attained.

First, the rare, novel and nuanced insights into local politicians' reflections regarding local land use policy and their arguments for continuing sprawl will help professionals striving to facilitate more sustainable land use policies to better understand what knowledge they need to introduce in planning processes and how they need to go about succeeding in stopping or reducing sprawl. This is relevant for professionals at local, regional and national administrative levels. These findings will also be helpful for researchers seeking to understand mechanisms hindering necessary policy transitions.

Second, the findings concerning experiences with and the efficiency of the urban growth agreements and negotiations provide useful knowledge for those who design or study similar policy instruments, mainly in Europe and other countries with land use policy frameworks comparable to those of Norway.

Third, the identification of how the different framings of the policy issue made discourse difficult might help advance the academic understanding of policy controversies concerning sustainable land use policy and forward the discussions regarding how policy transitions might be attained.

A strength of this research is that it engages with current governance issues and debates and is strongly based on dialogue with professionals and politicians involved in the studied processes, as Marsden and Reardon [63] identified a strong need for.

While this paper mainly focused on the understanding and reflections of local politicians, the data and results indicated that local professionals might be essential to facilitating policy transitions, resulting in reduced sprawl and more sustainable land use policies. Interesting remaining questions concern how local professionals reflect upon this and how they go about their daily work to facilitate shifts towards more sustainable land use policies, plans and development. Answers to these questions could be sought through interviews with local professionals working for municipalities engaged in urban growth agreements and a critical examination of relevant municipal planning documents produced before and after the agreements were signed.

Another interesting question is how national authorities and enterprises will respond to the obligations in urban growth agreements concerning the localisation of their activities and freeing up centrally located land. In future research, it would be interesting to study whether national authorities are confronted with the urban growth agreement obligations, how these actors reflect upon this and if they eventually alter their practices. To study this, one would need to identify cases in metropolitan areas engaged in urban growth agreements where these issues are debated and collect data through interviews with involved national, regional and local actors and an examination of relevant policy documents. The national public sector represents approximately 10% of the Norwegian workforce and includes many types of activities, such as hospitals, universities and various governmental offices. These workplaces are often among the largest in urban regions and they can induce sprawl and generate much traffic if located in car-dependent areas. The localisation practices of national authorities and enterprises might also influence local authorities' willingness to follow governmental planning obligations by altering their land use policies and stopping sprawl. Hence, their location has a major impact on whether the zero-growth objective can be achieved.

Author Contributions: A.T.: conceptualisation; methodology, data collection, data curation, investigation, formal analysis, writing—original draft; supervision, project administration, funding acquisition. G.S.H.: conceptualisation; methodology, data collection, data curation, investigation, formal analysis, writing—original draft, funding acquisition. E.L.: conceptualisation, methodology, data collection, data curation, investigation, formal analysis, writing—original draft, funding acquisition. All authors have read and agreed to the published version of the manuscript.

Funding: Norwegian Research Council, grant number 295704, and Ministry of Local Government and Regional Development, grant number 19/2153.

Institutional Review Board Statement: The data collection protocol was approved by the Norwegian Agency for Shared Services in Education and Research, reference number 121847, 22 July 2019.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Anonymized data will be shared upon request.

Acknowledgments: We would like to thank the four reviewers for valuable comments that helped us improve the paper. We would also thank all interviewees who contributed to the research with their insights and perspectives.

Conflicts of Interest: The authors declare no conflicts of interest. The financing institutions were not involved in study design, data collection, analyses, interpretation, or the writing of the paper and the decision to submit it.

Appendix A. Interview Guides

Appendix A.1. Interview Guide Concerning Negotiations over Land Use in Urban Growth Agreements

1. Background (position and role in negotiations)
2. How was land use handled in the negotiations? Organisation, actors, discussions, development of texts, etc.
3. What were the most important conflicts and challenges, why did these occur and how were they resolved?
4. How important were existing regional plans, central government planning provisions, etc. in the negotiations?
5. To what extent did the negotiations focus on the joint commitment to achieving the zero-growth objective across the levels of administration?
6. What conflicting elements were there in the agreement or in the actors' work towards achieving the zero-growth objective?
7. To what extent were the negotiations characterised by discussions related to the local latitude and authority of municipalities in land use policy?
8. What connections are there between how land use was handled in the negotiations and the agreement and how it has been followed up?
9. Do you have any recommendations or suggestions concerning the organisation of the negotiation process that could help improve future negotiation processes?

Appendix A.2. Interview Guide Concerning Local Democratic Anchoring and Follow-Up of the Urban Growth Agreement

1. Background (position and role in negotiations)
2. What were the procedures for anchoring (i) the urban growth agreements and (ii) the regional or intermunicipal plan in the municipal council and in the population?
3. To what extent did the municipal council and the population understand what the urban growth agreement means for future land use planning and development? To what extent was there a need for the administration to explain this to politicians?
4. How will urban growth agreements affect future land use policy, planning and development? What are the key challenges?
5. What is the role of the regional plan in the follow-up of land use obligations in the urban growth agreements?
6. How did you go about ensuring the local democratic anchoring of the land use indicators?
7. How does the county governor follow up on the land use part of the urban growth agreements?
8. As you see it, what are the most important strengths and weaknesses of urban growth agreements?
9. How can practices change to properly safeguard local democratic principles in future negotiations and urban growth agreements without reducing the agreements' ability to achieve the zero-growth objective?

10. Do you have any advice or recommendations to other municipalities entering urban growth agreement negotiations?

Appendix B. List of Interviewees

The 36 interviews were conducted in two rounds from October 2019 to January 2021. See the list of interviewees in the table below.

| | |
|--|---|
| Interviews in the Trondheim area (16) | |
| Municipal politicians | 5 |
| Municipal professionals | 8 |
| Professionals in Trøndelag county | 2 |
| Representative of the county governor in Trøndelag | 1 |
| Interviews in the Bergen area (12) | |
| Municipal politicians | 4 |
| Municipal professionals | 4 |
| Politician in Vestland county | 1 |
| Professionals in Vestland county | 1 |
| Representative of the county governor in Vestland | 1 |
| Lead negotiator from the Norwegian Public Roads Administration | 1 |
| Interviews at Nord-Jæren (10) | |
| Municipal politicians | 2 |
| Municipal professionals | 4 |
| Professionals in Rogaland county | 2 |
| Representative of the county governor in Rogaland | 1 |
| Lead negotiator from the Norwegian Public Roads Administration | 1 |

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