“Sustainable, for real”?

Brunnshög’s sustainability narrative and the state of post-politics in urban development

Elliot Soontjens

Master Thesis Series in Environmental Studies and Sustainability Science,
No 2023:027

A thesis submitted in partial fulfillment of the requirements of Lund University International Master’s Programme in Environmental Studies and Sustainability Science (30hp/credits)

LUCSUS
Lund University Centre for Sustainability Studies

LUND
UNIVERSITY

“Sustainable, for real”?

Brunnshög’s sustainability narrative and the state of post-politics in urban development

Elliot Soontjens

A thesis submitted in partial fulfillment of the requirements of Lund University International Master’s Programme in Environmental Studies and Sustainability Science

Submitted May 9th, 2023.

Supervisor: Sara Ullström, LUCSUS, Lund University

Empty page

Abstract

The combined global emergence of a sustainable development discourse and Swedish policies requiring municipalities to rapidly build new housing have led Lund to develop Brunnshög. This pioneering megaproject balances urban expansion with high sustainability ambitions. Through the lens of urban political ecology, this thesis aims at analysing Brunnshög's dominant sustainability narrative as told by its supporting stakeholders and its socio-environmental impacts. The selected thematic approach to a narrative analysis uses data from semi-structured interviews and additional documents. The results demonstrate a dominant narrative that promotes innovation, scientific discoveries, economic boosterism and sustainability whilst conveying a neoliberal form of city governance and a state of post-politics that foreclose democratic debates surrounding Brunnshög. This thesis manifests the need to think beyond the limitations of the contemporary sustainability discourse perpetuating urban socio-ecological inequalities. Instead, we must chart new avenues for a politicised urbanity that can produce equal and democratic cities.

Keywords: Brunnshög, Urban Megaproject, Sustainability Narrative, Post-politics, Neoliberal Governance, Sustainable Development Paradox

Word count: 11,937

Acknowledgements

Thank you to all the interviewees for taking part in this study and providing me with your answers and your valuable time.

A massive thank you to Sara, my supervisor, for your help throughout the semester and the amazing feedback and conversations you provided for. I appreciate your efforts in supporting me greatly, I would definitely recommend you if I could.

A crazy-big thank you to the wonderful people of Batch 25 for being great and filling my last 2 years with some of my best memories yet. I wish you all a fulfilling and joyful continuation in your post-LUMES lives... and that we gather for a music quiz in Ostrom in 2043 (exactly).

Lots of love to my amazing parents who have supported my young journey and to my lovely brother for being him.

Knock, knock.

Who's there?

Thesis.

Thesis who?

Thes-is no joke cuz.

Table of Contents

1 Introduction 1

1.1 Aim and research questions 5

1.2 Relevance to sustainability science 5

2 Theory 6

2.1 Urban Political Ecology 6

2.1.1 Sustainability and post-politics 7

2.1.2 Megaprojects: conveyors of neoliberal governance and post-politics 8

3 Methods and Material 9

3.1 Research design 9

3.2 Data collection 10

3.2.1 Interviews 10

3.2.2 Additional documents 12

3.3 Thematic approach to a narrative analysis 13

3.4 Limitations 14

4 Results 14

4.1 Brunnshög's dominant narrative 14

4.1.1 Ambition 15

4.1.2 Sustainability 16

4.1.3 Innovation 20

4.1.4 Attract investments 21

4.1.5 Science *22*

4.2 Interests served **23**

4.2.1 Perceived winners *23*

4.2.2 Perceived losers *24*

4.3 Socio-environmental impacts **25**

5 Discussion **27**

5.1 Brunnshög: a case of ecomodernist urban sustainability **28**

5.2 Brunnshög: a conveyor of neoliberal governance and post-politics **29**

5.3 Brunnshög: the embodiment of a national and global urban agenda **31**

6 Conclusion **31**

7 References **33**

8 Appendices **40**

Appendix 1. Interview guide **40**

Appendix 2. Codebook **42**

1 Introduction

As urbanisation and environmental degradation have become increasingly pressing global issues in recent years, the concept of sustainable development has gained widespread recognition and importance. Urban planning has emerged as a key tool for achieving sustainable development goals such as SDG 11 stipulating that national governments must "make cities and human settlements inclusive, safe, resilient and sustainable." (United Nations, 2015). By including an international commitment to cities, this target acknowledges the unique challenges that urban communities face and the notion of a "new urban agenda" in global policy marks a sustained effort to centre development discussions around cities (Barnett & Parnell, 2016). This perspective has become increasingly supported by technical audiences, as evidenced by the Intergovernmental Panel on Climate Change's decision to release a Special Report on Cities and Climate Change during its upcoming 7th Assessment Cycle (IPCC, 2023), as well as substantial discussions on urban sustainability challenges in the 6th Assessment Cycle's reports of Working Groups II and III (IPCC, 2022a, 2022b).

However, scholars have noted that the traditional approach to urban planning, which prioritises economic growth and development over environmental and social considerations, may not be effective in fairly underpinning current and future societal needs (Krueger & Gibbs, 2010). Despite the growing recognition of the importance of sustainable policies in urban planning, significant challenges remain, including limited financial resources, political and institutional barriers, and competing interests and priorities (Keivani, 2009). Varying scholars argue for different approaches to dealing with these challenges. The most predominant school of thought in western society is 'ecomodernist urban sustainability', representing a techno-managerial form of governance led by groups of experts relied upon to solve the cities' challenges through innovation whilst perpetuating the values of the contemporary capitalist economic system (Swyngedouw & Kaika, 2014).

For European countries, the Urban Agenda for the EU and The New Leipzig Charter are significant points of reference in the field of urban planning. Both documents recognize the central role that urban areas play in sustainable development and emphasise the importance of comprehensive and integrated planning approaches that consider social, economic, and environmental factors (European Commission, 2016, 2020). In its chapter on "The just city", The New Leipzig Charter emphasises the importance of social cohesion and inclusion in urban development, calling for strategies that prioritise equitable access to resources and opportunities for all residents (European Commission, 2020). The Charter also highlights the need for active and strategic land policy and land use planning, with a focus

on creating vibrant and sustainable urban environments. This includes promoting mixed-use development, supporting compact and connected urban forms, and protecting valuable natural and cultural assets (European Commission, 2020).

In Swedish politics, a major contemporary challenge is to build large amounts of housing for a rapidly increasing population and urbanisation rate, whilst being conscious of climate and other sustainability impacts (Swedish Institute, 2022). According to Boverket, Sweden's National Board of Housing, Building and Planning, there is a need to build over 700,000 homes over the ten-year period between 2015 and 2025 – a steep rate in comparison to Sweden's existing housing stock (Ministry of the Environment, 2020). There is a risk that such an urgent situation will result in solutions in which aspects of sustainability are not adequately addressed in planning and construction (Ministry of the Environment, 2020). Additionally, mitigating emissions in the construction sector is important in Sweden's path to achieving zero net emissions of greenhouse gases by 2045 (Ministry of Climate and Enterprise, 2021), as it contributes to 8% of Sweden's total emissions and impacts other sectors such as industry, energy, and transport, as well as other countries through imported materials (Ministry of the Environment, 2020). The challenge of balancing high demands of housing units with sustainability has spurred on municipalities such as Lunds to plan for new climate-smart cities.

One of these new districts is Brunnshög, an urban development project expanding the North-East of Lund (see Figure 1). Once rich Scanian agricultural land, the new district is currently being developed into a “European pioneer at the forefront of urban development” (Lunds Kommun, 2022a). When construction finishes around 2040, this project will be host to 26,000 new homes (Lunds Kommun, 2018) and a living and working environment for up to 40,000 people in a densely mixed urban space including diverse styles of housing and workspaces as well as parks, shops, cafes, restaurants, schools, cultural centres, and services (Lunds Kommun, 2023a).

Brunnshög is a product of national as well as local politics, as most local politicians perceive the city’s growth and development as central objectives for Lund. Since 1990, the city has seen an increase in population of around 30% (Statistics Sweden, 2023) due to its attractive living conditions. The Brunnshög ‘megaproject’, defined as “a major project or undertaking in business or construction” (Merriam-Webster, 2023), falls in line with the Municipal policy of building 1,200 new housing units every year to reach 26,000 more homes by 2040 than in 2018 (Lunds Kommun, 2018). Although other development projects have been and are being undertaken to reach this target, the biggest proportion of future housing and resulting urban expansion falls under the Brunnshög megaproject (Lunds Kommun, 2023a).

The Brunnshög project is a major urban development initiative that is put together by a variety of stakeholders, including: (1) landowners Lund Municipality (the primary landowner), Science Village Scandinavia AB. and Lund Cathedral; (2) developer companies such as Skanska and LKF (the municipal property company); (3) significant actors such as Lund University and several private companies. The project is divided into three sub-areas: South-Brunnshög, the Science Village, and Råängen (see Figure 1). South-Brunnshög is the largest sub-area, comprising the majority of the housing developments, as well as retail and commercial spaces (Lunds Kommun, 2023d). The Science Village is the focal point of research activities, including two major material-science facilities (Lunds Kommun, 2023b). The Råängen area, located between South-Brunnshög and the Science Village is a long-term housing development project by Lund Cathedral (Lunds Kommun, 2022d). The two research facilities, MAX IV and ESS, are the core institutions within the Brunnshög project. The MAX IV facility, a synchrotron radiation facility, is already in operation, while the European Spallation Source (ESS) facility, a European neutron source, is currently under construction and is expected to run in 2023 (ESS, 2023).

These stakeholders play important roles in legitimising this megaproject's benefits within local political debates and to attract other desired actors. The main arguments found in promotional material such as websites, books and presentations strongly align with the 'ecomodernist urban sustainability' discourse mentioned above. The dominant story these supporting stakeholders tell within this discourse to promote the district can be labelled as a 'sustainability narrative'. According to D'Amato (2021), 'sustainability narratives' are stories that provide solutions for one or more sustainability challenges, tailored to specific contexts. The problem with dominant sustainability narrative such as Brunnshög's is that they are frequently used to legitimise and contextualise the decisions of powerful actors, such as policy-makers, commercial groups, and research institutes and may not adequately address the diverse needs and perspectives of different groups which can perpetuate existing social inequalities (D'Amato, 2021).

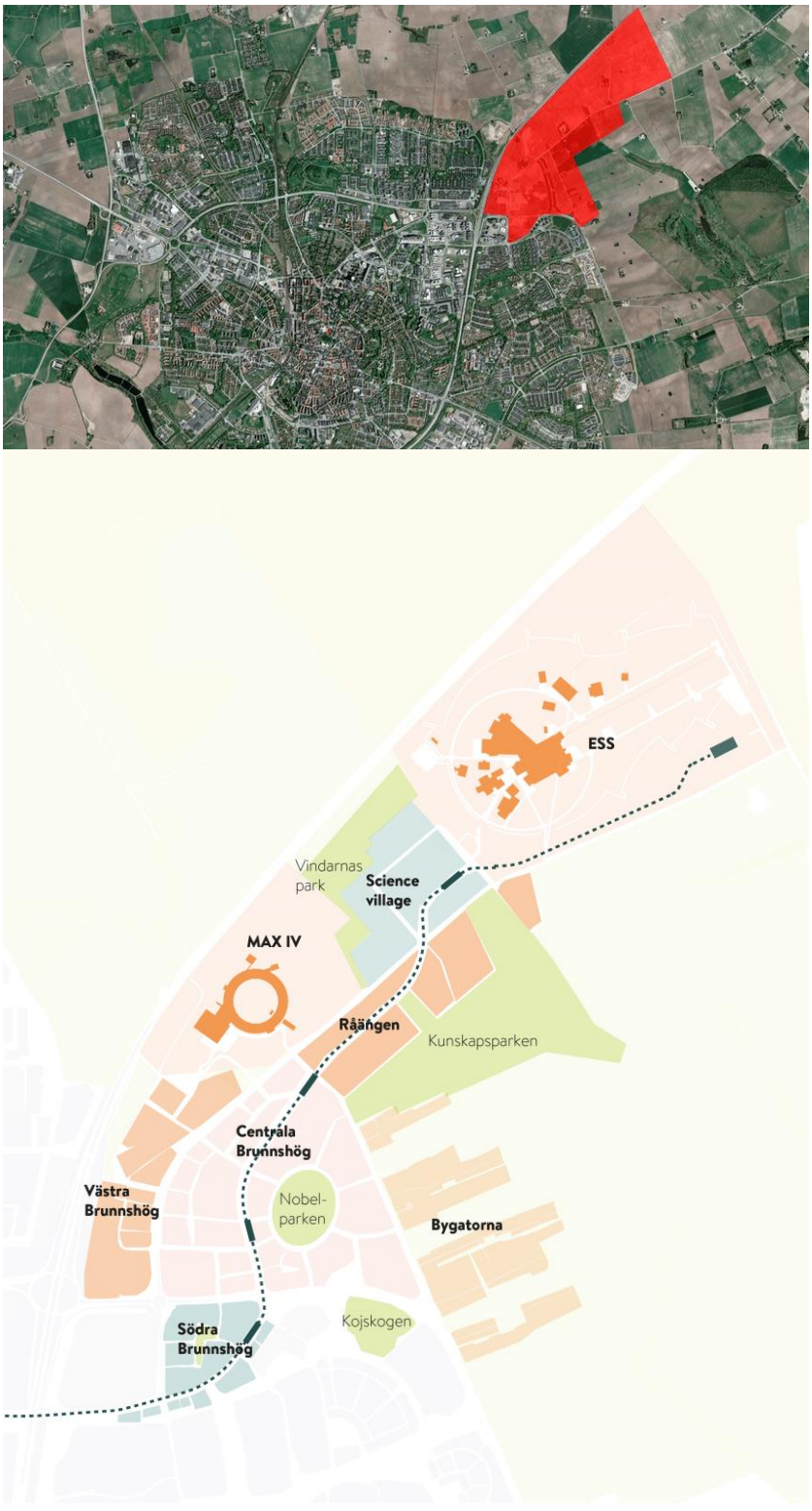


Figure 1. (a) Aerial image of Lund, Sweden, and the expansion of Brunnshög marked in red (top image). Source: Kopljar (2020), courtesy of Lunds Kommun. (b) Map of Brunnshög and its sub-areas, including the dotted tramline (bottom image). Source: Lunds Kommun (2022c)

1.1 Aim and research questions

The aim of this thesis is to demonstrate what Brunnshög's dominant sustainability narrative is about, how it is constructed, how it is manifested in practice and what its implications are. This is addressed through the following research questions: (1) What is the dominant narrative of Brunnshög as told by its supporting stakeholders? (2) Which interest does the dominant narrative serve? (3) What are the socio-environmental consequences of the dominant narrative? A critical urban political ecology (UPE) theoretical perspective is chosen as most relevant to answer these questions. As further described in the 'Theory' section below, UPE is concerned with how modern cities such as Lund reflect capitalist values on landscapes through a concentration of innovative infrastructure and societal inequalities (Swyngedouw & Kaika, 2014). In addition, urban political ecologists argue that the traditional urban sustainability discourse and arising 'sustainability narratives', especially when referring to urban megaprojects, lead to a condition of post-politics and post-democracy (Vento, 2015). This anti-political condition stems from a consensual obsession across varying societal actors with the concept of "sustainable development", which disallows the space for alternative perspectives to the hegemonised neoliberal approach to urban living (Swyngedouw, 2010).

1.2 Relevance to sustainability science

Analysing the dominant narrative of the Brunnshög megaproject is crucial for understanding the ways in which such projects are constructed, who they ultimately serve, and the potential socio-environmental impacts they may have. As cities around the world increasingly resort to megaprojects as a means of accommodating sustainability goals whilst increasing their appeal (Orueta & Fainstein, 2008), it is important to critically examine the conditions of neoliberal governance and post-politics that often underpin such initiatives (Swyngedouw et al., 2003; Vento, 2015). By looking closely at the dominant narrative surrounding Brunnshög, as well as the specific actors involved in its planning and implementation, we can gain insight into the ways in which sustainability goals may be diverted to or used to justify large-scale development that may not always serve the public interest (Adger et al., 2001). Such analysis can help to inform more democratic and equitable approaches to urban planning and development, in which diverse perspectives and community voices that challenge the normalised narrative are meaningfully incorporated into decision-making processes (Swyngedouw, 2018). Additionally, by understanding the potential social, political, and environmental impacts of megaprojects like Brunnshög, we can work towards ensuring that sustainability goals are met in ways that promote both justice and equity, two essential values in the field of sustainability science (Leach

et al., 2010). This study is especially pertinent for sustainability science as it presents a meta-analysis of the "sustainability" concept, including its political implications, and recognises the interconnectedness between environmental and social sustainability, seeking to denounce social inequality in a sustainability narrative (Krueger & Gibbs, 2010).

2 Theory

2.1 Urban Political Ecology

UPE is a theoretical framework that explores the production and reproduction of capitalist urbanisation, particularly in relation to socio-ecological inequalities (Keil, 2003). The central objective of UPE is to understand the complex process of human and non-human interactions that contribute to the formation of cities as hybrid concentrations of physical and social components, and the ways in which these interactions are intertwined with social inequalities and reflected in urban socio-ecological processes (Swyngedouw & Kaika, 2014). The example of Brunnshög illustrates how the physical infrastructure, subjects, and imaginaries come together to create a hybrid space that reflects the values of the city. However, because modern capitalist urbanisation prioritises growth and profitability, the socio-ecological configurations that emerge from these interactions can be highly unequal (Swyngedouw et al., 2006). UPE provides a critical approach to urban studies by interrogating underlying power dynamics and social inequalities (Keil, 2003), while examining the ways in which urbanisation is intertwined with socio-ecological processes to reflect and reproduce broader patterns of social inequality and environmental degradation (Swyngedouw et al., 2006).

As a subfield of political ecology, UPE emphasises the interconnectedness of urban metabolic processes with the social, political, and economic structures as well as the discourses that shape the development of cities (Swyngedouw & Kaika, 2014). Being a descendant of Marxist urban geography, UPE has developed a significant body of research focused on the arrangements of capitalist modernity in cities including the study of prestigious urban megaprojects and their implications in perpetuating neoliberal forms of urban governance (Orueta & Fainstein, 2008; Theurillat & Crevoisier, 2013; Vento, 2015).

UPE is concerned with the democratic processes involved in socio-ecological transformation, particularly regarding the management of the commons, arguing that democratic political equality is essential for decision-making within cities. The focus shifts from techno-managerial perspectives of 'ecomodernist urban sustainability" to a clear political argument centred around the notion of equality

(Swyngedouw & Kaika, 2014). The UPE approach considers the contemporary urban sustainable development discourse to be a paradox since it entails anti-democratic polities which benefit society's elite and disavow equal political debates around the desired socio-ecological functions of cities – presently serving endless unsustainable economic expansion (Swyngedouw, 2018). The sustainable development discourse is sustained by the mythical promise of technologically mediated sustainability and post-democratic forms of consensual governance that do not tolerate radical differences or the pursuit of real political-ecological alternatives (Swyngedouw, 2010). The discourse is also considered to be paradoxical because it relates to a remarkable advance in critical knowledge of urban-environmental challenges and widespread attention to 'sustainable' and 'smart' eco-technologies, yet global ecological conditions continue to worsen at an alarming rate as global urbanisation accelerates (Krueger & Gibbs, 2010).

2.1.1 Sustainability and post-politics

The discourse of sustainability is being deployed as a development strategy more than ever before (Krueger & Gibbs, 2010). In 1996, Campbell declared "in the battle of big public ideas, sustainability has won: the task of the coming decades is simply to work out the details, and to narrow the gap between its theory and practice." (Campbell, 1996). Today, it is difficult to find anyone who is not in favour of sustainability, regardless of one's political orientation. In Scandinavia especially, countries have been praised for their efforts in asserting models of sustainability in many aspects of society, including in urban design and development for which the city of Malmö represents a world-famous example (Krueger & Gibbs, 2010). But what do we mean when we talk about "sustainability"? Agyeman et al. (2003) argue the term is a space that provides a language for authorities, activists, and nongovernmental organisations to employ when advocating policies dedicated to environmentalism, ignoring the broader social concerns of sustainability issues, especially those concerned with justice and equity. Torgerson (1995) states that "sustainability" is ambiguous enough for actors with opposing agendas to proceed on policies without agreeing on a single action. However, how those policies relate to the social relations that inhabit capitalism-driven cities and how they should live up to sustainability's trifecta of economic stability, social equity and environmental integrity is often not discussed nor acted upon (Krueger & Gibbs, 2010). In other words, there is a consensual desire for society to be "sustainable" but the policies to act upon this desire are stuck in a state of inaction called post-politics; a desirable condition for those who benefit from unquestioning the status-quo (Swyngedouw, 2010).

In the chapter 'Impossible "Sustainability" and the Postpolitical Condition', Erik Swyngedouw (2010), a renowned urban political ecologist, explains in three steps why the consensual sustainability discourse, such as the one found in Brunnshög, leads to a post-political condition. First, the author argues that the idea of a singular Nature to which we can return to through sustainable development policies is an apolitically imagined and symbolically charged message that overlooks the complex and unpredictable natures out there. Furthermore, UPE scholars reject the dichotomy between nature and society and view cities as a second nature that represents the dominant form of living in the contemporary capitalist age. Second, there is no singular concept of "Nature" that can be used to inform urban environmental policies or interventions. Nature has become constructed through various meanings and associations, held together with 'quilting points' through which certain meanings of Nature are knitted together. As a result, important questions about what types of natures we want to live in or create are often excluded from political debates. Third, and most importantly, Swyngedouw argues that sustainability issues and their political framing contribute to the making and consolidation of a post-politic and post-democratic condition, one that forecloses the possibility of real politics on the natures we wish to preserve. Ideological division and conflict are rejected, leaving only space for a consensus constructed around the inevitability of neoliberal capitalism as an economic system (Swyngedouw, 2010).

2.1.2 Megaprojects: conveyors of neoliberal governance and post-politics

City development megaprojects have been criticised by UPE scholars for incarnating capitalist values in urban landscapes (Orueta & Fainstein, 2008) and for being vehicles for neoliberal governance (Vento, 2015). One reason for this is that they often involve partnerships between public and private entities, with the private sector playing a significant role in financing, planning, and constructing the projects (Jessop, 1997; Swyngedouw et al., 2003). Proponents argue that these partnerships can result in cost savings and efficient expert-led governance, but UPE critics such as Rodriguez et al. (2003) argue that they can lead to social inequalities and environmental degradation, as such private endeavours prioritise profit over job creation or other public welfares and environmental protection. Another factor contributing to the conveying of neoliberal governance is that megaprojects are dependent on market-based mechanisms for financing and governance (Vento, 2015). For example, many of these projects are funded through processes such as public-private partnerships or tax-increment financing as well as speculative urban investments to stimulate private investment in a chosen area (Vento, 2015). These mechanisms are based on the idea that private investment and market forces can improve infrastructure development and delivery, but they also rely on the assumption that public goods can be commodified and subjected to market discipline (Swyngedouw et al., 2002). Finally, UPE

scholars argue that megaprojects vehicle neoliberal governance because they prioritise global economic competitiveness and entrepreneurialism over local development needs (Hall & Hubbard, 1998). This can be seen in the way that megaprojects are often marketed as symbols of progress and modernity, with the implicit message that they will attract investment and boost economic growth (Vento, 2015). However, this focus on entrepreneurialism and global competitiveness through land revalorisation can come at the expense of local communities who may face processes of gentrification, environmental degradation, and loss of livelihoods (Evans, 2005).

The neoliberal nature of megaprojects makes them intimately linked to processes of depoliticisation leading to a state of post-politics. The post-political refers to 'the reduction of the political to the economic', which results in the incapacity to imagine an alternative to neoliberal capitalism (Wilson & Swyngedouw, 2014). Megaprojects symbolise the reduction of the political to the economic as they signify the city's commitment to creating a welcoming business environment (Wilson & Swyngedouw, 2014). This depoliticisation is central to the maintenance and advancement of neoliberalism as it institutes a political culture that is indispensable to the contemporary endless growth strategy (Kamat, 2014). Additionally, by using iconic architecture as a tool of seduction, megaprojects contribute to mentally blocking the possibility of alternative policies for urban regeneration, consequently generating consensus and displacing debates to issues of purely technocratic administration (Vento, 2015). The populist discourse often linked to megaprojects goes beyond creating consensus; it homogenises society and sublimates class conflicts behind an enveloping discourse for functions such as sustainability and urban prosperity (Wilson & Swyngedouw, 2014). Megaprojects convey a condition of post-politics where the political is disavowed, and policies are presented as having only winners (Swyngedouw, 2011). The unmentioned but important goal of iconic megaprojects is to convince citizens of the virtues of competitive strategies, creating the illusion of a harmonious, united, and homogeneous community competing globally for prestige (Hubbard, 1996).

3 Methods and Material

3.1 Research design

To pursue the aim of this thesis to unfold Brunnshög's dominant narrative and its implications, a mixed qualitative methods approach is used to answer the three research questions. This case study research design on Brunnshög involves both inductive and deductive data collection methods based on both transcripts from semi-structured interviews and additional documents. Data from these sources has been compiled in a thematic approach to narrative analysis, explained below. To undertake the first

research question, an inductive approach to data acquisition is employed, allowing for the dominant narrative to write itself and setting the groundwork for the following analyses. The second research question stems from traditional political ecology studies that evaluates who the dominant narrative is beneficial for and who it excludes. This entails a more deductive method as UPE theory guides the research for predetermined elements of information. The third research question is what anchors this study to sustainability science as it looks for empirical data on current and potential impacts of Brunnshög's narrative on social and natural systems.

3.2 Data collection

3.2.1 Interviews

The selected interviewees for this research represent key informants on Brunnshög including nine actors representing supporting organisations or companies (i.e., decision makers, landowners, and property developers), two researchers from the Political Science Department at Lund University who have followed the project closely and one local farmer (see Table 1). A total of 12 interviews were conducted between February 14th and April 6th 2023 with eight online recorded interviews, two in-person recorded interviews, one recorded phone call and one interviewee in written form. To answer the first research question, the transcripts of stakeholders labelled as 'supporters' of the Brunnshög megaproject (i.e., the first nine actors in Table 1) were primarily used for the analysis. This criterion allowed for the first analysis to be focused on the perspectives of actors who have financial or other forms of attachments to the project's success, to ultimately display the dominant narrative The information provided by the two researchers is also present in this section to give needed contexts to interpretations. To answer research questions two and three, transcripts from all twelve interviews were considered. Since anonymity is required in this thesis, only the professional title of the participants is displayed in Table 1, per consent of all participants' behalf. Every interviewee is assigned a code number (Code #) which are referred to in the 'Results' and 'Discussion' sections to simplify the citing of the participants' interview transcripts.

Table 1. Interviewees overview

Professional Title	Organisation	Primary Role	Label	Code #
Communications and Urban Planner for the Brunnshög Project	Lund Municipality	Decision maker	Supporter	I
Energy strategist & Project manager	Lund Municipality	Decision maker	Supporter	II
Project manager	Science Village Scandinavia AB	Decision maker	Supporter	III
Project manager	Wihlborgs	Property owner	Supporter	IV
Property development consultant & Former CEO of Science Village Scandinavia AB	Lund Cathedral & Science Village Scandinavia AB	Decision makers	Supporter	V
Spokesperson for the Environmental Party in Lund & Board member of the City Council	Miljöpartiet i Lund & City Council	Politician & Decision maker	Supporter	VI
Lund Cathedral Treasurer	Lund Cathedral	Landowner	Supporter	VII
Sustainability manager	LKF - Lund Municipal Property company	Property owner	Supporter	VIII
Environmental strategist & Former Chair of Lund's Nature Conservation Society	Lund Municipality & LNF - Lund Naturskyddsförening	Decision maker & Critical observer	Supporter & Opponent	IX
Local farmer	LRF - Federation of Swedish Farmers	Citizen	Opponent	X
Researcher at the Political Science Department	Lund University	Critical observer	Neutral	XI

Associate Professor at the Department of Political Science	Lund University	Critical observer	Neutral	XII

To collect relevant data to answer the research questions, the chosen qualitative research method is semi-structured interviews. This style of interview is relevant for this narrative analysis because of its capacity to entice the participant into two-way communication on the topic (Galletta & Cross, 2013). In particular, its flexibility to include both (1) open-ended perspective-driven questions to create the space for the supporting stakeholders to tell their narratives on Brunnshög and (2) precise theory-driven questions targeting the socio-ecological implications of the narrative, allow for this study's objectives to be met. The semi-structured interview guide for this thesis is composed of carefully formulated question which clearly relate to the research aim with their placements within the guide reflecting a purposeful movement towards a complete in-depth analysis of the narrative surrounding Brunnshög and its socio-environmental impacts (see Appendix 1).

3.2.2 Additional documents

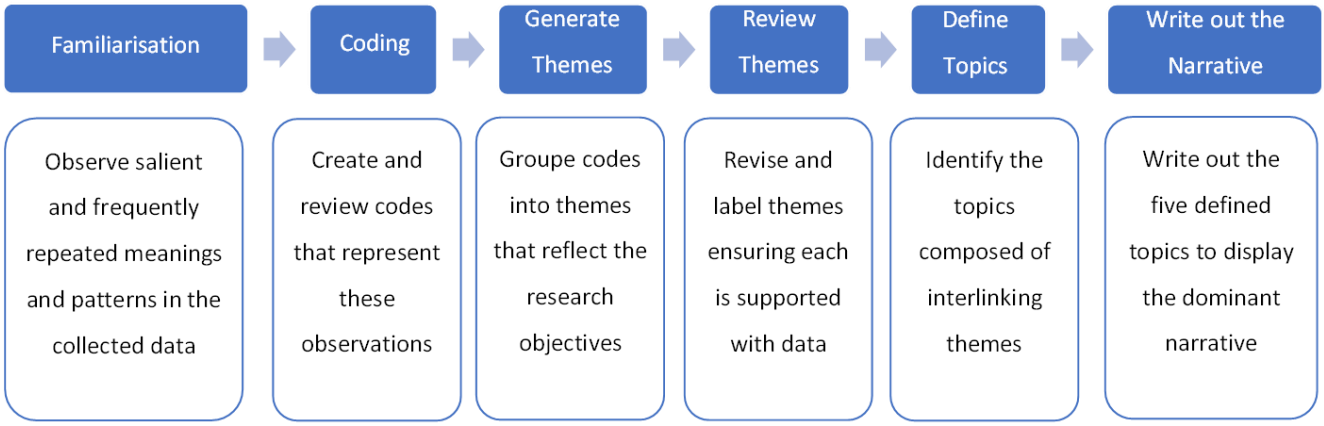
To support and enrich the data collected from the interviews, this thesis' analysis also draws on additional documents in the form of promotional material from the supporting organisations. This pool of data includes: (1) A book written for Lund Municipality, as well as published and distributed by them, written by Larsson (2019) entitled "*The history of Brunnshög - from prehistoric times to the future*" which retraces the historic land use in the Brunnshög area followed by chapters allocated to the MAX IV and ESS research facilities, the urban-rural interface, urban farming, sustainability and more; (2) A set of three webpages found under the overarching website dedicated to Brunnshög published by Lund Municipality which are entitled: "*High sustainability in Brunnshög*" (Lunds Kommun, 2022a) "*Visions and goals for Brunnshög*" (Lunds Kommun, 2022b) and "*Live in Brunnshög*" (Lunds Kommun, 2023a); (3) A short film on the BBC StoryWorks digital platform paid and presented by LKF (Lund's Municipal Property company) entitled "*Swedish communities making sustainability a reality*" (BBC StoryWorks, 2023) which focuses on their prestigious newly built Xplorion apartment complex in Brunnshög. All three sub-pools of data are rich in promotional material and will be primarily used to answer research question 1, demonstrating the dominant narrative surrounding Brunnshög.

3.3 Thematic approach to a narrative analysis

The first part of this qualitative study, answering research question one, is driven by the data itself, inviting an exploratory and inductive thematic approach to a narrative analysis. The goal of such a thematic analysis is to raise inductively coded themes, understood as patterns of meaning, or combinations of themes to a higher conceptual level (Braun & Clarke, 2021). Theme-building allows to make interpretive claims by weaving together evidence across the pools of data and naming these dynamic links into codes (Braun & Clarke, 2021). The chosen combination of thematic and narrative analyses is relevant to this study as the former states the main topics or ideas that the transcripts and additional documents turn out to be about and the latter allows to obtain insights into how and why these topics and ideas are being presented (Braun & Clarke, 2012; Chisholm & Petrakis, 2020).

A thematic analysis is a way to identify patterns and meaning in qualitative data that involves systematic coding, deriving themes and describing their interwoven meanings (Braun & Clarke, 2012). This study's method is influenced by the steps to conduct a thematic analysis as described by Braun and Clarke (2021) in their book "Thematic Analysis: A Practical Guide", as demonstrated in Table 2. These steps have been modified to identify and categorise themes and conglomerating topics that emerge from the collected data, representing the key ideas expressed in Brunnshög's stakeholders' narratives (see Appendix 2). Coding of the collected data was done through the NVivo qualitative analysis software to establish consistency in the data evaluation of both interview transcripts and additional documents. Thanks to this coding process, normalised stories are located more effectively within the pool of data. The dominant narrative is found in recurring themes and patterns that are particularly salient or significant within the collected data that reflect corresponding ways of understanding or interpreting Brunnshög. The dominant, metaphors, and other rhetorical elements expressed in the narratives of supporting stakeholders.

Table 2. Steps for a thematic approach to analysing Brunnshög's dominant narrative: own creation based on Braun & Clarke (2021)



3.4 Limitations

The qualitative analysis of a dominant narrative has its limitations. One major limitation is that interviewees are selective in what they share when sharing their perceptions, especially when answering questions they know are controversial (Bryman, 2016). This is due to inductive narrative analyses being dependent on what is brought up in the interviews rather than predetermined topics, which can limit the scope of the analysis (Braun & Clarke, 2012). This is a concern when wanting to depict a complete dominant narrative and all the possible implications. Additionally, sample size is an important consideration in any qualitative analysis and the twelve interviewees might not reflect the entirety of what there is to Brunnshög's case (Bryman, 2016). This problem was mitigated as best as possible in this study by interviewing as wide of a panel of relevant stakeholders as possible. Another limitation is the challenge of achieving objectivity as a researcher (Bryman, 2016). Doing this took some reflexive work as I found myself going into this project with a predetermined critical stance against the Brunnshög megaproject, having done some previous research and heard some of the narrative in a presentation. My mindset moved more towards a desired neutral ground as I went through the interviews and understood more of the supporters' point of view, but biases naturally remained.

4 Results

4.1 Brunnshög's dominant narrative

The overarching topics that were found through inductive coding of data in most, if not all, transcripts and additional documents pertaining to supporting stakeholders are: Ambition, Sustainability,

Innovation, Capital Accumulation and Science. These topics were found to be intertwined within each other and although they carry meanings when combined, they have been described separately per the thematic coding method for the sake of clarity and effectiveness in later depicting the dominant narrative. The 'Ambition' topic stands out as it represents the underlying foundation of Brunnshög's story and is the first to be described as it introduces how the megaproject is promoted, particularly from the major stakeholder's perspective (Lund Municipality). The following four topics represent specific aspects of the dominant narrative. Each topic is described with a combination of personal interpretations and supporting data.

4.1.1 Ambition

Saying Brunnshög is an ambitious project is an understatement. The goals that Brunnshög's supporting stakeholders have for the megaproject have, in some cases, never been reached in any comparable district of today (I). The ambition for Brunnshög to be a pioneering urban development is observable through two avenues. Firstly, the scale of the impact this megaproject is aiming for with its initiatives are seen as setting new standards not only for the region but for Europe (II). This conviction is palpable from the Municipality's perspective, which believes "*Brunnshög must be a European example, a pioneer who is at the forefront of development* (Lunds Kommun, 2022a) and describing the megaproject as "*A world-leading living, innovation and research environment*" (Lunds Kommun, 2022b). However, at the forefront of sustainable urban planning in Sweden is "*mainly our neighbour Malmö, which is very known globally*" (I). Consequently, one of the main drivers of this project is to put Lund on the map as a city *"which also take matters of living environments, matters of sustainable living and so forth seriously."* (I). In doing so, Lund is expected to "*inspire other municipalities and decision makers with the planning of Brunnshög as a whole and also with specific projects*" (VI).

Secondly, many interviewees referred to the ground-breaking sustainable infrastructures Brunnshög possesses including: (1) the world's largest low-temperature district heating network powered by surplus heat from the MAX IV and ESS facilities through which "science heats up the city", (2) a surface-efficient vacuum garbage collection system, (3) a tramline running from Lund Central station to the ESS facility, (4) open stormwater management for climate change adaptation (5) climate neutral and plus-energy buildings which will result in a plus-energy district (Lunds Kommun, 2022a). All these innovations embedded in Brunnshög's landscape contribute to creating a stable state of confidence in the project's sustainability allowing for ambitious narratives from supporting stakeholders.

On the social side of urban development, the ambition to create a global district has turned out to be somewhat true already. When Brunnshög hit 1000 inhabitants there were 44 nationalities represented thanks to researchers and companies moving into the area to be in closer proximity to the research facilities and the University (I). This district aspires to welcome 40, 000 residents and workers combined by 2040 from every corner of the world to become a global living environment (Lunds Kommun, 2022b). Brunnshög is not intended to extend current ways of living, its standards are what sets it apart as a city of the future. Ambition drives the Brunnshög project to be a role-model for how cities should face today's local and global challenges whilst accommodating for future needs (Lunds Kommun, 2022b). The slogan "*creating a future to believe in*" is used repeatedly by the Municipality to describe Brunnshög's vision (Lunds Kommun, 2022b).

4.1.2 Sustainability

"Sustainability" is a predominant concept in the narrative surrounding Brunnshög and a key topic to evaluate when analysing a sustainability narrative. This section displays the results of inductively coding what sustainability entails for the supporting stakeholders of a megaproject described as "*A neighbourhood that is sustainable, for real.*" (Lunds Kommun, 2022a). Sustainability is alluded to in three aspects: Agricultural land exploitation, Environmental sustainability and Social sustainability.

Firstly, the major sustainability issue is that this megaproject is being built on some of the most fertile agricultural land in the country (IX). This situation presents an ethical dilemma since the expansion of urban areas onto valuable farmland disregards previous decisions made by the municipality as well as national policy that discourage such developments (XI). Every supporting stakeholder is hyper conscious of Brunnshög's exploitation of the land as it constitutes the project's primary critique (XI). The supporting stakeholders get around this major problem when promoting Brunnshög through the following three arguments.

The most prevalent argument is that Brunnshög is replacing agricultural land in a dense and efficient way through one big project instead of multiple scattered ones around Lund. This argument is mentioned or alluded to in nearly all the supporting stakeholders' interviews. Additionally pointed out by Interviewee V is that to "*build a sustainable society, you need to build it with high density. And that is both for how you use the agricultural land, but also to provide the services that people want.*". To make the area as dense as possible, the residential side of Brunnshög only plans on building row houses or multiple story houses. In the Science Village, they are dealing with this idea through height, including

nine to ten story buildings and plans for a tower with similar height to the 190-metre-high Turning Torso in Malmö, a rarity in Swedish urbanism (V). Height and density are made possible because of Brunnshög's location far away from Lund's prestigious city centre and is made even more acceptable thanks to the immensity of the neighbouring research facilities (III). This strategy answers the demands of both density and return of investment on the Municipality's land (III).

The second most frequent argument in interviews and promotional material is the referral to urban farming's benefits. This represents Brunnshög's way of reconciling with the loss of rich agricultural land, by incorporating its values in the planning of streets, buildings and in the parks (Larsson, 2019). The Municipality describes urban farming as a primary example of an initiative that creates a more sustainable future and ticks off the three dimensions of sustainability. Not only does it supply urban farmers with fruit, vegetables, and berries, but it also results in better biodiversity with increased pollination and better conditions for insect-eating birds. Urban farming also brings people together, creates new contacts and promotes a sense of community (Larsson, 2019). On top of that, the argument was made by Interviewees I and III that urban farming is more surface efficient than traditional large-scale agriculture.

Another way in which Brunnshög's major landowners compensate for the loss of rich agricultural land is by trying to relocate the rich topsoil to less productive fields in Lund's surroundings. The actor considering this strategy the most is Lund Cathedral who, thanks to vast understanding of agricultural practices and close communication with local farmers, is set to move the topsoil away from the Råängen area to more depleted farmlands they own to hopefully enhance their productivity (VII). Lund Cathedral is also discussing the possibility of adding biochar to the displaced soil to capture carbon from the atmosphere (VII). Lund Municipality tried to launch a similar process with their land but met some "*big challenges in doing that"* (I) due to various factors including issues with administration and soil science. Regarding the land underneath Science Village, there have never been any discussions of moving the topsoil (V).

Although Brunnshög is critiqued for the exploitation of rich agricultural land, the megaproject possesses assets that, according to its supporting stakeholders, still make it an environmentally friendly living and working area. Brunnshög is set to become climate-positive by producing more sustainable energy than it consumes as well as being able to adapt to a changing climate to make it easy to live climate-smart (Lunds Kommun, 2022a). Brunnshög is counting on its ground-breaking infrastructures mentioned above to achieve these climate-orientated goals but also on the idea that 92% of the

district's buildings will have their own solar energy production as well as car-pool memberships (Lunds Kommun, 2022a). Interviewee II believes incremental improvements in buildings are already being made such as plus-energy multi-family homes, meaning they produce more energy than they consume year-round. Upcoming developments are set to also include climate neutral buildings (II). The enthusiasm surrounding Brunnshög's climate impacts are felt from almost all supporting stakeholders, similarly referring to one of the project's main objectives being "*to develop a lot of new housing and spaces for companies in a way that is climate-friendly*" (IX).

A central policy towards environmental friendliness in Brunnshög's framework that was first discussed in 2006 is the 'one third goal'. This target restricts car traffic to and from Brunnshög to a maximum of one third of all traffic and at least two thirds to be by bicycle, foot, or public transport (Lunds Kommun, 2022a). This strategy is perceived as a key to sustainability in Lund since it allows the city to further reduce the emissions from transport, its primary emissions sector with around 50% of total emissions (VI). This restriction on car use is worn like a badge of honour for some developers such as LKF, who describe their prestigious development project "Xplorion" as "*the first car-free accommodation in Lund*" (VIII). The only car associated to the housing complex is the shared electric car (BBC StoryWorks, 2023). The one third target is made achievable thanks to better proximity to tram stops than car parks for the anticipated majority of residents and to urban planning being focused on the mobility of cyclists and pedestrians (Lunds Kommun, 2023a). In addition, workers coming from outside of Lund are expected to use the tram from Lund Central station up towards Brunnshög (Lunds Kommun, 2022a).

The tramline is an essential infrastructure for Brunnshög's environmental strategy since it started its route in December 2020 (Lunds Kommun, 2022a). Supporting stakeholders seemed proud when asked about the tram, with Interviewee VI alluding to it winning major national architecture prizes (Lunds Kommun, 2023b). The tram not only enhances the appeal and the property value of the surrounding areas (II) but also serves as the foundation for a new "route of knowledge" connecting the historic city centre and the ESS facility in Brunnshög (IV), resulting in an aesthetic sustainable mode of public transportation (VI). The tramway also contributes to making Brunnshög greener thanks to the grass surrounding the tracks which provides several advantages: absorbing noise, binding particulate matter pollution, soaking rainwater, cooling the micro-climate, and improving biodiversity (Larsson, 2019).

Three sets of arguments were present in the supporting stakeholders' narratives to accommodate for social sustainability in this new "global environment" (Lunds Kommun, 2023a). The major argument is that Brunnshög predicates the mixing of social groups; whether that be socio-economic, ethnic or age

groups, "*new solutions for sustainable community-building are constantly explored*" (Lunds Kommun, 2022b). Different landowners across Brunnshög focus on different strategies to include varying social groups. Southern Brunnshög has planned 15-20% of rental apartments for people in need of cheaper accommodation as part of the municipal social service (I). One of Lund Cathedral's main objectives is to accommodate for three generations of tenants, thus building the necessary services from youth to elders with the objective of creating a community of different generations that interact and benefit from each other's contacts (VII).

The next argument is that the mixed types of housing and contracts found in Brunnshög alleviate the high prices found on Lund's property market. The Municipality states that "*Brunnshög will offer a diverse mix of homes with different qualities*" including traditional apartments both owner and tenant-occupied, townhouses, student housing, senior housing, and housing for families and singles (Lunds Kommun, 2023a). When looking at the constructed part of Brunnshög around the entrance of the district, there are more rental than bought apartments with a mixture of public and private housing associations owning them (II). Tenancy with the Municipality's property company LKF or other public housing companies is seen as a strategy to counter-act any risk of gentrification in the area thanks to mechanisms that can help the Municipality to regulate the price of rents (I), whilst simultaneously having less housing units being dependent on market prices (II). Also mentioned is the positive impact new housing in Brunnshög could have on relieving some of the housing demand in the rest of Lund (IX).

The third argument is that Brunnshög will be a vibrant district, encapsulating a buzz of activity around the office and residential spaces and providing a sense of community that forges feelings of safety and a desire to be there (IV, V, VII). This entails having restaurants, cafes, shops, cultural and recreational centres right by the offices to have social interactions during and after working hours (IV). University students moving into the Science Village will ensure the space is occupied once nine-to-five workers leave at the end of the day (III, IV, V). One of the Municipality's sustainability goals is to maximise sensory impressions by creating thriving environments where people can interact, be stimulated, acquaint, and relax (Lunds Kommun, 2022a). For LKF, social sustainability is very important for the company as they "*have set goals for increased safety and well-being in all of [their] residential areas".* Soft infrastructures that can generate safety are important in Brunnshög and if they can help people to meet when they want to but also keep privacy if desired, "*then you can build a peaceful society*" (V).

4.1.3 Innovation

Lund's history is full of ground-breaking innovations, including inventions such as Bluetooth, the artificial kidney, facial recognition technology, the asthma inhalator, medical ultrasound, and many more (Larsson, 2019). Lund having been home to academics for over 350 years (Larsson, 2019), it has "*an undisputed identity as a city of knowledge and innovation*" (Lunds Kommun, 2022b). The major innovation hotspot of the city, and an important stop on the tramline, is the Ideon Science Park which holds incubator infrastructure for different development-level companies and was famously home to Ericsson offices, the source of many of Lund's technological inventions (XI). Nearly every supporting stakeholder agrees that Brunnshög is a result of the city's identity and a contributor to extending it into the future. The research taking place in MAX IV, and soon in ESS, will make Lund an international centre for materials science research (Larsson, 2019), contributing strongly to strengthening the city's image. In addition, one of the Science Village's primary objectives is to connect innovative companies to the facilities to profit as much as possible from the research that will take place (III). The University moving big-science faculties into the area will also help boost Lund's innovation cluster created by the IDEON Science Park and Medicon Village (a life science research park) (VI). Innovation in Brunnshög does not only relate to scientific research, it also pertains to ways of living. As Interviewee I said: "*if we want to ride that train and continue being one of the most creative cities in Europe, we have to be at the forefront when it comes to trying out new things, also the way we live*".

Indeed, Brunnshög is portrayed as an urban experimentation project or a "blank page" for a few interviewees (I, V, XI). Brunnshög has effectively been coined *"as this area where we want to try and experiment different things regarding urban development*" (I). This desire to experiment with living environments is primarily managed through competitions for building rights, a system both the Municipality and the Science Village have adopted to motivate developers to be innovative regarding environmental measures, aesthetics, community feeling, etc. (I, III). Brunnshög is a place where solutions can be trialled and if successful can be replicated in other parts of Lund and further (IX). This idea is echoed by LKF who's "*hope for the future is that innovation projects like Xplorion are not innovation products, it's how we build every day*" (BBC StoryWorks, 2023).

In the case of the Science Village, where much of the innovative work will be concentrated, they "*believe that the development and the innovations that are going to sprout out of the area in the Science Village and the talent that is going to be activated, is going to be beneficial for the world*" (III). These global benefits are focused on sustainability, and they refer to Sustainable Development Goals as realistic targets that can be achieved with an innovation-positive mindset. As Interviewee III says:

"*If [Brunnshög] can have a 0.2% positive effect on sustainable development in Sweden for the next 30 years, that's a huge effect over that term. We have to believe in that but it takes a tech-positive mindset, you need an innovation-positive mindset for this"*.

4.1.4 Attract investments

To assure Lund's innovation identity is perpetuated through the next decades in Brunnshög, the district wants to attract private actors who can create beneficial outcomes from the research facilities as well as comply with the sustainability values imposed in Brunnshög. The project's primary selling point as a sustainable district has made it easier to attract companies that work with sustainability principles which would otherwise be in Malmö or other cities (VI). Secondly, the "route of knowledge" and the innovative history are essential factors to Lund's attractiveness for innovation-driven companies (IV). Thirdly, research facilities "*attract people from all over the world*" and are a main reason why companies have "*organically chosen to be in and around Brunnshög*" (I). Finally, the University plays an important role in anchoring employing companies to the area and creates a particular dynamic between academics and business; as Interviewee IX explains: "*there are companies who find it really good to establish themselves so close to the University […] for those who do, it's a benefit to have this cluster.*".

For the Science Village, the ambition is to make sure that the significant national investments into the two research facilities create knowledge and financial value in their proximity and for Sweden, not only to be exported far from the area (V). In addition to the research's benefits, they are "*looking at companies that could benefit from the talent that will accrue in the area"* surrounding these high-tech laboratories and "*this sense of excellence in the area will also be attractive to innovation-driven companies.*" (III). This "sense of excellence" is what the Science Village is counting on to attract *"strong institutional employers looking for highly educated people*" (III). It was then further explained that Brunnshög's long-term sustainability principles attract "*nice tenants*" (III), referring to companies that align with Brunnshög's values and strengthen the image of the district.

On the southern side of Brunnshög, the project is seen as a long-term return on investment plan for the benefit of the Municipality's taxpayers as well as to maximise the value of the district's land (I). Brunnshög is projected to generate more revenue than cost in approximately 2 years and "*the revenues will spill over into the Municipality's services such as schools and so forth*" (I). In addition, by making Brunnshög attractive, it will bring in wealthy tenants and professionals, creating "*a good tax*

base" for the city (II). According to Interviewee XI, the prime motivation for the Brunnshög project is to make Lund a more attractive city to live in, work in and invest in.

4.1.5 Science

"*Science heats up the city*" is a slogan proudly used to describe how MAX IV is, and ESS will be, connected to the city's district heating (Lunds Kommun, 2022a). The excess hot water is sent to the city's heating system and the used colder water is sent back for cooling (Lunds Kommun, 2022a). MAX IV and ESS are repeatedly portrayed as the project's "*starting engines*" (II) due to their significant contributions to district heating but mainly because of the way in which the Brunnshög project is growing around them physically and ideologically. Brunnshög was drawn up to fill in the space between the city's outskirts and the two facilities that were placed on agricultural land in isolation North-East of the city (I). The desire to grow Lund, maximise the value of the "in between" land and to collect the benefits sprouting from the facilities led way to the idea of a "route of knowledge" connecting the city to these huge research machines (III). The "route of knowledge" is the primary axis Lund's urban development authorities have chosen to expand on (XI). This political decision is encouraged by supporting stakeholders because it connects previously fringe innovation spaces, such as Ideon and Medicon Village, with the city core, the Engineering Faculty of Lund University and Brunnshög (IV). The decision to develop on this axis "*made the tram investment possible, which made the densification plans possible due to the increasing number of people wanting to live there*" (I). This approach to urban development connecting big research centres to city centres via tramlines has been applied in other European cities such as in Grenoble with the European Synchrotron Radiation Facility or the European Council for Nuclear Research (CERN) in the outskirts of Geneva (III). These facilities were labelled as unsustainable due to their initial isolation, before being densified thanks to tramlines linking them to the cities (III).

The catalyst for the entire urban development of Brunnshög is the ESS facility; "*Without ESS, no Brunnshög*" (XII). Lund would not have landed the ESS project if they had not promised to build a whole new sustainable district around it (XII). The problem with these mega research facilities is that they are usually located far away from urban centres for security, spatial and aesthetic reasons (III). Consequently, they are very energy intensive and inefficient since the excess heat that they produce cannot be used for other activities, creating highly unsustainable hubs that, additionally, researchers from all over the world fly to (IX). The reason why Brunnshög is promoted and developed on sustainability principles comes from the arguments made when Lund was a candidate to host the ESS

project (XII). This is echoed by the Municipality which states: "*the geographical location, well-developed infrastructure and smart energy solutions meant that Lund was a strong candidate*" (Larsson, 2019).

Lund is well known for its university and research, "*that is our factory*" Interviewee II explains. It is vital for Lund to be recognised as an important research city, and now with the two complementing facilities, to become "*the world's leading place for material-science*" (II), a vision in which Brunnshög has a significant role to play (II, IV, IX). The Science Village is essential in supporting the facilities through projects that create a scientific cluster between them, students, researchers, and private actors where solutions to world problems are experimented on (III). The significant discoveries that could come out of these material-science machines range across a vast number of potential fields from pharmaceutical to plastics and food technology (I). The Municipality sees no limit to Brunnshög's scientific aptitude; when referring to defining materials that gave names to past periods such as the Stone, Bronze, and Iron Age, they state: "*Who knows – perhaps Brunnshög will be the location of the discovery that in a few years will give a name to our era*" (Larsson, 2019).

4.2 Interests served

Following the traditions in conducting a political ecology study, the upcoming section looks at which groups of people are perceived to be affected positively and negatively and in what way within Brunnshög's dominant narrative.

4.2.1 Perceived winners

Drawing from the gathered data, the perceived winners of the Brunnshög project could be everybody with potentially a global scale thanks to the innovations that will come out of the area (III). The groups that were mentioned the most, however, are those that support or play a role in creating the dominant narrative including the University, researchers, and companies, but especially the city of Lund.

Lund represented the most decisive 'winner'. The constantly increasing number of people who want to live there, even outside of Brunnshög, now have a better chance at finding or keeping a place on the city's super competitive property market (I, IX). The Municipality and its citizens benefit from the megaproject primarily through taxes and spill overs (II). Moreover, with the Brunnshög project motivating the tramline, people now have a better sustainable connection from the Northeast to the city centre (IX). The tram-works simultaneously improved the pedestrian and cycling experience, "*so*

that is also good for the citizens of other parts of Lund" (IX). The district's dense public spaces are shaped for people to cross paths, which can help trigger beneficial encounters (III). Other infrastructure and individual projects linked to Brunnshög create positive outputs and drive the city's development forward, thus benefitting everyone in Lund (VIII). Neighbouring communities to Brunnshög are also perceived as winners since the value of their homes is increasing and they now have better access to services and shops in Brunnshög (I).

The second most alluded to 'winners' are the incoming companies as they will benefit from Brunnshög's creative environment, a cluster for scientific developments led by the two research facilities (IV). The companies that work with engineering innovation can directly profit from the pool of talented students, a strategy some private actors are already employing around Brunnshög (VI). Following the high-tech companies are foreign engineers for who Brunnshög's global ambiance is said to be appealing (I, II).

A few stakeholders enlarged the scale of the project's benefits to explain that Brunnshög will have a positive impact in numerous industries of the future such as electric vehicles, sustainable plastic materials, plant-based food technology, neutron technology, and more (III). The labs in MAX IV and ESS where these ground-breaking innovations are expected to take place will in turn benefit from the presence of competent academics and foreign engineers who will move into Brunnshög's residences (V, VII). Additionally, students can expect "*big future employers*" at proximity and "*a newly designed campus that was not thought up in the late 50's*" (III). Finally, through the Science Village's association to MAX IV especially, a Swedish research facility, Brunnshög will make sure the country regains a satisfying portion of the outcoming knowledge and business opportunities as desired returns on the significant investment the Swedish Government made for MAX IV (V).

4.2.2 Perceived losers

Following the discussions on the many groups who benefit from the Brunnshög project, the interviewees were asked if they could think of any current or foreseeable 'losers'; to which multiple stakeholders admitted difficulty in thinking of any. Whilst one respondent simply answered "no", others referred to the novelty of the project to explain how these groups would need to be evaluated long-term (III). However, a group that was briefly mentioned a few times was the local farmers. The stakeholders that did mention them as 'losers' picked up on the deprivation of farming valuable land but did not portray this as a significant or irreversible loss. Especially not for the farmers whose lands

will be renewed with the highly fertile topsoil coming from Brunnshög (VII), but also due to the reconciliation Brunnshög is making with the land through urban farming (I).

Another group that was occasionally mentioned includes the bordering neighbourhoods, specifically Nora Fäladen (South-West of Brunnshög) and Djingis Khan in Östra Torn (South of Brunnshög). Early frustration against the megaproject grew in both areas because of their exclusion during the planning processes (XI). The city developers were accused of making the plans too complicated to understand and difficult to influence as a neighbour (XI). Sixteen years later, however, supporting stakeholders believe the tide has turned and that these people have a more positive outlook on Brunnshög thanks to the tram, the stores, and the services it has provided (I, VI).

A few interviewees recognised the possibility of gentrification in Brunnshög or in surrounding neighbourhoods, but most either did not comment on it or explained why it is hard to imagine it taking place in Brunnshög's situation. The reasons given were that Lund's population is very middle-class, resulting in a small socio-economic divide within the city (I), that relative to other comparable Swedish cities, Lund does not have major socio-economic issues (V), that Brunnshög is a new area with new inhabitants who are not replacing anyone (II), and that the lower income areas of the city will not be affected by this development (II). On the other hand, Interviewee XI raised the question of whether Brunnshög is intended to be built for everyone, alluding to potential elitism in the district. Interviewee VI acknowledged that "*a lot of people can't afford to live in Brunnshög*", with potential social segregation accruing across the city because of the choice to have ambitious sustainability and innovation ideas resulting in homes there being more expensive than in the rest of Lund, which is "*a really difficult challenge to address*".

4.3 Socio-environmental impacts

This section covers the project's intertwined social and environmental consequences in an urban context as perceived by all interviewed stakeholders. Several concerns were brought up when it comes to the district of Brunnshög.

City-wide social segregation is thought to be a significant impact of Lund's politicians' desire to expand the city. Interviewee VI shared: "*I'm worried that with this very large expansion, we are building a more and more segregated city*", elaborating that "*as the city becomes bigger, city segregation also tends to grow*" (VI). When building new housing today in Sweden, it is extremely difficult to get past the problem that it will be "*really really expensive*" and neither the City Council nor the Municipality have

found any solutions to this problem (VI). Others spoke on the potential rise of segregation in Lund as a problem "*not only for the people in the low-income areas, it's causing problems for everybody, for the trust in society*" (IX). Interviewee IX explained that although negative effects are felt more directly in lower socio-economic areas, those isolated in wealthy areas are made unaccustomed to living around "others". A fear of the "other" might grow, triggering a set of fear-led responses in everyday society (IX). Possibly setting off these concerns is the current status of Brunnshög's mix of inhabitants. Whilst students and young families have also found new homes there, Interviewee III described the residential area as an "*expat-ish community […] partly because there are a lot of high earners with international backgrounds*" (III). This statement was echoed by interviewee II who explains: "*We see a lot of immigrants moving to Brunnshög […] that are engineers working at the high-tech companies […] So it's a very high proportion of immigrants actually, but the well-educated ones.*".

The most recent environmental debate surrounding Brunnshög is the addition of an extra motorway exit close to Brunnshög for the E22 that runs adjacent to the district (XI). Interviewee XI explained that this was supported by the local mainstream political parties but not by organisations such as FörNyaLund, the Environmental Party, the Left Party, the local Extinction Rebellion group and the Djingis Khan association. The motivation for the municipal board was that the expansion of the E22 is crucial for the development of the area of Ideon and Brunnshög and that the congestion on the motorway would be too significant without it (VI). However, this plan directly contradicts Brunnshög's one third goal of having maximum 1/3rd of commuters to and from Brunnshög traveling by car, promoting alternative modes of transportation around the district (Lunds Kommun, 2022a). But even that goal is considered not radical enough, with some believing this 16-year-old target should be updated with soft measures affecting people's mobility behaviour if it is to keep up with modern sustainability standards (VI, XI).

Another environmental concern originates from the ESS research facility. Lund's Society for Nature Conservation [Naturskyddsförening] campaigned against ESS' establishment in Lund with arguments alluding to: (1) the significant area of rich agricultural land it would replace, (2) the presence of hazardous chemicals such as radioactive forms of mercury close to where people live and (3) the amount of energy required to run this facility (IX). The ESS project adapted to concerns 2 and 3 by replacing the neutron target substance with a less hazardous one and by connecting the energy supply and excess to Lund's district heating system (IX). Nevertheless, LNF is set on watchdogging the facility as it comprises of serious risks of radioactive pollution too close to the city (IX).

Interviewee IV brought up the importance of system thinking regarding Brunnshög's urban planning so to not only integrate local environmental impacts but also those further connected through socio-

ecological systems. The first situation that was brought up is the trend in the current Swedish building industry to work with wood over cement for sustainability reasons. However, this leads to the disturbance of ecosystems by tearing down old growth forests and creating the need for monocultures (IV). They add "*we are so focused on CO_2 footprints that we have forgotten about all the other environmental impacts*" (IV). Another problem they elaborated on is the displaced effect of removing local agricultural land and what that entails for food security and dependence on imports as well as the impacts that has on land-use in other parts of the world (IV).

The importance of local food security was the main topic of conversation with the Local farmer who believes that with the Swedish population growing so fast, projects such as Brunnshög are cutting the branch on which we are sitting on (X). They and the Federation of Swedish Farmers believe urban expansion projects to satisfy the need for housing in the country should not be taking place on its richest lands. They encourage constructions in the North of Sweden where the soil is much less productive or even on the east side of Lund where land is less fertile than in the Brunnshög area (X). The farmer pointed to how removed contemporary urban citizens are from food production. This, they believe, has led to politicians in Lund taking decisions to continuously expand the city without having a sense of the value of the surrounding land, lacking the "*whole perspective*" (X).

5 Discussion

This thesis has investigated the dominant narrative surrounding Brunnshög as well as its emanating winners, losers, and socio-environmental impacts. Through its repetition and authority, Brunnshög's supporting stakeholders have created a normalised dominant narrative that can be described as follows: Brunnshög is an urban pioneer that fulfils present and future housing demands with high ambitions for sustainability whilst also maximising the benefits from the MAX IV and ESS research facilities by creating an innovative environment between them, the university, and private actors. The biggest 'winners' of the megaproject are the actors that perpetuate or play an important role in the dominant narrative, including incoming companies, material-science academics, and researchers, and especially the city of Lund which will benefit from a strong tax base, more housing units, and a prolongation of its identity as an innovative hub. In the dominant narrative, groups identified as 'losers' from this project are rare and not significantly affected, as Brunnshög represents a win-win scenario for everybody where the positives outshine the negatives. Those who were recognised are deprived local farmers (who still benefit from better topsoil), excluded bordering neighbourhoods (who now benefit from services and outlets) and gentrified areas (a concern that is heavily contested by certain supporting stakeholders). Regarding socio-environmental implications, the major concerns are: (1) an

increase in social segregation in Lund, (2) conflicts to limiting car use in the area due to the new motorway exit, (3) local radioactive pollution due to the ESS facility, (4) a loss of touch with the importance of local food production, and (5) a non-systemic approach to urban planning.

5.1 Brunnshög: a case of ecomodernist urban sustainability

The narrative surrounding Brunnshög fits the mould of the ecomodernist urban sustainability discourse which argues modernity, competition, innovation, and technology are key to achieving sustainability as well as local and global human prosperity (The Breakthrough Institute, 2015). Brunnshög's dominant narrative reflects the Ecomodernist Manifesto's (The Breakthrough Institute, 2015) arguments for urban sustainability in the following four ways: Firstly, ecomodernism, just like Brunnshög's supporting stakeholders, argues that higher-density cities are more sustainable because they require less land and transportation infrastructure per capita. The argument for density in Brunnshög is strong due to the value of the surrounding agricultural land. Density also serves the city of Lund by maximising the value of the land and by fitting in as many wealthy tenants and companies as possible. Secondly, ecomodernism advocates for the use of advanced technologies to make cities more sustainable. This includes infrastructure such as smart grids, energy-efficient buildings, and renewable energy sources. Brunnshög's main strategy towards environmental sustainability constitutes of modern infrastructure that includes "the world's largest low-temperature district heating network", plus-energy buildings and photovoltaic energy sources. Thirdly, ecomodernism argues that economic growth can be decoupled from environmental impact through technological innovation. This means that as economies grow, they can do so without increasing their environmental impact. Brunnshög's narrative reflects this philosophy as it is a result of the city's growth-positive mindset and portrays Brunnshög as having beneficial impacts on the environment. Finally, ecomodernism argues that innovation is the key to sustainable urban development. Equivocally, Brunnshög's narrative is heavily innovation-positive regarding sustainable urban development. After all, Brunnshög is an extension of a city which has been running on innovation for centuries. Overall, Brunnshög reflects ecomodernism's emphasises on the importance of using technology and innovation to achieve sustainability goals and improve the quality of life in urban areas.

The UPE approach sees this form of ecomodernist urban sustainability as a fantasy of socio-ecological cohesion fuelled by the hegemonic and consensual acceptance of the term 'sustainability' as the normative ideal (Swyngedouw & Kaika, 2014). The ideal of sustainability lacks intellectual coherence and political substance due its nature as an umbrella concept under which real political tensions are

diluted through consensual agreements from diverse societal actors (Swyngedouw & Kaika, 2014). The problem with the philosophy of ecomodernist urban sustainability that Brunnshög represents is that it focuses on the techno-managerial ways to deliver a 'sustainable' urban environment but relegates questions of socio-ecological inequality, environmental destruction, and associated power relations to a technocratic, or expert-led, governance spearheaded by scientific and innovative ideals. The groups making the calls for Brunnshög represent a 'pluralisation' of the state, whereby non-elected officials, experts, and private actors such as strategists, academics and companies are incorporated in the governance, delivery, and financing of the megaproject. The emergence of the ecomodernist approach to urban sustainability through techno-scientific ingenuity has been criticised by many scholars for creating a new form of governance excessively empowering business elites, negating issues of democracy and accountability, creating a post-political condition in cities (Swyngedouw, 2009).

5.2 Brunnshög: a conveyor of neoliberal governance and post-politics

The findings of this study correspond with previous research on the effects of urban megaprojects in four ways. Firstly, Brunnshög as a development project promotes an entrepreneurial approach to urban governance, aiming to attract investments and boost economic growth (Hall & Hubbard, 1998). Brunnshög conveys a neoliberal agenda as the success of such projects are always dependent on market forces as well as speculative urban investments to create value in the area, rather than social welfare (Vento, 2015). Thus, the construction of an attractive built environment such as Brunnshög is seen to attract investment by two means: it appeals to wealthy professionals such as engineering firms and is perceived as a low-risk area to invest in property (Vento, 2015). This entrepreneurial approach tends to exacerbate socio-spatial polarisation and exclusion processes, benefitting the elite rather than the masses (Hall & Hubbard, 1998). Since the focus of the dominant narrative is set on the image of Brunnshög, this diverts attention away from local socio-economic problems, with multiple supporting stakeholders rebutting the possibility of increased segregation or gentrification by diverting to Lund's middle-class and problem-free society. However, since the viability of Brunnshög depends on the returns from land revalorisation, megaprojects like this tend to displace surrounding populations through gentrification processes (Evans, 2005; Swyngedouw et al., 2002) whilst the benefits from land revalorisation are reaped by the elite groups leading the project (Vento, 2015).

Secondly, megaprojects such as Brunnshög, which promote a neoliberal approach to urban governance, limit the political say to experts and exclude public input from decision-making (Jessop, 1997; Swyngedouw et al., 2003). This approach is defended on the grounds of being technically

efficient and participatory for a wide range of stakeholders (Rodriguez et al., 2003). Brunnshög was found to be governed by what the Municipality calls "a close dialogue between many actors in society" (Lunds Kommun, 2022a). Interviewee III confirmed that what this practically entails is a decentralised governance focused on the development of the megaproject whereby a 'projectified' Municipal body, meaning their work is carried out in a series of projects where processes are handed on to experts (Lundin et al., 2015), collaborates mostly with private developers (except for LKF) for who the land is won through competitions on innovation and sustainability. Additionally, the City Council, which is responsible for voting on the policy that will see Lund expand by 1,200 homes per year for an unrestricted amount of time was defined by former member Interviewee XI as a "*council populated by researchers […] it's an expert committee*". This leads to the interests of the city being defined by the privileged social groups of Lund and business elites, with democratic debate surrounding the governance of Brunnshög being neglected (Swyngedouw et al., 2005).

Thirdly, the dominant narratives surrounding megaprojects such as Brunnshög can be seen to entail processes of depoliticisation by reducing the political to the economic and blocking the possibility of alternative policies for urban governance (Wilson & Swyngedouw, 2014). Indeed, by signalling the city's commitment to creating a welcoming business environment, Brunnshög symbolises the reduction of the political to the economic. Moreover, iconic infrastructure, like those promoted in Brunnshög, are found to contribute to mentally blocking the possibility of alternative policies to neoliberal urban governance through its capacity to seduce and impress (Vento, 2015). Megaprojects have also been useful tools to generate consensus around a city's urban policies and displace political debate to issues of purely technocratic administration (Vento, 2015). In Brunnshög's case, debates such as whether Lund should continue expanding on rich agricultural land are neglected due to the omnipresent dominant narrative assuring a positive and unquestioning public perspective on the megaproject.

Finally, the use of exceptionality measures within urban planning policies to justify the implementation of megaprojects based on their significance and benefits for the entire city further enhances a depoliticised style of urban governance (Swyngedouw et al., 2002). Brunnshög represents a prime example of exceptionality. Both the Municipality's 2018 Comprehensive Plan [Översiktsplan] and national policy discourage development on productive agricultural land, with some expansion projects in the outskirts of Lund having been stopped for this reason in the past (XI). The dominant narrative is effective in concealing this fact thanks to a win-win impression of benefits for the entire city.

5.3 Brunnshög: the embodiment of a national and global urban agenda

Brunnshög not only reflects Lund's values on urban development, it also embodies Sweden's urban agenda. As outlined on the Swedish Government's website entitled "Sweden and sustainability" (Swedish Institute, 2022), national policy places strong emphasis on innovation, research, and development to promote sustainable practices – reflecting Brunnshög's dominant narrative and the ecomodernist urban sustainability discourse. National policies have encouraged the incorporation of sustainable housing and energy-efficient technologies, pushing Municipalities such as Lund to build climate-smart and sustainable urban districts. Furthermore, Brunnshög is part of a broader social trend in Sweden which emphasises the importance of creating liveable, inclusive, and resilient cities. This approach, however, relies more on 'green' infrastructures than social measures, promoting public transport, reduced car usage, and prioritising pedestrian and cycling commuting instead of urban planning that establishes inclusive and enriching links between diverse community members.

Brunnshög also aligns with the global "new urban agenda" which heavily focuses on the concept of sustainability, as emphasised in SDG 11 (United Nations, 2015) and in both the Urban Agenda for the EU (European Commission, 2016) and The New Leipzig Charter (European Commission, 2020). These discourse-setting-policies perceive cities as central hubs for world-wide development (Barnett & Parnell, 2016), which under contemporary capitalism entails the 'sustainable development paradox' of sustaining endless growth, urban social inequities, and environmental degradation (Krueger & Gibbs, 2010). However, the Brunnshög megaproject clashes with aspects relating to equality found in The New Leipzig Charter's chapter on "The just city". This thesis has shown that Brunnshög's dominant narrative neglects the importance of social cohesion and inclusion in urban development, it is not built to provide equitable access to resources and opportunities for all residents and lastly, land use planning does not aim to protect valuable natural assets (European Commission, 2020).

6 Conclusion

The results from this thematic approach to an analysis of Brunnshög's dominant narrative demonstrate a normalised story that promotes ambitious innovations, scientific discoveries, economic boosterism and high-end sustainability. This dominant narrative is propagated for the benefit of those who construct the narrative including Lund University, incoming businesses, researchers surrounding the MAX IV and ESS facilities, and especially the city of Lund which benefits from an enhanced reputation and a greater investment appeal. The 'losers' are limited within this win-win narrative, but deprived local farmers, excluded neighbourhoods, and gentrified areas were mentioned. The socio-

environmental implications of Brunnshög include a potential increase in social segregation, conflicts over limiting car use, local radioactive pollution from the ESS facility, a loss of touch with local food production and a non-systemic approach to urban planning. Brunnshög's dominant narrative is also demonstrated to convey a neoliberal form of city governance and a state of post-politics that foreclose democratic debates surrounding Brunnshög.

The findings from this thesis are intended to extend critical thinking beyond the ecomodernist sustainable urban development narrative found in Brunnshög. As pointed out by Swyngedouw (2018) when discussing the re-politicisation of cities, to address the socio-ecological challenges of planetary urbanization, we must overcome the cultural conformity described by Jameson (2003) that "*it is easier to imagine the end of the world than to imagine the end of capitalism*". This requires future academics to go beyond the limitations of the depoliticising sustainability discourse perpetuating the unequal socio-ecological dynamics of urbanisation. Instead, we must chart new avenues for a politicised urbanity that can produce equal and democratic cities (Swyngedouw et al., 2006).

7 References

Adger, W. N., Benjaminsen, T. A., Brown, K., & Svarstad, H. (2001). Advancing a Political Ecology of Global Environmental Discourses. *Development and Change*, *32*(4), 681–715. https://doi.org/10.1111/1467-7660.00222

Agyeman, J., Bullard, R., & Evans, B. (2003). *Just Sustainabilities*. Cambridge, MA: MIT Press. https://mitpress.mit.edu/9780262511315/just-sustainabilities/

Barnett, C., & Parnell, S. (2016). Ideas, implementation and indicators: Epistemologies of the post-2015 urban agenda. *Environment and Urbanization*, *28*(1), 87–98. https://doi.org/10.1177/0956247815621473

BBC StoryWorks. (2023). *The Swedish communities making sustainability a reality*. BBC Storyworks. https://www.bbc.com/storyworks/building-communities/communities-making-sustainability-a-reality

Braun, V., & Clarke, V. (2012). Thematic analysis. In *APA handbook of research methods in psychology* (First, Vol. 2, pp. 57–71). American Psychological Association.

Braun, V., & Clarke, V. (2021). *Thematic Analysis: A Practical Guide*. Sage Publications Ltd. https://us.sagepub.com/en-us/nam/thematic-analysis/book248481

Bryman, A. (2016). *Social Research Methods*. Oxford University Press.

Campbell, S. (1996). Green Cities, Growing Cities, Just Cities?: Urban Planning and the Contradictions of Sustainable Development. *Journal of the American Planning Association*, *62*(3), 296–312. https://doi.org/10.1080/01944369608975696

Chisholm, J., & Petrakis, M. (2020). Peer Worker Perspectives on Their Potential Role in the Success of Implementing Recovery-Oriented Practice in a Clinical Mental Health Setting. *Journal of*

Evidence-Based Social Work, *17*(3), 300–316. https://doi.org/10.1080/26408066.2020.1729282

European Commission. (2016, May 30). *Urban Agenda for the EU*. https://commission.europa.eu/eu-regional-and-urban-development/topics/cities-and-urban-development/urban-agenda-eu_en

European Commission. (2020). *THE NEW LEIPZIG CHARTER: The transformative power of cities for the common good*.

Evans, G. (2005). Measure for Measure: Evaluating the Evidence of Culture's Contribution to Regeneration. *Urban Studies*, *42*(5–6), 959–983. https://doi.org/10.1080/00420980500107102

Galletta, A., & Cross, W. E. (2013). The Semi-Structured Interview as a Repertoire of Possibilities. In *Mastering the Semi-Structured Interview and Beyond* (pp. 45–72). NYU Press. https://www.jstor.org/stable/j.ctt9qgh5x.7

Hall, T., & Hubbard, P. (1998). *The entrepreneurial city: Geographies of politics, regime, and representation*. https://www.semanticscholar.org/paper/The-entrepreneurial-city-%3A-geographies-of-politics%2C-Hall-Hubbard/9595132d0605a1fe22cb5d3ee9140ece070d1683

Hubbard, P. (1996). Urban Design and City Regeneration: Social Representations of Entrepreneurial Landscapes. *Urban Studies*, *33*(8), 1441–1461.

IPCC. (2022a). *Summary for Policy Makers. In: Climate Change 2022: Mitigation of Climate Change Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press. https://www.ipcc.ch/report/ar6/wg3/

IPCC (Ed.). (2022b). Summary for policymakers. In *Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press.

IPCC. (2023). *Future Work—IPCC*. https://www.ipcc.ch/about/future-work/

Jameson, F. (2003). Future City. *New Left Review*, *21*, 65–79.

Jessop, B. (1997). *The entrepreneurial city: Re-imaging localities, re-designing economic governance, or re-structuring capital?* (pp. 28–41).

Kamat, S. (2014). The New Development Architecture and the Post-Political in the Global South. *The Post-Political and Its Discontents*, 67.

Keil, R. (2003). Urban Political Ecology. *Urban Geography*, *24*, 723–738. https://doi.org/10.2747/0272-3638.24.8.723

Keivani, R. (2009). A review of the main challenges to urban sustainability. *International Journal of Urban Sustainable Development*, *1*(1–2), 5–16. https://doi.org/10.1080/19463131003704213

Kopljar, S. (2020). Big Science, Ethics, and the Scalar Effects of Urban Planning. *Urban Planning*, *5*(4), 217–226. https://doi.org/10.17645/up.v5i4.3289

Krueger, R., & Gibbs, D. (2010). *The Sustainable Development Paradox: Urban Political Economy in the United States and Europe* (Vol. 32). Guilford. https://doi.org/10.1111/j.1467-9906.2009.00491.x

Larsson, R. (2019). *The history of Brunnshög: From prehistoric times to the future*. Lunds Kommun.

Leach, M., Stirling, A. C., & Scoones, I. (2010). *Dynamic Sustainabilities: Technology, Environment, Social Justice*. Routledge. https://doi.org/10.4324/9781849775069

Lundin, R., Arvidsson, N., Brady, T., Ekstedt, E., Midler, C., & Sydow, J. (2015). *Managing and Working in Project Society: Institutional Challenges of Temporary Organizations* (p. 274). https://doi.org/10.1007/9781139939454

Lunds Kommun. (2018). *Lunds kommuns översiktsplan*. https://lundskommun.maps.arcgis.com/apps/MapSeries/index.html?appid=ac1324c0e56a4729a5bb8143ff9c3d3c

Lunds Kommun. (2022a). *High sustainability in Brunnshög*. Lunds kommun. https://lund.se/stadsutveckling-och-trafik/stadsutvecklingsprojekt/brunnshog/hallbara-brunnshog

Lunds Kommun. (2022b). *Vision and goals for Brunnshög*. Lunds kommun. https://lund.se/stadsutveckling-och-trafik/stadsutvecklingsomraden/brunnshog/vision-och-mal-for-brunnshog

Lunds Kommun. (2022c). *Etapper och nyckeltal*. Lunds kommun. https://lund.se/stadsutveckling-och-trafik/stadsutvecklingsomraden/brunnshog/delomraden-och-byggnader-i-brunnshog/etapper-och-nyckeltal

Lunds Kommun. (2023a). *Live in Brunnshög*. Lunds kommun. https://lund.se/stadsutveckling-och-trafik/stadsutvecklingsomraden/brunnshog/leva-i-brunnshog

Lunds Kommun. (2023b). *Tramway Lund C to ESS*. Lunds kommun. https://lund.se/stadsutveckling-och-trafik/kollektivtrafik/sparvag-lund-c-till-ess

Merriam-Webster. (2023, April 22). *Definition of MEGAPROJECT*. https://www.merriam-webster.com/dictionary/megaproject

Ministry of Climate and Enterprise. (2021, March 11). *Sweden's climate policy framework*. Regeringskansliet; Regeringen och Regeringskansliet. https://www.government.se/articles/2021/03/swedens-climate-policy-framework/

Ministry of the Environment. (2020). *Sweden's long-term strategy for reducing greenhouse gas emissions* [UNFCCC Long-Term Strategy]. Government Offices of Sweden: Ministry of the Environment.

Orueta, F. D., & Fainstein, S. S. (2008). The New Mega-Projects: Genesis and Impacts. *International Journal of Urban and Regional Research*, *32*(4), 759–767. https://doi.org/10.1111/j.1468-2427.2008.00829.x

Rodriguez, A., Swyngedouw, E., & Moulaert, F. (2003). Urban Restructuring, Social-Political Polarization and New Urban Policies. In *The Globalized City – Economic Restructuring and Social Polarization in European Cities*. Oxford University Press. https://research.manchester.ac.uk/en/publications/urban-restructuring-social-political-polarization-and-new-urban-p

Statistics Sweden. (2023, May 6). *Population by region, changes, gender and month. PxWeb*. The Statistics Database. https://www.statistikdatabasen.scb.se/pxweb/sv/ssd/START__BE__BE0101__BE0101G/ManadBefStatRegion/table/tableViewLayout1/

Swedish Institute. (2022). *Sweden and sustainability*. Sweden.Se. https://sweden.se/climate/sustainability/sweden-and-sustainability

Swyngedouw, E. (2009). Civil society, governmentality and the contradictions of governance-beyond-the-state: The janus-face of social innovation. In *Social Innovation and Territorial Development|Soc. Innovation and Territorial Development* (pp. 63–78). Ashgate Publishing.

https://research.manchester.ac.uk/en/publications/civil-society-governmentality-and-the-contradictions-of-governanc

Swyngedouw, E. (2010). Impossible Sustainability and the Post-political Condition. In *The Sustainable Development Paradox: Urban Political Economy in the United States and Europe* (pp. 13–40). Guilford. https://doi.org/10.1007/978-90-481-3106-8_11

Swyngedouw, E. (2011). Interrogating post-democratization: Reclaiming egalitarian political spaces. *Political Geography*, *30*(7), 370–380. https://doi.org/10.1016/j.polgeo.2011.08.001

Swyngedouw, E. (2018). Urbanization and Environmental Futures: Politicizing Urban Political Ecologies. In *Promises of the Political: Insurgent Cities in a Post-Political Environment*. The MIT Press. https://direct.mit.edu/books/book/4104/chapter/169878/Urbanization-and-Environmental-Futures

Swyngedouw, E., & Kaika, M. (2014). Urban Political Ecology. Great Promises, Deadlock… and New Beginnings? - (L'ecologia política urbana. Grans promeses, aturades… i nous inicis?). *Documents d'Anàlisi Geogràfica*, *60*. https://doi.org/10.5565/rev/dag.155

Swyngedouw, E., Kaika, M., & Heynen, N. (2006). *In the Nature of Cities—Urban Political Ecology and The Politics of Urban Metabolism*.

Swyngedouw, E., Moulaert, F., & Rodriguez, A. (2002). Neoliberal Urbanization in Europe: Large–Scale Urban Development Projects and the New Urban Policy. *Antipode*, *34*(3), 542–577. https://doi.org/10.1111/1467-8330.00254

Swyngedouw, E., Moulaert, F., & Rodriguez, A. (2003). The World in a Grain of Sand: Large-Scale Urban Development Projects and the Dynamics of 'Glocal' Transformations. In *The Globalized City – Economic Restructuring and Social Polarization in European Cities*. Oxford University

Press. https://research.manchester.ac.uk/en/publications/the-world-in-a-grain-of-sand-large-scale-urban-development-projec

The Breakthrough Institute. (2015, April 1). *An Ecomodernist Manifesto—English*. The Breakthrough Institute. https://thebreakthrough.org/manifesto/manifesto-english

The Environmental Party in Lund. (2022). *E22 is being expanded*. Miljöpartiet. https://www.mp.se/lund/politik/e22-breddas/

Theurillat, T., & Crevoisier, O. (2013). The Sustainability of a Financialized Urban Megaproject: The Case of Sihlcity in Zurich. *International Journal of Urban and Regional Research*, *37*. https://doi.org/10.1111/j.1468-2427.2012.01140.x

Torgerson, D. (1995). The uncertain quest for sustainability: Public discourse and the politics of environmentalism. In F. Fischer & M. Black (Eds.), *Greening Environmental Policy: The Politics of a Sustainable Future* (pp. 3–20). Palgrave Macmillan US. https://doi.org/10.1007/978-1-137-08357-9_1

United Nations. (2015). *Transforming our world: The 2030 Agenda for Sustainable Development | Department of Economic and Social Affairs*. https://sdgs.un.org/2030agenda

Vento, A. T. (2015). Mega-project meltdown: Post-politics, neoliberal urban regeneration and Valencia's fiscal crisis. *Urban Studies*, *54*(1), 68–84.

Wilson, J., & Swyngedouw, E. (Eds.). (2014). Seeds of Dystopia: Post-Politics and the Return of the Political. In *The Post-Political and Its Discontents: Spaces of Depoliticization, Spectres of Radical Politics* (p. 0). Edinburgh University Press. https://doi.org/10.3366/edinburgh/9780748682973.003.0001

8 Appendices

Appendix 1. Interview guide

Recap

This interview is for academic research purpose as part of my master's thesis in Environmental Studies and Sustainability Science at Lund University. I am interested in the Brunnshög project and especially the arguments used by important actors regarding its sustainability and significance for Lund.

The aim with this study is to investigate the narratives of actors involved in the project, especially in regard to its sustainability, opportunities, and challenges.

The interview will take part in three segments based on a specific theory for interviewing as a methodology. We will start with a background question, followed by the opening segment which aims at understanding your perception of Brunnshög as a project and then the middle segment are more specific questions relating to the political debate surrounding Brunnshög and then we will finish off with the concluding segment where we will round off the interview.

Do you have any questions up until now?

Consent Questions

- ➔ Before we start the interview, I need to ask you for your consent so that I have it recorded. Do you consent to be interviewed for my master's thesis project, and for me to use your answers in my paper?
- ➔ Do you consent to the interview being recoded?
- ➔ I will not use your name, but do you give me permission to use your professional title instead?
- ➔ Can I quote you directly or would you prefer me to email you the quotes for approval before using them in my paper?

Background

1) Can you tell me about your role at X and how X is involved in the Brunnshög project?

Opening Segment: Brunnshög as a project

2) How would you describe the Brunnshög project to me?

    a. What are the objectives of the Brunnshög project?

    b. What are Brunnshög's main benefits?

    c. What are its main challenges?

3) Brunnshög is often promoted as a sustainable urban development project, what are your thoughts on this?

    a. How would you define sustainability in urban development?

4) Besides being promoted as sustainable, Brunnshög has been highlighted as important for Lund's growth as a city. What are your thoughts about this?

For example, the ESS and MAXIV facilities strengthen Lund's image as a research hub and the focus on sustainability will make Lund a 'city of the future'. How important do you think the additions Brunnshög provides are to the city of Lund?

Middle Segment: Brunnshög as a political debate

5) Brunnshög has been criticised for being developed on rich agricultural land. What are your thoughts about this?

    a. In what ways and to what extent would you say that the Brunnshög project takes this problem into consideration?

6) There was local contestation when the plans for the tram were revealed. Several local political parties opposed the projects and groups of citizens protested in the streets during 2015 and 2018 mainly due to increased public funds being required. What do you think about this initial contestation?

    a. What do you think is the current level of local acceptance of the tram and of Brunnshög as a whole? If it is commonly accepted as a positive project, why would you say that is?

7) Who do you describe are the winners of the Brunnshög project? In what ways?

    a. Can you think of any group that represents losers from the Brunnshög's project?

8) Brunnshög is said to be socially sustainable by including mixed housing for people with different income levels. Could you elaborate on this and how would you say social sustainability is addressed in the Brunnshög project?

9) Do you have any concerns regarding social and/or environmental consequences this urban expansion project can have that haven't been mentioned? If so, how does Brunnshög address these issues?

Concluding Segment: Round off the Interview

10) Is there anything you would like to add?

11) Is there anyone in particular that you recommend me to contact, that could help me gather more information on Brunnshög?

Appendix 2. Codebook

NVivo: LUMES-thesis

Codes

Name	Description	Files	References
Discussion points		7	19
3 Landowners		2	4
Cathedral		4	20
Keep the values of agriculture		3	5

Name	Description	Files	References
Municipality	Actor	5	9
Legislation		0	0
2010 rent legislation		1	3
Municipal demands		1	3
LKF		2	4
Science Village	Actor	2	3
City		1	2
Skane Regional Council		1	2
University		1	2
Wihlborgs		1	1
Brunnshog is not pushing anyone away	Narrative	2	2
Expansion	Theme	0	0
Lund should grow continuously		6	11

Name	Description	Files	References
Serves Lund's housing demand	Narrative	6	8
Local Perceptions		0	0
Brunnshog		6	8
Depoliticisation post-construction		8	8
E22		1	1
ESS		2	3
Tram		6	12
Project Governance		5	24
RQ1 - Themes & Narratives		0	0
Ambitious	Topic, being at the forefront of urban planning, sustainable living, good environment for the people of Lund	0	0
A future to believe in	Narrative: touching the imaginary	4	7
Ambitious goals	Forefront of sustainability, urban living, innovation, and material science	9	25
Global district		3	3

Name	Description	Files	References
Lund can inspire others	Narrative	2	4
Attract Investment	Topic	0	0
Attract sustainable and innovative companies	Narrative, based on competition and showing off your company's values	7	14
Long term investment and return plan	Narrative: Return from taxing companies and rich tenants, opposing narrative of wanting a mixed base of tenants	5	9
Innovation	Topic	0	0
Experimentation project	Narrative	8	13
Need an innovation-positive mindset for this	Narrative, based on competition	2	2
Ride Lund's train of innovation	Narrative	5	7
Science	Topic	0	0
Creating a science cluster between the facilities and science village		8	13

Name	Description	Files	References
ESS & MAX IV - the project's heart	Narratives, the first organ to develop in an embryo, what is developing around these 2 facilities is the rest of the being, Science is heating the city through district heating	10	19
Science & Innovation will bring solutions to world problems	Narrative	4	5
The University and research are our factory	Narrative, Lund at the forefront of big science	6	7
Sustainability		8	12
Agricultural land	Topic	7	11
Efficient dense land use	Narrative	10	17
Dense big project instead of scattered small projects	Narrative	3	5
Relocating rich topsoil to less fertile fields	Narrative	4	8

Name	Description	Files	References
Urban farming	Narrative: More surface efficient than large scale agriculture + community feeling --> Look at book, their way of reconciling what it means to build on that kind of soil	8	18
Environmental	Topic	5	6
Car-restricted district	You're building for the bikers and not for the cars	10	14
Positive env. outputs	Narrative, Net-positive, plus energy buildings	7	17
Tram essential to Brunnshog's success	Narrative: the knowledge route and planned development alongside it	5	8
Social	Topic	2	3
A good place to live		4	7
The 2 parks		6	7
Lund has little social issues to start with		3	5
Mixed groups	Narrative, mixed socio-economic levels, ethnicities, generations	12	21

Name	Description	Files	References
Mixed types of housing	Narrative	6	10
Expensive housing		8	11
Vibrant district	Narrative	7	13
RQ2 - Interests served (who + what)		0	0
Losers		5	6
Farmers		5	8
Neighbours		3	6
Those who can't afford Brunnshog		1	2
Winners		0	0
Brunnshog inhabitants		2	2
Companies		4	4
Lund		8	13
Sweden		1	1

Name	Description	Files	References
University, Science + Innovation		3	4
RQ3 - Potential Consequences		0	0
Cutting the branch on which you sit	Opposing narrative	4	14
Environmental		0	0
Car use		3	5
Ecological systems		1	2
ESS pollution		1	2
Failing infrastructure		1	1
Social		5	9