

Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences



Graduation Plan: All tracks

Submit your Graduation Plan to the Board of Examiners (Examencommissie-BK@tudelft.nl), Mentors and Delegate of the Board of Examiners one week before P2 at the latest.

The graduation plan consists of at least the following data/segments:

Personal information	
Name	Bas Jurrijean Kramer
Student number	5079802

Studio		
Name / Theme	Transitional Territories / Altered Nature - Poetics of change	
Main mentor	Dr. Victor Muñoz Sanz	Urbanism - Urban Design section
Second mentor	Prof. Zef Hemel	Urbanism – Spatial Planning section
Argumentation of choice of the studio	<p>As a Landscape-Architecture Bachelor's graduate, I am intrigued by the interplay between territories and people, an interplay that must adapt to today's time of crisis, demanding action.</p> <p>Embracing this, it is vital to synergize humans and nature. Neither element should be deemed more significant than the other, as both play a vital role in shaping a unified and enduring future. A conviction in line with the studio's advocacy, advocating a shift from passive land use to recognizing nature's active role in intergenerational life.</p> <p>Consequently, this studio resonates with my aspiration to be a landscape urbanist, reshaping human-environment dynamics for a sustainable world. While, additionally, the studio structure supports my preferred research-oriented and organized project approach, offering unique methods to further develop my skillset</p>	

Graduation project	
Title of the graduation project	<p>Recharged 'Hart'</p> <p><i>'Puzzling with Peripheral Housing Pressure on the Depleted Landscape of the Fringe of the 'Groene Hart'</i></p>
Key words (4-7)	<p>Ecocentric paradigm, Synergetic Urban Design, Terrestrial Urbanisation, Housing crisis, imbalanced urban-rural relationship, Pseudo-countryside, Fringe of the 'Groene Hart'.</p>
Goal	
Location:	The fringe of the 'Groene Hart'

	<p>Within the scope of the project, the region of the fringe of the ‘Groene Hart’ in the Netherlands is the focus of examination, with an emphasis on its spatial design and operationalisation catering to the pressure of housing among the fringes. The focus will primarily be on the operationalisation which directly conjures from the altered natural situation shaping the spatial relationships of the housing market dynamics. Hence, the thesis requires an interscalar approach to illustrate the continuity of the operationalisation and offer an alternative design proposal.</p> <p>The design proposal should constitute a mosaic of agroecological urban housing developments at diverse spatial interventions within the overarching spatial matrix of Macro, Meso, and Micro adapting the design scale to the corresponding subject or challenged condition while considering the temporal dimension.</p>
<p>The posed problem,</p>	<p>Our era is defined by a multitude of crises. Extreme weather is affecting the food supply, while the population is rapidly growing, causing housing and resource shortages, a war is reshaping global politics and opinions are dividing society. We are in crisis, the time of the Anthropocene (A), a time of irreversible impacts of human activities on Earth’s ecosystem, landscapes, leading to scapes of extraction and crisis (Curry, 2011; Daly, 2014; Haraway, 1988, 2015; Kóvskaya, 2021; Latour et al., 2020; Rolston III, 2020; Vieira & Sampaio, 2022; Washington & Maloney, 2020; Washington et al., 2017; Yigitcanlar & Dizdaroglu, 2015).</p> <p>The crisis that is particularly worrying in light of climate change is the continual global population growth and accompanying urban expansion (A) (United Nations, 2019a) leading to a need to find sustainable housing solutions.</p> <p>The problem of scarcity in housing is that it often coincides with a multitude of scarcities and altered natural situations in the landscape, causing an opposition between the urban and the hinterland (C, D, E) (Carson et al., 2022). This leads to landscapes of imbalances and fragmentation, found in ecological exhaustion, in human, non-human, and resources and in landscapes of segregation, between people and territories (Brenner & Katsikis, 2020). Hence, finding a solution becomes a disputed issue.</p> <p>The Randstad ‘Groene Hart’ fringe in the Netherlands is one of those areas dealing with the need to reinvent the relationship between the urban and non-urban to stand external housing scarcity pressure while offering a place for nature and agricultural production (B) (Koninkrijksrelaties, 2023d; Kooij, 2006; Rijksoverheid, 2023). The scarcity of housing in the Netherlands is currently in the scope of over 390,000 homes (Koninkrijksrelaties, 2023a; NOS, 2023e). The ‘Groene Hart’ is a landscape of immense cultural and economic significance,</p>

deeply rooted in its former peat extraction and current food production, which have consequently, shaped the monotone homogeneous agricultural dairy production landscape of today (Bureau Peter de Ruyter landschapsarchitectuur et al., 2022; Kooij, 2006). Simultaneously, the landscape is perceived as a pristine natural landscape (Bureau Peter de Ruyter landschapsarchitectuur et al., 2022; Kooij, 2006; Rijksoverheid, 2023). Henceforth, the current form is no longer sustainable, and asking for reiteration of the excessive space fuelled by external pressure.

Political implementations in the form of NOVI, NOVEX, and Woondeals (Klok, 2023; Koninkrijksrelaties, 2023b, 2023d; Rijksoverheid, 2023), have only worsened the problem due to the prevalent economic focus within its spatial development policies making them vulnerable to histrionic pitfalls similar to the VINEX developments (Eerenbeemt & Smit, 2018; Koninkrijksrelaties, 2023a, 2023b; Rijksoverheid, 2023).

Consequently, the overall problem of the thesis is the predominant market-driven, liberal, human-centric economic emphasis of spatial development policies tackling living environment issues, the housing scarcity in the Netherlands (B), leading to a disbalance within society and nature. Giving rise to economic, ecological, and social unaligned housing developments on the fringe of the 'Groene Hart' susceptible to similar pitfalls as the previous VINEX developments.

Problem statement:

The overall problem of the thesis is the predominant market-driven, liberal, human-centric economic emphasis of spatial development policies (B) tackling living environment issues, and housing scarcity in the Netherlands, leading to a disbalance within society and nature (A). Giving rise to economic (C), ecological (D), and social (E) unaligned housing developments on the fringe of the 'Groene Hart' susceptible to similar pitfalls as the previous VINEX developments.

A: Anthropocene, context: Continual urban population growth and expansion against the backdrop of climate change.

B: Policies towards Housing Scarcity, housing scarcity: Market-driven economic emphasis of spatial development policies tackling living environments issues leading to a disbalance within society and nature, and economic, ecological, and socially unaligned (demographic) housing developments.

C: Disconnected demographic pseudo-countryside development, economic: pseudo-countryside developments and the existing housing supply are progressively incompatible with the needs of the population due to a demographic disconnect.

	<p>D: Altered natural, ecological: The altered natural hydrology and ecological function of the landscape for human economic extraction, deprive it from its biodiversity and natural richness. Currently, these polders are monotone homogeneous peat pasture landscapes serving dairy production or housing developments.</p> <p>E: Residual Identity, social: Disconnected economically attractive residual identity is creating contentions between urban hinterland hindering future change.</p>
<p>research questions and</p>	<p><i>In light of the growing (urban) population and its subsequent scarcity of available housing in a time of environmental (ecological) crisis:</i></p> <p><i>How can we create a synergy between social, economic, and environmental interests in depleted landscapes like the fringe of the ‘Groene Hart’ through the implementation of the ecocentric paradigm in terrestrial development to allow for an alleviation of the housing scarcity?</i></p> <p>The sub-questions support addressing the main research question and are divided based on their role towards the overall research.</p> <p>SQ1: <i>What are the current and ongoing challenges in the Netherlands that are affecting the housing crisis in the fringe of the ‘Groene Hart’?</i></p> <p>SQ2: <i>How did the ‘Groene Hart’ and its depleted landscape in the Fringe arise?</i></p> <p>SQ3: <i>What are the economic causes and mechanisms behind the continuous housing pressure on the Fringe of the ‘Groene Hart’?</i></p> <p>SQ4: <i>What caused a disconnected residual identity instead of a place identity to govern terrestrial developments in the fringe?</i></p> <p>SQ5: <i>How does the altered natural state of the depleted landscape continuously play a role in terrestrial development along the Fringe?</i></p> <p>SQ6: <i>What can currently, based upon fringe literature, be defined as the elements and principles of the Fringe of the ‘Groene Hart’?</i></p> <p>SQ7: <i>How can the ecocentric paradigm direct a synergy between social, economic, and environmental interests?</i></p> <p>SQ8: <i>What are the methods, elements, and conditions for using the ecocentric paradigm in terrestrial development and design?</i></p> <p>SQ9: <i>What potential trade-offs or conflicts might arise between social, economic, and environmental interests when implementing an ecocentric paradigm in terrestrial development, and how can these be resolved or mitigated?</i></p>

design assignment in which these result.

The Research aim

The thesis aims to provide a new resilient ecocentric perspective on housing developments, guided by synergetic principles, for the fringe of the 'Groene Hart' until 2075 while providing guidelines for achieving enduring synergy. Its objective is to advocate a new ecocentric approach to housing, which fosters synergy between social, economic, and environmental interests by nurturing non-exploitative practices between human and non-human entities. Transforming the fringe into a dynamic transitional mosaic of agroecological urban housing developments, advocating a revitalised relationship with the landscape and its natural operation. Emphasising the regenerative potential of enabling synergetic fringes, it paints an alternative promising picture for the future region.

With the thesis comprising nine sub-research questions, the process part gives an exemplary proposed outcome of each, necessary to achieve the set trajectory, complexity, and planning of the thesis. Especially, with the results of the thesis illustrating the possible potential for ecocentric perspective within terrestrial development. While also illustrating the desired contribution of landscape architecture and urban design in tackling social, environmental, and economic challenges by utilizing spatial design. Anticipated outcomes arising from the posed questions therefore include:

SQ1: The establishment of site-specific adhering prospects and guidelines.

SQ2: The documentation of historical and current definitions and structures inherent within the 'Groene Hart'.

SQ3: The documentation of the economic spatial problem and its characteristics.

SQ4: The documentation of the social-spatial problem and its characteristics.

SQ5: The documentation of the environmental spatial problem and its characteristics.

SQ6: The documentation of the current Fringe and its structures and principles.

SQ7: A set of spatial ecocentric fringe design principles.

SQ8: A set of multi-scalar design strategies and interventions related to the synergetic fringe.

SQ9: The establishment of evaluation criteria tailored to the ecocentricity of the fringe for assessing synergetic housing.

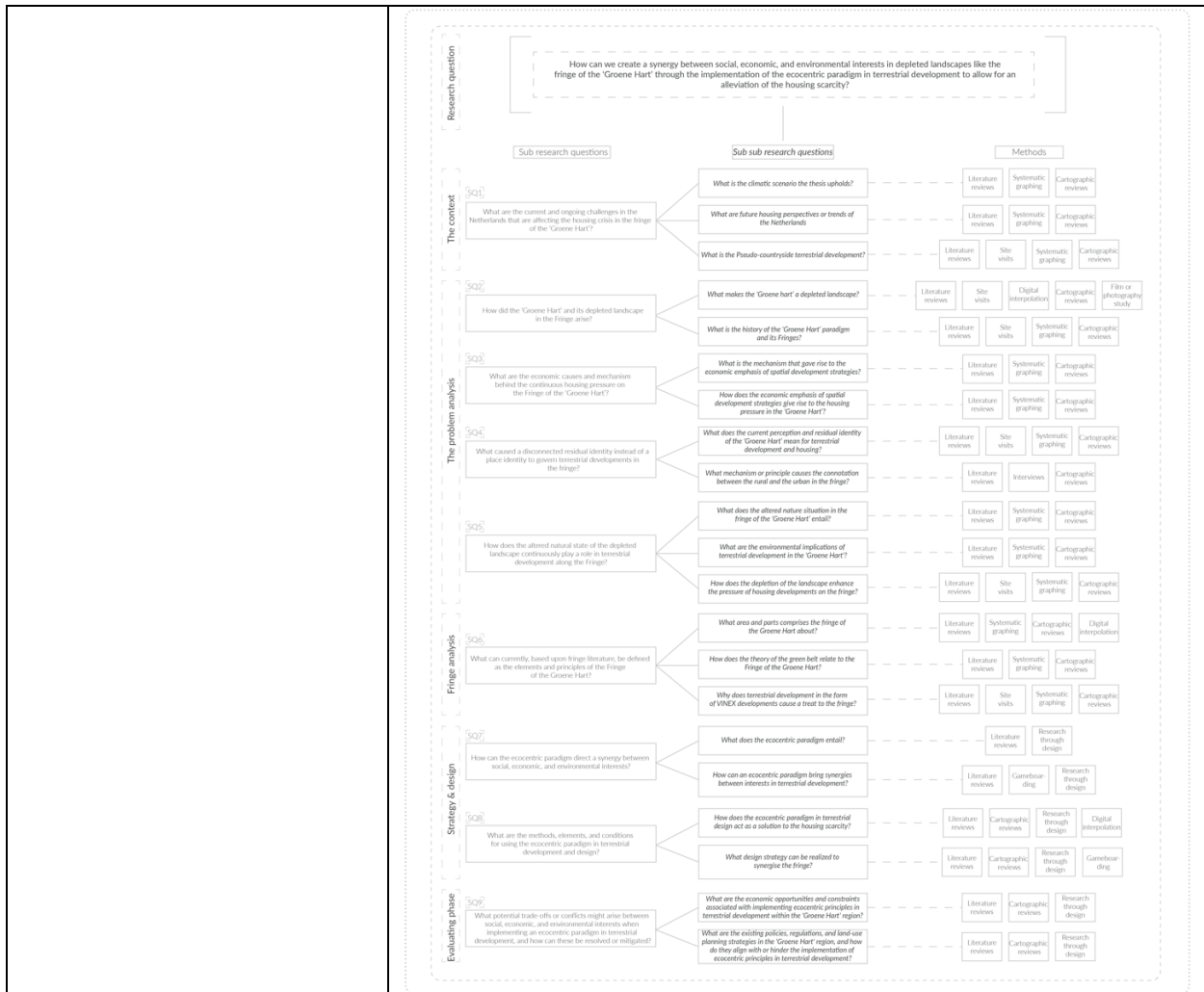


Figure 1, Research questions connected to the intended methodology.

[This should be formulated in such a way that the graduation project can answer these questions. The definition of the problem has to be significant to a clearly defined area of research and design.]

Process

Method description

The project encompasses five essential modules, each contributing to the anticipated outcomes. A literature review forms the backbone of each phase, providing systematic insights across diverse domains and supporting the specific methods of each module.

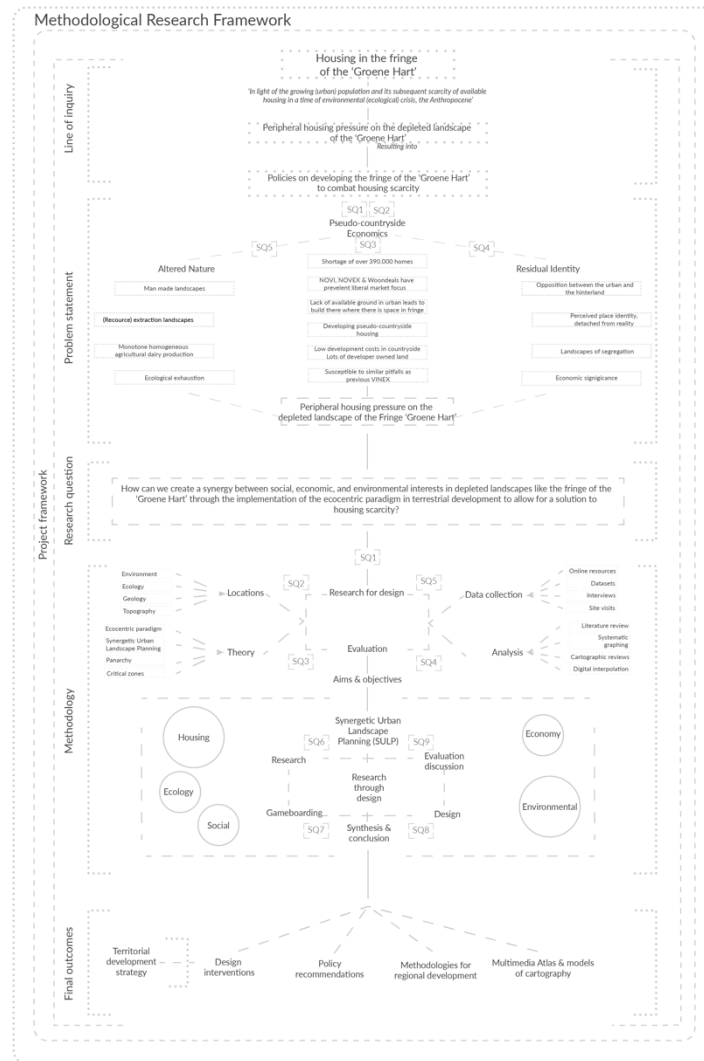


Figure 2, Methodological Research Framework.

The research begins with the contextual problem field module, where the line of inquiry is defined. This phase establishes the contextual background by adhering to scenarios and perspectives. Specific literature is reviewed, transforming generally accepted theories into thesis-specific prospects and guidelines. This is then translated into the Dutch site-specific context through cartographic reviews or graphs.

The second module involves the problem analysis phase, culminating in the definition of the problem statement. Given the intricate nature of the thesis problem, this module is divided into five consecutive research before the design sections. These sections explore pseudo-countryside economics, altered nature, and residual identity. Each segment utilizes literature reviews followed by site-specific clarification through cartographic reviews, systematic graphing, and a choice of digital interpolation, interviews, or film and photography studies. These efforts contribute to the problem statement and establish a theoretical and conceptual framework, guiding the project's narrative construction. The narrative is shaped within the ecocentric paradigm and frameworks such as Critical Zone and Panarchy.

The third module, Fringe Analysis, involves another research before design phase and follows a similar approach. A notable difference is the inclusion of a case study within its chapter exemplifying a theoretical footing.

The fourth module, Strategy and Design, involves research through the design phase, incorporating cycles of research, design iterations, and evolutions across scales. This is done through an ecocentric synergetic lens, revealing critical spatial interdependencies and opportunities for the fringe. The synergetic and ecocentric concepts draw on knowledge gained from the research before the design phases, utilizing frameworks like Critical Zone and Panarchy. While considering the intricacies leading to the current depleted state of the landscape, and its correlations to housing scarcity, and identifies possible synergies to design a future outcome and knowledge base.

The fifth phase involves the Evaluation module, which employs a methodology of reflection and evaluation. It is part of the research through the design phase, establishing criteria for evaluating synergetic housing developments. A literature review translates concepts into evaluation criteria tailored to the ecocentricity of the fringe. These criteria are then applied to the proposed design and policy implementations. Following this, a new loop of design initiates, or the thesis reflection and conclusion are formulated based on its outcomes.

Each module incorporates design thinking as a foundational methodology throughout this thesis. This approach involves the designer in generating scenarios and making choices, utilizing both convergent and divergent thinking. It allows the designer to establish connections among seemingly unrelated concepts and subjects of the problem. Consequently, design thinking is essentially a sequence of loops involving analysis, synthesis, and projection, which resembles the research through design as a module in itself.

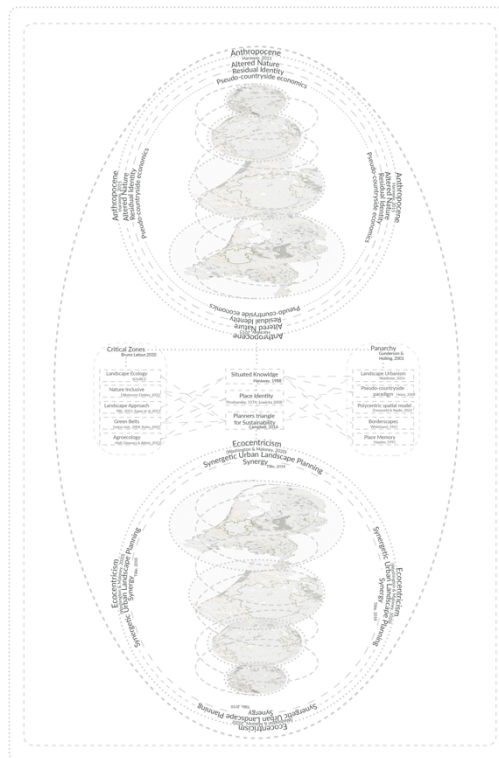


Figure 3, The Theoretical Framework.

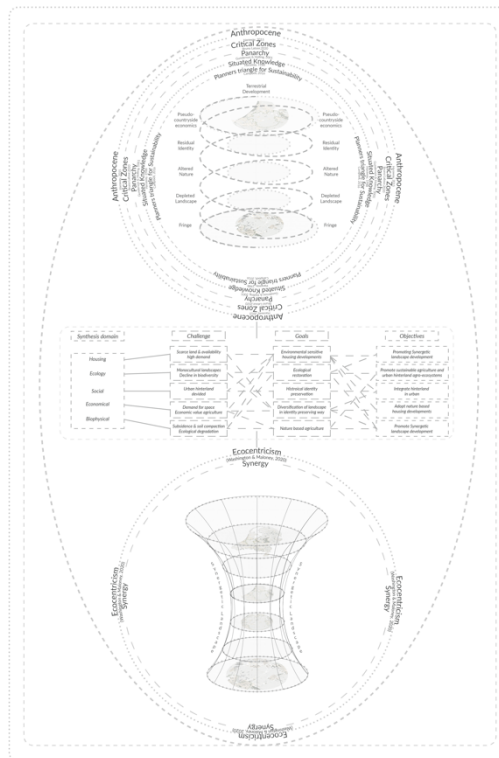


Figure 4, The Conceptual framework.

Literature and general practical references

Predominant literature and general practical reference:

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Booi, H., & Boterman, W. R. (2020). Changing patterns in residential preferences for urban or suburban living of city dwellers [Article]. *Journal of Housing and the Built Environment*, 35(1), 93-123.
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Reflection

1. What is the relation between your graduation (project) topic, the studio topic (if applicable), your master track (A,U,BT,LA,MBE), and your master programme (MSc AUBS)?

I believe that my project fills a knowledge gap in Dutch urban design by emphasizing a synergy among social, ecological, and economic interests. It accentuates the importance of integrating the intricacies of urban and non-urban landscapes, recognizing their multi-layered complexity, character, interplay, and interdependence. Advocating for a more inclusive and resilient urban design methodology. This mindset culminates from the MSc Architecture, Urbanism, and Building Sciences program, which enhances the capability to bridge challenges spanning various disciplines.

By exploring the integration of urban development with the natural environment to address housing scarcity, the thesis contradicts the commonality of treating them as separate entities. It views them as interconnected and dependent, forming a dynamic and evolving organism. The thesis demonstrates the potential to transform depleted resource-extracted landscapes into opportunities through agroecology, nature-inclusive design, and place-sensitive housing techniques.

The thesis acknowledges that external pressures and residual identities can create false perceptions of an area, causing detachments from reality and conflicts between governance and society. Despite its current homogeneity, the thesis recognizes the economic significance of the 'Groene Hart.' Integrating agricultural practices into housing and natural projects illustrates how urban design can enhance economic and environmental well-being.

Recognizing the dynamic relationship between landscapes and humanity is crucial for harmonizing their coexistence. Both contribute significantly to shaping a cohesive and sustainable future, with neither being more important than the other. This belief aligns with Transitional Territories' mission, advocating a shift from passive land use to recognizing nature's active role in generational continuity.

On the contrary, within the context of the Graduation studio of Design of the Urban Fabrics, my thesis would evolve from a research-oriented, evidence-based design proposal to a design-led project. This shift aligns with the studio's focus on the interaction between tangible and intangible aspects of urban surroundings for nurturing sustainable and desirable urban spaces, emphasizing transformation and renewal in the landscape—a core principle of contemporary Dutch urban design practice. Rather than addressing the root causes, it proposes a design-focused solution to scarcity on a small scale, overlooking the regional interdependencies that led to scarcity in the depleted landscape. If undertaken in this studio, my project would risk losing the opportunity to explore innovative approaches for addressing both urban and landscape challenges in favour of prioritizing aesthetically pleasing solutions.

Amid urban design movements like New Urbanism, the 15-minute city, and the Architectural Uprising movement (Arkitekturupproret), there is a prevalent emphasis on visual and aesthetic considerations in planning. Each movement brings its unique ideas, potentially resulting in designs that may not endure over time. Therefore, within the graduation studio of Urban Fabrics, the challenge would lie in transitioning the design approach towards a more 'academic' and research-driven methodology.

Like Design of the Urban Fabric, the City of the Future studio seeks solutions aligned with societal shifts to enhance urban morphology and human well-being. Consequently, it may yield similar project outcomes and face similar critiques.

A more suitable design-oriented graduation studio for my thesis is Metropolitan Ecology of Place, which explores ecological and socio-economic transitions for critical analysis and creative exploration. It focuses on the connection between Designed Space and Life, applying regenerative and biophilic design theories.

This aligns with my thesis, emphasizing sustainability as a complex, multidimensional process involving urban form, cultural heritage, society, biodiversity, nature, and resilience. Sustainability, in this context, encompasses environmental, economic, and social considerations—a core hypothesis of my current project.

MEP could provide a methodology like Design of the Urban Fabric, prompting a comparable reflective critique. Like Transitional Territories, MEP seeks a redefinition of the functioning of urban areas and landscapes. However, it does not allow for operating within the extreme paradigm of the human-altered landscape of the fringe of the 'Groene Hart' as an antagonist to change, as Transitional Territories would. This results in a less free and explorative design and research methodology, leaning towards realism and today's practices. This approach may not allow for the exploration of radically new ideas to address the stated problems. In contrast, Transitional Territories offers the ability to explore extreme scenarios.

The Planning Complex Cities studio explores planning strategies, governance structures, and community involvement in urban and regional territories. It prioritizes sustainable socio-spatial outcomes, aiming for institutional change to address disparities and conflicts resulting from the unequal distribution of spatial resources. In this human-focused studio, projects emphasize a human-centred approach to addressing scarcity, which diverges from my pursuit of synergy.

While my thesis may propose a spatial development strategy with institutional recommendations and address social disparities, it does so from a more extreme paradigm. In this paradigm, social justice and the concept of a just city are components rather than the goal. The complexity of the current crisis requires a multidimensional-multiscale approach, breaking it down into simple, quantifiable sub-processes of nature, social, and economic within the landscape. The Planning Complex Cities studio allows for this to a lesser extent compared to Transitional Territories.

Consequently, my project emphasizes the need for a harmonious blend of urban design, cultural heritage, society, biodiversity, nature, and resilience. Creating a paradigm where humans and nature are equally valued, fosters sustainable design that aligns with natural conditions. In this perspective, every territory represents a collaborative effort between urban and natural elements. The Transitional Territories graduation studio uniquely places this paradigm at the core of its thesis.

2. What is the relevance of your graduation work in the larger social, professional, and scientific framework?

Societal relevance

The historical significance of the 'Groene Hart' and its fringes, for Dutch urbanisation and civilisation, is well-established and universally acknowledged within society. It is an area that is at the forefront of Dutch cultural identity as the quintessential Dutch landscape, and its founding significance for the so-called 'polder model' and wealth gained from the excavation of peat and later agriculture.

Nevertheless, as consistently underscored in critical analysis of the region, the area has borne witness to encapsulate all the conflicts and tensions inherent in capitalist systems. As a landscape that binds together a multitude of factors, including the consequences of resource extraction, industrialisation, carbon, and nitrogen deposition, salination, soil compaction, eutrophication, disappearing biodiversity, societal divide, and external pressure leading to scarcity of housing.

Within this ongoing accumulation of societal implications, it would be naïve to assume that any single thesis could independently engage all the stakeholders and offer a comprehensive blueprint for the

future. However, what a thesis can achieve is the articulation of an alternative perspective on the development of housing within the fringe.

This perspective challenges the prevailing economically or politically driven approach that defines housing and development projects, which have gotten us to the current scarcity of over 390.000 homes (Koninkrijksrelaties, 2023a; NOS, 2023), by emphasizing an ecocentric approach, putting humans and non-human entities on an equal pedestal. Consequently, serving as a reminder that the landscape has been home to civilizations and cultures for thousands of years that regarded it as a shared space, devoid of the current exploitative system.

Scientific relevance

The subject of housing within the fringe of the 'Groene Hart', a transitional mosaic of landscapes amid the polycentric Randstad, and the monotone in-between production landscape of the 'Groene Hart' remains significantly under-researched, particularly when viewed beyond its conventional role as a space primarily for economic activity. While the housing scarcity and its accompanying ecological, agriculture debate have shifted attention towards revisiting areas outside the traditional metropolitan form in urban studies, fringes, especially in combination with production landscapes such as the 'Groene Hart' remain largely hidden and unexplored. As previously mentioned, the thesis seeks to establish a new perspective on housing within the fringe of production landscapes, portraying it as a shared space for both humans and non-human entities, an intentionally cultivated entity in synergy beyond the traditional suburb.

The case of the fringe of the 'Groene Hart' is chosen as an illustrative case, showcasing a historically human-made extraction landscape evermore on the edge of urbanisation, that encapsulates the multifaceted aspects of the urban and non-urban utilisation and politicization within its defined boundaries.

Ethical relevance

Throughout history, the 'Groene Hart' has served not only to emphasize a shared identity or history of the place but also been employed statically to reinforce its spatial perception and political, and economic value narrative. These manifestations in the light of the current Anthropocene, are evident through the intricate dependencies in its hinterland relation to the Randstad, in the form of housing relationships and resource relationships for instance.

This research places these relationships and tensions that impact both human and non-human entities at the forefront. Addressing them as an urban designer necessitates a critical mindset that not only transcends personal biases but also challenges the preconceptions that have been legitimized and presented as truth by dominant power structures.