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VISUAL ESSAY: MAPPING AS A MATTER OF COMPOSITION

KRISTINE C. V. HOLTEN-ANDERSEN

This is an illustration-essay displaying parts of my industrial PhD project with the title, “Adapting Cities to Landscape and Climate × Prospects and Methods in Urban Planning”, conducted in collaboration with Kristine Jensen, Landskab & Arkitektur and The Royal Academy, Institute of Architecture, Urbanism and Landscape, co-funded by the Innovation Foundation, Denmark.

The study commences from a notion that changing climate is about changing landscapes and water relations in urban areas, which calls for revised approaches in urban planning processes. The focus of the study is methodologies of landscape analysis and mapping, investigating and discussing applied methods in urban planning practice and private landscape architectural practice, in addition to experimental design of alternative approaches. In this essay, I will pay attention to the latter. The objective is to illuminate how I have worked with maps and mapping as a tool to bridge diverse conceptions of urban landscapes and their potential role in strategic urban transformation. I aimed for engaged collaboration where actors from different disciplines and municipal sectors were doing acts of mapping together. Rather than using maps as geographical documentation or as mere illustrations of text-format regulations, I invited actors to engage with maps as matters that could spark dialogue, generate mutual learning and mature shared landscape-literate narratives.

Digging into mapping-theory, I learned from Denis Cosgrove that cartographic and urban spaces are inseparable, and that (human) urban experience entails negotiation of their divergences. Additionally, Cosgrove describes cartographic acts beyond those of mere recordings, and rather as creative interventions *performing* urban spaces.¹ I further learned from Kevin Lynch that people develop mental images of their physical environment, and that we construct such images through our daily urban interaction with the spatial elements present.² This led to a notion of a ‘mapping network’ consisting of three clusters of actants – the mental images, the maps and the materialities – all in plural and in a ceaseless process of recording and creating one another. Consequently, we can assume that mental images of urban material spaces are sometimes vague, blurry and unaligned between people. Being able to cooperate, in a multidisciplinary setting, on composing the future urban landscape would then call for an alignment of these. I have strived to accomplish this through acts of mapping. In the following, I will display records from this research and offer some explanations as illustration-texts. I will not extensively use references, but I will use some endnotes to guide the reader towards some of the literature supporting this part of my research.

Prescript

The framework of the displayed research was an experimental case study in which I have utilized research-through-design and action-research methodologies.³ This ‘demonstration-case’ was constructed to probe, test and demonstrate a novel approach to landscape mapping in a municipal planning setting. I, as researcher, played an active role in preparing, hosting and participating in three workshops with actors from different disciplines and sectorial departments as well as the private practices of landscape architects. From my prior investigations of a case of private, landscape architectural practice (caseLARK) and a case of municipal planning practice (casePLAN), I had detected a difference in modes of working with landscape mapping and analysis. In casePLAN, I found a somewhat post-positivistic⁴ approach to landscape analyses. Maps were utilized primarily to build documentation, to appoint geographical boundaries or as mere illustration accompanying legal texts. In caseLARK, however, I found that landscape mapping was a way to build navigational narratives.⁵ Here, acts of mapping performed as a driver of design, a means to relate to the existing context, reveal potentials and spark ideas of future relations, or as James Corner puts it: “a collective enabling enterprise [...] that both reveals and realizes hidden potential”.⁶ The scheme of the demonstration-case was to employ some methodological elements from the caseLARK approach into a planning setting, introducing mapping as a matter of composition.⁷

- 1 Cosgrove, D. (2008). Carto-city. In J. Abrams, & P. Hall. (Eds.), *Else/where: Mapping: New cartographies of networks and territories* (p. 148-157). University of Minnesota Design Institute.
- 2 Lynch, K. (1960). *The image of the city*. MIT Press Ltd.
- 3 For clarification of my use of the term Research Through Design, see Prominski, M. (2019). Design research as a non-linear interplay. In: M. Prominski, & H. Seggern (Eds.), *Design research for urban landscapes: Theories and methods* (p. 33-49). Routledge.
- 4 Using Creswell’s definitions of post-positivism. Creswell, J. W. (2014). *Research design: qualitative, quantitative, and mixed method approaches* (4th ed.). SAGE Publications.
- 5 Sigrun Langner has described the potential of using landscape mapping in a planning setting as the production of *navigational narratives*. Langner, S. (2019). Mapping as a navigational strategy. In M. Prominski, & H. Seggern (Eds.), *Design research for urban landscapes: Theories and methods* (p. 50-69). Routledge.
- 6 Quote by James Corner: “These revisions situate mapping as a collective enabling enterprise, a project that both reveals and realizes hidden potential” (p. 213). Corner, J. (1999). The agency of mapping: Speculation, critique and invention. In D. Cosgrove (Ed.), *Mappings* (p. 213-252). Reaktion books.
- 7 The concept of composition stems from Latour’s Compositionist Manifesto. He suggests compositionism as a path to design “a liveable and breathable ‘home’” on Earth (p. 488). Compositionism is a concept which “underlines that things have to be put together (Latin *componere*) while retaining their heterogeneity” (p. 474). Latour, B. (2010). An attempt at a “Compositionist Manifesto”. *New Literary History*, 41(3), 471-490.

The motivation was to enhance a more landscape-literate⁸, strategical outset for urban transformation than that produced by the existing approaches in planning practice. I aimed to test a format that could endorse multidisciplinary collaboration, which is most needed in planning for changed urban waterscapes.⁹ Using Latour's concept of compositionism, one can understand the acts of mapping pursued at the workshops as a compositing activity, where we assembled different objects, views and stories into a structural narrative, while retaining the heterogeneity of the components. It was furthermore neither a process of assimilation nor integration because actors retained their disciplinary stances though searching for common ground, thus maintaining a multiple gaze on urban landscapes. As opposed to co-operation, where different sectoral and disciplinary actors would develop analysis and maps in parallel processes and meet up for exchanges, the aim of the workshops was to encourage actors towards mapping together. Maps were present at all workshops and actors engaged with as them as physical issues, pointing to them, touching them, articulating them and sketching concepts on them.

8 The term landscape-literacy was coined by Anne Whiston Spirn. Whiston Spirn, A. (2005). Restoring Mill Creek: Landscape literacy, environmental justice and city planning and design. *Landscape Research* 30(3), 395-413. <https://doi.org/10.1080/01426390500171193>.

9 This point is made by multiple authors and scholars engaged with climate adaptation planning and changing urban waterscapes, among others: Bergen Jensen, M., & Fryd, O. (2009). *Den blå by – udfordringer og muligheder*. Skov & Landskab, Københavns Universitet.

Demonstrationscase Timeline

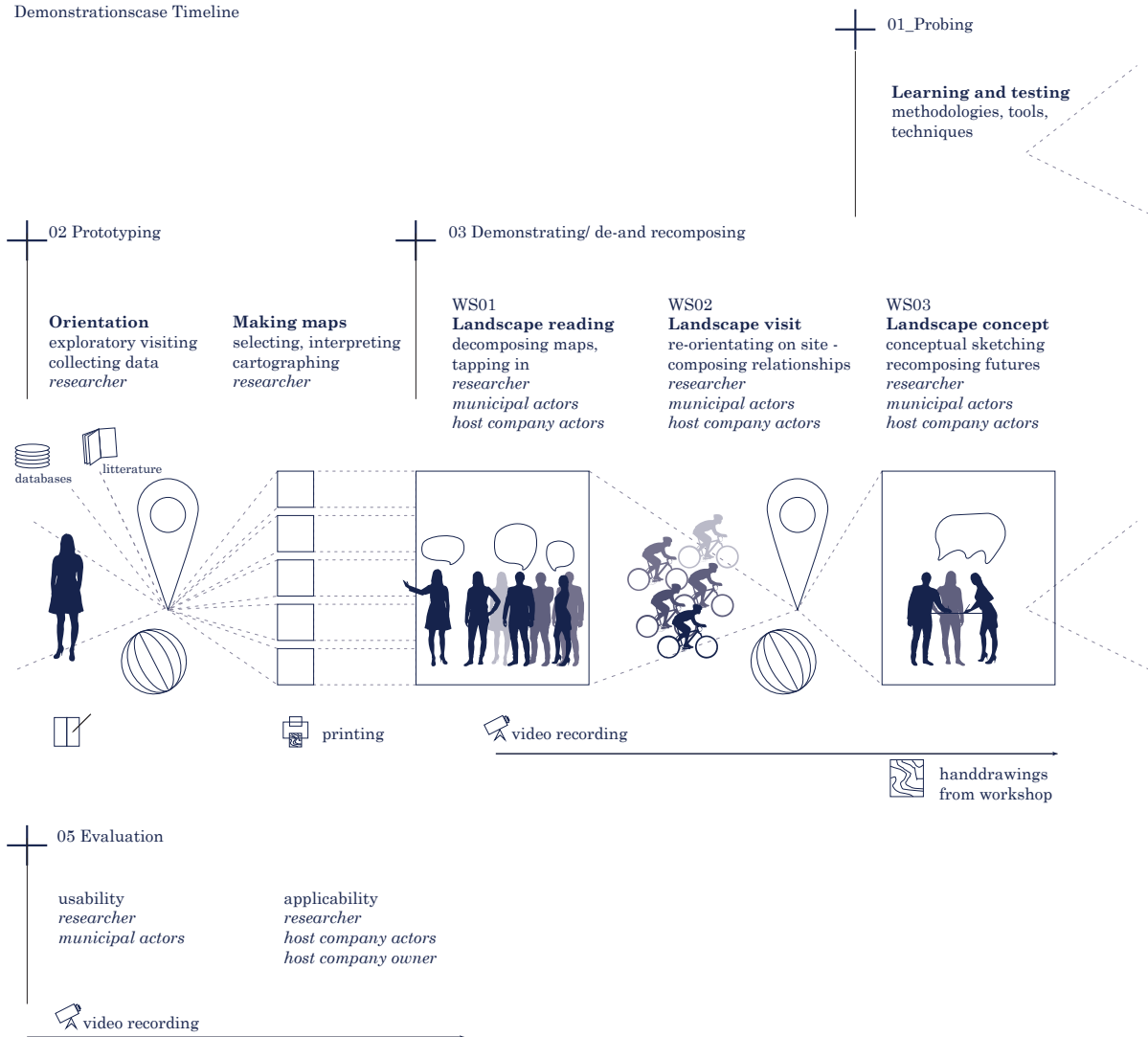


Figure 1.1

Planning the demonstration case of four phases: probe, prototype, demonstrator and evaluation¹⁰.

1. The probing phase, in which I tested different methodological approaches, tools and techniques with and without actors. My prior investigations had hinted that landscape architects' methodologies had to be somewhat modified to fit into the planning setting. In addition, the existing approaches did not thoroughly address the novel theme of changing urban waterscapes. In consequence, I could not simply just copy methodologies from LARK, but was required to modify and qualify them through probes.
2. The prototype phase, in which I mapped and produced 'readings' of the chosen geographical urban landscape, comprising five 'thick maps'.¹¹ The thick maps were to perform as matter to be moulded, decomposed and recomposed at the workshops.

10 This point is made by multiple authors and scholars engaged with climate adaptation planning and changing urban waterscapes, among others: Bergen Jensen, M., & Fryd, O. (2009). *Den blå by – udfordringer og muligheder*. Skov & Landskab, Københavns Universitet.

11 The methodology "Probe, Prototype and Demonstrator" draws on the work of Thomsen and Tamke: Thomsen, M.R., & Tamke, M. (2009). *Narratives of making: thinking practice led research in architecture* [Conference paper]. Communicating (by) Design 2009, 1-8.

3. The demonstrator phase, in which I utilized a dialogue-based approach to generate shared-learning and mature landscape narratives. The demonstrator phase consisted of three workshops with participation of actors from different departments of municipal planning sector along with landscape architects from private practice.
4. The evaluation phase, in which I conducted follow-up interviews and brought back results to the participating human actors, in order to gain their reflections, perspectives and opinions on the usability and applicability of the developed methodology.¹²

12 Gunhilla Lindholm has called for production of “thick maps” in connection to planning for green infrastructures in urban areas. Lindholm, G. (2017). The implementation of green infrastructure: Relating a general concept to context and site. *Sustainability*, 9(4), 610. <https://doi.org/10.3390/su9040610>.

Figure 2.1

Mapping history. Plunging into records of processes of formation and cultivation of the land. Getting lost in time.

I read descriptions of geological processes and early creation of landform as well as local historical recordings of early civilization in the area. I was searching for the manner in which early settlements related to and accounted for wetlands. I was looking through historical maps for pre-industrial wetland areas in the landscape.

Mapping the field. Following flow paths, registering various states of wetness. Getting lost in place.

I went on multiple site visits to verify and gain a full spatial cognition of mapped findings. I walked, biked and drove through the area, taking different routes and stopping at different locations, alone and with my children, sitting, playing and nosing around,¹³ to investigate the spatial-aesthetic qualities of the vast urban and rural area in question. I was building and un-blurring my mental image of the site.

Mapping maps. Understanding, processing and composing data, constructing narratives. Getting lost in GIS.

Using GIS to compose and overlay data of various kinds. Encompassing five thick maps at a scale of 1:10.000, designed to represent and reproduce the role of urban waterscapes; wetlands as past, present and in prospect: Landform-reading, Waterscape-reading, Historical-reading, Green-scape reading and City-scape-reading. I used the term ‘readings’, not analysis, in order to underline their open-ended and exploratory essence, and in order to invite surplus ‘readings’ from the actors in the dialogue-phase. The readings comprise a geo/biophysical landscape concept utilizing rational, geospatial mapping techniques and a spatial-aesthetic landscape concept utilizing subjective and embodied techniques for data collection.

13 In interpretive qualitative research methodology, ‘member checking’ is recommended. Here the researcher brings back findings to the informants in order to balance perspectives and avoid bias. In modus 2 research literature, I find arguments supporting the role of the researcher as someone who does not simply ‘absorb’ knowledge *from* (studying) *the field*, but strives to push knowledge-development processes *in the field*. Schwartz-Shea, P., & Yanow, D. (2013), *Interpretive research design: Concepts and processes*. Routledge. Kreiner, K. (2020). Tankevækkende viden. Mellem forskning og praksis. In L. Sigbrand, I. M. Kirkeby, & B. Kleis (Eds.), *Byg bro – en antologi om at bygge bro mellem byggeriets parter* (p. 33-54). BUILD, Aalborg Universitet.



Figure 2.1

Figure 3.1

Landform-reading. Downscaling of original (1:10.000, 1000 x 1000 mm).

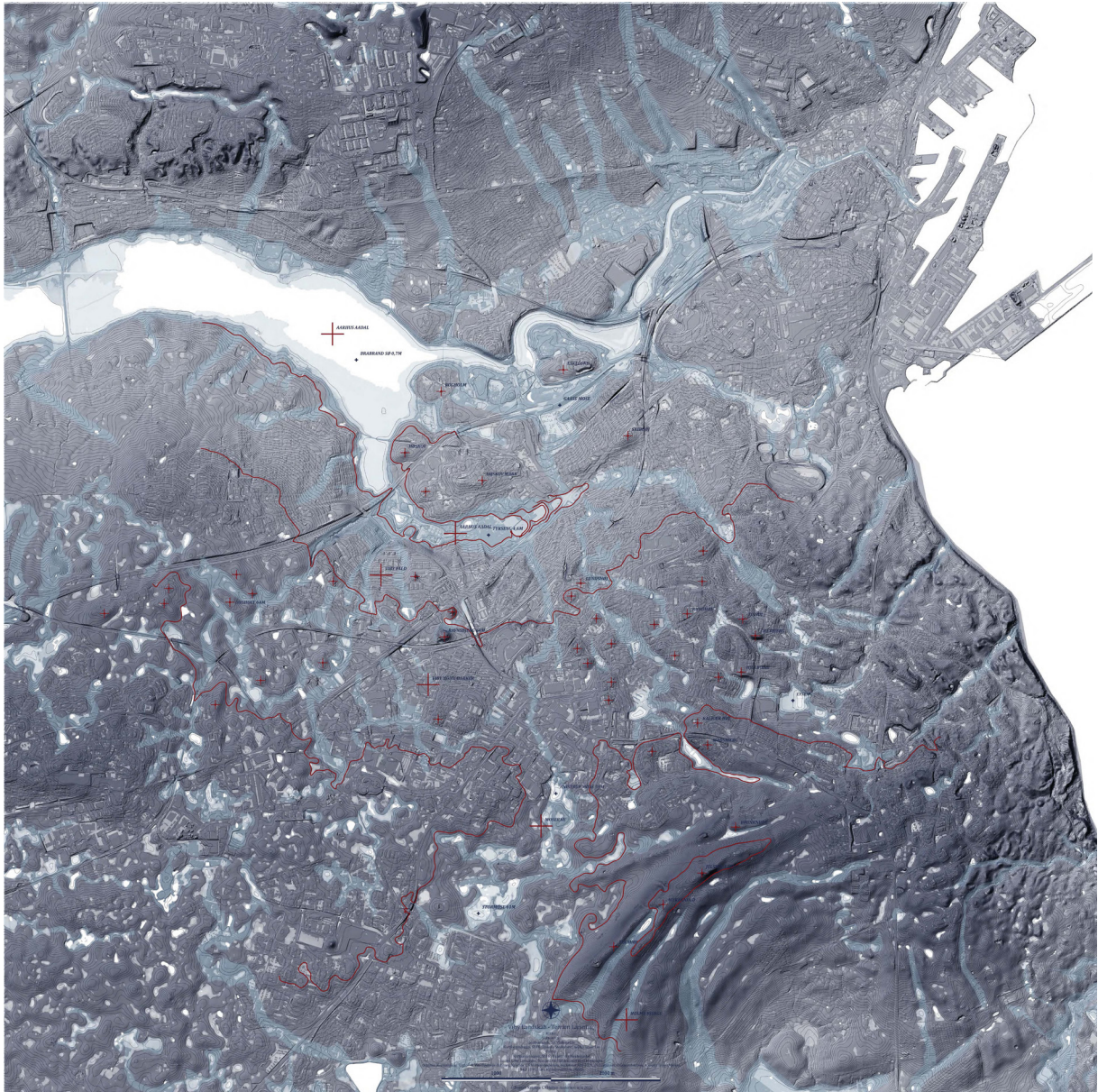


Figure 3.2.
*Waterscape-reading. Cut and downscaling of original (1:10.000,
1000 x 1000 mm).*



Figure 3.3

Historical reading. Cut and downscaling of original (1:10.000, 1000 x 1000 mm).

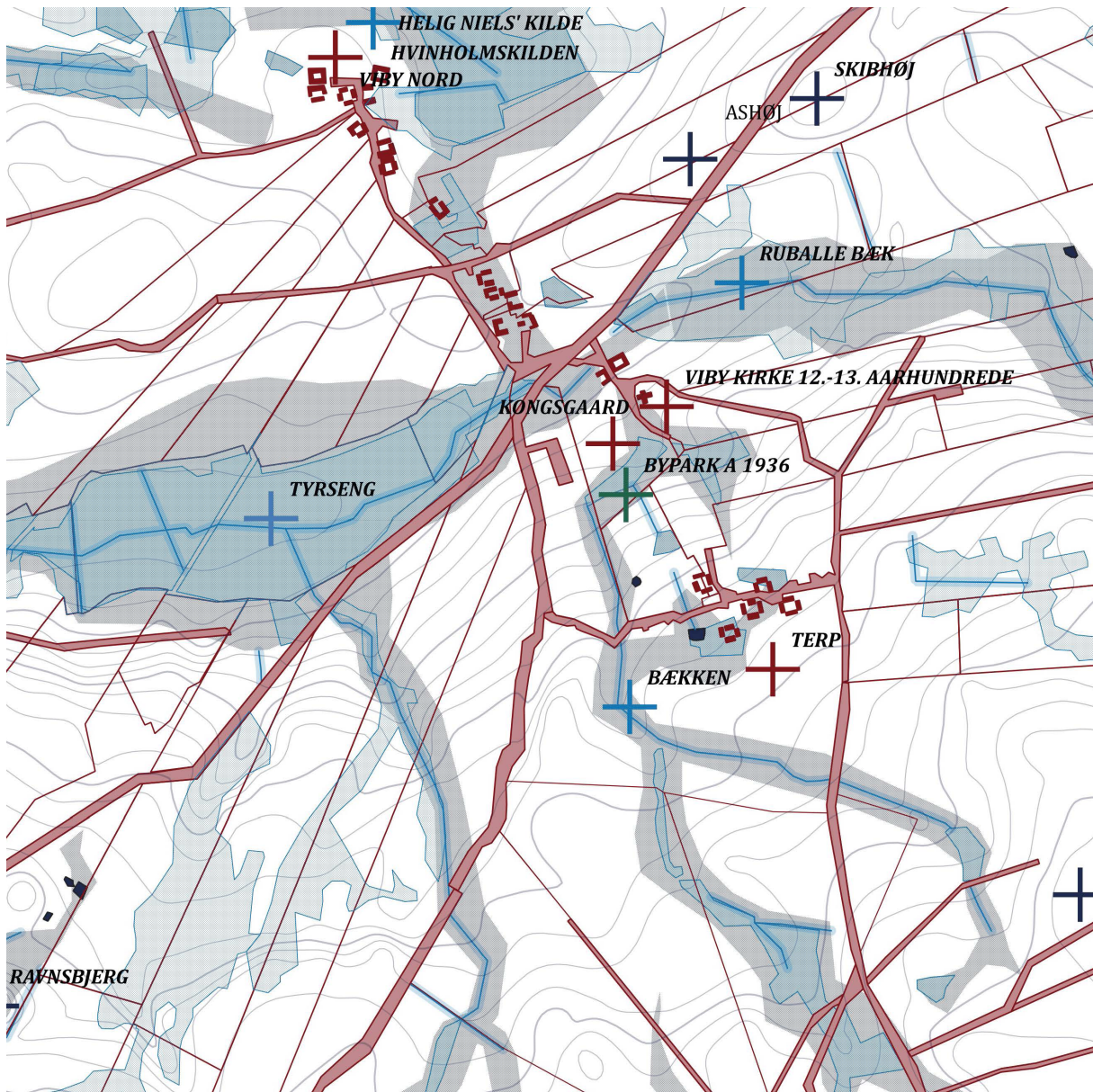


Figure 4.1

01.32 PM, 31.05.2021.

Arriving at the first of three workshops, participants are inspecting maps. Snacks, beverages and video camera installed at the table. When participating, actors introduced themselves; the five landscape readings were presented and discussed. The participating actors asked questions and gave comments to the maps. They openly shared information on the area from their prior professional experiences and personal encounters. In this manner, the prepared maps were decomposed as a means to construct aligned mental images of the urban landscape and waterscape.



Figure 5.1

8.30 AM, 01.06.2021.

Gathering at a pedestrian bridge, crossing the stream, which is the recipient of all surface water from the vast urban area of interest, at its final passage through the flat wetlands before reaching the large lake. Chatting in the sun before pedalling off on the second workshop; an on-site bike tour.



Figure 5.2

10.58 AM, 01.06.2021.

Biking around and correlating mapped features with materially perceived ones.



Figure 5.3

11.16 AM, 01.06.2021.

Resting with coffee and snacks (*flødeboller*) in a small park with a dam. Sharing a story found in local history archives about how the dam was a part of a historic stream, running from the vast bogs in the highlands to the former meadow in the valley. This stream is unaccounted for in municipal sets of geo-data¹⁴.



14 In the literature of local history, I found recordings of piping of streams in the area. These streams were not registered in the municipal data sets. The hydrologist meant that this finding might explain why the water treatment plant of Viby receives a large water volume, which they cannot currently account for. On this account, some of the design options discussed were to restore the historical streams and link them to existing and new, local patches of storm water retentions.

Figure 6.1

PM, 07.06.2021.

The participating actors worked in two groups, one landscape architect in each group, formulating and fleshing out the role of topography, water and vegetation in the urban realm on sketching-paper on the 'thick maps'.



Figure 6.2

02.29 PM, 07.06.2021.

Deeply engaged in the teamwork of the third workshop, drawing possible strategic concepts of future blue-green networks and structures.



Figure 6.3

03.05 PM, 07.06.2021.

After 40 minutes teamwork, the teams presented and discussed the conceptual sketches in plenary, as an act of recomposing that which had been commonly decomposed throughout the preceding workshops.



Figure 7.1

The conceptual sketches from workshops, displaying recomposed and structurally embodied narratives of the urban landscape in question.

The three workshops provided a shared understanding among the participating actors of strategic potentials in the urban landscape not yet acknowledged in current planning. Although the actors from the municipality had worked with the area before, the workshops revealed new ways of seeing and understanding. New knowledge was assembled in the process through the dialogue between disciplinary mental images, urban materiality and maps. Insights were facilitated by the acts of decomposing and adding to the prepared maps. It was a process where the imaginary ability to compose a different future role of urban waterscapes was intensely massaged, especially on stern participants from disciplines like hydrogeology and biology working in the sewerage sector. This effort of massaging was done by the participating landscape architects, e.g., imaging cranes feasting in the restored wetlands of what is currently wastewater treatment-plants and football fields. In addition, maps and tales of historical wet areas' and early civilizations' relations to morphology and water sparked discussions and ideas of how and why to revitalize urban hydrology. From these discussions arose an insight, pushed by the technical disciplines, into how history literally might repeat itself, when groundwater tables begin to rise.

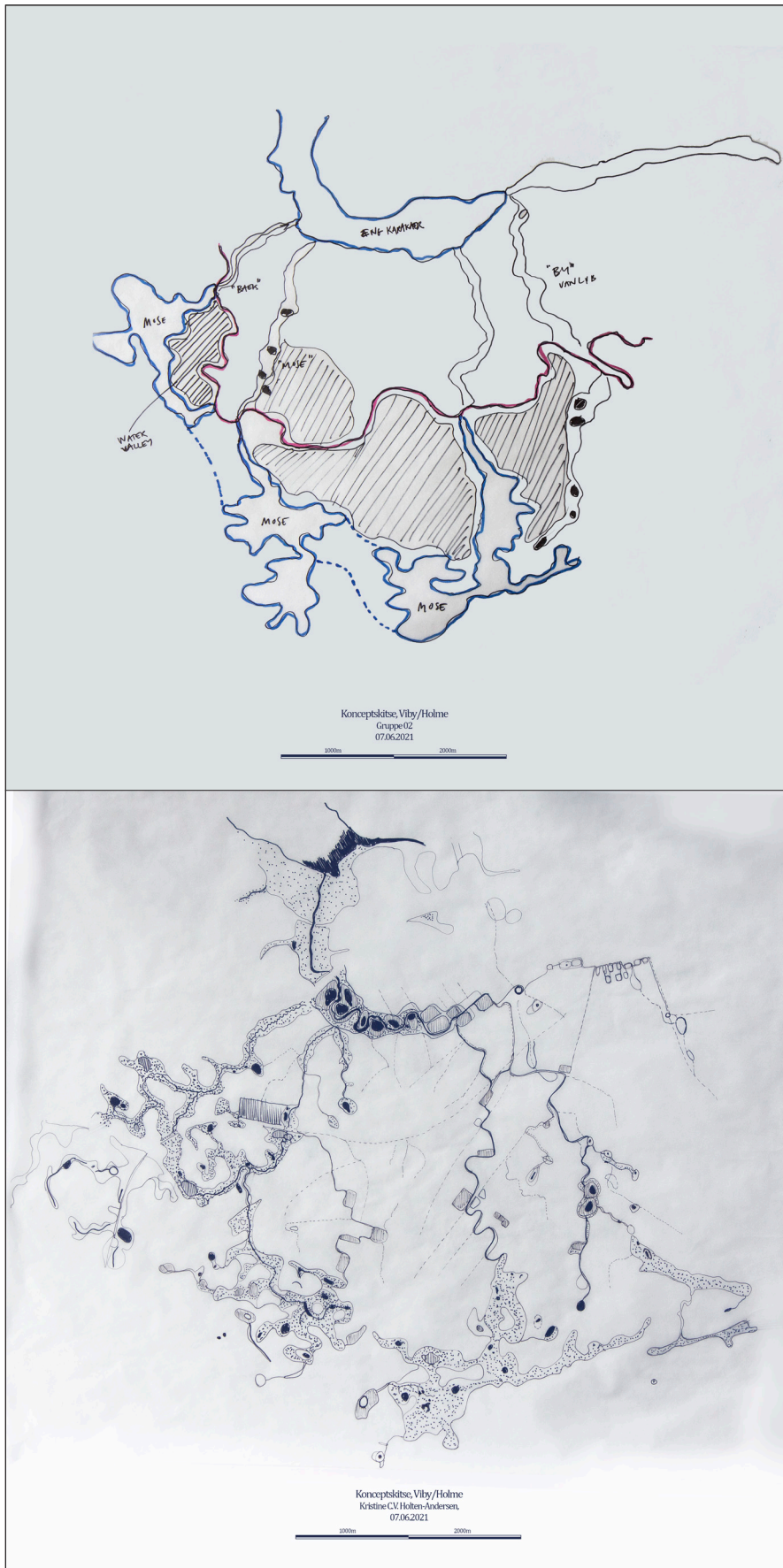


Figure 7.1

Postscript

The experiment of the demonstration case aimed to build and test a methodology, which could endorse multidisciplinary inputs and enhance a more landscape-literate, strategic outset for urban transformation than the existing approaches of planning practice. Obviously, the developed composites and narratives are not ‘finished’ plans, but merely possible stepping-stones on a long path towards planning and legislative work. Such follow-up work would most likely meet many challenges and barriers. Still, the used methodology led to spatial and strategic concepts more radical than the ones initially imagined by the participating actors, and quite different from those already entailed in the current plans of Aarhus. The process led to a shared understanding among participating actors of a possible, different path of planning, aiming to restore buried streams and wetlands as infrastructures for stormwater, corridors for flora and fauna and new recreational centralities. The proposed *composites* put landscape and water relations first, as drivers of urban transformation, rather than considering them as risks, or as Christophe Girot once wrote, as “cherries on the cake”, only regarded as hindsight.¹⁵ It ultimately demonstrates that a methodology of mapping, collectively decomposing and recomposing narratives, can be a useful supplement in complex, multidisciplinary planning settings.

15 Quote by Christophe Girot: “Our understanding of remaining natural structures and their inherent potential in rapidly developing urban environments comes more often than not as hindsight. Here, landscape is no longer considered a main structural element but rather as a cherry on the cake, the last green frill on some built tract of land.” (p. 93). Girot, C. (2006). Vision in motion: Representing landscape in time. In C. Waldheim (Ed.), *The landscape urbanism reader* (p. 87-103). Princeton Architectural Press.