Reflection

My topic was difficult to place within the department of building technology alone; it had some elements of several different chairs, such as 'Climate Design & Sustainability' and 'Building Physics & Services', but because of the emphasis on spatial impact on the neighbourhood-scale, it also has elements of several urbanism chairs, such as 'Landscape' and 'Environmental Technology & Design'. The positioning ended up between these different themes, combining sustainable technology with spatial aspects and design on building to neighbourhood scales.

The development of the research approach was not clear until quite far in the process. Some of the steps were logical, such as the literature study to provide context and an assessment of existing concepts to find an optimal. The outcomes of the study, as well as any emphasis, remained open until these steps had been taken. Only then it became clearer what the focus of the research should be and how to integrate this with the design. The initial idea was to focus on the development of a sustainable energy system, but further in the process, the emphasis shifted towards the assessment and implementation of existing systems rather than new development.

The design was therefore an integral part of my method, as it was used as part of the assessment of the proposed system. By designing options for implementation of several components of the energy system, the spatial impact can be evaluated and it could potentially be used for an evaluation of the social acceptance as well. The design was therefore an important step in my research and takes a central place in the conclusion as well.

The thesis has a strong emphasis on practical issues and continuously connects the results from the research to practice. The conclusion also provides clear practical recommendations that could be useful to researchers, but also to designers, spatial planners and engineers.

The innovation of this research is not so much in the development of an innovative energy system, but focusses more on the method of assessment to determine a project's feasibility and which factors contribute to this. It also provides recommendations to improve the feasibility for future projects, making the implementation easier. This is also where the relevance of the project for society and practice is; making the energy transition easier, specifically for existing neighbourhoods, which is currently one of the main challenges to create a more sustainable environment. In this way, the study can contribute to sustainable development in the built environment.

The initial study includes all three aspects of sustainable development in the assessment, but as the economic feasibility study went beyond the scope of this research, this is not part of the final report. Instead, the emphasis is more on renewable energy, 'planet', and its resulting spatial quality and social benefits, 'people', although the quality and benefits could fit with prosperity in its broadest meaning as well, even though it may not include direct monetary benefits.