

SPATIAL STRATEGIES FOR NEXT GENERATION MOBILITY NODES IN NORTHERN JUTLAND

Mobilities design in collaboration
Aalborg University, Brønderslev Kommune, Aalborg Kommune og Nordjyllands Trafikselskab

Hjallerup, Bouet, Nørresundby, Kongerslev

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Contributors Students and researchers at MA2 Urban Design, Aalborg University, 2020, and collaborators at Brønderslev Kommune, Aalborg Kommune, Nordjyllands Trafikselskab

Editors Ditte Bendix Lanng & the MA2 URB Curatorial Group

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The collaboration has been established through C-MUS PRAKSIS LIVING LAB, www.c-mus.aau.dk/c-mus-praksis

Please use this booklet as a teaser and visit vbn.aau.dk/da/projects/spatial-strategies-for-next-generation-mobility-nodes-in-northern to find the full material produced by the student teams.

Further information Ditte Bendix Lanng, associate professor Urban Design & Mobility, Dept. of Architecture & Media Technology, Aalborg University, dbla@create.aau.dk



Introduction

The next generation of mobility nodes should support a more sustainable urban and regional network structure in Northern Jutland.

Mobility nodes foster multimodality. They challenge monomodality by supplementing car-based infrastructure with efficient and attractive mobility options in villages, towns, and urban districts, implementing new technologies and concepts of mobility.

Mobility nodes should be efficient and safe transport sites. At the same time they must be meaningful, just and attractive places for people. They must be weaved into the local urban fabric and everyday lives, and as such they may be generators of access, urban life, spatial quality and urban development.

With this hybrid perspective, we have inquired into spatial strategies and designs of the next generation of mobility nodes.

What are the site-specific conditions and potentials for the next generation of mobility nodes in urban and rural settings across Northern Jutland, Denmark?

This question was explored by a team of students and researchers at the Urban Design MA2 programme at Aalborg University Spring 2020, in collaboration with Brønderslev Kommune, Aalborg Kommune and Nordjyllands Trafikselskab.

Four mobility nodes were selected as the sites of inquiry - see front page map:

- Hjallerup bus terminal and town centre
- Bouet future park'n'ride hub
- Nørresundby Torv network mobility node
- Village cluster 9293 rural mobility hub (Kongerslev)

The results of the inquiry are six site-specific spatial strategies and mobilities designs, authored by six students teams.

A summary of these results can be found on the next pages.
To find the full material produced by the student teams, please visit:

vbn.aau.dk/da/projects/spatial-strategies-for-next-generation-mobility-nodes-in-northern

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Thanks to the external sensors who evaluated the student projects in early June.

Thanks to the AAU team behind the project module: supervisors Ole B. Jensen, professor in Urban Theory, and Niels Agerholm, associate professor in traffic planning, and semester secretaries, Louise Kiilerich Pratas and Maria Langendorff Hansen.

Special thanks to Marie Frier, associate professor in architecture, for critical and constructive comments for the projects in progress.

/ Ditte Bendix Lanng, associate professor in Urban Design & Mobility
coordinator and supervisor
June 2020

Play Your Part Citizens Participation in Hjallerup

Hjallerup city centre is declining and lacking urban life with closed shops because people shop in the bigger cities when they commute to work. Despite the closing shops, Hjallerup is a city in growth with a rich and well-functioning association life and many activities that attract families with children.

In this project, Play Your Part, the importance of citizen participation in the design process is explored along with the use of a mobility hub as a catalyst for connecting and generating activities for the citizens. A process of mapping, site visits, and analysing notes from citizen meetings resulted in the development of a toolkit with a game approach for the municipality to use when involving the citizens in the planning of the city.

The toolkit consists of:

- A strategic potential plan (framework, the entire city)
- Design Parameters (framework)
- A flexible masterplan (gameboard, city centre)
- An activity catalogue (game pieces, city centre)

With the use of this game, the municipality can involve the citizens more actively in the development of their own city, while still including the expertise of planners and designers and ensuring a coherent design.

This report suggests a higher degree of citizen participation where the citizens are involved directly. Furthermore, it discusses the balance and importance of both expert knowledge and citizen participation. Further analysis and testing of the game are needed to ensure that the citizens are involved at the desired level, and that the concept can be adapted to work in varying cases.

Key ideas

- 1/ Bring life to the city centre
- 2/ Citizens participation to increase the quality of the city centre
- 3/ East-west connection through the city centre



Hjallerup in Northern Jutland - 1 : 250 000

The team behind the project



Anne Elisabeth



Cecilie



Katrine



Mathilde



Ramune

Anne Elisabeth Badstrue Torp (DK)

Bachelor in Architecture at Aalborg University
elisabeth.torp@fiberpost.dk

I am interested in the way our urban spaces are used and how to design and program the spaces in the city. I enjoy being active in nature and I believe that it is important that everyone has access to green areas, including those who live in the cities – especially with the increasing urbanization.

Cecilie Overvad (DK)

Bachelor in Urban Design at Aalborg University
cecilieovervad@hotmail.com

I am passionate about being creative and creating green adaptable cities for people. I believe that the best cities are created if we as urban designers think of holistic solutions in a multidisciplinary collaboration as well as a good dialogue with the users in the process. Furthermore, I believe that almost every place has potentials that can be developed and strengthened through urban planning.

Katrine Bjørn Olsen (DK)

Bachelor in Art and Technology at Aalborg University
katrine@bjorn-olsen.dk

At Art and Technology, we learn to find creative solutions for societal problems in various scales, using art as a method for both research and communication. With Urban Architecture I aim to continue the practice of working closely with the people we design for, to ensure what we create is beneficial to all people involved and that it works with the context it is in.

Mathilde Bernth Andersen (DK)

Bachelor in Architecture at Aalborg University
mathilde-123@hotmail.com

I chose the Master in Urban Design, because I wanted to get a wider perspective working with a larger scale, and expanding on my competences. Urban Design can have a significant impact on the way we perceive the city, and it can be a tool to solve some of the bigger questions on today's problems both global and local. This way of designing really challenge to think outside the box.

Ramune Maluke (LT)

Bachelor in Architecture at Kaunas University of Technology
ramune.maluke@gmail.com

I have a Bachelor in Architecture and 3 years of experience working with public and private buildings. From my point of view, to create a cohesive city - urban design, architecture, and interior design should go hand in hand. I find it fascinating working with the fabric of the city and implementing different scenarios, unfolding what it could be more.

Flexible masterplan - 1 : 1500



The mobility hub, Søndergade



~~~~~ The participatory game consists of a board, a catalogue of game pieces, and a set of instructions. The board (top ill.) is a flexible masterplan for Hjøllerup city centre. It is flexible in the sense that some areas have been left for the citizens to fill out with pieces from the catalogue. The bottom picture is a visualization of the mobility hub on the main street, Søndergade.

## How can an infrastructural design create urbanity through a spatial pattern? A conceptual strategy, initial design and exploration of Hjallerup as a mobility node

The project explores Hjallerup as a future new mobility node. This transformation recognizes that mobility is much more than transportation from A-B. The nodes bring new demands to the urban design practice, as mobility is understood in a wide sense. They require an ability to change over time and carry a potential to generate urbanity in an urban development.

Hjallerup is a town with a strong local community, a strong market culture, and a location in Northern Jutland with good access to the core network. The population number is increasing and the town houses many elderly and families with small children.

Despite the many strengths, this project claims that Hjallerup has an urban center without urbanity. The claim is based on urban explorations, that indicate challenges as well as solutions in Hjallerup.

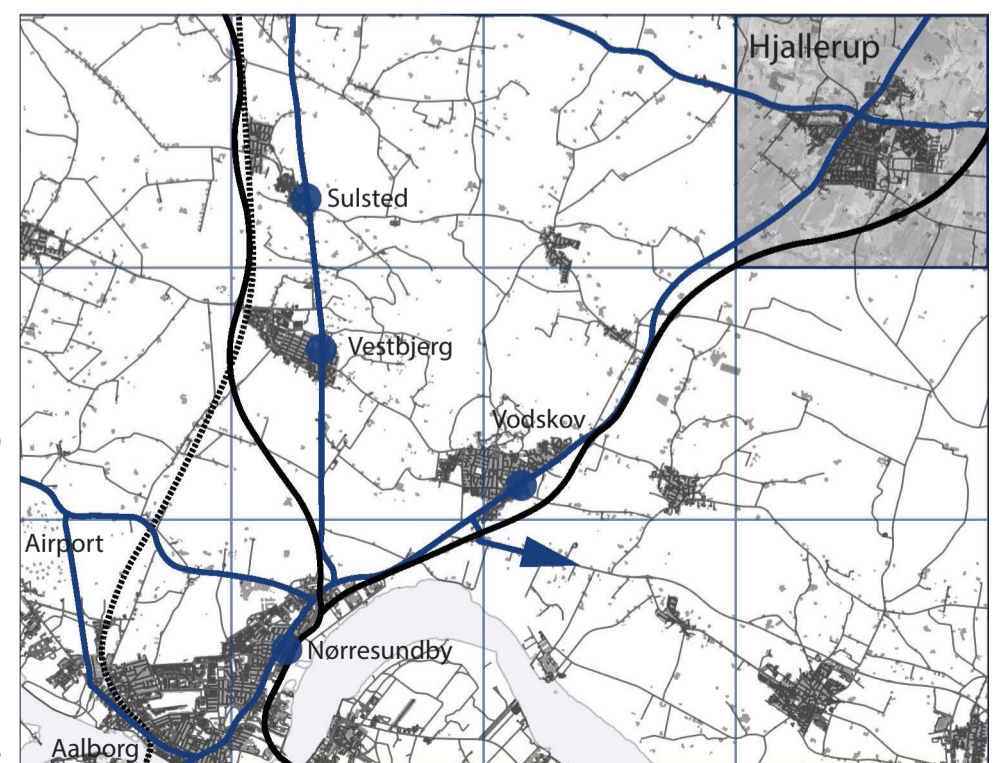
Emptiness, closing stores, disconnection, unreadable urban spaces and dominant parking and traffic in the urban space, are some of the indications of a town with a lack of urbanity.

This project attempts to make Hjallerup town centre relevant again. The bus terminal can be a 'generator' of urbanity, and help transform the town to be 'itself' instead of just a suburb to Aalborg.

To create this new urban centre with good urban spaces, a strategy to generate urbanity and an initial design proposal called 'The Urban Corridor' are developed, evolving around the question: How can an infrastructural design create urbanity through a spatial pattern?

### Key ideas

- 1/ The bus terminal as a 'generator' of urbanity
- 2/ A conceptual town centre strategy of juxtapositions and intensity
- 3/ An infrastructural design as a frame contributing to openness



Hjallerup's location in the region 1 : 150.000

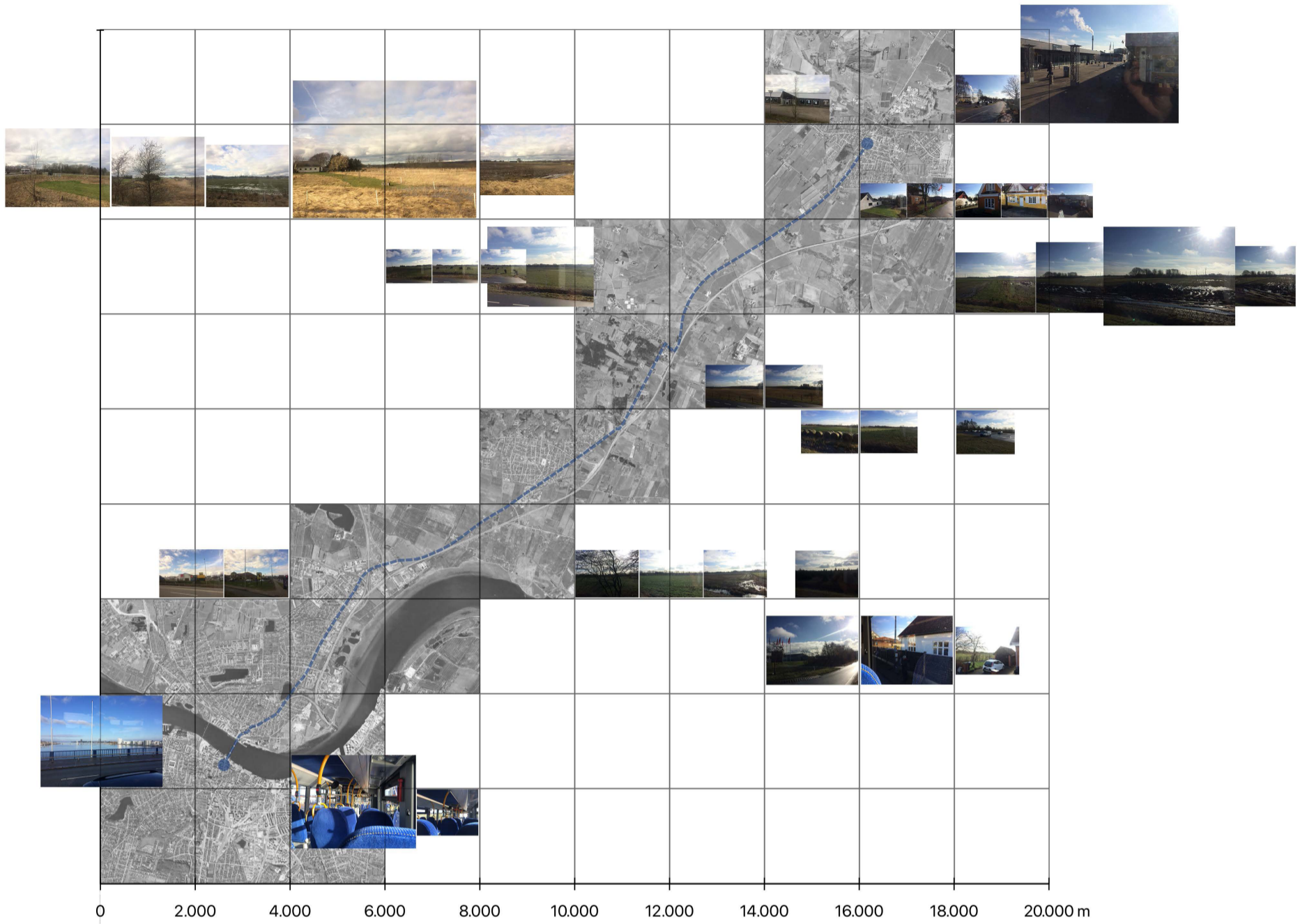
The team behind the project



**Signe Hald**

Bachelor of Urban Design at Aalborg University  
sig\_ha@hotmail.com

My interest in urban design is driven by the complex urban context. By exploring and understanding it, long-term and targeted development can be created. My approach to urban design is mainly strategic and process-oriented, where I'm interested in the interdisciplinary knowledge on which we make decisions regarding transformation and urban development.



~~~~~ A situational experience of a bus ride is highlighted. By exploring mobility affordances, the current mobile situation can be rethought. The area of arrival has been transformed into a new mobility node. From here, an infrastructural design leads people into Hjallerup.

Soft Nodes

The new Mobility Hub in Bouet

The mobility node in Bouet is located within a rural context and is placed at the intersection of two highways, E45 and E39. Today it is mainly used as a resting area and parking lot for shopping.

The project investigates the notion of the countryside and rural setting in a nordic context to explore the distinct qualities of rural living in relation to urban living, and how these qualities can be addressed and explored within a mobility hub.

The project examines alternative means of transport in rural settings, as rural mobility is facing other challenges than urban mobility, such as less frequent public transport services and more car-dependency.

Different site analyses are conducted to understand the identity of the site in a variety of scales from strategic context to atmospheric impressions.

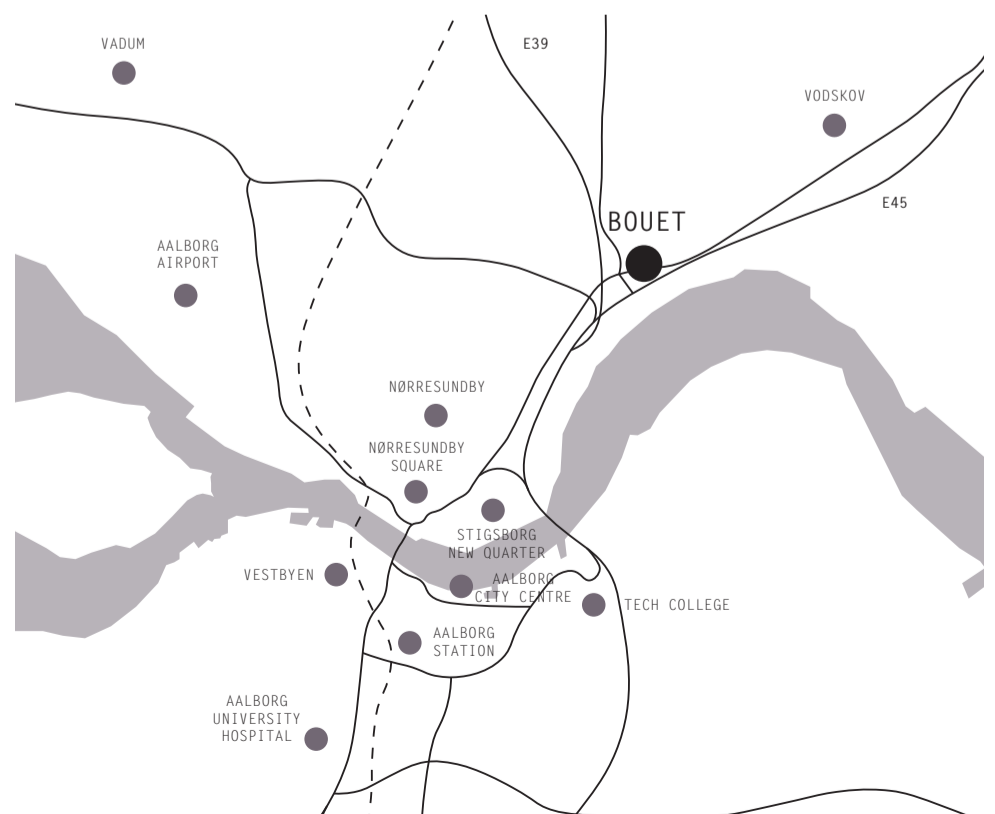
The vision for the design is to transform the existing site into a mobility hub which implements different modes of transport in order to move people from rural settings into the city.

The proposal implements new functions whilst maintaining the existing.

The design proposal attempts to support a change in people's perception of the rest area/parking lot typology through implementing human-based activities. therefore, the parking lot/rest area can be presented as something more than just movement. The design features different activities and public spaces in order for the area to be a soft node, a node which is not only about movement but also a pleasant place to be for people.

Key ideas

- 1/ Create a unique identity and sense of place
- 2/ Create space for people in an area dominated by vehicles
- 3/ Integrate the existing contextual natural environments



The location of the project site



The team behind the project

Dylan Chau Huynh (DK)
Bachelor in Architecture at Aalborg University
dylan101197@gmail.com

My main fields of interest is phenomenological architecture - how the built environment can create specific atmospheres. I use my background in architecture and the small scale, in order to deconstruct and design the bigger urban scale. I am born in Aalborg and i have lived my whole life in the city. In my spare time i enjoy playing football and reading.

Bouet before and after



Bouet masterplan 1 : 3000



Bouet overview



~~~~~ The visuals highlight the proposal to transform the site from a generic parking lot / rest area to a comfortable and safe place for people that at the same time is a mobility hub with car sharing facilities and a BRT station.

## Going above or below More than a transit space

The central primary school of Nørresundby is being relocated to the new residential area, Stigsborg Brygge. This results in many school children bicycling from the city centre to the new school.

The project seeks to create a safe route going from Nørresundby Square to Syrestien, a path that leads all the way to Stigsborg Brygge.

An analysis of the area was conducted, showing that the site functions on the premises of the cars; pedestrians and bicyclists have been down-prioritised.

The topography of the site is rather hilly, with the bridge landing and Vesterbrogade raised to the surroundings, functioning as a barrier between the city and the harbour.

This has a negative effect on the square, the largest public realm in the city, that appears underused and with mobility in focus.

The design process investigated how the safest possible way for school children can be conducted, while generating a more vivid environment at Nørresundby Square.

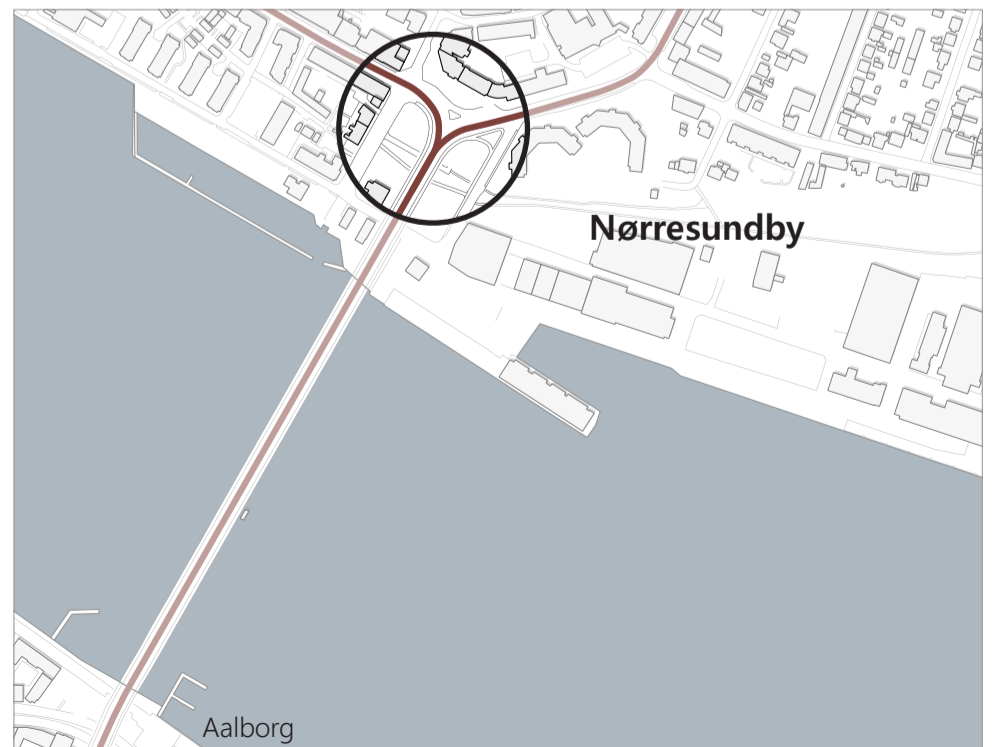
The design proposal is a passage going below the highly trafficked Vesterbrogade.

By this solution, school children as well as other bicyclists and pedestrians have the opportunity to travel back and forth between the city, the harbour, and Syrestien, without interfering with cars.

A redesign of parts of Nørresundby Square and the space next to the culture house creates an inviting descent with areas for stay, greenery and ramps, leading to the lowered passage. Cafés, exhibitions, and playgrounds facilitates public life for the entire area, while the passage itself creates a more coherent city, between areas and generations.

### Key ideas

- 1/ Create a safe route for bicycling children
- 2/ Stretch the town square below Vesterbrogade
- 3/ Prioritise 'soft' traffic at the town Square



Location of project site 1 : 10.000

The team behind the project



**Jannik Højer Jensen (DK)**  
Bachelor in Urban Design at Aalborg University

jje16@student.aau.dk

Jannik is an urban designer with an interest in the interconnection of humans, technology and urban design - how interactive elements in the public realm affect the people using it. He loves concept development and has an eye for graphic presentation, seen in the communication of analysis and design through clear and detailed illustrations.

**Louisa Borup Holm-Pedersen (DK)**  
Bachelor in Urban Design at Aalborg University

lbr16@student.aau.dk

Louisa is an urban designer with a strong focus on the human aspect of urban, landscape and architectural design and has a big interest in psychology and sociology within the urban life. She provides structure to a process and as a result of this, she is a strong communicator that is often in charge of structuring reports and presentations.

**Gustav Just Nielsen (DK)**  
Bachelor in Urban Design at Aalborg University

gniels16@student.aau.dk

Gustav is an urban designer from Aalborg University, looking forward to getting out of school and into the real design life. He focuses on 3D modelling, rendering and concept development. For him it is important to develop a design that works on both the technical, human and aesthetical scale, in order to create a coherent design.

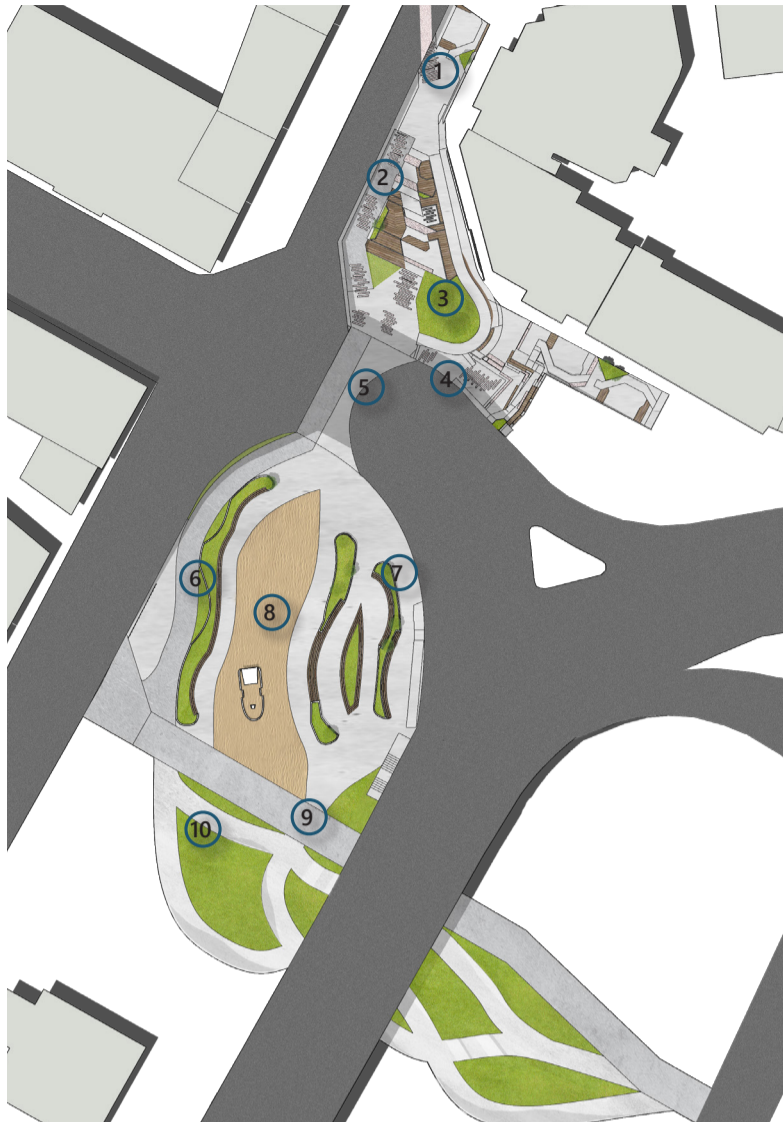
**Magnus Hæse Madsen (DK)**  
Bachelor in Urban Design at Aalborg University

mhma16@student.aau.dk

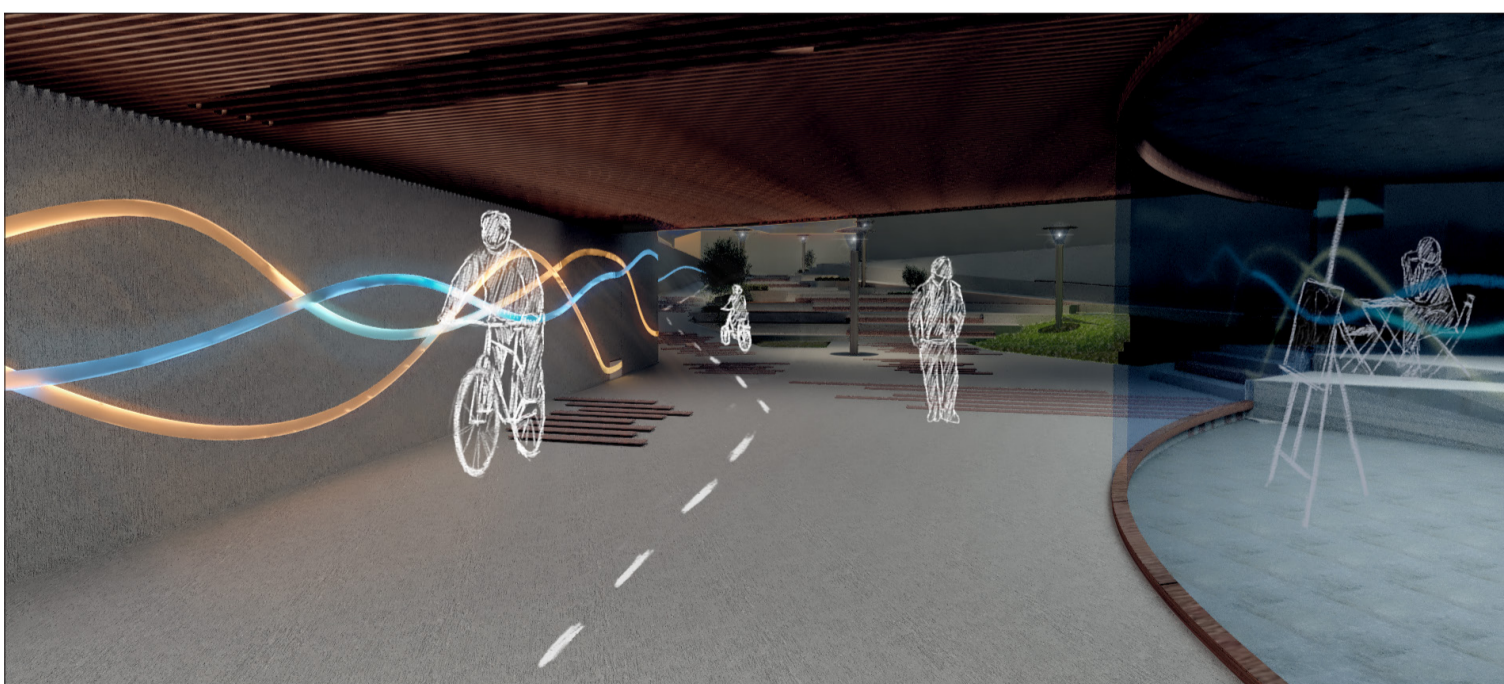
Magnus is an urban designer with an interest in multifunctional solutions. He has a focus on making sure technical implementations feel natural and part of the project rather than something in itself. He seeks to communicate the integration clearly through visualisations and 3D-models and through this make the project more clear-cut and understandable.



Plan 1 : 2000



- ① PLATEAU THAT WORKS AS A MEETING PLACE AND BOTTLENECK
- ② BICYCLIST AND PEDESTRIAN RAMP WITH GUIDING LIGHTS
- ③ STAIRS WITH GRANITE STONES AND LIGHTS AS GUIDING ELEMENTS
- ④ SMALL CAFÉ WITH OUTDOOR SEATING AREA
- ⑤ PASSAGE GOING BELOW VESTERBROGADE WITH EXHIBITION SPACE
- ⑥ BICYCLE PATH WITH VIEW OF MARINA
- ⑦ SEATING AREA AND ENTRANCE TO CULTURE HOUSE
- ⑧ PLAYGROUND WHERE SMALL CHILDREN CAN PLAY
- ⑨ SHARED SPACE FOR BICYCLISTS AND PEDESTRIANS
- ⑩ BICYCLE PLAYGROUND THAT LEADS TOWARDS SYRESTIEN



~~~~~ The upper render shows the bicycle path from the square and down towards the passage passing stairs and seating areas.  
Below you see the passage at night with a wave-shaped light guiding bicycles along an exhibition room at the right.

Making Motion Matter Improving soft mobility node in Nørresundby

Nørresundby is located opposite the Limfjord from Aalborg. The bridge landing area of the Limfjord bridge is an important node for the mobility in and around Nørresundby that gathers and spreads traffic from the Limfjord bridge to the main roads going east and west.

But it is also experienced as a complex and undefined area. The motorized traffic is dominating, and this has consequences for the accessibility and legibility for soft mobilities. The pedestrian and bicycle infrastructure is important to connect different surrounding destinations.

Three separated bus stops, the Nørresundby square, the harbourfront promenade and the new development on Stigsborg are all important destinations that will benefit from having improved connectivity through one coherent node.

This project works to secure the qualities of the area, and investigate and suggest strategic focus points to give soft mobilities a more prominent prioritization in the future.

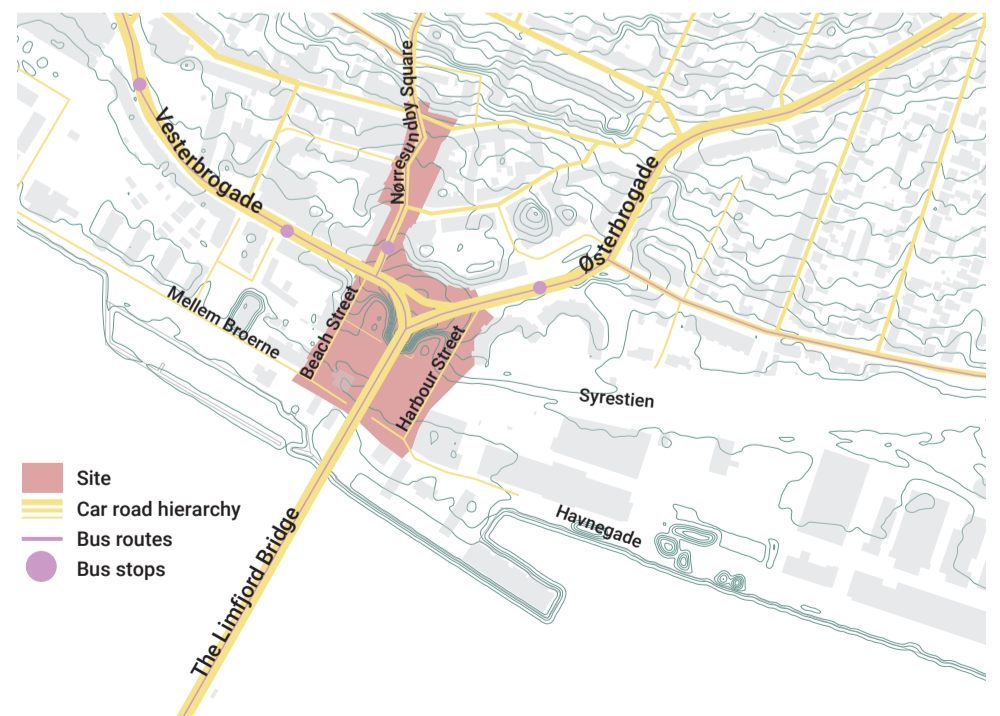
With both planning work and trends going towards a more sustainable future, the project wishes to contribute to this by giving pedestrians and bicycles better conditions.

The solutions presented focus on improving the existing crossings in the area, establishing legible connections and utilizing the potential of the open spaces to create appealing public spaces.

The goal is that the area around the bridge landing can function as a coherent and dynamic mobility node and an attractive meeting point that connect the surroundings and the citizens of Nørresundby. In addition, the project intends to support more sustainable transport choices in the future.

Key ideas

- 1/ Create better connections for soft mobilities, secure internal movement lines and outgoing connections
- 2/ Establish the east crossing of the main road as the prioritized crossing, especially in relation to a safe school route to Stigsborg
- 3/ Create public spaces that can be used as both recreational meeting points and mobility transit spaces



The location of the project site 1 : 7500

The team behind the project



Laura S. A. Gélie (DK)

laurafalk1994@gmail.com

I am taking my master's degree in urban design and I studied my bachelor in Architecture and design at Aalborg University. I get strongly motivated for each project because it expands my knowledge and creativity to see our city landscapes in new ways.

Zane Kraujina (LV)

kraujinazane@gmail.com

I am from Latvia. I have a bachelor's degree in architecture from Riga Technical University. Before my master's degree I have been working with bicycle urbanism. In my professional career I strive to create more life-sized cities that are prioritizing peoples well-being while using nature as an asset.

Eline Netland (NO)

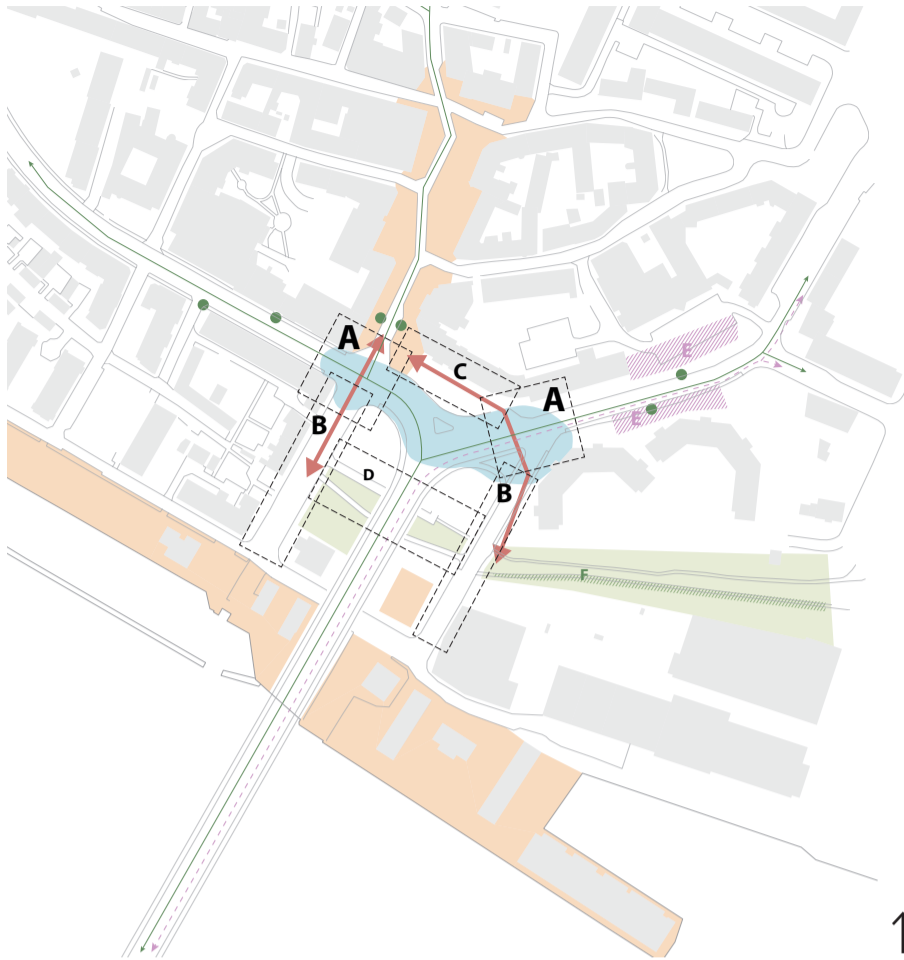
eline.netland@lyse.net

I am from Norway and moved to Aalborg for new experiences and learning within urban design. I have a bachelor's degree in civil engineering and have worked as an area planner next to my studies. I'm passionate about creating liveable spaces for citizens and sustainable solutions to meet the challenges of the future.

Chrisann Rodrigues (IN)

annrodrigues08@gmail.com

I am studying masters degree in Urban Design at Aalborg University, Denmark. I have done my bachelors in Architecture from GCA, Goa University, India. It interests me to work on the built environment and its emphasis on people's lives, in creating environments which are sustainable and socially responsive.



Problems & Potentials

- Recreational area
- Green area
- Challenges - critical point of contact
- Opportunities for good connections
- Bus connection
- Bus stops
- Future BRT Line
- Opportunity for the first BRT stop in Nørresundby
- Future green pathway

4 key areas of the site

A West and east crossing

Description:
Major intersections, heavy traffic.
Lack of connection for soft mobilities.

Potential:
Connect bicycle lanes.
Bring awareness towards soft mobilities.
How to create safe pedestrian crossing at major road?

B Roads connecting to harbour

Description:
Beach street and Harbour street are essential connections to the recreational harbour front from the intersections.
Today roads are prioritizing car traffic instead of soft mobilities.

Potential:
Creating clear connection to the harbour, with a transition from the major road to an area where pedestrians are prioritized.

C Space at the bridge landing

Description:
Space just north of bridge landing area.
Used for car parking.
Small pedestrian pathway along the building and major road.

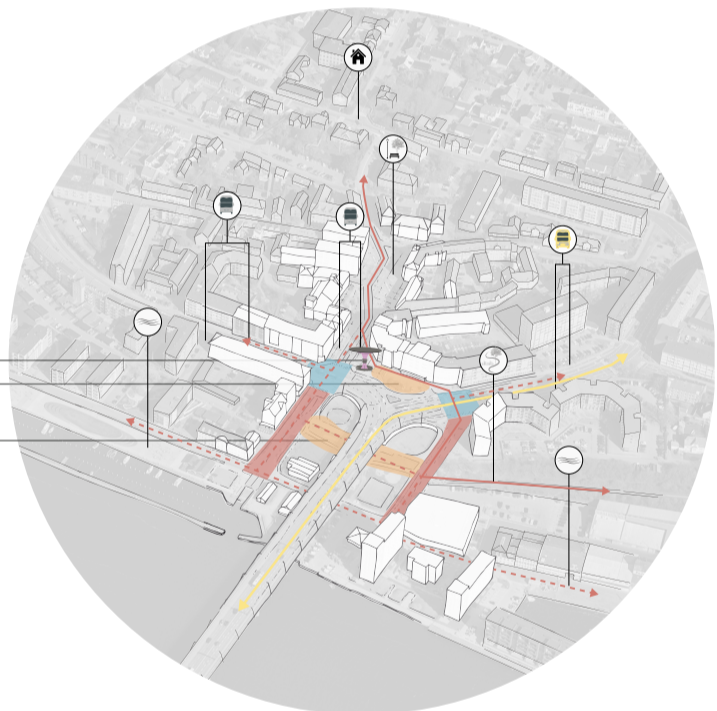
Potential:
Connecting two crossings. Making the space more coherent with Nørresundby square. Providing with necessary affordances for pedestrians and cyclists.

D Public space under the bridge

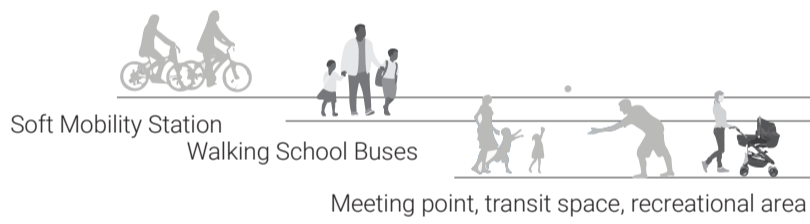
Description:
A windy and open public space under the bridge. Neglected public area without clear wayfinding and identity.

Potential:
Create coherent movement lines for soft mobility users.
Enhance the identity of the public space.

Strategic plan



The project proposes coherence and connectivity for the movement lines of pedestrians and bicycles throughout the area, and strategic design solutions for two public spaces. The focus is on improving safety, legibility and attractiveness.



■ Streets connecting to the harbourfront
-viewlines
-prioritizing soft mobilities

■ Crossings
-safety
-designated lanes

■ Public spaces
-transit and recreational
-meeting points

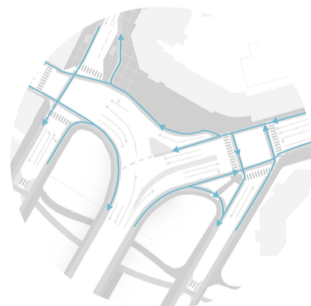
➔ Main soft mobility movement

➔ Soft mobility movement

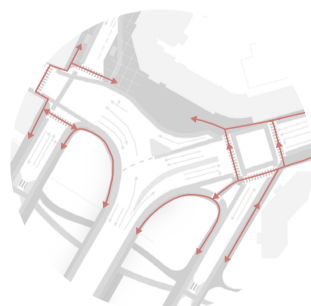
➔ BRT-line



Soft mobility station



Bicycle movement



Pedestrian movement

Movement plan



- pedestrian path
- Nørresundby square
- recreational harbour fronts
- bicycle lane
- connecting bicycle movement
- bus stop
- car lane
- road island
- ➔ pulling boats in and out of the water

1 : 2500

Hanging by a Thread

In this project, we investigate the relationship between three rural villages in Aalborg Municipality: Kongerslev, Nørre Kongerslev, and Komdrup. We examine how the concept of a village cluster might be used to address challenges related to mobility and the future resilience of village community life.

A village cluster is a network of villages with a common place identity that relies on the strengths of individual villages to address shared challenges through civic engagement (Laursen et al. 2015). Collaboration in a village cluster has the potential to sustain a wider range of functions of local community life and business not feasible in each individual village. With regards to mobility, this requires facilitating the external mobility to the regional city network as well as the internal mobility between the villages.

Our aim is to address these challenges through the proposal of a village cluster mobility strategy and the design of a mobility hub in the main village, Kongerslev, which aims to support and facilitate daily life in Village Cluster 9293.

To accomplish this aim, we initially gain an in-depth understanding of the social, technical, and aesthetic dimensions of infrastructures and places in the village cluster. This includes a consideration of the future of rural mobilities. We also conducted a survey which was used to develop relevant personas for analysis and design evaluation.

Together with the findings from our analysis and survey, these inform our design parameters, and lead to our strategy and design proposal.

Key ideas

- 1/ The village cluster concept applied to mobilities
- 2/ Rural mobility hubs and local nodes as local meeting places
- 3/ A red structure with a strong link between form and function



The location of the project site (site plan to scale)



The team behind the project

Charlotte Amalie Frejlev (DK)
Bachelor in Geography and Geoinformatics from University of Copenhagen

cfrej19@student.aau.dk

I'm an interdisciplinary urban design student who is especially interested in the strategic, technical, and social aspects of planning and design. I'm 24 years old and live in Copenhagen where I'm an avid user of the city's urban spaces.

Anette Primdahl (DK)

Bachelor in Town, Energy, and Environmental planning from Aalborg University

aabrah14@student.aau.dk

I'm a 27-year-old urban planner who is now refining my visual and spatial qualifications through the masters program in Urban Design. My interdisciplinary profile is a creative combination of the design expertise with the analytical understanding of a planner of the sociological conditions of urban environments.

Signe Gren Carlsson (DK)

Bachelor in Urban Design from Aalborg University

scarls15@student.aau.dk

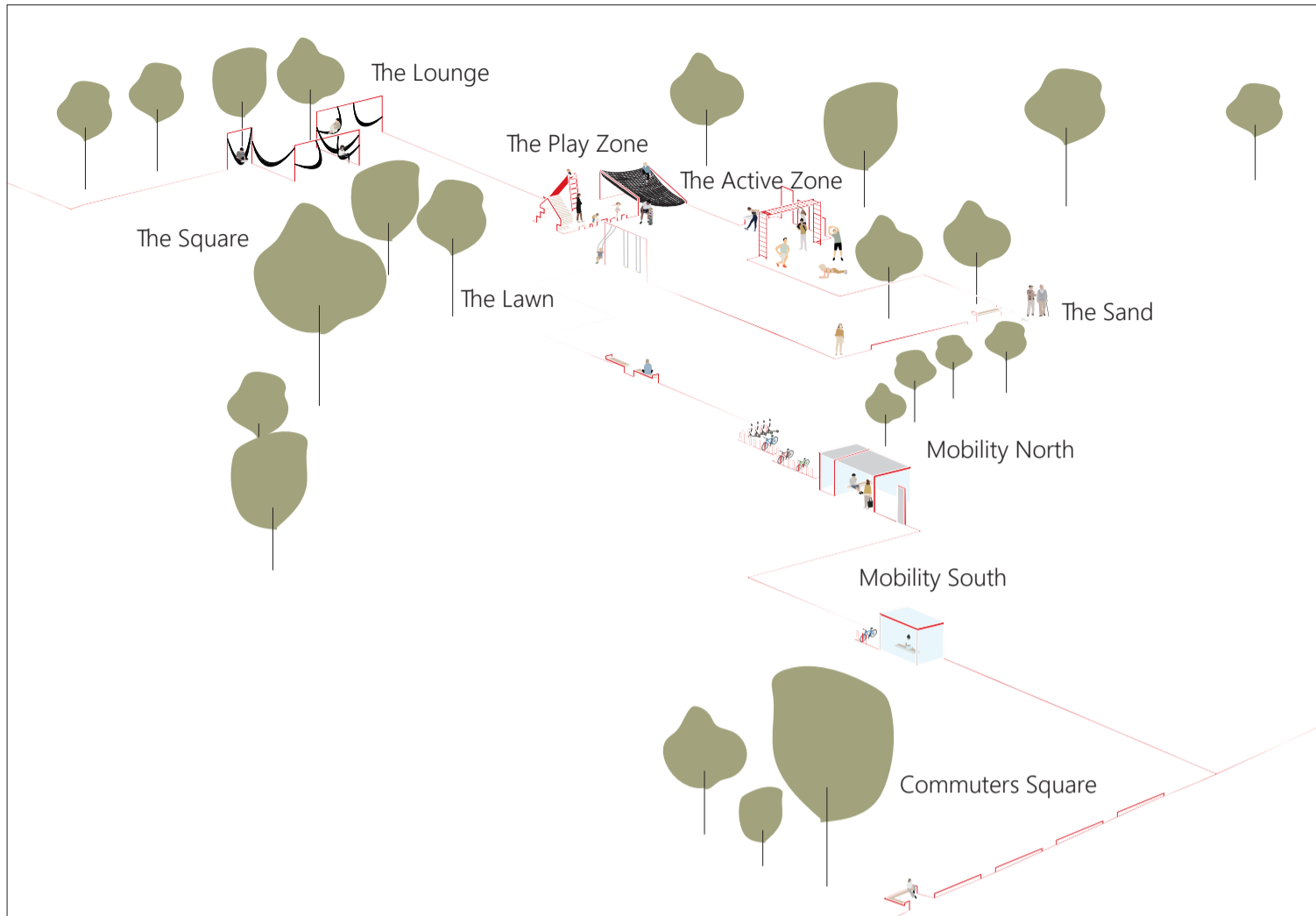
I'm 26 years old and I'm studying Urban Design at Aalborg University. I have a great interest for the creative field and enjoy the creative process towards a design solution. For me there is no final design - the process is always ongoing even when the design has been taken into use.

Caroline Vibeke Krogshave (DK)

Bachelor in Urban Design from Aalborg University

ckrogs15@student.aau.dk

I'm 24 years old, and study at Aalborg University. I have a natural interest and desire to explore the creative field, which led me to an education within landscape architecture and design. I have a great interest in smaller urban space design, and I want to create cities for people!



~~~~~ The illustrations show the proposed red structure with its distinct zones, the redesign of the bus stop with added functions and a balance between generic and specific design elements, and an overview of how the combination of the red structure and the vegetation breaks up the previously open and empty area.

Hjallerup, Bouet, Nørresundby, Kongerslev



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DENMARK

Spatial Strategies for Next Generation Mobility Nodes in Northern Jutland  
MA2 Urban Design, Aalborg University 2020

