HUMLEBÆK SYD

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SYNOPSIS

The project takes its point of departure in the architectural competition for Humlebæk Syd. The overall vision of the competition is to create a suburban neighbourhood build upon ideas of the good life in the suburb with the nuclear values: Architectural quality, Diversity, Climate and Sustainability and social contact.

The landscape concept evolves around the formation of six bands of individual characteristics that are possible to visit individually in a north south going direction having solely an experience of one landscape type. It is also possible to move across the bands in a east-west going direction having a more diverse experience.

For the build environment the focus has been set upon making up with the modernist ideal of the enclave. Part of the concept has been to change the status of the suburban stem road from being solely a peripheral car road to be the main street in Humlebæk Syd. Further a big emphasis has been put upon creating principles that ensure a mix of typologies to accommodate a diverse neighbourhood that can support social contact across different societal levels.

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PREFACE

This report is a result of a 4th semester master project in Urban Design conducted at faculty of Architecture & Design at Aalborg University. The project concerns the competition for a residential area in Humlebæk Syd of 58 hectares. The report consist of six overall chapters: an opening containing a discussion of some of the overall challenges of the suburb and an introduction to the competition; a structural analysis of Humlebæk; a landscape chapter leading to an overall landscape concept; a chapter describing the build environment of Humlebæk Syd leading to a master plan and stage plan for the area and finally a project recapitulation including conclusions and reflections of the project.

The project has been conducted within two scales. 1:5000 for the overall landscape concept and master plan and 1:1000 for a more detailed example of a selected stage of the stage plan.

All diagrams in the report are produced by the group. The images are a mix of own production and ones found on the Internet.

Finally we would like to thank Karoline Grum-Schwensen of Fredensborg Kommune helping us getting the competition material that has been the foundation of the project. We would further like to thank Jes Vollertsen for supervision about rainwater handling and for sharing his technical insight.

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INTRODUCTION

// opening, competition foundation, site presentation

OPENING

Since the end of modernism and the heavy migration from the classical cities to the suburbs around 1975, a heavy sanitation and restoration process has been going on in the cities(Danielsen, C.B. et al, 2010) , (Nielsen, T., 2010). Roadscapes has been conquered back from the car, urban pedestrian environments has grown as well as bicycling (Gehl, J. 2006). New infrastructures promoting public transport has been introduced like the Copenhagen Metro. Urban regeneration of industrial brown fields and harbours for attractive new neighbourhoods has happened and are still ongoing. The city has proven to be an attractive place to live with lots of urban life, cultural offers, short distance to the workplace and easy access to efficient public transport (Weirup, T. 2012).

Meanwhile little has happened in the suburbs. Different typologies has since been built other than the concrete slabs of the 1960s but within the same overall structures (Gaardmand, A., 1993). The road infrastructure from the modernist era are still existing and only limited public spaces are found in the residential areas.

The suburb is antiquated when comparing to the state of the cities they are surrounding. The suburb are facing a time of restoration if it should meet current standards of urban life and challenges of sustainability.

The contemporary suburb within a Danish context is mostly a result of urban planning going on from the end of World War II in 1945 until year 1989. The period is often denoted as the creation of Welfare City (Danielsen, C.B. et al, 2010). But the overall ideas of the suburb dates back to beginning of the twentieth century.

GARDEN CITIES

Ebanizer Howard did with his *Garden Cities Of Tomorrow* published in 1902 present ideas of the formation of what he denoted the sub-urbs. These were to be a new kind of urbanisation to supplement or ease the massively expanding industrial cities(Nielsen, T. 2008). Instead of still growing endless cities, he promoted suburbs of smaller size located in countryside around a core city. The suburbs would be connected to the core city and one another by railroad(Nielsen, T. 2008).

The garden city ideals were used in the creation of the Finger Plan by a team with Steen Eiler Rasmussen in front. The plan for the growth of Copenhagen from 1947 described a new way of expanding the city in fingers instead of growing in all directions. The structure was very similar to the one proposed by Ebanizer Howard, with small garden cities located on each finger like pearls on two strings of railway and motor way. Between the fingers green wedges were to be kept for farming, woods, garden centres and recreational areas(Gaardmand, A., 1993). Between the individual suburbs in the five fingers green areas were to be kept as well to ensure that an endless coherent city would not be formed through out the fingers(Gaardmand, A., 1993).

MODERNISTIC IDEALS

With various technological inventions, an optimism arose in the inter-war period, that technology would be able to improve overall conditions of all of mankind (Tom Nielsen p. 24). This were to become the ideals of modernism. Utopian cities as functional and aesthetic machines were designed by architects like Le Courbusier and his colleagues in the CIAM Charter (Nielsen, T. 2008).

“The view was unambiguous turned towards the future, that should be based upon rationality, on well planed cities where people had good space and lots of light, fresh air and thereby be covered against illness. Where people could move fast and unhindered to where they wanted....” Tom Nielsen Translation (Nielsen, T. 2008)

To accommodate their visions of the city as a machine three principles of separation were invented.

Separation of building and road was a reaction against the historical city centres perimeter buildings that was found unsafe, impractical in relation to sewage, pipe and other underground infrastructure as well as potentially an expensive solution with future road upgrades (Danielsen, C.B. et al, 2010).

Separation of modes of traffic was increasingly being part of plans to accommodate fluent car traffic and safe environments for soft traffic. To ensure as few nodes between the different modes of traffic as possible the formation of the antenna structure of dead end streets were a necessity accompanied by a parallel bicycle and walking infrastructure with various underground tunnels and fly overs (Danielsen, C.B. et al, 2010).

Finally the separation of housing, industry, centre functions and recreation in opposition to the classical cities noisy and polluting overlapping of functions. For the suburbs this meant the formation of centre functions typically by the railway stations, residential dwellings at another place, schools and institutions at a third place and finally industry at a forth place(Nielsen, T. 2008). This did result in a city where the everyday of shopping groceries, picking up children and bringing them to after school activities, getting home from work and similar would often be including several distant destinations within the suburb. With the relatively low density of the suburbs this would be a long route easiest accomplished in car.

HOUSING ENCLAVES

In the inter-war period the housing enclave had gained great attention with ideas of individual cities or neighbourhoods in a pact with nature. The American sociologist Louis Mumford agitated for the value of cities compound of foreseeable sized units of neighbourliness(Gaardmand, A., 1993).

“Everywhere in the city there is a need for units, where intelligent cooperation in lieu of mass regulation, mass decisions and mass actions from remote leaders and administrators. Smalll groups, small classes, small municipalities, institutions that are adapted in measure is reasonable conditions for a healthy development in modern society” Louis Mumford quoted by Arne Gaardmand - translation (Gaardmand, A., 1993).

With inspiration from post-war period plans from London, the ideals of foreseeable enclaves within the city became a major part of suburban planning in Denmark as well. Within the enclaves small collective facilities would be found like playgrounds, small shops, restaurants, laundry services, childrens nurseries or similar that were to be paid collectively as part of the rent(Gaardmand, A., 1993).

The visions were to create democratic societies of various social classes living side by side as an alternative to the working class and upper class housing areas of the city. An example here of were Steen Eiler Rasmussens plan for Tingbjerg(Gaardmand, A., 1993)

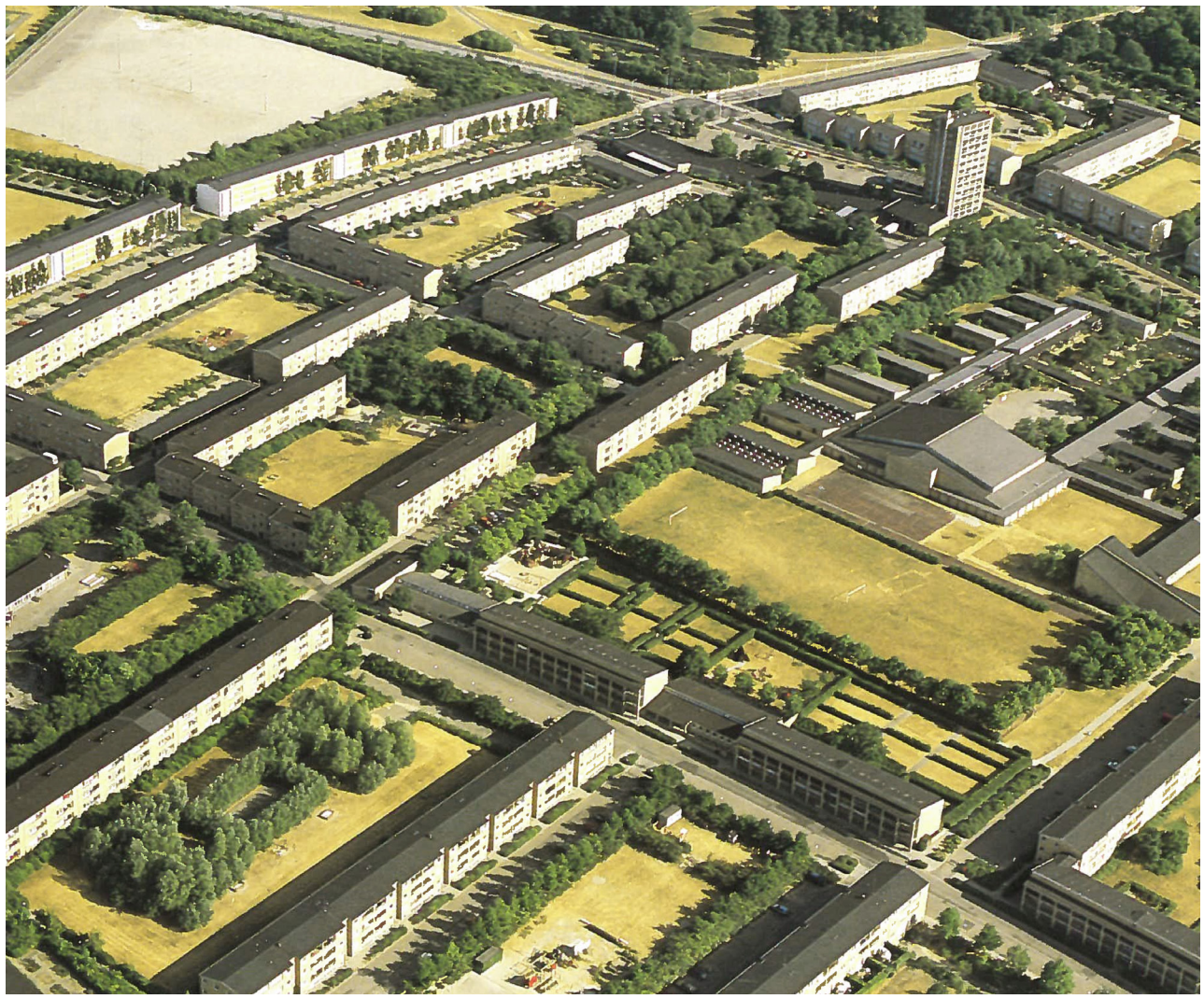
The idea of the enclave was consistent through out the development of the welfare city until its “completion” in 1989. Both in big scale multi- storey montage building projects in the 1960s, the attached housing projects of the 1970s and 1980s (1945-1989). The enclave was also part of the single family housing streets with the modification that collective facilities were never a part of these areas.

In the structural analysis of Humlebæk found later in this report it is found that the extensive use of housing enclaves and the separation of traffic and separation of building and road, are problematic. First enclaves orienting towards non-public inner environments and being surrounded by dense vegetation. Secondly separation of traffic where pedestrians and cyclists are moved to a

■ Right Page
Tingbjerg area

Left page:

Right page:
Top, from left to right: Langagergård; Dyngeland
Bottom, from left to right: Kronborg Strandby; Europan 2011, Allerød, winning project; Hornshøj.



separated system of paths hidden from the building facades as well.

The end result is a suburb where social contact is mostly experienced between people of the same enclave. This fit very well with the modernistic ideals. The problem is the diversity of people they wished too live in their individual enclaves gradually were erased. The monotonous architectural ideals of the time also resulted in a monotonous population.

In the publication Forstadens Bygningskultur one of the overall challenges of the suburb mentioned are social segregation or polarization. While the amount of unemployed, singles, ethnic minorities and low income groups are increasingly making up the group of inhabitants in rented and public housing - a concentration of households of high income, employed and families with children are found in owner-occupied dwellings where the single family house are the primary dwelling type (Danielsen, C.B. et al, 2010).

In Humlebæk the results are to be read in the public schools. Here two schools located primarily in owner-occupied dwelling areas are top ranking in the municipality while one located within an area with a higher amount of rented and public housing is among the worst performing schools in the municipality(Structural Analysis).

In the holistic plan for the upgrading of Gellerup Parken in Aarhus an acknowledgement of the problems of housing enclaves is presented. Part of the main concept of reducing social problems within the area is to break down the enclave and bring new functions, workplaces and dwelling types into the area(1945-1989). Some of the same principles has been part of the upgrading of Kildeparken in Aalborg (Niels Bjørn, Byplan nyt)

The enclave is found to be a major part of problem in modernistic planning. Here we believe it is important to learn, that as long as introverted big enclaves are build of monotonous dwellings, there will be an increased polarisation in the city.

Accordingly it is alarming when observing newer projects within suburban planning that has still not made up with the formation of enclaves. Here still no or limited effort has been set upon mixing typologies to avoid generic developer projects where only a small variation will be found between the different offered dwellings.

When further moving the enclaves from their urban context into the open landscape no longer surrounded by other neighbourhoods but by open landscapes as experienced in newer projects they are no longer just enclaves, they are now castles separated from the city with the landscape as moat. Castles that will only need a slight modification to become regular gated communities.

Five examples has been found of contemporary projects that has dealt with some of the challenges of the suburb but do still have the enclave as starting point.

Landscape architect Stig L. Anderson(SLA), founder of SLA Architects, is represented with three projects. Although he is solely not to be blamed use of enclaves, he is one of the few that has written articles and reflected upon the work conducted by his office.

SLA did for the 2010 Shanghai Expo with the theme Better City contribute to the Nordic countries exhibition New Nordic Landscapes about biodiversity within an urban context and the interaction between infrastructure, landscape and the urban development process. Here he proposed a new ism within urban planning based upon his company design philosophy called Process Urbanism.

Process urbanism is described by SLA as the consequence of a general change of nature view from a former view of man being superior to nature towards a view where man although technological progress still are subject to the natural process and coincidences (Andersson, S.L., 2012). This is experienced through climate changes resulting in among other still more frequent heavy rainfalls.

In the planning of cities, a bigger emphasis should according to SLA be set on using the natures processes on site like using the sites natural process of handling rainwater instead of moving the problem to a further located rainwater facility, or using natural processes when developing the landscape instead of spending huge efforts on creating unnatural green environments that will need high maintenance to not look natural.

“To be a process urbanist does entail that all ideas of control and management are shelved. Hence the process becomes the changeable, the unfinished and the unknown central elements, that process urbanism constantly works with” Stig Lennart Andersson translation (Andersson, S.L., 2012)

SLA Architects has promoted the concepts of process urbanism in their projects for Langagergård, Dyngeland and Hornshøj. All three projects exhibits a new ecological nature view of the city blending together with the wild landscape.

Langagergård
In the project for Langagergård the main concept is the formation of six slightly elevated enclaves of build environments surrounded by a recreative landscape for water draining. The enclaves are situated like islands in the landscape with no build coherency to the surrounding city.

Dyngeland
In the Dyngeland project enclaves of housing around an inner shared courtyard surrounded by landscape are proposed. Three different sizes of buildings are presented to create spatial variation. These does all seem to resemble a detached housing typologies containing one or more dwellings. Here the landscape outside the buildings enclaves does as well serve as a rainwater drainage.

Hornshøj
In Hornshøj the idea of the housing enclave in the landscape does also appear. Here the typology is of bigger scale of low rise multi- storey buildings forming small castles in the landscape.

Common for all three projects are the basic premise of creating build environments as enclaves that can be integrated into the landscape and separated from their relative context. The process urbanism is experienced through the active use of rainwater and the landscapes that will develop as biotope over time.

Similar projects outside SLA Architects the Arkitema project Kronborg Strandby or the winning project for the 2011 Europan competition for Allerød could be mentioned. Here it is important to mark that both projects are winning proposals in competitions suggesting that as much as the individual architects behind the designs believes in their ideas, a jury of professional judges has also accepted these concepts and found value in these.

Kronborg Strandby
Kronborg Strandby is a residential area at the coastal front of Elsinore. Here a wild beach landscape of long dry grass and sand grows between the housing. The project is different from the SLA projects mentioned by not being an

enclave entirely separated from its immediate context. Still the project forms an enclave with its more than 100 dwellings in similar point houses of various storeys forming a shift from the neighbouring slab buildings

Europan 2011 allerød winner
The winning proposal of the 2011 Europan presents a series of housing enclaves with each having individual shared inner court yards distributed on a generous piece of land. Rainwater handling is also an active part of the landscape that stretches between the housing enclaves. The plan describes how the private outdoor areas are exchanged for a public landscape. Three different fixed typologies of attached and multi- storey housing are proposed indicating that the project is thought as a housing developer scheme.

Within the selected projects some overall tendencies can be found. The focus of integrating the processes of nature into urban planning is a positive addition to the field and a logical development with still more visible consequences of climate changes. Also the change of aesthetics toward a wilder flora instead of the nurtured, homogenous green planes that characterise the green environments seen between the buildings in the suburban context today is a positive development for both biodiversity and human(structural analysis).

While the processes of the nature will be experienced between the buildings in an ever changing landscape that will exhibit the season, periods of heavy rain or drought and a progress over time - the building mass will remain the same showing no other sign of change than their patina. With the abandonment of the detached single family building with an individual building plot as an element of the new suburban quarters, the process and architectural diversity they represent will disappear, as well as the demography this typology attracts. With developer housing schemes of multiple similar fixed attached and multi- storey buildings only, the building mass will represent a homogeneous time warp in an ever changing heterogeneously landscape.

The enclaves of homogeneous housing mass as experienced in all five examples does implicate that in the effort of integrating the processes of nature into the planning of the city, the societal level of the build environment - the city - are neglected. This conclusion is build upon the lacking emphasis on presenting plans of ensuring architectural, typological and inhabitant diversity. This could in relation to process urbanism have to do with the wish to end control and management and begin relying primarily on processes of nature. Are the processes of nature when it comes to the build environment solely meeting the housing market needs and what developers are able to sell at a given point in the process? Here its relevant also to reflect upon human nature and which cities we prefer.

With the general use of detached enclaves of homogeneous housing the build environment of these plans forms micro societies of inhabitants that will, unless controlled and managed, most probably be homogeneous - just like seen in the already existing enclaves of the welfare city. Further detaching the enclaves from the cities they are supposed to be part of, does not create a good fundament for social contact between new and existing citizens of the city. Unlike diversity in nature, diversity in architecture and inhabitants are not result of natural processes and coincidences.

For the Langagergård project the first developments are starting to show up. Reading the local plans that has been made for the further development of two of the six enclave islands describes how each of these individual islands will feature an individual development but each island will contain one developer project with one plan only. The islands will not feature any public functionality that could invite people from the surrounding city to visit the new development.

From left to right: The first development of Langagergård, housing island A; bird view rendering of Humlebæk Syd seen from south to north overlooking Øresund; rendering of Humlebæk Syd within the built environment.

The suburban cities does by now already have problems of low social contact and polarization. It is found that this is related to the enclave ideal these are a result of. When adding new housing mass of such a scale as seen in the presented projects the projects should not only add more dwellings, they should add more city. More specifically - the projects should ad urban spaces of high quality that will accommodate social contact between both new and existing citizens of the city.

With the dissolution of the city that many of these projects represents, new urban qualities are not added and the problems of the suburb is not being improved. Instead the landscapes that was formerly open spaces are getting filled up with castles. Castles of homogeneous developer housing schemes. When building in the still more limited landscape of for example the finger plan in the greater Copenhagen region, it does still become increasingly important to include the landscape into the planning of new urban areas. We would with this project like to contribute to this development. We would however like to exhibit a different way of making plans, where the end result will not become a dull developer scheme in the landscape separated from the city it is to be part of.

Instead it will be in focus to enhance the city of Humlebæk as a whole with the project by adding urban spaces of high quality offering both new and existing citizens to meet.

This competition response will investigate and design solutions of a denser, more diverse suburban residential area in Humlebæk Syd that will make up with the formation of enclaves

COMPETITION FOUNDATION

Fredensborg Municipality did in June 2011 arrange an open architectural design competition - Humlebæk Syd. This project take its starting point in this competition. This section will outline the overall requirements of the competition program.

The municipality describes the assignment of the design competition as to create a lively neighbourhood with a high level of architectural quality with a focus on climate and sustainability, diversity and social contact(Fredensborg Municipality p. 5, 2011).

The municipality does with the competition wish to contribute to the overall quality of future neighbourhoods. It is the municipal council vision that Humlebæk Syd should be an example project for sustainability and architectural quality(Fredensborg Municipality p. 5, 2011).

Humlebæk Syd should in relation to identity enhance value to the adjacent neighbourhoods and Humlebæk as a whole. The competition shows great interest in underlining the importance of the ability of the proposal to define the identity of Humlebæk Syd as an attractive housing area with focus on social, economical and environmental sustainability.

For the current Humlebæk the area should enhance recreative qualities of the city and be an attraction that exhibits how a new neighbourhood can make it even better to live in Humlebæk (Fredensborg Municipality p. 27, 2011).

As a premise for the development of Humlebæk Syd the municipality has decided not to sewer for rainwater. As a consequence of this the plan for Humlebæk Syd have to establish alternative systems to manage the increasing amounts of rainwater, which have characterised the recent years in Denmark.

The new neighbourhood should be planned upon thoughts about the good life in the suburb, where the basic elements according to the municipality are :

- Architectural quality - in build and recreational areas
- Diversity - In architecture, landscape and inhabitants
- Climate and sustainability - Integrated in the entire built up area
- Social contact - both within the neighbourhood and with its surroundings.

(Fredensborg Municipality, 2011)

ARCHITECTURAL QUALITY

As previously described the project sets four main elements which is essential for the competition - architectural quality, diversity, social contact and climate & sustainability, which will be further referred to as sustainability. Within these four elements architectural quality takes a key position, not as an element, but as a common qualitative description of the totality of the project. This does not entail a neglect of the basic principles of architectural quality as described by Vitruvius. Durability, usability and beauty still forms the foundation of the projects understanding of architectural quality.

The foundation describes the way in which the three focuses should be obtained. Only be creating durable, usable and beautiful solutions for diversity, social contact and sustainability can the desired Architectural quality be reached.

The overall topics of the competition has for the further work been clarified to three headlines found important for the development of Humlebæk Syd.
In the following chapters, the terms of Diversity, Density and Social Contact are explored in order to clarify the nature and basic requirements of these terms in an suburban context.

DIVERSITY
The majority of Humlebæk and the suburban development of Denmark have been planned on modernistic principles. Principles build on democratic values, with the intention of generally improving the standard of living for the masses. Despite its honourable intentions the result of the modernistic planning principles have been far from unproblematic. Especially regarding diversity the short comings of modernistic planning has become obvious in Humlebæk. This is for example illustrated in the large housing enclaves, mainly seen on Teglgårdsvej. Here hectares of monotone multi-storey building slaps dominate the area, creating not only architectural monotony but also homogenity in the spaces surrounding them and the residents living in them.

An architectural diverse neighbourhood can be described as the architectural critic R. S. Ifversen devoted the project of BO01 in Malmø - “An anti democratic urban plan where everybody does not get the same” (Ifversen, K, 2011). Here there is not strived to give every inhabitant the same. Here some building plots, on a neighbour basis, have a significantly higher value than others and as a consequence offering dwellings only affordable by a particular group of people. This helps to ensure the diversity among inhabitants on a neighbour scale.

Ensuring diversity in Humlebæk Syd has to be based on new principles. Principles which consider variability and multiplicity on a neighbour scale, principles which consider diversity not only in regards to buildings but also ensures diversity in the landscape. These principles will have to be based on a change of attitude towards the size of distributed plots. The huge single developer projects or the single family housing enclaves which have characterised the modernistic area up until today, can no longer be exist in their current form, if the diverse neighbourhood is to be reached.

DENSITY
When considering sustainability in the context of the suburb one specific element bears a great significance and that is density. The border less city or sprawl are some of the predicates which the suburb have received as an indication of its uncontrollable growth eating up the landscape.

Density is at the heart of creating a sustainable city and thereby reducing distances between people and functions. Density has a number of positive effects for example making it cost effective to run a high quality public transport system, promoting walking and bicycling and thereby creating a healthier environment.

The plan for Humlebæk Syd will have to take into consideration the need for increasing the current density of the suburb as general, and thereby creating a sensible weighting between city and landscape.

SOCIAL CONTACT
Social contact is in the project seen from a societal angle. As presented in the Opening the formation of urban enclaves of the suburb is found to be a serious problem with still increasing polarisation.

Social contact is considered to be the cities capability of social integration and the coherency of local society. Here it is found important that people of different backgrounds and societal levels meets and has a relation to one another. Only this way are polarisation and the enclave of the suburb opposed.

Fundamental for social contact is that meetings between people of different societal levels will, not just as strangers in the supermarket, but that they will have social relations on a daily basis.

To accommodate social contact the spatial planning of Humlebæk Syd has to support the foundation for social contact and thereby promote the meeting between people.

SITE PRESENTATION

Humlebæk Syd is a 58 hectare large area of open landscape south west of the centre of Humlebæk. The area lies within approximately 2 km of the train station connecting it with Elsinore and Copenhagen, from where Copenhagen Central Station shortly can be reached in 36 minutes. Further, as seen on illu. xx, Humlebæk Syd lies within a walking/ bicycling distance of all daily essential functions such as public schools, children nursery and shopping. Humlebæk Syd can with its unique location - well connected, with all daily necessities and recreational purposes nearby, be a fantastic place to live.

With its unique placement, Humlebæk Syd allows the landscape to be within the immediate proximity of the western part of Humlebæk. This further connects it with one of the larger landscape wedges secured by the finger plan, making it an important recreational area. Following the competition announcement the public debate have since voiced a concern from the inhabitants of Humlebæk, fearing that a new urban development will compromise this highly treasured landscape and recreational area.

It is the project persuasion that Humlebæk Syd, with its unique location, has a significant potential as a new attractive residential area. An area which not only will hold value for new residents but become an additional value for the current inhabitants in the existing Humlebæk.


ELSINORE
TRAIN+BICYCLE: 17 MIN.
CAR : 17 MIN.
Church
Humlebæk harbour
Louisianna
RAILWAY
Soccer fields
Childrens nusery
Private school
Childrens nusery & daycare
Gas station
Shops
Train station
Humlebæk centre
Childrens nusery &
Youth centre
Shops
Langebjerg
public school
Gas station
Childrens nusery
1200 m
Humlebæk Syd
58 hectare
Baunebjerg
public school
Shops
Tennis club
600 m
Cinema
Public school
Childrens nusery
Childrens nusery
Youth club
Sletten harbour
Peder mas beach
RADIUS : 500 M
WALKING : 6 MIN
BICYCLE : 2 MIN
RADIUS : 1000 M
WALKING : 12 MIN
BICYCLE : 4 MIN
RADIUS : 1500 M
WALKING : 18 MIN
BICYCLE : 6 MIN
COPENHAGEN
TRAIN+BICYCLE: 41 MIN.
CAR : 38 MIN.

■ Birdview over Humlebæk from south towards north with Swedish coastal line in the distant background.

STRUCTURAL ANALYSIS

// build structure, green structure, infrastructure

Humlebæk has its origins in two Harbours, respectivily Sletten and Humlebæk(Fredensborg Municipality p. 10, 2011). The city did with the coastal railway connecting Copenhagen to Elsinor(kystbanen) opening in 1897 become a popular site for summer residences for the bourgeoise of Copenhagen. The the area between the two Harbours additionally became the foundation of Humlebæk as a city (Fredensborg Municipality p. 10, 2011).

Until year 1950 Humlebæk were not to be considered a city and did basically only exist on the eastern side of the railway along the ocean. No city structure had been formed as most of the housing mass were holiday housing only.

Beside the first rows against the ocean the rest of the city is primarily built in the period 1960-1989(Danielsen, C.B. et al, 2010). It is clearly seen when visiting the city that the years the heavy expansion was going on, was also the years heavily influenced by modernism.

This structure study is about understanding and learning from the city that the project is about to expand. In the following chapter structure analysis of Humlebæk will try to find reasons and measures of how to enhance diversity, density and social contact in the future neighbourhood of Humlebæk Syd

The structural analysis takes its starting point in the framework of the structural analysis as described by Marling, G. and Kiib, H. The structural analysis is evaluated upon the focus of density, diversity and social contact.


1 - VILLAS


2 - MULTI-STOREY HOUSING


3 - ATTACHED HOUSING


4 - DETACHED HOUSING


5 - ATTACHED HOUSING


6 - INDUSTRY

BUILD STRUCTURE

The physical organization of typologies in humlebæk can roughly be described as six bands. From left to right band one consists almost entirely of detached housing, separated by the railway, band two consists mostly of multi-storey housing (late 1960's), band three consists mainly of attached single family housing, band four consists mainly of detached housing, band five consist of attached housing (1980´s) and finally band six being mainly an industrial area.These bands are also visible in the ownership relations with owner-occupied housing mainly situated in band one and four, whereas in band 2,3 and 5 rented housing is making up about half the housing mass.

Indications show that this zoning not only affects the physical structures of Humlebæk but also the economical and thereby the social capacity of certain areas. Three elementary schools are evenly distributed over the six bands, with Langebjergskolen within band four, Baunebjergskolen situated between band three and two and finally Humlebækskolen within the first band. In a new report for the school system of the Fredensborg municipality examining the quality of each school in the municipality key figures shows the huge difference between the performance quality of the three schools. Baunebjergskolen performs poorest of the three and while Langebjergskolen and Humlebækskolen is among the top schools in the municipality, Baunebjergskolen is among the poorest (Fredensborg Municipality, 2011).

What differentiates the area surrounding Baunebjergskolen is not only the typologi, but also form of ownership. The towns majority of social housing mass is concentrated in the surrounding area of the school. Here social housing is distributed over multi-storey and dense low-rise housing. This corresponds well to the distribution of social housing on typologies in Denmark as a whole, here three quarters are in multi-storey buildings and the last quarter is contained in dense low-rise housing (Housing in Denmark since 1945). Opposite the situation in the 1970's where social housing had its most expansive period, the mix of tenants corresponded well to the mix in other housing types, the situation today is very different. Today over half of the residents in social housing are unemployed and a relatively large proportion of immigrants. As a result of these factors social housing has obtained a bad reputation (Housing in Denmark since 1945). The concentration of particular social groups over large areas has to be avoided in order to counteract the possible negative effects seen with for example the public schools and increase social contact between different social groups.

Right Page
Diagram: Structural bands
of Humlebæk

Right page

Top: Detached housing
Middle: Attached housing
Bottom: Multi-storey housing

TYPOLOGIES

The municipality does with the competition wish to promote a neighbourhood of higher diversity in architecture and inhabitants. They mark Humlebæk Syd should attract new citizens as well as maintaining already existing citizens that changes life situation and family patterns.

As seen in the structural study Humlebæk does basically consist of three different typologies. These are Multi- storey apartment housing, attached- and detached single family housing. Within Fredensborg municipality, each typology do roughly constitute 1/3 each (Fredensborg Municipality, 2009).

The following chapters will elaborate on the qualities of these three basic typologies in relation to create diversity and social contact. This will establish a foundation for how these typologies are to be utilised in Humlebæk Syd.

DETACHED SINGLE FAMILY HOUSING

Unlike the two other typologies in Humlebæk, the detached single family house has a crucial difference. While the other two are classical developer projects, this housing form is most often build by private people that has purchased the land themselves. This produce a much greater diversity in the architectural expression of a neighbourhood, where materials, colours, dimensions etcetera vary from house to house.

The ability to build ones own house and do modifications to the building without having to be in negotiations with neighbours of shared walls is attractive to many. This offers the opportunity to continuously develop the house over time as new needs show up. This does however also set requirements of handling work and costs of maintenance and reparations individually. Also considering the price of a single family house, which by standard only occur as owner occupied, it is clear that is only available for a certain group of people(Kristensen, H. 2007). If one are alone, a single parent or similar, one will need an income far above average to be able to buy a detached single family house in Humlebæk. This constriction of the target group for detached single family housing, as a natural consequence, constrict the multiplicity of the residents.

Single family housing, despite its low density, has often a higher degree of social contact between neighbours than the two other typologies. 2/3 of people in a detached single family housing neighbourhood have a practical (borrowing things, watering flowers and occasional chatting) social relationship with their neighbours and approximately half has a close relationship with their neighbours.

ATTACHED HOUSING

Attached housing, row-, chain- and double housing brings with it a series of advantages in comparison to the multi-storey building, as all homes can have a private outdoor space and own entrance. Attached housing utilises some of the vital qualities of detached housing such as private garden space (in a smaller format) and own private entrance at ground floor.

Regarding diversity attached housing can be considered as a hybrid between multi-storey housing and detached housing. Private gardens and often small semi-private front gardens allow for a individualization of each house and adds to the experience of diversity. Regarding diversity in architecture this housing type is often, and only in Humlebæk, build in large quantities by a developer, creating enclaves of architectural monotony.
As in the case of the detached housing, attached housing has also a fairly good social contact within the neighbourhood, but very much depending on wether the dwelling is rental or owner occupied. Here attached common rental housing is the typology with fewest social relations (Ærø, T., 2002).

MULTI- STOREY APARTMENT HOUSING

This typology offers the lowest architectural diversity of the three. The variability of the individual dwellings is fairly poor, though sometimes having the opportunity of individualization of balconies can increase the experienced diversity.

Despite the multi-storey housing has the highest dwelling density and the most common areas it has the lowest amount of social interaction between neighbours (Ærø, T., 2002). There could be a number of reasons which causes this. The Ph.D., which the social interaction findings are built on, points towards a relationship between social relations, within a neighbourhood, and wealth of the residents as the main reason. Residents with a higher income tend to have more social relations within their neighbourhood. If this is the case a simple way to address this problem could be to build minor amounts of multi-story buildings within other typologies.

The multi-storey typology has problematic issues regarding architectural diversity and social contact. Despite this, multi-storey housing still has advantages in creating dense and cheap quality housing which can help contribute to the diversity of a neighbourhood.

CONCLUSION

Each typology represents in its own form specific qualities. Qualities which correspond to different residents, for example the ability to enjoy possibilities of a large garden as a family where the children can play or easy maintenance of a flat for an elderly person. Therefore offering different typologies promotes a foundation for a greater diversity among residents.

In regards to social contact a higher income among residents leads to a greater social contact within the neighbourhood. Here the ownership form is seen as the determining factor for differentiating between high and low income housing. This points towards the typology as not relevant. But when looking at Humlebæk there is a clear tendency of rental housing only represented in attached and multi-storey housing and detached having the majority of private ownership. This creates a situation where typologies do relate to the level of social contact, because the type of ownership is connected to different types of typologies.

DENSITY

The three overall typologies that are distributed throughout Humlebæk represent three different densities. To examine their differences a study of three different enclaves have been conducted. The findings of this study will then help to determine the density of Humlebæk Syd.

In this study the classical use of build plot ratio, where each individual building is analysed on its respective building plot, has been found irrelevant. When considering an enclave the amount of space needed per building, not only the individual building plot is interesting, also the road infrastructure needed to supply the enclave, parking spaces, green areas, shared community functions etcetera are relevant. Further the build plot ratio does only represent an experienced physical density, as the number does not express the density of inhabitants which is important in relation to sustainability. For example when considering public transport the amount of inhabitants is critical for the quality hereof.

Three examples of different densities found in Humlebæk are examined. First the multi- storey housing area in Teglgårdsvej (1). This area has a dwellings per hectare count of 67. This rather impressive number considering the suburban context is however also founded upon a dwelling size with an average of 75 m2. With a more modern size of 100 m2 the dwelling amount would be about 50 dwellings / hectare. Secondly the attached housing area in between Baunebjergvej and Boserupsvej (2). This typology contains 18 dwellings / hectare, where all dwellings are with own individual gardens. Last the detached housing area between Boserupsvej and Langebjergvej (3). Here only 7,6 dwellings / hectare are found.

When comparing the amount of dwellings per hectare it becomes evident that the three different typologies has noticeable differences in capacity. The multi- storey housing area does, even with correction to current standards of square meters per dwelling, contain more than 3 times as many dwellings per hectare than attached housing and almost 7 times the capacity of the detached housing area. The difference is also experienced in between attached and detached housing where the attached housing contains more than twice the amount of dwellings per hectare.

In order to meet a future demand for a higher density in the build environment of the suburb, while maintaining a diversity in typologies, the detached single family house needs to be thought in a denser context. A context, in relation to density of dwellings, corresponding in greater degree to that of the multi-storey housing. Challenging the norms of density generally connected with a Danish suburban context.

Left Page
Left: (1)Multi- storey housing enclave.
Middle: (2)Attached housing enclave.
Right: (3)Detached housing enclave

Right Page
Diagram: Examples of enclaves of Humlebæk and their respective densities















GREEN STRUCTURE

Humlebæk has a series of green environments distributed over the city. For this study examples of green spaces representing the overall qualities of green spaces of Humlebæk has been selected.

Generally green environments are found all over the city of different scale. They do all form individual green environments either as an attraction within neighbourhoods or for the city in its entirety. Humlebæk does not have a coherent recreative green structure through the city within the city boundary.

The neighbourhood recreative areas does in all examples selected consist of mostly a green lawns with trees planted at the boundary. Some do feature minor functions like a small football field or a fire ring.

The bigger recreative areas that has a greater appeal features wider open spaces and bigger functions like small lakes, full size football fields, a tennis club or a beach. These do also often consist of green lawns and boundary trees.

Common for both are the green lawns of grass and trees that has through the history of Humlebæk has grown tall and dense. The nature is mostly apparent in the oversized city trees, while the green lawns represents a continuous mowing to keep. Both represents a biological mono culture that are designed to accommodate a form of recreation where it is of greater importance that the lawns are trimmed and welcoming for stay and play. In terms of biological diversity and the green areas function as biotope the quality of these areas are found to be low. This could be described as a functionalistic nature view.

Humlebæk Syd, in opposition to the green structures described within Humlebæk, provides a more vast space of continuous landscape stretching to the horizon.

Left Page
Picture collage of green structures of Humlebæk

Right Page
Diagram: Examples of green structures of Humlebæk

HUMLEBÆK SYD

Humlebæk Syd represents an open landscape different from what experienced within the city boundary. The scale of the coherent landscape far exceeding the green environments found within the city of Humlebæk.

Today the landscape of Humlebæk Syd is experienced as a typical Danish field area with several water holes distributed over the area, with the highest concentration in the western part of the site(1). An obvious contrast arises in this wide hilled moraine landscape - the vast openness of the far stretching fields against the dense vegetation around the secluded water holes(4). Moving through the landscape this contrast offer a unique set of experiences from the beautiful extended views of the wide hilled landscape to the intimate and free growing nature represented by the water holes and in their immediate proximity(5).

Moving through the central Dageløkke path will give an experience of sometimes being in a hollow surrounded by the hills and sometimes being above it all with scenic views over the landscape.

Essential to the area is the ability to walk in longer distances with no interruptions. Here walks of up to one kilometre can be conducted without having to cross major roads or urban environments. The Dageløkke path represents such a stretch with termination in the village of Dageløkke. The village dates almost 400 years back representing a history that is far greater than the 50 years the majority of Humlebæk represents. At the end of Humlebæk Syd a scenic view over the village is found down a steep hill to a marsh in front of the village of historical old farm houses(3)

The landscape experience does with its big scale create a feeling of leaving the city behind. A citizen couple of Humlebæk describes the area as good for mental health.

“To have the ability to walk across the fields, through a small grove and enjoy the spectacular landscape north of Dageløkke. To have the opportunity to leave requirements and stress behind for a while - to get a little peace of mind.” H. & C. Niemann, 2012

The letter is part of a massive debate that has been going on in local media about the subdivision of Humlebæk for future residential development. Reading the vast amount of letters from multiple citizens leaves the impression that Humlebæk Syd is a treasured landscape that many are worried about loosing with future development.

Humlebæk Syd is now an agricultural landscape. In terms of biodiversity the majority of Humlebæk Syd is in reality not much greater than the green functionalistic spaces within the city border of Humlebæk. The biggest difference is that another crop than grass is grown here and harvests here a more rarely.

The exception are the places that has not been suitable for farming. The small hollows in the moraine landscape that are often over flooded has been unfeasible to grow crops in and has grown dense and has become a protected biotope representing rare species of reptiles and bats(Frisenvænge, J. 2010)(. These forms a great potential for biodiversity that can not be developed with the current agricultural production in Humlebæk Syd.

Moving through the site is limited to a path centrally located in the area in a north - south direction. Beside this the movement is limited to field boundaries. During spring, summer and beginning of fall the majority of Humlebæk Syd is unavailable to the citizens of Humlebæk.

Left Page
Top: Panorama upon Humlebæk syd in southern direction

Right page
Top, from left to right: Dageløkke Path, view upon Dageløkke village
Center, from left to right: dense vegetation, Small hollow
Bottom: Beginning of Dageløkke Path




INFRASTRUCTURE

The road infrastructure of Humlebæk does predominantly follow modernistic ideals of taylorism trying to create optimum conditions for seamless travel for both cars, cyclists and pedestrians (Eric Mumford, Defining urban design). This is experienced in two ways - the separation of building and road, and the separation of hard and soft traffic.

The separation of building and road cause main and stem roads to appear abandoned from life. In the dense medieval and modern city the road infrastructure serves as an important public spaces. In the modernist suburb the road only serves as functionalistic transport veins. This is seen as a big mistake in regards to intensifying the experience of life, in the residential areas, where transportation is among the only necessary activities(Gehl, J. 2007).

The main road in western Humlebæk, Fredensborgvej, does also serve as trunk road to Fredensborg and access road to the motorway. The speed limit has been set to 70 km/h expressing the priority of the modernist planning to create an effective flow for the everyday (Mumford, E., 2009). To create a safe condition with the high velocity of the cars, footpaths and bicycle lanes are placed far away from the road, with access from viaducts. No street lighting, building facades or other elements that could give a sense of urbanism are facing the main road.

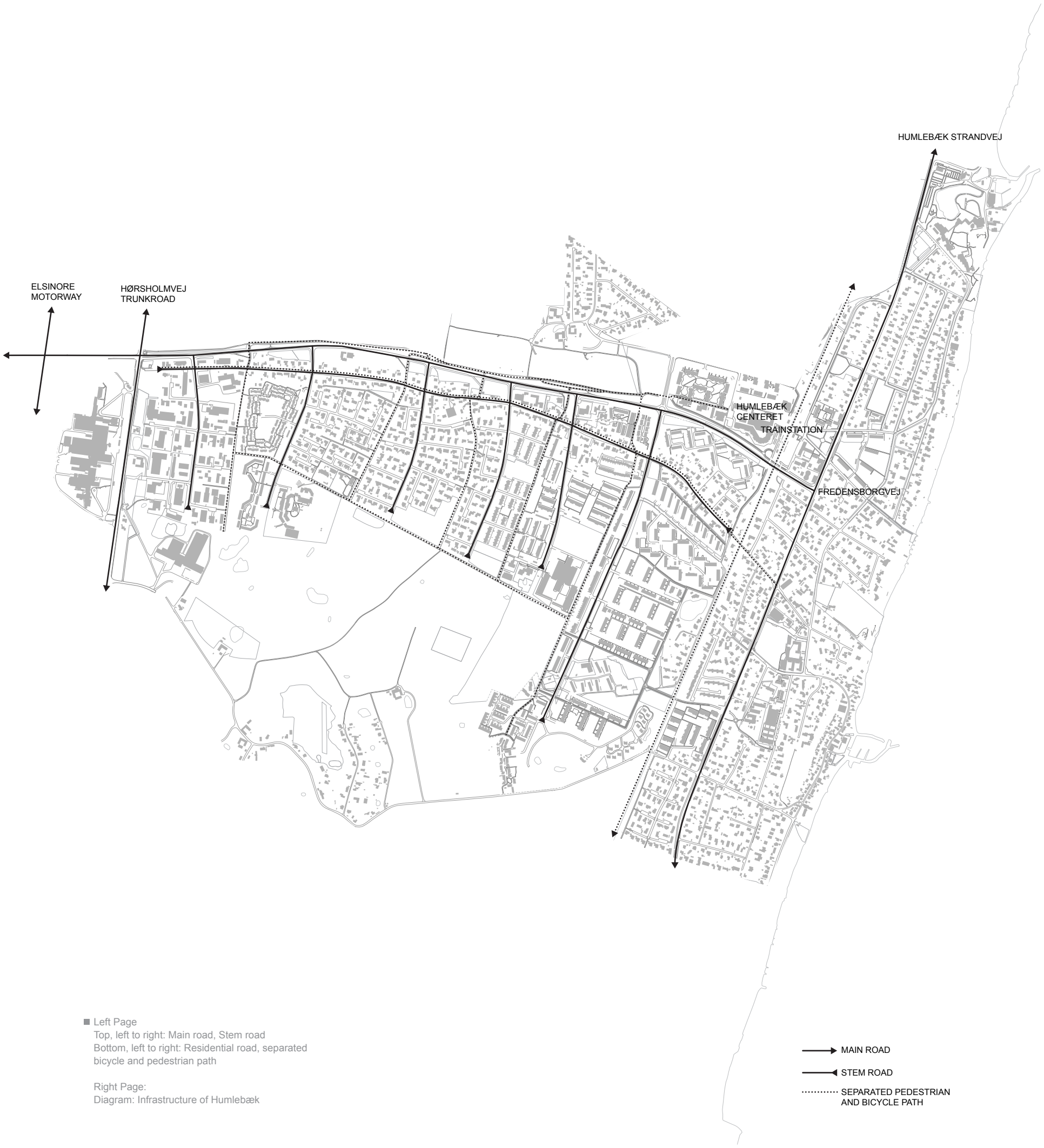
The high velocity creates motor noise, and to avoid motor noise green belts has been planted along the road scape further shielding the infrastructure from life of the city further distancing the urban from the roads.

The stem roads form the main artery of an antenna structure in the western Humlebæk. Still no pedestrian pavement or bicycle paths are found which are further underlined with signs indicating pedestrian and cyclist ban. No buildings are directly facing the stem roads and between the road and buildings another green hedge is located. With the separation of traffic a huge potential is lost in the stem ways. These could with the right design become places of social contact forming a suburban residential area pendant to the cities boulevard.

The final road before reaching the home are the residential roads. These are the first place to experience pedestrian foot paths. This is one of the few places of western Humlebæk where cyclists, pedestrians and car drivers are found in the same street scape. This forms a community based around ashared road where social contact of meeting and greeting neighbours is possible. This is mostly experienced within the residential streets for row and multi- storey housing typologies with shared parking spaces. Here the car driver leave the car on the street and walk the rest of the distance to the building giving a chance to meet and talk to neighbours. Within the single family housing areas the personal driveway to the buildings forms another road before reaching the destination.

What is important to notice, is the difference in scale of these final public spaces before reaching the private sphere. The multi-storey housing has offhand a reverse logic when it comes to the scaling of the successive spaces leading up the semi-private sphere, with the biggest space just before entering the building. Then entering the building and the semi-private sphere of the stairway, the space is exposed to a radical down-scaling creating an even more intimate space than what often is experienced in the individual apartments. This is also described by Jan Gehl while referring to the anthropologist Edward T. Hall which defines the concept of social distances - the closer the distance the closer social relationship is between persons. This same logic must also apply in how the scaling of succeeding spaces, from public to private is carried out.

To accommodate good and safe accessibility for pedestrians and cyclists a separated network of bicycle and walking paths are located in between the different residential neighbourhoods. These creates a safe school way for children, and an uninterrupted transportation back and forth from the railway station and local shopping facilities in the Humlebæk Centre. These however do also hide pedestrians and cyclists in an infrastructure separated from the urban with buildings either not facing the paths or even hidden behind dense green belts.



Left Page
Top, left to right: Main road, Stem road
Bottom, left to right: Residential road, separated bicycle and pedestrian path

Right Page:
Diagram: Infrastructure of Humlebæk

CONCLUSION

With the focus of diversity, social contact and density the physical structures of Humlebæk have been examined. Through the analysis a probable connection between diversity and social relations have emerged. On the basis of the typology structure analysis a relation between the concentration of typologies with owner form in large bands, and the performance of the three public schools in Humlebæk was found. High concentrations of rental multi-storey housing and attached housing have most likely helped to created one of the municipality poorest performing public schools by concentrating the social and economically weakest. This relation continues when examining the individual typologies with weakest social contact in rental attached and multi-storey housing. Seen from a societal perspective it would be beneficial to address this concentration and segregation of social groups in future planning. A problem which need to be addressed with a higher level of diversity both in architecture and owner form.

When building a new neighbourhood in Humlebæk Syd that should attract both new citizens and retain existing that are changing life situation or family pattern both detached, attached and multi- storey housing are interesting typologies. They do individually attract different inhabitant groups with different economical and societal backgrounds. This diversity needs to be planned for, obtaining diversity from plot to plot, improving not only the social relations, but also creating a built environment far more interesting to move through.

From the analysis of the infrastructure in Humlebæk it has been suggested, that the infrastructure holds a huge potential in a suburban setting for supporting the social contact, both internally and externally. By placing public functions within immediate distance of main roads public life can be intensified. The last road before the dwelling forms a community space where all modes of transport are found in one place. Especially the common parking facilities found in attached and multi- storey housing are found interesting in relation to social contact. Sustaining the social contact entails not only planning the public areas, but also the semi-public, semi-private and private spaces, creating foreseeable spaces related to their degree of privateness.

In relation to density multi-storey housing have proved that a density of approximately 50 dwellings per hectare can be obtained within a suburban context and Humlebæk. Obtaining this density in Humlebæk will require that the typology of the detached single family dwelling in Humlebæk is thought in a much denser context. The density of 50 dwellings per hectare is seen as an important goal for the new built environment of Humlebæk Syd, positioning Humlebæk Syd as a example project of how new dense suburban developments can be.

The green environments found within the city border of Humlebæk are primarily green lawns surrounded by tall trees. The green areas are distributed over the entire city but not visually connected and the individual green areas does only accommodate short walks separated from the city.

Humlebæk Syd represents a much greater scale than any other green area in Humlebæk. It offers long, uninterrupted walks with scenic views over the landscape and the village Dageløkke. The landscape is now used for agricultural purposes and therefore offers limited accessibility to the inhabitants of Humlebæk. Also the small hollows with wild plantation that has become protected nature with rare species exposes Humlebæk Syds potential as a place, not only for long extend views over green fields, but also a diverse landscape with open and dense experiences of nature.

VISION

Humlebæk Syd has a unique location, surrounded by the open landscape, green fields extending to the Forrest by the sea with beautiful beaches. Lying within walking and bicycling distance to the train station and centre facilities. Humlebæk Syd has the foundation for becoming a great place to live. A place not only utilizing existing surrounding qualities, but also adding quality for the surrounding Humlebæk. Humlebæk Syd will become a destination in itself. A destination with great diversity, from landscape and architecture to people and experiences. The dense build environment will attract many new residents. The new residents will help maintain and strengthen the quality of centre facilities and cultural life in Humlebæk supported by easy access. Provided by public and private transportation, to and from Humlebæk Syd, creating a strong affiliation and contact between the two.

Humlebæk Syd will become a place known for allowing the landscape and the build environment to flourish. A place where the landscape is allowed to be landscape and the build to be urban. A landscape which evolves in its own tempo, a diverse landscape, which is sustained by its own nature. In Humlebæk Syd one will not live in the landscape, but right beside it.

The built environment of Humlebæk Syd will as the landscape be a place where the sense of an urban environment will be essential. A dense and diverse area where there still is room both for public and private outdoor spaces. Spaces where neighbours can meet, where children can play and spaces for solitude, where the individual can retreat. An area which promote architectural diversity, a area which promote the life within it.

LANDSCAPE

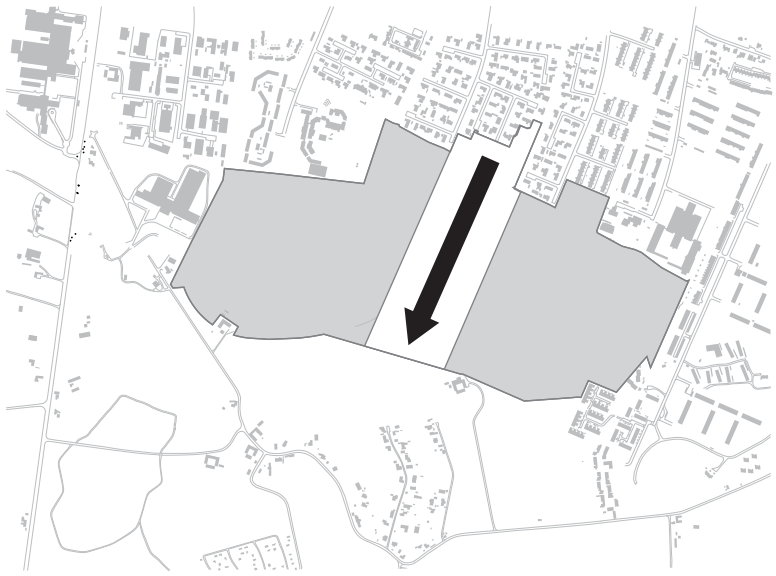
// landscape -principles, -concept, -experience

Humlebæk Syd is a treasured landscape for the current inhabitants of Humlebæk as well as it will be for the future inhabitants of Humlebæk Syd. Understanding and using the processes, potentials and qualities of the sites landscape is the foundation for making a successful plan for Humlebæk Syd.

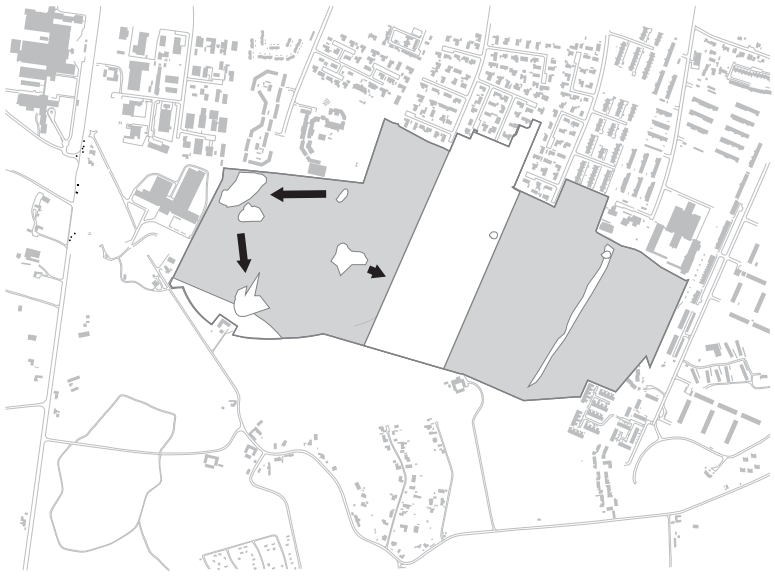
In the following chapter the landscape of Humlebæk Syd will be analysed towards creating site specific concepts for the experience, landscape, build environment, infrastructure and rainwater management that will finally conclude in a master plan for Humlebæk Syd.

The process toward the landscape concept is inspired by the Rem Koolhaas - Ville Nouvelle Melun Senart projects concept of Surrender. The most important part of Humlebæk Syd in relation to both human experience of the site and natural preservation has initially been preserved to finally create an environment that can be used for urban development.

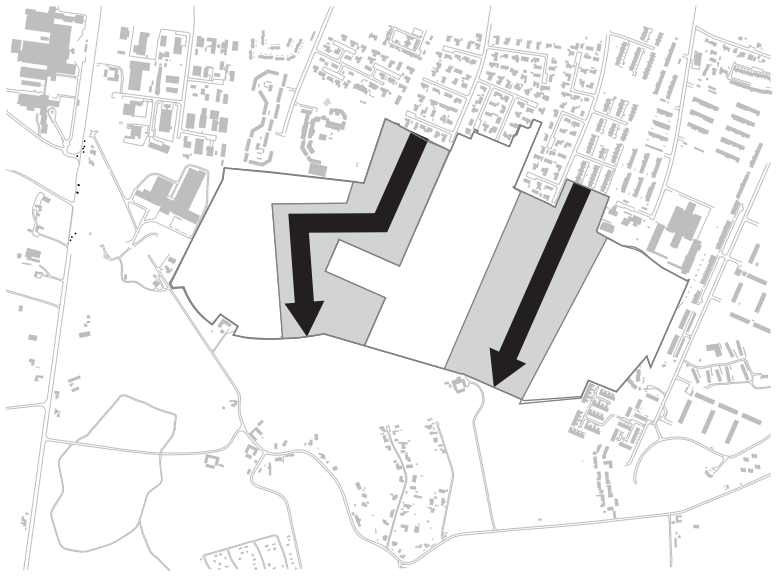
ill. 1 HUMLEBÆK SYD



ill. 2 SECURING view through Humlebæk Syd from northern hill



ill. 3 CONNECTING PROTECTED NATURE AND SUBDIVIDING EASTERN PLOT



ill. 4 BUILD CONCEPT OF TWO FINGERS PROLONGING HUMLEBÆK INTO THE SITE

LANDSCAPE PRINCIPLES

VIEWS

There is two important vantage points connected to the site. The first one is situated at the far north corner of the site, represented by a steep hill sloping towards the south. This vantage point offer a unique view over the area, from where it is also possibly to see the large deciduous forest of Lave Skov(see image previous page). The project suggest that the area that extend from the northern hill towards the southern border of the site is kept free of building mass and tall vegetation so as the beautiful view over the soft rolling hills with the backdrop of the more than 200 year old forest of Lave Skov is preserved (ill. 2).

The second vantage point is located at the southern part of the site represented by the steep sloping hill overlooking the old romantic village of Dageløkke with old farmhouses, free-range horses and the dense marsh called ‘Flyderne’. The steep slope is located just outside the border of the site of Humlebæk Syd, but still has huge potential as a scenic destination for the inhabitants of Humlebæk and Humlebæk Syd.

PROTECTED LAND AND SPREADING CORRIDORS

The protected land of Humlebæk Syd is related to the water holes situated through out the site. There is concentration of protected land in the western part of the site with areas of larger water holes and vegetation. In order to ensure spreading corridors the project suggest the protected land extended and interconnected so as these areas are maintained and strengthened to develop naturally over time (ill. 3).

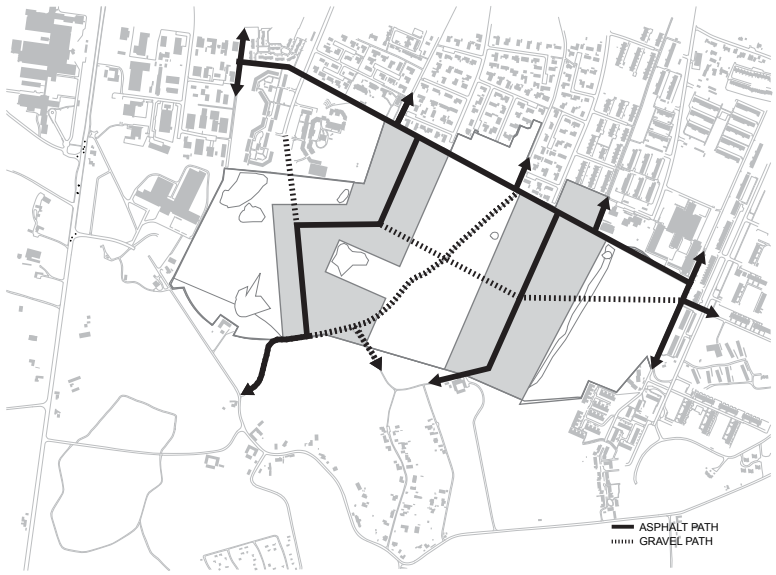
In the eastern part of the site the existing hedgerow should be preserved to function as a spreading corridor and as natural border for a new built-up area. This border will ensure that the adjacent neighbourhoods, including the Baunebjerg school, still will have direct access to the large landscape which spans between Humlebæk and Nivå to the south.

BUILD UP AREAS

By ensuring important vistas and extending existing protected land the special quality of Humlebæk Syd, with sharp contrast between vast open spaces and dense intimate areas, is maintained and strengthened. Further the direct and uninterrupted access to the immediate landscape extending all the way to Nivå is sustained for the neighbours to Humlebæk Syd. By securing existing qualities the concept for the overall development of Humlebæk Syd is created (ill. 4).

BICYCLE AND PEDESTRIAN ACCESS

It is the intention of the project to maintain and further strengthen Humlebæk Syd as an externally and internally bicycle and pedestrian friendly area. The current access routes which run to and through the site are to be kept with the addition of two main routes connecting north and south(ill. 5). This is done with the objective of ensuring that Humlebæk Syd does not become ‘the last stop’, but an area well connected to its surroundings ensuring circulation and a living neighbourhood in both ends of the area. Further a small gravel path will give a more direct connection for the inhabitants of the western finger to the existing city, without comprising the scenic qualities of the landscape. This path is continued in western direction ensuring good accessibility across Humlebæk Syd without having to drive the entire way to the northern site border.



ill. 5 CAR INFRASTRUCTURE - PROLONGATION OF ALREADY EXISTING STEM ROADS

ill. 6 CAR INFRASTRUCTURE - PROLONGATION OF ALREADY EXISTING STEM ROADS

ill. 7 WATER FLOW IN RELATION TO BUILD AREA

ill. 8 WATER MANAGEMENT

CAR

Car access will be possible from the two existing stem roads, Boserupsvej and Bogårdsvej, from the north which can be extended onto the site(ill. 6). Cars will not have the possibility of entering or exiting from the southern part of the site. Firstly to maintain a pedestrian and bicycle friendly neighbourhood the amount of passing through the area has to be limited. With a southern exit for cars the possibility of taking a shortcut through the site arises for many of the current inhabitants of Humlebæk which would create an unwanted amount of car traffic in Humlebæk Syd. Further the opportunity of driving through Humlebæk Syd would eventually weaken the existing centre functions of humlebæk and thereby the affiliation of Humlebæk Syd to the existing town of Humlebæk (Competition programme).

RAINWATER

Humlebæk Syd is a wide hilled moraine landscape with a high amount of clay in the soil. In relation to local water handling this play an important role in determining how the construction of the rainwater handling system should be. Small and larger water holes are distributed over the site which has no connection to streams or creeks. This mean that they have been formed by rainwater. This illustrates the slow ability for the earth in this area to obtain rainwater and express that the majority of the rainwater falling on Humlebæk Syd, as it does today, has to be guided to other areas where it can be obtained and finally guided into the ocean via small streams.

As it can be seen on ill. 7 the majority of rainwater falling on Humlebæk Syd flows towards a hollow which the small village of Dageløkke is built around. Building Humlebæk Syd entails a large amount of solidified area which now helps, when massive rainfalls occur, to slow down the water before reaching the hollow, and prevent it from flooding.

The project suggest a rainwater handling system which consists of five reservoirs (as seen on ill. 8), which can handle massive rainfalls. This will sustain the speed of which the rainwater today flows down to the hollow, preventing a flooding of the hollow. With the reservoirs it is further possible to precipitate polluting elements that the rainwater has obtained after washing roofs, cars, roads and similar within the built up area.

The five reservoirs will be placed within the new built environment of Humlebæk Syd serving as local attraction points and become an added value for the inhabitants. Creating several reservoirs enables the possibility of rainwater management being part of a successive development of Humlebæk Syd.

1. COMMON

2. WILD WINDBREAK

3. TOWNSCAPE ONE

4. FIELD

5. TOWNSCAPE TWO

6. THICKET

LANDSCAPE CONCEPT

The main idea of Humlebæk Syd is to create six bands stretching in a north - south going direction. These six bands are a result of the two build up environments dividing the site into four landscape bands. Four different landscape spaces are defined where each have an individual landscape characteristic. Two large veins, extending from existing stem roads form the main infrastructure of Humlebæk Syd with pedestrian, bicycle, car and public transport also with rainwater handling. A network of bicycle and pedestrian secure high accessibility to and from the Humlebæk Syd promoting the use of environmental friendly transport.

The Six bands ties together the existing town of Humlebæk with the new neighbourhood of Humlebæk Syd. The landscape bands offers the opportunity of experiencing a particular landscape type over a longer stretch or switching between the different landscape types. Thereby experiencing the diversity of the landscape while moving through the area on foot or bicycle. To accommodate a diverse experience of moving through the bands each band will be clearly defined forming a clear contrast to the neighbouring bands.

The following chapter will elaborate on the landscape concept for Humlebæk Syd and describe how a diversity in landscape and the experiences of moving through it is obtained.

1. COMMON
This relatively flat area is generally the lowest within the site and has traditionally not been used for growing crops because of frequent floods and wet periods. The area is a meadow with primarily wild grass growing and being harvested through out the summer. With a transition towards animals like sheep or cows pasturing on the land, the biotope of this landscape band will gradually become a common(overdrev) with its characteristics in greens with sporadically placed bushes and small trees like hawthorn or ash, various sorts of grass and wild flowers. The common does create a habitat for various birds, butterflies, insects, lizards and small mammals. The experience of this area is about listening, feeling and smelling the landscape.

2. LIVING WINDBREAK
The living windbreak, probably dating more than 100 years back to an old road that did formerly cross the area of Humlebæk Syd. Here tall old trees stretches up to 10 meters above ground. The wild windbreak forms an important fly route and hunting ground for bats and birds in the area(Landscape analysis). With bushes forming between the stems the windbreak forms a dense green wall next to the flat surrounding fields. The windbreak forms a vertical border between the wild growing common in first band and the urban third band enhancing the experience of diversity and contrast when moving through Humlebæk Syd in the east-west going direction.

3. TOWNSCAPE ONE
The first of two build up areas of dense housing. Here the green plantation are not coherent but separated, nursed green planes of grass and tress. The green elements of this part of the townscape here stands in opposition to the surrounding wild growing nature. The green elements here are looking more like the building materials of the housing with trees pruned, grass is moved frequently, hedges are cut with sharp edges etcetera. The ground is not soil but primarily hard surfaces of tiles and asphalt.

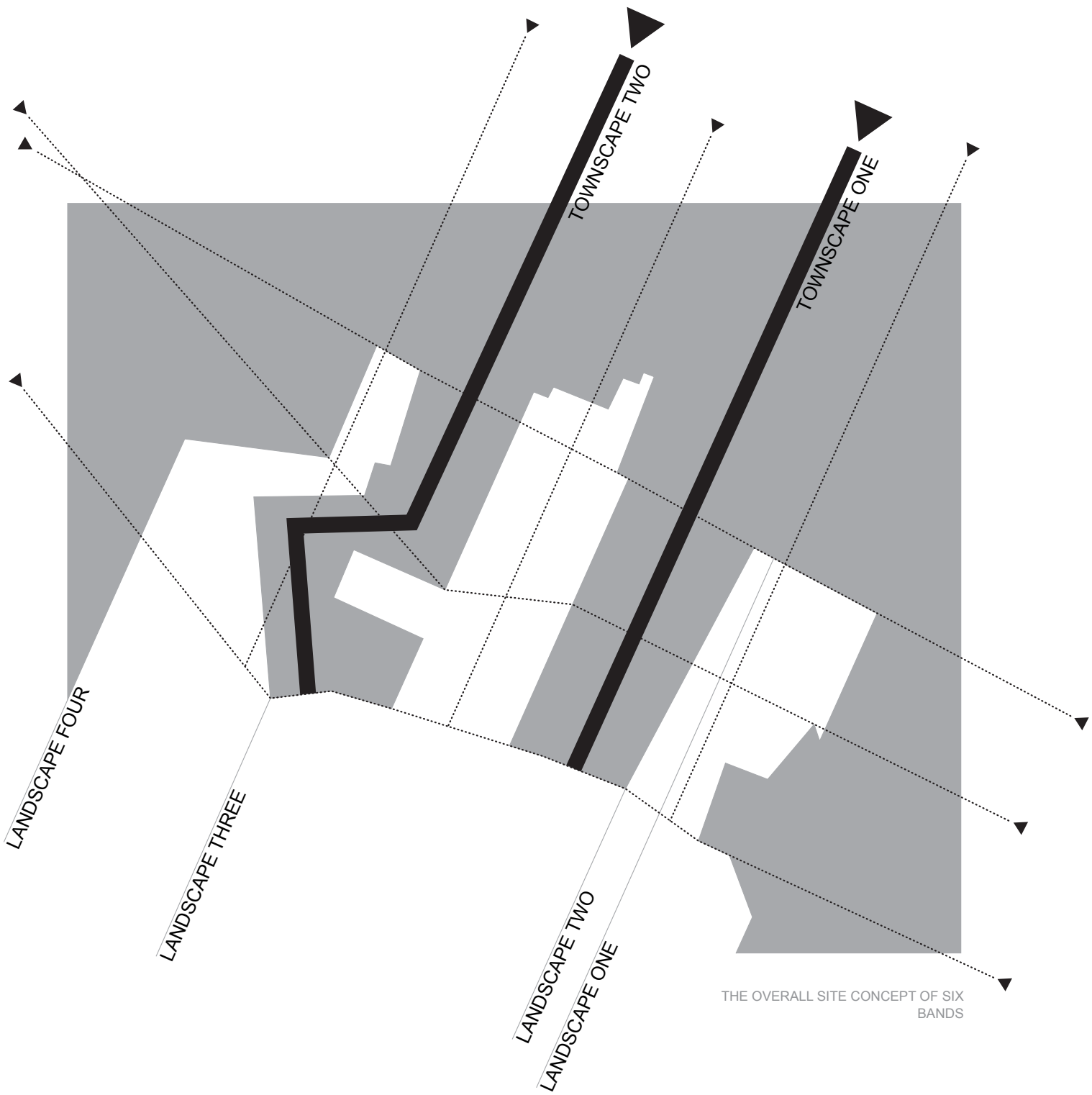
4. OPEN FIELD
The 4th band represents the most visited part of Humlebæk Syd with Dageløkkestien passing through the band. This cultural landscape is generally represented by wide hills and small hollows where the rainwater streams to, resulting that the soil here generally is dryer and more agricultural suitable than the meadow in landscape band one. The wet small hollows are overgrown with dense plantation forming small islands of vertical towers of plantation within the curving agricultural landscape. Here the experience is about the open landscape and the contrast of at one location being on top of a hill with vast views and on another being in a small valley of limited views. This area should be maintained as a dry meadow that will be mowed annually preventing it from growing dense outside the small hollows and maintaining the openness of the landscape found today.

5. TOWNSCAPE TWO
The second build up area with characteristics similar to the third band. Once again an experience of a constructed atmosphere with greens tamed into elements of a constructed garden environment. The buildings located close to one another with their diversity in facades creates an experienced colour palette entirely different from the one experienced in the landscape oriented bands.

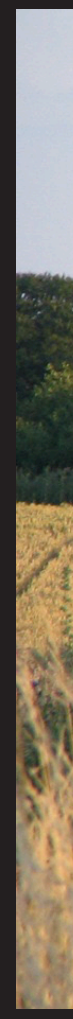
6. THICKET
This last landscape band represents a wildlife corridor from the woods south west from Humlebæk syd into the area. The area shall be left without any nursing to ultimately become a dense- wild growing area with various wild vegetation that will through natural immigration enter Humlebæk Syd. Within this band a small lake is found below the attached housing found in the northwestern corner of Humlebæk Syd and a natural playground located next to Langebjerg School both serving as locations within the wild growing landscape. This band will be ideal for playing hide and seek, and building caves. Moving through this landscape will sometimes require bending, crawling and climbing giving a sense of that landscape can also be a dense, sometimes impassable experience in opposition to the fourth band.

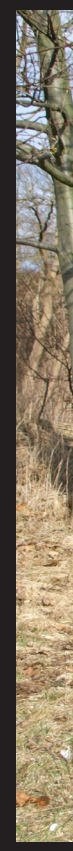
The six bands does each have individual paths through them in a north-south going direction offering a chance to discover one landscape band alone. To have a more diverse landscape experience paths are created across all the bands in a east-west going direction.

The landscape bands does require a minimum of processing and maintenance to obtain the wished qualities. To create the different landscape characteristic the landscape bands simple needs to be maintained different. Band 1 will be kept by pasturing animals that can be part of meat production as experienced other places in Fredensborg Municipality. Band 2 will basically take care of it self, but will sometimes need to be cut back to maintain some of the existing geometry of the windbreak. Band 4 will need a mow once a year, while band 6 will need no particular maintenance. Further only the paths will need to be constructed and kept.



THE OVERALL SITE CONCEPT OF SIX BANDS

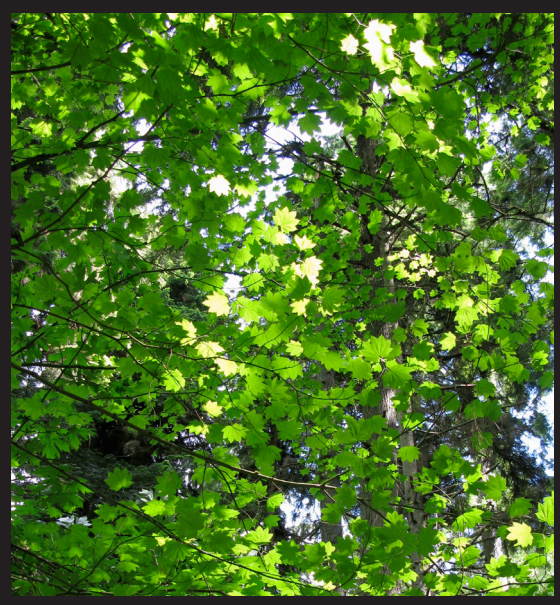




LANDSCAPE EXPERIENCE

Arriving from the east via the small path along Teglgårds-vej passing small row houses and the primary school - the area of Humlebæk Syd opens up into a **large meadow** of wild grass and plants, pasturing animals and butterflies swarming between wild flowers and tall grass. Bounded by large trees and bushes to the west - the first landscape band.

Moving along a small path through the wild grass the **dense and intimate space** of the next landscape band scales down the landscape and filters the sun into a spo-radic pattern of glowing spots. Passing different trees and bushes. Sound of birds chirping and sudden escapes from branches above.

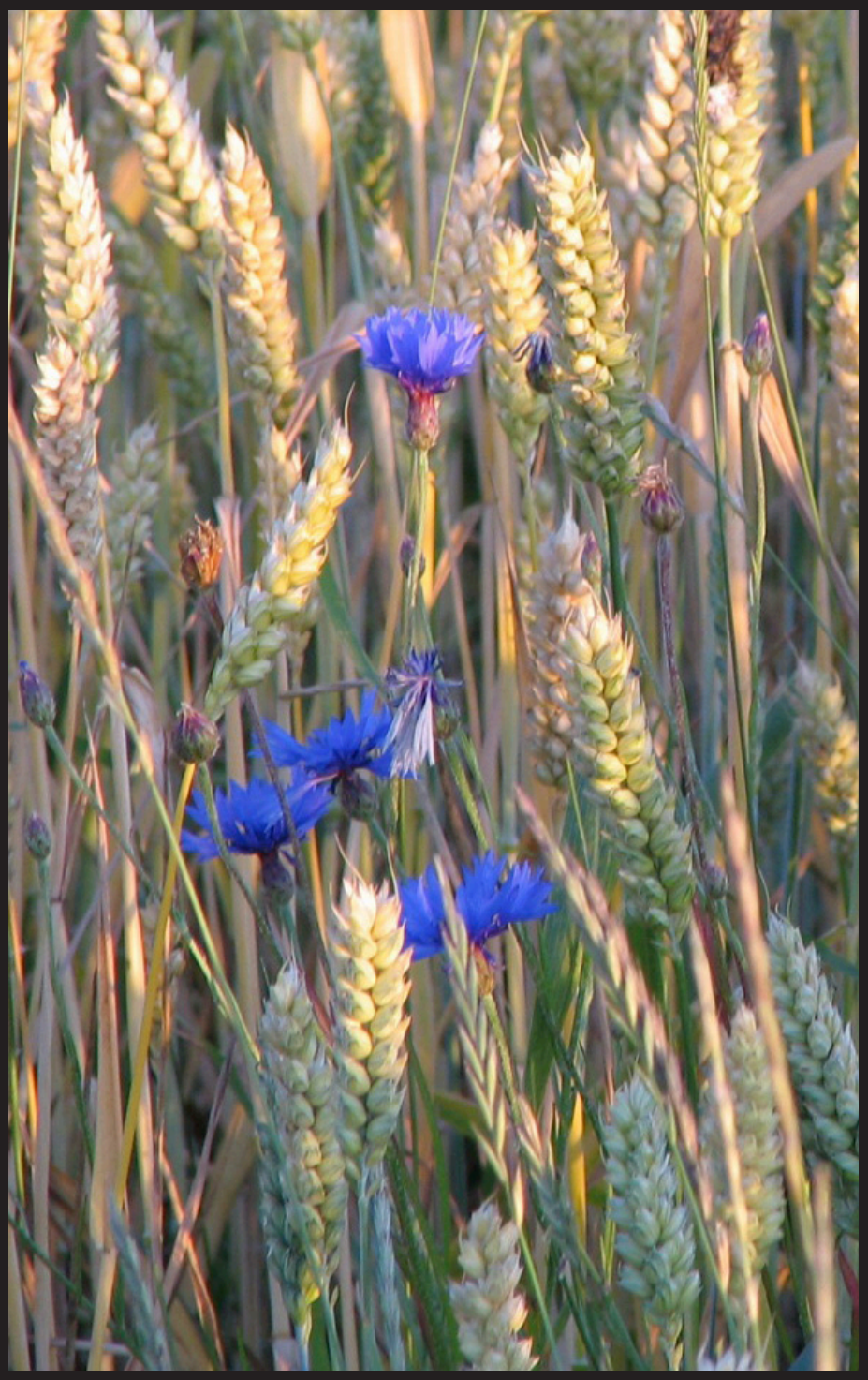


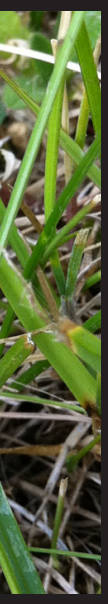
- A complete new landscape band arises, with hard surfaces straight lines and geometry the new band creates an immediate contrast to the previous - houses, people, bicycles densify this band creating a lively atmosphere.

Moving across this band further towards the west the landscape opens up into soft rolling hills of wild grass and small path gliding through this wide scenery, with **reference to the old farming fields**. In the northern part of this landscape band, a hill, at the edge of Humlebæk Syd creates a beautiful vantage point from which the landscape extends to the horizon with a dark blue-green backdrop of Lave Skov.

Along this open landscape the next **dense built structure** of row houses, multi- storey and detached dwellings winds through, and over, the wide hills creating a sharp edge underlining the contrast between the two.

Passing this built landscape the final band shows - a vegetational densification of wild plants and trees with small and larger water holes hiding within this dense landscape.





■ Birdview over Humlebæk Syd with an example of future building mass.

BUILD ENVIRONMENT

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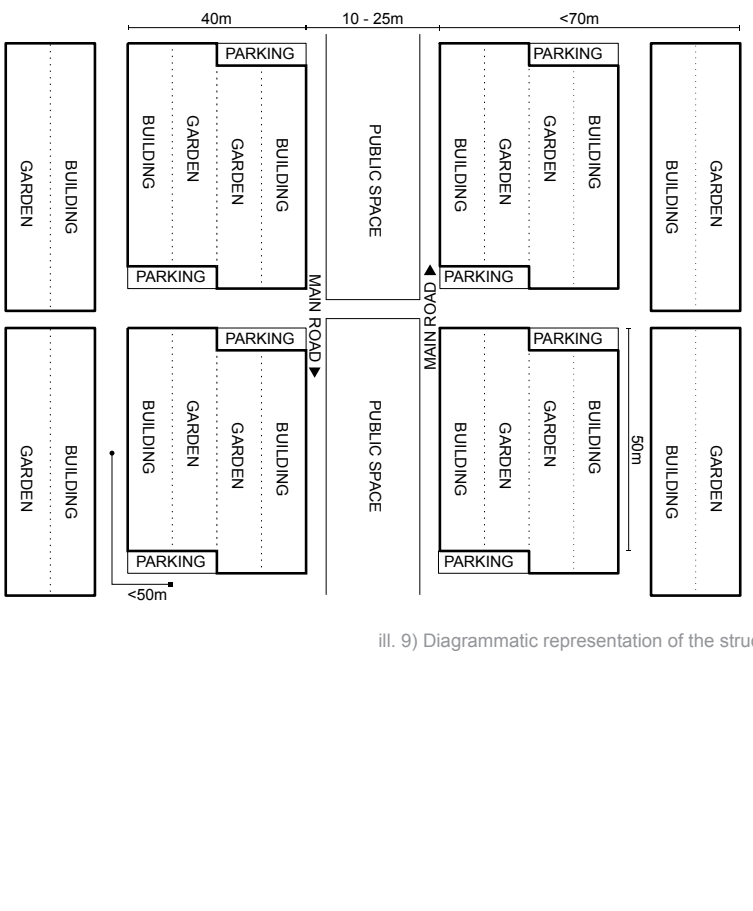
It is the vision that Humlebæk Syd will be a lively place with an urban atmosphere. Humlebæk Syd will exemplify how a lively urban setting can be created within a residential area of the suburb.

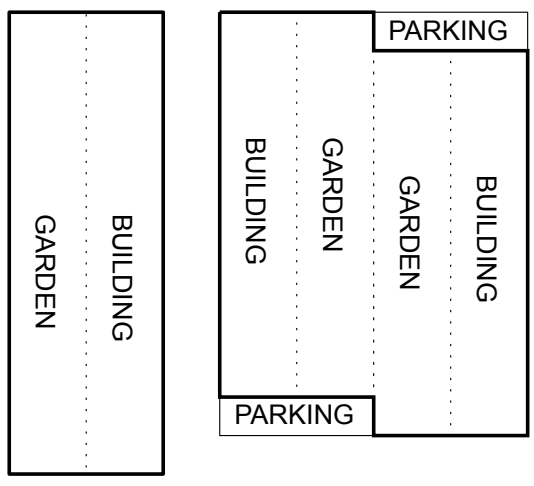
In the following chapter a new urban form will be introduced that will promote the dissolution of the urban enclave. A solution for this will be presented with the master plan for Humlebæk Syd.

Through various different principles and concepts build upon the ideals of density, diversity and social contact a stage plan for Humlebæk Syd is created that will ensure a diverse architectural experience and composition of inhabitants.

In the end of the chapter an example of how a stage of the Humlebæk Syd master plan could be planned and how it could appear.



ill. 9) Diagrammatic representation of the structure



ill. 10) The building plots

BUILD ENVIRONMENT CONCEPT

To accommodate the vision of Humlebæk Syd a new suburban structure is introduced(ill. 9). The new structure is to make up with massive use of enclaves seen in Humlebæk Today. With pedestrians, cyclists and cars in the same stem road there is no need for the separated bicycle and walk ways in Humlebæk Syd. Instead the area of which these separated bicycle and walkways represent is proposed placed in the centre of the road profile, as a public space separating the two traffic directions from one another (see ill. 09) This will create more accessibility and safety for soft traffic, as only one road lane will need to be passed at a time.

The central public space is surrounded by the stem road of the structure that will be a prolongation of two existing stem roads of Humlebæk. In Humlebæk Syd the stem roads will be transformed from lifeless motor landscapes to a lively urban space where all modes of transportation are situated side by side surrounded by a building mass facing it and framing the inner public space. Here opportunities to both move and stay within the most lively place of the plan will be found. To attract the citizens of Humlebæk and Humlebæk Syd a series of public functions like playgrounds, ball game fields, park greens, water elements and sitting arrangements will be placed here. This way interaction is created between the life of the facing buildings, the traffic and the public space that will ultimately support a public environment of high social contact.

Located along the stem road, build environments are found on both sides. These are proportioned to support a walk-able neighbourhood where the shared parking spaces, public space in the centre of the structure and the landscape surrounding the build environment are never more than 2 minutes away from the doorstep (see ill. 10). This is solved with building plots of two 20x50 meter plots lying side by side but slightly shifted to give room for car parking within the frame, and a 20x60 meter building plot closest to the landscape (see ill. 10).

The structure proposes buildings to be located along the urban environments creating an experience of density. Gardens between the housing will be facing each other gardens or the landscape to create a spacious condition where the gardens have a less dense and more private experience than the urban spaces.

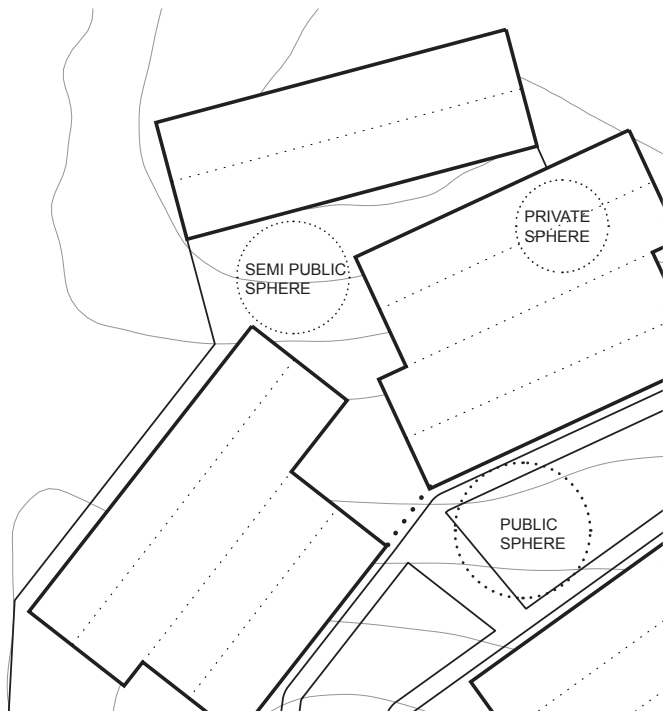
The shared parking facility forms the access road for all the buildings that are not facing the inner public space. These will function as a more local semi public space of the neighbourhoods, where neighbours will meet daily when parking their car and walking the rest of the distance to their building, driving through the space on bicycle or on foot. The smaller inner environments between the buildings will like the public space in the centre of the structure be continuous throughout the entire plan and connected to avoid the formation of individual enclaves for every shared parking space.

APPLYING THE STRUCTURE TO THE SITE

When applying the structure to the build environment bands of Humlebæk Syd an adaption towards the site contour curves will take place as well as the structure will have to follow the direction found in the build environment concept (see ill. 11). Through shifts and rotations the structure gains a sporadically appearance that will have similarities to a medieval city structure. Walking through the built environment of Humlebæk Syd will be an experience of fluctuating urban spaces - from narrow to open with unexpected spatial formations appearing around a corner.

The building plots and their future buildings expresses a story of the contour curves existing in the moraine landscape. Even with site preparation the original contour curves will remain with the buildings as a representation. With the build environments adoption of some of the sites complexity with protected nature and contour curves, the build environment will contain some of this complexity as well. Already before building anything, no two rooms will spatially be identical in the plan increasing the experience of diversity. Further the adaption to the site will ensure

ill. 11 ADAPTING TO ANGLES



ill. 12 SOCIAL SPHERES OF STRUCTURE

that long corridor views and roads will not appear in the plan enhancing the serial vision experience of moving through the area, breaking down the scale of the build environment as everything can not be contained in one view and finally lower the velocity of motor vehicles creating a more safe condition for soft traffic.

SOCIAL CONTACT

Essential to the structure is that it will accommodate social contact. As not everybody within Humlebæk Syd can have personal relations to one another different spheres of social contact are integrated to the structure. The structure accommodate this with different experienced densities in the build environment resulting in different distances between people in according to the wished social contact.

The Public space (see ill. 12) in the centre is generally the widest space with its 10-25 meters. This room is dimensioned to contain a public sphere experiencing the mass of the city - a public environment where people from all of Humlebæk Syd and Humlebæk as a whole will feel welcome. The space will be comparable to the cities boulevard roads. A scale where you greet the people you know but mostly experience the presence of others.

The shared parking space (see ill. 12) contain the semi public sphere. This room is scaled down to a width of 12 meters forming a more social distance to accommodate a neighbourhood scale comparable to the detached housing street, the shared parking facilities in attached housing areas and the walkway to the building in multi- storey building areas. A scale where you greet and know where people you meet live, which family they are part of, which car they drive, your children might play with theirs and similar.

The small street between the buildings (see ill. 12) that will supply the buildings not facing the public space in the centre does also form a semi public sphere, but here the atmosphere is more intimate. Here the room is scaled down to approximately 5 meters in width. This ensures a dimension for nearer social contact between neighbours entering and leaving their homes, borrowing and sharing things from one another, greeting and having small chatter. The semi public sphere stretches all the way to the building entrance.

The final sphere is the private (see ill. 6). This sphere is contained in the individual dwelling and its private garden space. The place where you can be just yourself both inside and outside. It is considered to be a fundamental setting for social contact that there are private places where people can isolate themselves.

In between the semi public and the private sphere a semi private sphere should be placed to ensure a smooth transition between the private and the semi public. This can be considered similar to the driveway, the front yard or the building porch of the building where the border between private and public are more open. This transition needs to be placed within the individual building plots, and are thereby a building principle that should be thought into the overall requirements for the individual buildings.

MASTER PLAN

The master plan of Humlebæk Syd is build upon the landscape concept of creating six bands through the site. Of these four are landscape while two are build environments. Each of these bands does individually contain a north south going path infrastructure offering the opportunity to experience their individual characteristics. Three paths are found in a east - west going direction, one nearest to Humlebæk represented by the existing bicycle path, one in the southern edge of the site and finally one in the centre of Humlebæk syd. The north south and east west going paths of Humlebæk Syd forms a grid of high accessibility for soft traffic making. The paths makes it possible to pass Humlebæk Syd in multiple ways with different experiences giving an impression of the diverse landscape Humlebæk Syd represents.

The master plan for Humlebæk Syd proposes a new structure in the build environment different from what is seen in Humlebæk today. The structure is an experiment of breaking down the idea of the enclave that has characterized the development of Humlebæk up until today.

The western band stretches and bends to move in between two different small protected lakes creating a structure that appears more sporadic and uncontrolled than the building structure located along the same stem road above Humlebæk Syd. This sends a signal of a neighbourhood that is subordinated to priorities given to the landscape.

The right fingers is corresponding to the shape of the left finger. Bending in the opposite direction of its sibling. This creates a condition where the open space between them shifts shape from being narrower at the beginning to being most wide at the centre and once again narrowing in the end. This way the cultural historical agricultural landscape is framed on both sides staging the view that has been preserved here. On the opposite side of both the build structures a band of more dense vegetation is found forming a contrast to the open field in the centre. This way the diversity in landscape can be experienced from within the build environments simply by looking at the townscapes two surrounding sides.

Five reservoirs for rainwater handling are placed as part of the structure. As well as the small lakes and hollows does sometimes get very close almost entering the build structure, the rainwater reservoirs does correspondingly sometimes leave the structure and stretch into the open landscape bringing a very edgy and sharp object into the soft landscape.

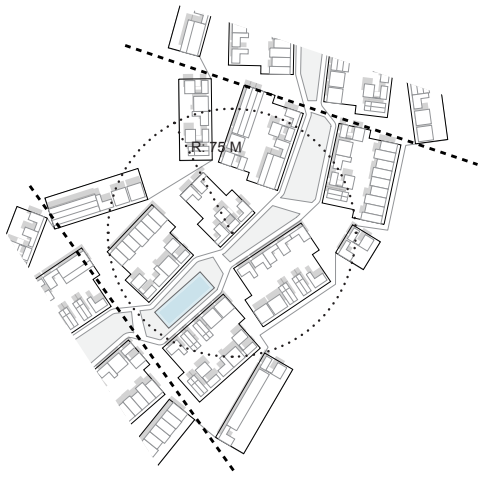
The relationship found between the two stem roads prolonged into Humlebæk Syd and their surrounding residential areas is turned outside in. The stem road are placed in the centre of the build environment with buildings orienting towards them on both sides and public functions are placed in the centre of the road structure. The life generated from people entering and leaving their buildings, of all modes of transport sharing same road infrastructure and of the public space in the centre will create an urban atmosphere supporting social contact between both new and existing citizens of Humlebæk.

To accommodate social contact between inhabitants of Humlebæk Syd semi public spaces are formed between the building plots. These do also include the shared parking spaces that has a double programming of also functioning as access road for the buildings not facing the public space in the centre of the development. This way people will meet on a daily basis when walking to their car, cycling to the train station or walking to the public space.

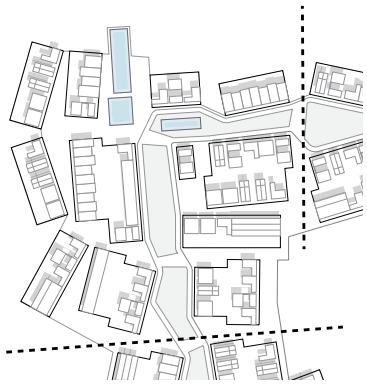
The build environment grasp Humlebæk by stretching across the bicycle path in the northern edge of the site with building mass right beside the already existing dwellings of Humlebæk. No landscape or particular spacing is found between the existing Humlebæk and Humlebæk syd to enhance coherency between the two and to avoid the formation of a detached enclave.

Car access to the two townscape bands in Humlebæk Syd are conducted in a prolongation of the two existing stem roads Boserupsvej and Bogårdsvej. With a bend at the entrance point to Humlebæk Syd, a shift from the straight modernist lines towards the more edgy curves of the plan are created. The bend does also mark a place of attention with the crossing cyclist and pedestrian path and the transition from shared traffic in Humlebæk Syd to separated traffic in existing Humlebæk. With a completion of the western townscape band a road can be opened in southern direction opening for through traffic of public transport.

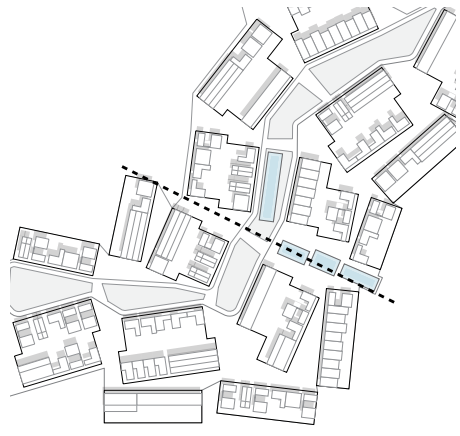
PLAN 1:5000



ill. 13 STAGE SIZE OF APPROXIMATELY A CIRCLE WITH RADIUS OF 75 METERS



ill. 14 INDIVIDUAL RAINWATER RESERVOIR FOR STAGE



ill. 15 SHARED RAINWATER RESERVOIR BETWEEN TWO STAGES

STAGE PLAN

Essential to the development of Humlebæk Syd is the plans ability to be constructed successively. Here securing that the overall visions of diversity, density and social contact will be contained through out the development of the plan is a main priority. To accommodate a successive process it is proposed to divide the development of Humlebæk into multiple stages.

The landscape bands of Humlebæk Syd can be created from day one of the development, as the process of these is mostly a process of nature that will improve over time with no absolute goal. Even with nothing build, the landscape bands would be an asset to Humlebæk creating a more diverse landscape with increased experiences.

The build area will have to be build in relation to marked needs, and it is impossible to predict how many years, even decades, the development will take. With this time span it is further impossible to predict housing preferences as well as socioeconomic parameters. Either is it predictable if the entire plan will be build. This sets requirements for every stage to be a possible last development of the plan. Road infrastructure as well as rainwater management will need to be designed for the chance that the next stage might not be build instantaneously but maybe in several years or perhaps not even build.

In Humlebæk Syd stages are not only about a reasonable amount of dwellings to be build at once. It is also about finding a scale of which it is desirable to have architectural and inhabitant diversity and support social contact within.

It is desirable that the stage has a size where people living in detached, attached and multi- storey housing will meet as neighbours on a daily basis within the semi private environments between their individual buildings, by the shared parking facilities or children will play with children on neighbouring buildings of different typologies. The scale of each stage should therefore accommodate experienced inhabitant diversity and the meetings between them.

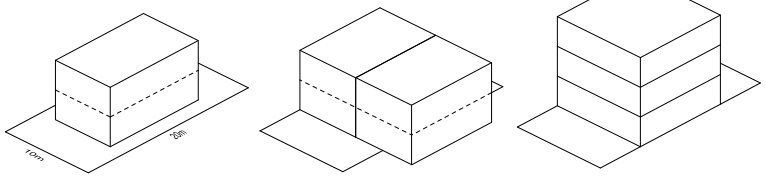
It is proposed to dimension the stages as walkable units to pass within 2 minutes which transfers to a field of about 150 x 150 meters or a circle with a 75 meter radius (see ill. 13). With this measure architectural diversity will be experienced on a near neighbourhood scale, where the parts of the quarter that will be experienced on a daily basis when cycling to the train station or walking to the car or using the recreative facilities of the area will give an impression of architectural diversity. The measure will further establish an inhabitant diversity experienced on a neighbour basis avoiding too big enclaves with homogeneous populations.

With the proposed dimension of stages, Humlebæk Syd will be divided into eight different stages with four stages in each finger (see ill. 16).

The first stages to be build are the stages one - four in the finger located on the eastern side of Humlebæk Syd. These are the ones located the closest to the train station and shopping facilities of Humlebæk, as well as these will be within 500 meters of the public transport at Teglgårdsvej, resulting that this part of the Humlebæk Syd plan can be supplied with public transport without making any changes to the already existing public transport infrastructure.

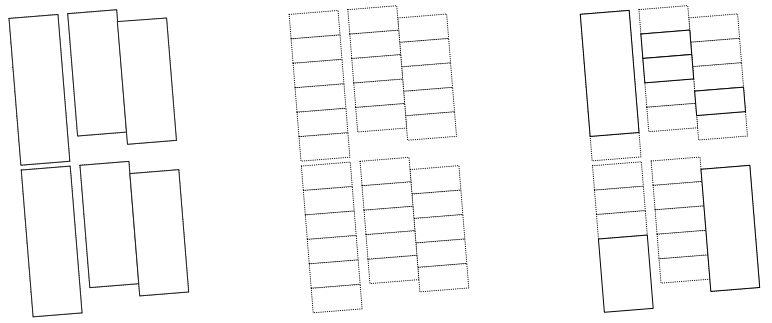
To ensure that rainwater can be handled within the site before the completion of the plan or in a limited version, every stage will have to have either its own rainwater reservoir (see ill. 14) or be sharing with another stage by locating the rainwater reservoirs on the boundary between two stages (see ill. 15).

ill. 16 THE DIVISION INTO EIGHT STAGES



Detached housing ratio 1 | Attached housing ratio 1,5 | Multi- storey housing ratio 3

ill. 17 RATIO PRINCIPLE



Original building plots | 200 m2 grid applied | Different building plots

ill. 18 COMBINED BUILDING PLOTS

TYPOLOGY CONCEPT

A central part of the plan for Humlebæk Syd is to create diversity and support social contact across various societal classes. Essential to achieving this is to avoid the formation of enclaves of monotonous housing and to create a greater mix of typologies than experienced in Humlebæk today.

In the master plan of Humlebæk Syd building plots are distributed upon the two townscape bands. These are to be subdivided and sold for both private builders and professional developers. To ensure that the wished diversity in architecture and inhabitants as well as the wished density will be obtained a typology concept will be set up.

In the end of this chapter a catalogue is found of different classical building types that has been redesigned to fit within the given dimensions they need to be build within in Humlebæk Syd.

In the structural analysis it was found that including both attached, detached and multi-storey housing as part of the plan for Humlebæk Syd would accommodate a diverse population. It was further found that if Humlebæk Syd should represent the same population composition as Humlebæk as a whole, the three typologies should be evenly represented.

To accommodate a denser suburban environment it was found interesting that the multi-storey typology had a capability of creating 50 dwellings / hectare even with modern sized apartments . This count has been found interesting to achieve for Humlebæk Syd.

The overall concept for the subdivision of initial building plots of 20x50 meters or 20x60 meters, that the building plots will be subdivided on the long part. This way the building plot will always have a depth of 20 meters but the width will vary. The task is to find a building plot width for each the detached, attached and multi-storey typology.

DETACHED HOUSING

The detached house is the typology that needs the heaviest modification, if a 50 dwellings / hectare count should be achieved. As experienced in the structural analysis, the detached housing typology do in its traditional form in Humlebæk only create 7,6 dwellings per hectare.

It can easily be documented that equal amounts of building square meters can be build on a smaller plot simply by changing some overall values of the local plan and overall design norms of the typology. For this we do only need to look back at housing in the classical Danish market towns or to places where land is of a higher expense like in the Netherlands or Japan.

What can not be changed is the size of the garden area. This will always be limited when reducing the size of the building plot. The detached house will for Humlebæk Syd either need to adopt to new conditions or be phased out.

From various tests it has been found that it is possible to build a detached house on a 10 meter wide building plot equal to 200 square meters(see ill. 17). This even with a coherent garden space of more than 50 square meters. Examples here off can be found in the typology catalogue on the next page.

One basic premise for this to succeed is to break with the overall local plan limitations of the detached housing typology in Humlebæk. From the local plans above Humlebæk Syd restrictions of detached housing can be found. A build percentage of 25%, a maximum of one storey, maximal roofing angle of 25%, building offset of 9-10 meters from middle of residential road and similar (Fredensborg municipality, local plan).

For Humlebæk Syd it will be a premise to build-in at least two storeys to increase density and decrease building footprint and no build plot ratio should be made. Instead height plane limitations and inclined height plane limitations will secure sunlight to streets, gardens and dwellings.

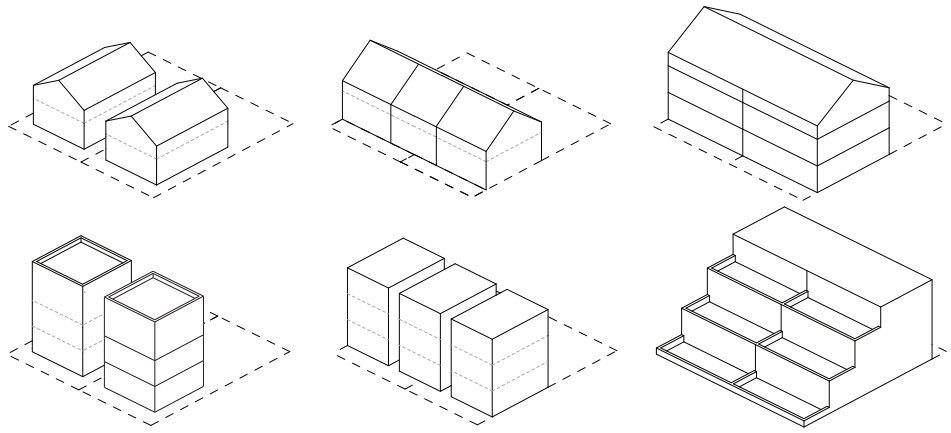
Selling one building plot to detached housing will result in one dwelling. With attached and multi- storey housing a bigger plot will be sold to a developer building multiple dwellings on the plot. To ensure an even distribution between detached, attached and multi-storey housing overall density principles needs to be described.

ATTACHED HOUSING

The attached housing typology does not need to have distance from exterior walls to the building plot edge. This makes the typology more space efficient than the detached house, and it can thereby be constructed on a smaller building plot. This can be seen in the classical Humlebæk attached house building plot of 250 square meters or less for every dwelling.

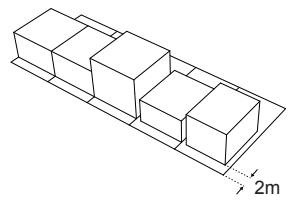
It is found that with this typology the room width can be limited to 6 meters or less and still have good room volumes. With a room width of 6 meters and bearing isolated walls to neighbours, the building plot can be limited to a width of 6,5 meters which in Humlebæk Syd will be equal to 130 m2. With this size 1,5 attached housing dwellings can be located on the size of an detached housing building plot or for every two detached housing plots, three attached housing dwellings can be located at the same footprint (see ill. 17).

In the typology catalogue two examples are given of that it is possible to create 1,5 and even 2 attached dwellings on a 200 square meter plot and that

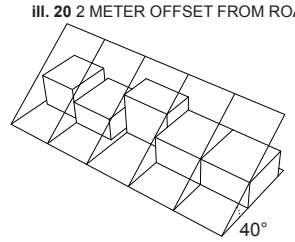


DWELLING TYPE	DETACHED	ATTACHED	MULTI-STOREY
DWELLINGS / 200 M2	1	1,5	3
DWELLINGS	33,3%	33,3%	33,3%
BUILDING PLOTS	50%	33,3%	16,6%

ill. 19 BUILD PLOT SUBDIVISION PRINCIPLE



ill. 20 2 METER OFFSET FROM ROAD



ill. 21 HEIGHT INCLINED PLANE OF 40°

it is still possible to create regular gardens close to the size of the detached housing plots. The examples also examines that it is relatively simple to obtain a reasonable sized dwelling even on a small plot of land.

MULTI- STOREY HOUSING

For multi- storey housing the building plot is a bit different as apartments are stacked. With apartments typically in one storey, all square meters needs to be placed in one floor.

For every 10 meters of building plots 3 reasonable sized apartments can be built without having to deep apartments with a bad inflow of light. On the size of a detached housing building plot a 3 apartment dwelling can be located (see ill. 17).

For multi- storey housing the typology catalogue examines how 3 dwellings can be contained on a 200 square meter building plot with two different design proposals.

TYPOLOGY DISTRIBUTION CONCEPT

To accommodate an even distribution between detached, attached and multi-storey dwellings a concept of typology distribution is constructed.

It is experienced that the ratio between the three when taking starting point in the building plot of detached housing, 1,5 dwellings of attached housing and 3 multi- storey dwellings can be situated at the same plot.

The detached housing ratio of 1,5 Dwellings per 200 square detached housing building plot means that everytime two of these building plots are represented 3 attached housing dwellings can be constructed on the space respective to them (see ill. 18).

With the ratio between the three typologies, a grid can be defined based upon the 200 square meter building plot. Applying the 200 m2 grid to each of the eight individual stages of Humlebæk Syd will give a certain amount of grid masks(see ill. 18). These can be sold as individual building plots for detached housing, or combined for developer oriented attached- and multi-storey housing projects (see ill. 18).

As attached and multi- storey housing are more efficient typologies than attached housing in relation to land use, the amount of 200 square meter grid masks can not be evenly shared between the three. If this was done the multi- storey housing typology would make up the greatest amount of dwellings followed by attached housing. Here it is important to distinguish between land use and dwelling amount.

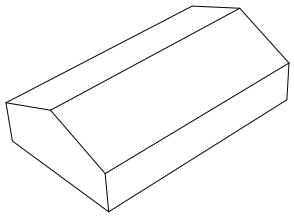
To archieve an even distribution upon the three building typologies, their ratio is used to find a percentage of land that each typology can occupy. Detached housing 50% , attached housing 33,3% and multi- storey housing 16,6% (see ill. 19).

BUILDING PRINCIPLES

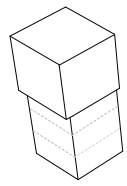
With detached, attached and multi-storey housing side by side some overall spatial limitations needs to be established to provide reasonable conditions for natural light and provide a transition between public and private space.

When the entrance door and facade is located directly towards a public space the private space tends too dissolve loosing its basic qualities of seclusion privateness. Therefore a minimum 2 meter margin within the individual property forming a front yard between the facade and the semi private area between the properties is proposed (see ill. 20). This way a small front yard or terrace for parking bicycles, garden furniture and similar can be constructed. The small front yard will further add a human dimension in the form moveable items placed here that will express the individuality and diversity of the residents, creating a ever changing space entailing a lively neighbourhood.

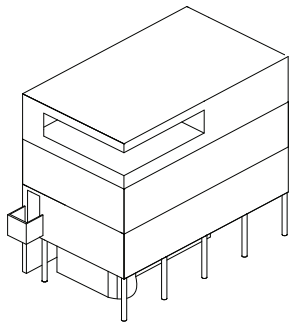
For Humlebæk Syd no specific build percentage should be set or building storey maximum. Instead of a percentage, the size of the building should be based on spatial constrictions. To ensure good sunlight conditions within the dense neighbourhood a height inclined plane of 40 degrees and a building height of maximum 10 meters is proposed (see ill. 21).



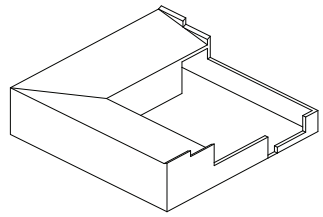
REGULAR DANISH MODULAR HOUSING
BUILDING PLOT : > 650 M2
SIZE : 139 M2
ELEVATIONS : 1-1,5



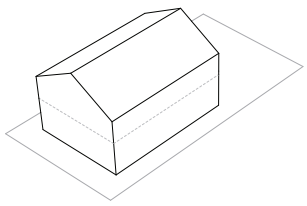
TADAO ANDO : 4X4 HOUSE
BUILDING PLOT : 117 M2
SIZE : ~64 M2
ELEVATIONS : 4



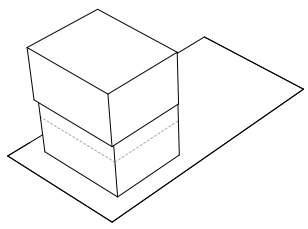
LE COURBUSIER : WEISSENHOF HOUSE
BUILDING PLOT : 600 M2
SIZE : ~525 M2
ELEVATIONS : 4



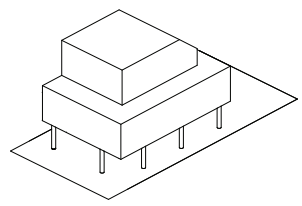
JØRGEN UTZON : KINGOHUSENE
BUILDING PLOT : 250 M2
SIZE : 106 M2
ELEVATIONS : 1
FREE OUTDOOR AREA : 144 M2



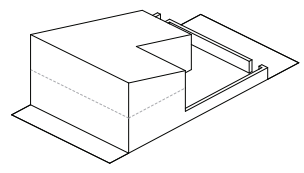
VARIATION ON DANISH MODULAR HOUSING
BUILDING PLOT : 200 M2
SIZE : 160 M2
ELEVATIONS : 2
FREE OUTDOOR AREA 130 M2
REGULAR GARDEN SPACE : 80 M2



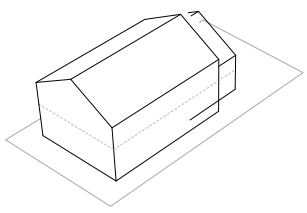
VARIATION OF TADAO AMDO : 4X4 HOUSE
BUILDING PLOT : 200 M2
SIZE : 120 M2
ELEVATIONS : 3
FREE OUTDOOR AREA 158 M2
REGULAR GARDEN SPACE : 120 M2



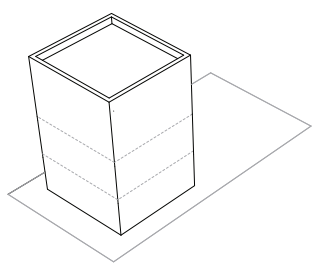
VARIATION OF LE COURBUSIER :
WEISSENHOF HOUSE
BUILDING PLOT : 200 M2
SIZE : 140 M2
ELEVATIONS : 3
FREE OUTDOOR AREA 175M2
REGULAR GARDEN SPACE : 61 M2



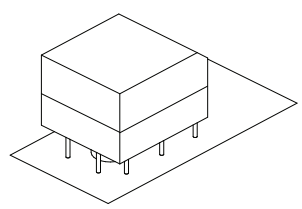
VARIATION ON KINGOHUSENE
BUILDING PLOT : 200 M2
SIZE : 150 M2
ELEVATIONS : 1,5
FREE OUTDOOR AREA 100 M2
REGULAR GARDEN SPACE : 80 M2



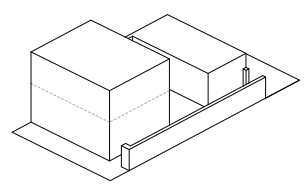
VARIATION ON DANISH MODULAR HOUSING
BUILDING PLOT : 200 M2
SIZE : 181 M2
ELEVATIONS : 2,1,5
FREE OUTDOOR AREA 115M2
REGULAR GARDEN SPACE : 60 M2



VARIATION OF TADAO AMDO : 4X4 HOUSE
BUILDING PLOT : 200 M2
SIZE : 120 M2
ELEVATIONS : 3
FREE OUTDOOR AREA 151M2
REGULAR GARDEN SPACE : 109 M2



VARIATION OF LE COURBUSIER :
WEISSENHOF HOUSE
BUILDING PLOT : 200 M2
SIZE : 140 M2
ELEVATIONS : 3
FREE OUTDOOR AREA 175M2
REGULAR GARDEN SPACE : 105 M2



VARIATION ON KINGOHUSENE
BUILDING PLOT : 200 M2
SIZE : 130 M2
ELEVATIONS : 2,1
FREE OUTDOOR AREA 110 M2

TYPOLOGY CATALOGUE

A study of the different classical dwelling designs can be constructed upon the settings Humlebæk Syd offers. These are to be seen as examples of the possibilities in the building plots of Humlebæk Syd.

The starting point has been to create detached housing that will be of equal sizes as regular detached houses. The country average is here 139 square meters (Kristensen, H. 2007).

CLASSICAL DANISH SINGLE FAMILY STANDARD HOUSE

A classical and treasured typology within the suburban context. To adopt to site conditions it is needed to build in two storeys. Here it is experienced that a 160 square meter dwelling that is 21 square meters more than the average size of suburban detached single family houses in Denmark(Housing in Denmark). The exterior walls are distanced from the building plot edges ensuring that it is possible to walk around the building.

In the second example an expansion of the first example has been created. Here the building reaches 181 square meters. Still 60 square meters of regular garden space is found which should be enough for both a small terrace and for growing plants.

TOKIO TOWER HOUSE

The single family house as experienced in Tokio where land is extremely limited and expensive. Here small houses in multiple stories forms small towers. This building makes it possible to create a spacious building while still having some distances to the building plot edge and a good garden space. Further the building type will have great views from the third storey over the landscape and build environment.

The first example given is the closest to the inspiration of Tadao Ando, 4x4 house. Here the top storey is shifted a bit. The second example forms a more straight tower. Both examples are 120 square meters. What is noticeable when comparing to the adapted classical Danish single family house is that in this case almost twice the garden space is available.

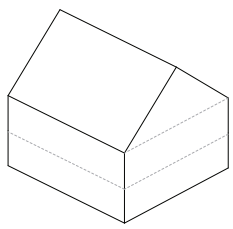
ELEVATED HOUSE

The typology as presented by Le Courbusier makes it possible to have a lot of square meters while keeping the ground floor free for other uses. Although not the most logical typology within the Danish context and Humlebæk Syd where car parking is handled outside the building plot, the typology still has some interesting aspects. The space open created by elevation of the building can potentially be used as garden or a big roofed terrace that could be comfortable on both sunny and rainy days. The space could also be practical for storage of bicycles especially with larger bicycles like the Christiania bike or Nihola bike.

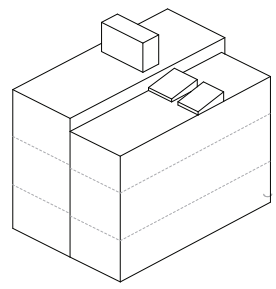
The two examples given are both 140 square meters and do almost leave the entire building plot open to other possibilities in the ground floor.

COURTYARD HOUSE

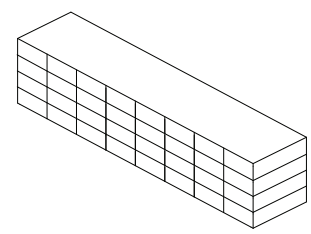
This typology makes it possible to create an intimate space even with a small building plot. Further the layout utilizes the possibility of building at the plot edge. Here the building closes around itself framing the garden space. The two building designs are inspired by Jørgen Utzons classical Kingohusene but with a slightly bigger building on a smaller plot. The first example is the



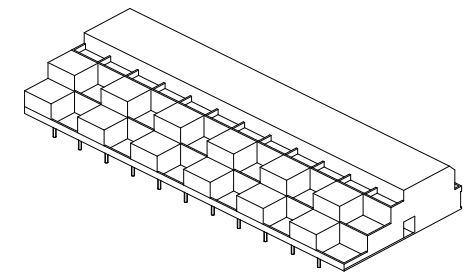
MVRDV : HAGEN ISLAND
BUILDING PLOT : 180 M2
SIZE : 130 M2
ELEVATIONS : 3
FREE OUTDOOR AREA : 120



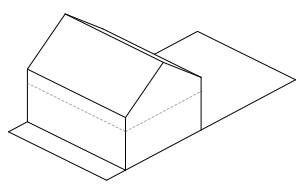
VARIOUS ARCHITECTS : BORNEO SPORENBURG
BUILDING PLOT : 200 M2
SIZE : 279+240 M2
ELEVATIONS : 3-4
FREE OUTDOOR AREA : 0



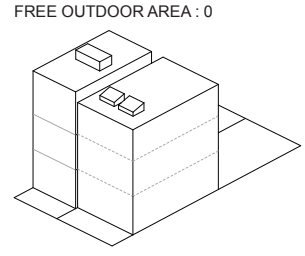
CLASSICAL MODERNIST SLAP
SIZE : VARIOUS X 70-140 M2
ELEVATIONS : 3-10



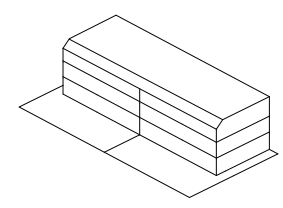
FÆLLES TEGNESTUEN : FARUM MIDTPUNKT
SIZE : 1645 X 54-129 M2
ELEVATIONS : 3



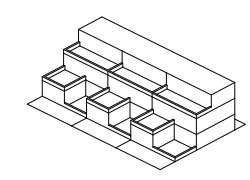
VARIATION ON HAGEN ISLAND
BUILDING PLOT : 200M2
SIZE : 152 M2
ELEVATIONS : 2
FREE OUTDOOR AREA : 120
REGULAR GARDEN SPACE : 100



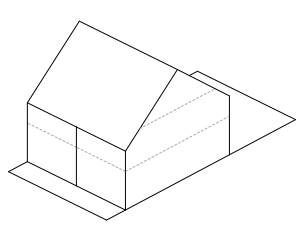
VARIATION ON BORNEO SPORENBURG
BUILDING PLOT : 200 M2
SIZE : 105+153 M2
ELEVATIONS : 3
FREE OUTDOOR AREA 52 + 62 M2
REGULAR GARDEN SPACE : 44+ 49 M2



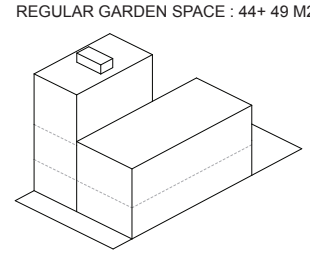
VARIATION ON CLASSICAL SLAP
BUILDING PLOT : 2X 200 M2
SIZE : 6X 108M2
ELEVATIONS : 3
FREE OUTDOOR AREA 368M2
REGULAR GARDEN SPACE : 320M2



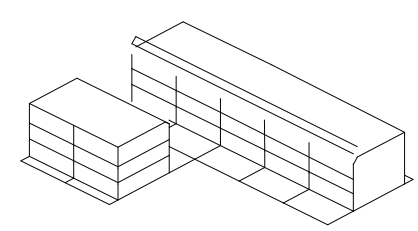
VARIATION CLASSICAL PERIMETER BLOCK
BUILDING PLOT : 3X 200 M2
SIZE : 9 x 90-115 M2
ELEVATIONS : 3
FREE OUTDOOR AREA 469M2
REGULAR GARDEN SPACE : 213M2



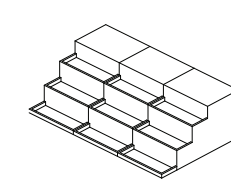
VARIATION ON HAGEN ISLAND
BUILDING PLOT : 200M2
SIZE : 135 + 135 M2
ELEVATIONS : 3
FREE OUTDOOR AREA : 45 + 45 M2
REGULAR GARDEN SPACE : 35 + 35 M2



VARIATION ON BORNEO SPORENBURG
BUILDING PLOT : 200 M2
SIZE : 105+144 M2
ELEVATIONS : 3 + 2
FREE OUTDOOR AREA 52 + 41M2
REGULAR GARDEN SPACE : 44+ 30 M2



VARIATION ON CLASSICAL SLAP
BUILDING PLOT : 7X 200 M2
SIZE : 21 X 120M2
ELEVATIONS : 3,2
FREE OUTDOOR AREA 560M2
REGULAR GARDEN SPACE : 420M2



VARIATION CLASSICAL PERIMETER BLOCK
BUILDING PLOT : 6X 200 M2
SIZE : 9 X 110-140M2
ELEVATIONS : 3
FREE OUTDOOR AREA 469M2
REGULAR GARDEN SPACE : 213M2

closest to the inspiration but with an utilasation of two stories to gain extra square meters. The second given example are a two storey main house of 100 square meters with a 30 square meter separated annex in one storey located behind it. This could also be an inspiration of a building type that could be build in two stages as new requirements for the home shows up.

PITCHED ROOF TOWNHOUSE

A typology that can both be an individual townhouse or a attached housing typology. The inspiration is found in the MVRDV project for the Hagen Island of the Ypenburg plan.

With this layout for a detached house a great garden space can be achieved. As an attached housing typology an extra storey is added to compensate the narrower building width. Here 2 dwellings are constructed on a 200 square meter building plot

BOX TOWN HOUSE

The typology as found in the Borneo Sporenburg area in Amsterdam. These extremely space efficient buildings has no waste space for pitched roofs. The housing design was a response to a requirement of creating a density of 100 dwellings per hectare - the double of what striven for in Humlebæk Syd (Eastern harbour p. 136).

For Humlebæk Syd the Height inclined plane will narrow the depth of the building a bit. Still it is possible to create two dwellings of more than 100 square meters each on a 200 square meter plot.

In the second example a variation is made with a compostion of one three storey and one two storey dwelling. Here the two storey dwelling is 144 square meters.

MODERNIST SLAB

The most common multi- storey housing typologi within the suburban context. The slab can be constructed in various lengths and is very flexible to different arrangements.

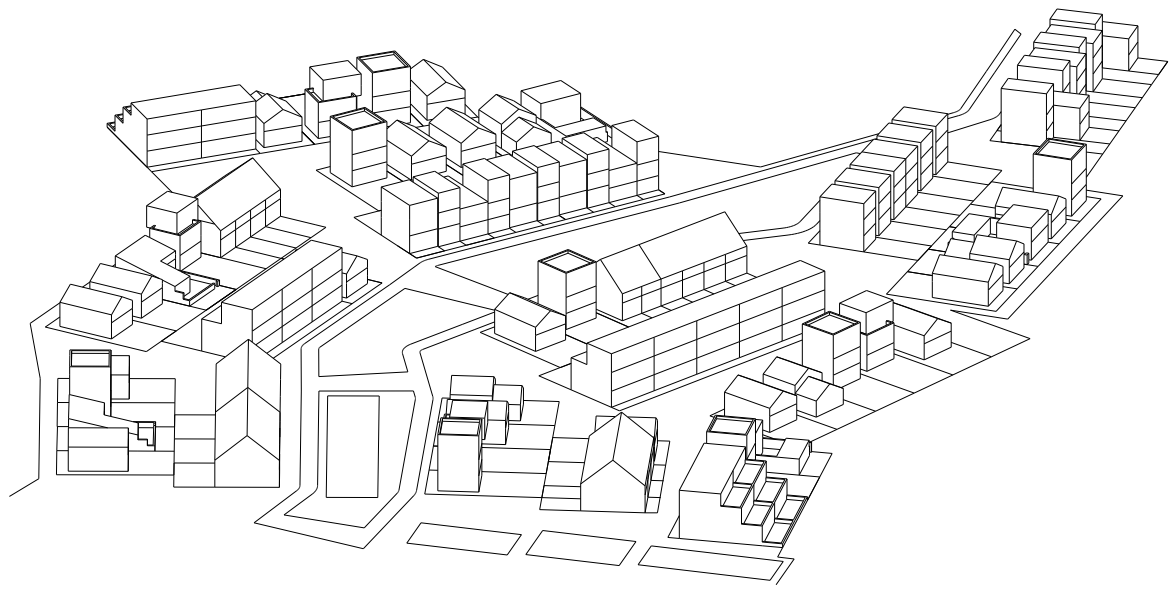
In the first example given the slab is a free standing version that could be found next to a detached or attached dwelling. In the second example two slabs facing one another is presented exposing opportunities of creating spatial environment between two slabs.

TERRACE BUILDING

The typology where the slab meets the attached house bringing a small garden to an elevated plateau. This typology is very feasible for Humlebæk Syd as it can use most of the building plot with the height inclined plane. With inspiration from Farum Midtpunkt two different building designs of a stair slab building are presented.

The first example are the closest to the original. Here a small sun room or similar are combined with a terrace on the first floor. The second floor balcony is placed upon the sun room.

The second example is a more simplistic version of the staircase building offering a bit less exiting architectural spatiality but has greater balconies.



ill. 22 EXAMPLE OF STAGE PLAN WITH DISTRIBUTED TYPOLOGIES

STAGE EXAMPLE

To exemplify how the concepts of plot size and typology distribution can create a dense, diverse neighbourhood an individual stage is selected for trying out the principles. Here the 5th stage has been selected.

The 5th stage contains 16 building plots of various lengths. Applying the 200 square meter grid will give 72 grid masks to work with.

With an even distribution between attached, detached and multi- storey dwellings and the concept of ratio, the grid masks will be divided as follows

Detached Housing : 36
Attached Housing : 24
Multi- Storey Housing: 12

Each typology are in this stage represented with 36 dwellings equal to 108 dwellings in total. With the road infrastructure, space between buildings and public space in the centre this adds up to about 40 dwellings / hectare.

These dwellings are to be distributed over the stage with emphasis set upon creating a mix between the three. In this stage example(see ill. 22) the multi-storey and attached housing has been placed first with an even distribution over the stage. Secondly the detached housing plots has been placed between them. This is done to accommodate a diversity in architecture and inhabitants on a near neighbour scale.

In the plan example given on the right the buildings has been placed upon the master plan document. Centrally in the plan the road infrastructure is found. The existing stem road Bogårdsvej is prolonged into the Humlebæk Syd. Just after passing the bicycle path located at the northern edge of the site the road divedes into two separated tracks. Between the tracks a public space emerges. The public space features a series of interesting functions that will attract both inhabitants of Humlebæk syd and inhabitants of existing Humlebæk. These include a pocket park, a small ball game field and ping pong tables. A big water reservoir for delaying rainwater falling on Humlebæk Syd. By the reservoir stairs are found making it possible to touch the water. The reservoir continuous around the corner in an eastern direction stretches out into the landscape.

On both side of the inner public space build up areas are found. These are accessible from small spaces facing the inner public space. These do function as shared parking spaces but also as access road to the buildings not facing the inner public space. The pavement is forming a coherent carpet under are all of the building mass on each side. It represents a semi public space shared between the people using the shared car parking and living in the buildings attached to these. The pavement stretches to the edge of the build environment forming a sharp edge to the surrounding landscape. When three rows of housing are represented the pavement functions as a inner space between the two rows of housing closest to the landscape. When only two rows of housing is found the pavement becomes a path with landscape on one side, building on the other. Moving through the area on the pavement carpet closest to landscape will give an experience of a spatial environment continiously changing from path open towards the landscape to space surrounded by building mass.

The pavement carpet surrounding the houses combined with the shared parking spaces forms the fundament of social contact. Neighbours will be meeting on it, greeting and chatting while moving to their car, arriving on bike or walking to the public space in the centre.

The buildings are always facing the pavement carpet. This way an urban atmosphere is created of various different building designs and typologies located next to one another. The gardens of the buildings will be placed more privately between the housing or facing the landscape.

Various typologies of different heights and volumes are placed next to each other forming an architectural diverse environment to move through as well as people of different typologies will sometimes be neighbours in Humlebæk Syd.

PLAN 1:1000

SECTION AA 1:1000

PUBLIC ENVIRONMENT

The central public space of Humlebæk experienced on a warm summer day. The diverse building mass creates a scenic frame to the public environment with various different facades and building heights. Children are splashing with water from the rainwater reservoir.

Life is experienced from people walking through the site, people that has decided to stay, children playing and people arriving and leaving their homes.

An ambience of children playing, cars, water and people chatting are found here.

INNER ENVIRONMENT

Between the housing the atmosphere is more intense because the room is narrower. People does here get very close to one another. Here continuous flow are appearing of people arriving and leaving their home, but in a quite way as because bicycles and pedestrians are passing. They do often greet and chat with neighbours on their way.

People from the multi-storey building are observing the life going on at the ground floor. Opposite to their apartments some detached housing is located.

Every entrance and transition from semi public to semi private is marked with a small bridge across the rainwater canals. The small yard in front of every building has been used differently. Some has used it for greenery while others has build small terraces for enjoying the sun when the backyard lies in shadow.

RECAPITULATION

//conclusion, reflection

CONCLUSION

The Opening of this project describes a Danish Suburb, developed mainly in the 60's and 70's, now requiring a major modernisation. With the competition of Humlebæk Syd Fredensborg municipality is beginning the process of establishing a foundation for a future modernisation of the suburb. Concluding from the Opening the formation of enclaves as an (unwanted) result of modernistic planning has come to create serious societal problems, seen with for example Gellerup Parken and Tingbjerg. This formation of enclaves cannot be viewed as a historical trend, but still lives within present day planning of the Danish suburb.

On the basis of the competition three main parameters form the foundation of the project - social contact, diversity and density. Through the structural analysis a clear link between these three parameters emerges. Seen from a societal point of the view the enclave have helped form many societal problems allowing seclusion of different social groups from society. To avoid this an emphasis on social contact between different social groups has a lead role. What can be concluded from the structural analysis logically, is social contact between different social groups must be supported by diversity. A diversity not retained within city scale, but an experienced diversity which is present within eyesight. Acknowledging this, places the concept of density as the foundation for obtaining diversity which forms the foundation for social contact between different social groups. These three parameters has therefore a central role in avoiding the mistakes of historical planning in forming enclaves.

The planning of Humlebæk Syd takes its starting point in the landscape. By extending the built structure from existing stem roads from within Humlebæk as bands of two built environments the immediate proximity of the landscape is maintained. Further the new built environment will from day one form a continuous course creating built coherency with the existing town. These bands of land and townscape will support a diversity in landscape, architecture and people. In the built environment this will be obtained by dividing the master plan into eight stages which each contain an equal mix of typologies of detached, attached and multi- storey housing. Different typologies containing different qualities - supporting different needs to accommodate the individual and thereby supporting a diversity in residents. A diversity contained within 150 x 150 meters creating an experienced diversity for every inhabitant of Humlebæk Syd.

Creating a diversity of inhabitants within a relatively small area has to be supported by a dense structure. Humlebæk Syd introduces an average dwelling/ hectare of 40 per stage. Within the structure the infrastructure layout creates a central public space, in prolongation of stem roads from Humlebæk, containing pedestrians, cyclists and car traffic. The densification of the infrastructure helps support a lively inner public space from where a graduation towards the private space is framed with a down scaling of the following spaces. This help to create spatial dimensions which correspond to the level of privateness needed.

By securing a dense built environment and introducing diversity through every stage of the master plan and establishing a strong connection to the existing Humlebæk the project have secured the foundation for social contact avoiding the formation of an enclave.

REFLECTION

DENSITY

How dense should the suburb be? This question has been debated multiple times while writing this report. However the question has newer been answerable. Is there a limit to how dense the suburb can be? It was soon clear that the density of Humlebæk Syd needed to be lower than the one found within the inner city of Copenhagen. This was based upon a gut feeling that a major reason for moving to the suburb would be to be closer to recreative green environments and a more quite peaceful environment. However it was also found, probably due to the general debate of densified urbanism in the suburbs, that it should be denser than seen today - but how much?

We ended up with a final density of about 40 dwellings per hectare. Borneo Sporenburg, Amsterdam are 100 dwellings / hectare. Bo01 are 59 dwellings / Hectare, Detached single family housing in Humlebæk 7,6 dwellings per hectare and multi-storey buildings in their current form with 70 square meter dwellings - 67 dwellings / hectare.

With the density of 40 dwellings per hectare it was possible to retain the detached family house on a 200 square meter building plot while keeping the development within a scale of about three storeys. This was found to be a good scale of the development that would be pleasant to move through. The values are based upon an evaluation of what would be suitable for the suburban context. But are the 40 dwellings / hectare dense enough considering that the multi-storey typology of the 1960s could accommodate 67 dwellings / hectare?

By now we are still not experiencing Japanese or Dutch tendencies in Denmark. There is still pockets, brown fields, left over properties etcetera around in the region of Copenhagen. Therefore it can also be hard to argument for extremely dense neighbourhoods in the suburbs by now. The densification process of the suburb will probably have to be an ongoing process for years from now gradually increasing density in new development as former has been found obsolete.

The competition program does not set a specific goal for the amount of dwellings wished build in Humlebæk. A gentle try of interpreting the competition program could indicate a build percentage slightly below 25% equivalent to the build plot ratio of the detached housing typology (Competition program, p 25). But are this number for the entirety of Humlebæk Syd, the 58 hectares, or for a selected portion of it?

In the proposed design for Humlebæk syd it is estimated that a build percentage of 20% will be obtained when distributing the expected housing mass upon the entire site. The density of our proposed master plan is then in reality lower than the density of the detached single family houses found above Humlebæk Syd. This would however entail that the entire landscape of Humlebæk Syd would be Subdivided.

When calculating the build percentage within the townscape bands alone the number is 75%. This number is though not directly comparable to the municipality build plot ratio percentages, as our percentage do also include roads and open areas.

Here a certain amount of Humlebæk Syd has been selected for urban development based upon a qualitative process of ensuring certain landscape qualities of Humlebæk Syd. We could as well have selected a plot of 1 hectare and saved the rest for recreative green environments. This sets out an entirely new question in this debate - when the city is expanded into the landscape - what should the ratio between them be? If too little is build, the municipality will need to subdivide other landscapes if they should still be able to sell properties and develop - if too much is build the openness of the landscape might disappear and the existing citizens living behind the new development will have longer distances to the landscape.

We did take the stance that to keep the parts of the landscape that had been found most treasures for existing and new inhabitants of Humlebæk, while still creating a reasonable amount of dwellings on the site, we would need to build dense.

What became clear was that when increasing the density it was possible to create a walk able community. Not in the sense of being able to walk to a metro station or all everyday functions like the supermarket or the school as the term is often used to describe. Rather in sense that we could create a socially inclusive neighbourhood where both detached, attached and multi-storey housing would be situated side by side and where architectural diversity would be experienced within a walk of two minutes. This even with reasonable sized dwellings. The density became a tool of ensuring experienced diversity in architecture and inhabitants.

Perhaps in the continuous debate about density of the suburb emphasis should as well be put upon ensuring architectural diversity and social contact across societal groups by bringing the inhabitants closer together.

DIVERSITY IN INHABITANTS AND SOCIAL CONTACT

An important part of Humlebæk is the effort in avoiding to build an enclave closing around itself. This was done to ensure architectural as well as inhabitant diversity within the new neighbourhood. Both with a wish to create a suburban environment where social contact would occur across societal classes to decrease polarisation of the suburb.

In the project the stance has been taken that by creating diversity in architecture and typologies - a diverse population would also be accommodated.

A lot of inspiration has been found in the process and end result of Bo01 in Malmö, Sweden. Here architectural diversity was achieved with an intelligent principle for selling the property denoted the confetti plan. Here developers could only purchase land when also purchased a series of other building plots of different scales and on different locations within the entire plan area. This way big enclaves of similar looking housing were avoided and a more diverse architectural experience were created. The experience was here however that the area contained a limited amount of affordable housing (Kate Givan, 2010). This sets out a focus that has also been slightly touched within the structural analysis of the report - as much as inhabitant follows typology, inhabitants does also follow ownership form and renting prices. To accommodate a diverse inhabitation of Humlebæk Syd, not only private tenanted property or owned occupied property can be represented in Humlebæk Syd, also public housing will need to be found. In the continuous effort of bringing new socioeconomically advantaged inhabitants into the problematic public housing enclaves, some of its existing less fortunate citizens does also need to move elsewhere. If this elsewhere is not to be remote lying peripheral Denmark with few workplaces and a heavily unsustainable transport situation with commuting distances hours from workplaces in car due to poor public transport found in these areas - the elsewhere needs to be found within the surrounding city of these.

Will the more fortunate people then be less attracted to buy property in Humlebæk Syd then? Yes probably.

A Phd thesis by Thorkild Ærø about housing preferences found that people living in detached and attached housing preferred to live next to people of same language and cultural background(Thorkild Ærø p. 101). With this in mind Humlebæk Syd will probably over time obtain a more or less homogeneous inhabitants that will have the same language and cultural background.

However Humlebæk Syd will probably never become an area of heavy social problems due to the existence of detached housing making up one third of the overall supply of dwellings. With freehold detached housing and apartments the amount of rented housing will unless if it is of priority, not be the predominant owner form.

Attached housing and multi-storey housing will in Humlebæk Syd not be very different from everywhere else. The typology that has the biggest difference to the surrounding city are the detached single family house. To keep detached house as a typology represented in Humlebæk Syd, it was in design of the stageplan found that the typologies building plot needed to be limited to 200 square meters. This is a serious reduction, and no mater what solutions tested, the end result was always a heavy reduction of the garden space.

While the already build is hard to change, we can make an effort of building denser when making new projects. If new projects have to compete 1:1 with existing housing mass by ensuring the same things, we would probably end up building a copy of the already existing. This does also imply that the existing is best practice and that new will only be able to reach the level of that.

When people are selecting a place to live the go through a long negotiation of priorities before finally selecting a place to settle. The task is here to make a convincing plan where the advantages will overshadow the fact that people will have to give up some of the garden space.

It is hoped that the way Humlebæk Syd will attract people seeking exiting neighbourhoods of high architectural diversity and with well functioning urban spaces as well as near proximity to recreative green environments.
In the paper *Between the City and the rural by* sociologist Helene Hjorth Oldrup a series of interviews has been conducted with people that has moved into a new suburban area in Måløv, a city that in many ways are comparable to Humlebæk. The interviewed are primarily young people that has recently ended education in Copenhagen and hsve or are about to initiate a family. A group that matches the municipalities wishes to attract new citizens to the city of Humlebæk.

The interviewed were asked about their priorities and process leading up to and reason for selecting the dwelling in Måløv. Some of the biggest priorities were to have immediate access to green areas for children to play in, near contact to recreative green environments, to live in an urban setting with good accessibility and short distances and finally to have individuality in aesthetics in opposition to living in a big generic developer scheme(Oldrup, h. 2009)

These are all priorities that has been covered in the planning of Humlebæk Syd. Further it has been secured that a house can be build of equal sizes of classical detached housing as well as expansions can be made to the building afterwards.

In the end hopefully people will be open towards this new urban form supporting a greater diversity within the suburban context.

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PICTURE SOURCES

All pictures not mentioned are of own production or from the competition program attached cd.

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Langagergård : http://www.sla.dk/Images/indhold/lanager/boliger.jpg

Dyngeland : http://www.sla.dk/Images/indhold/Dyngeland/biotop.jpg

Tretornsgrunden: http://arkitema.dk/Boliger+Living/Privat+boligbyggeri/Tretorn.aspx#projectpreview

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The first development of Langagergård : Microsoft Bing Maps Birdview

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1. Villa : http://www.nybolig.dk/maegler/pages/estate-viewer/largeviewer.jsp?caseno=164174&shopn
o=103402&gsv=true&address=Gr%F8ndalsvej%2052%202000%20Frederiksberg

6. Industry : Google Streetview

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Detached housing : http://www.nybolig.dk/maegler/pages/estate-viewer/largeviewer.jsp?caseno=305
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Multi-Storey housing enclave example : Microsoft Bing Maps Birdview

Attached housing enclave example: Microsoft Bing Maps Birdview

Detached Housing enclave example: Microsoft Bing Maps Birdview

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Picture collage of green structure in Humlebæk : Microsoft Bing Maps Birdview

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2. Wild windbreak : http://www.jagtblog.com/wp-content/uploads/vildtpleje-læhegn-sprøltefri-gødn-
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Wild grass :

Goats : http://skovtur.e-museum.dk/temaer/Skoven%20som%20spisekammer/Til%20Landbrug%20
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Cereal flower : http://www.flickr.com/photos/7113321@N05/2676599308/sizes/o/in/photostream/

Yellow Cerial field : http://www.flickr.com/photos/7113321@N05/2676599308/sizes/o/in/photos-
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