

Tailored Form Field.

TAILORING ARCHITECTURE IN THE FIELD
CONDITION TO SET WITHIN A DUTCH CONTEXT.

Regina Makhmutova

MASTERS THESIS/ FALL 2017

MAATWERK

A Tailored Form Field.

Tailoring architecture in The Field
condition to set within a Dutch context.



CHALMERS

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Master Thesis Autumn 2017
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ACADEMIC BACK-
GROUND.

2010-2015 BSc Interior
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Material&Detail
Sustainability in Design Profes-
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Computational Design Tools
Housing Inventions
Architectural Competitions

TU Delft Masters courses:

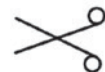
InteriorsBuildingsCities studio
Building Technology
Fundamentals I, II
History of American Architec-
ture
Delft Lectures on Architectural
Design

TITLE FOR THE MASTER
THESIS:

Maatwerk. A Tailored form
Field.
Tailoring architecture in the
Field condition to set within a
Dutch context.

Chalmers University Of Technology
Master's programme in Architecture
and Urban Design.
MPARK 2017

Jonas Lundberg as supervisor
Kengo Skorick as tutor
Daniel Norell as examiner
Material Turn Studio



OBJECTIVE

Walking along the curved medieval streets I am intrigued by its ambiguity and a certain tension to which flirting with the past and the present leads. I like this gesture it offers, designing contemporary interpretations of the brick vernacular by looking at the intricate urban fabric with its diversity of forms. "A TAILORED FORM FIELD" is a discussion about the inherited qualities of a traditional city and the way how they can be translated into a new form field.

BACKGROUND

Facing a large number of new built form sacrificing with its meaning in the existing historical context, my project asks what can we learn from the tradition of a particular place? Why this form rather than another?

METHOD

I collected the common notion of form from the selected historical site in Overschie, South Holland. Elaborating physical models I was crafting each house individually, which shapes are rooted on the morphology of the context. Taking photo pictures of a physical site model from a human scale perspective allows me to examine those forms and urban fabric that they create.

Final design proposal has three scales of research to present:

- 1) Street space design/new town scape
- 2) A figure, as individual with reminiscent silhouettes
- 3) A crafted brick profile

In my evaluation of the form in all scales I extruded qualities of coherence and variation, richness in sight-views, continuity and plasticity of the mass, recognition and coexistence with the surrounding, etc. Organization of the elements was aligned with the concept of a Field project, in response to the organic character of the site.

RESULT

By close observations of the context and careful evaluation of the models I made a selection of the qualities to be translated into a contemporary design. Result is a design project in different scales. It is a flexible number of mix-used houses set within a Dutch environment. While each has a distinct form and a strong personality, a sum of them able to correspond to the surrounding and create intricate relations between each other.

CONCLUSION

Urban fabric of a traditional city reveals a great diversity of forms which yet keep coherence. From my research I suggest that with a deep understanding of the local culture, building techniques and history, by looking closely and learning from its specific urban morphology, one can reveal unconscious qualities to bring them back in a great field of novelty.

MAATWERK CONCEPT.

“Maatwerk”(from Dutch- tailor-maid) architecture- a title I give to my project, a guiding line and idea to its design. Maatwerk refers to how the building is made and shaped, going from the historical and typological references to the relationship between traditional and contemporary building methods. In my project I carefully examine the relation of the new form to its spatial context and the way how I position each volume affects its shape, so I customize, edit and “tailor” the form. Maatwerk also affects the detailing in construction and choice of the materials involved in both the design and building process. Finally, Maatwerk is also part of the architect’s signature in terms of the personal storytelling, experience and references used in the project process.



Bureau van Eij, The Netherland

REPRESENTATION

Simultaneously working in different scales, I used physical models as a design tool and as a set for visual representations. Opposed to realism, the focus on the architecture’s representation through the aesthetics of drawings and materiality of the models. All the site pictures (unless indicated other source) are taken personally during my staying in The Netherlands in 2017.



noAarchitecten, Belgium

ACKNOWLEDGEMENT

Sincere appreciation for guidance and unshakable faith in me from my tutor Jonas Lundberg, brilliant comments by Jonas Runberger and Danial Norell and valuable review by Ninke Happel and Floris Cornelisse.



Vincent van Duysen, Belgium

BIBLIOGRAPHY.

- Stan Allen “From Object to Field” AD 2008
- Words 3 “The Poetics of a Wall Projection” Jan Turnovsky; AA Publications 2009
- Pier Vittorio Aureli “Obstruction. A grammar for the City”
- Jeffrey Kipnis “Towards A New Architecture” AD 1993
- Vladimir Belogolovsky “Conversations with Architects” 2015
- Kengo Kuma “Anti-Object” AA Publications
Points + lines : diagrams and projects for the city / Stan Allen
- Colin Rowe “Collage City”
- Space Reader. Heterogeneous Space in Architecture. AD 2009
- Building Upon Building/ J. Engels & M. Grootveld
- Indifference. Again Michael Meredith Log 39, winter 2017
- OASE #91
Building Atmosphere Interview with Peter Zumthor
- Amsterdam Canal Guide. Tim Killiam.
1978 Utrecht/Antwerpen



Chapter I. Design Proposal

“Architecture is not a Martini”
Kees Kaan

Content:

- 1.Context reading Overschie
- 2.Context map
- 3.Site plan
- 4.Photo pictures of the site from the model
- 5.Case house: plans, section, group form
6. Facade elevation
7. Material and detail
- 8.Construction details
- 9.Interior photo pictures

Context.



For my design proposal I took a site located in Overschie, South Holland. Its an old Dutch village with very picturesque town scape and nature. It has a very rich context to relate to, clear typology in the houses arrangement and there are lot of details and interesting forms to learn from. I was especially interested in some imperfections, those moments when the houses are not perfectly aligned or intentionally shifted from the street line. Notion of the overlapping roof gables. Sometimes irregular position of the windows and narrow corridors between the houses. Such moments I think give an extra layer of interest to the city. Those are very common aspects of a vernacular which I found valuable and as a source of inspiration for the contemporary city planning. In my project I challenge a new form by making it rooted on the vernacular, so that it may speak the same language. What I was trying to achieve is a field of buildings, which form is very recognisable, but clearly new, contemporary and coherent to the context.





Figure #a "Immersing textures."

Overschie 2017

This capture reveals the visual quality of the facade bricks: not only by their shallow relief and the differentiation of the hues between them and clay, due to the age effect, but the shadows around the three dimensional corner, soft contrast and plasticity makes the volume to immerse into the surrounding particles of pavements , roof cladding and leaves of the greenery around.



Figure #b 'Roof massing'

Overschie 2017

The backyard of the houses hides other volumes attached in a loose way. Often they differ in scale so we can see the masses behind. They are rich in their materiality which sometimes does not follow the same treatment as on the facade, yet looks coherent sharing the saddle roofs with terracotta shingles. Elements like window frames do not necessarily copy each other but essentially has a white painted offset.





Figure #c "A glimpse through."

Overschie 2017

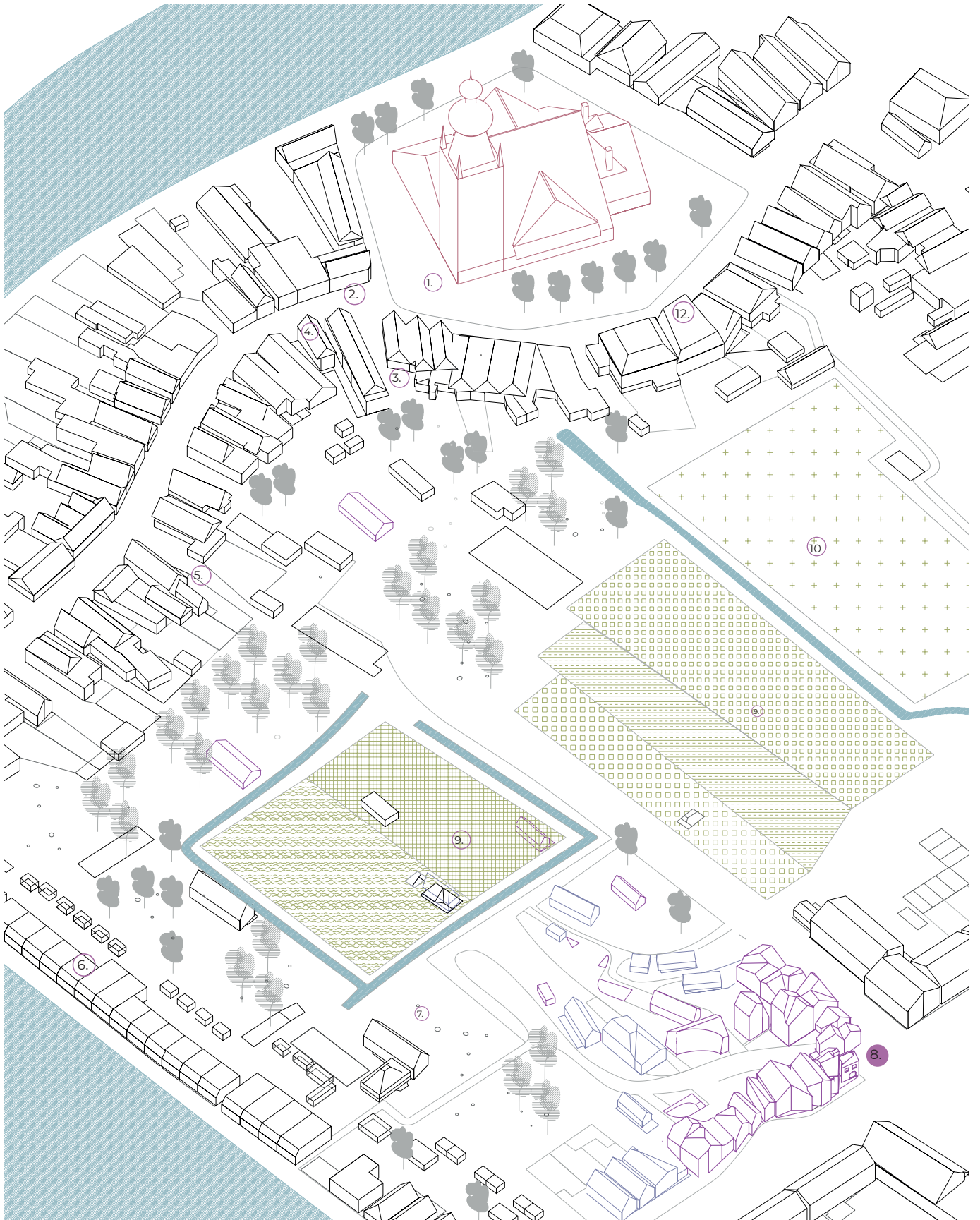
Overschie historically had many craftsmen living in town who has their workshops facing the street which can be traced with big openings on a ground level. What I find special about the site is the relation between coherence/in-coherence and the positioning of the volumes. Like here above, two houses are different in shapes, facade cladding and decoration. They are even not attached together but have a gap between which keep transparency behind the wooden fence at the ground level. This spacing brings some air bridges to the street and also give a glimpse on the situation behind the houses. Such arrangement makes one being curious about the life unfolding behind.



Figure #c "A garden looking at the garden."

This picture captures a moment when we can see a garden at the backyard through another garden living inside of the house. The view is framed within a window which is positioned diagonally to the backside opening and gives a glimpse to a third aperture at the level of a second floor at the back. Such composition of multiple openings may provoke a loose idea on what is interior and what is exterior? Which garden is framed and which is free? Is it me looking through a house or a garden looking out of it.





1.Church 2.Figure #a 3. Figure #b.4.Figure #c 5. Figure #d 6. Row of old shipmen houses 7. Playground 8. Entre to the project site 9.Meadows
10. Cemetery 11.A gate towards the cemetery 12. Overschie Museum



Site model photo picture taken from the position #8 (map on the left) Wood, MDF, Plaster, trees

Approach.

By close observations of the context and careful evaluation of the models I made a selection of the qualities to be translated into a contemporary design. Result is a design project in different scales. It is a flexible number of mix-used houses set within a Dutch environment. While each has a distinct form and a strong personality, a sum of them able to correspond to the surrounding and create intricate relations between each other.

An important notion was a streetscape, the silhouette of the roofs, and how they change our perception of the street. From the physical site models I take photo pictures to represent a character of a design proposal which is a continuation of the existing urban ring. The existing city centre has an organic character which I reflect in my design by applying a Field concept. It gives a certain plasticity to the townscape, to the roofs and the masses which unfold in different directions. There are moments of uneven distribution of intensity which is reminiscent of the situations found in the context.

In my evaluation I was concerned of diversity in sight-views, differentiation of forms and continuity of the street, orientation and scale of the corner volume, coherence to the surrounding, etc. Those moments are presented through the photo pictures of a site models through the book.

During my research I was working mostly with physical models crafting each house individually from wood, foam and making moulds for the plaster figures. So many of the design decisions originate on the inner resources of intuition, which allows to reflect on the results immediately by model-to-model logic. Besides it gives an extra quality to the work to be appreciated tangibly.



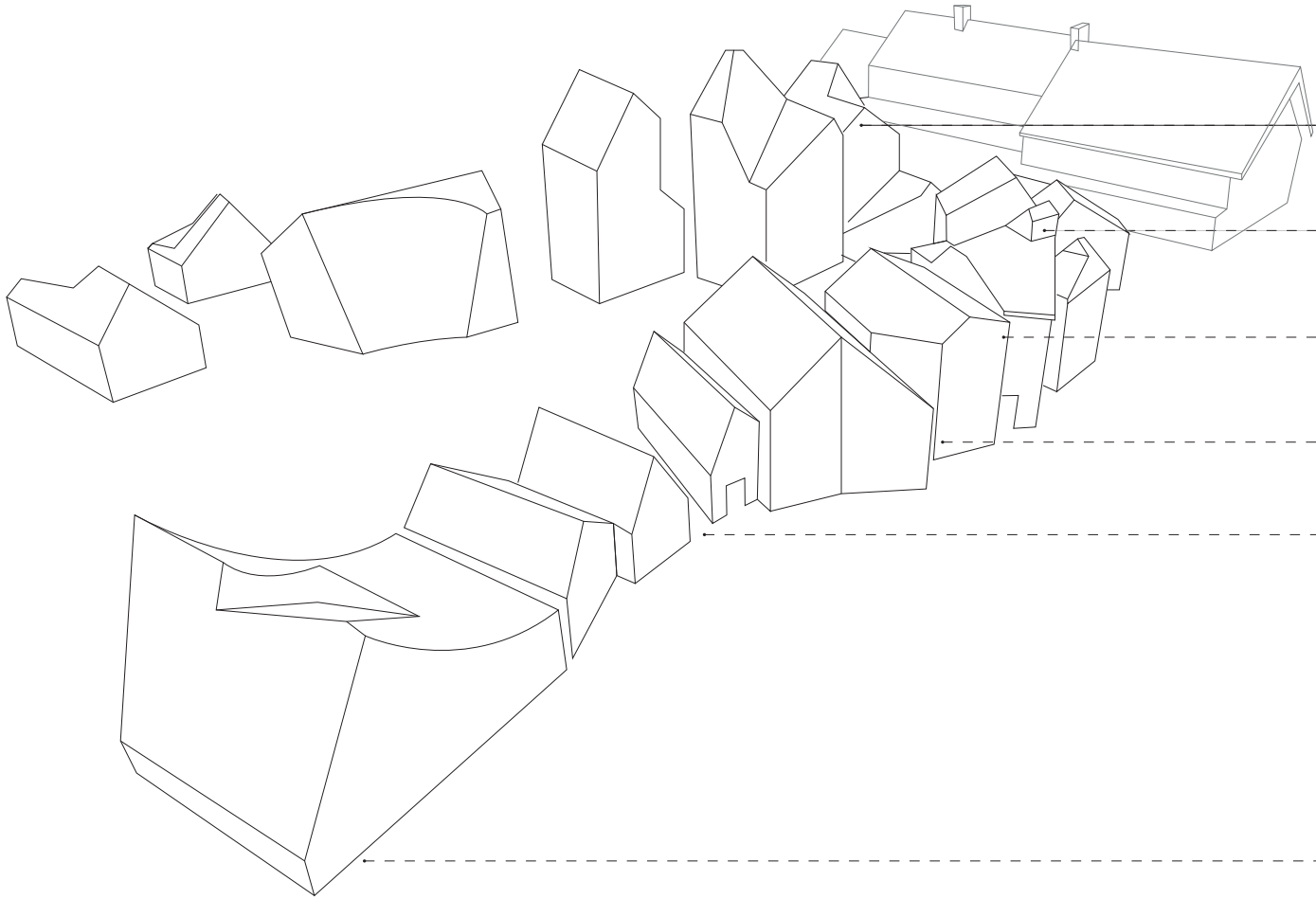


Site model photo picture . MDF landscape, Plaster.



SIGHT VIEW FROM PHOTO CAPTION





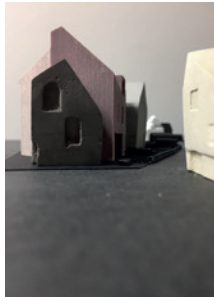
This diagram explains how form of the elements takes origins in the form of the local context, though not providing a direct link in configuration and details. Most of the designed houses are shaped by merged volumes and elements, taken from typology and morphology of a traditional Dutch house.

Immediate context of the site was empowered by the richness of the traditional saddle roofs houses and materiality but same time was constrained by the absence of any powerful new built form to relate to. In this sense it is tempting to "reinforce dominant mode" of old city centre. However this medieval urban fabric is still in a distance to read from, thus requires a link and intellectual reminiscent in forms translated into a contemporary building.

Overlapping saddle roofs



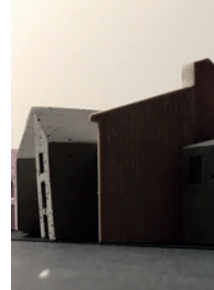
Chimney/Gable
Mansarde windows



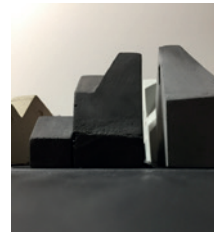
Transverse/ Saddle roof



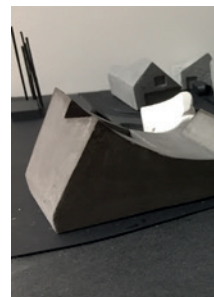
Breaking alignment



Insight to the back



Curved gable



Site photos taken 2017;

Models photos, clay

“Typically, one identifies important site influences such as manifest or latent typological/ morphological diagrams, prevailing architectural language, material, detailing or the like, and incorporates some or all of these influences into a design, often by collage. Such relationships are not affiliations, but alignments and serve to reinforce the dominant architectural modes governing a context.

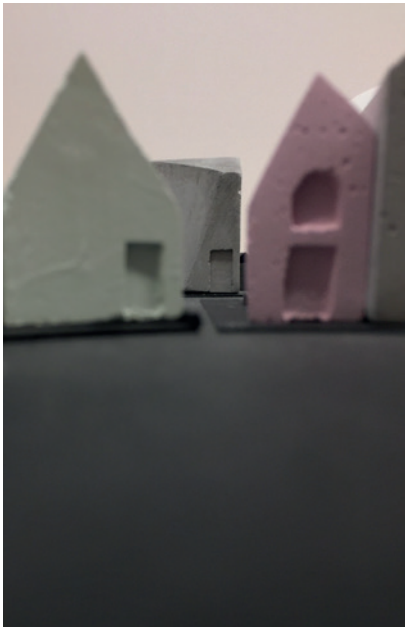
Affiliations, on the other hand, are provisional, ad hoc links that are made with secondary contingencies that exist within the site or extended context. Rather than reinforcing the dominant modes of the site, therefore, affiliations amplify suppressed or minor organisations that also operate within the site, thereby reconfiguring context into a new coherence. Because they link disjoint, stratified organisations into a coherent heterogeneity, the effect of such affiliations is termed ‘smoothing.’¹

¹ AD Space Reader: Heterogeneous Space in Architecture
Michael Hensel (Editor), Achim Menges (Co-Editor), Christopher Hight (Co-Editor) 2009

Model studies.



Existing on the edge between the city and nature, buildings make a gesture to the landscape by their folding roof scape. Clay study model.



Figures make a corridor to provide a short cut to the street and a sight view to the building behind. Site model in clay.

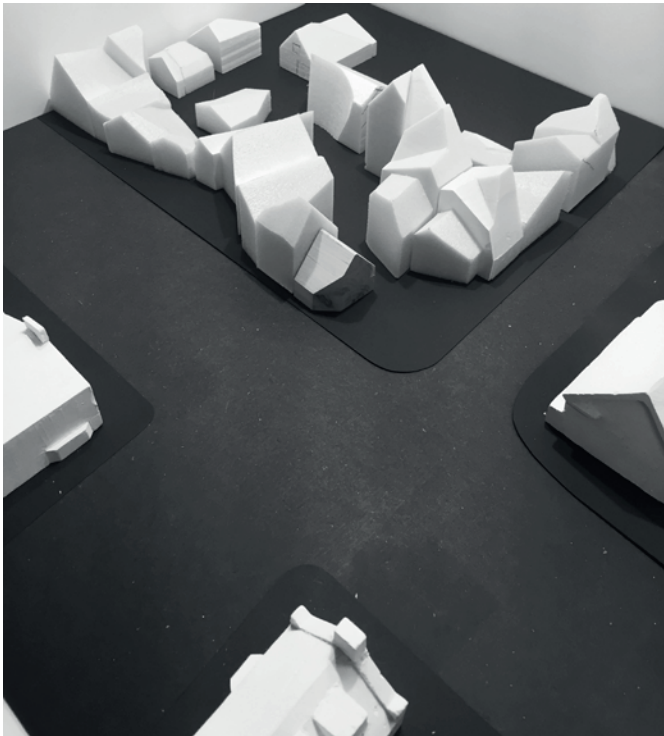


Organisation of the figures in a field condition makes organic curvature of the street. Study model in wood and foam.

Street scape.



Relation to the existing buildings (volumes in white) affects the scale, rhythm and position of the new form (on the right). House at the distance (green) reminiscent to the proportions of the one at front, so to make a "mind bridge" to the context, yet not directly. Plaster site model.



From the early project stages I used a physical site model to capture the street views, that new forms create and its relation to the context. These street scape became important part of my research, where I study a human scale perspective I understand that rich layering of the saddle roofs volumes and its gables orientation create our perception of a street as one whole, homogeneous yet intricate. It is important to keep the diversity in scales and loose fit, sometimes figures stay tight to each, sometimes opening space gaps, making visible the other volumes behind. In such arrangement one pays attention to the details, such as an apertures shape and the slight difference in the roofs angle gets more attention and that makes us wonder about the place more.





Rotation of the narrow volume at the corner makes a gesture to the buildings behind. It gives a flow to another curvature of the street and makes a viewer wonder and welcoming.

Street elevation scale 1:200



Floor plan, ground level, scale 1:200



Orientation of the facades differs which makes us see simultaneously clear silhouettes of some, and very volumetric character of the others. While one presents the rigid apertures, the other emphasize a cladding material. Such shifts of attention let us focus on various aspects of built environment, and appreciate its diversity.



Axonometric view of the same





Street elevation scale 1:200

In this row of the buildings we see silhouettes of common saddle roofs and gables of different scales and brick patterns, which is very typical to the Dutch building tradition.



Three unequal in masses buildings find a tight relationship with each other, to balance their incomplete form.
Clay crafted, gypsum 3d printed models



The height of the corner houses slope down in a welcoming character and make visible the masses of pointed roofs behind.

Street views

However by changing an angle of point of view, one can find unexpected complexity of form, which fluidly merge, intersect and correlate to each other in various relations.



Same street from above view. The silhouettes of the volumes unfold gradually in a graceful plasticity of the roofs form. Shadows from the corners of shifted houses of the first row emphasize the rhythm and reference to the situation behind.

At some moment we see a gap between two narrow buildings which and creates a sight view to the grand house at the back. Clay crafted, MDF, cardboard model



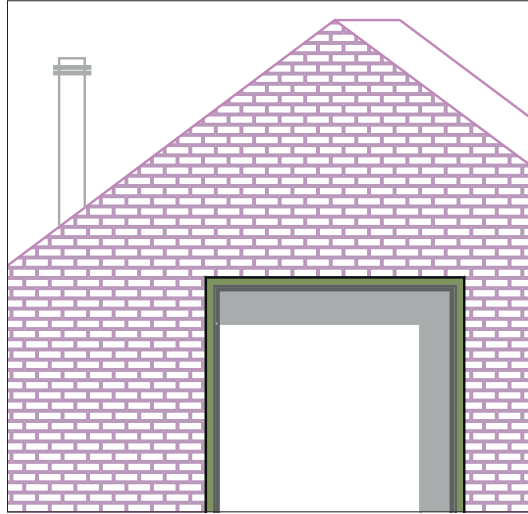
Fragments drawings



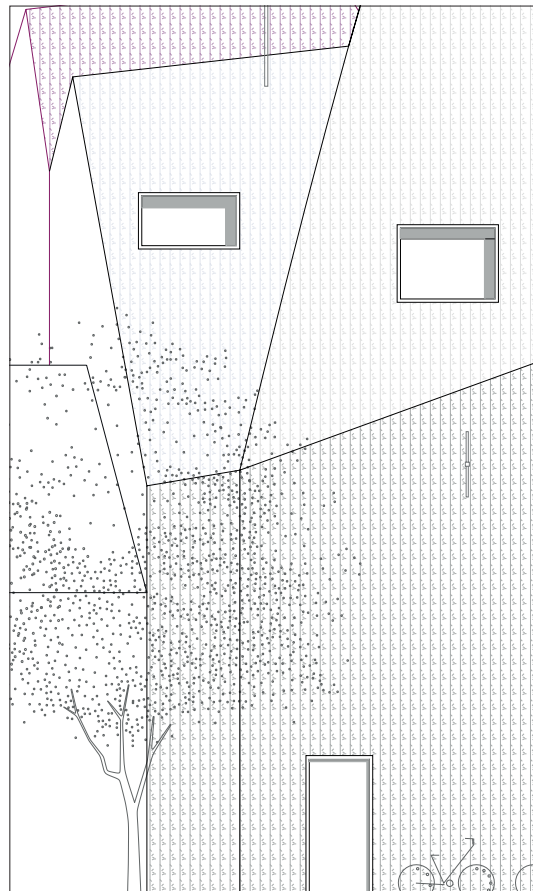
Fragment: Porosity on the facade brickwork



Design drawings



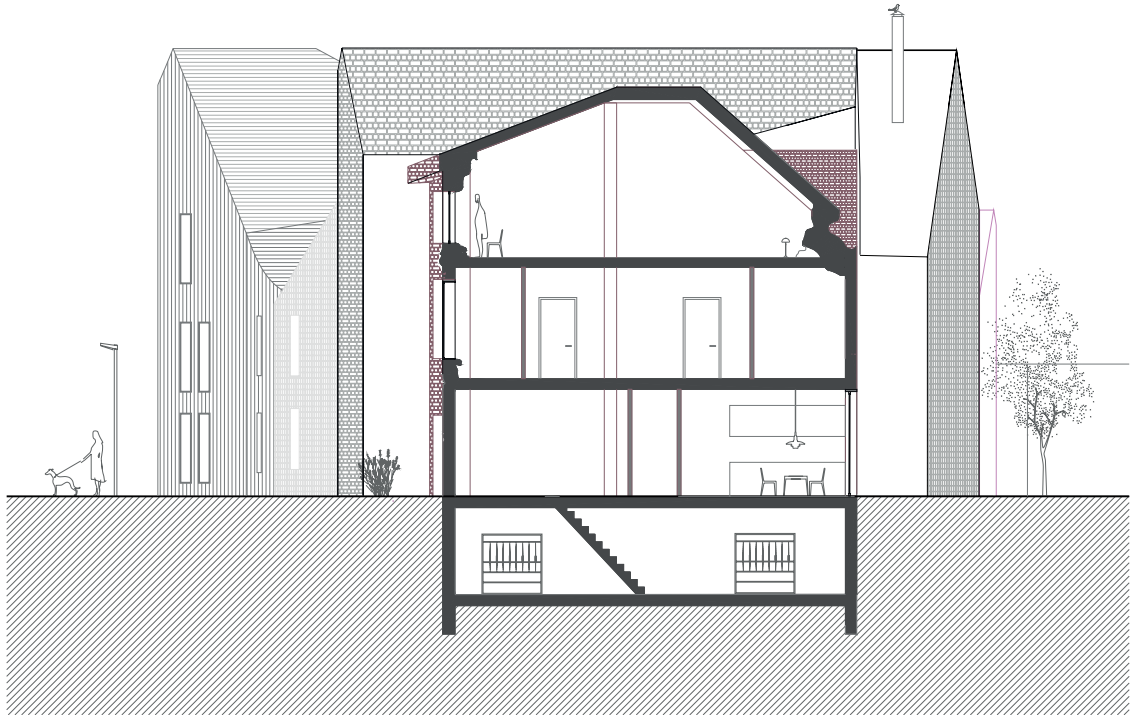
Fragment: Simple forms in detailing



Fragment: Continuity in brickwork



Case House

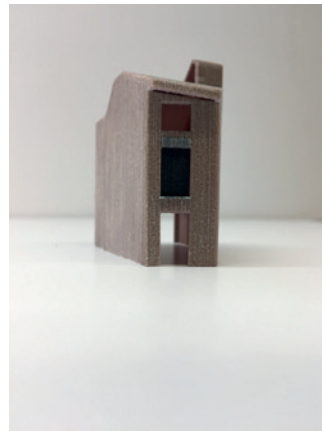


In this section of the Case House I study the effect of a brick work coming into the interior of the space.

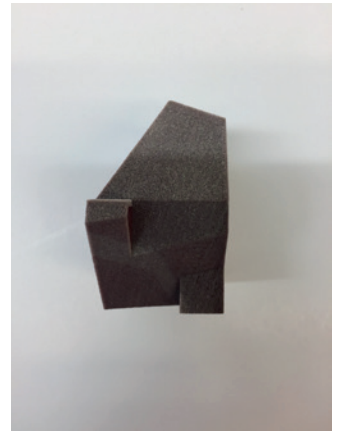
-1 Level: workshop, storage; 1 Ground level: atelier, kitchen; 2 Level: bedrooms; 3 Level: Living room.

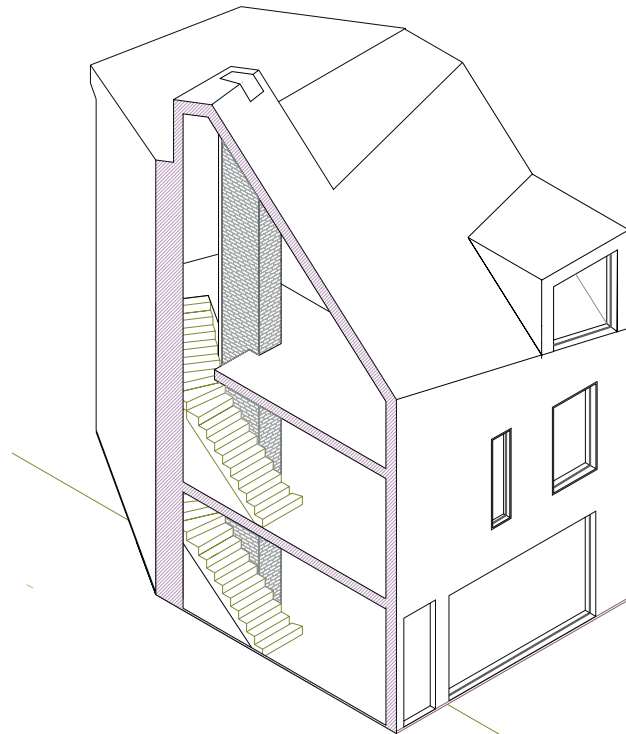
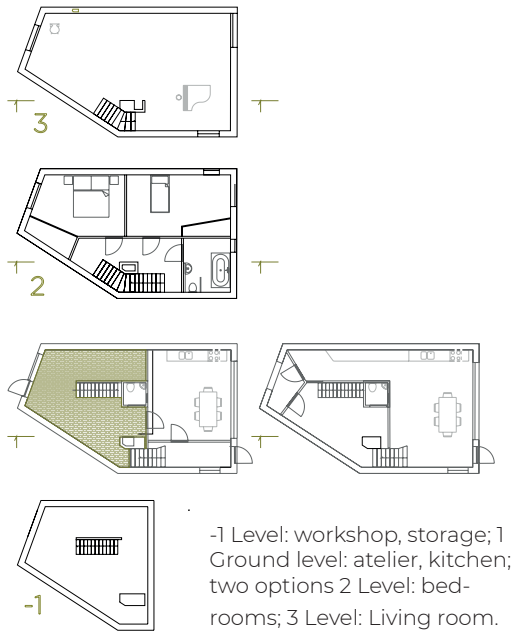


Clay model side views of the Case House



Gypsum 3d printed model the Case House



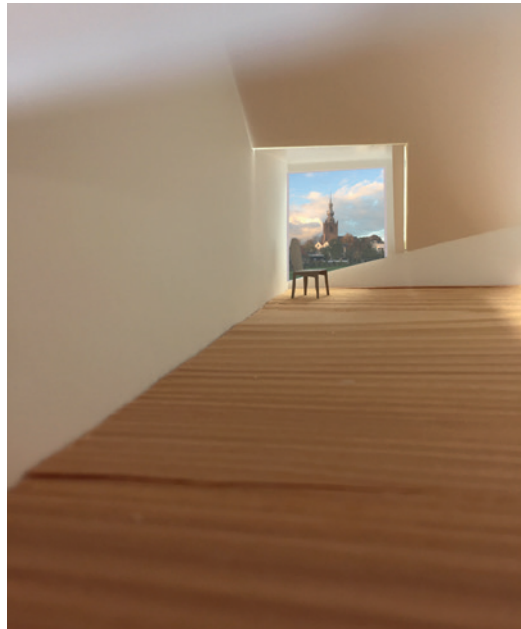


In these plans I study the conditions and space program in the house as a typical one, which I therefore call "Case House"

Axonometric section drawing shows the staircase arrangement.



Interior models photo picture studies a space on the third level of the Case House looking through a window framed by curved brickwork.
Cardboard section model 1:33



Interior models photo picture studies a space on the third level of the Case House framing the picturesque sight view on a church.
Cardboard section model 1:33

Brickwork



Such a corroded surface produces a gentle relief in which the contrast between built object and environment is less stark, as its porosity becoming three-dimensional and dissolve into the air, tree leaves and bushes or merge with alike building standing nearby.

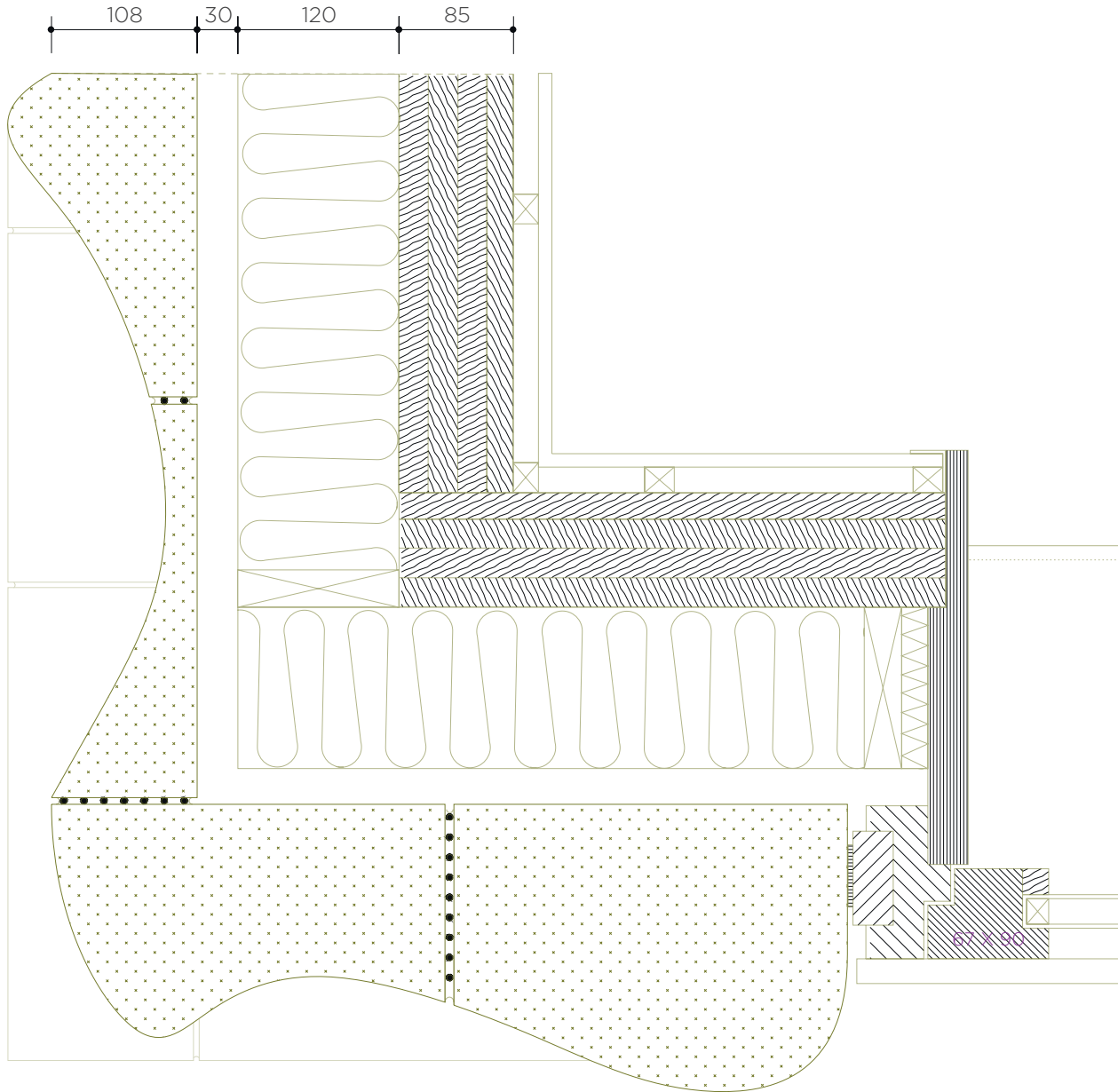
Brickwork



These models study what a curved brick form would do in different scales. As on a brick wall unit or on a whole facade.



Construction details.

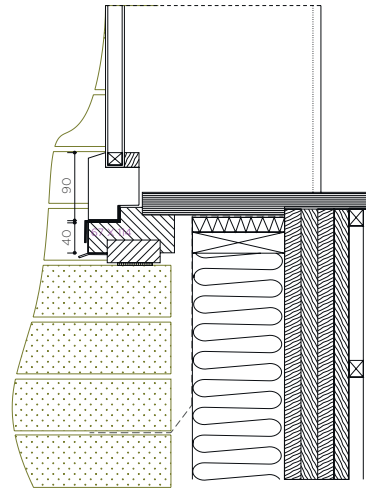
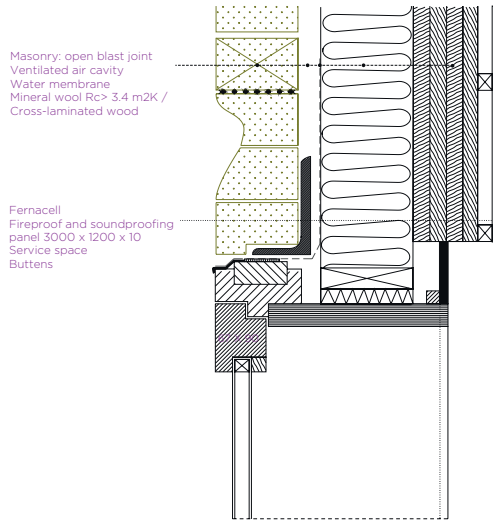
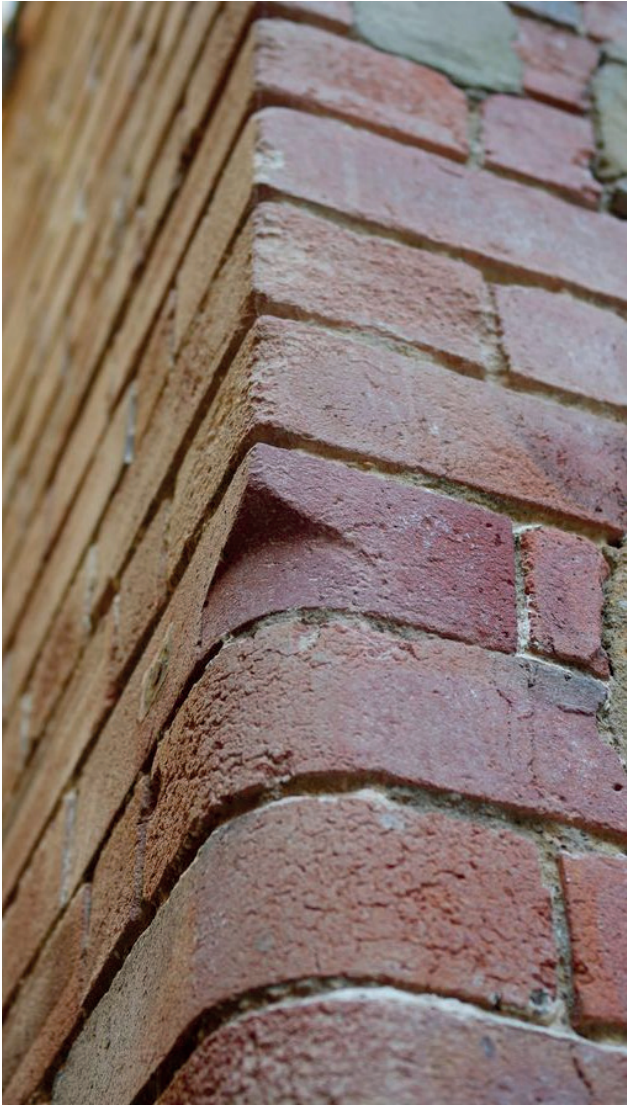


Construction detail 1:5

In construction details¹ I was looking for a simplicity in terms of construction and sustainability. So the choice of the materials, CLT as load bearing and brick facade as a finishing layer responds to the post-sustainable approach of a "use of common sense" and use of local materials and building techniques.

¹ Details developed with reference to the detail drawings by HCVA, Rotterdam internship 2017

Construction details.

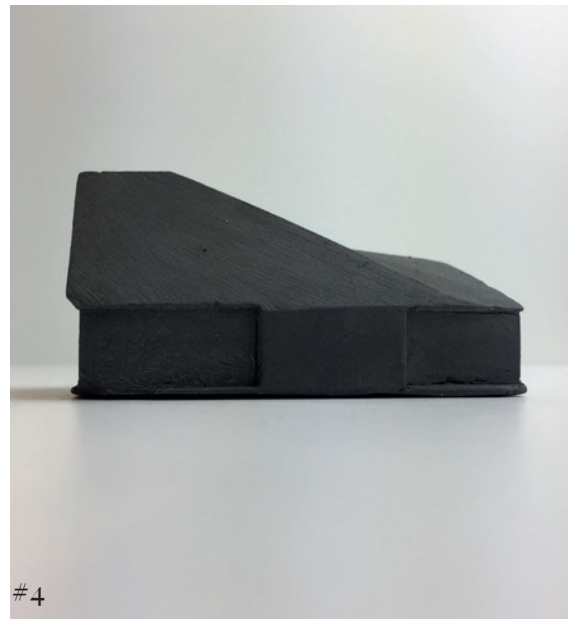


Construction detail 1:10

The argument for making the façades using the curved bricks is rooted on the idea of a rich plasticity that they create. Such "porosity" gives shadows on surface (which in a way may refer to the generous materiality of the historical buildings around, where old bricks keep the notion of time) It is a detail that buildings on the site can share and they sort of merge into each other by this porosity.



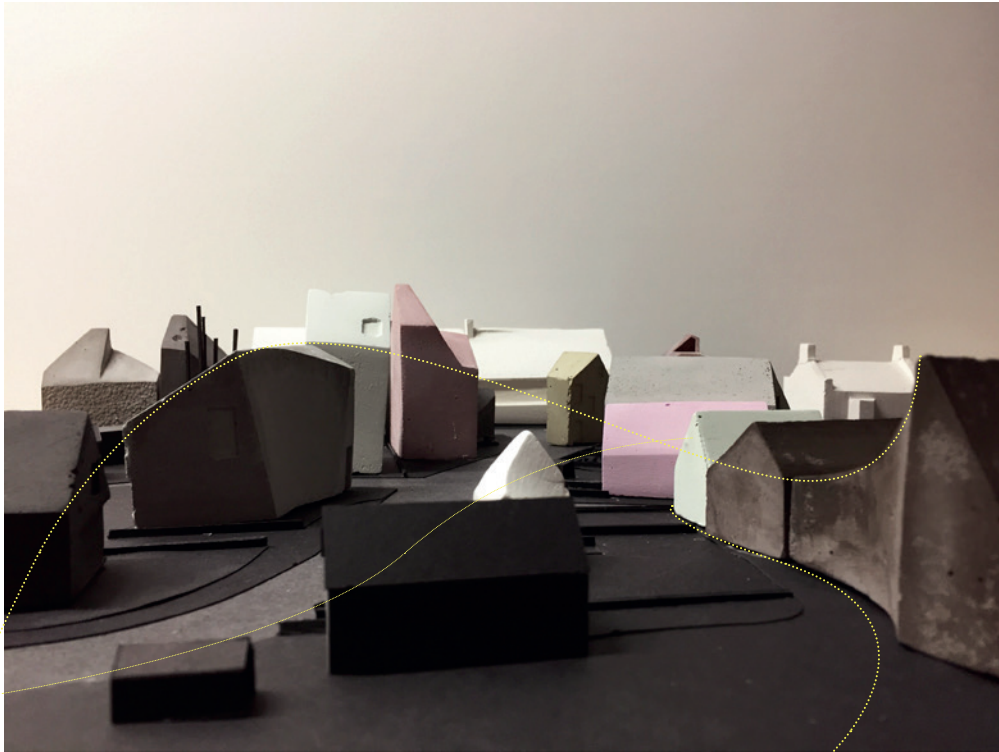
Figures.



Each of the buildings on the project site has their own character and strong personality. Like figure #1 looks bossy and heavy, figure #2 is very elegant and feminine. Figure #3 can taken like very normal and static, figure #4 can be compared with a sport car. However individual they may seem, all of them due to the material and building techniques (even at the study modelling stage) share the same logic and come coherent to each other.

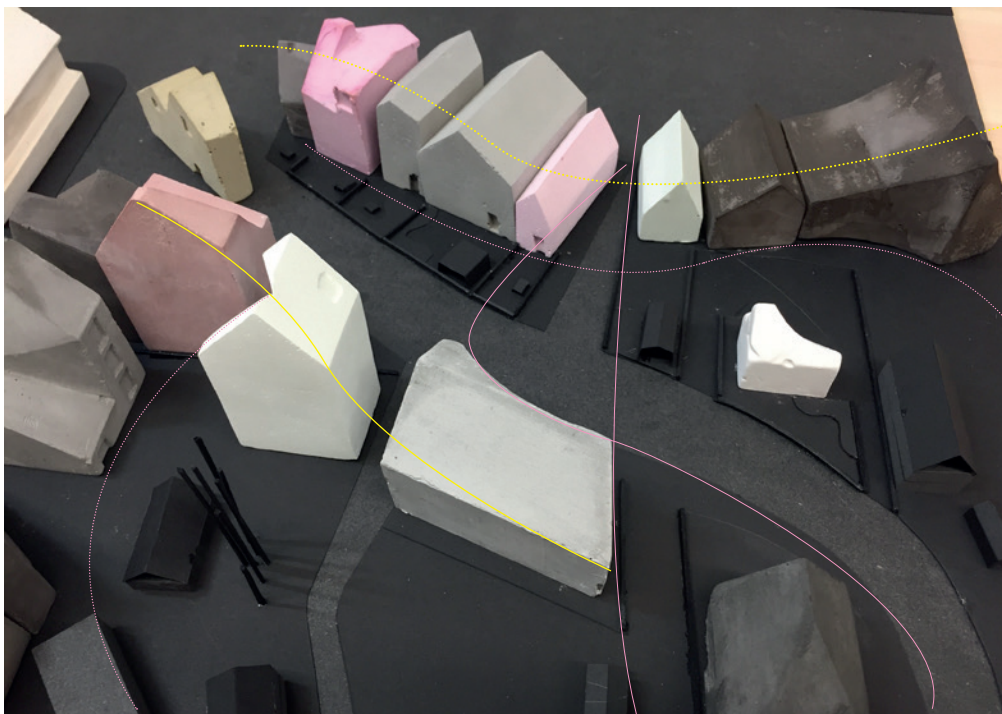


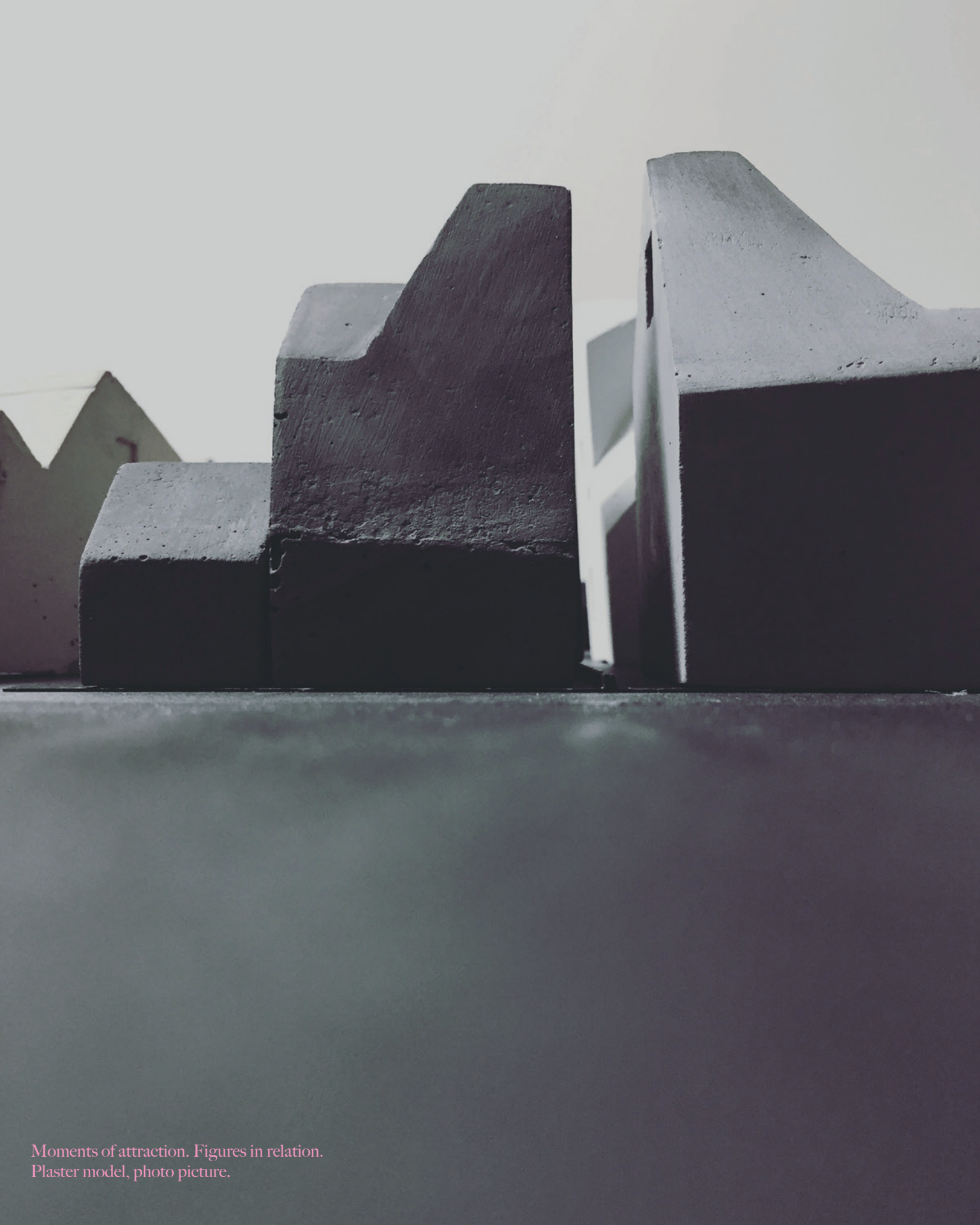
A figure find its place in the context.
Plaster model, photo picture.



Site model photo picture from the backyard.

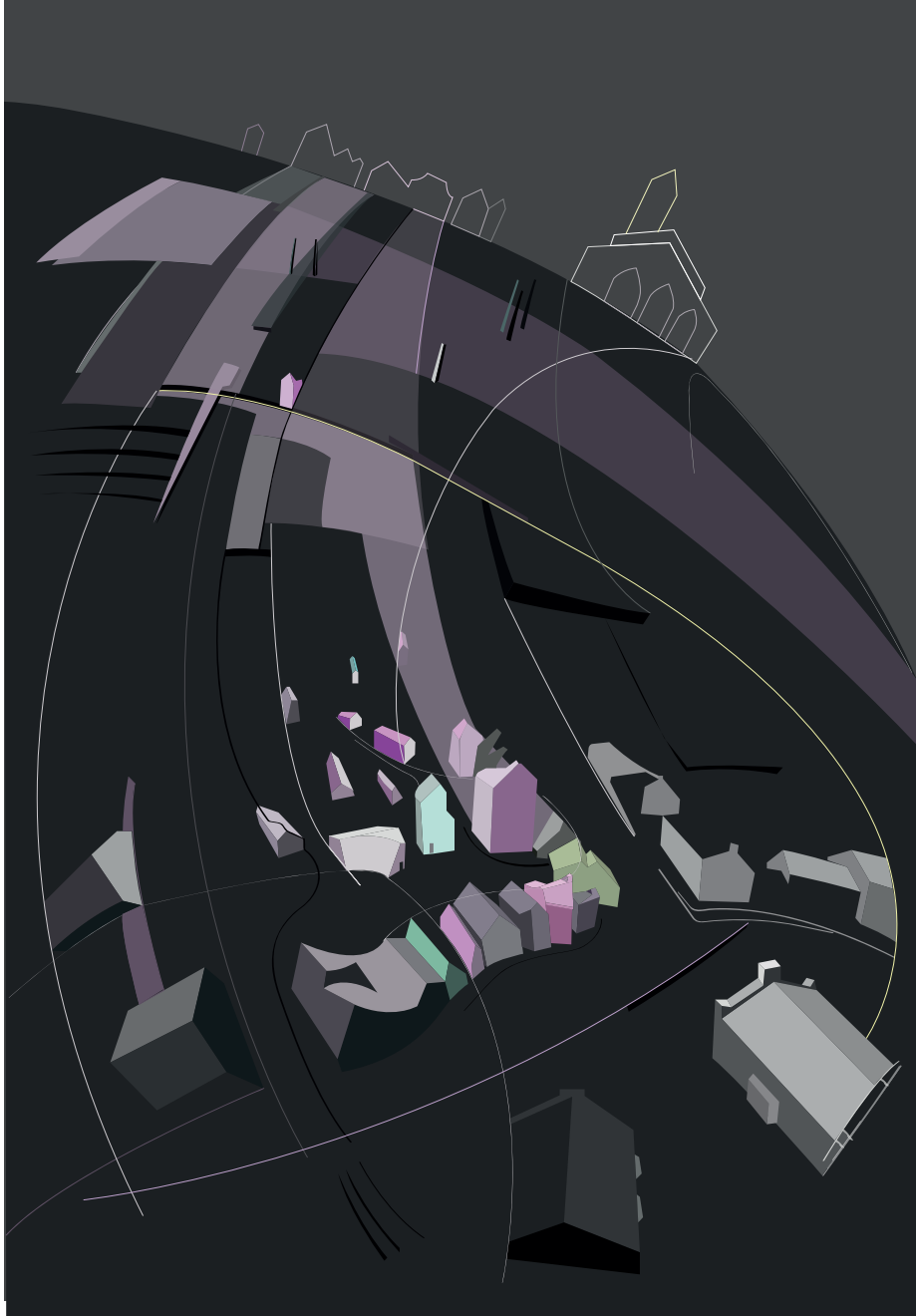
In my approach I use a physical site model to study and compare the unfolding form of the city. In response to the organic character of the city I crafted masses to create a fluid space in between. This plasticity can be read from different positions of view, as from the front street, as at the backyard (picture above). Various points connections and relations to be found in the form of the roofs, gables and orientation of the facade. Such organic coherence is achieved by individual crafting of the profiles, field organisation in a loose fit, and a shared common language of tectonics.





Moments of attraction. Figures in relation.
Plaster model, photo picture.

Field concept



This conceptual drawing represent the organic character of the design proposal which takes it reference at the old city centre. The curvatures of the new streets stream across the meadows, between the houses and flow beyond, finding their anchor point at the roofs, façades and a vast landscape in the context.

Chapter 2

A Field concept

“The whole is other than the sum of the parts”
Kurt Koffka

Content:
Introduction, definitions
Field concept in architecture
Figure-ground.
Reference.
Project interpretation.
Figure interpretation.

A Field. Introduction

The concept of a field originates in the physical sciences, where it tries to understand motion among objects without some substantive medium such as through the forces of gravity, electricity, or magnetism. Unlike the conventional understanding of causality where variable A somehow directly impacts B, field theory understands motion as structured by a set of forces whose relations create effects that do not reduce to the properties of individual units.

Following that comes social-psychological perspective of Gestalt theory associated with Kurt Lewin and Kurt Koffka 1951 and Bourdieu's field theory. In 1960s field theory was highly discussed and applied within art, architecture and urbanism.

A concept of field in architectural theories has been used as a tool to understand contemporary urban context and to explore new possibilities.

Though the field concept is used widely in current architectural debates, the use of the word "field" often goes without any attempt to clarify its meaning, so as if its understanding should come intuitively and has a shared meaning in architectural discourse. Hereby I try to reveal the scope within current positions.

Early interpretation of the field concept appears in architecture with reference to the field theory in physics in the work of Christopher Alexander in 1960. In his book "Notes on the Synthesis of Form" he refers to the field concept as a tool to explain his design methodology, based on the idea that "a design problem begins with the recognition of a misfit between two entities: the form and its context." Further comes an effort to achieve fitness between them. Form emerges as a solution of a particular problem. Accordingly, Alexander mentions "good fit" as "a desired property of this ensemble which relates to some particular division of the ensemble into form and context" Alexander provides an example with simulation of magnetic field as the good fit between form and context. He finds a form as a state that balances the contextual irregular forces and call these irregularities as the "functional origins of the form". There is a clear distinction of this position with direct analogy in physics from the approach of Rowe, who comes from the psychological point of view.

Colin Rowe and Fred Koetter's analysis of urban structure based their understanding on Gestalt principals and figure-ground readings in their article Crises of the Object: Predicament of Texture in "Collage City" 1978. It makes a special interest in my personal research since covering the topic of "Figure-ground" like in example of Uffizi Palace reading. (to be specified below)

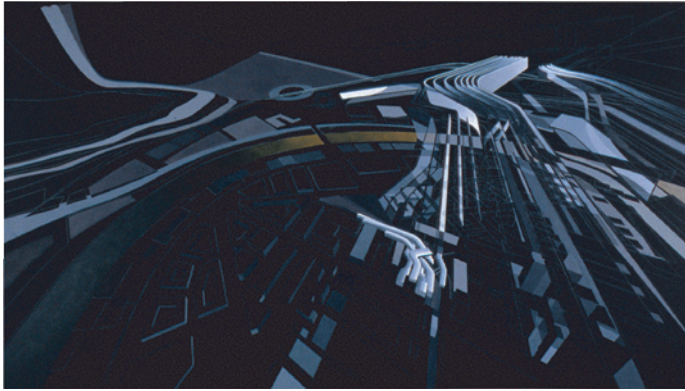
In the same period, shifting the attention towards "human association" in architecture and urbanism, mat concept was introduced and became a great tool to criticise modern functionalism, by Eric Mumford, Hashim Sarkis and later in 1999 Stan Allen. Mat concept suggest to create an urban field as a mixed-use and complicated urban structure with a vibe infrastructure integrated.

"Today mats are appearing everywhere. We call them fields, grounds, carpets, matrices. Whether seen as counterpoint to the preoccupation with sculptural form or as what happens to architecture when it has to cover really large areas, no building type, it could be stated without exaggeration, captures the predicaments but also the imagination of contemporary architecture more fully"

A Field in computational design

Another framework of understanding a field condition is set within computational design and diagram architecture. Diagram architecture defined by Stan Allen as “architecture that establishes a loose fit of program and form, a directed field within which multiple activities unfold, channelled but not constrained by the architectural envelope.”¹

Greg Lynn discuss it so that since it is characterized by forces rather than forms, diagram architecture needs to be understood as complex and dynamic; “Instead of form, patterns of organisation are to be addressed in architectural design”²



Zaha Hadid's painting of Maxxi, Rome's National Museum of XXI Century Arts © ZHA

There is also a scope of relationship between a field and a grid. A field is a complex organisation of in homogeneously distributed forces, which create moments of intensity within the whole. A grid, on the other hand, corresponds to the most homogeneous condition, which could be considered as an extreme state of field, in which all forces are homogeneously distributed¹

As Stan Allen states “all grids are fields but not all fields are grids.”

From this I make a conclusion that figure-ground relation is an extreme condition of a Field, since forces there are in homogeneously distributed and concentrated at certain locations within the field. With such a consideration I also see my design proposal representing a Figure-Ground Field or a “Tailored Form-Ground Field”.

¹Stan Allen 1998 “Diagrams Matter” ANY Magazine Vol 23, p. 16

²Greg Lynn, 1997 “An Advanced Form of Movement” Architectural Design



Figure-ground.

In my research important place takes place a notion of "figure-ground" or "figure-void" which goes along with "figure - field". From the Colin's Rowe and Fred Koetter analyse of Uffizi in "Collage City":

"A central void - figure, stable and obviously planned with by way of entourage, an irregular back up which may be loose and responsive to close context. ..."¹

Hereby Rowe elaborates on the meaning of space corridor as a solid matrix, within a building mass which constitute "the ground of the city". So within this relationship between figure-ground of solid mass and space between, this urban void becomes a figure, based on the continuous solid-the ground-the field. This approach is opposite to the perception of built form as figures. Void space emerges as a figure by serving as a stream of forces of the city, with points and picks of attraction (at the crosses and moments of extreme narrow corridors) Same approach in Gestalt theory of Koffka:

"It is clear that the smaller the area of the figured part in a constant led, the "greater its relative energy density with regard to the ground part. If the condition that the energy density in the former is greater than that in the latter is a necessary condition, then the smaller part must be the figure"²

Stan Allen also defines the figure-ground relations, though reading a figure as solid part of the field organisation. However he still conceive the city as a heterogeneous, complex field of diverse forces, with "moments of intensity":

"One of the potentials of the field is to redefine the relation between figure and ground. If we think of figure not as a demarcated object read against a stable field, but as an effect emerging from the field itself - as moments of intensity, as peaks or valleys within a continuous field - than it might be possible to imagine figure and field as more closely allied. What is intended here is a close attention to the production of difference at local scale, even while maintaining a relative indifference to the form of the whole."³

The reading of a street void as a focus object also found in "The Poetics of a Wall Projection" by Jan Turnovsky :

"If we consider architecture as a delimiter of space...then we have little interest in the actual built substance beyond the surface of this net. What concerns us instead is the volume and the form of the space. ...We will initially perceive houses along a street as a delimiter of space, a continuum that itself could stretch forever, especially if the side views are either concealed or disappear to a distant vanishing point. But if we consider the facades individually, we tend to switch to an object oriented mode."⁴

So here Turnovsky regards a street space as a volume of air and the facades lining it as the surface of spatial boundary rather than objects.

1 Colin Rowe "Collage City" The MIT Press 1978

2 Kurt Ko a "Principles of Gestalt Psychology" 1935

3 Stan Allen "Points and Lines: Diagrams and Projects for the City" NY 1999

4 Words 3 "The Poetics of a Wall Projection" Jan Turnovsky; AA Publications 2009

Figure-ground reference.

Looking through references in urban planning, it deserves mentioning a project proposed by Rem Koolhaas in 1987 for new town of Melun -Senart, France, which is constructed on the existing traditional urban layout. From the review by Alex Wall, this project "...reverses the formal and structural roles of figure and ground, building and open space," hence the figure- field organisation of the traditional city is the departure point of the project. Here the voids are translated as from the definitions of urban voids within a traditional city by Rowe and Koetter's , as figures serving as points of attraction. "Rather than concentrating on the planning and arrangement of buildings, variously programmed voids are outlined."

"The voids exercise a greater effect on the subsequent built environment than does the design of a particular building layouts. They provide a resilient structure that can withstand the unpredictable political and economic pressures that architects and urban designers are rarely able to influence. Melun-Senart continues a logic that progressively reverses the significance normally attached to buildings and directs attention instead to the spaces in between."

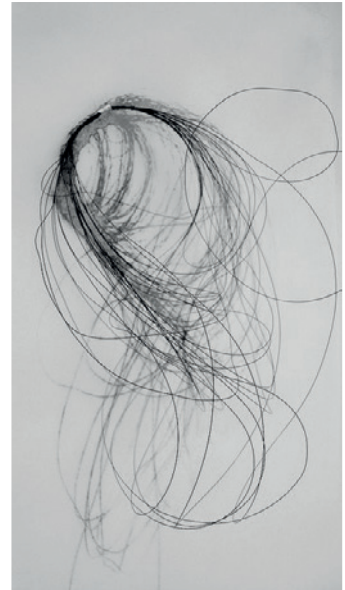


© DAM UND OMA, OFFICE FOR METROPOLITAN ARCHITECTURE, REM KOOLHAAS / FOTO: UWE DETTMAR

Alex Wall, "Programming the Urban Surface" 1999 NY



Field in Art.

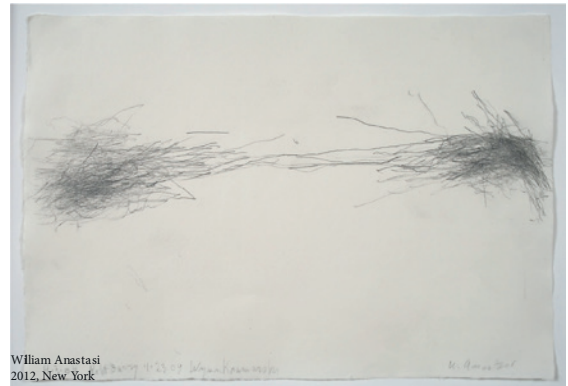


Juliet Macdonald (UK)

In the references below I study the field condition in graphics and sculpture. Artists of beginning in the mid-sixties were aware of the spatial field and some, like Barry Le Va dissolve the idea of "sculpture" as a delimited entity, an object distinct from the field it occupies.



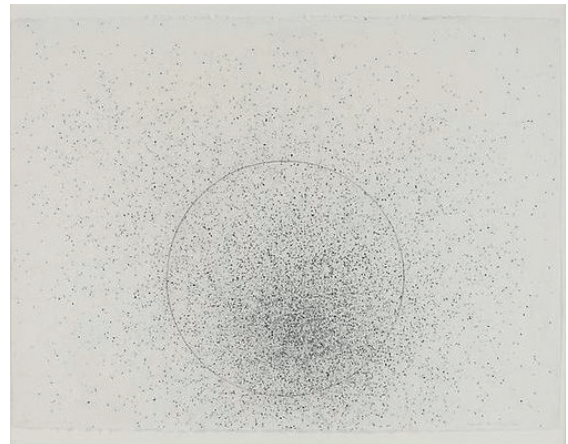
Richard Serra, Rotterdam Vertical, Boijmans 2017



William Anastasi
2012, New York



Monika Gryzmala



William Anastasi
2012, New York

Post-minimal.



Saret



Benglis



Le Va

"Le Va signals a key compositional principle emerging out of post-minimalism: the displacement of control to a series of intricate local rules for combination, or as a sequence of events, but not as an overall formal configuration. When working with materials such as wire mesh (Saret), poured latex (Benglis), or blown air (Le Va), the artist simply cannot exercise a precise formal control over the material. Instead the artist establishes the conditions within which the material will be deployed, and then directions it flows."

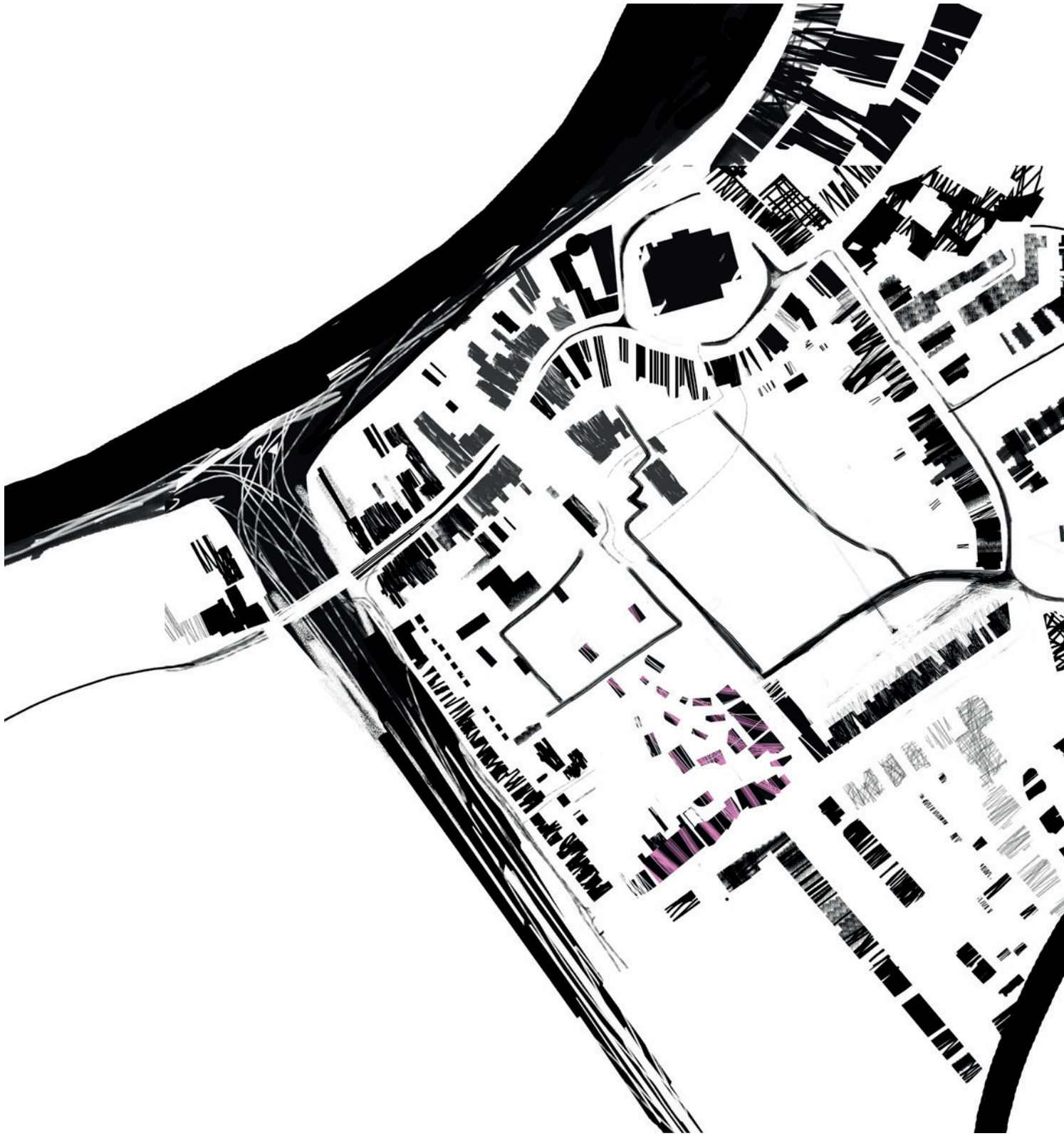
Stan Allen "Points+Lines" 1999 NY

In this model below I examine the field condition or "sequence of events" within a house. It is a conceptual building that is reminiscent of the familiar and persistent forms and typologies, yet compelling emotive qualities of material.



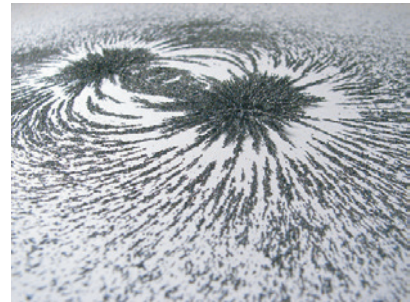
Plaster, scale 1:200



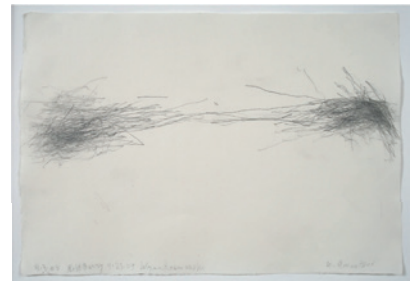




Aerial top view on a waterfalls Algar



Application of magnetic fields.



Blind Drawing. W. Anastasy

In urban planning of my project I apply the concept of Figure-ground to bring a Field quality to the site. Hereby the Field-reading of the plan, the references in nature, physics and art and interpretation of the "stream of forces" in the site mode.

The anchor points for these flows can be found at the city centre so they make a link between the new form and the existing historical.

Chapter 3. Methodology.

“Architecture is not about inspirations, it is about history and principles. Inspiration does not exist. Architecture is about hard intellectual work. You have to think through problems and analyse history and reality rationally...

It is a peculiar way of knowledge, not a form for forms sake. It is about methodology.”

Paulo Mendes da Rocha

Content:

Research method.

Post-parametric approach.

Method in diagram.

3.1 Context reading.

3.2 Group Form.

Site application.

3.3 Figures

Design research plan
<ol style="list-style-type: none"> 1. Elaborating shapes of the models <ul style="list-style-type: none"> -Revealing unconscious silhouettes from the context -Addressing specific qualities of the urban fabric -Building interrelations within a group -Indifference to the form of the whole 2. Analyse the qualities between variations and define the logic 3. Apply the principle to a different form or site plan. 4. Letting object meet the field condition <p>Key element in my research is Semantics: significance of reading profile, form, shape, figuration, sculpture, metaphors. Above mentioned Design research plan describes how do I come to the semantics.</p>

Design and research method
<ol style="list-style-type: none"> 1. Collect the context mental map. 2. Experiment with physical models in different materials and scales. 3. Through a performance of a physical models on a site model define the qualities to be brought as systematic 4. Make a human scale sight view pictures. 5. Specify details and programme of the selected figures. <p>The project started intuitively with shaping a field without programme or prescription on what kind of field and how I intend to build. Through the experience of modelling process, I came to a method which became a guiding line for a decision making.</p>

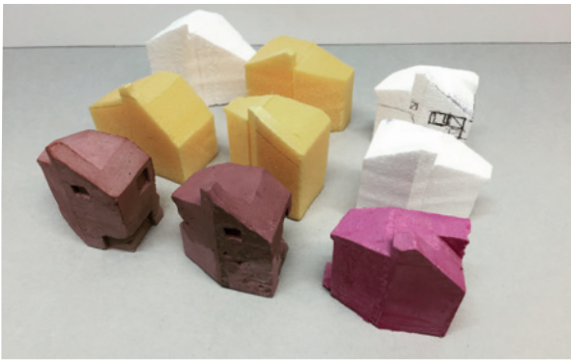
Design non-research plan
<ol style="list-style-type: none"> 1. Acceptance of the random, weak, chance 2. Focus on architecture's representation of itself opposed to realism 3. Employing antiaesthetic aesthetics of appropriation (accepting ugliness) 4. Programme will adapt to the gesture and a potential spacial qualities <p>Modelling itself was an intuitive process, driven by materials qualities and time limits. Constraints and possibilities of workshop working affected the design which was not a part of research plan. However the models were a great time investment since themselves were ready material for representation.</p>

Non-design research plan
<ol style="list-style-type: none"> 1. The narrative of the objectification in the architecture history 2. Current positions regarding the form (formalism, de-composition, deconstruction, weak-form, loose fit, etc) 3. Object vs. Field 4. Conditions of the field project and its interpretation in art, design and architecture <p>Looking through the positions regarding the Form theme, I got acquainted with for me new theories and works in architecture and art. Looking back at the diversity of approaches let me define which position in the field appeals me.</p>

There is a growing position that the parametric is already a historical periodization and, as McLuhan might argue, is the “counter-environment to the current state of pedagogy and practice. Thus, the post-parametric is not the intensification of the same or similar codes and processes, as in the rationalization of curvature, optimization of form, or even the potential democratization of compute power afforded by cloud computing, self-modelling buildings, or personal super-computing. Instead, fundamental assumptions about parametric thinking, design, and computation need to be re-assessed according to the physical realities of our actual environments and sensory thresholds. Questions of perception, scalability, technology transfer, translation (not from drawings to building, but from models to models), and the construction of evaluative criteria for iterative design are critical to this re-alignment.”

From Calling Papers of Jennifer Leung, Yale 2012

Post-parametric in the Figure.



Search for the form of a Case House, 1:200

Opposed to a form determined by coding parameters, or extruded from the drawn plan demands, the volumes above are produced with “model-to-model” logic, driven by the perceptual idea on what the form should look like and how it should not. By elaborating numerous transformations and comparing results I look carefully at the relations with the context and I bring selected qualities into the end result. One may call it just like “sculpturing”.

Such approach I perceive also as under the definition of “post-parametric” as it responds to the ignorance of pre-determined conditions regarding the form and accept accidents, further repeating and learning from them.

Post-parametric in the Filed.



Search for the urban fabric form, 1:200

In post-parametric scheme elements arise not from some predetermined logic that is built into the design of a form. As opposed, the organisation is built around the effect of unexpected relationship of the repeated and slightly modified elements. The ‘loose t’ of those elements allows democratic adding and contribution, which create not sameness but even more reach in diversity organisation.

Such method illustrate my assumption, that parametric environment has came not to a variation but rather a homogenisation of the form which create sameness. Digitally modified environment gets a status of “smoothened” or “uniformed” and risk to loose a distinctive quality of surprising incoherent elements and details that harmonious context presents.



Method.



Step 1. Collecting a context mental map.

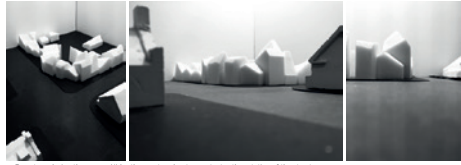


Step 2. Experimenting with typology.

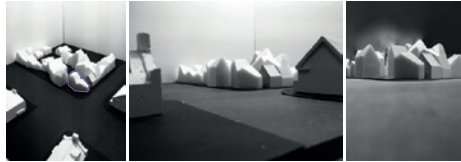


Step 3. Grouping and analysing.

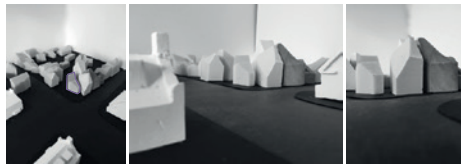
Method.



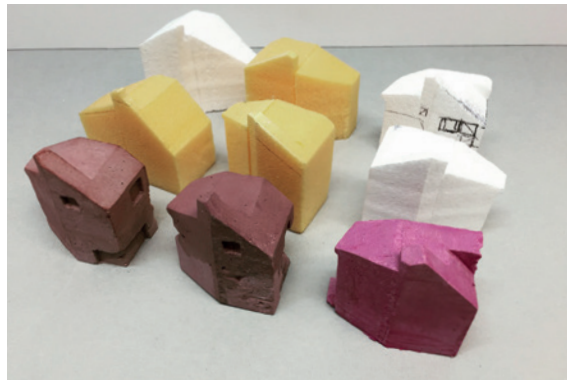
Curvature closing the corner. Hides the courtyard, yet accentuates the rotation of the street.



Group of two giving insights from both side. Short volume on the right, reveals silhouette behind.



Step 4. Applying to the site ,comparing,selecting.



Step 4. Sculpturing and editing.



Step 4. Appreciating.



Context reading.

Merged form.



Pointing gables/flipped texture.



Overlapped saddle roof.



Hereby I present how I read the context. Firstly by close observations during a site visit. Secondly collecting the image library from the distant context, thus from other cities in The Netherlands. Finally I study tradition and building techniques from books, by sketching and looking carefully at precedents.

As a result I get a mental map with idea about typology and morphology of the place, to consciously and unconsciously reveal it later in a design process.

Context reading.

Extruded chimneys.



Shifted angle of a back facade. Relief on the corner.



Shifted alignment.



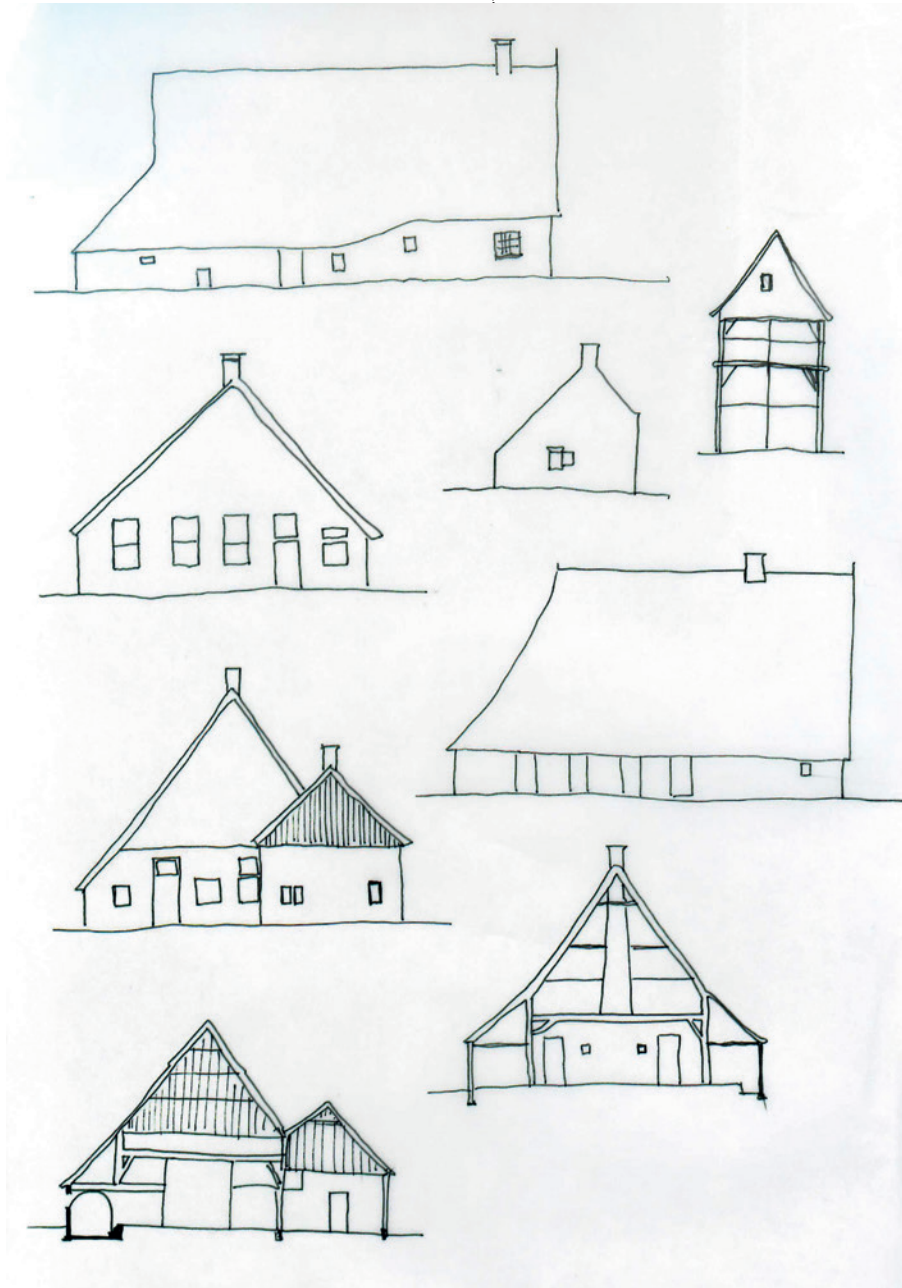
Gable in different materiality. Details in texture and colours.



Various scales.



Context reading.



By studying the structure of typical rural Dutch houses (above found in the South Holland) I get understanding the construction techniques which were used for centuries in the area and how do they come to these shapes of the houses.

"When a clarity of structure is combined with an architecture that expresses its construction, the spaces have a rich dialogue between the singular and the many or the figure and a ground."¹

¹Ryan W. Kennihan Architects

Context reading.



Rural houses in South Holland.

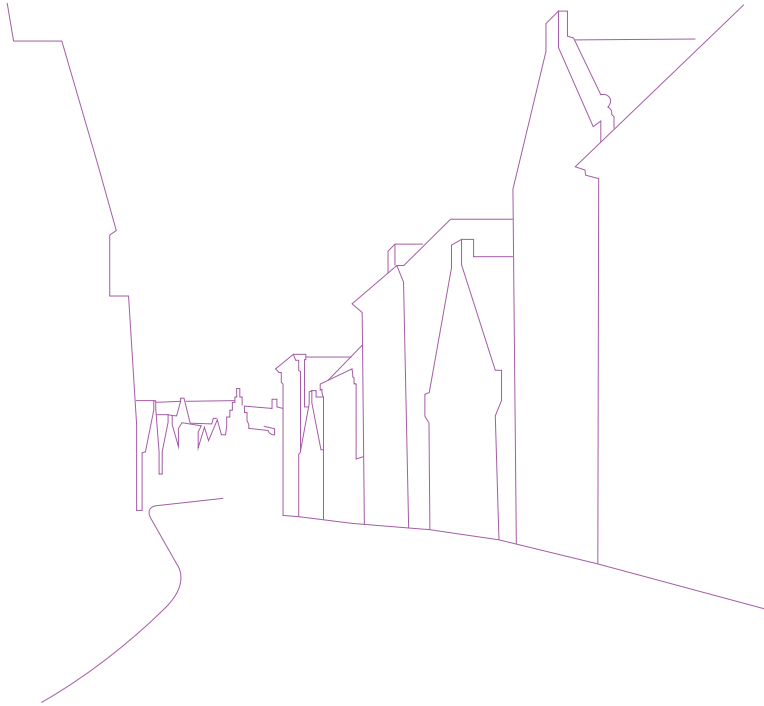


Context reading.



Through these buildings I found around The Netherlands, I try to collect the visual identity of the place from the notion of specific forms and silhouettes.

Context reading.



Tightly positioned narrow volumes draw a clear streetline. Variosity of gables in forms do not distract the overall coherence of the streets front, due to its approximate scale, rotation and coherent details (window frames coloring). The morphology of the saddle roofs repeats, as its materiality and prolonged direction.



In proposal the scale of a single volume reduced and partitioned. In geometry of the roofs, such elements like chimney and mansarde windows are merged with the house volume, yet keeping the rhythm from gable to gable.





3.1 A Group Form

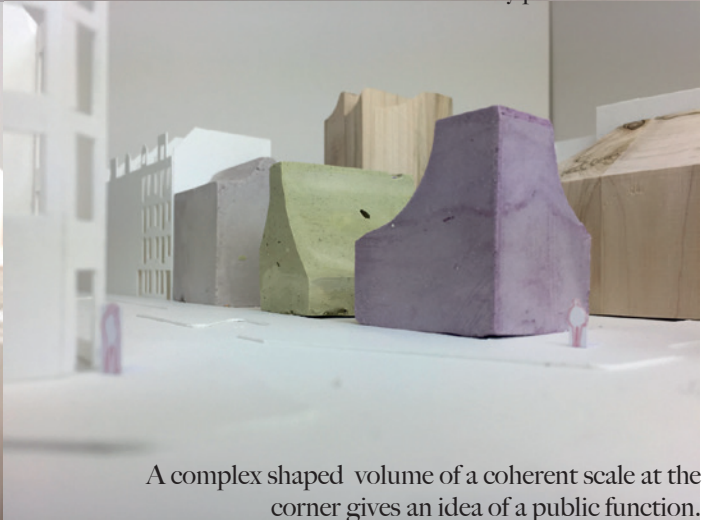


One of the solutions against objectification a small-scale architecture is a grouping. Corner buildings being a potential object, a semi-object requires a careful articulation in order to make it a part of the cohesive urban block. Each combination was studied from the human perspective scale taken in a physical model at the Amsterdam context (Borgerstraat, OudWest Amsterdam) and later at Overschie site model.





Tall volume at the corner makes an effect of a randomly placed landmark

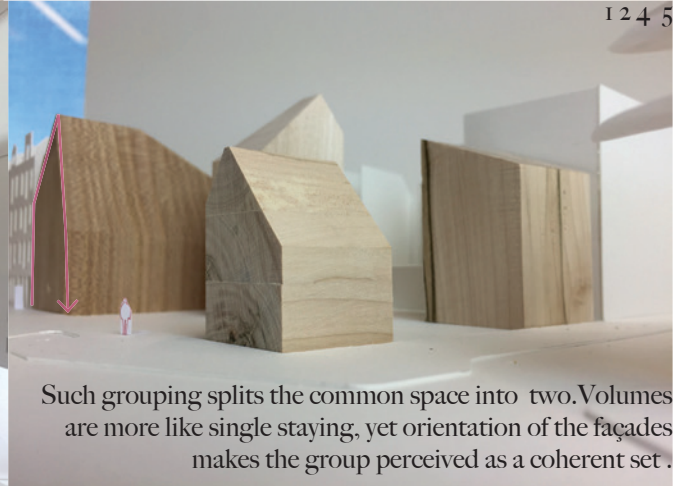
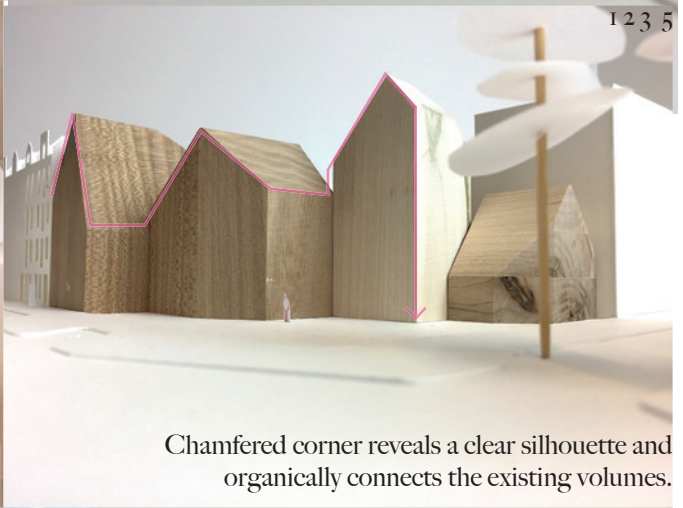
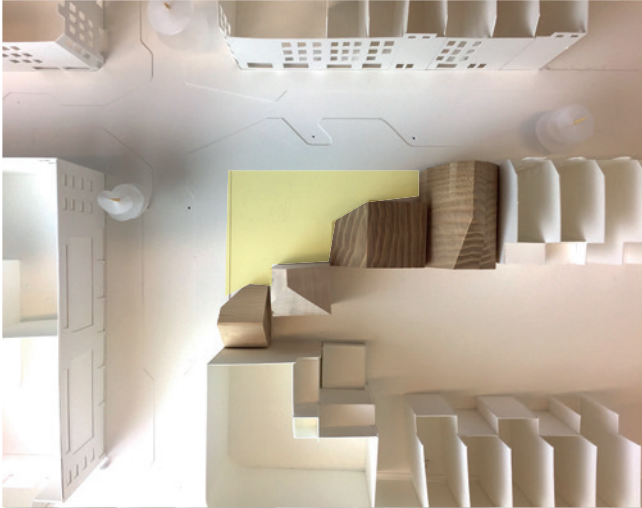
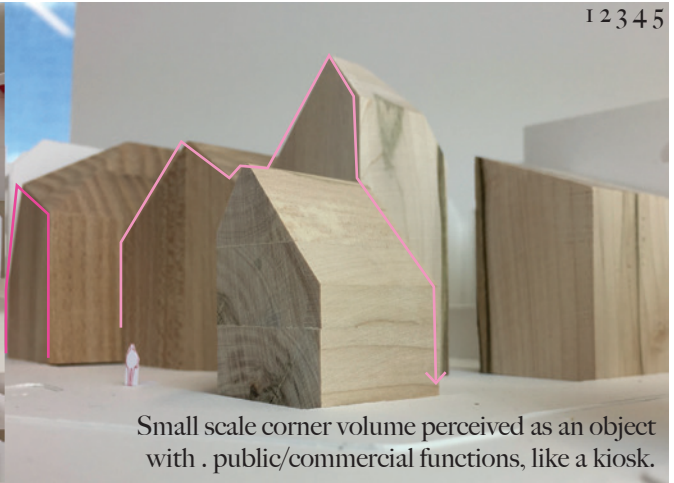


A complex shaped volume of a coherent scale at the corner gives an idea of a public function.

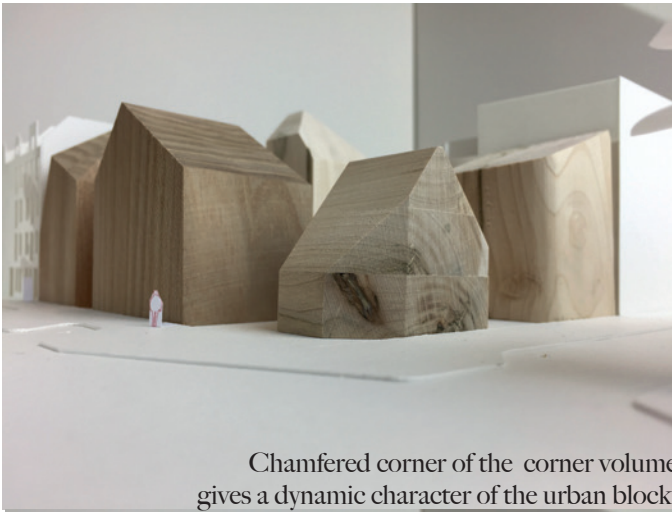


The same but tightly attached with other volumes makes less accent on the form of a single volume

Method.



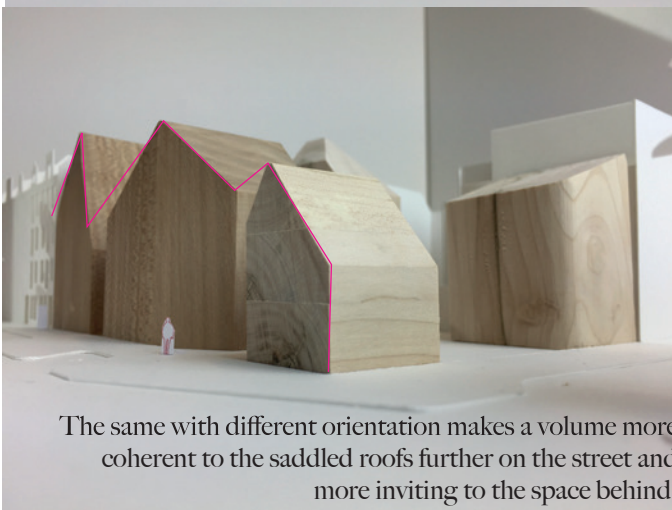
Group form.



Chamfered corner of the corner volume gives a dynamic character of the urban block.



Straight wide corner of the corner volume is less inviting to the space behind.



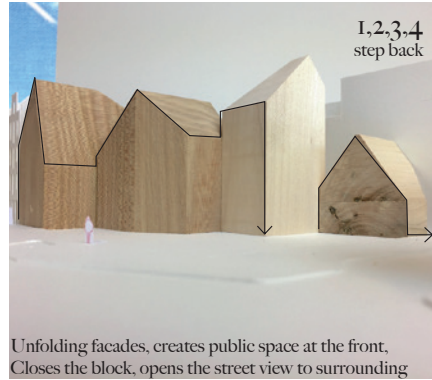
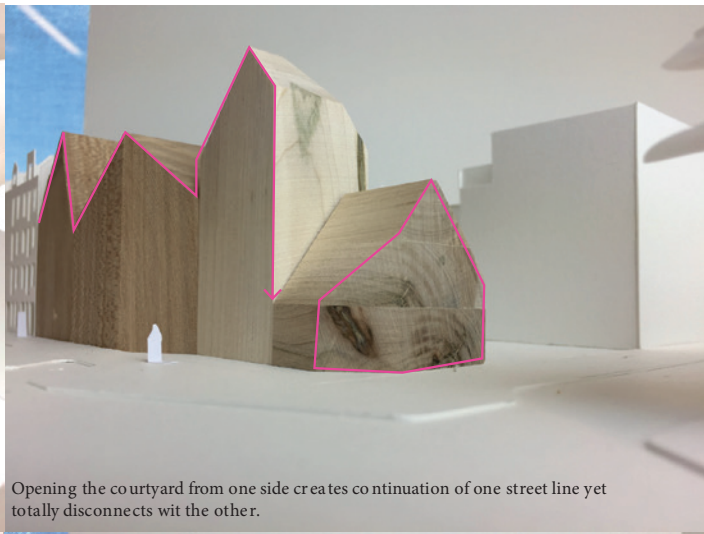
The same with different orientation makes a volume more coherent to the saddled roofs further on the street and more inviting to the space behind.



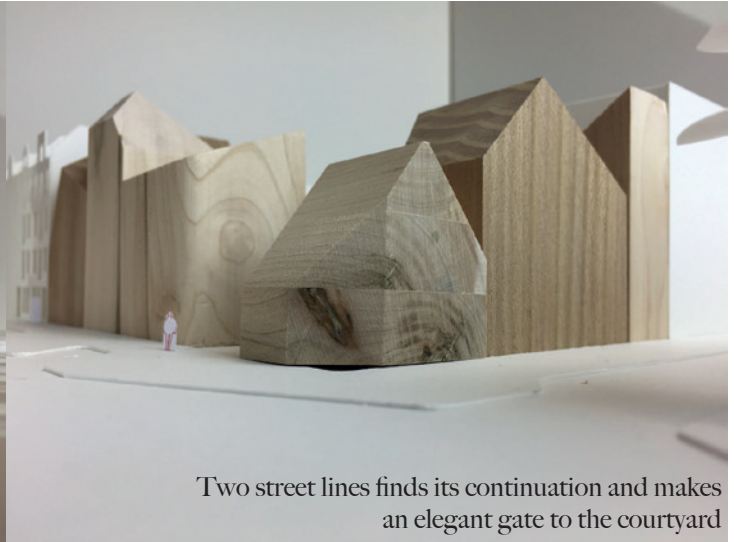
Here comes clear the significance of not only the corner volume, but the quality of corner cut and orientation of its façades.



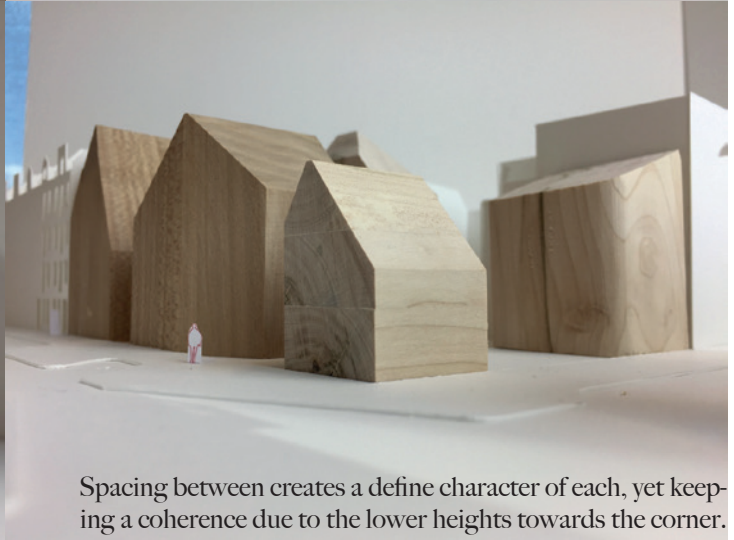
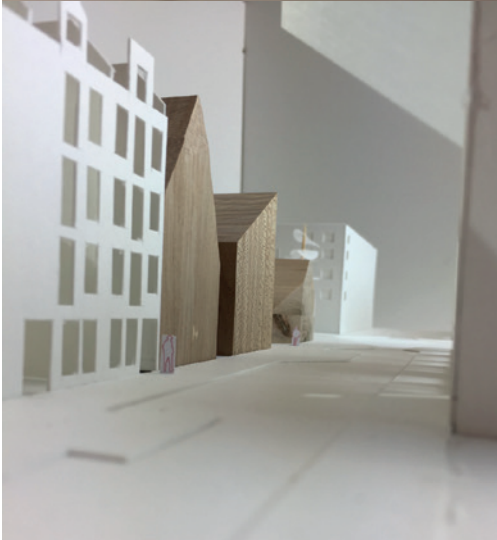
Method.



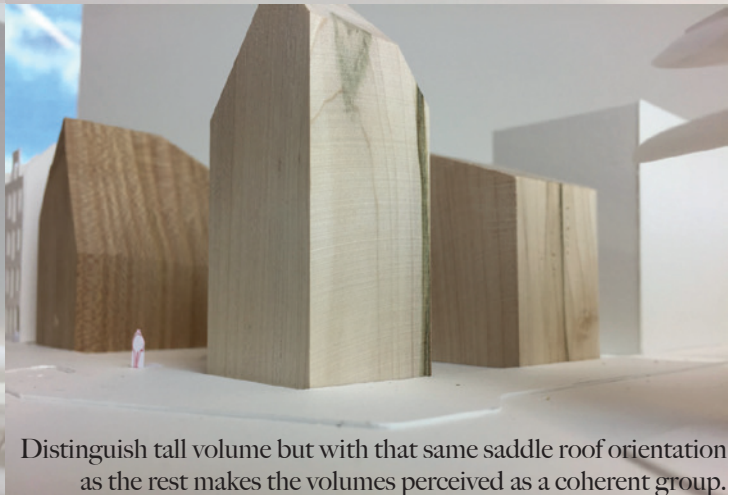
Group form.



Two street lines finds its continuation and makes an elegant gate to the courtyard

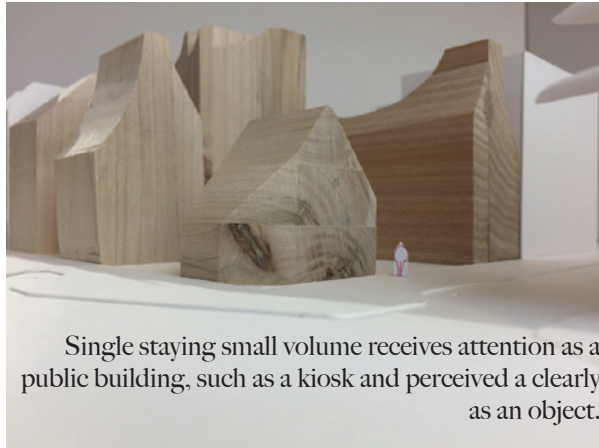


Spacing between creates a define character of each, yet keeping a coherence due to the lower heights towards the corner.

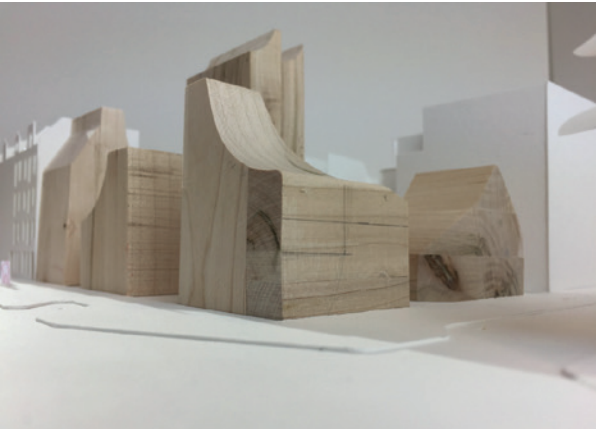


Distinguish tall volume but with that same saddle roof orientation as the rest makes the volumes perceived as a coherent group.

Method.

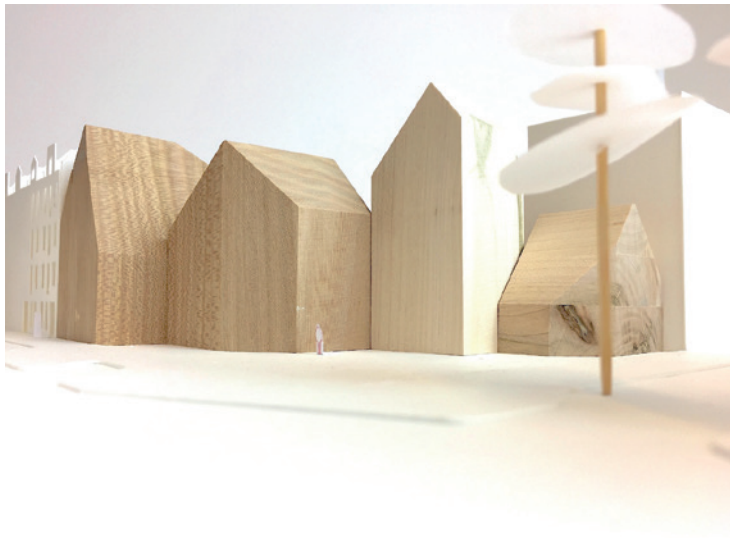
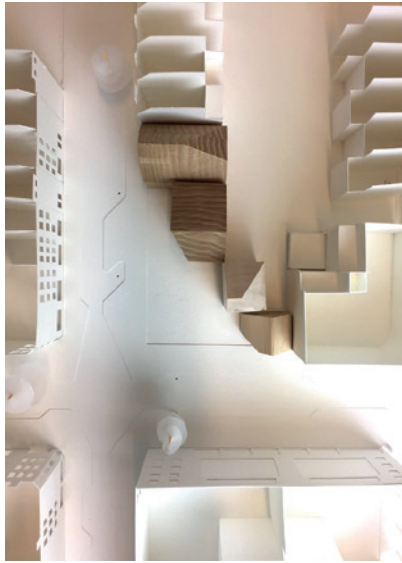


Single staying small volume receives attention as a public building, such as a kiosk and perceived a clearly as an object.





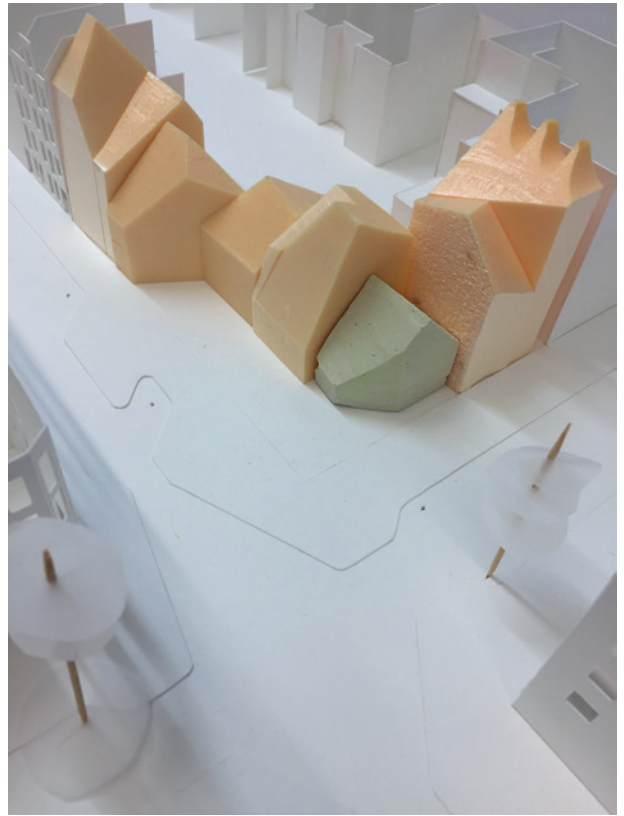
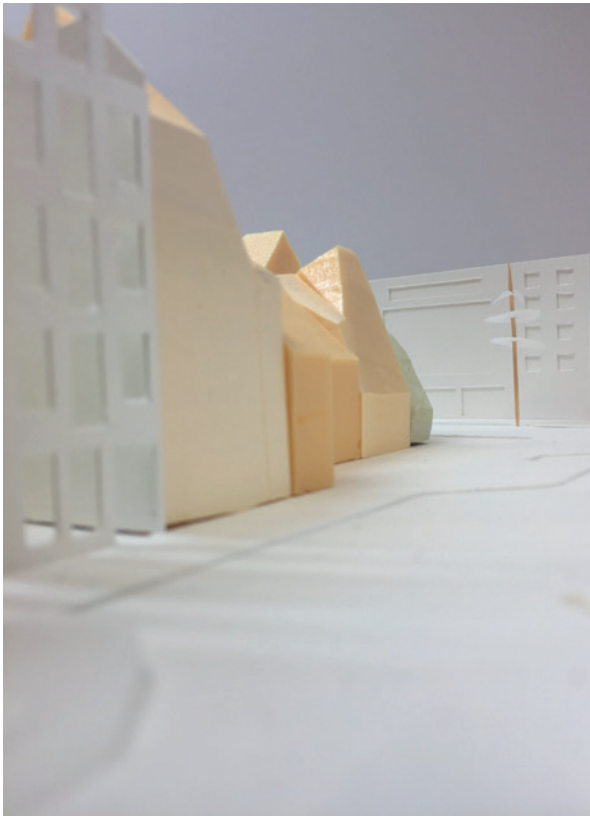
Group form.



This particular situation I found as the most appealing. It feels good to open the corner and reveal the views to the streets facades from all the points of perspective. The silhouette of each volume is very legible, yet none is perceived as dominant.

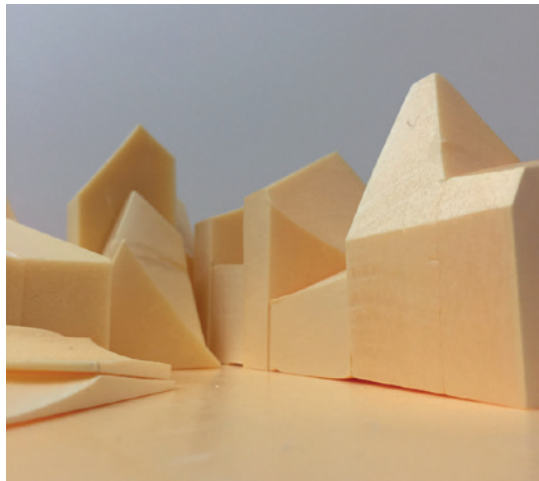


Method.



Hereby the roof cut of the volumes (in foam) follow the same logic to create intricate and layered massing.

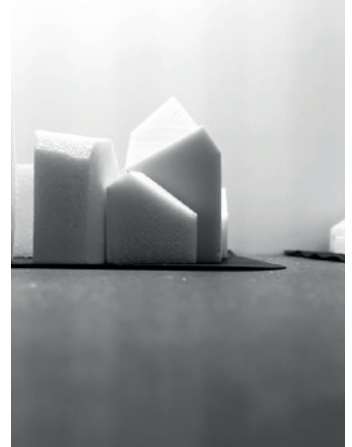
Method.



In this studies I create a fictional city, to perform the field of variation of the volumes, which share same tectonics, scale and (most of them) cutting logic, but differs in details and articulation of that logic applied.

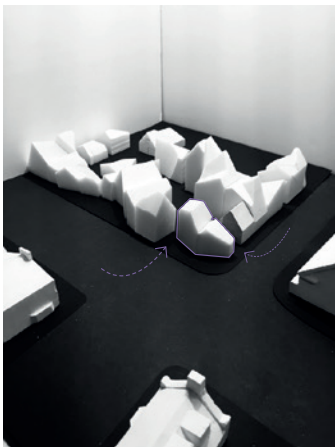


Group form at Overschie.



Curvature closing the corner. Hides the courtyard, yet accentuates the rotation of the street.

Continuous street curve



Group of two giving insights from both side. Short volume on the right reveals silhouette behind.

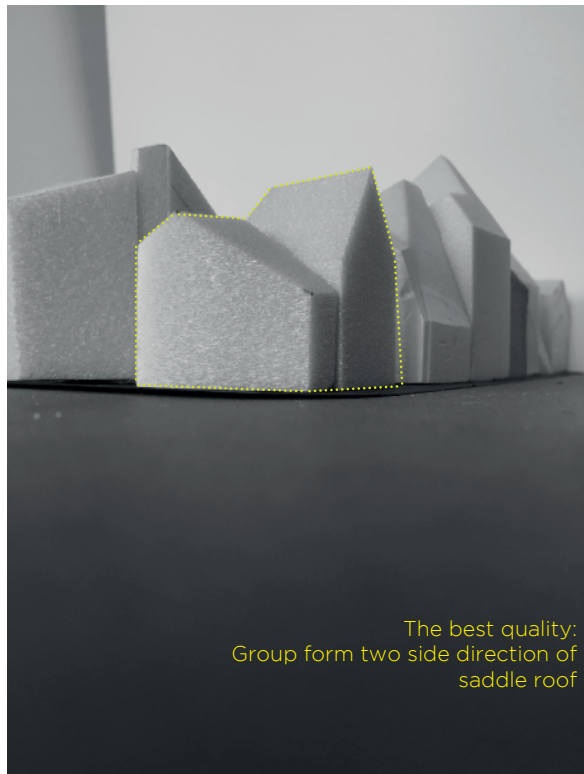
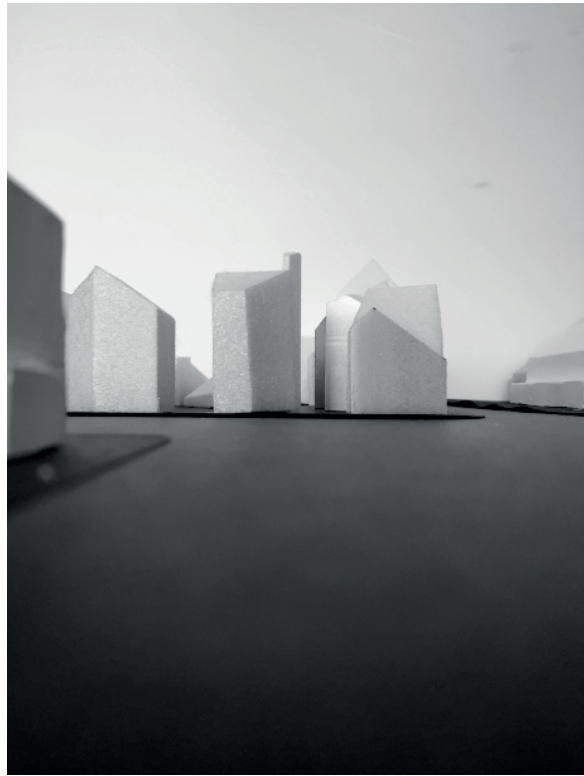
The best quality:
Masses at the back. Rotated corner facade invites to the second curvature



Group of two giving insights from both side. Tall volume on the right emphasize the direction to the courtyard.

The best quality:
The two tall volumes

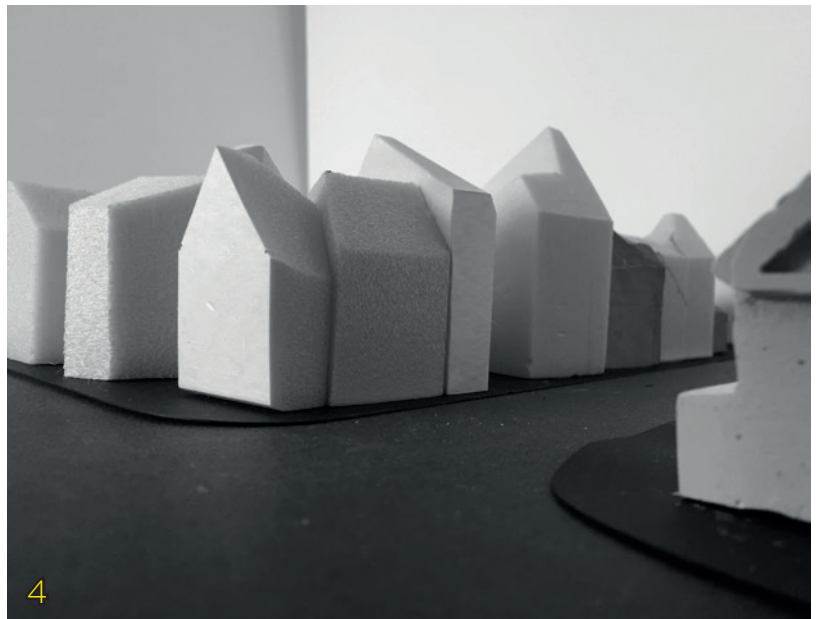
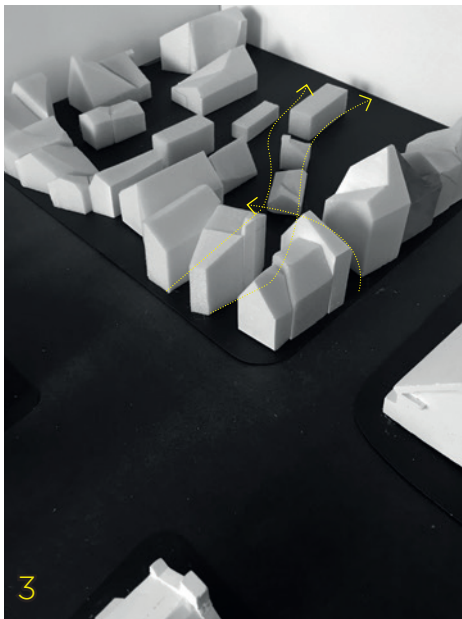
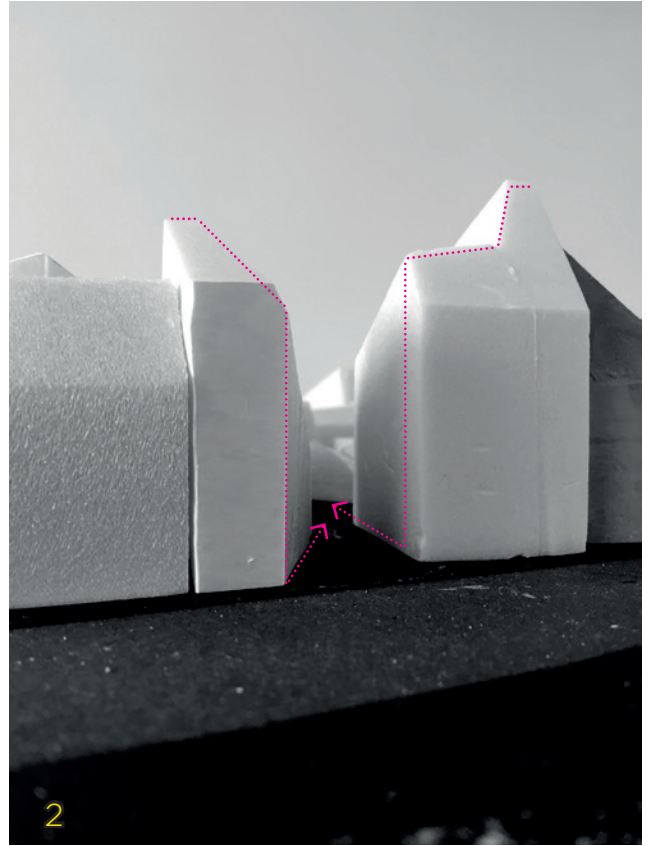
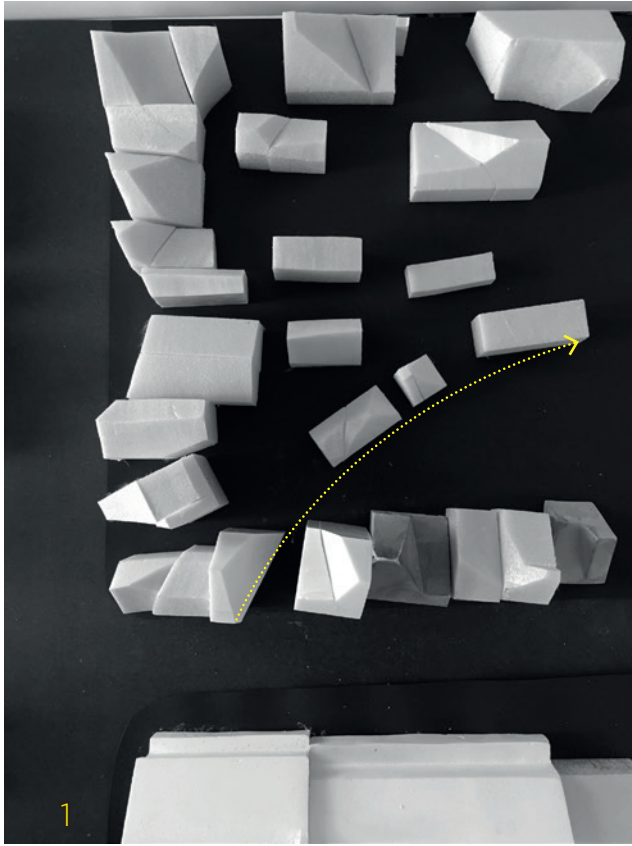
Field Group form study



The best quality:
Group form two side direction of
saddle roof

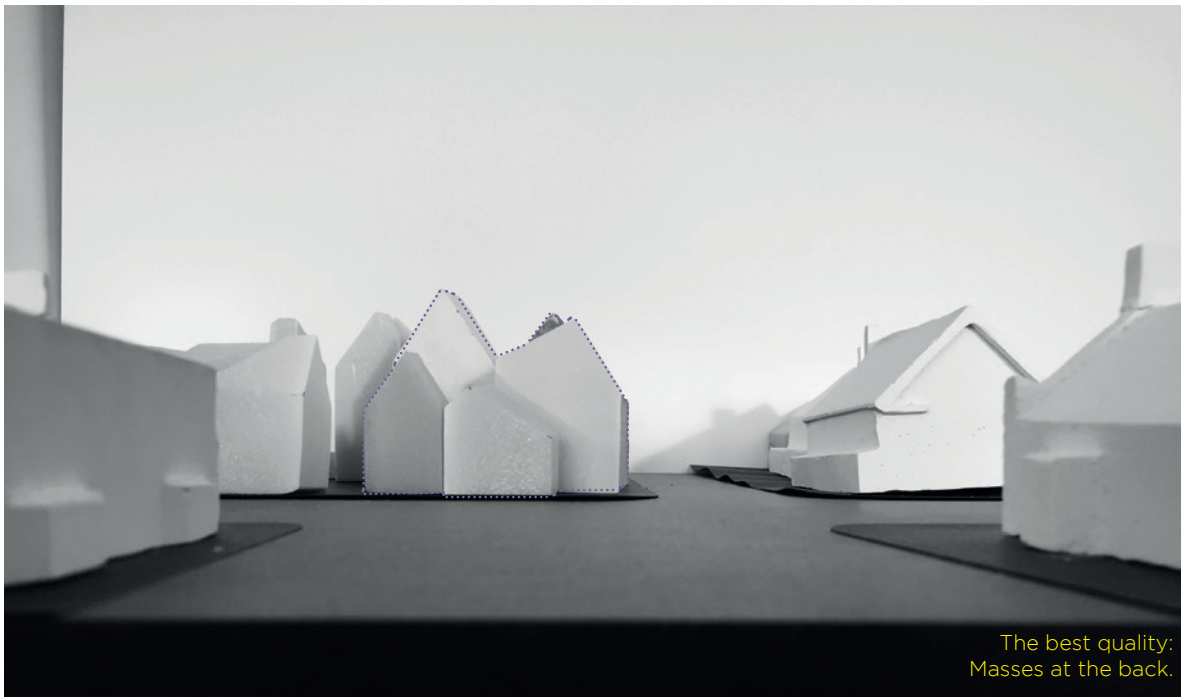
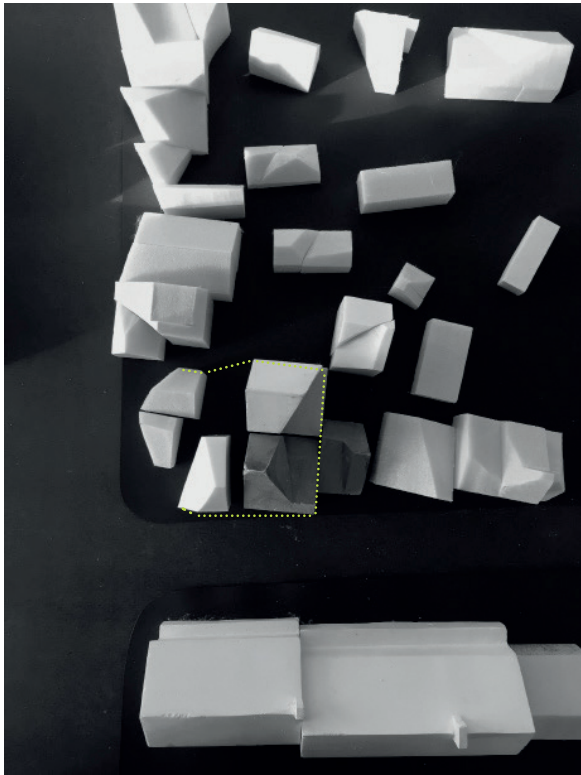


Method.



The sight-view towards the "field" defined by two tall volumes (pic2) and works as a framing or a gate. A diagonal cut gives a kinetic beginning for the alignment of the elements at the back. Such moments creates more generous fabric in terms of unexpected sight-views, pathways and diverse reading of the profiles.

Field Group form study



The best quality:
Masses at the back.

Two groups at the corner, yet being separated create a single mass group from the street point of view (lower pic). It resembles the massing quality found around the Church but here is mirrored towards the street.





3.3 Figures

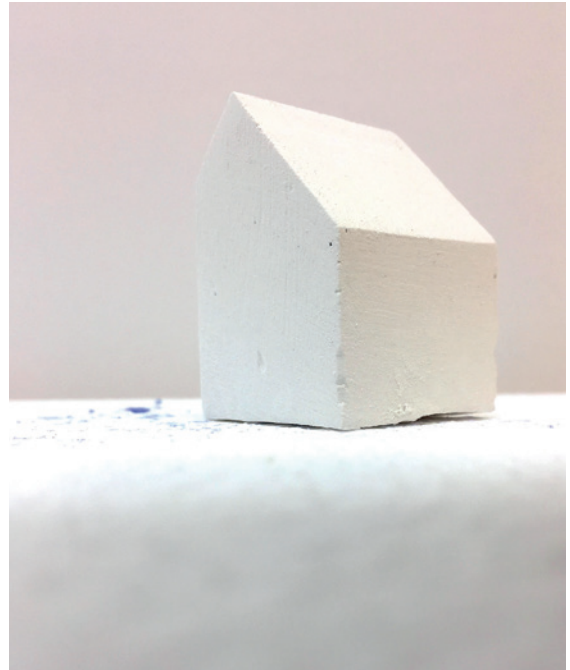
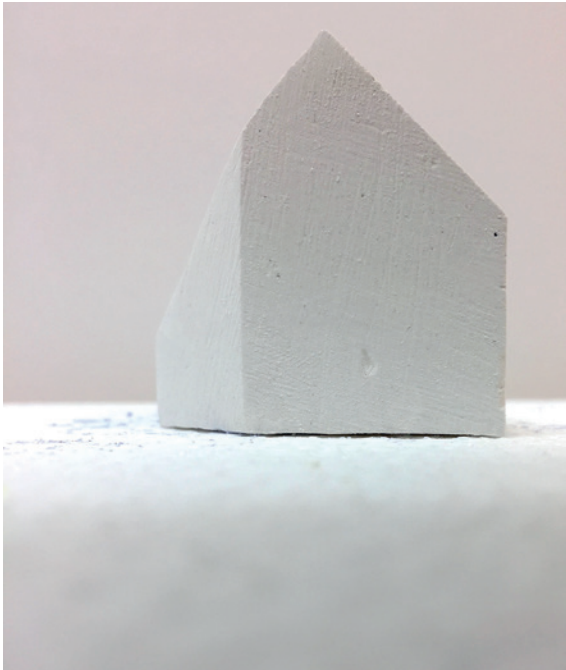
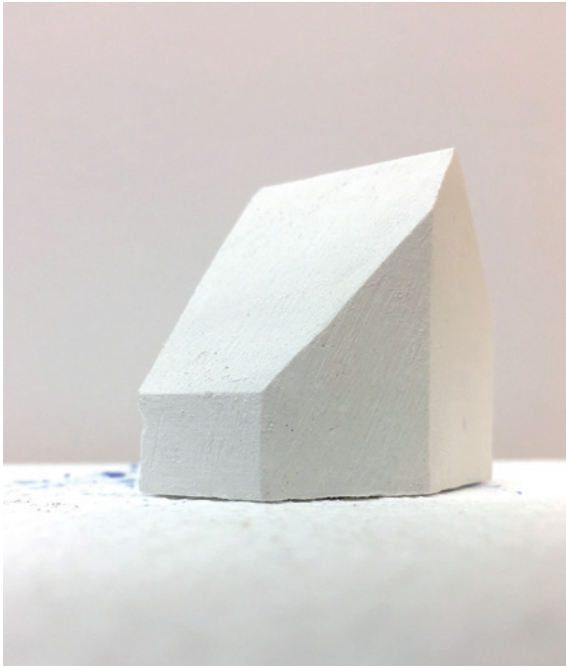
OBJECT-ORIENTED FORM FIELD.

“A solitary building is almost always perceived as an object because its compact form allows us to consider it a bounded entity. Consequently we tend to contemplate it in an object-oriented mode. We allow our senses to glide over its surfaces, looking for any opportunity to delve into its thickness, for we are interested not only in the object’s outer form but also in its structure, materiality and tectonics. An object is simultaneously an object-of-interest; we want to probe its comprehensively.” Jan Turnovsky

Even though most of the building we tend to contemplate in an object-oriented mode, such strategy as making them multiple-profiled gives on one hand, a special flexibility in terms of the orientation and what is a “street facade”, but also to the city fabric an extra layer of diversity. Hereby some examples. Variety of façades forms makes an building as an object-of-interest and encourages one to probe its comprehensively, collecting a “field” of ambiguous perceptual experiences, since it is perceived every time differently.

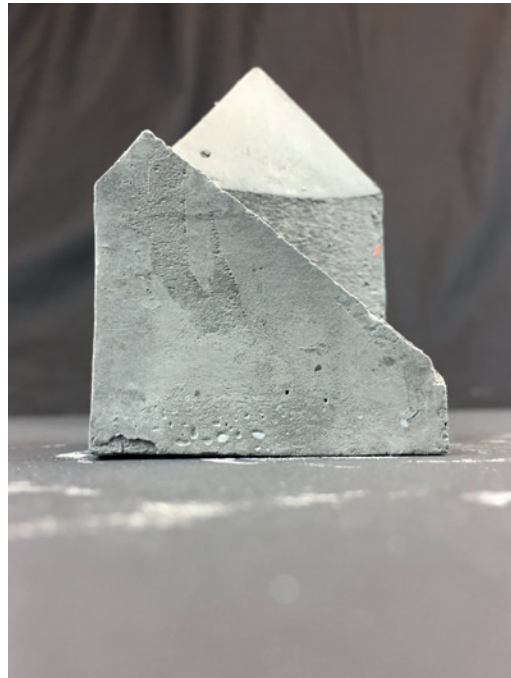
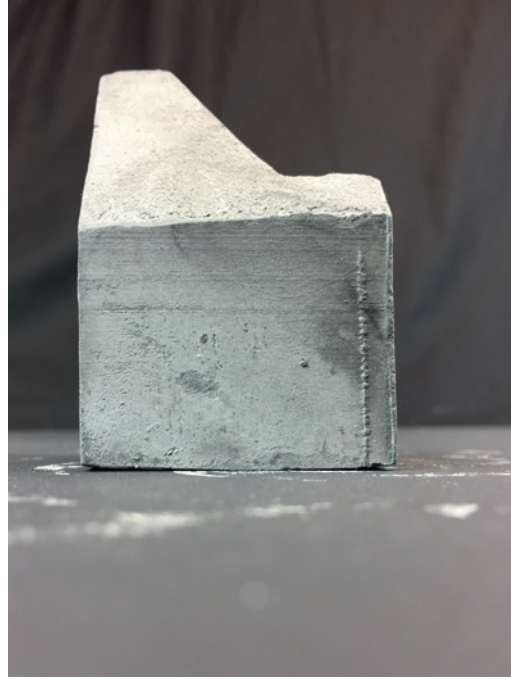
The figure’s shape deals not with immediate surrounding but more with intellectual context which is broader than physical. The forms take their scale, character of the roof and details from the local and develop a simple tectonic logic further but so, that they may speak the same language to the context.

Method.



With a series of gypsum scale models I wish to express the mass of a building and its different silhouettes from each side. The model reduces the building to its formal shape.

Profiles.



This shape came after a model I called as a church. It still resembles a "churchy" silhouette from one side (2) but I gave a more extreme slope at the back, so elevation can be read as from two separate volumes.(4) I found how much more monumental mass is taken as a house if one puts a window in the middle of a gable(3) and it takes a special human scale if there is an aperture on a short frontage (1). I think the success of this form is in the diversity of perception from different sides and somehow a medieval character without indication on the tectonics.



Method.



This villa reminds me some rural barn house that can be found in The Low countries. Yet with this big corner windows it takes a completely contemporary look. The modesty of the form yet allows to be rediscovered over again, by passing by and seeing it from different angles.

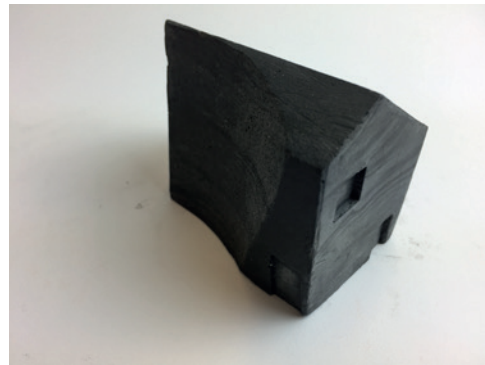
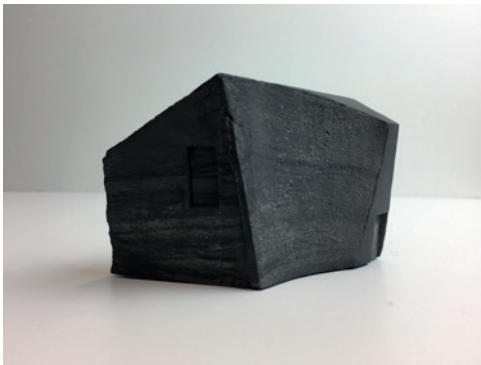
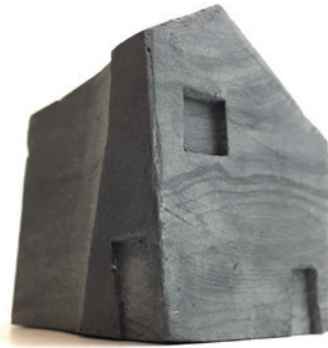
Profiles.



Likewise a Barn villa before, this red house shares the traditional/ fluid form and gives very controversial perception of the volume from each side.

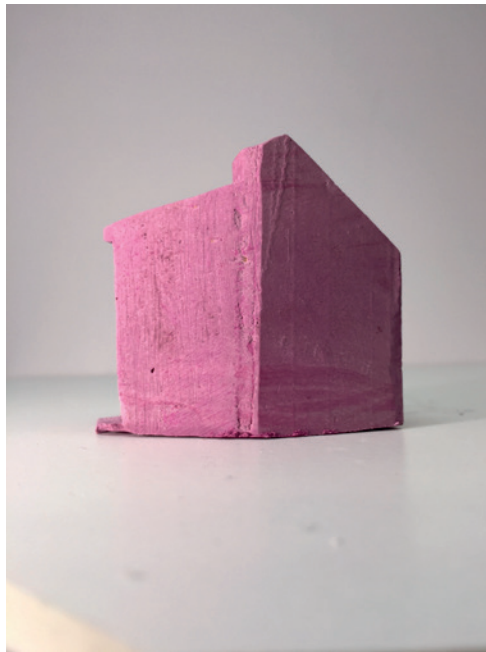


Method.



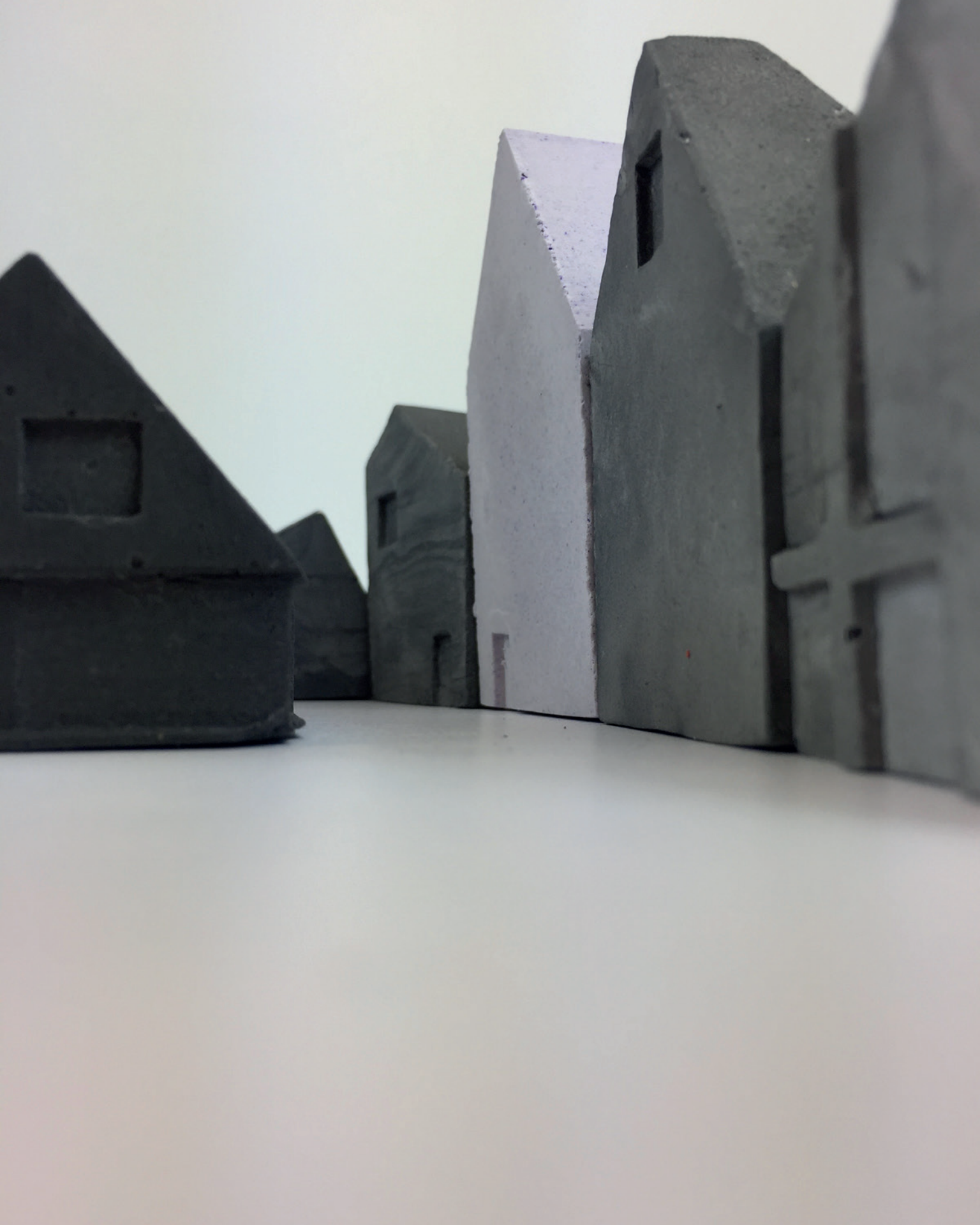
This model has a very traditional look from one side and, one might say, a very contemporary smooth another side. In materiality it also traces the process of clay making and I gave it a few apertures to indicate the human scale yet not to distract from its strong character.

Profiles.



This case house has apertures only at the front and the back facade, as supposed to be squeezed between the others. The roof is a result of merging form of the chimney, the mansard window and a transverse roof. While at some points of view we can see a clear silhouette (#4) the overall geometry is very volumetric.





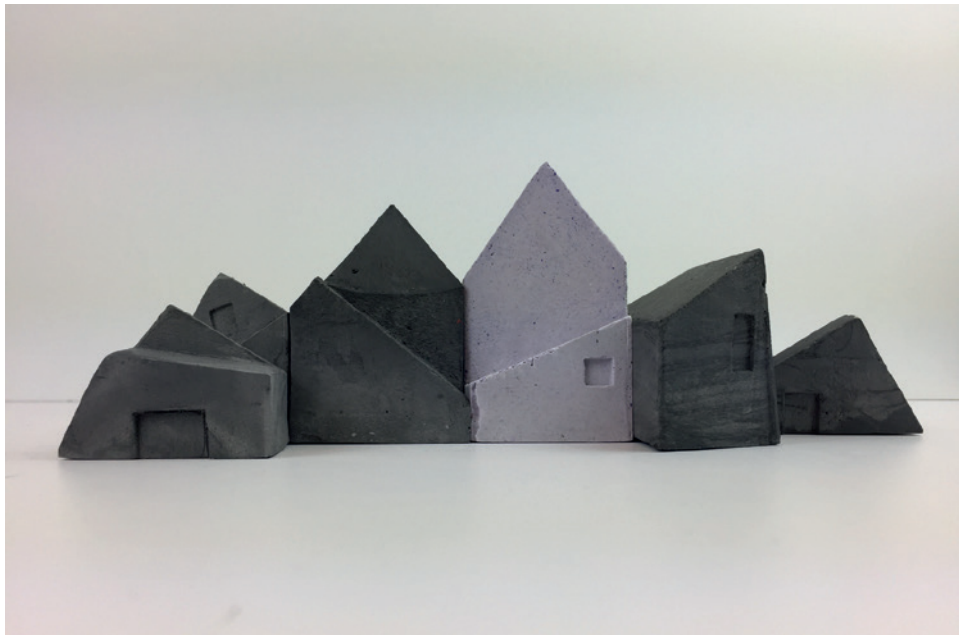
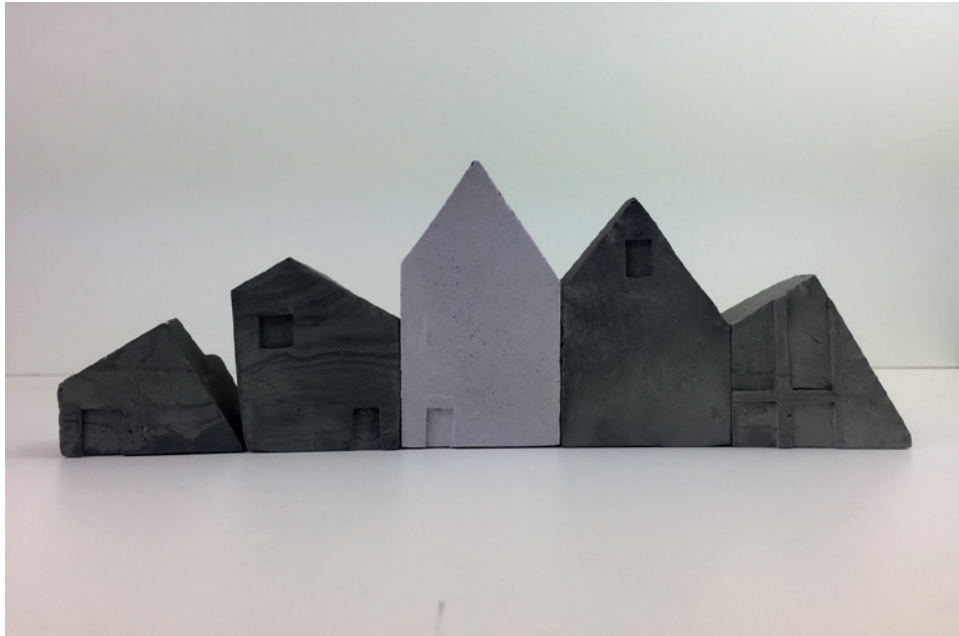
Chapter 4.

Experiments.

Street form. Material.

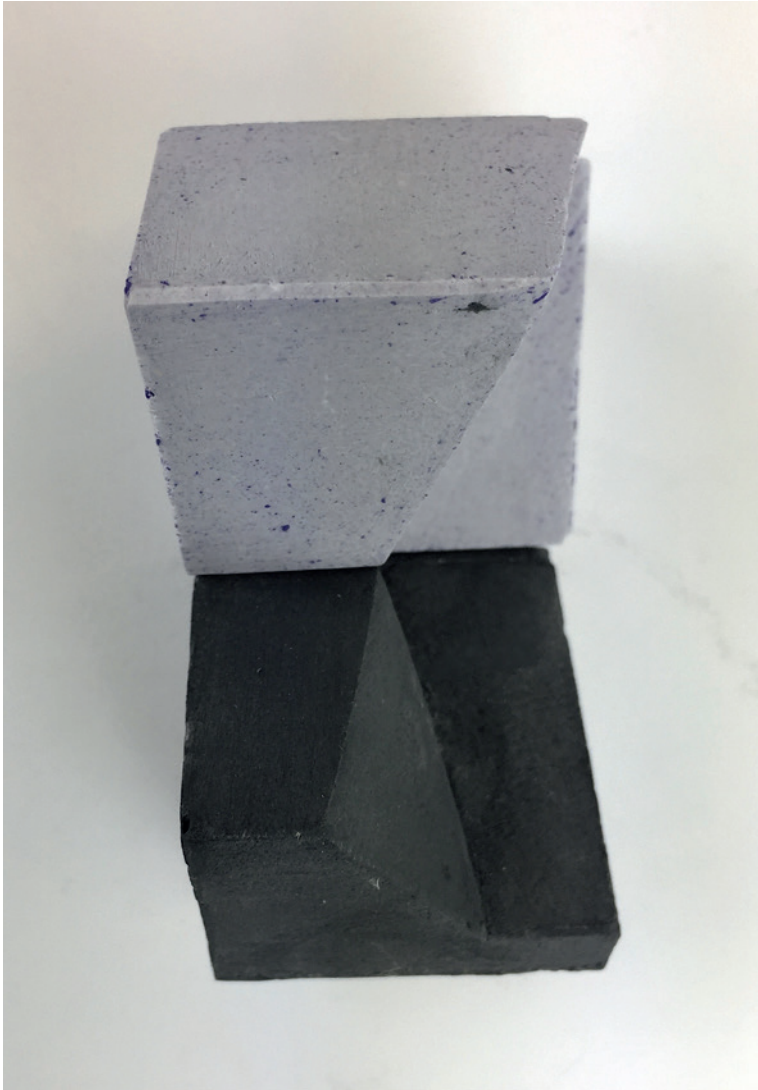
- Multiple profiled forms let the urban fabric to be explored in:
- how the forms create the streets and a new urban fabric
 - how the forms relate to each other in a street line/ back side
 - how the form affect the orientation/ navigation
 - when the forms loose its coherence, even being shaped under the same conditions
 - how does it relate to the existing city's core

Study Model. Frontage/Backstage



This composition of models resembles the morphology of the typical 18th century Dutch houses, with its clear frontage towards a street and a volume unfolding towards a back side. In my interpretation of such arrangement I connect the corners of the "front- age" volume and the "backstage" corners, so they occasionally create a continuous line. Sometimes this line can shift and jump onto another volume which is pulled deeper, but from some specific angle of view, it is still eligible.

Study Model. Frontage/Backstage

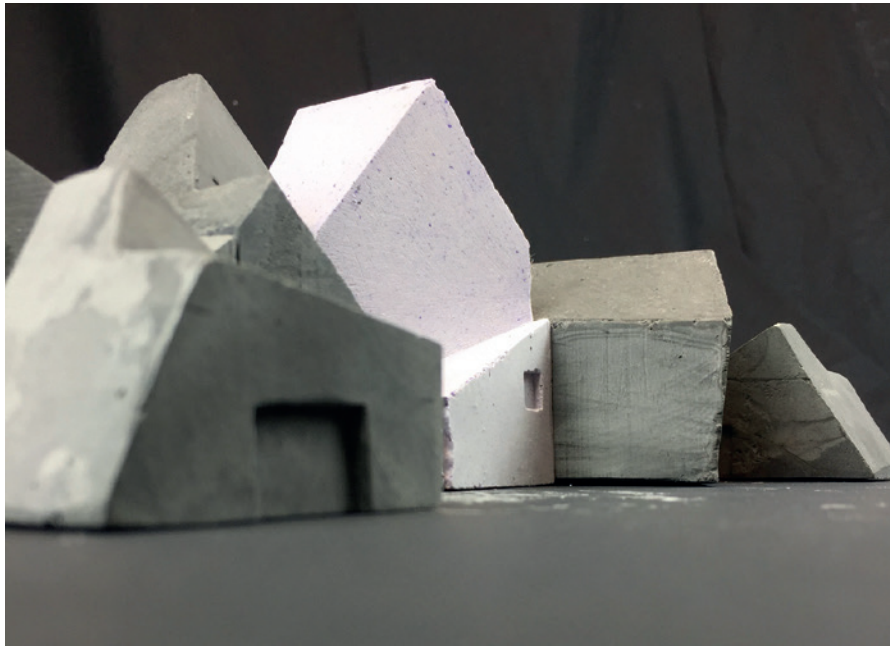


Technically most gables (bell-gable, neck-gable, step-gable, etc.) of Dutch houses covers the triangular end of the roof , bringing aesthetic qualities to the facade (or the Dutch word gevel to refer to the entire facade) but if we look beside we see that it is relatively thin plane which hides a hipped roof (a roof in which the two ends have a slope as well as the sides).

In this model I transform those two elements to merge and further, to meet corner end of the neighbours building. Though the depth of the houses is almost the same, this condition give



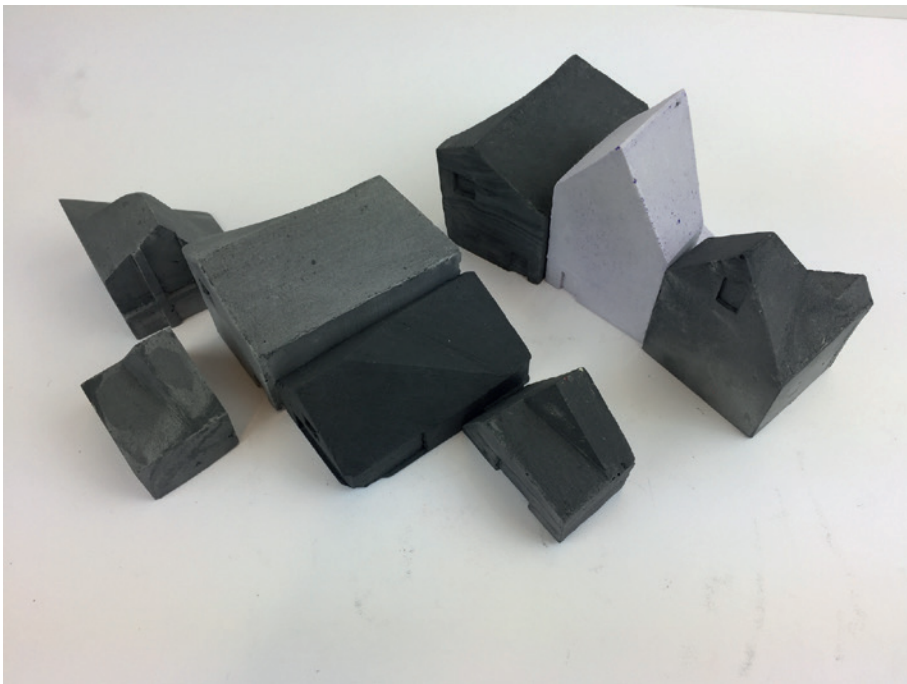
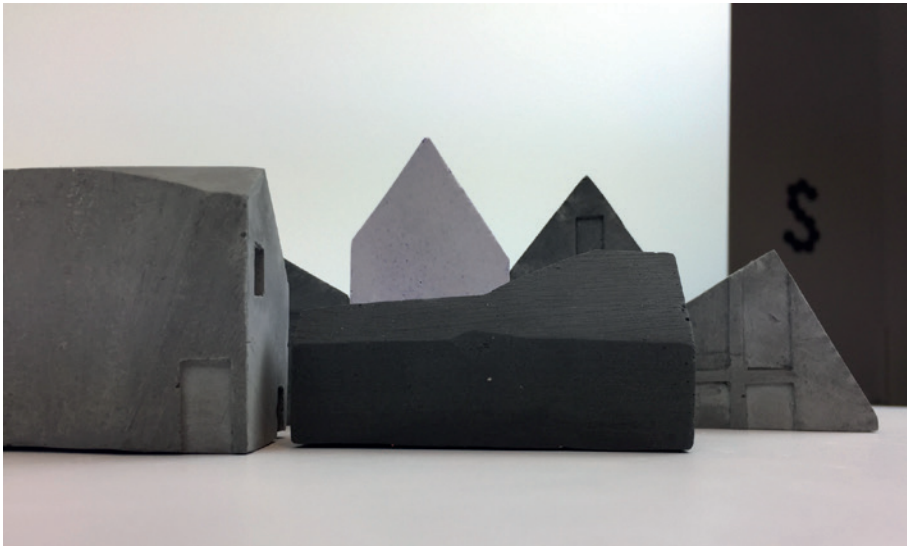
Gables and connections.



These two perspective shows the contrast between the street façades aligned creating a clear silhouette and somehow hectic mass towards the courtyard. That is what we find very typical in The NL with private gardens and numerous extensions of the houses. In my model I didn't try to imitate this character, but this notion was a key to accept the "back side mess" and also it gave a new rich spatial condition of a city block.

From a picture above we see the three grouped volumes have a steep fall after a lilac house until the hipped roof of the dark grey one. Such situation might recall the character of canal houses where the gables have independent heights from their neighbours.

Experiments.



Since the profiles of the models can be read differently from each side, it gives a special flexibility in terms of the orientation. So the city fabric gets an extra layer of diversity. The disadvantage of such an arrangement is though a possible "disorientation" which one can get coming to a site from different paths. In this sense the diversity in heights and materiality can serve as a key for specification.





Experiments



Porosity in the form

Experiments with material gave me accidents and new qualities of form which I started applying intentionally and finally brought into design proposal.



Experiments



Early experiments material and moulds. The overall shape is an extruded Dutch gable, while the curvature of the brick goes along the corner.

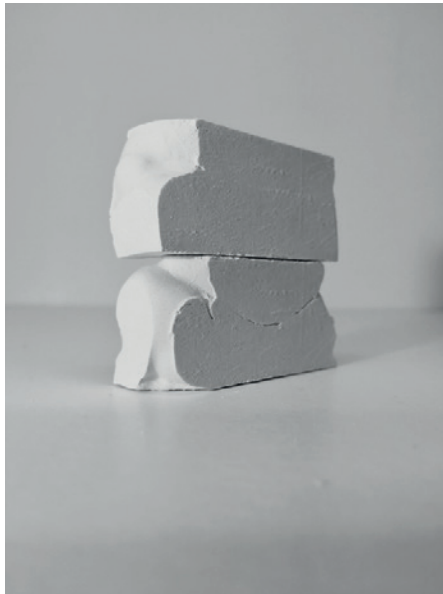
Experiments



These models are the interpretation of what the curved brick can do in different scales and intensity.



Experiments



These are the prototypes of the curved brick. Its smooth side in a contrast to the "facade" makes a very clear and sharp silhouette .

Postface.



To explore a traditional Dutch city is to find oneself in a quite picturesque village surrounded by nature, in a place which keeps its own life pace, its traditions and resists change. Urban fabric of a vernacular city reveals a great diversity of forms which yet keep coherence.

From my research I suggest that with a deep understanding of the local culture, building techniques and history, by looking closely and learning from its specific urban morphology, one can reveal precious qualities. Those are also unconscious qualities of a town scape, street form with splendid sight views and identity of a place.

This research suggests a method, on how one can read the context and extrude those qualities, to bring them back in a great field of novelty.

BIBLIOGRAPHY.

1. Stan Allen "From Object to Field" AD 2008
2. Words 3 "The Poetics of a Wall Projection" Jan Turnovsky; AA Publications 2009
3. Pier Vittorio Aureli "Obstruction. A grammar for the City"
4. Jeffrey Kipnis "Towards A New Architecture" AD 1993
5. Vladimir Belogolovsky "Conversations with Architects" 2015
6. Kengo Kuma "Anti-Object"
AA Publications
7. Points + lines : diagrams and projects for the city / Stan Allen
8. Colin Rowe "Collage City"
9. Space Reader. Heterogeneous Space in Architecture. AD 2009
10. Building Upon Building/ J. Engels & M. Grootveld
11. Indifference, Again Michael Meredith Log 39, winter 2017
OASE #91
12. Building Atmosphere Interview with Peter Zumthor
13. Amsterdam Canal Guide. Tim Killiam.
1978 Utrecht/Antwerpen



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Gothenburg 2017