TU Delft
MSC 4 Architectural research








VERNACULAR ACHITECTURE

FEATURES ICONIC ARCHITECTURE MIDDEN-DELFLAND

Niels de Rijke

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INTRODUCTION

How do you assess the academic and societal value, scope and implication of your graduation project, including ethical aspects?
The value of my graduation project lies in its contribution to the field of architectural adaptation to climate change, particularly in rural landscapes. It provides a case study on how to integrate historical context with modern architectural practices to address environmental changes. Societally, the project offers a concept for sustainable development in rural areas facing similar challenges. It emphasizes the importance of maintaining historical and cultural connections while accommodating new developments, promoting a balanced approach to urban expansion and environmental adaptation. Ethical considerations were central to the project, ensuring that the design respected the local heritage and community values while addressing contemporary environmental challenges. In addition, it is in the line of climate goals. Energy-neutral, renewable materials, changing agricultural purpose by no longer keeping livestock and stop subsidence of polders by turning them into wetlands.

H*ow do you assess the value of the transferability of your project results?*
The methodology of my project are transferable to other contexts facing similar challenges. The methods used, archival research, site visits, and photographic analysis can be applied to any design, but this research is still based on Midden-Delfland. So application in a different landscape context requires new research. But farmhouses from this research are often inspired from other provinces or other provinces inspired by these farmhouses. Often they have many similarities in terms of material use, construction and layout.
The principles of integrating historical context with modern design to maintain harmony and continuity are universally applicable. This approach can guide architects and urban planners in other regions, helping them to develop contextually sensitive and sustainable solutions. The project provides a framework for balancing development with preservation, which is a critical consideration in many parts of the world facing environmental and urbanization pressures.

Critical point of view
By designing carefully and looking at each design choice with a critical eye, there is always the chance that in practice it will be experienced differently. for example, mixing living and working can be experienced as unpleasant. On the other hand, it has been well argued that this is minimal by designing facades with regulating privacy, accessibility, etc. And that storage is meant for harvesting that will cause noise in the community in a short period of time. The study could have had more depth by studying the interiors of farms. By approaching a number of farms and attempts to do so, I did not succeed and had to do it with drawings and existing interior impressions. In contrast, a good overview was created by studying floor plans, cross-sections and interior impressions.

Learning process

Working on a project over a long period of one year allows you to have time to make design choices. But because you have a lot of time, this has to be done properly and responsibly. By discussing design variants and pros and cons, I chose a direction in the design that had technical design challenges. By mixing small village with different types of houses in combination with storage barns, I learned a lot about mixing living and working. These can influence each other positively but also negatively. Because living and working were designed under the same roof, there were more design challenges to be solved. Such as fire safety and noise pollution. But accessibility and privacy also required important solutions to be devised. Moreover, the tutors supported me, but also took a critical look at my design. As a result, I continued to develop. I can take the experience of this project with technical design challenges into my future career.

Unanswered questions

What is the relation between your graduation project topic, your master track (A, U, BT, LA, MBE), and your master programme (MSc AUBS)?
My graduation project is intrinsically linked to my master track and the overarching MSc AUBS programme, which focuses on the architectural adaptation of rising water levels in rural landscapes. The topic of my thesis addresses the imminent changes in landscape due to rising water levels and urban expansion into green polders, which are crucial aspects of my master programme. As water levels rise, rural landscapes will inevitably transform, and the extension of cities into these areas will affect the historical experience of the landscape. My project explores how new architecture can connect with the rural architectural context, maintaining a commitment to the area's history while ensuring that new buildings harmonize with the existing environment. This approach ensures that the region remains connected to its historical roots, promoting harmony between new developments and the rural context. Moreover, due to the changing landscape, farmers have to adjust their agricultural goals. My interventions encourage farmers to make a change through storage capacity for wet cultivation. Making this project strongly linked to the overarching theme of ''water''.

The outward characteristics of rural landscapes are under pressure. Green open peat landscapes, once kept dry by pumps, can no longer be maintained dry. Due to land subsidence, oxidation, and salinization, the soil and water quality deteriorate, biodiversity decreases, and they become less resilient to extreme weather conditions. Adjusting the groundwater level of polders to match the landscape level is therefore deemed necessary. However, this will force farmers to seek alternative forms of agriculture, which may put the historical identity of the green open peat landscapes at risk.

Additionally, urbanization continues to expand due to population growth and the demand for new housing, resulting in the disappearance of green landscapes. Preserving historic buildings, such as farms, is crucial. Farms significantly contribute to the experiential value and identity of various regions through their distinctive appearance and region-specific architecture. They form an essential part of the Dutch landscape and are indispensable for maintaining its character.

Unfortunately, many farms are currently facing challenges. Rural areas are undergoing significant changes due to the development of new residential and commercial areas, leading to a decrease in the number of active agricultural businesses. These changes mean that many historic farms are losing their original function and are threatened with demolition or extensive renovations. This results in an irreparable loss of cultural heritage values and a serious impoverishment of our landscape. Therefore, preserving and repurposing these valuable heritage buildings is crucial.

It is inevitable that new interventions take place in these areas due to the necessity of new construction projects. The project location for these interventions is Midden-Delfland. However, how can these projects be best approached architecturally in green landscapes with a rich historical identity? Additionally, research will be conducted on the traditional architecture in the Midden-Delfland region, so that contemporary architecture can have a relationship with the context. Finally, research will be conducted on the contextual characteristics that can be applied in the architectural design.

2.0
CONTEMPORARY ARCHITECTURAL POSITIONS

Reflection of mentors

I had a positive experience with my mentors' guidance. The year started with group work. In which the project location had to choose with the topic ''resources''. As a group, we had two committed mentors. We got weekly feedback. After the group work, the individual process with guidance was helpful. In this, I received guidance from O. Klijn on architecture area, on building technology guidance from R. Kuijlenburg and research from A. Campos. On architecture area, I was encouraged in my design process, but also being critical. One key piece of feedback was the importance of balancing historical references with innovative design elements. Initially, my design leaned heavily on historical elements, but through discussions with my mentors, I learned to integrate contemporary features that complemented the traditional aspects, resulting in a more balanced and dynamic design.

In terms of construction engineering, I was also supported to get the best out of me by a positively stimulating mentor. By setting ambitions in terms of sustainability and circularity, I had a guideline in mind what the design had to meet. Through useful tips, I learnt a lot in terms of climate, construction and building engineering. For example, the mentor asked questions that made me think about certain topics. For example, by applying the concept of prefabricated construction, I had a vision in terms of span direction. But by asking the question why should you span it like that?, I started thinking about it and developed it further. Or a certain truss size that made the sizing of beams too large. By asking the question can't that be done differently I started thinking about it by myself without the mentor figuring it out for me. Finally, the guidance with the research was positive. I was allowed to be very flexible in what the final outcome would be, which I felt was positive. By applying an approach and method that I would like to apply in the future, such as site visits and research of landscape context, I had a preview for my future work. The easy communication and extensive feedback allowed me to develop myself into a better researcher. A weakness for me was that I sometimes left out the research a bit because I was so into the design process. But by encouraging that research also matters, this contributed positively to the design.

Methodology reflection

How do you assess the value of your way of working (your approach, your used methods, used methodology)?

After establishing the architectural context, vernacular architectural features were studied extensively. The initial phase involved a literature review of Uilkema's works. Uilkema, a teacher and historical farm researcher from the early 1900s, conducted significant studies on South Holland farms, including farms in Midden-Delfland. His research highlighted several characteristic features, notably the evolving construction techniques resulting from the new positioning of livestock in the stables. Following the literature review, a comprehensive understanding of Midden-Delfland farm characteristics was achieved. Subsequently, a selection of farmhouses from the South Holland National Office for Monuments list was examined. The government has identified these buildings as high cultural-historical value. By applying this method, farms identified for their cultural and historical value were examined. This creates a good overview of farms that have valuable significance and features.

I analysed several types of farmhouses from this monumental list in terms of façade, morphology, and spatial planning. This analysis facilitated the incorporation of shape features into the design process.

When I visited the site I was conducted to foster a deeper connection and awareness of the cultural-historical significance of these farms. Physical presence at these remarkable sites reinforced this understanding. Studying the morphology by drawing 3d models gave a good idea of the composition and shape.

Subsequently, I studied urban planning aspects, focusing on village structures and the positioning of buildings relative to public spaces. This examination revealed additional features relevant to urban planning. This gave me more knowledge in the field of larger scale.

The interior of the farmhouses was also studied, with particular attention to construction and spatial distribution. This created a deeper layer in the research. This study clarified the influence of supporting structures on the perception of spaces. These features were considered in the design process. A limitation of the study was the inability to physically inspect the interiors of the farmhouses due to restricted access to private yards. Despite this, the approached methodology provides valuable insights into the integration of vernacular architectural features into contemporary design.

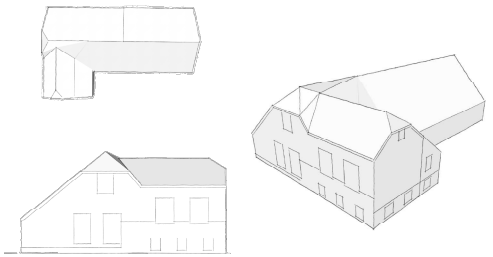
After studying farms, I was able to write conclusions with which architectural features could potentially be implemented in the design process. As a result, the applied methods of site visit, morphology study, archival research etc. achieved the desired result.

CONTEMPORARY ARCHITECTURAL POSITIONS

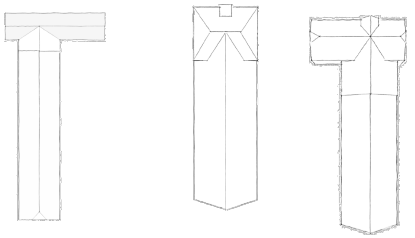
A new construction project in a rural historical environment can be approached through different angles. In contemporary modernist architecture, residential projects with little relation to the context can evoke many reactions from local residents. ''Modernism is not attuned to the human scale'' (Soeters). Modernism is responsible for a loss of place and identity, resulting in inhuman neighbourhoods and cities (NRC architecture editor Bernard Hulsman). In contrast, the countermovement is neo-traditionalism. Architecture based and insipired on local traditional architecture. Here, many geeks are critical of it, as it is often perceived as fake or fussy. ''There is really nothing authentic and certainly it is not finely enclosed, or old and familiar. Above all, it feels stuffy. Neo-traditionalism is mostly potty latin, a form of quackery with a matching set of incantations for the tormented minds of citizens with a top mortgage, a big car and a high-speed internet connection.'' (D van den Heuvel, TU Delft 2006)

There are also proponents of this form of imitation architecture. A book has been written called: The new tradition: continuity and renewal in Dutch architecture. It says: ''And traditionalism itself teaches us not to reinvent the wheel all the time but, instead, to benefit from the lessons of history.'' But what is new tradition? Can you even make new tradition? There is another way to design without applying copies of the past.

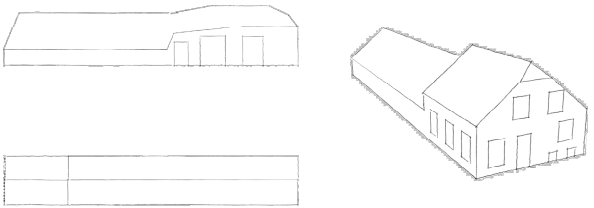
''Critical regionalism is an approach to architecture that seeks to counter the placelessness and lack of identity of Modern architecture, using contextual forces to provide a sense of place and meaning.'' (A. Tzonis)'' This does not mean copying the past in contemporary architecture. But using context. "How to become modern and to return to sources; how to revive an old, dormant civilisation and take part in universal civilisation". According to Frampton. Regionalist is not Critical Regionalism in the sense that it strives to be traditional, on the contrary,regional elements are unravelled and transformed, applied in a different, new way. Critical Regionalism should be seen as an alternative authentic architecture that bridges the gap between modernism and traditionalism (Frampton). Pointing out these differences, case studies have been examined based on contemporary architectural solutions. Modernism, neo-traditionalism and crticial regionalism are compared.



Krukhuisfarm



T-house farm



Longhouse farm

Reflection - Research and design

Niels de Rijke

How did your research influence your design/recommendations and how did the design/recommendations influence your research?

The research influenced the design process in several ways. By first doing a preliminary study of the project site, I knew where I wanted to go with my design. I wanted to design architecture that fits into the rural context. As the site is under great pressure from changing landscape and urbanisation, its character is increasingly disappearing. Designing new interventions with features of iconic architecture from the area keeps this local connection intact. Especially when it became clear that the project site asked for a living and working settlement. By having this position from the start and not deviating from it, a strong concept has been created. Design in such an environment should draw from the iconic architecture of the immediate surroundings, necessitating the identification of specific features for implementation. A research of vernacular architecture of midden-delfland results in which characteristics contemporary architecture can implement. This research gave me a broader understanding of iconic architectural elements that I could implement in the design process. It became clear that there were three different types that were common with distinctive features. These farm typologies from the research are recognisable in the design through references of form, materials and façade elements. These farm typologies share common features, including structure, interior layouts, and floor plans. Through studying various architectural positions modernism, neo-traditionalism, and critical regionalism, I was able to select an appropriate approach for the design process. By applying a critical regionalist approach in the design process, the historical context is not merely imitated but reinterpreted in a contemporary manner. This ensures that the design is perceived as fitting within its surroundings, incorporating recognizable elements from the area's iconic architecture. This approach maintains aesthetic harmony with the landscape. As the research progressed, I found out more and more about the features of Midden-Delfland architecture. I took these characteristics into account in the design process. I was able to apply this with a critical regionalist approach to the design. Case studies of different architectural responses to context were conducted, providing valuable insights and contributing to a understanding of the architectural position.

In short, as the research progressed, I was able to integrate elements from architecture of the environment into the design. The different architectural positions allowed me to establish a critical position myself so that modern interventions are referenced in traditional characteristics. The design also influenced the research. Because the design involved living and working under the same roof, I added an extra layer to the research by studying floor plans. Specifically on the separation between living and working.

Modernism Le Corbusier, Villa Savoye, Poissy, France, 1931

Neo-traditionalism Brandevoort in Helmond Rob Krier

Critical regionalism, Punt en Komaa The Hague, Siza architects

2.1
MODERNISM

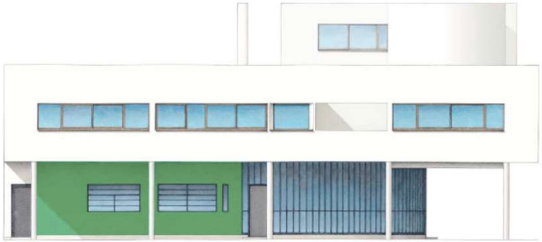
1. LE CORBUSIER, VILLA SAVOYE, POISSY, 1931
2. DESSAU BAUHAUS / WALTER GROPIUS 1926
3. THE FARNSWORTH HOUSE / MIESVAN DER ROHE 1951
4. VILLA VUGHT

4.0
REFLECTION
RESEARCH & DESIGN

Le Corbusier, Villa Savoye, Poissy, 1931

Completed in 1931, Villa Savoye is one of the most important houses of the 20th century. A key building in the development of the International Style of Modernism, it is one of the only houses in France to have been declared a national monument during the architect's lifetime.(Gibson, 2006)

Architect: Le Corbusier



Le Corbusier, Villa Savoye, Poissy, France, 1931

Le Corbusier, Villa Savoye, Poissy, France, 1931

Plattegrond tussenwoning - begane grond

Plattegrond tussenwoning - eerste verdieping

Welgelegen, Aarlanderveen

Op dit erf worden woningen gerealiseerd in een schuur typologie. De schuur is onderverdeeld in tussenwoningen en op de kop een hoekwoning. Ze bieden uitzicht over de polder.

Dessau Bauhaus / Walter Gropius 1926

''The style of the Dessau facilities hints at the more futuristic style of Gropius in 1914, also showing similarities to the International style more than the Neo-classic style.'' (Gropius)
The straight lines, rectangular shapes and minimalist design which is characteristic of modernism.

Architect: Gropius

Dessau Bauhaus / Walter Gropius 1926

The Farnsworth House / Mies van der Rohe 1951

Less is more, a minimalistic house characterized by open interior spaces, an absence of ornate ornamentation, rectilinear form, and the use of glass and steel construction materials.

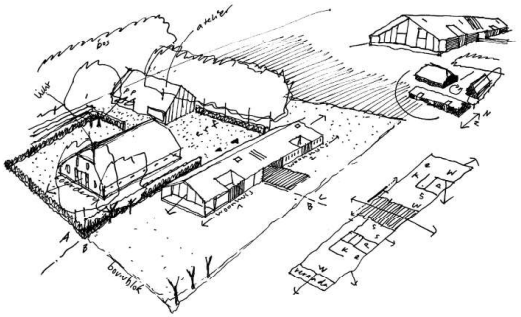
Architect: Mies van der Rohe

The Farnsworth House / Mies van der Rohe

Erve Driemarke

These houses are based on barn types. The elongated barn is divided into two dwellings. The long façade offers an unobstructed view over the countryside where agricultural activities still take place.

Architect: Franz Ziegler en Ninke Happel



House in Leiria, Aires Mateus

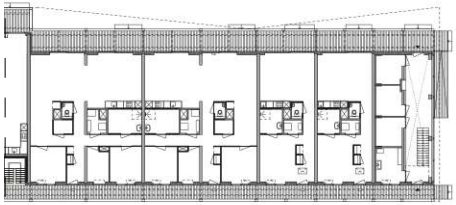
An extreme modernist example from 2010. A white box with pointed roof with no detail. Little to no context. An inward-facing bunker.

Architect: Aires Mateus

House in Leiria, Aires Mateus

2.2
NEO-TRADITIONALISM

1.BRANDEVOORT, HELMOND
2. HAVERLIJ, DEN BOSCH
3.KAAPVAARDER KATENDRECHT
4.TRADITIONAL FARM ALSTEN



Almere Oosterwold Boerenerf Vliervelden

Apartments and detached houses with farm

New apartments and detached houses has been built on this farmyard. While it is still a farmyard with agricultural function. There is a cow stable and hay storage and machinery barn.
Architect: architectenbureau KettingHuls

Brandevoort, Helmond Rob Krier

All houses had to contribute to the ideal image of the 17th-century Brabant town, and only architects designing in the traditionalist style were engaged. Brandevoort thus became an ancient-looking -but brand-new- fortified town. With city gates, an artificial stream and a retro market hall. With canal house facades, windows with rods and authentic lighting fixtures. A fantasy of the past. (P. Bakker)

Architect: Rob Krier

Neo-traditionalism Brandevoort in Helmond Rob Krier

Carefarm Noorderhoeve Schoorl

Residential carefarm with rural area

This care farm is in the middle of an agricultural environment. The hay storage shed is next to the farm, making the functional of agricultural surroundings the living environment of the residents.

Architect: 9graden architectuur

Barn Rijswijk

Material and sheep storage with apartment

These new barns consist of a storage area for materials and a sheep stable. There is also an apartment in the barn.
Architect: workshoparchi

workshoparchi

Haverlij, Den Bosch Krier & Soeters

The Haverlij project is based on a fortified castle. Centralising housing in a green area leaves plenty of space for greenery. The fortified castle with castles and protective walls is inspired by the past.

Architect: Rob Krier & Sjoerd Soeters

Haverlij Den Bosch, Soeters

Kaapvaarder Katendrecht, Rotterdam

Kaapvaarder is a new construction project on Katendrecht where 32 townhouses have been built. . The townhouses are designed in 19th-century architecture, a concept that went down very well with Kaap Belvéderè owner-occupied houses. Built in 2017.

Architect: BTR Architectuur + bouwkunde

Kaapvaarder Katendrecht, Rotterdam BTR Architectuur + bouwkunde

Schaapskooi Balloo

Schaapvee verblijven, wolopslag & woning

A newly built sheepfold with wool storage and dwelling was built in Balloo. These functions are arranged like a farmyard. A detached barn where people live a separate adjacent barn with livestock. Livestock and storage is part of the living environment of housing.

Architect: DAAD Architecten

Schaapskooi Balloo, DAAD Architecten

Boerderij Houweraheem, Kloosterburen

Machine- en materialen opslag en woning

The clients wanted a house and storage shed that was appropriate in the surroundings (RTV Noord). The storage is situated next to the house and connected by a carport. Living and working are part of each other's environment.

Architect: DAAD Architecten

RTV Noord, farm Houweraheem

Traditional farm Alsten

This farmhouse could be so copied from the past. Parts of the roof with tiles and part thatched because tiles used to be expensive. Brick facades, rods, shutters, gabled roofs, etc. are all recognisable elements from neighbouring farms. Neo-traditionalist can be called.

Architect: Architectenbureau Drijvers Oisterwijk B.V.

Traditional farm Alsten Architectenbureau Drijvers Oisterwijk B.V.

2.3
CRITICAL REGIONALISM

1. SÄYNÄTSALO TOWN HALL
2. GANDHI MEMORIAL MUSEUM
3. WILD TURKEY BOURBON
4. SRI LANKAN PARLIAMENT

4.1
REFERENCE STUDY

Reference study mixed program housing and storage
Independent residents with agricultural environment

Kenneth Frampton's Approach to Critical Regionalism

Kenneth Frampton, a prominent architectural theorist, developed the concept of critical regionalism as a counter-movement to the homogenizing forces of globalized modern architecture. His approach emphasizes the importance of a deep connection to local geography, culture, and climate, advocating for an architecture that is rooted in the specificities of its place while also engaging with universal modernist principles.

Frampton's critical regionalism is characterized by several key principles:

Resistance to Global Homogenization:

Critical regionalism opposes the uniformity and placelessness of modernist architecture that often disregards local context. Instead, it promotes designs that are informed by the specific conditions of their site, including the cultural, climatic, and topographical features unique to the region.

Integration of Local and Modern Elements:

Frampton advocates for a synthesis of local architectural traditions with modernist techniques. This approach does not reject modernity but rather incorporates contemporary materials and methods in ways that respect and enhance regional identity.

Emphasis on Tectonics:

A critical aspect of Frampton's theory is the focus on the tactile and structural qualities of materials—what he terms "tectonics." This involves an appreciation for craftsmanship and the expressive potential of construction techniques, which can imbue buildings with a sense of place and material authenticity.

Contextual Sensitivity:

Buildings designed under the principles of critical regionalism are sensitive to their surroundings. This includes considering the landscape, climate, and local light conditions to create structures that are harmoniously integrated with their environment.

Cultural Continuity:

Frampton emphasizes the importance of maintaining cultural continuity through architecture. This means drawing from local history and traditions to create buildings that resonate with the collective memory of the community, fostering a sense of belonging and identity.

Opposition to the Spectacle:

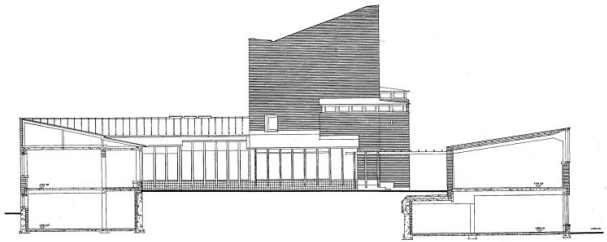
Critical regionalism rejects the notion of architecture as a mere spectacle or commodity. Instead, it prioritizes creating meaningful spaces that engage users and reflect deeper cultural and social values.

Frampton's approach to critical regionalism is a call for architects to move beyond superficial stylistic choices and to engage deeply with the context and culture of their projects. By doing so, architects can create works that are not only aesthetically pleasing but also culturally and environmentally sustainable, providing a counterbalance to the often impersonal nature of globalized architecture.

Säynätsalo Town Hall

The design of town hall in finland applied traditional red masonry shaped in a court-and-tower model of a civic center.

Architect: Alvar Aalto



Säynätsalo Town Hall, Alvar Aalto

Construction

The choice to incorporate the same timber frame constructions from historical farmhouses in the surrounding area into contemporary architecture stems from various considerations, ranging from aesthetic coherence to structural integrity and cultural preservation.

Firstly, utilizing the same timber frame constructions fosters a sense of continuity and connection with the local architectural heritage. By echoing the traditional building methods and materials, contemporary structures can seamlessly blend into the existing landscape, preserving the visual harmony and historical identity of the area.

Moreover, timber frame constructions offer practical benefits in terms of sustainability and eco-friendliness. Wood is a renewable resource with low embodied energy, making it an environmentally responsible choice for construction. By opting for timber frame constructions, contemporary architects can contribute to reducing carbon emissions and promoting sustainable building practices.

Additionally, the use of traditional timber frame techniques allows for flexibility and adaptability in design. These constructions offer structural stability while accommodating various architectural styles and spatial configurations. This versatility enables architects to create contemporary spaces that meet the functional needs of modern living while honoring the timeless craftsmanship of the past.

Furthermore, incorporating the same timber frame constructions from historical farmhouses can serve as a nod to the craftsmanship and craftsmanship of previous generations. By preserving and reinterpreting these traditional building techniques, contemporary architects pay homage to the skills and ingenuity of the past while infusing new life into the architectural landscape.

In conclusion, the decision to apply the same timber frame constructions from historical farmhouses in the surrounding area to contemporary architecture is grounded in a desire to maintain cultural continuity, promote sustainability, and celebrate the enduring legacy of traditional craftsmanship. By embracing these architectural elements, contemporary buildings can seamlessly integrate into their surroundings while embodying a timeless aesthetic and commitment to environmental stewardship.

Materialitity
An advantage of using local materials is the harmonious integration of the building into its surroundings. By choosing materials that have been used in the region for centuries, the building can evoke a sense of continuity and respect the architectural traditions of the area. However, a critical approach requires careful consideration of the availability and sustainability of these materials. Some traditional building materials may become scarce or fail to meet modern sustainability standards, leading to long-term issues.

On the other hand, adhering to traditional materials and techniques may impose constraints on design and innovation. For instance, it may be challenging to integrate modern energy-efficient systems or meet specific building regulations while preserving traditional aesthetics. Therefore, it is important to adopt a balanced approach, combining traditional elements with modern technologies and design methods. This approach ensures that the building not only respects its cultural context but also meets contemporary standards of sustainability and functionality.

Gandhi Memorial Museum

He was a pivotal figure in Indian architecture post-independence, acclaimed for his responsible and contextually sensitive approach that combined modern concepts with vernacular elements. His projects utilized courtyards, terraces, spaces open to the sky, local materials, and passive cooling techniques – all part of historic Indian building traditions.

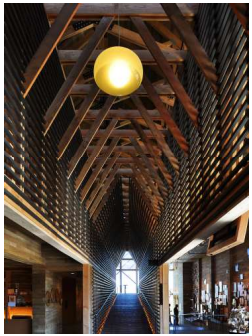
Architect: Charles Correa

Gandhi Memorial Museum, Charles Correa

Visitorcentre Wild Turkey Bourbon

This design of Wild Turkey visitor centre was inspired by barns from the surrounding area. The used truss construction and barn form are familiar in immediate surroundings. Clad in a chevron pattern of stained wooden boards, the simplicity of the barn form is contrasted by the complexity of the building skin, creating a shifting sense of scale and tactility that is intentionally both simple and complex.

Architect: De Leon & Primer



Visitorcentre Wild Turkey Bourbon

Spatial division

The front house was separated from the stable by a threshing floor. This intermediate space drove vehicles in and out to thresh grain. The concept of this separation of living with working part can be included in the design process.

Implementing the principle of the raised living area and split-level design from historical farmhouses in the surrounding area into contemporary architecture offers various advantages in both functionality and aesthetics.

Firstly, the principle of raised living areas and split-level designs allows for efficient use of available space. By utilizing the terrain and creating different levels, homes can adapt to the varying height differences in the landscape. Additionally, the incorporation of an additional living floor with natural daylight in the split-level design enhances the livability of the space. The daylight penetration into the lower level establishes a connection to the raised living areas found in the historical built environment. However, this may also present challenges in terms of natural lighting distribution and energy efficiency, which should be carefully considered during the design process.

On an aesthetic level, the principle of raised living areas and split-level designs adds character and depth to the architectural design. By creating variation in height and level, a visually intriguing and dynamic whole is achieved, enriching the architecture and enhancing its overall aesthetic value. Nevertheless, it's essential to ensure that this aesthetic enhancement does not compromise structural integrity or functional usability.

Furthermore, while implementing these historical principles contributes to the preservation of local identity and heritage, it's crucial to acknowledge potential conflicts with modern building codes and regulations. Some traditional design elements may not align with contemporary safety standards or accessibility requirements, necessitating careful adaptation and compromise to ensure compliance while preserving historical authenticity.

In conclusion, while the incorporation of the raised living area and split-level design principles from historical farmhouses into contemporary architecture offers various benefits, it also presents challenges that require critical consideration and careful design integration to achieve a successful and harmonious outcome.

Architectural features that can potentially be implemented in contemporary design.

Spatial planning and mixed program
The integration of residential and storage spaces for naturally harvested materials in architectural designs offers several benefits that contribute to both the environment and the local community.

First and foremost, this approach aligns with sustainable design principles by encouraging residents to become more closely connected with materials sourced from the local environment. By placing storage facilities within residential areas, a direct link is established between residents and their natural surroundings. This proximity not only fosters a greater awareness of local materials but also promotes a more sustainable lifestyle. Moreover, the juxtaposition of residential and storage spaces within the same architectural context fosters interactions among residents and strengthens a sense of community. Residents have the opportunity to share knowledge, exchange resources, and collaborate on projects related to sustainable living, thereby enhancing overall quality of life within the neighborhood.

Another important aspect is the preservation of historical heritage. By combining residential and storage spaces, architectural designs can better integrate into historical landscapes and traditional living environments, such as those found in historical farmsteads. Adopting a similar layout, such as having a front and back house, seamlessly integrates the new design into the historical landscape while preserving local culture.

Furthermore, integrating storage spaces into residential areas can lead to a decrease in land costs. Shared amenities and infrastructure help reduce the overall development costs, thereby increasing the affordability of housing and improving accessibility for a wider range of residents.

Lastly, combining residential and storage spaces contributes to increased social engagement with the area. Residents experience a deeper connection to the location and become more aware of seasonal changes and the specific characteristics of their environment. This not only promotes a sense of identity and sense of place but also confronts residents with the challenges of earning a living in this specific area, strengthening their engagement with the local economy and community.

Sri Lankan Parliament

With projects all across Asia, Bawa's work features consideration for local values and materials combined with modernist concepts. His buildings employ traditional elements such as courtyards, verandahs, or roof overhangs with local materials such as clay, stone, or timber to handle unforgiving South-East Asian climates, and facilitate interaction between interior and exterior through contrasts between built and unbuilt spaces.

Architect: Geoffrey Bawa

Sri Lankan Parliament, Geoffrey Bawa

2.4
POSITION APPROACH
CRITICAL POSITIONS

4.0
IMPLEMENTATION IN CONTEMPORARY ARCHITECTURAL DESIGN

Architecture remains a subjective matter influenced by individual tastes. Some architectural firms favor modernism, while others lean towards neo-traditionalism or the intermediary approach of critical regionalism. Although clients may have specific preferences, architects often have the capacity to persuade them towards different stylistic choices.

Architectural approaches elicit varying degrees of reaction. For instance, the application of modernist principles in a rural historic village is likely to attract more criticism than a rural traditionalist approach. Conversely, entire neighborhoods designed in a neo-traditionalist style may also face significant criticism for appearing inauthentic or contrived.

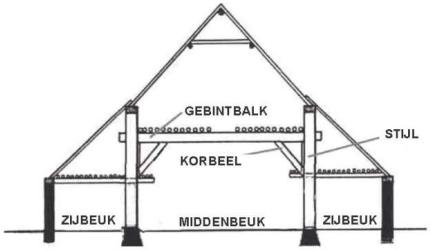
Critical regionalism, when applied in a landscape setting, aligns more closely with the context than modernism. On the other hand, neo-traditionalism might align too closely with the context, risking the creation of a deceptive historical past. For example, the Brandevoort project by Krier emphasizes the "historical" perception of streets, yet features modern interiors and non-traditional layouts. Similarly, the Haverlei project in Den Bosch replicates fortress castles with walls and moats, creating a pleasant living environment but also drawing criticism for imitating medieval architecture in the 21st century.

Critical regionalism strikes a balance between modernism and traditionalism by incorporating regional elements in a novel manner, thus maintaining a connection to the past without fully abandoning it. Buildings designed with this approach exhibit greater identity and definition compared to purely modernist structures.

This study investigates which architectural approach best suits the polder landscape of Midden-Delfland. Urban expansion threatens the historical identity of Midden-Delfland. Modernist developments significantly alter the area's perception, making them unsuitable for this environment, a view shared by the local municipality. While traditional buildings might appeal to current residents of historic homes, imitating past periods can result in perceptions of inauthenticity. Critical regionalism offers a middle ground that bridges modernism and traditionalism. New construction in Midden-Delfland should therefore harmonize with the historical context in a contemporary manner, making critical regionalism an apt solution. However, it remains a matter of personal preference.

By studying the vernacular architecture of Midden-Delfland, distinctive features of this traditional style can be reinterpreted and applied in innovative ways. The following chapter examines the architecture of the Midden-Delfland area, focusing on morphology, materials, and spatial organization. It includes a site visit with photographic analysis and an urban study of existing village structures.

3.0
PROJECT LOCATION STUDY MIDDEN-DELFLAND



Main characteristiscs of traditional architecture

Which features from traditional construction in the Midden-Delfand area are image-defining and characteristic of the built environment?

Spatial planning:

Typically, farmhouses are oriented perpendicular to the public road. The driveway continues from the road along the building to the rear. As a result, the front door is usually located on the side elevation.

Spatial division:

Each front house in the surveyed Midden-Delfland farms contains a half-embedded cellar with an opkamer above it. Because the cellar was not under the entire front house, there was a part of the front house higher up which is called the upstairs room (see the interior photo on the right). This created a split level. There was no elevation in the floor, which meant that the opkamer contained very low ceilings and doesn't meet current standards (2.6m minimum). The split level creates interesting divisions and connections between rooms.

Facade and roofing:

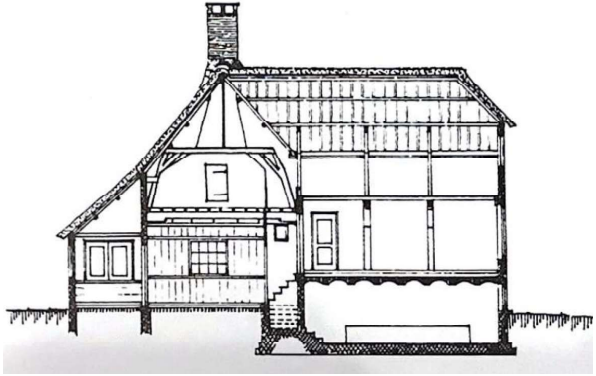
The exteriors of the Midden-Delfland farms partly determine the experience of the nostalgic open peat landscape. The langhuis, T-huis & krukhuis farms have many corresponding features. Typically always a gutter height from the first floor up, with the gutter height sometimes higher in the front house. Always a sloped roof, often of thatch but occasionally covered with tiles. In the further past, the gutter height of the back house was lower. Later, it was raised because of the more convenient cattle placement in the barn, creating a walk-through space along the façade.

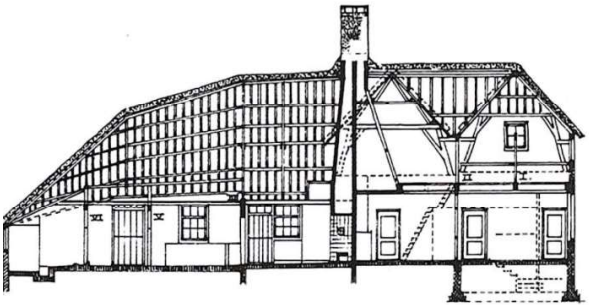
Construction:

De boerderijen werden met lokaal geproduceerde materialen gebouwd. Riet als dakbedekking, klei voor baksteen uit rivier gebieden en hout voor de constructie. Deze gebintbalkconstructie is typerend in Zuid-Holland. Met twee zijbeuken, middenbeuk met bovenin de gebintbalken. Verdiepingsvloeren bestonden uit houtenliggers met houtenvloeren.

3.1
UILKEMA, A HISTORICAL FARM SURVEY.
FARM RESEARCH IN THE NETHERLANDS 1914-1934.
VOLUME 1

LITERATURE STUDY

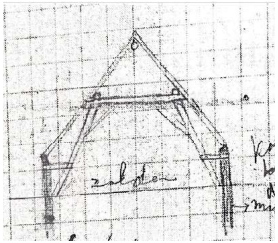




Boerderij Van Arkenstein
Vlaardinsche Vaart 39 Schipluiden

4. STRUCTURAL DESIGN

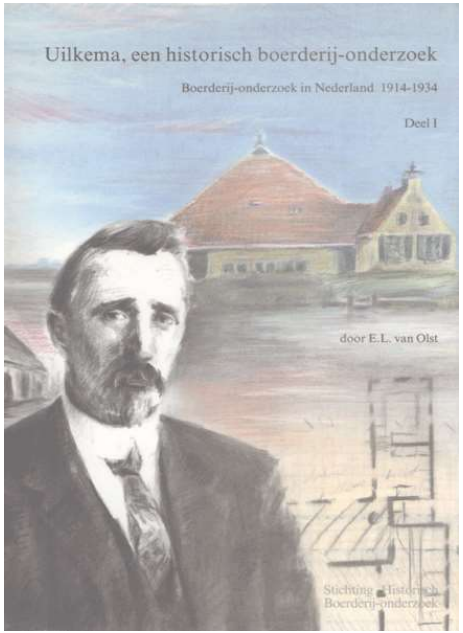
Fronthouse farm:
The front house consisted of a three-aisled structure where masonry walls supported the wooden floors. The roof was made of wooden trusses with purlins. The floor beams of the upper story were visible in the living areas. See figures below. The wall that separates the living areas from the work areas was a fire wall, often featuring a chimney shaft.



Sketch Uilkemade farm survey. roof construction farms

Milk basement Westgaag 100 Maasland 1996 (Rijksdienst voor cultureel erfgoed)

Bedstede Westgaag 100 Maasland 1996 (Rijksdienst voor cultureel erfgoed)



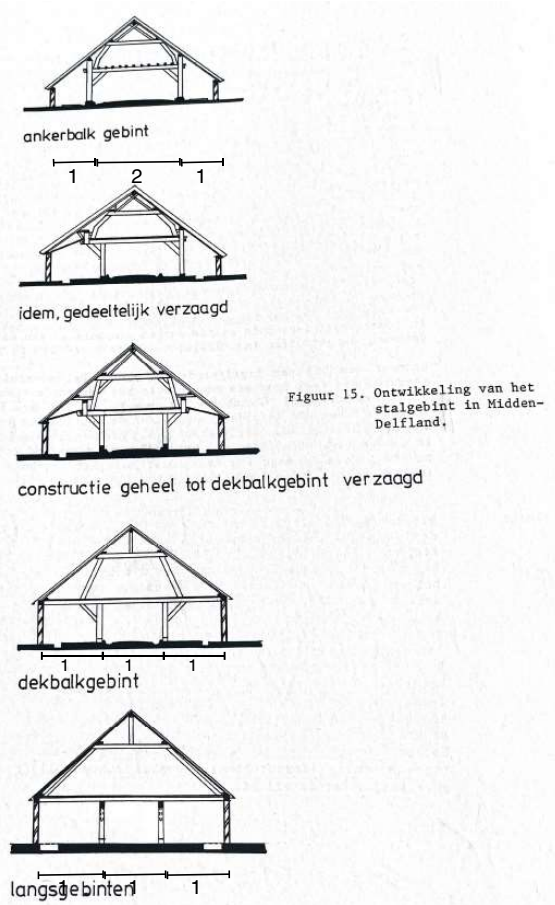
Summary Uilkema, a historical farm survey. Farm research in the Netherlands 1914-1934. Volume 1

Mr Uilkema was a teacher and historical farm researcher around 1900. This is a summary of his farm research in Zuid-Holland:

Characteristics mid-Delfland farms:
- Separation living-working part
- Hallehuis group
- Front house living, back house barn storage
- Opkamer (space above basement, higher than surface level
- Three naves, high middle section, low sides
- Anchor beam trusses
- Milk production for cheese and butter
- Cellars always in front facade, below front house
- White plinth - reflects sunlight in front of cellars, keeps it cool
- Cross vaults in cellars occur in 16th century farmhouses in mid-Delfland

Summer houses to relieve burden of cleaning large front house, were busy enough making cheese or butter. Summer house was detached
Crosses over cellar doors to protect dairy.

In 17th/18th century, side walls had to be raised to make crawlspace behind cows walkable. As threshing was no longer done in middle aisle, it could be narrowed to feed alley:
Deck beam truss called.

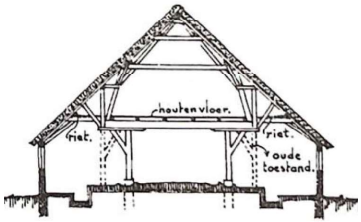


Figuur 15. Ontwikkeling van het stalgebint in Midden-Delfland.

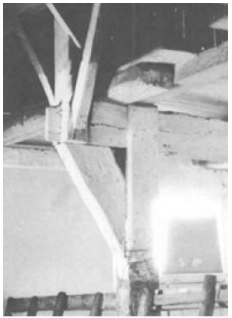
(Huijts - de ontwikkeling van de midden-delflandse boerderij)

4. STRUCTURAL DESIGN

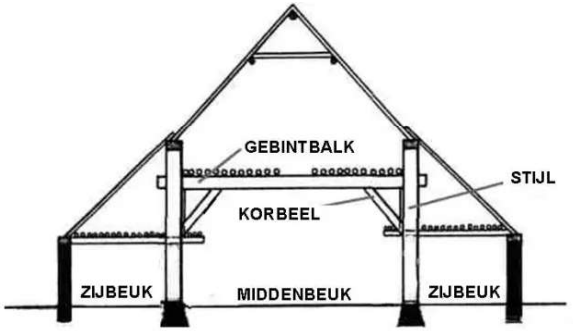
Barn:
With the modification of livestock arrangement, the truss construction was modified. The columns were moved more to the centre, allowing better milking and better positioning of the cattle (see pictures below). Two corridors emerged along the facade where the farmer could walk more easily due to the relocation of the columns. Later, side walls were raised for even better passage. The displacement of the columns caused a change in the truss construction. The tie beam became a purlin truss and the side aisles became as wide as the central aisle. Additionally, the corbel braced outward. With the rise in dairy prices, farmers had more income, and money was spent on expanding production. Stables were extended lengthwise, around the corner creating an L shape, or even in an U or Z shape. During this renovation, oak anchor beam trusses were replaced with pine purlin trusses. The purlins ran from wall to wall.



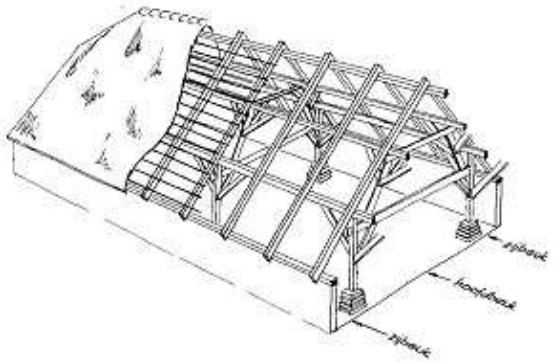
Boerderij Van Arkenstein
Vlaardinsche Vaart 39 Schipluiden



Verzaagd ankerbalkgebint
boerderij te Maasland



Anchor beam trusses,



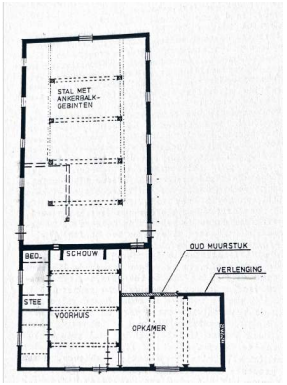
Anchor beam trusses 3d perspective (Alblasserwaard en Vijfheerenlanden, jaarboek 1983 (Utrecht 1983)

Style trusses were moved inside:
Due to the construction of a back corridor, the group and cowshed beds had to be relocated so the stile was at hip height. In the end, this situation proved untenable.(...) Because of the new position, the hips of every first and fourth cow were positioned in a frame right next to a stile, which not only hindered the animal, but also hindered the free movement of the arms during milking. This became the cause of moving the lower style halves inwards.'' 13) UILKEMA, Unpublished typescript concerning South Holland, p. 233-234.

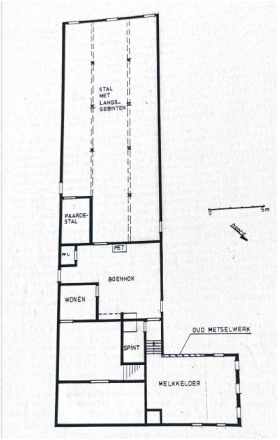
Facades mainly made of brick due to specialisation and economic growth from surrounding towns. From wickerwork and wooden facades to brick. Changing method of stabling livestock automatic water supply was later possible for every farm, (first only farms next to reservoirs) water trenches had to be centred to make carrying with buckets unnecessary. Side aisles were widened, middle aisle narrowed to feed alley. This allowed farmer to milk more easily because style was now at head instead of hip. Attic made thermal separation.
In 17th/18th century, side walls had to be raised to make crawlspace behind cows walkable. Attic also suddenly had much more space because of this design.

Hay storage was no longer possible here because of higher moisture content of warm downstairs room with cows. Result: external haystacks with natural ventilation.

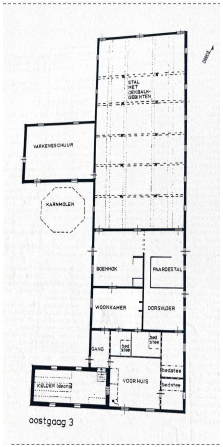
Churn mill moved to external building, became too big for the back house.



Average floor plan 16th century farmhouse (Huijts - de ontwikkeling van de midden-delflandse boerderij)



Average floor plan 17th century farmhouse (Huijts - de ontwikkeling van de midden-delflandse boerderij)



Average floor plan 18th century farmhouse (Huijts - de ontwikkeling van de midden-delflandse boerderij)

3. FLOORPLANS AND INTERIOR

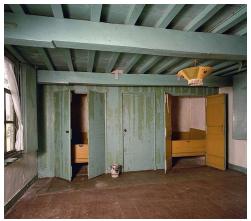
This chapter refers to the conclusions of Huijts. Huijts sees the floorplan of the Midden-Delfland farm changing in the 16th,17th,18th and 19th centuries. The front house always consisted of a milk cellar with an upstairs room above. The upstairs room was the living area with bed boxes (picture below). The other part was used as cheese storage or workplace. At the back of the front house, against the back house, the kitchen was positioned. The kitchen often also served as a workplace, living space or milk production.

The front and backhouse was divided by a fire protected stone wall. Behind this wall, the threshing floor (dorsvloer) was located. (see picture below). Vehicles drove in through large doors to thresh the grain. The threshing floor disappeared over time and was replaced by a horse seat, washroom or workplace. Typical is an extension building called the churn mill adjacent to a side wall of the rear house. This functioned as a butter-making facility.

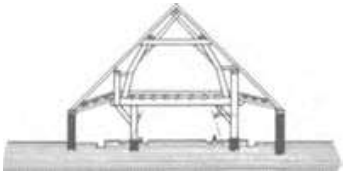
In the further past, cattle stood in the stables with their heads facing the side walls. As a result, a manure corridor was situated in the middle. Later, a more favourable layout developed with the heads facing the centre. As a result, there was a feed trough centred in the middle and a manure corridor on the side walls. Manure could be collected through the manure hatches in the side walls.

Adjacent are floor plans that are typical for the 16th, 17th, and 18th centuries. In the 16th century, the farm had a relatively small stable. As farmers became more prosperous over the centuries, there was more money to have more cows, resulting in the expansion of the stables. The milk cellar was often enlarged, and new rafters were built. Sometimes expansion occurred in an L, U, or Z shape. Over the centuries, the back house changed into a scullery, and spaces were incorporated into the front house.

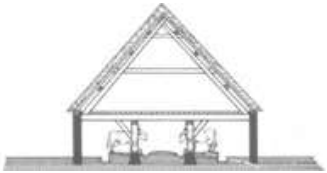
Dorsen, Dekker, Grijpskerke, circa 1930



Bedstede Westgaag 100 Maasland 1996 (Rijksdienst voor cultureel erfgoed)



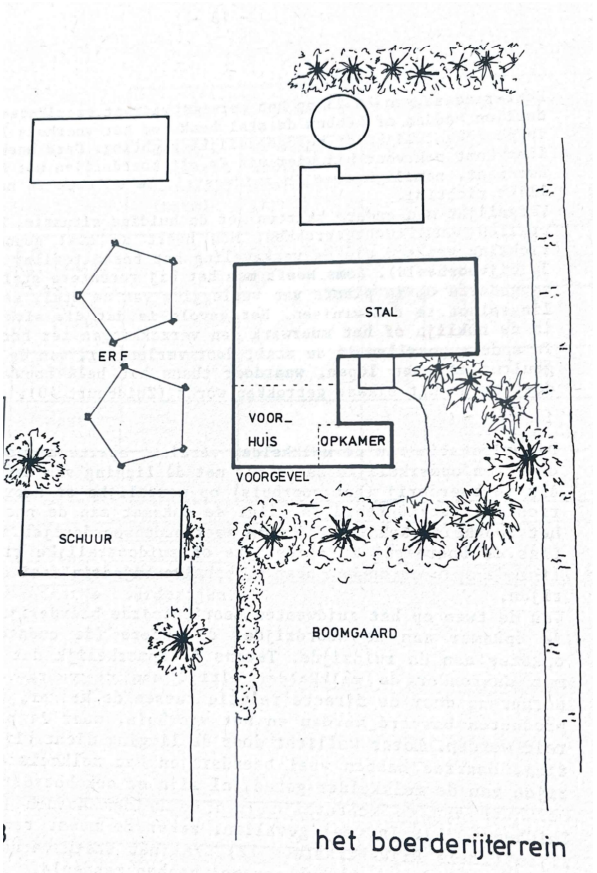
Replaced style trusses



New farms, higher walls, centralised style trusses

3.2
MORPHOLOGY, FACADE & SPATIAL PLANNING

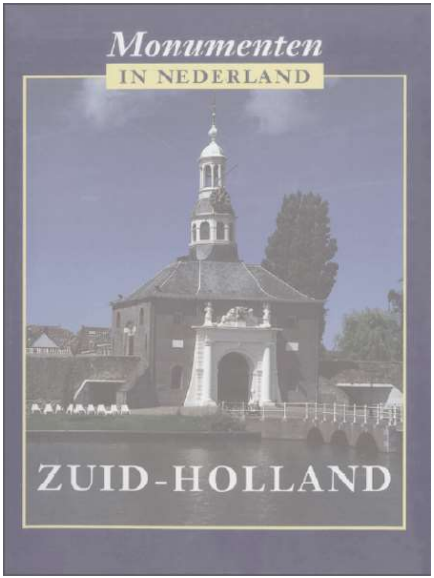
The farm research in the following chapters are based on selection of monuments from the list South Holland National Office for Monuments



Avarage farmyard - (Huijts - de ontwikkeling van de midden-delflandse boerderij)

2. SPATIAL ARRANGEMENT

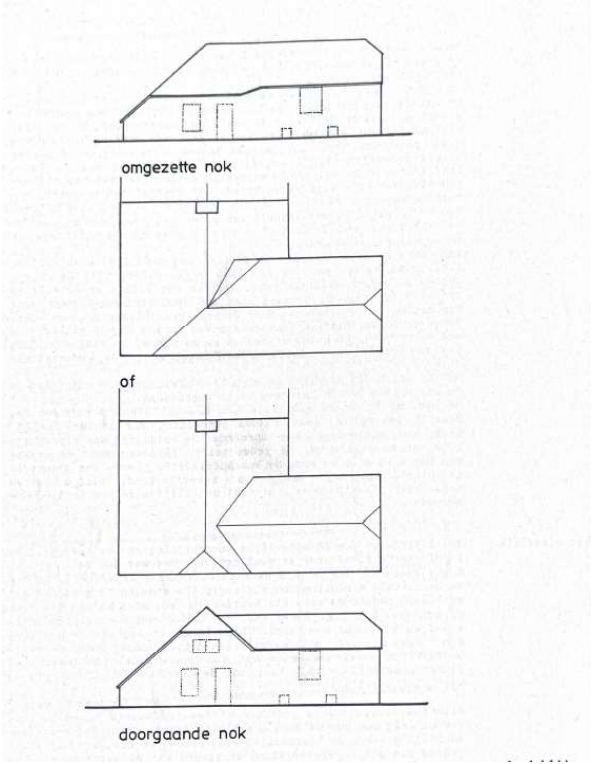
The farmhouse is often perpendicular to the public road and thus to the direction of cultivation. The milk cellars with storage rooms were usually built on the north side to keep the milk cool. The front door in the façade gradually fell out of use and was sometimes bricked up. The door in the side wall was the most commonly used. The driveway often ran alongside the farmhouse, past the side wall of the stable to the back of the yard. Hay barns were positioned next to the farmhouse. If the storage room was partly oriented to the south, trees were planted to provide shade on the milk cellar during the summer. Due to increasing prosperity, the milk cellar was often expanded with shutters in the facades. Above the milk cellar is the storage room, which usually contained bedsteads. The scullery was usually located in front of the firewall, the wall separating the stable from the farmhouse. A churn mill is also characteristic of Midden-Delfland. This was sometimes a separate annex in a pentagon.



RONALD STENVERT, CHRIS KOLMAN, SASKIA VAN GINKEL-MEESTER, ELISABETH STADES-VISCHER, SABINE BROEKHOVEN EN RONALD ROMMES,
RIJKSDIENST VOOR DE MONUMENTENZORG, ZEIST / WAANDERS UITGEVERS, ZWOLLE 2004

KRUKHUIS FARMS

If the house is extended to one side, giving it an L-shaped ridge line, it is called a krukhuis farm. The basis of the krukhuis-in its most original shape-is the hallhouse farmhouse. The hall house has a compact, rectangular floor plan. The front house has a residential function, while the back house houses the farmhouse. The ground plan of this farm type is three-aisled, with a wide central nave and two narrow side aisles. (krukhuis and T-farm, country life 5th volume number 1- January/ February 2000)



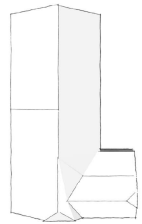
Avarage facade - (Huijts - de ontwikkeling van de midden-delflandse boerderij)

1. MORPHOLOGY

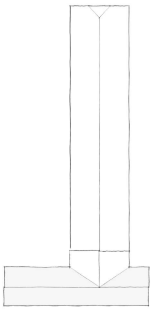
In the study by Uilkema, a historical farm researcher, the different types of farmhouses, langhuis, T-huis and krukhuis, emerged again. The layout was almost frequently the same. The floor plans are case studies of farms that have been in existence. The floor plans show an overall layout.
Huijts compiled a study on the development of the Midden-Delfland farm in 1984. The study examined 36 farmhouses in terms of materials, construction, shape, floor plan, orientation and spatial arrangement. This chapter refers to the conclusions of Huijts and the farm research in het previous chapters.

Morphology

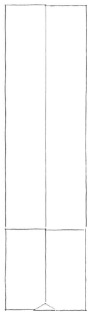
The front house is always connected to the barn. Over the centuries, the barn has been expanded in various forms, which may include extensions in L, U, Z, or straight configurations. The rear barn always features lower side walls compared to the front house. Occasionally, there is a discrepancy in ridge height. The roof of the rear house or barn can transition into the front house in several ways. The front house may be perpendicular to the barn, resulting in a T-shaped ridge line. Alternatively, the barn can be constructed on one side of the front house, creating an L-shape, known as a krukhuisboerderij. The gutter line extends along the façade side to the height of the side wall of the barn.



Krukhuisboerderij L



T-huisboerderij

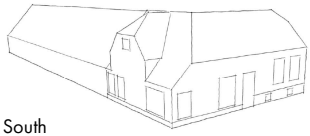


Langhuisboerderij

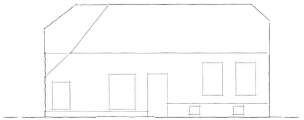
Adres:	Bouwjaar	Gemeente:	Type dak, materiaal	Gevelmaterialen	Opkamer met kelder?	Bijzonderheden
Noordlierweg 4	17e-18e eeuw	Westland	Wolfsdak, voorhuis riet & achterhuis pannen	Baksteen rood – witte plint	x	Hooiberg, kruizen boven kelderluiken
Woudweg 24	1650	Schiedam	Wolfsdak voorhuis riet & achterhuis pannen	Baksteen rood – witte plint	x	Bogen boven ramen, hooiberg – U achterhuis
Groeneweg 15	1840	Schiedam	Wolfsdak riet	Wit geschilderde stenen	x	
Kluiskade 21	17e eeuws	Midden-Delfland	Wolfsdak zwarte en oranje pannen	Gele bakstenen	x	Hooiberg, karnmolen
Zuidbuurt 5	1711	Maassluis	Schilddak, voorhuis pannen, achterhuis riet	Baksteen bruin	x	Raam luiken
Gaagweg 36	17e eeuws	Midden-Delfland	Wolfsdak, voorhuis riet, achterhuis pannen	Baksteen bruin	X	
Overgauwseweg 50	17 eeuw	Pijnacker-Nootdorp	Wolfsdak riet	Baksteen bruin	X	Getoogde kelderramen, hooiberg
Zuidbuurt 34	16e eeuw	Vlaardingen	Zadeldak, pannen	Baksteen geel, witte plint bij opkamer	x	Zijtrapgevels,

Gaagweg 36

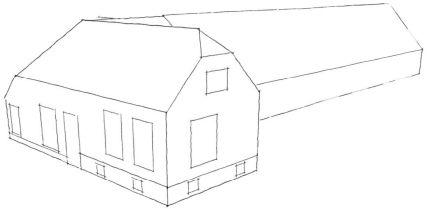
17e- eeuw



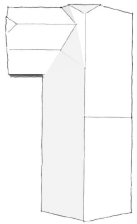
South



Front view eaves



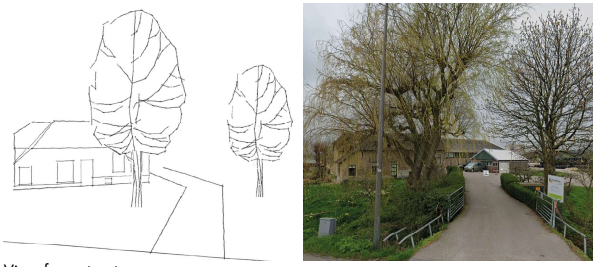
South-east



Top view

3.5
CONCLUSIONS

1. MORPHOLOGY
2. SPATIAL ARRANGEMENT
3. INTERIOR DESIGN
4. STRUCTURAL DESIGN
5. Main characteristiscs of traditional architecture
2. IMPLEMENTATION IN CONTEMPORARY DESIGN

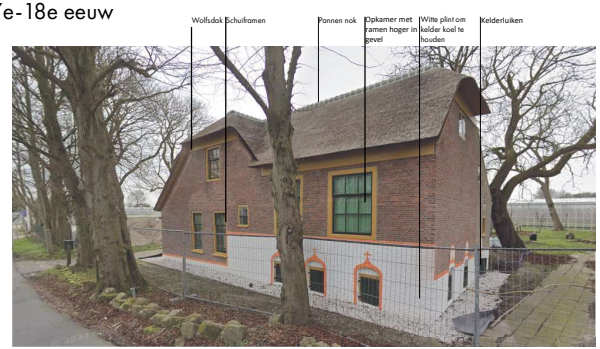


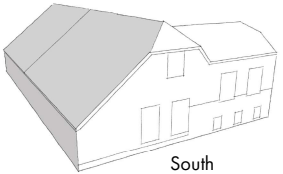
View from street

Spatial planning

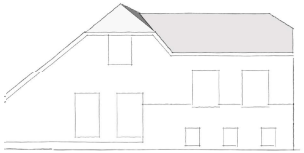
Noordlierweg 4

17e-18e eeuw

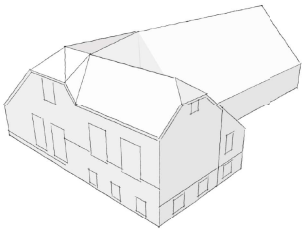




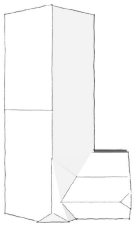
South



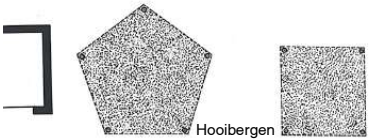
Front view eaves



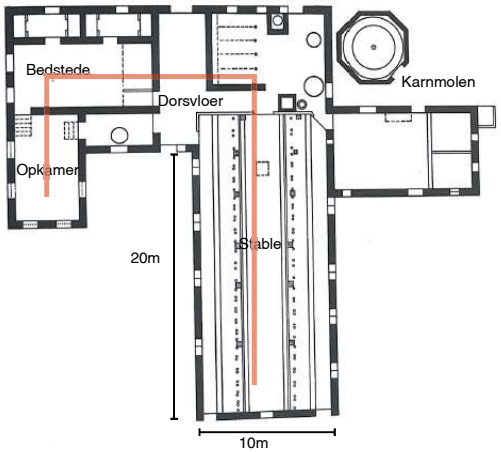
South-east



Top view



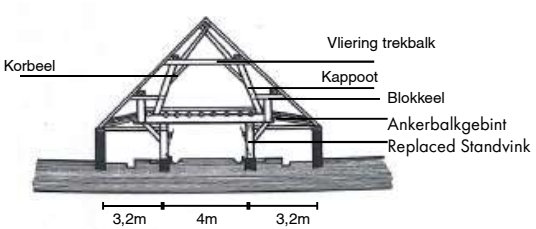
Hooibergen

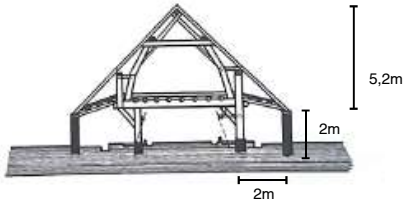


8. Boerderij Van Mil, Vlaardinger Ambacht

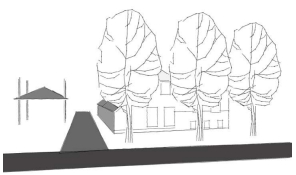
Interior & constructive design

Type: krukhuisboerderij

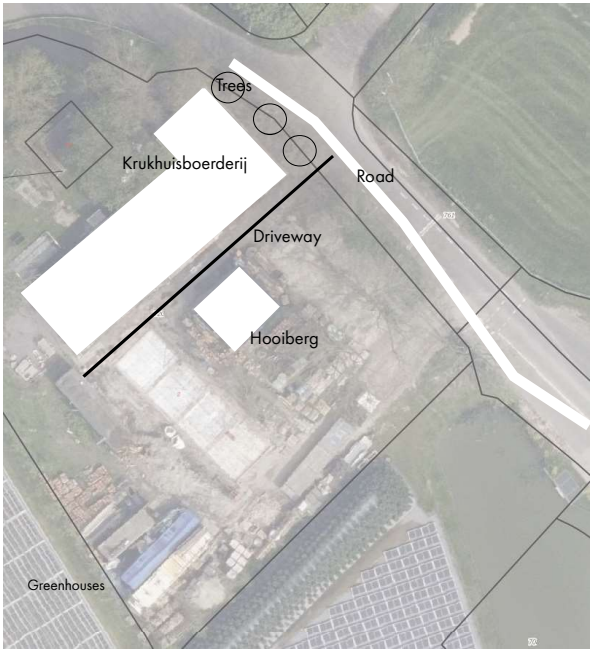




Some trusses contained an adjustment in the column at one side of the truss



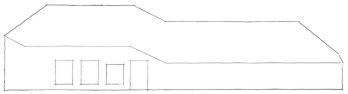
View from street



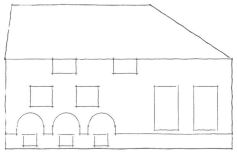
Spatial planning

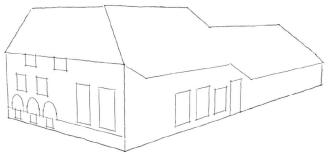
Overgauwseweg 50 Pijnacker

17e- eeuw

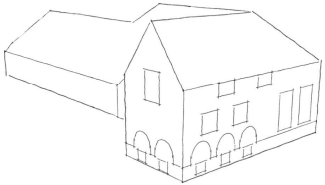


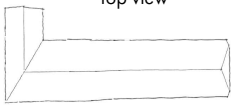
right view



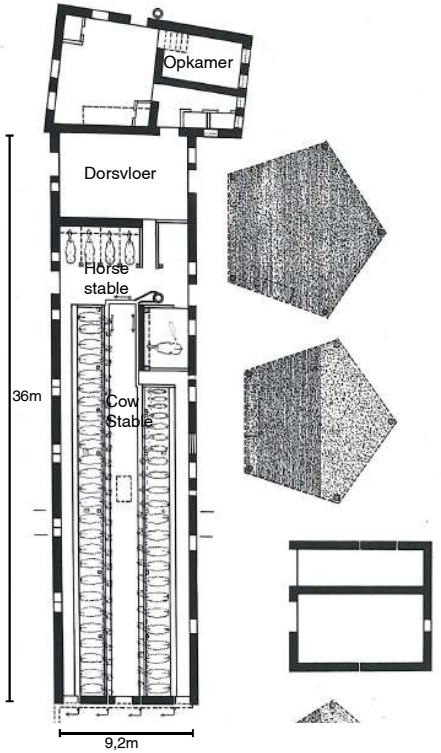


Front view





Top view

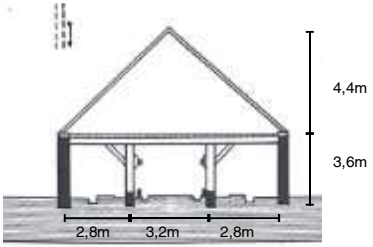


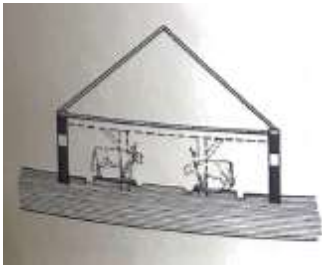
Uilkema, een historisch boerderijonderzoek 1914-1934

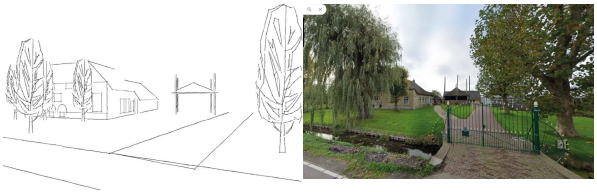
7. Boerderij De Nolwoning, Maasdijk

Interior & constructive design

Type: krukhuisboerderij





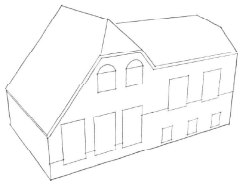


View from street

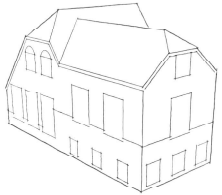
Spatial planning

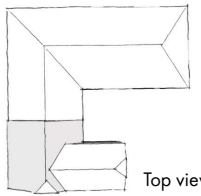
Woudweg 24, Schiedam

Krukhuisboerderij 1650

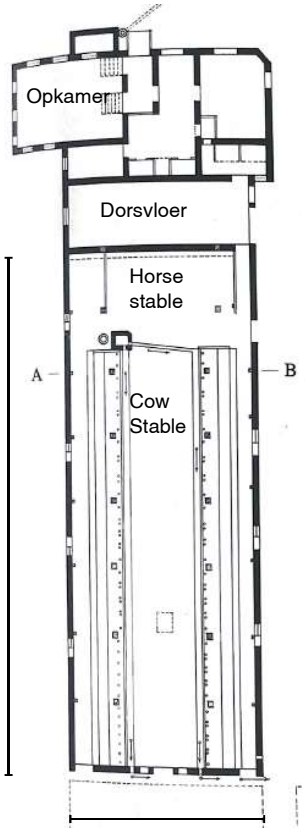


Front view





Top view

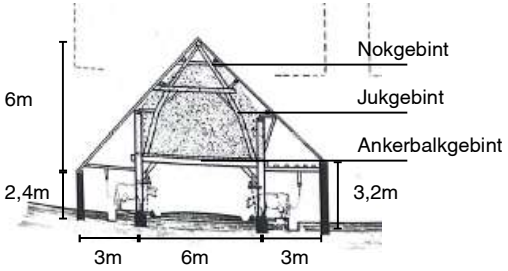


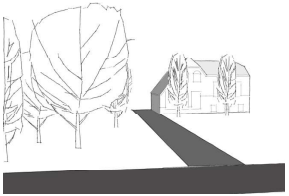
Uilkema, een historisch boerderijonderzoek 1914-1934

6. Boerderij Keijzer, De Lier 1700

Interior & constructive design

Type: krukhuisboerderij



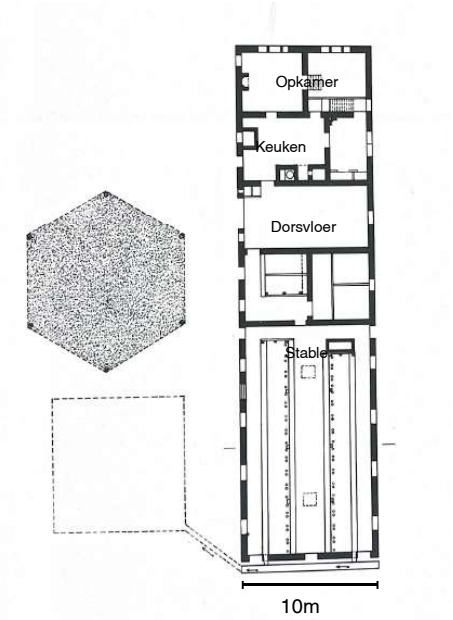


View from street

Spatial planning

T-HUIS FARMS

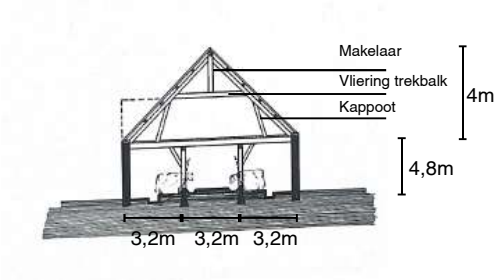
A T-house farmhouse is a farmhouse of the hall-house type, in which the living area (the front house) is placed at right angles to the rear house (creating a T-shaped unit). Both parts have their own roofs.



Uilkema, een historisch boerderijonderzoek 1914-1934

5. Boerderij Van der Kooij, Schipluiden 1920

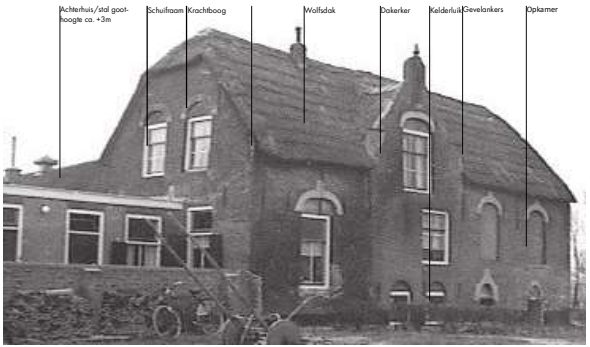
Interior & constructive design
Type: langhuisboerderij

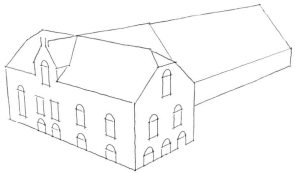


Adres:	Bouwjaar	Gemeente:	Type dak, materiaal	Gevelmaterialen	Opkamer met kelder?	Bijzonderheden
Harreweg 61	1889	Schiedam	Schilddak, overgaan in zadeldak, zwarte pannen	Gele baksteen	X	
Commandeurskade 46	1860	Midden-Delfland	Zadeldak, dakpannen met dakkapel	Rode baksteen	x	Karnmolen
Zuidbuurt 14	17e eeuws	Maassluis	Wolfsdak riet met dakerker. Pannendak achterhuis	Bruine baksteen	x	Getoogde (kelder) ramen,
Hoeve Bouwlust Oostgaag 31	18e eeuw	Midden-Delfland	Zadeldak, pannen	Baksteen rood	x	Hooiberg, kruizen boven kelderluik
Westgaag 28	1666	Midden-Delfland	Zadeldak, riet	Bruine baksteen	x	Kleine roede verdeling in ramen, getoogde kelderramen
Zuidbuurt 79	1735	Vlaardingen	Zadeldak, oranje pannen	Wit geschilderde bakstenen	x	Getoogde kelderluiken

Zuidbuurt 14, Maassluis

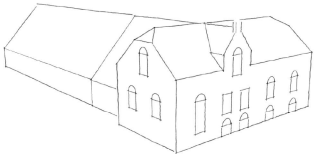
T-huisboerderij 17e eeuws



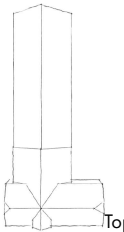


Perspective view 1

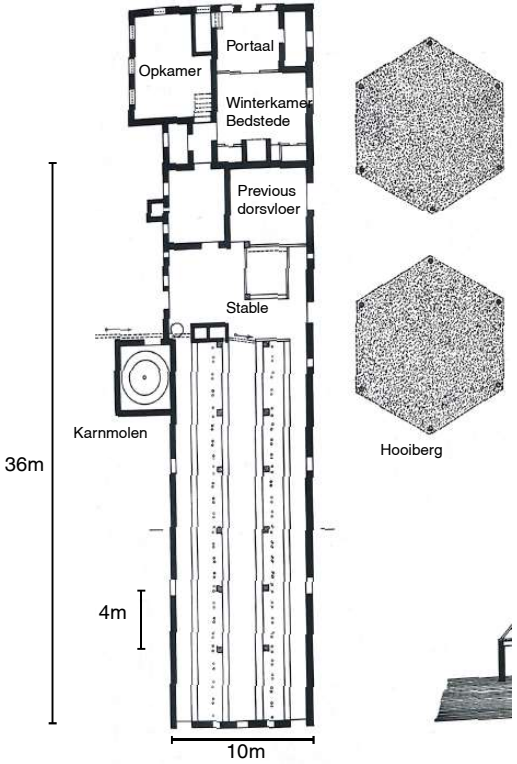
Front view



Perspective view 2



Top view

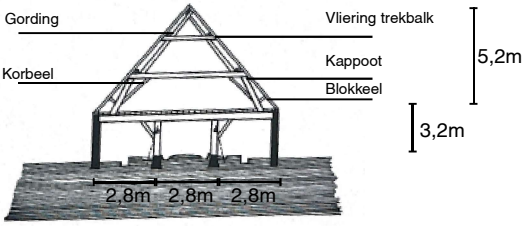


Uilkema, een historisch boerderijonderzoek 1914-1934

4. Boerderij Van der Kooij, Schipluiden 1768

Interior & constructive design
Type: krukhuisboerderij

(J.) Verheul , boerderij Van der Kooij Oostveenseweg 15, Schipluiden



Uilkema, een historisch boerderijonderzoek 1914-1934

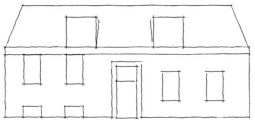
View from driveway

Spatial planning

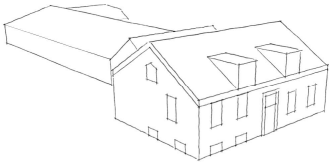
Commandeurskade 46, Maasland

T-huisboerderij 1860

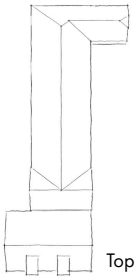
Perspective view 1



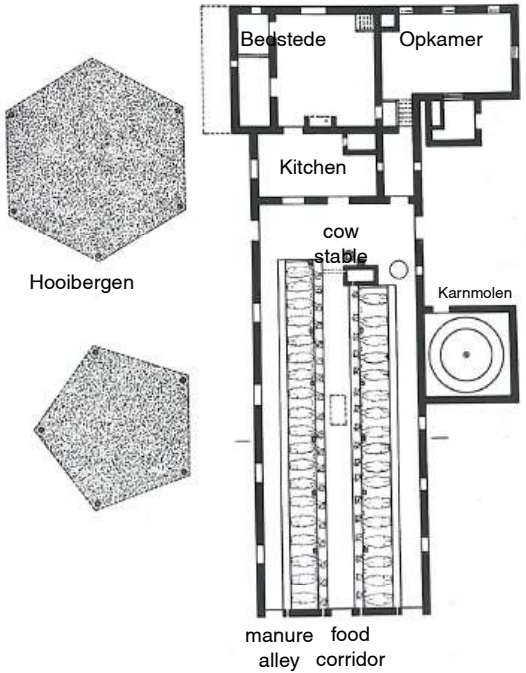
Front view



Perspective view 2



Top view

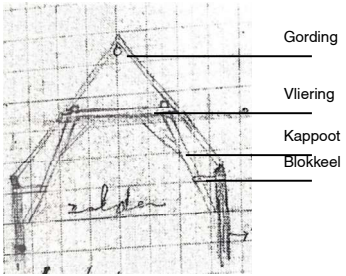


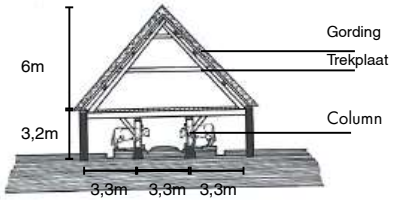
Uilkema, een historisch boerderijonderzoek 1914-1934

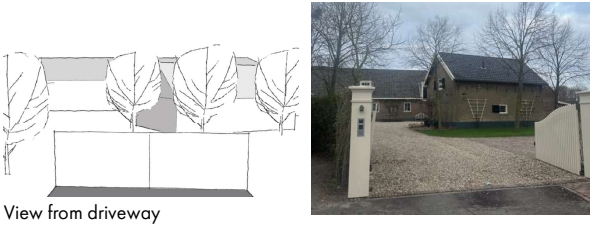
3. Boerderij Blijdorp Pijnacker 1630

Interior & constructive design

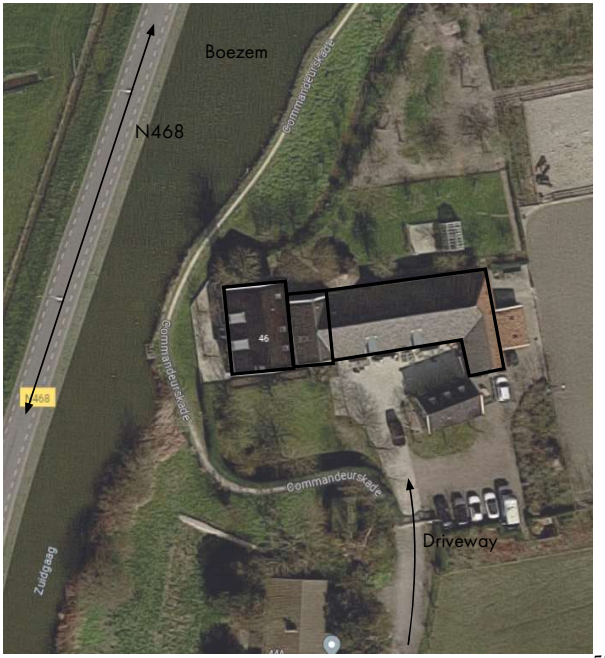
Type: krukhuisboerderij







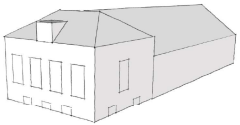
View from driveway



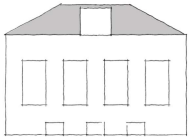
Spatial planning

Harreweg 61, Schiedam

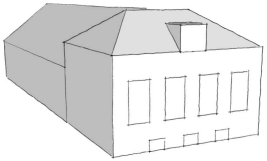
T-huisboerderij 1889



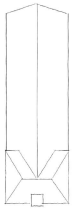
Perspective view 1



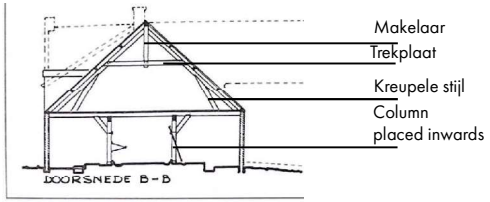
Front view

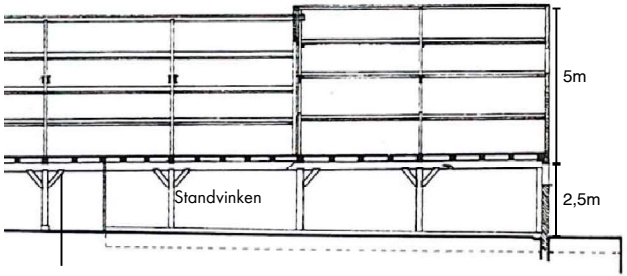


Perspective view 2



Top view

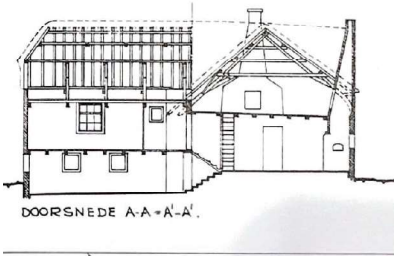


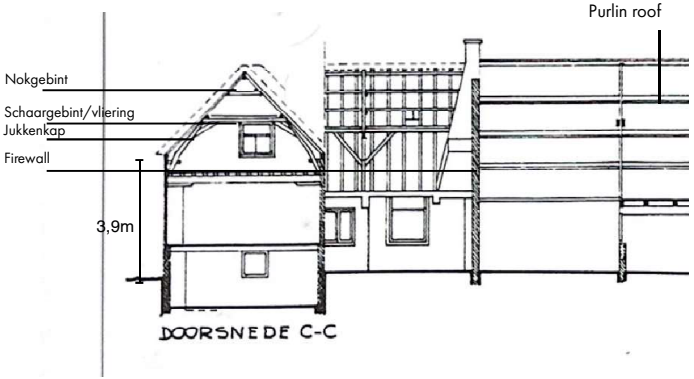


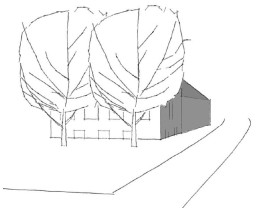
Boerderij Westgaag 100 - Van Olst, Stichting historische boerderij onderzoek, Landelijke bouwkunst

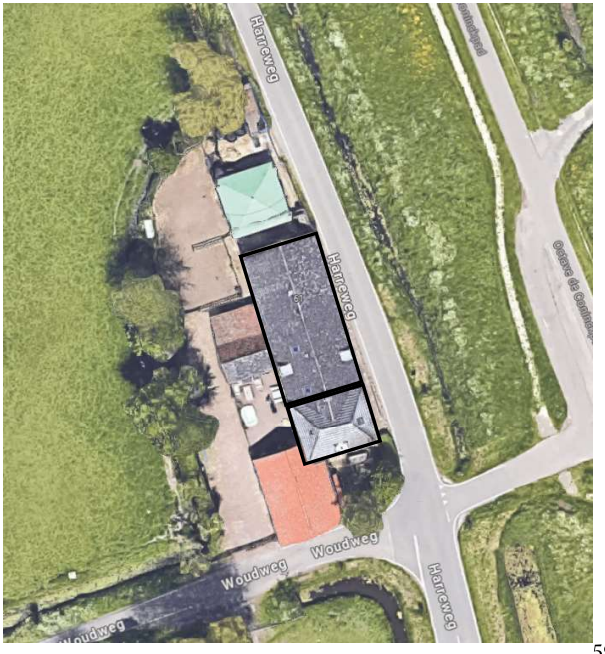
2. Boerderij Westgaag 100

Constructive design







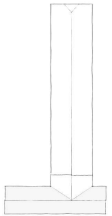


Westgaag 28, Maasland

T-huisboerderij 1666

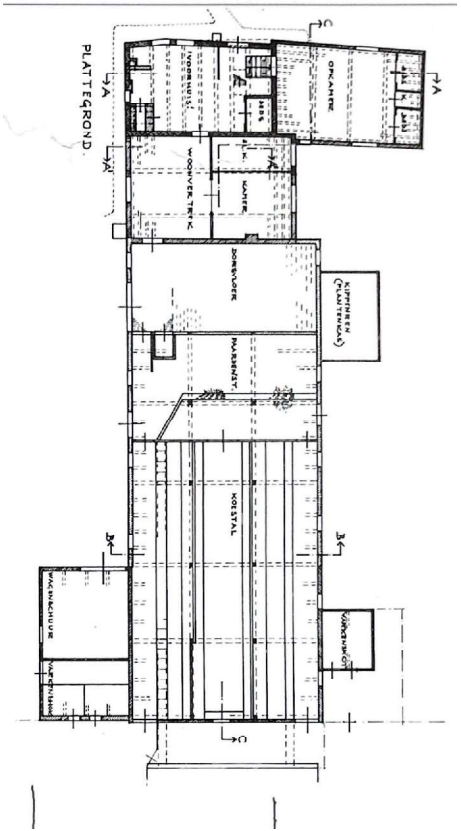
Front view

Perspective view 1



Top view

Perspective view 2

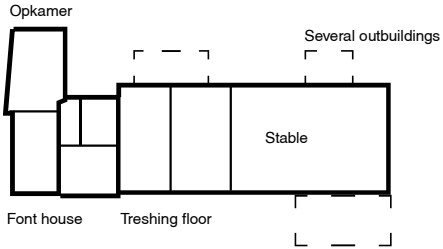


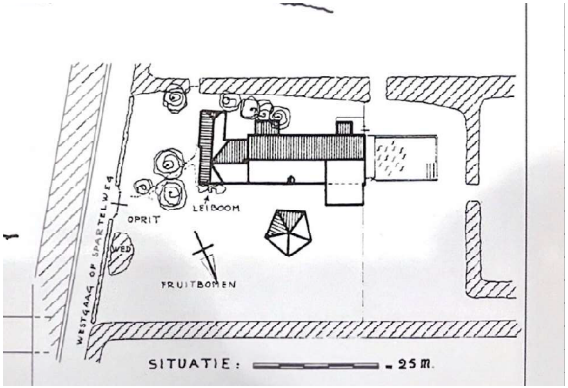
Boerderij Westgaag 100 - Van Olst, Stichting historische boerderij onderzoek, Landelijke bouwkunst

2. Boerderij Westgaag 100

Interior design

Type: krukhuisboerderij



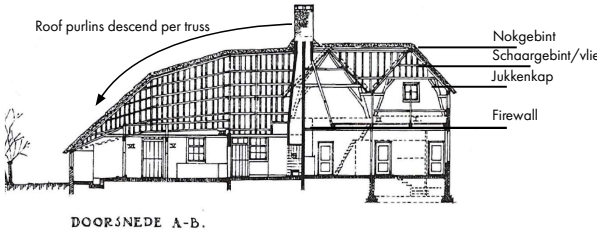


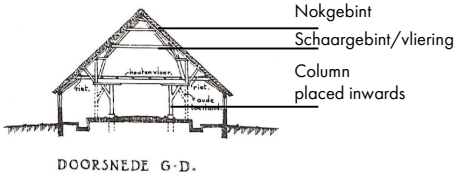
View from street

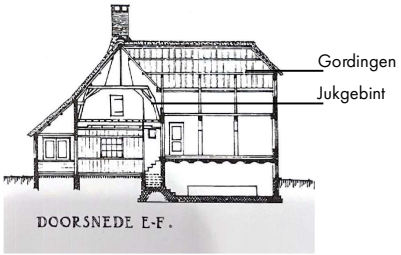
Spatial planning

LONGHUIS FARMS

A longhouse farmhouse is a farm where the main house and the rear house are under one roof in line with each other (forming a long house)



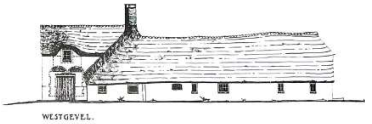


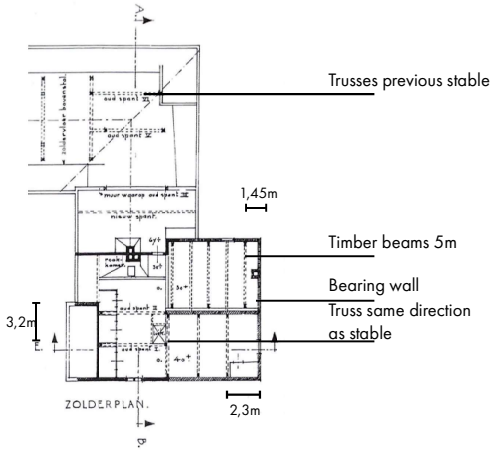


Boerderij van Arkenstein - Van Olst, Stichting historische boerderij onderzoek, Landelijke bouwkunst

1. Boerderij van Arkenstein, Schipluiden

Constructive design

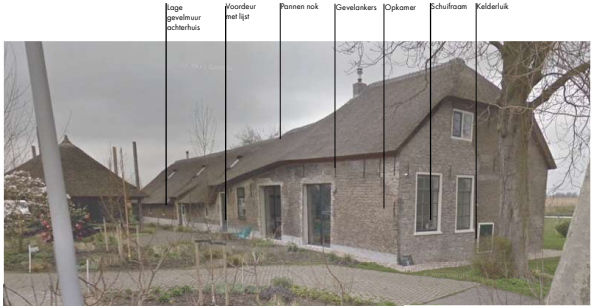




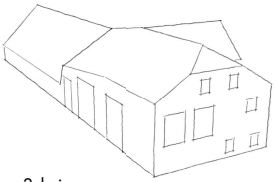
Adres:	Bouwjaar	Gemeente:	Type dak, materiaal	Gevelmaterialen	Opkamer met kelder?	Bijzonderheden
Groeneweg 31	1850	Schiedam	Wolfsdak riet	Baksteen	x	Golvende nok en goot, kranmolen en hooiberg
Oostgaag 49	17e eeuw	Midden-Delfland	Wolfsdak, riet	Rode baksteen	x	Getoogde ramen en kelderramen. Raamluiken, hooiberg, karnmolen
Sportlaan 2	1658	Maassluis	Zadeldak, voorhuis pannen, achterhuis riet		x	Karnmolen
Woudseweg 27	1910	Midden-Delfland	Zadeldak zwarte pannen	Baksteen	x	Chaletstijlsierspanten, grotere ramen, karnmolen

Groeneweg 33, Schiedam

Langhuisboerderij 1850

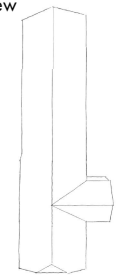


Front view

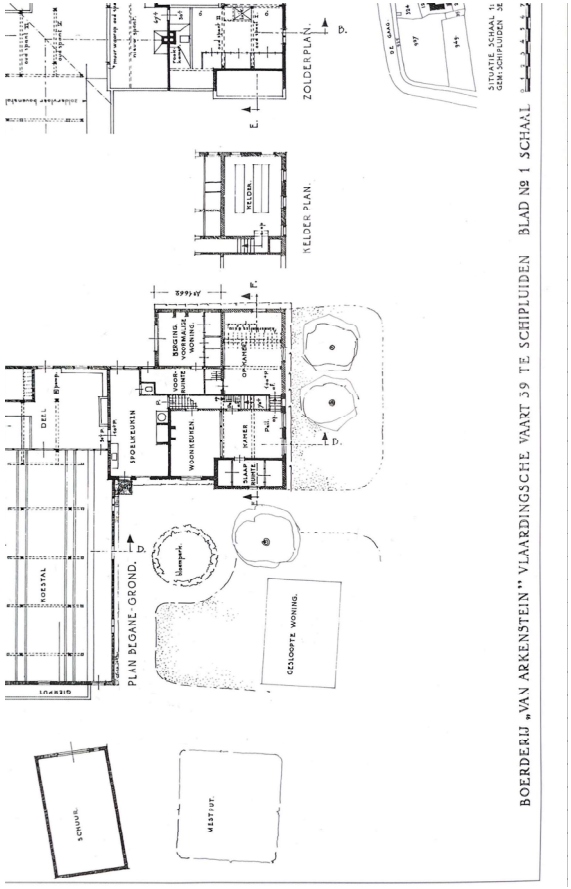


3d view

Side view



Top view

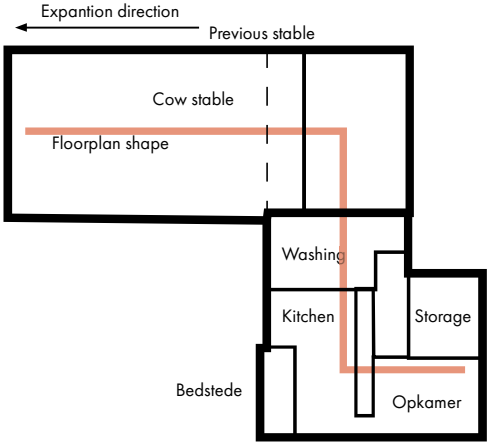


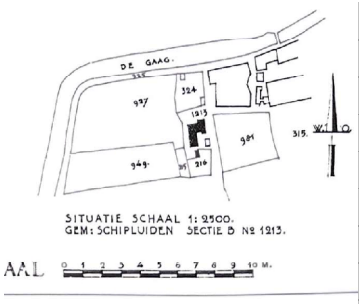
Boerderij van Arkenstein - Van Olst, Stichting historische boerderij onderzoek, Landelijke bouwkunst

1. Boerderij van Arkenstein, Schipluiden 1662

Interior design

Type: krukhuisboerderij





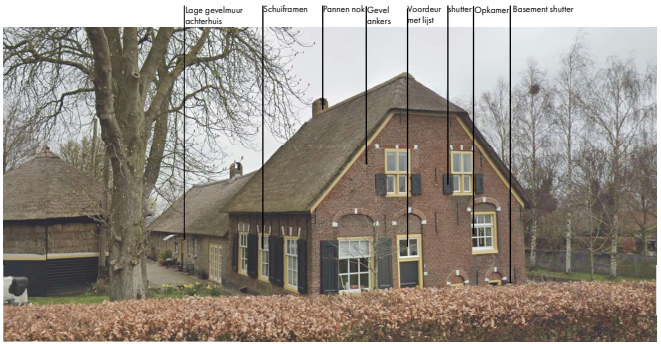
Situation

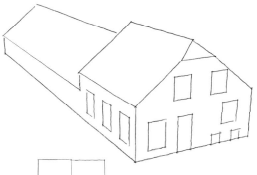
View from street

Spatial planning

Oostgaag 49

Langhuisboerderij 17e eeuw





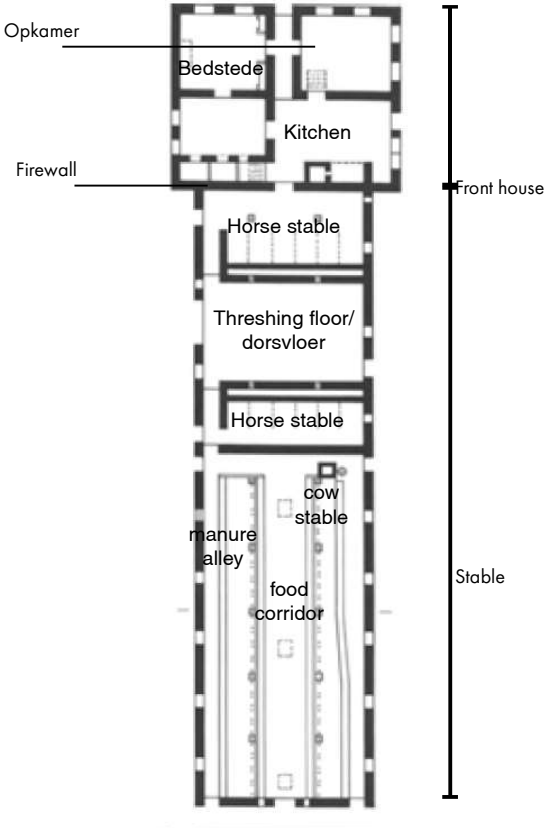
3d view

Front view

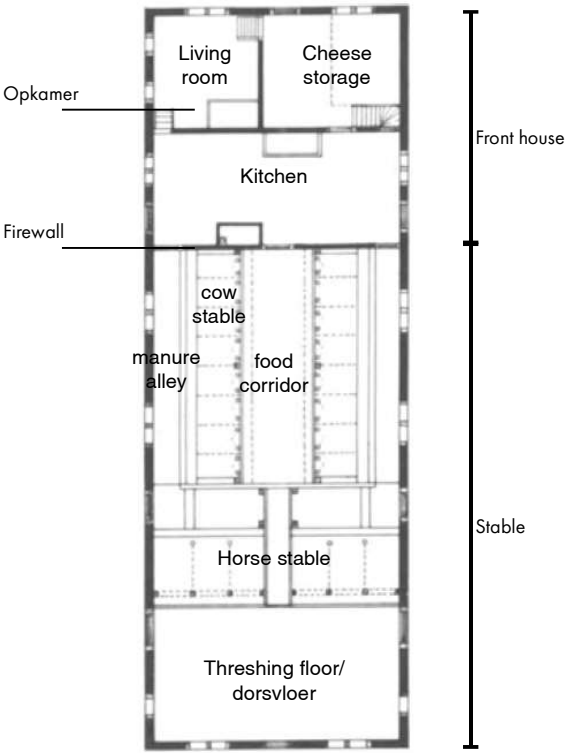
Top view

Side view

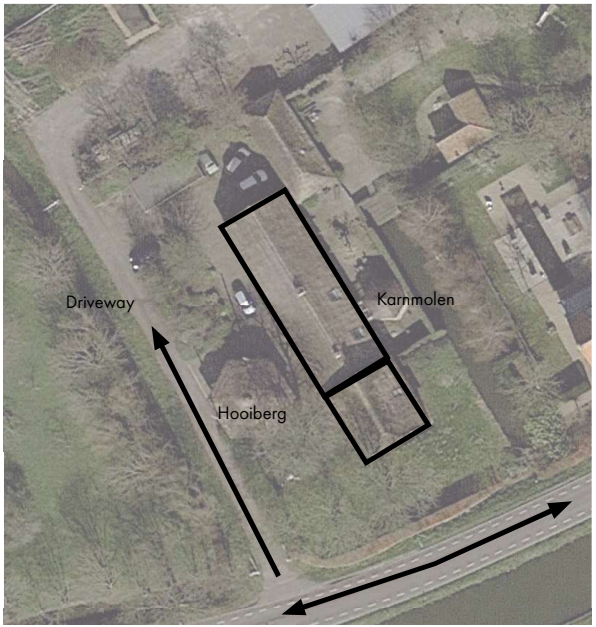
T-huisboerderij



Langhuisboerderij



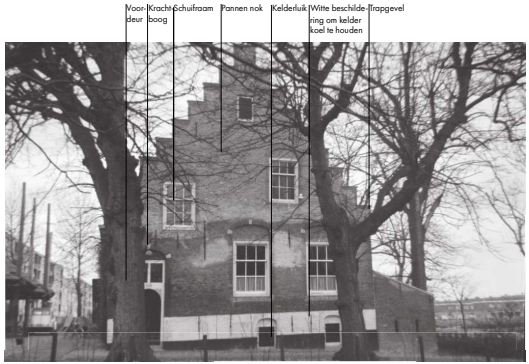
View from street

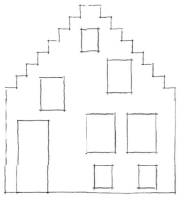


Spatial planning

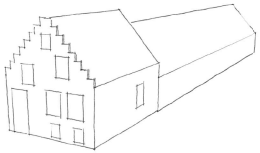
Sportlaan 2, Maassluis

Langhuisboerderij 1658



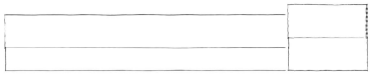


Front view



3d view

Top view



Side view

3.5
INTERIOR & CONSTRUCTIVE DESIGN

Spatial planning

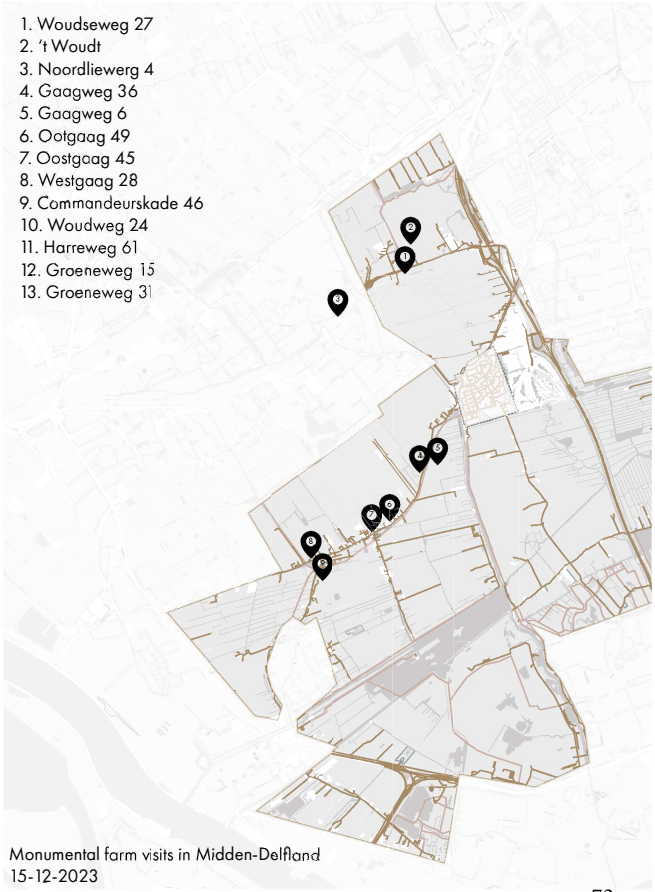
3.3

SITE VISIT
PHOTO GALLERY

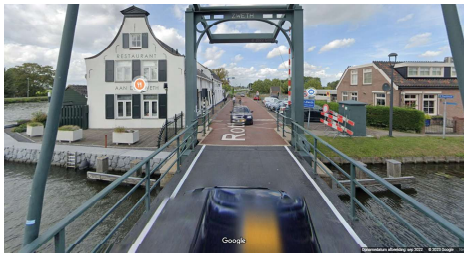
1. Woudseweg 27
2. 't Woudt
3. Noordliewerg 4
4. Gaagweg 36
5. Gaagweg 6
6. Ootgaag 49
7. Oostgaag 45
8. Westgaag 28
9. Commandeurskade 46
10. Woudweg 24
11. Harreweg 61
12. Groeneweg 15
13. Groeneweg 31

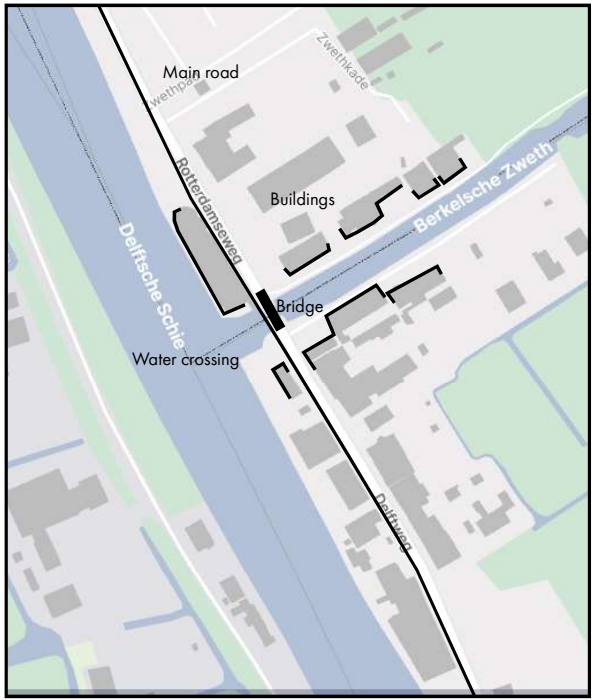
Maassluis


Fortegracht
Noordzijk
Veerstraat
Marnixkade
Sluis
Noordvliet
Geerkade
De Kolk
Hoogstraat
Nationaal Sleepvaartmuseum
Eetcafé De Bijk
Haven



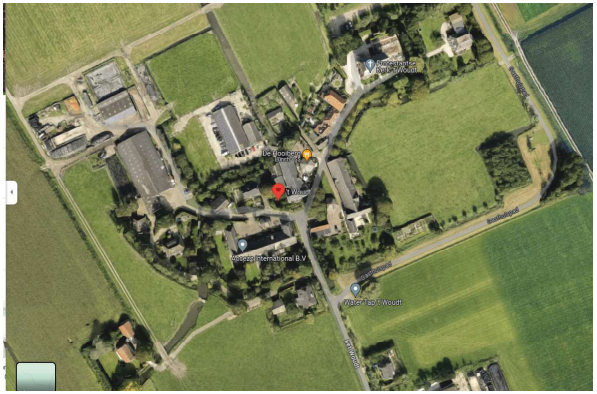
Monumental farm visits in Midden-Delfland
15-12-2023




Main road
Zwethkade
Rotterdamseweg
Buildings
Berkelsche Zwet
Delftsche Schie
Bridge
Water crossing
Delftweg

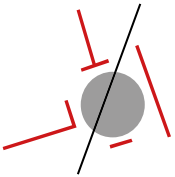
Site visit

1. Woudseweg 27

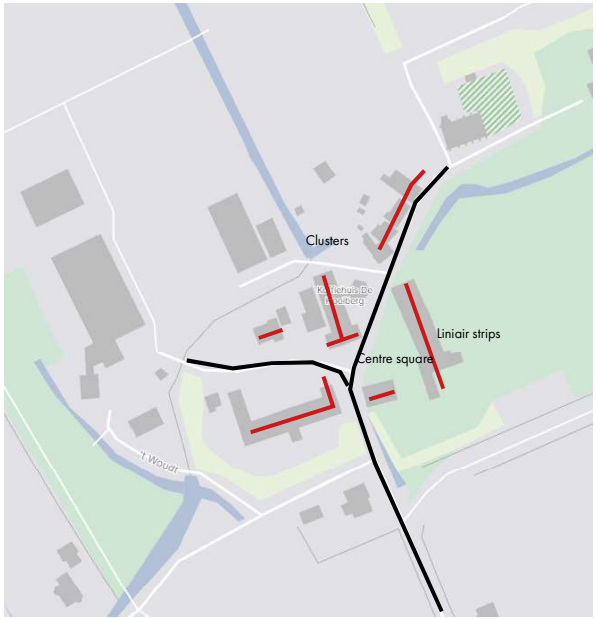


‘t Woudt

(Smallest village from the Netherlands)

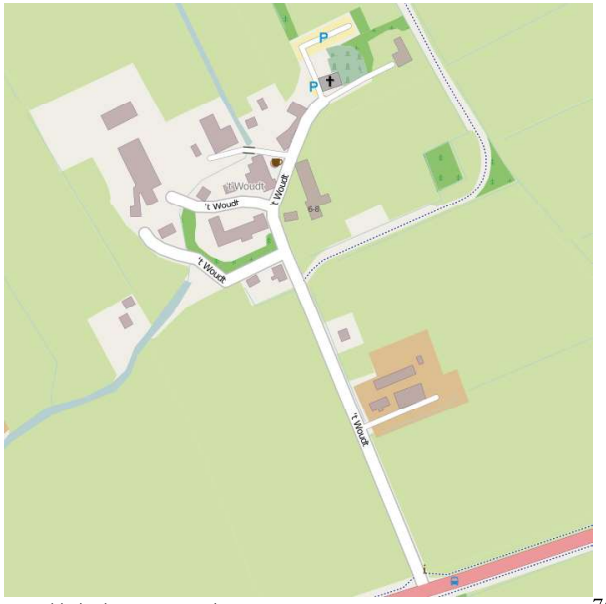


Diagonal street
45 degrees



2. ‘t Woudt

‘t Woudt is a church village located in Midden-Delfland. With original buildings such as farms, church, parsonage and a café. Due to its special location in the middle of the polder, the village has one access road. There are one kruhuis boerderij and two T-house farms. One of the T-house farmhouses has been visited inside, Het Woudt 15.



Ensemble (Helanuaren, 2013)

1. ‘t Woudt

2. De Zweth

3. Maassluis

3.4
URBAN PLANNING

1. ‘t Woudt
2. De Zweth
3. Maassluis

Not only traditional architecture has been studied but also urban planning. In Midden-Delfland, two neighbourhood communities, ‘t Woudt and de Zweth are studied for orientation towards water and roads, and the town of Maassluis for building along two waterways.

View from N223

accessibility road

Farmhouses are oriented in the same direction but the staggered arrangement creates squares of sorts. The road runs diagonally through the village so the buildings are positioned 45 degrees to the road. The road to the church is a picturesque little street with a gravel path. The farms are spaciously positioned and all have a haystack, some functioning as other functions such as parking or a catering facility.

13. Groeneweg 31

This longhouse farmhouse has a thatched roof in which the front house has a different gutter height but continues gradually. The driveway continues along the long façade to the back next to which is a haystack. On the other side is a churn mill. The opkamer with dress shutters is clearly recognisable from the street.

2.1 Het Woudt 15

The back house which used to be the barn at Het Woudt 15 is now a catering facility. During the visit, the structure could be properly surveyed. The wooden beams supporting the storey floor are supported by two other beams. These beams are again supported by columns with braces. This is a different type of construction from the anchor beam truss construction known for its joists. Here, no crossbeam could be found.

12. Groeneweg 15

This modernised krukhuis farmhouse is located with a driveway at a distance from the public road. The driveway runs along the long side of the façade. Apparently there are two front doors, one along the long gable and one on the end gable on the public road side. The thatched roof is a wolf roof that overflows with the same gutter height towards the rear house.

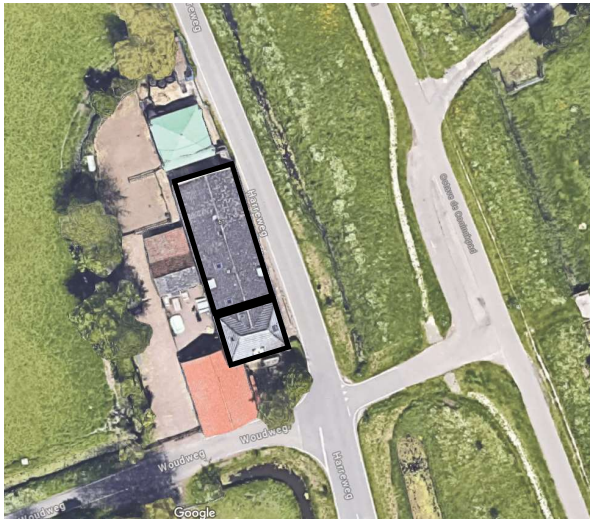
Front house with basement shutters, opkamer above

2.2 Het Woudt 9

Het Woudt 9 is a cross-house farmhouse extended in a U-shape. The front door is in the front facade facing the main road. The haystack serves as a parking facility. There are cellar hatches with an opkamer above. The roof is a thatched wolf roof.

11. Harreweg 61

This T-house farmhouse is unusually situated. The main road runs right past the farmhouse's long gable end. The front house has a hipped tile roof and the front gable of the front house was previously overgrown with ivy, hence the lighter-coloured bricks. Part of the back house belongs to the main house as seen by the front door and large windows in the facade. This part contains a gabled roof. Behind the back house is a modern haystack.



2.3 Het Woudt 6

Het Woudt number 6 is a T-house farmhouse. The roof of the back house is at right angles to the front house. With a greater distance between public road and the front door than number 9, a large driveway is located. With a haystack.

10. Woudweg 24

This krukhuis farmhouse is still a dairy farm. A long driveway runs past the front house to the back house. The front door is on the side of the house along the driveway. This overlooks a haystack. The farmhouse is extended in a U-shape with a tiled roof.

3. Noordlierweg 4, De Lier

A krukhuis farmhouse with symbolic painted crosses above the cellar doors. White-painted bricks were used to keep the cellar cool. The farmhouse has been completely renovated. The back house contains roof tiles with large skylight. The front house is a wolf roof with thatch. The front door is situated in the long façade of the farmhouse where the driveway is located. Next door is a haystack.

9. Commandeurskade 46

This is a special T-house farmhouse because it looks like there are two front houses against each other. The back part, the back house, has a hipped roof where the ridge extends to one of the front houses. In the middle section, the roof is at right angles to the rear house. The roof of the front section runs in the same direction as the middle section. It looks like a front house was added towards the boezem. This contains a cellar with opkamer above.

4. Gaagweg 36

This krukhuis farm is L-shaped. It is still a dairy and cheese farm. The opkamers with cellar hatches below are clearly visible. The property is accessed via a driveway that passes by the building. The front door is in the front gable on the main road. This is presumably hardly used.

8. Westgaag 28

A T-house farmhouse with thatched gabled roof. Opkamer with cellar hatches below are visible in gable. Front door is centred in gable at the main road. Driveway extends past building to back house.

5. Gaagweg 11

A T-house farmhouse where it is unique in that the front door is located in the side wall on long side elevation. It is located on the side of the main road. Usually the front door is in the front gable of the front house on the end side. A traditional churn mill is located on the west side.

7. Oostgaag 45

This is an L-shaped kruhuis farmhouse that functions as a building materials store. The front house has a hipped tile roof. The front door is located on the public road side at the end of the farmhouse. Next to the farmhouse is a driveway with large traditional haystack.

6. Oostgaag 49

Oostgaag 49 is a longhouse farmhouse where the front house has higher roof ridge than back house. The front house is a thatched wolf roof and the back house a thatched gable roof. The driveway passes the house next to which is a haystack.