

P4 report

Learning from ~~Las Vegas~~ Zaandam *A new entrance for Wormerveer*



Colophon

Name	Rick Zwerver
Student number	1240900
Address	Bosboom-Toussaintplein 229
Postal code	2624 DN
Place of residence	Delft
Telephone number	+31627412644
E-mail address	rickzwerver@gmail.com

Faculty of Architecture, TU Delft

Studio	Msc Graduation, Hybrid Buildings: 'Urban Regeneration: What next?'
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Tutors	Esther Gramsbergen, Tamara Rogic, Henk Muhl
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Contents

Colophon	1
Chapter 1: Introduction	3
1.1 Theme of the studio	3
1.2 Personal motivation	4
Chapter 2: Problem statement	4
2.1 Introduction	4
2.2 Decrease of housing occupancy	5
2.2.1 PHS Programme high frequency traintraffic	5
2.2.2 Urban tissue and cultural heritage	5
2.3 Municipal housing policy	5
2.3.1 Reuse of industrial areas	5
2.3.2 Adding new stations	5
2.3.3 Underutilized station locations	6
2.3.4 Parking and stations	6
2.3.5 Facilities around the stations	7
2.3.6 Recreational node	7
2.3.7 Papermills in Guisveld-Vijverlanden, Wormerveer	7
2.4 Problem statement Zaanstreek	7
2.5 Problem statement Wormerveer	8
Chapter 3: Methods and Techniques	8
3.1 Methods and techniques Urban Analysis Zaanstreek	9
3.2 Typology study	9
3.3 Architectural ideology	9
3.4 Design method of Soeters en Van Eldonk architects	10
3.5 Methods and techniques Wormerveer	11
Chapter 4: Analysis and Argumentation	12
4.1 Choice of location	12
4.2 Master plan	13
4.3 Analysis and argumentation Wormerveer	15
Chapter 5: Conclusion	18
5.1 Defining the design question	18
5.1 Answering the design question	18
Chapter 6: Reflection	20
6.1 The relationship between research and design	20
6.2 The relationship between the theme of the studio and the subject/case study within this framework (location/object)	20
6.3 The relationship between the methodical line of approach of the studio and the method	21
6.4 The relationship between the project and the wider social context	21
Bibliography	

1. Introduction

This report shows the research of the graduation studio; Hybrid Buildings / Urban Regeneration, done at the Faculty of Architecture of the TU Delft. The studio focusses on the possibilities to improve the quality of train stations and to increase the housing density around them. The Zaanstreek, just above Amsterdam is the area in which the studio will investigate the existing train station areas on the 'Zaanlijn' -the train connection from Zaandam to Krommenie-Assendelft. There will also be looked at possibilities for extra train stations between the existing ones. Eventually this research will result in a design question for one of the station areas. The design question will eventually be answered by making an architectural design for a specific location along the 'Zaanlijn.'

"De Afstudeerstudio stelt zich tot doel met behulp van de voorliggende studie voor een aantal stationslocaties mogelijke interventies te onderzoeken die zowel kunnen leiden tot verdichting als tot verbetering van de stations." (Engel, H.J., de Waaijer, D.A., 2011: 10)

The foundations for this research are in the report made by ir. H.J. Engel and ir. D.A. de Waaijer; 22 stationslocaties in the Hollands Noorderkwartier. This report was commissioned by the municipality of Noord-Holland and was made to give a better overview of the development of the network of Dutch cities and the urban ground use, relating to other researches like: 'Uitvoeringsprogramma Verdichting rond OV-knooppunten' from the Province of Noord Holland and 'Randstad Holland in kaart'.

1.1 Theme of the studio

Urban regeneration, what next? This is the theme of the hybrid buildings graduation studio. This studio name does not cover the complete theme of the studio itself but it gives an idea of the main focus. The difference between urban regeneration and urban renewal might be slight but for a better interpretation of the studio theme it needs to be clarified.

Urban Renewal:

Rehabilitation of impoverished urban neighborhoods by large-scale renovation or reconstruction of housing and public works.

Regeneration:

1. *The act or process of regenerating or the state of being regenerated.*
2. *Spiritual or moral revival or rebirth.*
3. *Biology Regrowth of lost or destroyed parts or organs.*

(<http://www.thefreedictionary.com>)

The use of the word: regeneration, implies a lack of spirit within a certain framework, this spirit needs to be revived in some way. Urban renewal simply suggests the reconstruction or renovation of an existing situation. This distinction gives an important nuance for the interpretation of the assignment. The main topics that are related to the theme are: densification, railway stations and cultural heritage, with a special focus on the densification around the station areas and improvement of the station itself.

1.2 Personal motivation

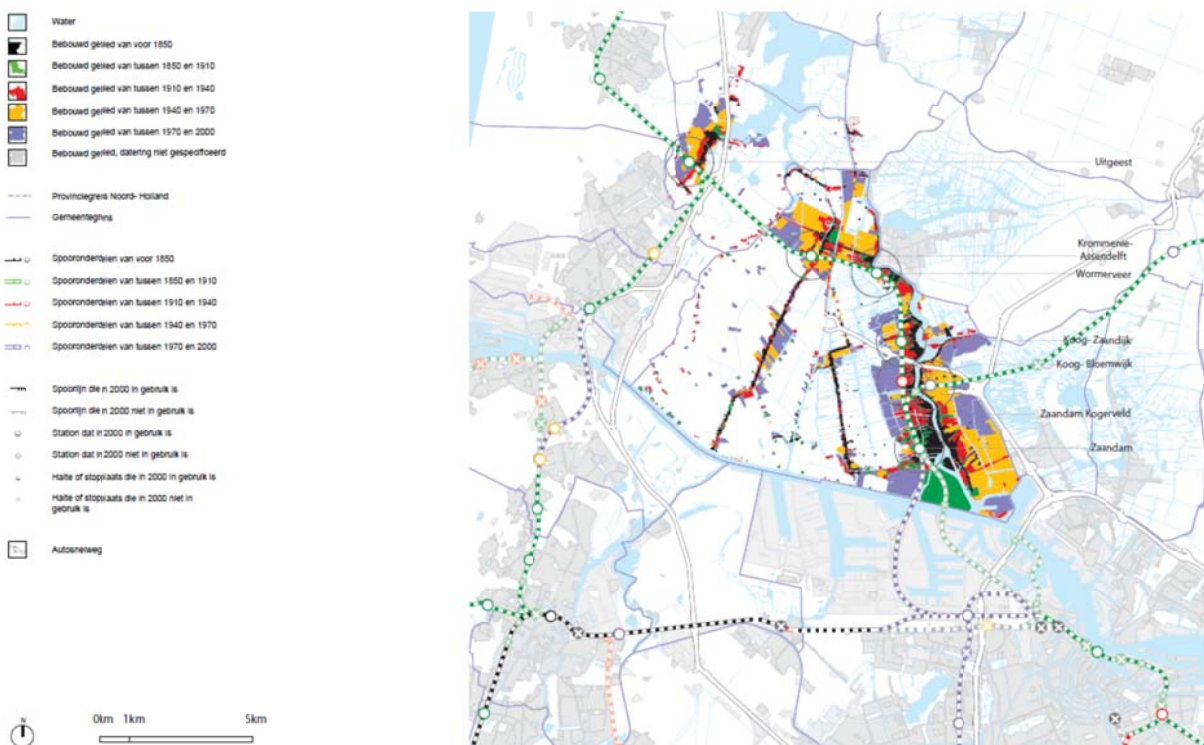
Why did I choose this studio? The Hybrid building studio focusses on a niche between architecture and urbanism; this is a theme that really interests me. In my opinion the two cannot be seen separately when intervening within a city or any urban context, I detest the modern interventions where 'urbanists' design dwelling slabs and vinex areas that are totally disconnected from the surrounding urban fabric. That's why I want to use this project to find a method for dealing with urban regeneration and densification in harmony with the existing urban tissue. I also want to use this project to position myself within the field of architecture. Looking back at my other designs, there is starting to emerge a common ideology, I will use this graduation project to crystalize my architectural vision.

2. Problem statement

2.1 Introduction

Since the research of the studio covers the Zaanstreek and its stations, there is a first problem of which location within this area to choose for the intervention. To make this decision there is made an urban analysis of each station area, done by small groups of students. Also a masterplan is made to show where there are opportunities to densify. Another argument for making this decision is from a theoretical and personal preference. The latest is important for my location choice. Based on the station of Zaandam, which made a big impact on me, the first time we visited the area. However the studio doesn't only focus on improving the station areas but also on increasing the amount of dwellings within an 800 meter radius around the station. The intention of this studio is to make the public transportation and mainly the train, better accessible and also promoting it as a greener alternative for the car. The 800 meter radius circles around the train stations on the 'Zaanlijn' have been analyzed by Henk Engel, showing low housing densities around the stations, mainly caused by urban sprawl and vinex areas.

Stationslocaties Zaanstreek



2. Station locations in the Zaanstreek (Engel, H.J., de Waaijer, D.A., 2011)p.69

2.2 Decrease of housing occupancy

The outcome of the study on nine cities in the 'Randstad' shows that since 1970 there is an ongoing decrease in housing occupancy. Which has big consequences for the urban ground use; the housing density and number of inhabitants per hectare has decreased. This phenomenon is further investigated and will serve as the starting point for this graduation studio. (Engel, H.J., de Waaijer, D.A., 2011: 1)

2.2.1 PHS Programme high frequency traintraffic

In the 'ontwerp structuurvisie' the government sketches the ambitions till 2040 and the targets till 2028. They are investigating the Programma Hoogfrequent Spoorvervoer (PHS) on the train connection between Alkmaar - Amsterdam. There will be a frequency of 6 intercity's and 6 sprinters per hour. This metro like utilization has to be further investigated. The research of the graduation studio will look into the new possibilities it can offer for station areas in the Zaanstreek. Not only the possibilities for housing addition should be investigated but also the situations directly around the station. Adding two extra train stations will have to be investigated further as well. (Engel, H.J., de Waaijer, D.A., 2011: 12)

2.2.2 Urban tissue and cultural heritage

Special attention has to be given to the presence of characteristic building patterns and cultural heritage, which can serve as starting points for development of the station areas. Interventions along the Zaanstreek are strongly connected to the industrial heritage and the reuse of these buildings since it is an important layer that shows the identity of the Zaanstreek.

2.3 Municipal housing policy

De agglomeratie Zaanstreek bestaat uit de gemeente Zaanstad en Uitgeest. Zaanstad is een samenvoeging van Krommenie Assendelft, Wormerveer, Koog Zaandijk en Zaandam, die in 1970 nog als zelfstandige gemeenten bestonden. Sinds 1970 is er in de Zaanstreek slecht één nieuw station bijgekomen: Zaandam Kogerveld in 1989. Totaal zijn er nu zeven stations. In de periode 1970-2010 is het aantal inwoners van de Zaanstreek toegenomen van 123.230 tot 157.801 en naar verwachting zal die nog verder toenemen tot 173.344 in 2030. (zie tabel 2) De dekkingsgraad van de stations is sinds 1970 gedaald van 39 % tot 31% in 2010 en daarin lijkt geen verbetering te komen ondanks een geraamde woningbehoefte van 10.780 woningen. Daarvan komen er met de beschikbare capaciteit 2.642 woningen in de stationslocaties terecht. Het aantal inwoners rond de stations in de Zaanstreek zal daardoor ruim op peil blijven, maar vanwege de groei elders in de betrokken gemeenten zal het dekkingspercentage toch met een procent dalen tot 30 %. Dat zou verhoogd kunnen worden, indien een groter deel van de woningbehoefte bij de stations zou worden gerealiseerd. Als de gehele woningbehoefte in de 7 stationlocaties zou kunnen worden ondergebracht, dan zou deze agglomeratie een dekkingspercentage kunnen bereiken van 40 %. Hier liggen mogelijkheden, die nadere studie verlangen.

2.3.1 Reuse of industrial areas

Ten eerste is er binnen de zes stationslocaties van Zaanstad 124 ha. Industriegebied aanwezig die de nominatie staan om te worden hergestructureerd. Als daarvan een deel beschikbaar zou kunnen komen voor woningbouw zou dat enige verlichting kunnen geven.

2.3.2 Adding new stations

Een tweede optie is het toevoegen van twee nieuwe stations op deze lijn: één ten westen van het huidige station Krommenie Assendelft en één tussen huidige stations Koog Bloemwijk en Zaandam. Het traject Zaandam-Uitgeest kan dan met sprinters echt als een metrolijn gaan functioneren en het gewenste aantal woningen kan verdeeld worden over negen in plaats van zeven stationslocaties.

Bovendien wordt een deel van de al aanwezige bebouwing door de twee nieuwe stations afgedekt en zou de dekkingsgraad nog weleens hoger kunnen uitkomen dan 40 %.(Engel, H.J., de Waaijer, D.A., 2011: 10)

2.3.3 Underutilized station locations

Het gaat niet alleen om verdichting van de stationslocaties ten behoeve van woningbouw maar ook om de uitbreiding van werkgelegenheid en voorzieningen, en de verbetering van de bereikbaarheid van de stations zodat het gebruik van het spoor aantrekkelijker wordt. Daarom moet niet op een te hoge bewoningsdichtheid van de stationlocaties worden ingezet. Er is ook ruimte voor andere zaken nodig.

Over de ontwikkelingsmogelijkheden rond de stations in Zaanstad merken Goudappel en Coffeng op dat drie van de huidige zes stationslocaties in Zaanstad op dit moment 'onderbenut zijn'. Vrij vertaald, betekent dit dat de locaties Wormerveer, Koog Zaandijk en Zaandam Kogerveld goed ontsloten zijn met het openbaar vervoer maar dat hun stedelijke ontwikkeling daarbij is achtergebleven. Goudappel en Coffeng zien vooral goede aanknopingspunten voor verdere ontwikkeling van Koog Zaandijk in verband met de Zaanse Schans en pleit ervoor prioriteit te geven aan de ontwikkeling van deze stationslocatie.²⁸

Vaak zijn spoorlijnen in het verleden aan de rand van het dorp of stad aangelegd, waardoor ze slecht zijn ingebed in de lokale omgeving. Als het station via aantrekkelijk ingerichte en veilige route eenvoudig te voet of met de fiets kunnen bereiken, maken ze er meer gebruik van.(Goudappel, Coffeng, 2010: 51)

2.3.4 Parking and stations

Goudappel en Coffeng hebben vastgesteld dat bij de stations in Zaanstad veel te weinig stallingsruimte voor fietsen aanwezig is, er is te weinig parkeergelegenheid voor P+R en de overstap op bussen en taxi's behoeft verbetering.³⁰ Bovendien zijn de meeste stations nog steeds eenzijdig naar de oostkant georiënteerd terwijl met name in de periode 1970-2000 veel woningbouw aan de westzijde van de spoorlijn gerealiseerd is. En dan is er nog de provinciale weg, krap langs de stations, die in dezelfde periode steeds verder is opgedikt. Ook het oversteken daarvan vraagt om verbetering.³¹ Verder valt op de Wormerveer, Koog Zaandijk en Koog-Bloemwijk weinig fietsenstallingscapaciteit hebben. De auto is in de Zaanstreek een sterke concurrent van het openbaar vervoer. Er is weinig integratie tussen het aanvullend openbaar vervoer en de trein met uitzondering van de stations Zaandam en Alkmaar.

2.3.5 Facilities around the stations

Wonen is de dominante functie rondom de stations van de ZaanSpoorcorridor. De dichtheden rond veel stations zijn in vergelijking met knooppunten in de rest van de Provincie laag. Aan de uiteinden van de spoorcorridor bevinden zich wel voorzieningen en werkgelegenheid in de directe stationsomgeving, maar centraal in de spoorcorridor is er sprake van erg weinig functiemenging. Verdichtingsmogelijkheden moeten dan ook vooral gezocht worden in het toevoegen van werkgelegenheid en voorzieningen. De markt voor meer economische activiteit is wel beperkt in deze regio. Het kan zinvol zijn om gericht te investeren in één knooppunt om de aantrekkelijkheid voor deze functies te vergroten, bijvoorbeeld Koog-zaandijk. De Zaanlijn is een spoorcorridor die zich kenmerkt door veel gezinnen. In de stationsomgevingen kunnen voorzieningen gevestigd worden die aantrekkelijk zijn voor gezinnen, zoals kinderopvang.(Goudappel, Coffeng, 2010: 36)

2.3.6 Recreational node

In de Provincie bevinden zich veel stations in de directe nabijheid van natuurgebieden, zoals de kust, de duinen en de heide en recreatiegebieden, zoals Spaarnwoude en de Zaanse Schans. Dit zijn knooppunten waar het gezien de kwaliteiten van de omgeving soms lastig is om te verdichten. Deze knooppunten kunnen zich verder ontwikkelen tot de toegangspoorten voor recreatiegebieden. Dit kan zowel door specifieke transfervoorzieningen (fietsverhuur, collectief groepsvervoer) als ruimtelijk programma dat de recreatiefunctie benadrukt (informatiecentrum, uitstraling station). Voordeel van meer sociaal-recreatief verkeer met het openbaar vervoer is dat het leidt tot meer reizigers op de momenten dat het nu wat rustiger is in de trein. (Goudappel, Coffeng, 2010: 51)

2.3.7 Papermills in Guisveld-Vijverlanden, Wormerveer

In juli 2008 is, in opdracht van de gemeente Zaanstad, door Hollandia Archeologen een Archeologisch Bureauonderzoek uitgevoerd voor het gebied Guisveld-Vijverlanden te Wormerveer (gemeente Zaanstad). De aanleiding voor het onderzoek was het voornemen van de gemeente Zaanstad de in het plangebied aanwezige resten van papiermolens te consolideren en op te nemen in een toeristische wandelroute.

Deze vijvers zijn restanten van 'waterzuiveringsinstallaties', behorend bij de 17e en 18e eeuwse papierfabricage. In het terrein zijn de overblijfselen deels nog zichtbaar, zoals verhogingen waar de papiermolens hebben gestaan, de sloten of vijverlanden, een stenen waterput en de funderingen van een gebouw. De oppervlakte van het plangebied bedraagt ca. 2,8 ha. (Médard A., van Rooijen E. J., Vaars J.P.L. , 2008: 4)

De provincie Noord-Holland streeft naar het behoud van het erfgoed in de bodem en het leesbaar houden en maken van cultuurhistorie. Uitgangspunt daarbij is dat cultuurhistorie geen belemmering hoeft te zijn maar juist kan dienen als inspiratiebron voor nieuwe ontwikkelingen. Het plan om de in de bodem aanwezige resten van de papiermolens te consolideren en eventueel te restaureren en op te nemen in een toeristische wandelroute past goed in dit beleid.

(Médard A., van Rooijen E. J., Vaars J.P.L. , 2008: 5)

2.4 Problem statement Zaanstreek

The previous topics are a summary of the problems that are related to the studio theme and the Zaanlijn research area, they are the result of a study that was done by Goudappel and Coffeng in 2010. These topics are still relevant for the current situation and offer a deeper understanding of the problems and opportunities along the Zaanlijn. Below I summarized the main issues that can serve as guidelines for an intervention along the Zaanlijn.

-The coverage of the station areas decreased since 1970, from 39 % to 31% in 2010. The calculated dwelling requirement of 10.780 dwellings could be used to increase the percentages if these dwellings are placed within the station radius of 800 meters.

- Within the existing six station areas of Zaanstad, there is 124 ha. of industrial areas that are nominated to be restructured

- Wormerveer, Koog Zaandijk en Zaandam Kogerveld are underutilized, since the urban development has stayed behind where the public transport is sufficient but the accessibility of the train stations has to be improved; bike and pedestrian access is insufficient.

-Park and ride opportunities are welcome for all the train stations along the Zaanlijn. For Wormerveer, Koog Zaandijk and Koog-Bloemwijk there should be an increase for bike storage as well.

- From the exploitation perspective it is interesting to look at ways to create employment by adding facilities. In the station areas it is serviceable to add family related facilities like daycare since a lot of households live within the station areas.

- Stations directly connected to natural areas and recreation places like the Zaanse Schans, have potential to become entrance gates to the recreational areas. This can be achieved by providing transfer facilities (bike rental, collective group transport) as well as a spatial intervention that emphasizes the recreational function (information center, appearance of the station)

- The use of cultural history as a source of inspiration for new developments.

-The provincial road and the railroad track form a big barrier, separating the Zaanstreek in two parts, west and east. The question is how to deal with these structures and how can the barrier between west and east be solved?

2.5 Problem statement Wormerveer

Summary problem statement:

- The station building does not look inviting, nor gives it a sense of place – can be improved architectonically and show the identity of Wormerveer
- Provincial road running in front of the station forms a noise and accessibility barrier. – can be tunneled, bridged or diverted
- Station doesn't connect with the surroundings, it's like an island – redevelop left over space and parking space to create a continuous public space and urban fabric
- Polder is hidden behind the station – Make visible or even accessible for visitors and dwellers
- Main axis to the station is dominated by cars – make more slow traffic friendly and or reducing the flow of motorized traffic
- Station area needs to be intensified with more dwellings – a combination of a station building and dwellings or dwellings next to the tracks, on top of the tracks or a combination.

Based on improving the stations and increasing the density, the question rises in what way this can be realized. How can the regeneration of these station areas be realized? In other words: How can we revive the spirit of the place in order to improve the station areas? This leads to the main research question of the graduation project:

-How can cultural history serve as a source of inspiration for new developments?

3. Methods and techniques

The methods that were used vary from literature references to analysis of the historical development of the typologies. Precedents of mixed function stations and station squares have to be studied. Also should the existing industrial heritage be analysed to find out a way to relate to these artifacts in an architectural manner. The following three epistemologies will be used to clarify the way of designing and analyzing; typology for looking at station types that fit best to my situation, historical research on the existing urban tissue. Semiology was used to investigate ways of using architectural elements to convey meaning to a building. Literature about Venturi and Soeters was used to understand semiology and the related methods. Praxeology is necessary to find out the measurements of the station, parking and transport elements.

3.1 Methods and techniques Urban Analysis Zaanstreek

The graduation studio was split up in seven groups of three people, to make an urban analysis of each of the seven station areas along the Zaanlijn. A fieldtrip, maps and data of the locations were the basis for analysis. This resulted in booklets summarizing the different themes per station and seven A1 posters displaying the conclusions of the analysis. The themes were:

1. Station typology: showing the existing station typologies
2. Historical development: showing the relation between the railroad station and the village cores in 1868 (the introduction of the railroad stations in the area).
3. Cross connections railroad 'Zaanlijn': showing the crossings of the railroad track.
4. Public spaces of the stations: showing how the public spaces of the stations are organized.
5. Main structuring elements: showing the landmarks, monuments, industrial area, railway, roads, water, green
6. Functional character of the station areas: each railroad station area has a different functional character
7. Formal aspect of the cross connections: showing the spatial organization of the cross connections.

3.2 Typology study

An assignment was made to get a feeling of the scale we were working in when we talk about densification on a large scale. In groups of three students we did densification studies for a hypothetical site of 25 hectare and cut in two by train rails, representing an abstraction of the Zaanlijn with its East – West division. The goal was to fit a thousand dwellings on this site and to play with housing typologies and the trainstation.

We looked at three different typologies: courtyards, strips, and towers. And looked at the extreme variations for each typology and try to combine them with a train station. This typology study was done to give us insight in the possibilities of the different housing typologies in relation to use of space.

3.3 Architectural ideology

Typical modern buildings don't define the public domain; they leave left over spaces which do not promote public use. This functionalism approach denies the rhetorical functions of a façade to give life to the public space and add a sense of place. (Ibelings, H, 1996: 9)

“onze stedelijke gebieden moeten weer worden beziel met een gevoel van plaats en identiteit, niet in de laatste plaats met ontwerpen die aanknopen bij elementen van de locatie of ernaar verwijzen.” (Ibelings, H, 1996: 12)

Since the nineteenth century there was a big need for large scale developments to house the increasing population. Many of these big scale interventions did not take into account what was already there in the landscape or city. The most famous example is the plan of Le Corbusier from 1925 where he proposes to demolish the existing buildings and street plans in order to make place for eighteen skyscrapers of each sixty floors. (Ibelings, H, 1996: 102)

The architect Christian Norberg-Schulz emphasizes in his book: *Genius Loci. Towards a Phenomenology of Architecture*, that people will identify themselves with the space they live in, they will be disconnected when this identification is obstructed. Norberg-Schulz calls it 'getting friends with your environment'. (Norberg-Schulz, C., 1979: 21)

3.4 Design method of Soeters en Van Eldonk architects

How to make the built environment lively? Is one of the main questions for Soeters en Van Eldonk architects. The firm uses architecture to create a good understanding between the people and the environment by using the architecture to refer to the place, to continue the existing context and to respond to what was or is there. They try to make their architecture talk in a way which is familiar to the context. (Ibelings, H, 1996: 186)

In the age of globalization there is growing a need for a sense of place. Architecture should fulfill this need according to Soeters. This can be accomplished by looking for the characteristics of the place, which can be seen as a layering of what is there, what was there, what is typical, the streetscape and the landscape. Understanding a place is not exact science but a quest for relating new architecture to a context. This method can be applied everywhere and can be seen as a generic design tool. The results of this method will never be the same since the sum of the characteristics of a place is never the same. (Buchanan P., van Dongen H., Ibelings H., Mulder S., 2008: 188)

What Soeters does in Zaandam is making use of semiology as a method to come to his design. In the book: *Dialog met mensen en plekken*, a series of images are shown which serve as a base to give meaning to his building.



(Ibelings, H, 1996: 146-147)

The typical 'Zaanse huisjes' are used to give identity to the place by referring to this shape and type of decoration. The building itself is in fact a series of oversized 'Zaanse huisjes' which are the volumes of a municipal office building. This is a way of using the shape of a building in combination with the decoration to convey meaning to it. The chosen typology however does not correspond to the typology which is referred to; neither does the construction nor the program. Venturi describes this phenomenon in more detail:

"We shall emphasize image- image over process or form – in asserting that architecture depends in its perception and creation on past experience and emotional association and that these symbolic and representational elements may often be contradictory to the form, structure, and program with which they combine the same building."

They describe two main manifestations of this contradiction:

- "1. Where the architectural systems of space, structure and program are submerged and distorted by an overall symbolic form. This kind of building-becoming-sculpture we call the *duck*...
2. Where systems of space and structure are directly at service of program, and ornament is applied independently of them. This we call the *decorated shed*."

(Venturi, R, Scott Brown, D and Izenour, S, 1977: 86)

Looking at Soeters architecture in Zaandam, we can consider this building as a *decorated shed*.



(Ibelings, H, 1996: 151)

The identity or character of this building or in fact buildings are strongly related to Zaandam, by using typical elements of this place. For public space a similar approach is seen. The way Zaandam regenerates 'de gedempte gracht' shows another quality that has been there in the past, the canal is reopened and is crossed by a series of bridges, this is an interesting approach of using historical features to improve the public space. For the research and design of the Wormerveer train station area I will use the same method which was used by Soeters.

Soeters onderscheidt zichzelf van andere architecten door tegendraadsheid en populisme. "In deze benadering is de essentie terug te vinden van de 'decorated shed' van Robert Venturi, waarbij het ongewone een toevoeging is, een completering van een bouwwerk dat zonder deze toevoeging normaal zou kunnen functioneren, maar dankzij deze toevoeging betekenis krijgt."

'Symbolisch contextualisme' maar toch zichzelf genoeg. Architectuur als communicatie middel en de semiotische dynamiek van kunst en architectuur, meestal ontstaan uit een voortgaande betekeniserosie. (Ibelings, H, 1996: 9) Ibelings, H, 1996: 9)

3.5 Methods and techniques Wormerveer

- Study typologies for a station combined with housing
- Station and parking measurements from (Neufert)
- Investigate the relation of the station with other modes of traffic like: bus, taxi, bike and boat
- Make a Nolli map of Wormerveer, to study the types of unbuilt and built space

- Evaluating the existing buildings within the station area, what kind of functions, and architectural value and how my building can relate, or even strengthen them.
- Historical research of the place and development of Wormerveer, relating to its morphology and typologies

4. Analysis and argumentation

4.1 Choice of location

The problem statement of the Zaanstreek offered a framework for the site selection criteria. The main criteria were pure functional and technical like; densification possibilities, solving the infrastructure and dealing with industrial/cultural heritage. I selected some specific themes that could help me make this decision.

- Using the potential of stations directly connected to natural areas to become entrance gates.
- Making a spatial intervention that emphasizes the recreational function (information center, appearance of the station)
- Using cultural history as a source of inspiration for new developments.

The Zaanstreek is famous for its industrial heritage, mainly focused along the river Zaan. The Zaanse Schans is the main tourist attraction, where the old windmills and shops are rebuilt in the authentic Zaanse style. However the Zaanstreek has more to offer than just the Zaanse Schans. These other qualities should be exploited as well; instead of just focusing on the Zaanse Schans as the main attraction, The Zaanlijn should be conceived as a chain of nodes which all have a different functional and cultural identity.

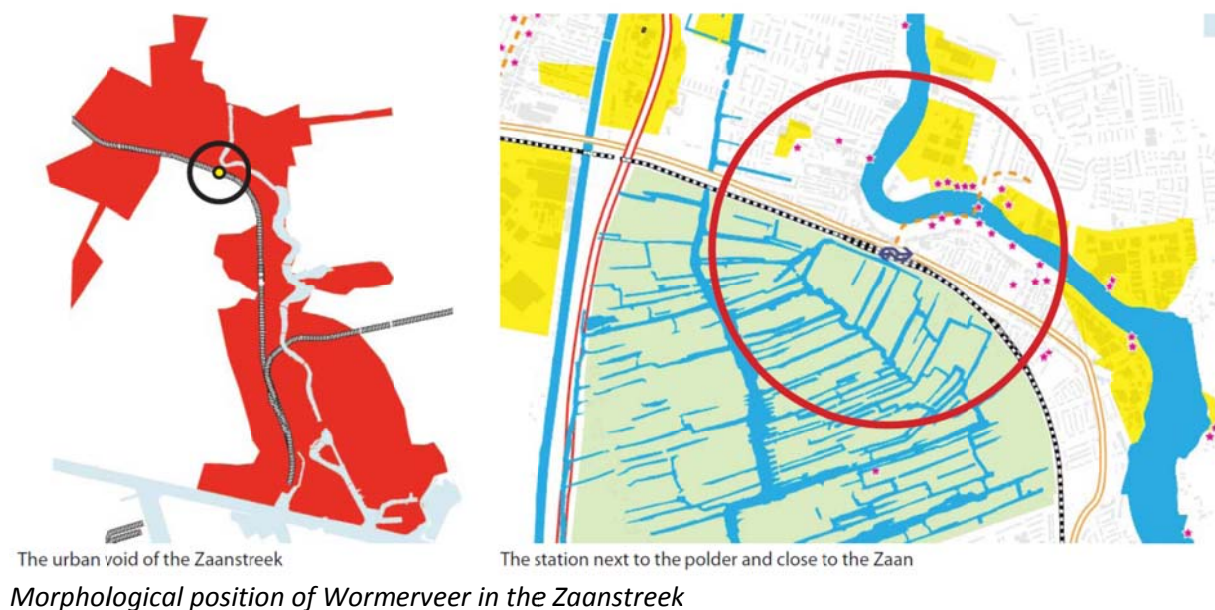


(Wormerveer maps.google.com)

Wormerveer is one of the nodes along the Zaanlijn, it is a unique location along the Zaan, where the river curves through the village, with public space next to the water, the waterfront is decorated by historical factories and residences. This could be an interesting place for tourists to go sight see.

Another quality of Wormerveer is the closeness to the polder, the only station where it has not been filled in with a vinex neighborhood since it is a protected natural area and a place for birds to breed. The polder landscapes are characteristic for the Zaanstreek and in Wormerveer it is right next to the station. Therefore it has potential to become an entrance gate to the polder.

The station however is not very attractive; the left over spaces around the station make it look like an island, disconnected by the urban fabric, to reach it you have to cross the busy provincial road. Intensifying the areas around the station can make the station better integrated within the urban fabric. In Zaandam they also intensified around the station, with some supersized 'Zaanse huisjes.' It looks like a kind of trend to use the station area to show the identity of the place you are entering, the new Delft central station will have 'delfts blauwe' tiles as cladding for the platform vaults (Mecanoo). Zaandam uses the 'Zaanse huisjes' (Soeters). The cultural history could serve as a source of inspiration to give a more suiting appearance to this station as well.

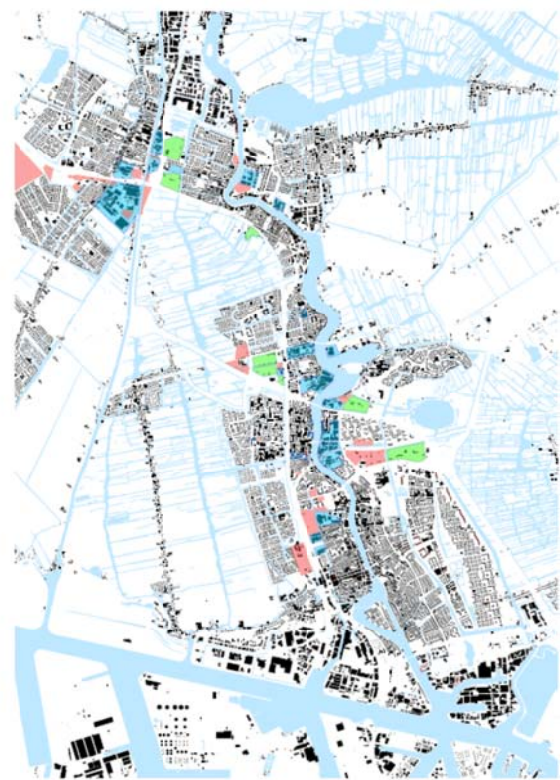


4.2 Masterplan Zaanstreek

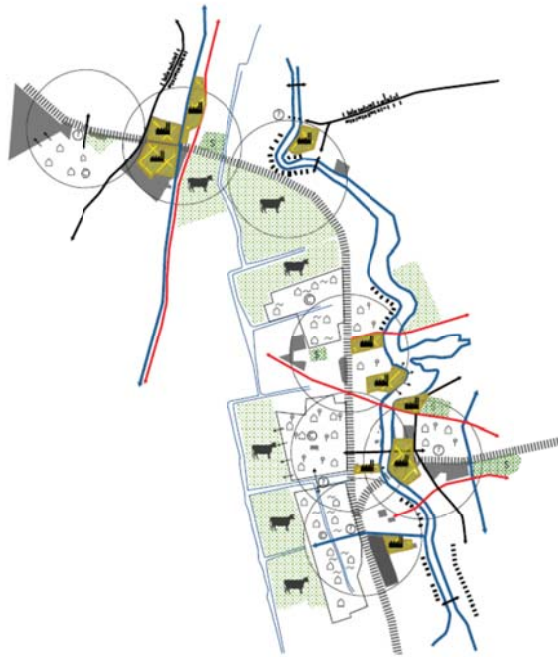
With the graduation group we made three masterplans for the complete Zaanlijn, to distribute 7000 dwellings over 7 stations along the Zaanlijn. The results of this assignment was very rough but gave a clear impression of the potential areas that were suitable for densification. There were three main types of space that were considered potential densification areas; blue for industry, green for sport fields and red for unused/parking space. The maps on the next page show where these areas are located. After this mapping, an indication of the amount of dwellings was made, which could be realized within these areas. Different scenarios were presented, showing only placing dwellings in the red areas. But also regenerating industrial areas became a scenario. In my location choice I based my dwelling densification on the red scenario, where only the empty space will be built upon.



800 meter radius circles around 'Zaanlijn' stations



Map of potential densification areas



Characteristic spatial elements along the Zaanlijn

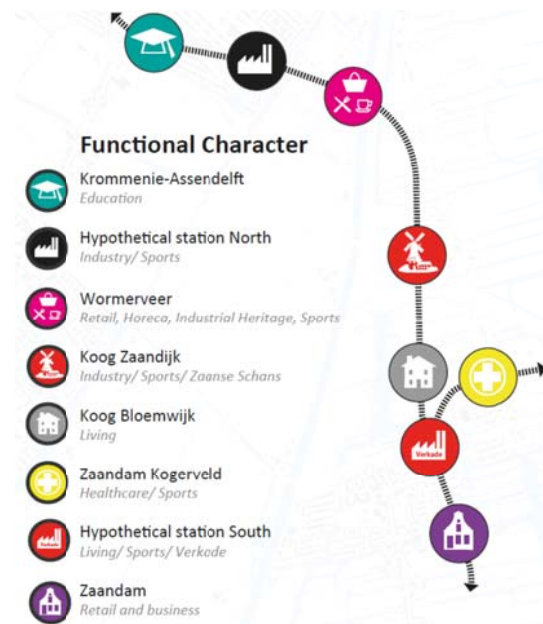


Diagram Main character of the stations

4.3 Analysis and argumentation Wormerveer

Before I could continue with a design proposal I had to find answers to the questions below:

- How to use the potential of a station directly connected to the polder to become an entrance gate?

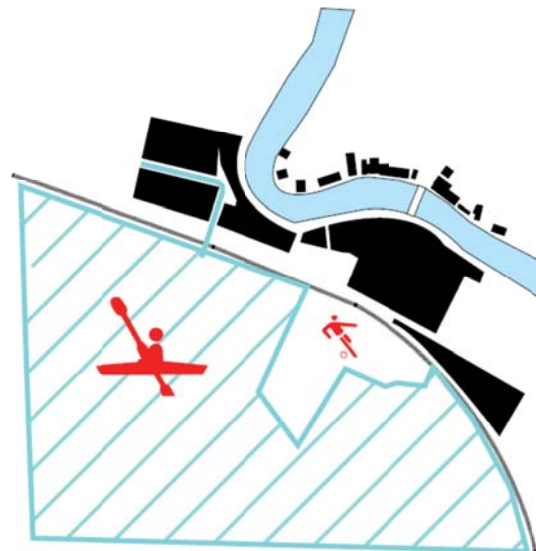
By observation of the station and the connection with the polder there was a lack of connection with the polder. The only way to reach the polder was to go through a tunnel, which looks more as a necessity than an entrance gate. The polder itself was separated by water parallel to the railroads. The tunnel functioned merely as a connection to the sport fields and paintball area behind the station. These recreational functions do give extra foundation to improve this connection.

- How to make a spatial intervention that emphasizes the recreational function (information center, appearance of the station)?

The functional analysis showed that there is an office of Natuurmonumenten right across the station. After gathering more information about this organization I found out that they also have visitor centers across the country. This map also showed there was no visitor center in the Zaanstreek. Since the office was now located in the potential densification area, it gave me a reason to move this office and to combine it with a visitor center connected directly to the polder. The recreational function that could be added became obvious since the best way to explore the polder is by using the water. A canoe rental facility came to mind.



Natuurmonumenten Visitor centers



Recreation possibilities in the polder

-Where are densification possibilities?

Looking at the 800 meter radius circle around the station, this is where the densification has to take place. There is an empty space across the street in front of the station which is now used for parking but has potential to be used for dwelling in combination with daycare for the families.

-How to deal with the provincial road and the railroad track?

The infrastructural problems are mainly visually disturbing, since it's a big surface of asphalt in front of the station, the station does not become inviting. The roads come together in a T section right in front of the station. There is space to introduce a roundabout in front of the station. The railway cuts of the village from the polder. The existing tunnel underneath the station is lacking quality to be an inviting connection between the polder and the village.

-How to deal with the industrial/cultural heritage?

First I had to find out where this heritage was or is. After gathering historical maps I worked together with Foteini to make an analytical sequence of maps that showed the development of Wormerveer starting from 1811. In this analysis the most important developments over time are mapped. The old ribbon structure of Wormerveer is the starting point, and then the train station in 1878 was built and had a big impact on the polder landscape. Expansions towards the train tracks took place and in 1894 a bridge between Wormer and Wormerveer was built. The expansion towards the tracks but also on the other side of the river continues, and the provincial road is a fact in 1930, the station building had to make place for the bigger road and also the tracks were doubled. A better understanding of the existing urban tissue was gained from this analysis. Also we found out that the polder behind the station was once inhabited by papermills and long sheds to dry paper. This typology was no longer present. Still it served as a starting point for revival of this lost cultural/industrial heritage.



- How to use cultural history as a source of inspiration for new developments.

To get my source of inspiration I started looking for the characteristics of the place, using Soeters method by mapping: what is there, what was there, what is typical, the streetscape and the landscape. This led to a historical research of the development of the place. A similar analysis was

made by the subgroup that analyzed Wormerveer. It showed the qualities that used to be there: a monumental station and rows of trees along the station street. Old photos show some of the cultural history.



Het oude *stationsgebouw* aan de Wandelweg te Wormerveer (Zaanstad, Gemeente Archief)



1930. Transformation of the station to a roof and tunnel. (Gemeente archief Zaanstad)



1932 De brandweerkazerne. (<http://zaanstad.pictura-dp.nl/collectie-afbeeldingen>)

Wandelweg 7, gemeentelijk monument. Voormalig kantoor van de gemeentelijke gasfabriek gebouwd in 1912 - 1913 door de architect G.J. Hiddink. (hvwormerveer.nl)

5. Conclusion

5.1 Defining the design question

The design question was based on the urban analysis and problem statements regarding the Zaanstreek and Wormerveer. I wanted to combine the station and dwellings into one building, so I could solve the problems with one design. After some further investigation this turned to be the wrong approach for this low dense area, I then decided to separate the project into a station design and housing densification. And put my design emphasis on the station building. This led to two design questions;

How to add dwellings into an urban context? And the main design question: how can I give identity to the station and let it become an entrance gate to the polder by doing an architectural intervention?

After assessing the existing urban context there emerged some typical housing patterns. I chose to organize the dwellings in a way that it continues the urban housing pattern the same way, and therefore relates to its surroundings. The housing typologies are based on the historical row housing complexes shown below.



Wormerveer. Blaauwe Hof, gebouwd in 1766 En hof Saenen. (hvwormerveer.nl, 25-5-2012)

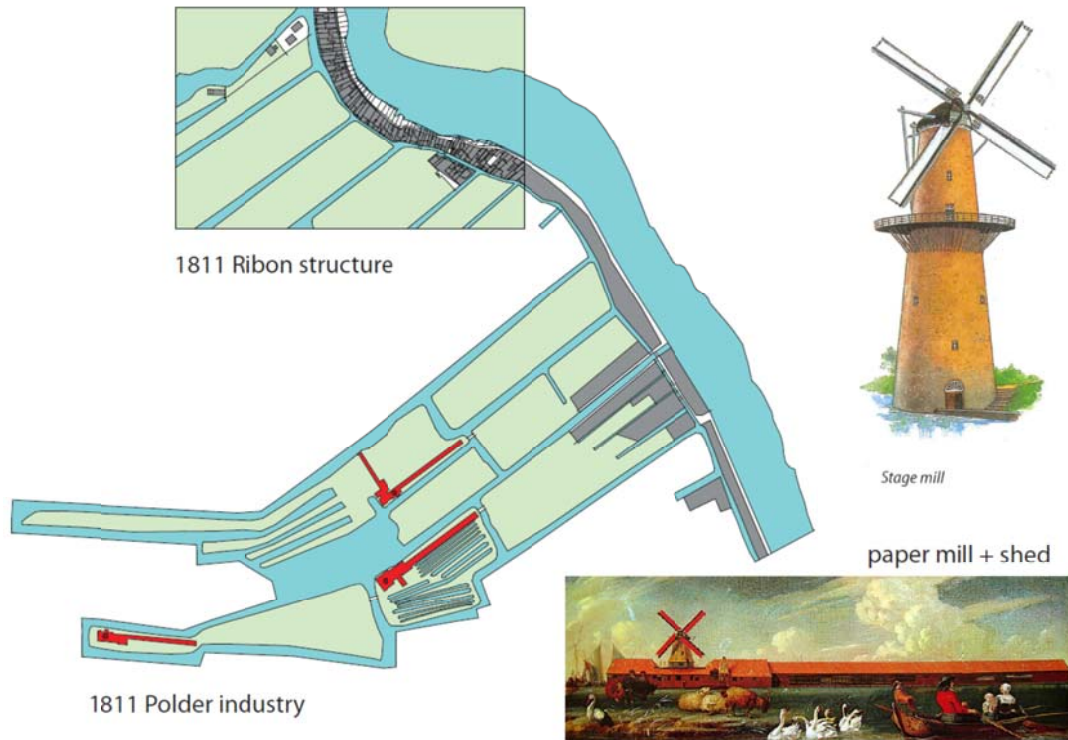
For the polder I had to dig deeper to find substantial material that could show the identity of this place, since there is no urban context but only the train tracks and the polder grid like water structure. The historical analysis showed the old polder industry sheds; this character gave me inspiration on how to give identity to the place by referring to this lost typology.

5.2 Answering the design question

The design focusses on creating a more accessible station, additionally there will be a visitor center with canoe rental, a restaurant and the natuurmonumenten office to relate better with the polder. This building is based on a typology found in Wormerveer and has the same dimensions. The length of the building and its horizontality refers to the historical paper sheds. A tower will be added to serve as a windmill reference and observation point. From this tower the visitor center can be accessed by a spiral stair. On top of the tower there is a nice view over the polder and Wormerveer. The wicks of the 'windmill' serve as the station clock.

The bike storage is placed in a basement underneath the station to keep the public space clean, and the bikes protected from rain. The entrance to the station and polder will run through this basement and will be a ramp that slopes down into the basement. An elevator and stairs are accessible from here in order to reach the station platform. The elevator can also bring you to the visitor center which is hanging over the station and forms a bridge between the polder and Wormerveer.

On the top floor of the visitor center there is the tower access and an elevator entrance. In this space there is an exhibition space dedicated to the polder and nature. At the southside towards the polder is a restaurant and a stair leading to the offices on the inbetween level and on ground floor the canoe rental. From the ground floor the footbridge is accessible to start the canoe journey.



Voorn Wormerveer, Laurens Oom Hein, Papiermolen De Oude Voorn, Wormerveer (ca 1730)
<http://www.katerstede.nl/dorpen>

The station will be merely a roof based on the historical shape of the shedlike building that was there in the past. The construction is a combination of concrete columns, steel beams and a roof made out of wood covered by glass panels. Pv cells are added to gain energy from the potential sun energy, which can be used to heat the neighboring visitor center. A kiosk is added in the centre underneath the station roof.

The infrastructure in front of the station is improved by introducing a roundabout. The station street can now be smaller, creating space to add trees to bring back the historical qualities of this main street.

Summarizing the solutions:

- *The polder connection is improved*
- *Improving accessibility of the station*
- *regenerating the station street with the historical qualities*
- *The train station becomes a recreational node by adding a visitor center*
- *Bike parking is solved and expanded*
- *The station becomes an entrance gate to the polder and shows a sense of place*

6. Reflection

This project can give a new perspective on the meaning of a station building, instead of being merely a stop, it is an entrance to the city or village, and it can be more theatrical instead of just a functional composition of a roof, stairs and ramps. The project could be a statement of how to deal with a station area in a way that it shows the image of the place, the “genius loci” In other words; how the entrance of the place, can become the visit card (visitekaartje) by using characteristic elements of the specific place.

It will also touch upon the question of modern copies of traditional architecture. Where Zaandam uses typical ‘Zaanse huisjes’ around the station, there is a lot of discussion going on if that’s kitsch or art. It is just a copy that is oversized or repeated in a way that it was not used traditionally, it is merely decoration. But at the same time a confirmation of place. We all know we are in Zaandam when we see it. It has an iconic meaning and at the same time it’s mocking with tradition.

In Wormerveer I want to make a reference to the rural cultural heritage, by using similar architecture for the station building. It should not merely be a copy of a historical building, but a translation of the architectural language of that time, suited for the needs and program of the new station building. In this way I am trying to create the same effect as Soeters does in Zaandam, but without making fun of the tradition, making the past visible again and show something of the historical cultural identity.

In this reflection I will give a short substantiated explanation to account for the results of the research and design in the graduation phase (product, process, planning).

The aim of the reflection is to look back and see if my approach worked, to understand the “how and why”, and subsequently to learn from this. The choice of method (how) and argumentation (why) which preceded the research was a part of my learning plan – the reflection contains an answer to the question of how and why the approach did or did not work, and to what extent.

6.1 The relationship between research and design

Analysing the existing situation gave some starting points for making an argumentation for the location selection within the research area. Especially the historical research gave a better insight on the identity of Wormerveer and the different typologies that were there.

“onze stedelijke gebieden moeten weer worden bezield met een gevoel van plaats en identiteit, niet in de laatste plaats met ontwerpen die aanknopen bij elementen van de locatie of ernaar verwijzen.” (Ibelings, H, 1996: 12)

The design question was: How can I improve the station area and give identity to the place?

Built mass versus the open space on a big scale of the total research area and the selection of the exception – Wormerveer showing the tension between polder and village at its strongest. These diagrams show the main reason why Wormerveer is such a special place. On one side the river curves through the village and on the other side the polder touches the edge of the village. The traintracks are the border between nature and urbanity. This tension and also disconnection with both sides made it an interesting case study area.

6.2 The relationship between the theme of the studio and the subject/case study chosen by the student within this framework (location/object)

The theme of the studio can be defined as: Densification and improvement of station areas, along the ‘Zaanlijn.’ The case study focusses on Wormerveer, where dwelling possibilities around the station and ways to improve the train station area and the station itself are researched. The

framework that was described in chapter 4 already shows the relationship between the studio subject and the relevance within the chosen case study area. The problems with infrastructure, density and cultural heritage that were part of the studio theme are also related to the chosen case study area. With the design proposal I am trying to give proper answers to these design questions.

6.3 The relationship between the methodical line of approach of the studio and the method chosen by the student in this framework

The methodical line of approach of the studio consisted out of a series of analysis of different themes; typologies of the existing train stations, the functional footprint of the villages, infrastructure, morphology and more. They served as a base to understand and compare the possible case study areas along the 'Zaanlijn' and to make a more reasoned choice for selecting a case study area. The methods that were used for analyzing the given study area turned out to be good foundations for making a well-founded location choice. The method I chose to continue working on this case study was based on the work of Soeters and Venturi. For me the Zaandam train station showed a very explicit way in how to use architecture as a mean to give meaning and to show identity of the place. I decided to use a similar method as Soeters, looking at the history of the area, I made a historical analysis to see the changes and to understand the identity, and last but not least to find elements I could use to give meaning to the train station- the entrance of the village. The methods were mostly complementary but the method I chose to use within this framework gave me a clear direction on how to continue the project. Without it I would have gotten lost.

6.4 The relationship between the project and the wider social context

This project is a manifestation of how semiology and historical values can be used to create a sense of place. This method has been frequently used by Soeters; an architect that has been criticized by his colleagues for making populist architecture. But also the architect that can bring life in every city center he has regenerated. There seems to be a gap between populist and serious architecture. If you ask people what they think of the oversized 'Zaanse huisjes' next to the Zaandam station, the opinions will vary from love to hate. It can be considered kitsch or art. In the end it does create this discussion and that is what was intended. Architecture creating a dialogue is what can give meaning to a place; it is social for doing so.

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