Rural Park Hof van Delfland.

Redefining production and consumption patterns for a metropolitan landscape in a rural context
Colophon:

Thesis
Msc Urbanism
Msc Architecture

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‘urbanization of the countryside’, gouden eeuw:
Above Estates in the countryside, Gerrit Berckheyde, Gezicht op buitenplaats Elswout, 1654, Frans Hals Museum, Haarlem
Left: Jacob van Ruisdeal, gezicht op Haarlem, 1670, Rijskmuseum, Amsterdam
The background for this topic can be found in my architecture history thesis about Haarlem in 2009-2010. This thesis was a research about the different leisure and economic activities in the landscape. My conclusion was that this was the start of the ‘urbanization’ of the countryside. People of the city escaped the business of the city for the idyll, rest and amusement that were found in the landscape; people built estates, went to country markets and fairs and go for a walk. This research interested me because this was the start of how city and countryside slowly intertwined with each other.

This process went quit slowly until the industrialization; from than on the green and red changed upside down. The open green spaces between the Dutch cities are not longer the opacity of the build up area. The landscape changed from wide ‘green’ landscape with ‘red dots’ into a ‘red’ landscape with green dots. Cities changed from compact concentric structures into metropolitan regions. Metropolitan regions exists out of cluster of cities with different sizes. They are connected by infrastructure and communication networks.

This was the start for the –in this thesis named- in-between landscapes: the green and open landscapes between the highly urbanized areas. These in-between landscapes are nowadays a part of urbanized area. It is a combination of ‘green’, ‘red’ and infrastructure.

In the Netherlands some of the in-between landscapes are kept open by the spatial instrument the bufferzones. For 50 years (1960-2010) this instrument has been used as part for the development of the structure of the Randstad; Cities should be developed in a ring around the Green Heart, separated from each other by green bufferzones, so that each city remains moderate size and kept their own identity. The goal is to preserve rural and urban characters. Today some of the bufferzones are seen as potential metropolitan parks.

These bufferzones are more and more under pressure. They are claimed for urban expansion, rural development (glass houses and scaling up of farms) and for the quality of life of the citizen. Citizens demands more quality and possibilities of recreation in this open area. Next to that the green spaces are part of a strategy of branding the region. Metropolitan regions concur with each other and use therefore also the local landscape quality. In this development the main pillar-agriculture has problems to survive. This has huge consequence for the quality and the maintenance of these landscapes.

In this thesis an proposal for future development will be proposedon the level of Urbanism and Architecture, as answer for before sketched problems and trends. The specific location that is researched is the bufferzone Midden Delfland.

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The graduation is to define a future for the mainly agricultural area in-between Rotterdam and the Hague, in policy today known as the Hof van Delfland. In this thesis this name also will be used. The strategy for the future of Hof van Delfland should response on the changes in rural landscape and developments for policy for these kind of areas, to be specific:

- the transformation towards a post modern rural landscape
- the next step for the bufferzone
- and the search for metropolitan or regional landscapes and parks

These developments are set out in chapter 1 and give the general background for this thesis, the relevance for intervention and give this research a place in the spatial debate.

From this background the research question and aims can be derived in chapter 2. Here the research is bound on the theme of production and consumption in the landscape; which results in the research question: *What should be the new patterns for production and consumption in a metropolitan landscape development dealing with a rural identity?*

With this research question a general and location specific research in chapter 3 leads to different tasks for the strategy for Hof van Delft. The results of these researches are the base for the interventions to define new and strengthen patterns in production and consumption for Hof van Delfland.

First the problems in the existing productive landscape (dairy farming) will lead to a program of demands for the production landscape: an innovation in dairy farming to maintain the quality of the landscape, which the dairy farming brings today.

Second the research in the existing consumption and future consumption leads to the following tasks in the landscape; the accommodation of the rural experience, strengthen the recreational edges more with the rural identity, accessibility of the landscape, bringing broadening of farms to the next level and at last to integrate the spatial effect of the ‘horsification’
Summary

of the landscape.
Third, the productive and consumptive changes on the scale of the yard (scale increase, broadening of farms, change of function) have had a huge effect on the embedding of the -mostly idealized- farm yard; yards that became ‘footloose’ from the landscape. This means it’s time for design for yard and farm.

This research will lead to the motto for intervention: LUST = NUT and NUT=LUST. It is about integrating production and consumption in landscape, infrastructure, buildings and yards. It will be the transformation from a rural landscape with recreational edges into a productive landscape with a rural –consumptive- park structure. The design assignment is about to accommodate the rural experience. This rural experience is set out in chapter 4 by give specific spatial interventions showed into three projects to develop Rural Park Hof van delfland. This three projects will be explored in the center part of the area, which shows generic solutions for the whole Hof van Delfland:

The first intervention is about what the entrances should be for a rural park. On the higher level (regional and national) the area will have a local ‘food’ transferium/ market next to the A4. Were not only cars can be parked to go into the rural park by bike or by feed, but local food can be collected and distributed from farmers, horticultural industry and private to citizens, restaurants caterers etc…

Next to that on the lower level the area will get its park meaning of a park in-between the urban structure (a front position) instead of a backyard of the cities. This will by done by a design of –some- the entrances of the park.

The second intervention will deal with the recreational edges: by giving it more meaning by a more rural use which connects it better to the rural land and use this area to develop the –needed- horse facilities

The last intervention is the main project. It is about the transformation in organization of the farmland dealing with the problems in the diary farming. This project will give the strategy for the rural land which will bring not only organizational solutions but will mainly bring a transformation in the spatial structure of the infrastructure, yards and buildings in the rural land, which will bring the main park structure. This will be draw up in three cases: the rural park structure, the yard transformed to a civilian yard and the boerenhof 2.0.

The boerenhof 2.0 is the project where NUT and LUST is used as the main strategy for future in dairy farming. This projects is elaborated on the scale of architecture. In this project the rural experience exists out of getting acquainted with the modern sustainable dairy farming on the one hand. And on the other hand experience the pleasure of the rural land by broadening functions like a Spa, education and a accommodation and horse riding facilities. The experience of this program is housed in a new barn structure by connecting stables and barns to eachother by a wooden roof structure.

These projects mostly are small interventions that can be implied and work separately, but together they will bring the rural experience that is needed for an agricultural future for this area. The architectural project is the main key project that enhances the future as an agricultural area. Using the motto of Nut and Lust it brings the answer for a future farm and a future rural area in a metropolitan landscape development by enhancing existing qualities.
Time for a plan.

context for intervention

A future for the agricultural area in-between Rotterdam and the Hague should be responsive on the changing rural landscape and developments for policy for these kind of areas, to be specific:
- the transformation towards a post modern rural landscape
- the next step for the bufferzone
- and the search for metropolitan landscapes and parks

These developments are the general background for this thesis and give the relevance for intervention and give this research a place in the spatial debate. Further on, from this background the research question and aims can be derived.
TRANSFORMATION OF TRADITIONAL FUNCTIONS LIKE:

NEW FUNCTIONS LIKE

Housing development in the countryside  
nature development  
Rural recreation; “boerengolf”

= POST MODERN RURAL LANDSCAPE
1.1 The transformation to a post modern rural landscape

The results of the post modern rural landscape in the bufferzones

Most bufferzones started as mainly agriculture landscape. Today this landscape has been a result of transitions of functions in bufferzones which can be seen in more rural landscapes in the Netherlands. The function change can be characterized by the transition from modern to post-modern rural landscape. (after Daalhuizen et al 2008) This post-modern rural landscape is characterized by a wide variety of spatial features, space users and space claims. (idem 2008 p27) In the post-modern rural landscape traditional economic functions (mainly agriculture) have lost main interest in favor of new functions; like landscape preserving, recreation and tourism, other non agricultural activities and housing. (Idem) Next to this transition in multifunctional rural space the agriculture is broadened by consumptive functions like (healthcare, recreation, education) ecologic functions (maintaining end protecting nature) and new production ( sell of regional products, new crops for energy demand or chemical industry) ( Langeveld et al. 2005). (Fig 1) Multifunctional agriculture has been seen as the way forward for European agriculture to focus on a production of market goods and non-market goods or public goods and services (Hall Mcvittie Morn 2004)

This transition have a huge spatial impact on the appearance of todays countryside. The next part will describe the reasons for the transition in agriculture landscape and the spatial effects of this. These transitions are especially seen in bufferzones. In combination with the policy of bufferzones and potential metropolitan parks this will lead to the general problem statement.

Transitions in agricultural business: industrialization and widening of business

Since the Second World War the Dutch agriculture- also in the bufferzones- has changed dramatically. First of all the scale increase of farming is a result and consequence of technological innovation, stimulating (European) agriculture policy and spatial efficiency interventions. This causes increasing of productivity and efficiency.

Second the agricultural sector is intensified and industrialized. (Daalhuizen et al. 2008)

As a result of this process, new requirements are made to space in the form of re-allotment, the disappearing of traditional parcel division likes ditches and hedges and the development of new agricultural building (Fig 3) (replacement and addition of large stables, barns, silos and greenhouses) (Daalhuizen et al. 2008 p34 and De Regtand & Kuiper 2006).

Next to the scale increasing, as a result of social change (see next section) and the shift in production procedures, new agriculture production methods, farming styles as products has influence on the appearance on the landscape. Examples are the rise the organic farming (fig 4) and the new or the major expansion of crops and products.

In this context the changing of farming styles will be further examined; in the dairy farming the cow is more inside than in the meadow, and in the stock farming new animals are kept. Also you see widening of the activities in farming business: next to traditional production function, agriculture is combined and integrated with other functions, which increase income for the farmer. These activities emerge from economic need and new social demands on the countryside, where citizens demand a new role for the farmer as a producer of food with amenities and have corporate community involvement ( healthcare, recreation, education etc) ( see Daalhuizen et al. 2008 p30, Pinto-Correia and Breman 2009 p143, Schoorlemmer et al. 2008). Beside the more consumptive functions for social demands farmers also broadening their incomes with ecologic functions ( maintaining end protecting nature) and new production ( sell of regional products, new crops for energy demand or chemical industry) ( Langeveld et al. 2005).

Above transitions are mostly seen in the extensive agriculture; the arable farming, dairy farming and livestock farming. These sectors also have to deal with new spatial
claims of ‘red’ (housing and companies) ‘green’ and ‘bleu’ (nature and water) functions. Reason for this is the relative low economical meaning in production value and employment. (see VROM-Raad 2004 p10-11)

At the same time with these developments the extensive peasantry in the Netherlands is disappearing faster than expected. If the trend of recent years will be continued than 50,000 farms will be left over 10 years. Although the surfaces are much less declining, there are signs that the farmers will be much more decrease: half of the current farmers are over 55 years and most of them have no successors. (fig5) Also bufferzones are dealing with this successor problem. Only scaling-up can’t be the total solution for this development. By international competition especially with accession of eastern European countries to the European Union extensive agriculture in the Netherlands will face difficult times. Because the extensive farming is the main maintainer of the rural landscape, this will have a huge effect on the quality of the landscape. (Pols et al. 2005, pp12-13)

With these agricultural developments it is expected that the agriculture landscape will increasingly deal with new functions. Spatial consequence of this are the change in ground uses for new crops, grow of glasshouses complexes, scaling up of farms and intensive agro-business centers. These functions have a strong influence on the openness of the landscape (Lamers 2007)
**Society transitions in the rural landscape: consumptive and protective**

Social changes are caused by a huge increasing prosperity. This has led to an increasing of car ownership and mobility. This in combination with the increasing of free time made the countryside more available and accessible for tourism, housing en business activity. Especially in the bufferzones with the nearness of dense urban structures this has led to an increase of recreational zones and facilities on the countryside. Not only leisure activities are changing the countryside also housing demands asks for green rest and space. (Van Dam et al. 2005 & Heins 2001) These new consumption activities on the countryside widened the rural economy. This has also led to a demand for rural housing and recreation facilities. Spatially the result of this development are new housing projects, higher densities of ribbon development and village expensions, recreation areas, holiday parks, golfparks and new roads.

Another social change is due to the increasing interest in environment, nature and landscape. (Daalhuizen et al. 2008 p29) The attention for nature has led to nature protection and the development of new nature at the expense of agricultural land (Daalhuizen et al. 2008) The development of new nature has a big influence on the landscape; new nature can involves threes and bushes that are blocking the vista’s.

**1.3 Urbanization in the rural landscape**

The urbanization process of the last decades has a major impact on the landscape, due to development of the industrial city and the increase of prosperity. This causes an increase of mobility which developed a process of suburbanization and this increased the cities dramatically. (Asbeek Brusse, Van Dalen & Wissink 2002 p24)

This development is one of the most important causes of the spatial change on the countryside; by urbanization the agriculture land disappeared in favor of urbanity. This has led to the disappearing of the openness; almost everywhere end especially in bufferzones you can see from the countryside urbanity on the horizon.(fig 6) The urbanization process brought new housing (for example VINEXdevelopment), industrial areas and recreational zones into the rural area. Also these urbanization brought new ‘borders’ trough the landscape in the form of highways, traintracks (HSL and betuwelijn) and electric lines. (Daalhuizen et all 2008 p35)

( for more detailed information see attachment 1 paper: Transition in Dutch rural landscape, Spatial effects of the post-modern rural landscape and strategies in rural policy)
De ontwikkeling van het Westen des land 1958

Bufferzone Midden Delfland showing situation in 1958 and 2008

Nederland heeft sinds 1958 elf bufferzones. Deze bufferzones liggen in de Randstad en in Zuid-Limburg. Het gaat om de volgende gebieden:
1. Amsterdam - Purmerend
2. Amsterdam - Haarlem
3. Amsterdam - Vechtzeek
4. Utrecht - Leusden
5. Den Haag - Leiden - Zierikzee
6. Midden-Delfland
7. Oost-Voorthuizen
8. Eindhoven - Maastricht
9. Maastricht - Valkenburg

In 2008 is de nieuw bufferzone aangemeld:
10. Amersfoort - Nijmegen
### 1.2 The future for the bufferzone?

**Bufferzones**

Midden Delfland is one of the first Bufferzones in the Netherlands. The bufferzone policy starts in 1958 with the document: ‘De ontwikkeling van het Westen des Lands’ (The development of the West of the Netherlands). The expansive growth after the WOII raises the question how to organize the Randstad. The position that is taken wants to intervene in this development. ‘Laat men de ontwikkeling haar gang gaan, dan verspeelt men één der grote voordelen van de Nederlandse Randstad boven buitenlandse conurbaties: de ruimtelijk apart liggende steden van overzichtelijke omvang. Het zal daarom nodig zijn, waar nog mogelijk, een scheidende strook van ongeveer 4 km tussen de steden open te houden.’ (VROM 2008)

The bufferzones should be open green zones where the agriculture dominates. Goal of the bufferzones is to keep distances between the cities. Where the typical quality of the Dutch cities can be maintained. **Interesting is that it is not about the culture historic and ecologic quality that is the main focus for maintaining the open area, like today’s practice, but to keep the quality of the cities.**

These bufferzones are not only agricultural zones, also recreation and nature should get their place. The instruments of this strategy are more than only indication of a buffer zone and an appropriate planning policy instruments. To keep these green areas open, public organization should acquire large spaces.

In the Tweede Nota Ruimte in 1966 ‘an element of a big size’ for day recreation Midden Delfland is proposed, because of the high urgency on this location. Meanwhile municipality and the province Zuid Holland have established the Stichting onderzoek Midden Delfland (Research Foundation Midden Delfland) which important ideas where in 1968: a recreational zone around the cities owned by the government and agriculture in the middle en west part.

**Recostruction law:**

To achieve this goal in 1977 the reconstruction law has been adopted. The reconstruction starts with a programmatic phase to define the ideas, meanwhile land is purchased and a period of re-allotments has started. The main objectives of the Reconstruction were to prevent further urbanization through the creation of strong nature and recreation functions to the edge of the city and improve the agricultural conditions.

The reconstruction law used different ways to influence the area:

- The spatial vitality is tackled by development of recreational and nature areas. This should led to more social support for the reconstruction development.
- The re-allotment and infrastructure improvements should lead to agricultural support and strengthening of the economic position of the agriculture.

The planning instruments are zoning plans, the indication of a bufferzone, defining the edges of the area and every building plan should be submitted by
Making quality by a strong interaction between green, red and blue. Red boxes are searching areas for metropolitan parks.
The reconstruction committee (Art. 9 test)
At last the ownership is a way to control the process. The law in combination with the budgets is able to expropriate and exchange land. They can allocate land and leasehold it for organization that has the aim not to cultivate the land: like staatsbosbeheer, het recreatieschap en Natuurmonumenten. And by spend the ground to farmers, they can be increase in scale which help them to compete and keeps them in the area. (Van Rij 2006)

This law achieved a recreational zone around the cities, existing nature areas are strengthened and developed (for example Vlietlanden) and in 2004 Midden Delfland municipality is a fact as the main governing body of Midden Delfland. The open and predominantly agrarian character is still visible as an open productive agricultural landscape of grasslands, ditches, cows, willow trees and yards and the typical plot structure is still clearly visible in large parts of the area. But the area is nowadays in the South en North surrounded with the dense urban structures of Delft, Den Haag and Rotterdam and in the west and east by greenhouse structures of the Oost- en Westland

A Metropolitan park?
At 2008 the reconstruction law has been ended. The end of the reconstruction shows that in the area there is a consciousness what the future for this area should be. All kind of plans are made commissioned by the involved municipalities.

On national level the future of the bufferzones is also discusses. Bufferzone Midden Delfland is for example now examined for expansion to the East. But the question arise of the policy is still suitable. Because the Randstad 2040 (VROM 2008) provides the arrival of ‘metropolitan parks’ in the vicinity of the cities. These metropolitan parks overlap partly some of the bufferzones. Midden Delfland is now explores as one of these metropolitan parks. This vision makes comparison with parks like; central park in New York, the Fontainebleau in Paris and the Hyde Park in London. These parks should improve quality of life of the Randstad citizens and offers durable resistance to urbanization pressure. (Idem)

It can be seen as the transition of bufferzone policy to metropolitan park policy. The restrictive ‘freeze’ policy has been changed into a policy for development and transformation.

This led to the discussion what a metropolitan park, a metropolitan landscape, a regional park or a regional landscape is and in what direction now midden delfland should develop in the context of this debate.
**Hof van Delfland: “Heel het hof”**

Today the approach is to develop a vision for the region as a whole: including the west and east greenhouse area and the urban environment. To develop it as a whole ecologic and recreational connections should be made between the coast-glashouse area-polder- and the city and attention for the climate tasks.

For the Midden Delfland this means that the east part behind the A13 becomes a part of the green area strategy. This strategy vision is so far including:
- make it one area by ecologic and physical connections between the east part of the A13 and the rest
- Developing A4 with eco passage
- Farmers as nature protectors (weidevogels)
- demolish ‘free’ glasshousing
- Strong zones between city and land
- Recreational water-bicycle-network
- Open landscape by ‘new’ bufferzone midden delfland

**Policy:**
Bij the end of the reconstruction law and the reconstruction commission the Hof van Delflandraad should be the new authority for the spatial policy for the area. The hof van delflandraad exist out of: 12 municipalities, two city regions, the governance, the province, the water board, social and agriculture associations, entrepreneurs en other parties. Their goals are:
- samen een Ruimtelijke Visie voor het gebied op te stellen en deze door te laten werken in alle relevante bestemmingsplannen; te zorgen voor behoud en versterking van de landschappelijke, economische, ecologische en cultuurhistorische kwaliteit van het gehele gebied;
- structureel geld te besteden aan de ontwikkeling en instandhouding van het kerngebied in de Hof van Delfland;
- te waarborgen dat burgers en bedrijven in het gebied bij een loket terecht kunnen voor alle zaken die met de inrichting, de ontwikkeling, de bescherming en het beheer van het gebied te maken hebben;
- te zorgen dat het gebied een herkenbare identiteit heeft, vanuit een gemeenschappelijk idee beheerd wordt, voldoende planologische bescherming heeft, economisch vitaal blijft en zich in de gewenste richting kan ontwikkelen.

Vision for 2025 exist out of: basis of LOP Midden-Delfland® 2025 and extra Hof van Delfland 2025

Source: www.hofvandelfland.nl

This means that it is a protective vision, not a developing vision. Except the ports the area will stay the way it is and will be more open by the demolishing of ‘freestanding’ greenhouses. But the area is broadened by more parties and area (the area west of the A13 with the belonging actors)
new relation between the layers:

- prosperity: production layer
- people: consuming layer
- planet: Environment

EXAMPLES

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<th>TIME</th>
<th>TYPE</th>
<th>ENVIRONMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>National park</td>
<td>90%</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional landscape/metropolitan park?</td>
<td>60%?</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>outer city park</td>
<td>20%</td>
<td>-</td>
<td></td>
<td></td>
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</tr>
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<td>inner city park</td>
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<td>-</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>neighborhoodgreen</td>
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<td>-</td>
<td></td>
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</table>
1.3 Metropolitan landscape, regional landscape or metropolitan park?
Finding a Identity for the rural landscape in a metropolitan context

Introduction:
The context for the development of Hof van Delft can be found in the spatial debate about defining metropolitan landscapes, regional parks or metropolitan park. For this thesis the goal is not to define the precise definitions, but how the theory and existing examples can help to find strategy for the future of Hof van Delfland and give it a place in the context of the total landscape between the cities.

This debate is based on the reinterpretation of the main functional layers in the landscape: the productive layer (agriculture etc) consumptive layer (recreation and leisure) and the environmental layer (nature and ecology). In the different types of scale of landscape they are different related to each other. (The neighborhood park is more for recreational use and the Green Hart more the main element is productivity)

For the future of Hof van Delfland the question is how the different layers should relate to each other. Research in this topic has led to two examples that can help define the landscape between Rotterdam en the Hague and how to deal with agricultural area in transformation;

- The case of Amsterdam will be explored to show how a metropolitan landscape can be seen and what role a metropolitan park is in the dutch context.
- The case of Rhein main will show an interesting strategy for intergrating park structure to an existing landscape.

I will use the case of Amsterdam to show how a metropolitan landscape and metropolitan park can be interpreted in the Dutch landscape. And I will use the theory of a regional park and the case of Rhein main to show a strategy for an productive agricultural landscape, although it is on much bigger area it will show some interesting solutions.

A metropolitan landscape and a metropolitan park, Case of Amsterdam
The case of Amsterdam shows a way of defining the metropolitan landscape as part of a metropolitan strategy:

‘De Noordvleugel is zowel een stad in het landschap als een landschap in de stad.
De opbouw van dit Metropolitane Landschap is van grote kwaliteit en levert een belangrijke bijdrage aan het internationaal concurrerend vermogen van de Noordvleugel. Daarmee is het Metropolitane Landschap onlosmakelijk verbonden met de ontwikkeling van de metropolitane strategie die zich richt op het versterken van het woon- en vestigingsklimaat in de Noordvleugel. De ‘Metropool Noordvleugel’ is niet een aaneengesloten stad, maar een verzameling van relatief kleinschalige stedelijke kernen in een bijzonder waterrijk en open landschap met waardevolle natuur. Deze afwisseling is een absolute troef ten opzichte van andere metropolen.

De partijen van de Noordvleugel erkennen de intrinsieke waarde van landschap en natuur, en nemen de verantwoordelijkheid om deze kwaliteiten veilig te stellen en verder te ontwikkelen.’

Stuurgroep metropolitaan landschap, p7 (2007)

This metropolitan landscape of amsterdam is seen as a landscape existing out of different identities
- Stelling van Amsterdam en Nieuwe Hollandse Waterlinie
- De coast
- De peat areas in the north of Amsterdam (Zaanstreek Waterland)
- Including the reclaimed land in Laag-Holland (Beemster, Schermer, Wijdemerwer)
- De peat areas south of Amsterdam (Amstel- en Vechtgebied) en het zuidelijk veenweidegebied
- ‘Scheggen’
- IJmeer/Markmeer
- Noordzeekanaalzone (IJmond-IJmeer)
- Gooi en Vechtstreek
- city landscape Haarlemmermeer en city landscape Almere
- OostvaardersWold (landelijk Flevoland)

The existing different identities are seen as the most important element for the metropolitan landscape and as a key for development: For every landscape identity a direction of development is proposed based on the maintaining of the identity. the integration of functions for the city and the Stelling of Amsterdam can be seen as the connector between the different landscapes.

In this metropolitan landscape ‘ het park van de 21e eeuw’ can be seen as an example for a dutch metropolitan park. Where an agricultural landscape is transformed into a leisure/
The metropolitan landscape

The metropolitapark

every identity its own development strategy, connected bij the Stelling van Amsterdam and integrated with functions for the city
recreational area and the function of the agriculture has not an importance role anymore.

**Recommendation: Hof van Delfland part of a Metropolitan landscape South wing**

This case shows how different landscapes can be seen as the metropolitan landscape for the north wing* where a metropolitan park is a part of this development. In the case of the south wing ** this is an interesting way of defining and developing the landscape between and around the cities. Where the different functions of the landscape: production (for example the glasshouses and the agricultural area (hof van Delfland)), consumption (leisure areas and recreation areas (recreationare Rottemeren, Zoutermeer leisure city) and the nature en ecologic function can be seen as the basis identities for the development of a metropolitan landscape. According to the strategy of Amsterdam for developing attention should be paid with maintaining the existing qualities, integration of functions for the urban environment and connecting these landscapes to city and to eachother.

*+,** the north wing and southwing are part of the urban network of the Randstad. The nortwing is a collaboration between the province of North Holland, Flevoland en the municipalities of Almere, Amsterdam en Haarlem. Today this northwing has changed its name to metropoolregion Amsterdam. The southwing is a collaboration between the Province of South-Holland, City region Rotterdam and city region Haaglanden, and 3 collaborations; Holland-Rijnland, Drechtsteden and Intergemeentelijk Samenwerkingsorgaan Midden-Holland ISMH
Regional park, the case of Rhein main

Another interesting way to look at the development for an agricultural landscape is the theory of a regional park with as example the case of rhein main. First of all there is no legal definition for a regional park. However it is a concept that makes of an urban region a park. Although parks are traditionally green spaces with open landscape in an urban structure with high maintenance of tree structures, flowers etc. This is of course not be applicable on the scale of the urban region. Regional parks integrate the existing landscape with a number of elements with landscape design.

Background:
The present urban regions are result of the economic and social changes brought by the network city. The consumption of the open space developed fragmented urban landscapes. Also known as the zwisschenstadt ( Sieverts 1999). The remaining open spaces are important for the quality of life. They are developing as important places in cultural history, as meeting places for the region’s population, as the basis for the location quality of an urban region, as the spatial prerequisite for local recreational services, and as a resource for safeguarding urban agriculture. Also these open spaces are used for the marketing of an urban region, because the competition between the different urban regions.(Gailing 2007) This resulted in changes in the rural area ( see paper attachment 1), which developed themselves in multifunctional spaces, where functions like leisure and tourism, landscape preservation, cultural history and housing became more and more important. (Nijhuis 2007) These transformations between the relation land and open space ask for new strategies for the whole urban region. Existing tools have difficulties to use according to Gailing: ‘Traditionally the formal tools of regional planning, urban land-use planning, and landscape planning are used. They exercise control in the sense of defensive protection chiefly by enabling or preventing building development and other uses. However, they can do no more than accompany qualitative design and project-oriented up-grading strategies. Owing to their lack of sensuous-aesthetic accessibility and their high degree of abstraction, formal plans have difficulty reaching the public, the politicians, and the authorities.’ Using regional parks as a spatial concept can be used as a strategy to develop collaboration, integration, qualification of the landscape, regional action and networks.(Nijhuis 2007)

Goals:
Next to these elements of the strategy, their should be attention to the goal of a region park; ‘to revitalize the rural landscape in a spatially, socially and economically responsible way’ . (Nijhuis 2007):
- Quality of the rural and urban landscape (attractive);
- Access to the countryside;
- Identity (spatial and cultural);
- Space for different lifestyles (multi-culture);
- Multifunctional areas;
- Attractive business locations;
- Private participation with a view to social embedment;
- Incentives for joint implementation.

Strategy

The essential elements in this strategy approach are according to Gailing (2007):

Expression of changing planning culture: in formal planning practice, open space is seen not as a design element but merely as a protected asset. A more far-reaching open-space policy requires the traditional forms of governance to be supplemented by an action and project-oriented “strategic planning approach” (Grabow). As an non-statutory and hence informal tools, regional-park development strategies waive restrictive action. Instead of imposing regulatory measures, they focus on using market forces of finance, providing economic incentives, on convincing and mediating. Planning and active implementation run parallel within the framework of regional park management.

Multifunctionality as the basis: regional parks offer potential for the integration of the ecological, socio-cultural, and economic interests called for in the sustainability discourse. Open-space policy, from being a primarily ecological matter, now becomes a cross-sectional task, seeking to diversify the functions of open space in an effort to satisfy the demands of a pluralistic society.

Focus on the urban landscape: regional parks generate guiding principles and projects for improving the entire urban landscape. They offer potential as a tool for developing new qualities of design and use in dovetailing open space and built-up areas in the cultural landscape of the urban region.

Regional approach: for the purposes of local open-space projects, regional parks can couple regions and local authorities. As pilot projects for urban regions, they bundle and interlink decentralised landscape development projects. In so doing, they can provide land for regional compensation management measures. Regional parks are increasingly seen as proof of the viability of urban regions in interregional competition, since they help establish an urban or metropolitan region as a universe of action.

The “staging” of open spaces: regional-park development places special emphasis on landscape design and artistic interventions. Open spaces gain intrinsic value through such “staging” strategies. People are emotionally affected, identification with open spaces is facilitated. However, a “staging” strategy runs the risk of distracting attention from the socio-economic or ecological problems of a region. Although producing communicable images enhances what marketing strategists would call the “exchange value” of the urban landscape, its utility value for local residents risks being neglected (cf. Keil 1991: 244 L). Open-space policy as structural policy: the improvement of the urban landscape is also considered a regional economic strategy for enhancing soft locational conditions, for meeting the demands of creative knowledge workers for an ambience conducive to creative work (cf. Grabow 2007), and for quality orientation in coping with economic structural crises. In fact, the image of an urban region as determined by landscape quality is an important locational factor in business attraction (cf. Grabow) and the implementation of open-space measures can, by creating a “green infrastructure,” help raise property prices and attract private follow-up investment.

Open-space policy as regional identity policy: the development of the urban landscape, like the conservation of the associated cultural heritage, contributes to the identity of a region. Regional-park development strategies can hence serve as tools for promoting regional awareness, which can be important for the location in competing with other regions. What is to serve as vehicles for identity can be strongly influenced by regional-park development where, for example, industrial ruins, mine dumps, sewage disposal fields, and other landscape structures with negative connotations are re-interpreted and re-designed as core elements of future development.
Spatially:

In general there are some spatial concepts in a regional park

1) leisure routes or “Open space networks” connecting cities and the countryside;
2) nature and landscape parks as a counter-model to the city and,
3) cultural-historical hotspots for generating a sense of identity and “cultural biography”

Nijhuis (2007)

This development of the landscape transforms it into new urban landscapes, where cultural and historic elements are placed in another position, tourist and leisure facilities are clearly placed, agricultural products are connected to the city and it is an attractive place to live and work. These functions will be linked to a green en leisure networks which make the landscape more attractive and finds place for nature in an urban context. The rural space is developed into a new public space.

Case study: Rhein main
diameter of around 100 km  (in comparison: hof van delfland 7500 ha)
3,7 million inhabitants = (1,8 miljoen inhabitants
metropoolregion Den Haag – Rotterdam)

Goal:

The motto of the park “Making Sense of Landscape – A Landscape for the Senses” they hope to develop a landscape that people appreciate and in that way defend against further urbanization, because of the enormous pressure of the settlements.

Organisation and finance:

The organization for this park is the Frankfurt/Rhine-Main Conurbation Planning Association.

To develop this park successfully a mix of public and private actors (public funding is today not any more acquirable) finance this project to acquiring land, meeting the cost of planning, organisation, and long-term maintenance.

In the first ten years of its development, some € 28 million was spent on the park. The funds came from the regional association (39 per cent), the local authorities involved (16 per cent), sponsors (29 per cent), and in the form of grants from the Hessen government (8 per cent) and the EU (8 per cent)

Background of regional park rhein main concept and past strategy:

In 1930 the strategy of Frankfurt greenbelt has been applied to protecting and connecting open spaces. In this greenbelt exist out of landscape and nature development and interesting culture hotspots for leisure and education. Surrounding the greenbelt a new urban landscape developed with a balance between built up areas and areas of open spaces with a mixture of different functions. Since 1990 the development of protection and development in the open space has been extended to the whole metropolitan area including the greenbelt. The strategy was the regional park concept Rhein main.

The regional park concept tries to upgrade these open spaces connect them with each other and redesign them, thus uniting and harmonizing nature, agriculture and recreational uses (European Community, 2001; Plannungsverband Ballungsraum Frankfurt/Rhein-Main, 2004) To realize this different pilot projects have started in different parts of the metropolitan area.

Spatial strategy plan:

The aim is to develop a 500km long structure of a park-like network of cycling and footpaths, so far around 100km is realized in collaboration with local partners and more than 100 are proposed for the future. This implies a bottom up approach with a regional scope (Nijhuis 2007) The local projects should fill in the missing links in the network and develop attractivity of the landscape by exploiting and developing cultural and historical assets, and tourist and leisure facilities.

In the leisure strategy some rules are set out without putting pressure on existing facilities and nature:

- The general public’s recreational requirements take priority over other forms of leisure usage, especially private demands
- The facilities should be easily accessible, i.e. they should be in close proximity to residential areas and linked to public transport.
- The expansion of existing sport and recreational facilities takes precedence over new facilities, so
that open spaces are preserved.
- New sports and leisure facilities should be built wherever possible on the edge of residential areas, with good public transport links.
- Projects for water-related recreational facilities focused mainly on the connection between nature conservation and leisure (Nijhuis 2007)

Key projects
One of the local project is the pilot project Hattersheim-Flörsheim-Hochheim, here the concept of the whole regional park can be best explained; By a park-like route fragmented agricultural and nature spaces are connected. Every 100 m there is a special element/attraction highlighted by the route with a specific cultural, historical or recreational value. (see fig examples: Roman relics and vineyards, art, a rose garden, objects reflecting the industrial heritage restaurants, hotels and other tourist facilities)

(Nijhuis 2007)

Recommendation: Hof van Delfland designed with tools of the regional park strategy
The new public domain is formed by the concept of a regional park. To overcome the problems of the zwisschenstadt or the inbetween landscape the regional park can be used as concept to make an aesthetic cohesion between open and built up spaces. It is an tool that help to develop and manage the spatially the metropolitan regions.
By the concept of the regional park brings a new public domain: The rural land is part of this public domain, connected by a network with other leisure-, cultural-, historic- and nature areas and facilities. The strategy to develop such a transition is by a local –bottom-up- approach. The local projects should fill missing links in the network and develop attractive landscapes by developing cultural historical and leisure facilities. These developments can take place by a public private partnership.
The research foundations.  
Relevance, aims and research question

This research will bound itself on the theme production and consumption; As seen in the previous chapter the context for this theme is the transformation of a rural landscape dealing with the features of a post modern rural landscape. Next to that it should correspond with a strategy of a metropolitan region dealing with a metropolitan landscape.

Based on the previous outlined background this chapter will define the relevance, aims and research question. This bound the research to specific topics of research and corresponding interventions for Hof van Delfland.
BRABANTSTAD, EEN STERK INTERNATIONAAL CONCURRERENDE EN DUURZAAM GROEIEND STEDELIJK NETWERK

Fig 1: Competition with other regions; marketing of region Brabantstad: Brabantstad, a strong international competitive and sustainable growing urban network. Source: www.brabantstad.nl

Fig 2: VROM on mission to stimulate projects which bring more beauty to the Netherlands in the context of the littering of the Netherlands. Source: www.VROM.nl
2.1 Relevance

The outlined background brings social and scientific relevance for intervention for the Hof van Delfland. The social relevance can be divided in
- The relevance of a metropolitan landscape and regional park strategy in a metropolitan region development and
- The relevance of a strategy for the problems in agriculture in this in-between landscapes.
Scientific this research and intervention should try to trigger the spatial debate about the position of agriculture in metropolitan landscape strategies:

Social
Relevance of a metropolitan park:
-International:
The metropolitan regions in Europe have to compete with each other for settlements of companies. The quality of the live environment plays also an important role for settlement reasons of companies. For the Randstad it is now important to become top region. A sustainable organization of the Randstad is now needed. The (agri)culture landscapes can play an important role in this organization and attractivity of the metropolitan regions of the Netherlands The development of metropolitan Parks can be a part of this organization. (SER 2008)
-Regional:
The South Wing has to compete with other regions with attractive environments; Region Amsterdam, Brabantstad (fig1) and Midden Nederland. The landscapes of the South Wing are not always good connected or attractive to visit. In Rotterdam for example lots of landscapes or recreational areas are not good visited. (COS 2008)
This makes it needed to invest in the development of metropolitan parks as attractive landscapes for the quality of life as contrast to the highly urbanized areas.
-Local:
The in-between landscapes and bufferzones bring ‘air’ in the built-up environment. They give possibilities for citizens to escape the business of the city. To stop pressure from urbanization, these landscapes should be protected as was done the last 50 years. Maintaining these restrictions is only not enough. Urban life demands new uses of spaces and the main pillar-extensive agriculture- is not in the existing way sufficient for these potential regional parks anymore; new developments should be implied.

Relevance of intervention in agricultural structure
As already mentioned the existing structure of the agriculture in these in-between landscapes has a lot of problems; lack of successors, economic failure and spatial claims of other functions. Also the appreciation of the rural land has changed. Was agricultural production in the middle of last century commonly accepted, nowadays there is much more emphasize on the consumptive qualities that the rural land has to offer. Within this consumer landscape the position of agricultural land is not longer obvious. Small scale landscapes are much more appreciated in recreational way than large scale agricultural land. (Pols et al. 2005 p11). Because the existing agriculture is the main maintainer of the landscape a new strategy is needed for finding possibilities for existing which generates spatial qualities and economic supporting for the landscape.

Scientific:
Scientifically this research can trigger the professional debate about how to deal consumptive and the productive sides of a park development. This can trigger the policy to think of new strategies for the rural land in metropolitan landscape. Nowadays there is a tension between Ministries of VROM and LNV in their rural policies; LNV wants to strengthen the rural economy in order that agriculture can cope with international liberalization of the agriculture market. Therefore it stimulates scale increase, new outlets and broadening of functions. Also strengthen the rural economy with possibilities of new housing projects and business development in the rural area. VROM is meanwhile on mission to eliminate cluttering (Dutch= ‘verrommeling’) and stop new building projects in the countryside to enhance the quality of the landscape(fig2) (Daalhuizen et al. 2008 pp 10, 18, 40) These two strategies have in common that they use policy concepts dealing with ‘red’ end ‘green’ functions. In rural development (LNV) economic bearers are stimulated mostly in the form of ‘red’ functions (housing, agricultural activity) and in landscape conservation (VROM) this is done by using the ‘green’ functions as agriculture and the banning of ‘red’ functions. In this context red functions are mostly seen as threats for the rural landscape. And green functions are keepers of landscape quality.
In a metropolitan park this will loose all it’s meaning, because a metropolitan park can probably be seen as a ‘red’ development. New thought about the quality of open areas between the city help the debate to develop a strategy that is more nuanced than ‘green’ = good and ‘red’ = bad in open land policy.
This graduation has two kinds of aims. First of all there are the project aims to find spatial solutions for the problem statement. Second there are personal aims to find new ways of designing and new skills that can be used in future career.

Project aims

In general this research will give my point of view of how a strategy for the agriculture landscape can be part of a metropolitan park strategy. This will be done by giving a future perspective for the case of Hof van Delfland. Although this perspective will give specific intervention strategies in the landscape of Hof van Delfland, this strategy should lead towards generic strategies for in-between landscapes with development ambition for maintaining the identity of a agricultural landscape.

The general focus of the strategy is in my thesis to give a sustainable solution for the existing productive landscape (agriculture) by transforming developing new productive and consumptive in this landscape. To reach this general aim, the focus will be finding a future role for the existing supporters for the landscape and find possible new. This should lead not only to an economic approach for the agriculture base of the landscape but also it will bring more quality for the use of the landscape by the citizens, the consumptive part. Next to that other problems and developments should be developed and designed which contribute to the development of this regional park; for example accessibility on different scales (Randstad, Zuidvleugel, surrounded cities and the neighborhoods) to create a regional park.

Personal aims

This graduation project is also a way to show how the architectural project can contribute to the landscape strategy. The architectural object should be the physical elaboration of a part of the landscape strategy. For me this is the project where I can show that the project can’t be separate into an urbanism/landscape part and architectural part. They both are essential for the development of the strategy. (fig1) Also this last project on the faculty should bring me new skills for urban/landscape, architectural and integrated projects.

Next to that this project should bring up a debate for new thoughts and approaches for a ‘rural park’ in a metropolitan landscape development. For the urbanized areas the tasks and strategies are mostly already set out: densification, transformations of old areas or unused areas and transport developments all dealing with sustainability. For these open in-between landscape this task is much more unclear. The strategies and tools are not strong enough yet. New strategies and approaches should be found to develop a future of agriculture in the in-between landscapes that can be a basis for a rural park development.

Fig 1 Aim is to find my own interpretation of how agriculture development can contribute to a metropolitan park, where architecture and urbanism are part of each other. As reference Parc la villette, where the architecture in the form of follie are integrated as layer of the urban plan.
Source: ead.nb.admin.ch
2.3 Research question

The outlined background, relevance and aims have led to a specific research question. The basis for a research finding new patterns for productivity and consumption in an existing rural area are founded in:
- The transformation of the productive layer towards a post modern rural landscape
- The development into a metropolitan landscape development using a regional park strategy

This has led to the research question:

What should be the new patterns for production and consumption in a metropolitan landscape development dealing with an rural identity?

Structuring this research 5 themes were researched; giving a background for motive for intervention (seen in the previous chapter), research to define the intervention that is needed and design of the implementation of the intervention.

**Background:**
**Theme A Motive:**
The post modern rural landscape
Future for bufferzones

* what is the post modern rural landscape and what are the reasons for this transition?
* what are the spatial effect of the post modern rural landscape?
* what is an in-between landscape?
* what are the problems, quality and potentials of the in-between landscape?

**Theme B Goal:**
Metropolitan park, metropolitan landscape or regional park strategy

* what can be a metropolitan park in the Dutch context?

**Intervention**
**Theme C location research**

* what are the exiting spatial elements of the location that can contribute to the identity of a metropolitan park?
* what are the existing problems and potential of the existing supporters by means of the productive layer (focus on agriculture)? What is the existing productive value in the location?
* what is the existing consuming pattern of the landscape and what economic potential are in the consumptive aspect?
* what should be the strategy?
* what can be the architectonic interpretation for the 'new' buildings in the Midden Delfland case of a metropolitan park?

**Theme D Strategy**
Producing and consumption

* What is a productive landscape? What is a consumptive landscape?
* what can be the new productive and consumptive landscapes? Where do the overlap?
* which combination of productive and consumptive landscape is suitable for these in-between metropolitan landscapes to become a metropolitan park? (concept)
* What can be the architectonic translation

**Implementation**
**Theme E spatial interpretation of research results**
Design landscape, urban and architecture
This chapter will show the results of the general and location specific research in production and consumption. The results of these researches are the base for the interventions to define new and strengthen patterns in production and consumption for Hof van Delfland.

First the problems in the existing productive landscape will lead to the task for changes in the pattern of the production landscape. This change will be used to contribute to the development of a parkstructure (see chapter 4).

Second the research in the existing consumption and future consumption leads to the following tasks in the landscape; the accommodation of the rural experience, strengthen the recreational area more with the rural identity and at last the integrate the spatial effect of the ‘horsification’ of the landscape.

Above changes has led to huge changes of the mostly idealized farmer yard; the scale increase or changes of function have led to yards that became ‘footloose’ from the landscape.
Mapping of main productive layer: Diary farming owns 2/3 of cultivated landscape
3.1 The existing productive landscape:
dealing with –problematic- developments

Traditionally and today diary farming is the main source of income in the landscape. Today still 2/3 of the landscape is maintained by the diary farming. In the diary farming changes and problems arise; by a lack of successors ground and buildings will be placed in the market, however the high ground prices will makes it difficult to keep this in the agricultural sector. Next to that the liberalization of the milk sector will make it necessary to increase in scale for farmers. The last problem is the soil, the wet condition of peat land makes it maybe only for diary farming interesting for cultivate and production.

Source for this input is:
BUITEN, bureau voor economie en omgeving (2007) gebiedseconomie midden Delfland. Utrecht

Successors
The future of the diary farms is in problem because of the lack of successors. Expected is that 14-31 of the 80 farms will stop their current activities. Reason for this is the high age of today’s farms without a successor. This effect for the landscape is that 500-1100 ha will be put into the market.
Omdat deze agrarische verkeerswaarde beïnvloed is door de nabijheid van de stad betekent dit dat de erfpacht canon hoger moet worden dan wat boeren op basis van hun agrarische inkomsten voor de grond kunnen betalen. Het bovenstaande figuur laat dat zien:

| Tabel 3.6 Bedrijfsovergang melkvleesvoeders in Midden-Delfland |
|-------------------|-------------------|
| 2000 | 2004 |
| Aantal bedrijven | 110 | 81 |
| Aantal bedrijven 55+ | 69 | 40 |
| Aantal opvolgers van de 55+-ers | 37 | 18 |
| % 55+ bedrijven met opvolger | 54 | 37 |

Groundprices:
But there arise problems with the sell of the ground in the agricultural sector:
The ground prices of the ‘cold ground’ (far from the remote town, not in future to cultivate) have decreased, because of the declining milk prices. This value is based on what the land with agricultural production can afford. In 2006, this dropped to around 2 euros per m². However the land prices in Midden Delfland are influenced by the price of land for urban development and glass housing. This prices much higher than the agricultural output value. They already asking higher prices than the actual value for the ‘cold ground’, because it is expected that once such price for the land can be asked. Also in the leasehold these prices are increasing, because LNV wants to make the leasehold canon markt conform. This has led to an increase of the canon of 100-300 euros in Midden Delfland.

Liberalisation:
In diary farming the average company in Hof van Delfland is now 30-35 ha. This is too small to be competitive in producing milk in the future. Reason for this is that in the future, the further liberalization and the resulting expected reduction in milk prices and milk quota abolition makes it necessary and gives a possibility of further increase in scale of the dairy sector. The fact that companies will grow, will also affect the landscape.
Next to that, the scale increase of the entire agricultural sector will effect a closed diary area as the hof van delfland. The distance between the supplying and collecting businesses will bring some extra transport costs, which is with low milk prices not favorable for the farmer. Sales to large dairy cooperatives - eventually - could possibly be replaced by regional dairy processing. Possibly this can be a link established with the development of regional production or other forms of diversification.

Soil:
Large part of the midden delfland exist out of peat herbage land. For the diary farming the water level should be 60cm below the land. This led to a circular development of lowering water level, peat oxidation- soil subsidence and further lowering of the water etc. The costs for this process are very high and in the end the peat will disappear. This soil is not easy for cultivation, history have proved that diary is perhaps the only affordable productive(!) way of cultivating the land.

Next stap:
The ground prices and low income of milk, makes the position of diary farming as main identity of the landscape at a risk. Three ways of future scenario’s has been researched:

- Transform the landscape for new production (energy, water producten etc
- Go a long with the multifunctional landscape as outlined in the post modern rural as a trend that is already started developing in the Hof van Delfland (see 3.3).
- find new possibillites in diary farming.

The new strategy had to contribute to a park strategy finding relations between production and consumption.
What can it produce? what can it process?

What does it need? What does it eject?

**Necessity of life**
- food
- water
- materials
- energy

**Quality of life**
- information
- services
- social

INPUT CONSUMPTION OUTPUT

optimum: development into an urban organism?
3.2 Future production: New production?

The first future scenario was searching for a total new productivity for the landscape. Afterwards this was a bit naive. But it helps to find the meaning of productivity in city land relations. First I will explain what productivity can mean later on I will explain why a total new way of productivity is not the way for development.

Productivity in a broader perspective and city land relations: In general Van Dalen defines productivity as: pro•duc•ti•vi•teit de; v voortbrengende of scheppende kracht (the generative or creative power)
This suggest that it is about creating new products.

This should be placed in a broader perspective; in the meaning of todays consumptive society. It becomes clear that our consumptive society can no longer be sustained for the future. Urban areas consume much more than what their physical environment can provide and the ecological footprint, the demand of human activities on the environment, is still rising. (Pellitero 2009) A new approach is needed for the built and the unbuilt environment.

According to Rovers (2007) ‘we are now at the eve of change at the moment where the balance between need and provisioning will be broken due to unhealthy situations regarding air-quality in dense consuming urbanism, changing outdoor conditions due to climate change, and limits in distant provisioning due to limits in resources and energy for transporting these. The footprint of a city however has grown to a level where the relation between urban environments and hinterland can not be re-established in the old form. The problem however has to be solved merely within the new system boundaries of the urban/ built environment. So far these solutions concentrated mainly on limiting negative effects (reduced footprints) However, with the massive balance disturbance in view, its unlikely that also these small scale improvements can help a city survive. Its necessary to concentrate on the enormous organism a city can be seen as, and to see in how far, as a system, the urban environment can provide in its own needs.’ ( see fig)

This can be the idealized optimum, as we see the open area as part of the urban organism. This urban organism should deal with input streams and output streams. The open unbuilt area, in this thesis midden Delfland, can contribute to this by different means. So far I have devided them in a production stream which deals with:
- input for the city by means for the necessity of life; Water, Food, Materials and Energy (in sequence of importance) and quality of life: Information, services( healthcare, daycare ect) and social services ( recreation etc).
- output of the city by dealing with the output of the input stream; Water waste/ water storage, Food waste, Materials waste and can produce (by bringing information, services and social services) knowledge, health and happiness for the citizens.

This means that the more consumptive streams ( quality of life) are part of the productivity. So production is the context of this thesis is that the open land can contribute the the input and output streams of the urban, where consuming is part of the production streams.

N.B. the harbor and the greenhouses can also be a part of this system and in the urban system as itselfs can also work on the streams.

Source Rovers (2007) p 3-4
Consumed food

- 170,000 kg of round veal, cheese, butter, milk
- 5100 kg of eggs and meat
- 250 kg of eggs and meat
- 7.1 ha of barley
- 3.8 ha of sugar beets
- 1 ha of corn
- 1.4 ha of potatoes
- 2.8 ha of vegetable oil
- 9 ha of fruits

Total 4.2 million ha

Human food production

- 16.5 million people need 2.14 ha for food

Animal food production

- 91 animals need 2.66 ha for feed production

85% of land use for production is not on Dutch ground

The Netherlands:
- 41,532 km² total surface area
  - 7,760 km² water (18%)
  - 33,883 km² land (82%)
- 19,225 km² cultivated land
  - 4,806 km² arable land (25%)
  - 10,574 km² grazing land (55%)
This way of thinking is of course very idealistic and if we look only in the food production; this area can not serve all surrounding citizens. But it can give a respond to connect city and land better to each other and give the transformation to a park a deeper meaning. Especially it gives an answer to the globalization; we can get our recourses from all over the world. City and land are not connected by means of necessity for producing food, energy etc. Today there are many discussions about the negative effects of globalization and some think that regionalization can be the solution.

In this thesis I want to show how new relations between city and land can be made by the regionalization of the production streams, to create a more sustainable solution of the urban regions; a better connection between land and city by connecting agro production to urban life.

If only we use this land for food production, it can not even be self sufficient for the region.
regional foodstrategy:

- less foodmiles
- less links between farmer-consument
- demand for local/biological
- higher quality and fresh
- more selfsufficient

todays local food:

example: Mijn Boer

MIJN BOER: overkoepelende organisatie van agrarische ondernemers die in en verkoop verzorgen op deze manier rendabel
3.3 productive identity and development of a regional food strategy
Diary farming as productive identity for future food and productive strategy

Precious research makes clear that production streams should have a more regional approach. By research for introduce new ways of production has led to the recognition that the identity of this area should be a leading principle to find how production should be in the future.

Researching the possibilities of the introduction of energy landscapes, water landscapes and material landscapes have led to the awareness these kind of landscapes where mostly economically and social not feasible and it destroy the culture, historically and social identity of the area.

The notion of the identity and qualities of the landscape has led to the idea that the existing ‘food’ landscape should be a key in transformation. It should lead to a more regional productive approach.

A food landscape and a regional approach lead to what can be a regional food strategy and which food can be produced.

**Task: spatial elaboration regional food strategy**
Dairy farming, main productive identity
Sustainable dairy farming can be achieved by unifying needs for cow, farmer with the demands of society and environment.

**Systeminnovation**

** FARMLAND **

** ENVIRONMENT **

** COW **

** ENVIRONMENT **

Sustainable dairy farming can be achieved by unifying needs for cow, farmer with the demands of society and environment.
Location and food production
The strong position of the dairy farming and its important role for the identity, quality and culture history of the landscapes makes it a logical step to strengthen its position.
As seen in the research, dairy farming near the city is difficult; high ground prices and the regulation and wishes from municipality (for example odour nuisance) and society (grazing of cows). Next to that liberalization has led to think of new ways of dairy farm business and ways of getting income.

But the nearness of the city can also be part a potential for a future in dairy farming;
- People of the city are today more interested in the origin of their food
- less foodmiles is getting interesting with high energy prices
- And next to that local food is getting a stronger position in the food business. (as seen in the success of Marqt and Landmarkt
This project uses the opportunity of the nearness of the city as a chance for a stronger economical position for the dairy farming and visa versa dairy farming bringing quality and knowledge for the citizens of the region.

This has led to two actions that are needed:
- A ‘grondbank’ (groundbank) should be developed to deal with the high ground prices. As proposed bij Van Rij (2006) (attachment B shows the working of a groundbank)
- A system innovation in the dairy farming dealing with the nearness of the urban environment.

Based on the knowledge of the WUR animal science group a proposal is made where animal welfare, environment and economy can strengthen each other in the dairy farming, fitting in today’s societal needs. To achieve this a system innovation is needed, to give the dairy farming a sustainable future for the long term. In this way sustainable dairy farming can be achieved by unify needs for cow, farmer with the demands of society and environment.

According to Peter Groot Koerkamp, co-projectleider Kracht van Koeien

"De melkveehouderij is een fijnzinig systeem waarin boer, koe, grond, gewas, kapitaal, energie en voedingsstoffen op allerlei manieren met elkaar zijn verbonden. Trek je aan het ene touwtje, dan kan dat gevolgen hebben op heel andere plekken. Daarom is er een systeeminnovatie nodig: een omslag in denken en doen. In Kracht van Koeien gaan wij er vanuit dat op die manier dierenwelzijn, milieu en economie goed zijn te verenigen."

To reach this, according kracht van koeien innovations are needed for the different aspects of dairy farming:
- The farming business
- the welfare of the cow
- innovations to have less environmental problems
- and implementation in the societal wishes and ideas.
I would also add:
- The policy be part of a new system, as a translation for the costs of the greenspaces around the city
- and the spatial aspect dealing with the embedding in the landscape
The farming business

The chance for future dairy farming in this area near the city should be found in the combination with scaling up and broadened activities for citizens. Mega barns are not in my opinion on the right place here, because the scale of the landscape is too small and in an approach of a combination of production and consumption these ‘small’ industrial areas does not fit. Next to that the distribution of income sources makes the farmer more stronger in times of economic crises (as seen in this crisis farmers with more sources of income are dealing better than the megabarn farmers).

Instead of scaling up to megabarns costs can be saved by sharing machinery and vehicles and spend on automatize so time can be spent for other sources of incomes as proposed this broadening.

The welfare of the cow:

In the Netherlands cows live less long because of hoof problems, to less space to get pregnant, which is the base for milkproduction. This has not only ethical problems but also to less income. After 40 years of creep area barns (Dutch: ligboxstallen) it is time to think in the needs of the cows, the main transformation should create:

- more space
- freedom to move
- good climate
- quality of the stable ground

>> a free move stable (vrijloopstal) is in this perspective a good alternative

Environmental

The main environmental impact of the farm is over fertilization, turning sour by ammonia emissions and contribute to global warming by emission of methane and nitrous oxide. To decrease the environmental impact innovation can be made by:

- compost barn/ or separation of feces can contribute to less ammonia emission and to a nutrient cycling. By this nutrient cycling artificial fertilizers for the arable farming can be produced and can be used for biomass energy’
Dutch citizens are more and more involved in the livestock farming. Positive interest as critics about how farms should deal with their animals grows in the society. Result of the research of the WUR animal group show that in dairy farms society would like seeing cows in the meadow, have a environment to live as their natural habitat, freedom of cows.

**Role of policy**

The policy should see the importance of the green rural environment around the city in this metropolitan development. To keep this quality policy should spent part of the budget to improve the green space like the investments in parks. As these spaces are getting more important and even can be seen as a new park for the city this is. The money can be seen as an investment in the land as part of a strategy to keep low affordable ground prices (use of the ground bank principle). This can be seen as translation of the costs for green space which the farmers maintain. Also money should spent to improve the quality of the building elements of the green space- the farming buildings as part of a park structure. In return farmers provide the quality of the landscape, local products, accessibility of the rural land and functions for society like recreation and care.

**The spatial imbedding**

This led to the design task, innovation in farmer business should also be unified with good design. After years of little or no involvement of designers, time and money should be spent on the quality of the buildings in the landscape. As part of a metropolitan development the green space should also improve in quality as seen in park design.
Entering the landscape....
3.6 The existing consumption patterns:
recreation

Task: strengthen accessibility to the rural land & between the city and land
Farmers had to leave because the recreation authority could do it better?
3.7 Spatial effects of the recreation strategy

Today
Recreatieve edges Hof van Delfland

Future:
uniform recreative edges?!

Task: strengthen rural identity in the recreational edges
Mapping of horse facilities and today's number of horses (Source: Buiten 2007)
3.8 Potential of horsification

- Economische potential: prices for ground sometimes 5x as for dairyfarming and stables 200E/month

- Potential of barns for 2100 private horses for recreation when looking in the region
  this means 500-1000 ha for (Hof Van delfland 5000 ha)

Tabel 5.3 Indicatie omvang 'recreatieve' paardensector Midden-Delfland

<table>
<thead>
<tr>
<th></th>
<th>Aantal</th>
<th>Aantal paarden</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manege</td>
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<td>378</td>
</tr>
<tr>
<td>Privéstallen</td>
<td>11</td>
<td>384</td>
</tr>
<tr>
<td>Pension en particulier (kleinschalig)</td>
<td>11</td>
<td>132</td>
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<tr>
<td>Inschatting overig aantal paarden</td>
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</tr>
<tr>
<td>Totaal ‘ruitersportcentra’</td>
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<td>914</td>
</tr>
</tbody>
</table>

Bron: Routestructuurplan Midden-Delfland 2003, bewerking Bureau BUITEN

Task: accommodate horse - fascilities- in the landscape
FOOD EN DE LANDBOUW
Pilot Provinciaal landschap Hof van Delfland (Midden-Delflandgebied) e.o.
(r = 10km) CONCEPT

FOOD

Verwerk & bereiding = Verwerk van een nieuw landbouwproduct tot een ander nieuw product dat bedoeld zijn voor de markt. Bijvoorbeeld melk of aardbeien tot jam (def CBS). De bereiding van deze producten in bv restaurant of (boerderij)

Verkoop (aanhuis) = Directe verkoop van landbouwproducten (van eigen bedrijf en/of andere bedrijven) aan de consument of de detailhandel (def CBS)

CULTUUR & EATING

Natuur- en Educatie centrum

Natuur- en Educatie centrum

EDUCATIE IN DE LANDBOUW
Pilot Provinciaal landschap Hof van Delfland (Midden-Delflandgebied) e.o.
(r = 10km) CONCEPT

EDUCATIE

Voor 2009 werd in de CBS landbouwtelling boerderijeducatie gezien als onderdeel van Agrotourisme. Sinds 2009 wordt boerderijeducatie beschouwd als een aparte activiteit van verbinding.

In het Midden-Delflandgebied koördineert Vereniging Vooskaaster het educatief aanbod in de landbouw

ZORG IN DE LANDBOUW
Pilot Provinciaal landschap Hof van Delfland (Midden-Delflandgebied) e.o.
(r = 10km) CONCEPT

ZORGLANDBOUW = Hulp aan personen met een zorgvraag. Dit kan bijvoorbeeld zijn voor mensen met verstandelijke of lichamelijke beperkingen, langdurig werklozen, personen met een psychische hulpvraag, (ex)verstappenden, (ex)gesloten, maar ook de opvang van kinderen en ouderen (def CBS)

N.B. deze categorie is onder te verdelen in zorgboerderijen volgens de definitie van de landbouwtelling (met >39GE) en zorgboerderijen volgens andere definitie

Zorgboerderij

ZORGLANDBOUW = Hulp aan personen met een zorgvraag. Dit kan bijvoorbeeld zijn voor mensen met verstandelijke of lichamelijke beperkingen, langdurig werklozen, personen met een psychische hulpvraag, (ex)verstappenden, (ex)gesloten, maar ook de opvang van kinderen en ouderen (def CBS)

N.B. deze categorie is onder te verdelen in zorgboerderijen volgens de definitie van de landbouwtelling (met >39GE) en zorgboerderijen volgens andere definitie

Zorgboerderij

Natuur- en Educatie centrum

Educatietoezicht
3.9 The consumptive contribution of the farms

coffee/ thea at sunday...

childrensparty at wensday

Task: taking brothening to the next level
Spectrum of: creating the experience to space for own experience

Theme park: rural experience
Flevohof 1971-1993

Talud A4 open space for own experience
3.10 The assignment of the future recreation?! 

Mommaas (2000): 
Waar de verbeelding eens vooral werd geziens als representatie van de werkelijkheid, wordt in de informationele ‘samenleving’ de werkelijkheid een functie van de verbeelding.

Jacobs (2003): 
De beste manier om de postagrarische groene ruimte tegemoet te laten komen aan de wensen vanuit de belevenismaatschappij is het spectrum van plekken waar men belevenissen op kan doen tot plekken waar men ruimte voor de eigen verbeelding kan vinden.

Task: accommodate space for rural experience and own experience
3.11 Spatial effects of the transformation in farmyards

two spatial types

‘Island’ farm

‘Ribbon’ farm

Drive types

farm and road

hoofdweg N223
kreekrug

kale weg: zand/asfalt/grind

60% 30% 10%

Spordisch ‘beboomde’ weg:
zand/asfalt/grind

‘beboomede weg:
zand/asfalt/grind

Eigen terrein
Spatial characteristics island yard

dairy farming

old farm example

old farm with scale increase

new farm

scheme
Mapping today’s yards

broadening and transformation

old farm transformed for horse function
dairy farm with horse function
civilian yard often with horse function
Spatial characteristics ribbon yard

dairy farming

old farm

example

scheme

old farm
old farm with scale increase
new farm

old farm embedded in landscape
new house (boerderette)
farm needs (mest opslag voeropslag)
rational yard shape
scale increase and or
stables cows/horses
horse arena
yard planting

loose boerderij
apart industrieerf
met stallen etc
broadening and transformation

old farm transformed for horse function

dairy farm with horse function

civilian yard often with horse function
Boeren erf het verhaal van de scheiding tussen:

VROUW
schoon

MAN
vies

WERKEN
geld verdienen

WONEN
geld uitgeven

NUT
inpassing erfbeplanting

SIER
relatie met het landschap

sober, rommelig, ecologische kant

netjes, schoon siertuin, moestuin
Main transitions of farmyards in historic perspective

Yard FOOTLOOSE of landscape

Na 1950: schaalvergroting  
Na 1990 verbreding  
na 2010?

Task: leading spatial transformation of yards embedded in the landscape
Rural experience achieved by:

- ruralisation of recreative edges
- city land relations > entrances
  - high scale-low scale
- accessibility rural land
- accommodate horse facilities
- broadening of farms to the profitable level
- spatial embedding of farms in transformation
- spatial translation regional food strategy
17de eeuw

19de eeuw

NUT & LUST

NUT
The changes in production and consumption now makes it necessary to think about a new relation between them to make the next step in history:

In the 17th century people reclaimed the land of the beemster to on the one hand for the useful reason (NUT) as an investment, as prefending the cities for water logging and as a way for feeding the growing cities. On the other hand consumptive reasons (LUST) have developed many estates in the beemster to escape the business of the city and enjoy the countryside. The Nut en Lust reflected by principles form the ‘verlichting’ are still today visible in the landscape, yards and buildings. Two decades later in the 19th century the land was mostly reclaimed for useful reasons (NUT) to produce food for the growing cities. The spatial translation in landscape, yard and building shows also these more pragmatic purpose.

Although these are examples for reclaimed land it is interesting to think about the next step: In line with the transformations in consumption and production it is interesting to see that the LUST has become part of the NUT for farmers (broathing functions of farms for citizens as a way for income) and vica versa the Nut of the farms and countryside have become the LUST for the citizens.

The motto for the strategy of hof van Delfland is NUT=LUST and LUST = NUT shown in building, yard, and landscape;

This means in basis that NUT en LUST, Productive and consumptive, will be more intergrated with eachother; The productive landscape as part of the consumptive structure and the consumptive structure with a more rural productive purpose and identity.
Van nut & lust naar Lust = Nut and Nut = Lust.

Strategy: a rural park with new production & consumption patterns

The previous chapters have now given the motive and context for intervention, the boundary of the assignment, the specific tasks and at last the motive for intervention: Integrating LUST en NUT = Lust nut Lust en Lust Nut = Lust NUT.

This chapter will give specific spatial interventions to develop rural park hof van delfland by designing the center part of the area, which shows generic solutions for the whole Hof van Delfland landscape with a rural park structure. It will be the transformation from a rural landscape with recreational edges into a productive landscape, infrastructure, buildings and yards. It will be the transformation from a rural landscape with recreational edges into a productive landscape, infrastructure, buildings and yards.
Note:

A rural park is a specific park theme giving the existing identity more meaning and brings accessibility by a parkstructure for the citizens. By this means it does not facilitate the mass-tourism with ‘attractions’.
Some Dutch terms used in the proposal:

Nut en Lust: Benefit and the Pleasure
Boerenpaden: routes through the farmland
Elaboration center area Hof van Delfland
4.1 Intervention map

existing

Network

Pedestrian
bike/pedestrian
horse track
rural track
rural head infrastructure
train
parking
neighborhood head infrastructure
neighborhood infrastructure

Landscape

nature/recreation landscape
Water
Dulges + meadow
bushes/ threes
green landscape

Yards

farm yard: dairy, sheep, horse
civilian yard

Strategic Inverventions

Key project 1: Rural parkstructure and farmyards

To transformation towards a rural park exist
out of three projects:
The first projects is about what the entrances
should be for a rural park. On the higher level
(regional and national) the area will have a
local ‘food’ transferium/ market next to the
A4. Were not only cars can be parked to go
into the rural park by bike or by feed, but
local food can be collected and distributed
from farmers, horticultural industry and private
to citizens, restaurants caterers etc…

Next to that on the lower level the area will
get its park meaning of a park in-between the
urban structure (a front position) instead of a
backyard of the cities. This will by done by a
design of— some -the entrances of the park.
The second project will deal with the recre-
tional edges: by giving it more meaning by
a more rural use which connects it better to
the rural land and use this area to develop the
—needed- horse facilities.

The last project is the main intervention
project. It is about the transformation in
organization of the farmland dealing with the
problems in the diary farming. This project
will give the strategy for the rural land which
will bring not only organizational solutions
but will mainly bring a transformation in the
spatial structure of the infrastructure, yards
and buildings in the rural land, which will
bring the main park structure. This will be
draw up in three cases: the rural park struc-
ture, the yard transformed to a civilian yard
and the new farm.
4.2 Project 1: Entrance & network

**Interventions-Projects:**

Project 3) network interventions

- entering routes
- rural parkings
- Local food distribution and regional park entrance: Afslag Hof van Delfland

Planned network interventions:

- A4

**Existing**

Network
- Pedestrian
- bike/pedestrian
- horse track
- rural head infrastructure
- train
- neighborhood head infrastructure

Landscape
- nature/recreation landscape
- Water
- Ditches + meadow

Yards
- farm yard: dairy, sheep, horse
- civilian yard

Case 1A: On the higher level (regional and national) the area will have a local ‘food’ transferium/market next to the A4. Were not only cars can be parked to go into the rural park by bike or by feed, but local food can be collected and distributed from farmers, horticultural industry and private to citizens, restaurants caterers etc…

Case B: Next to that on the lower level the area will get its park meaning of a park in-between the urban structure (a front position) instead of a backyard of the cities. This will by done by a design of –some - entrances of the park dealing with gates, routes and parking places.
Collage: landMarqt: local food distribution centre/ local food restaurant+ rural parking + picknick + entrance to Hof van Delfland

Sources: building, bewerking van onix atchitecten
Case 1A A4-Food entrance

The development of the A4 through Hof van Delft gives a good opportunity to develop a ‘recreational gate’ to the landscape. Which will behave as a ‘Aires de Service’ second generation as in France. A place where you can rest and eat –local(!)- food. And it will function as an entrance to the park where you can park you car and go by bike or food into the landscape.

Next to that it will strengthen the position of local food as a collecting and distribution center for local food. For the citizens there is a small market to buy local food and for caterers, supermarkets restaurant on a bigger scale products can be bought.
Good example of entering the park from the urban fabric:

The structure of the “landweg” is still visible in the urban structure surrounded by green structures penetrating into the urban fabric.
Case 1B Entering the park: city-land routes

Bad example of entering the park from the urban fabric:

from the urban fabric it is not clear which roads go into Hof van Delfland. And the routes are not direct connected to the head infrastructure of the urban fabric.
Rural gate- intertwing land and city

urban tree structure in landscape

rural road in urban fabric
Rural gate + rural parking: parking in a orchard and marking the entrance
4.3 Project 2 ‘re-farming’ the recreation edges

**Interventions-Projects:**
Project 2) re-farming the recreational areas

- horse tracks
- horse facility case 2A
- sheep facility case 2B
- rural paths: ‘klompenpaden’

**Planned network interventions:**
- A4

**Existing**

**Network**
- Pedestrian
- bike/pedestrian
- horse track
- rural track
- rural head infrastructure
- train
- neighborhood head infrastructure

**Landscape**
- nature/recreation landscape
- Water
- Ditches + meadow

**Yards**
- farm yard: diary, sheep, horse
- civilian yard

The second project will deal with the recreational edges: by giving it more meaning by a more rural use which connects it better to the rural land and use this area to develop the –needed- horse facilities.

This is done by creating a horse track and two cases as example for creating more rurality in the edges:

Case A: a hippisch centre for horse riders that stable their horse on a farm to get lessons en just function as a normal manage.

Case B: providing a parkbuilding for sheep to give the recreational edge more meaning and on the same time maintain the landscape.
Case 2A recreation edges and horsification

The horse centre is placed in the Abtswoudsebos and becomes part of the recreational route. The architecture of the building should fit as a park building in the area. And by this means the Abtswoudsebos has an ‘attraction’ when walking through where pedestrians can have a look on the horses during their walk.
Sources: building, bewerking van 70F architecten
Case 2B  sheepening the recreational edges

At the zuidrand a parkbuilding is proposed that function as a sheep stable with extra functions inspired of the example in Almere. (see text below)
By an interesting architecture is will become part of the parkstructure and on the same time the sheep give more meaning to the nature/recreation land. It will be another ‘attraction’ in the recreational/ nature edges.

“sheeping” in the Zuidrand

Almere heeft een schaapskudde van ongeveer 80 schapen. Om deze populatie te centraliseren en huisvesten, is een flinke stal nodig. De stal, die uitgevoerd is als potstal, krijgt een homogene doorsnede. De constructie en gevelbekleding zijn van hout gemaakt; alleen de gebogen spanten zijn van staal. De stal is zo ingericht dat ze bezoekbaar is voor burgers en schoolklassen. Verder is er op de verdieping op de kop een verblijf voor de schaapsherder, die tijdens het lammeren ook ‘s nachts aanwezig moet zijn, en een klein kantoor.
The ground owners:
The strategy starts with the ground owners, the farmers (cow/sheep/horse). The biggest group the dairy farmers are known to have problems with successors and groundprices. In this area 25 dairy farms are located which according to the statistics (Buiten 2007) 5-10 will stop. This means around 175-350 ha will be parceled out. (average ground = 35ha/dairy farmer) from the other ground owners (horses/sheeps) data is not known. But expected is to also contribute to ground redistribution.

Cooperation of farmers and instances:
To deal with the high ground prices a cooperation and ground bank has been arised. Municipality/province, farmers, and private parties have each an equel share in the ground. For municipalities and province it is the financial translation of the importance of a green around the city. It makes it easier to take over the ground from a quitting farmer and keep it an agricultural purpose.

Rural park structure
This means that when a farmer quits an other farmer can increase to create more share in the co-operation. This ‘increased’ farmer in return gives a part of the land to a park structure. With ‘boerenpaden’ and small rural park elements. These small rural elements function as entrances to a ‘boerenpad’ and as highlight where you can picknick, play etc..

Boerenhof 2.0
Next to that this ‘increased’ farmer can transform to a boerennhof 2.0 where diary farming and broathening are combined as the way to become a farm for the future.

Civilian yard
The quieted farmer yard will be transformed-when sold and having enough quality- to a civilian yard, to increase value of the land when sold.

Demolished yard
Some yards have to less value and will be demol-ished to become meadow again
Indication of grounduse of the diary farming

Today

Schipuiden

Delft

Vlaardingen

Schiedam

Indication of grounduse of the diary farming and implementation of parkstructure in case of 5 stopping farmers

average 35ha
main roads
A4
train
recreation/nature edges

parkstructure
rural public garden or landscape art
'klompenpad'
transformation in farmyards
land rearrangement
Boerenhof 2.0
Demolished farmyard
Demolished farmyard with parkstructure
Indication of ground use of the diary farming and implementation of farm structure in case of 8 stopping farmers

Indication of ground use of the diary farming and implementation of farm structure in case of 10 stopping farmers
4.1.1 ‘boerenpaden” & transformation of yards

The third project will be drawn up by three cases to show the rural experience of the implemented park structure, and how the new yards are imbedded in the landscape (Boerenhof 2.0 and the civilian yard):

Case 3A transformation farm yards into civilian yards and scale increase, with a boerenpad connected to
- a Hamlet (Buurtschap).
- ‘open’ recreational edge (Zuidrand)
- the recreational/nature edge with a forest identity (Abtswoudsebos).
And exist out of rural park elements.

Case 3B: transformation of two dairy-farmyards into a boerenhof 2.0, a civilian yard and a new farm
Boomgaard: entree boerenpad
Case 3A: Boerenpaden: herverdeking kavels Boeren pad: example Boomgaard en Buurtschap

Boerenpad connected to Buurtschap Negenhuizen

The Buurtschap (hamlet) Negenhuizen is a group of farms together next to the Zouteveenseweg. A change of farm yards in civilian yard and Boerenhoven 2.0, brings the opportunity to have a boerenpad connected to this small Hamlet and the Vlaardingsevaart (which has a nice consumptive infrastructure).
To connect a boerenpad to this hamlet, the structure of orchards in front of the houses gives an reason to make a public orchard. This is an example of a small rural park structure that function as entrance and for the boerenpad picnic place.
connection ‘boerenpaden’ to Abtswoudse bos

The ‘Boerenpad’ connected to the ‘forest’ of Abtswoudse bos

To connect the recreational/nature structure and the meadow land to each other, forest ‘squares’ will be placed into the meadow, providing at the same time shadow to the animals in the field. This is also seen on other places in midden delfland; a group of threes and bushes at the head of a meadow field

These threes squares will provide an entrance from the road and Abtswoudsebos to the rural area by a Boerenpad. This will strengthen the integration of the recreational structure of the edges and the agricultural land as one big consumptive structure.

VOORBEELD: oostveense weg, three ‘squares’
Boerenpad and Zuidrand

Garden allotment and a boerenpad

At last a boerenpad can be connected to a more open recreational edge, with a partly-public garden allotment. People of the city can choose their own garden allotment with different sizes, shared little barns and dividing plants between the gardens.

Other people can make a small walk through the park to see the gardens and overview the landscape. Instead of a messy and closed of garden allotments this garden allotments have an open structure to show the vegetables when walking over the ‘boerenpad’ and are part of a landscape design.
Profiel boerenpad

Sloot

weiland ‘pad’

Geul

Brugbankje
The implementation of a recreational park infrastructure on the rural land demands for bridges, signs and benches.

The entrances of the boerenpaden should be recognizable:
- At the entrances a pile marks the entrance and gives the name and length of the boerenpad.
- when the Boerenpad connect to the head infrastructure a concrete bridge will be placed.
When the boerenpad connects to a hamlet the bridge had raised edges as is seen on the other bridges in the hamlet.
When it connects to an open infrastructure it is just a plain concrete bridge.
  - when it connects to a bike and pedestrian route it is a wooden bridge

Because the boerenpaden should emphasize the openness of the landscape the place for benches is around the ditches, where the bridge can at the same time function as bench and can be extruded to a picnic bench

The Boerenpaden themselves are as plane as possible, with a small trench giving direction of the track and sometimes a track out of pebble stones.
Picknickbrug
‘Boeren pad’: rural park elementen

Meadow bridges

Boerenpad entrance connected to bicycle path/ pedestrian path

Boerenpad entrance connected to head infrastructure
Situation today
Case 3B; transformation farmyard into civilian yard, the Boerenhof 2.0

Context Abtwoudsebos

demolishing yard elements and reorganisation land
transformations of yards and landscape:
The last case is about the transformation of two dairyfarm yards into a civilian yard and a Boerenhof 2.0. The ground of the former dairy yard will be part of the new Boerenhof 2.0. And in return a part of this land will be given to the park structure connecting the Abtswoudsebos with a more forest closed identity to the open structure of the meadows.

Case: transformation civilian yard

Case: transformation to Farming Lane
woningbouw op voormalig boerenerf

Referenties

Bouwenbijboeren.nl
Case 1A - Project 1: transformation to civilian yard

Civilian yard:
For the transformation from a dairy farm to a civilian yard the goal is to develop a type of yard that has a rural identity and a clearly bounded structure embedded in the landscape.

The meadow fields should be direct connected to the yard without an ‘urban garden’ inbetween the house and the meadow. To have the optimum rural experience and the houses can bound (afbakenen) the yard.

Development

Yard

Boeren erf het verhaal van de scheiding tussen:

MAN
VROUW
WERKEN
MOWEN
SIER

VOOR

ACHTER

Na 1950: schaalvergroting
Na 1990 verbreding

relatie met het landschap

rol vrouw!

Geld verdienen
Geld uitgeven

‘vies’
‘schoon

relatie landschap

woonhuis+tuin

showen

voor

achter

rommelig, kaal, andere

relatie landschap

woonhuis+tuin

showen

time for yard design embedded in the landscape

diversiteit

uniformiteit

Zuid-Holland
Friesland
Limburg ...etc

Zuid-Holland
Friesland
Limburg...etc

the next step in transformation of yard and farm

Farm

Program and architectonic assignment

The boerenhof 2.0 is the farm for the future with the transformation of the yard by:

-A necessary –scale increase, using system innovation of the dairy farming sketched out in chapter 3. This heralds a step into a more sustainable way of dairy farming by the new stable, giving environment, cow, society and farmer a better perspective. In this case it is proposed to go from 40-60 cows to 150.

- Broadening of activities for citizens next to dairy farming. Farmers with more economically benefit activities are especially in these kind of areas in-between big cities- the way for future farming. (Note: big scale farmer have much more to suffer in this economic crisis, instead of farmers which have more activities Tegenlicht 15 November 2010)

From location research and Buiten (2007) three forms of profitable broadening are proposed:

> The demand for wellness activities makes a spa farm an interesting option
> The demand for –group- accommodation could be combined with horse stabling as part of the horification of the landscape; this makes pony camps also a possibility for Hof van Delfand
> more and more schools and business ‘parties’

would like to learn and see what’s happening on farms; an educative farms is therefore also one of the possibilities.

This program will mark the next transformation of yard and farm:

Yard
- Where the first scale increase developed a ‘Footloose-ness’ of farmyard and landscape, this transformation should make the farmyard more embedded in the landscape. Also the broadening function should be part of the new composition.

Farm
The design of the farm dealing with scale increase and broadening should aim for architecture on the yard again. From a historic perspective after area depending farms, the scale increased has developed uniform barns over the whole country without architecture. Now it’s time to think how todays architecture can contribute to the –societal wanted- rural experience, dealing with modern dairy farming.

For this design assignment Farming Lane is proposed. This will be elaborated in chapter 5.

scale increase and broadening
Farming Lane is the architectural elaboration of NUT en LUST. The boerenhof 2.0, combining production and consumption is the strategy for dairy farming for the future. The experience exists out of getting acquainted with the modern sustainable dairy farming on the one hand. And on the other hand experience the pleasure of the rest of the rural land by broadening functions like a Spa, education and a accommodation and horse riding facilities.

In the architectural elaboration the old barn structure is transformed to a new typology for farms.
Composition farmyard

New farmyard connected with polderstructure

Recognisability of farm elements and decrease scale of barns and stables by the roof.
5.1 Composition farmyard and farm

Composition farm: 3 spatial elements

- **Stable**
  - Lodging of animals
  - Climate for animals determines appearance

- **Barn**
  - Serving program determines filling

- ‘Farmers-axis’
  - Outer space

- Serving program determines filling
Villa:

Program: Welness

Program: Education

Villa Giulia

Villa Emo

Theme

enclosed spaces

Belvedere en rural-axis
Composition and landscape villa tradition

Program: Accommodation en horse riding

For the composition of the stables and farms analogies were made with the Italian villa tradition and its composition and embedding in the landscape. One of the themes that was explored is the high and low architecture (villa and barn) and gardens as part of a composition (see also attachment D).

For the dairy farm with three proposals of programme of broadening (Spa Farm, education farm, Accommodation farm) different compositions are made:

Spa Farm; creating privacy by enclosed spaces created in-between the barns and stables.

Education farm: The axis which tie together the stables, as the axis in villa Emo ties the land. Central a raised barn is placed with a belvedere on the landscape.

Accommodation Farm: The green bowling in the villa Gamberaia ties the villa, barns and gardens to each other; here the farmers axis ties the barns, stables and outdoor spaces to each other as a sequence of spaces.

I have chosen to work out of the Accommodation Farm, because it gives the spatial answer for the two main land users: horses and cows.
The theme of integrating an axis that connects the barns and stables is not unknown on historic and today’s composition of farms in the Hof van Delfland. The quality of this axis is that when you passing such a farm you can have a look through the yard and see at the end the stretched meadows with the cows. This quality is sometimes lost because large-stables are now placed on the axis, which enclose the view on the landscape.

In this proposal I want to bring back the axis to create the connection between yard and landscape.

Axis connects landscape and barns.. .lost of axis
Farm opens “abtswoudsebos to the meadowland by a rural route to experience forest, farm and meadow.
End of farming lane; connects to Vockestaerpad
-afkalfuimte 50m²
-behandelbox/operatie 30m²
-melkrobot cap 75 koeien
-machineruimte
-melktank
-hygènesluis
-kantoor
-special need koeien
-zieke koeien/jongvee/droge koeien

pp2.

-wedstrijdbak
-20x box
-3x3,6m
-20x40m

compoststal
Max 75
570m²

-melkrobot cap 75 koeien

-voergang 3,6m breed

afkalfuimte 50m²
compoststal (min 7m²/koe)
hooi en houtsnippers

 Ponyschuur:
accommodatie 20 (40 met stapelbedden)

Paardenstal:
- solarium
-hooiopslag
-afspoelruimte
-zadelruimte

belvedere

ruimte voor feesten en vergaderingen

15000l melktank

Source LELY, Farm management
Stalontwerp voorgeautomatiseerd
5.2 Program of barns and stables

The program for the Accommodation Farm exists out of three domains:
- The domain of the farmer
- The domain of the cow
- The domain of the citizen

The domain of the farmer exist out of his main working area which is situated in and around the ‘Milk barn’. Entering the milk barn a hygiene lock is required. From there the office, milk tank, machineries, milking robots are accessible. Next to that the special need cows are situated around this area (calves, dry cows, sick cows) with a space for separation and treatment.

The domain of the cows obvious overlaps partly the domain of the farmer; around the milk robots and special need cows. Next to that a compost stable and feeding area are the main area for the cows.

At last the new program for the citizen exists out of the ‘Pony Barn’: an accommodation for groups and also for pony camps together with the stables for the horses. Next to that for citizens in the Milk barn a loft is created which can be used for parties and meetings. Here the three domains come together: citizens can have a look in the milk barn, where the farmer works.
Opslag schuur:

Voertuigen en machines accommodatie
Paarden stal
Rijbak 20x40m halfverharding

Rijbak

Compost stal

Melk schuur + feestruimte

Boerenas

Fotoliet
Bestaande Boerderij
prive tuin
Kuilvoer en
krachtvoer opslag
Opslag
Houtsnippers en hooi
Compost
stal
Bespaarde boerderij
Sprin Tuin
Program distribution of barns and stables
Begane grond

1. bijak met wedstrijdzaaling (20x40)
2. paardenstalling: 18 boxen 3x3,5m, solarium.
3. ziekenruimte, zaddelkamer
4. groepsaccommodatie (max 20-40)(dubbelbereden)
5. lifs
6. wasruimte
7. machine en voortuigen schuur
8. machinekamer/bergplaats
9. koolentrein/doorloophal
10. melkruimte met melkmachines 15000L
11. melkrobot, 73 keizers
12. kantoor
13. voederkamer/melkrobot
14. wachtruimte
15. melkgang
16. verwarming/behandelruimte
17. melkruimte
18. droog/verkoelkamer jonge koeien
19. compostkelder en reinigingsruimte
20. voeropslag
21. melkruimte en melktransport halaat
22. rustplaats en stapventilator
23. wasruimte met was, toeleiden en berging
24. wasruimte en stapventilator
25. wasruimte
some extended barns
todays length of stables
Construction scheme

- Concrete base
- Wooden roof structure
- Sandwich eco roof (‘farmers’ roof)
5.3 Construction and climate schemes

- **Light ridge (mostly indirect light)**
- **Isolation in existing structure**
- **Isolation, ventilation ducts and light**
- **Compost warmth (40-60 degrees can be used for warming the accommodation)**
- **Ventilation ridge**
- **Curtain during extreme weather circumstances**
5.4 Appearance
5.5 Experience of the Farming Lane- entrance

Entering farming lane starts with the experience of the old farm. The new farm will be placed with a distance to the old farm, where old and new are connected by the silo’s and feedstorage.
The stables of the cows are designed as stables where cows can walk free to the feed area, the milk robots and to the meadow. This stable is a compost barn where the ground where the cows can lie is a combination of the shit of the cows and is composted with woodcuts. The choice for a compost stable is a new step after 40 years of ‘ligboxstallen’ where the quality for the cows could be better. A compost barn creates a higher standard of living for the cows, by creating more freedom and herd behavior is stimulated. It is a way to create the quality of the meadow during the winter months. Where in this area the ground is to wet to stay all winter outside.

For the farmer it means that the cows have less claw problems and a longer life which in the end brings a higher milk income. Next to that a compost barn will decrease the ammonia emissions a lot.

For compost barn is needed:
- A compost layer of around 50cm
- An aeration floor
- Enough ventilation (open facades)
- Once a day the farmer should whip the compost to stimulate the composting process (few minutes work)

This way of farming fits in a transition of a rural park where the dairy farm part of is Where citizens would like to experience the farm and see how they live. It is a sustainable way of dairy farm where the needs of cows and farmer are united with the demand of society and environment.
Experience of the Farming Lane- Milk Barn

The milk barn is the barn where the domains of cow, citizen and farmer come together:

The citizen comes in the barn in and a wooden stairs leads to the ‘wooden’ loft which can be used for parties and meetings, the stairs make a turn 90 degrees on the farmer’s axis which led to a new belvedere with a balcony.

The cow enters the barn from the compost stable for milking and for treatment. Also this is the place where the calves are born. From the loft this can be seen.

The farmer has from his office a view on the cows that are milked, separated or gives birth. Also he can keep an eye on the machinery, the milk tank and the milk robots.

Central there is a functional zone used for installation, on the level of the loft there are toilets, a bar, storage and on the level of the ground floor the office and milk robots are placed.
The interior exist out of ground floor with concrete walls, suitable for the cow environment. On this concrete wall a wooden structure is placed out of a wooden truss construction. On this construction a roof existing out of eco sandwich panels special made for farms. Which are isolated to against the heat radiation in the summer which decreases heat stress for the cows.

The loft’s interior exist out of a ceiling covered with birch plywood. In the functional zone white plastered spaces are created for bar and meeting place.
view in the milkbarn

...LUST
...NUT
Milk

Heating
Installations for the milkbarn

The zone between the open space of the loft and the barn for milking and calves is the functional zone for installation and serving functions. Here the toilets, storage and ventilation equipment are placed in the loft and on the ground floor the office and milk robots are placed. In this zone also the tubes are placed just under the wooden beams of the roof structure (so you don’t have to make holes in it). The tubes for heating, milk and ventilation etc are visible hanging above the milk robots. In the loft the tubes are placed in the serving zone and only industrial grills are visible. In the corners low radiators will take care for the heating of the loft. When necessary it is possible to extend the ventilation equipment with heating and cooling functions for the loft. On the ground floor heating takes care of the heating of the entrance, hygiene stock and office, for the milk tank and machinery area radiators are placed that can be turned on in case it is freezing.
Experience of the Farming Lane- Store Barn

Except the milk barn two other barns are connected to the compost stables; Barns for storage of machinery and vehicles and straw and wooden chips. These barns have a closed character. Between the storage bran and the accommodation barn an opening is made to create a relation between these barns. From the accommodation it is now possible to see the tractor etc.
Experience of the Farming Lane- ‘pony’ Barn- accommodation and stables

The accommodation barn has an open floor plan with a functional zone in the middle. In this zone on the ground floor the kitchen, toilets, a fireplace and storage are placed, on the first floor toilets and showers are placed and on the second floor the sinks are placed together. The space around the functional zone is used for long tables to play games eat etc and a seating is created around the fire place. From the barn there are great views on the landscape.

The interior of the barn exist out of a ground floor with concrete wall. On this concrete wall a wooden structure is places out of a wooden truss construction with a ceiling covered with birch plywood. The bedrooms are hanging in this structure as white boxes. The functional zone is also covered with this warm birch plywood.
Experience of the Farming Lane- horse stables

The ending of the farming lane exist out of the horse stables where the wooden roof structure comes down and forms the horse arena. In the horse stables the boxes for the horses are placed central and the walls are covered with corrugated translucent sheets to keep wind out of the barn. These translucent sheets give the stables an open view like the stables for the cows. In the stable there is next to the horse boxes a saddle room, a place to clean the horses and heating lamps. On the façade to the horse arena large doors can be opened constantly during warm periods.
Evaluation and Acknowledgements
Research:
During the research a lot of time has been spent in defining the assignment and what the spatial tasks are. The main question I worked with is; what is the task in an agricultural area in-between a metropolitan development. The difficult part was to get a grip on the landscape and what it’s-productive-meaning could be for the surrounding cities.
Starting with ambitions as new energy landscapes for example it was difficult to make it to a realistic proposal. A lot of time is spent on reading about what is needed for new productive landscapes. To get a grip on the meaning of this 6000ha between the cities, I calculated roughly what it could produces in terms of energy, food etc. Than I realized that the ground prices in this area and the soil condition make it not profitable to think about for example energy landscapes. (fig A)
With this step I realized that it was important to really look at the existing identity and meaning for the city and how it is developed. The dairy farming has been for centuries the main bearer for the landscape, because of the soil conditions. This helped me to define my position: The existing identity dairy farming should be have given a future, as a old city center is preserved with new functions inside the old buildings. But this dairy farm should response to today’s recreational approach; the experience of a rural landscape. This has led to the step to a rural park.

I have learned out of this research to also have a good look at the situation. Mapping it, going in to it often and not only looking in literature but own interpretation is the key to define my vision. The main lesson learned is; that a realistic approach can be made with using what already is given in the area.

The project in landscape/urbanism and architecture:

Landscape/urbanism
When finding the problems and tasks for this area it was helping to define a main approach and leading principle to define the key projects. By finding the approach in NUT=LUST and visa versa it became clear that this can be used in different scales; from the scale of the area to define the relation between the recreational edges and the polder landscape to on the scale of the farm.
What I liked of this project it uses societal knowledge that experience became more and more important in the different key projects. Also I am glad that I have found key projects that combine existing development in the area as a opportunity to develop this rural park; the implementation of the A4 and combining it with a recreational gate where a combination also is made between Nut and Lust; A regional supermarket that sells local products of the farmers and gives an image of the rural park to
people passing it form the highway. What would need more attention in a future projects is the detailing of the projects. Now they are giving an impression and helps to strengthen the approach but they have not the level that is achieved with the architectural part. This is caused by spending maybe too much time in researching and finding the right approach for this area. But overall I’m glad that I have made a project beginning with a vision of what should be an agricultural area in a metropolitan development, towards what should be the meaning of the ‘building blocks’ (the farms, the polder landscape, the recreational areas) to achieve this vision.

The intertwining of architecture and urbanism

Especially I am glad that the architectural project can really contribute to give in detail my vision on how this rural experience should be. And also it is the project that gives on the smallest scale the motto of Nut=Lust and Lust=Nut and on the same time gives and vision and solution for future dairy farming to gives it a perpective.

The architectural project also tries to bring analogies between historic examples; using Italian villa tradition to find composition for the Dutch polder landscape. This has given the project more meaning as part of a architectural tradition. However a next step in going deeper in the symbolic meaning of the composition could bring the project to the next level. But in this time frame the start using this Italian villa tradition really gives me a quick start in the design and gives me a grip on the program.

As an architect I think my strengths can be found in organization the program, the spatial layout of the different spaces and understanding the system of a building in materials and organization. Without knowledge about dairy farms, how they work and what the organization should be etc, I could easily define how the program should function and what kind of composition is suitable. Not only in this project but overall I think this is one of my strongest points.

In the elaboration of the program into an architectural expression I started to look at examples that try to break with the farming tradition; stables in the form of glasshouses, cow gardens etc. But at the end I took the same step as in the urbanism part; look at the existing area and what is the quality that I want to bring in for a rural experience. Familiarity with a new look became the theme that I worked on. Where the scale increase has let to barns where you cannot see me what’s happening inside; I transformed barns and stables into a rhythm part of a new composition; together they form one building linked to eachother by the roof structure which make the program and functions of a farm ‘readable’ again.

In the next step in working this idea to real architecture I encountered myself; transforming the overall idea into details is not my strongest point. But in this project I was really stimulated to design the elaboration into details, instead of just finding the –easier- solutions. This really helped me to make some good steps after the p3, which made the building in its simplicity stronger and has strengthened the basis idea of linking the stables and barns by the roof.

To conclude; the strongest point of the project in urbanism and architecture lies in its simplicity, strengthen the existing qualities by give a vision for an agricultural area using key projects. These projects mostly are small interventions that can be implied and work separately, but together they will bring the rural experience that is needed for an agricultural future for this area. The architectural project is the main key project that enhances the future as an agricultural area. Using the motto of Nut and Lust it brings the answer for a future farm in a metropolitan landscape development.
First of all I would like to thank my teachers for the many interesting and instructive conversations. Luisa Calabrese I would like to thank for the inspiring conversations and helped me to survey the project. Willemijn Wilms Floet helped me really with her analytical vision on the different aspects of the urban and architectural project, to help me to find the essence in my project and define the critical elements to make the next steps. Henk Mill for challenging me to think of every line you draw in architectural and constructive way. And last but not least Dirk Sijmons for helping me to make a realistic approach in the project.

Second I would like to thank my friends and family for their support. In special I appreciate the help of my college students and best friends Leonie Korting and Tim Eichhorn for many hours discussing and brainstorming over this project.
Attachments.
Attachment A: Theory paper
   Transitions in the Dutch rural Landscape
   Spatial effects of the post-modern rural landscape and strategies in rural policy

Attachment B: Groundbank

Attachment C: Farming lane technical elaboration

Attachment D: Plananalysis productive and consumptive architecture
Abstract – Throughout Europe the productive function of the rural land is changing. In the Netherlands the dominant position of the agriculture is getting less strong in favour of functions like housing, recreation & tourism, new commercial activities, nature development and nature protection. Next to that the role of farming has been broadened as provider of consumptive functions, ecologic functions and new production. This makes the rural space a multifunctional space with different activities, actors and spatial claims. This transition is in this paper named post modern rural landscape after Daalhuizen 2007.

Reasons for these changes are transitions in the agriculture business, society changes, the urbanization process and climate change. Some of the changes have had a huge impact on the quality of the landscape. However the development of a multifunctional countryside is not in all regions in the Netherlands and in Europa the same. In some regions the productive function has still the main economic role where in others regions new functions are needed to survive economically which can have also social and environmental roles.

This paper will focus on the transition of the Dutch countryside to a multifunctional space. This will be named the post-modern rural landscape (after Daalhuizen 2007). In the post-modern rural landscape traditional economic functions (mainly agriculture) have lost main interest in favor of new functions; like landscape preserving, recreation and tourism, other non agricultural activities and housing. (Idem 2007) Next to this transition in multifunctional rural space the agriculture is broadened by consumptive functions like (healthcare, recreation, education) ecologic functions (maintaining and protecting nature) and new production (sell of regional products, new crops for energy demand or chemical industry) (Langeveld et al. 2005).

Multifunctional agriculture has been seen as the way forward for European agriculture to focus on a production of market goods and non-market goods or public goods and services (Hall Mcvittie Morn 2004).

Some of these changes have a huge negative effect on the quality of the landscape however the rural spatial policy of the ministry of LNV and VROM are counteracting each other. This paper will explore the reasons and effects of the transitions on the countryside and the tensions in rural policy.
Next to that it will give recommendation for spatial strategies in the changing countryside. By this means the paper will provide a literature background for the problem statement and a starting point for future rural strategies of the authors’ graduation project.

In rural research there can be also seen a change in topics, due to the transition in the countryside. Where previously such themes as scaling up and level of facilities in rural areas are addressed, nowadays these issues are extended with accessibility and social problems. In addition, researchers are also investigating the reason for the change, how quickly this dynamic will run and where it will end. (for example Daalhuizen et al. 2008, Daalhuizen & Heins Red 2001, Pols et al. 2005 and lamers 2007) In general this transition will be explored by international literature of Halfacree & Boyle (1998) Holmes (2002) Wilson (2001) Mather, Hill & Nijnik (2006) and Evans (2002); this literature is dealing with the theme of post-productive countryside. For the spatial effects, reasons and recommendations for these transitions in the Dutch rural landscape, Dutch rural literature will be used of Daalhuizen (et al 2008) Daalhuizen & Hein (2001) Lamers (2007) and Pols (2007). These authors have the most recent researched about this topic. At last the rural policy will be explored by the policy documents Agenda vitaal platteland by LNV (2006) and the Nota Ruimte of VROM, LNV, VenW en EZ (2005).

The structure of the reminder of the paper is as follows; after this introduction the first chapter will explore the different reasons and spatial effect of the transition towards post-modern rural landscape. The policy for these effects will be explored in chapter two. After the conclusion recommendation will be made for future rural strategies.

1 Transition towards the post-modern

rural landscape; reasons and spatial impact

The function change on the countryside in the Netherlands can be characterized by the transition from modern to post-modern rural landscape. This post-modern rural landscape is characterized by a wide variety of spatial features, space users and space claims. (Daalhuizen et al. 2008 p27)

In literature this transition has been explored under the term post-productive countryside. (for example Halfacree & Boyle 1998; Holmes 2002; Wilson 2001) Although many authors are agreeing over the changes on the countryside, there is a debate about the validity and applicability of the meaning of post-productivism. (for example; Mather, Hill & Nijnik 2006, Wilson 2001 & Evans 2002) They correctly point out that productivism has not died. Also the scale where it is applies raises questions; if it should be applied to the level of the field, the farm, the region or the nation. (Mather, Hill & Nijnik 2006 p444 & 453)

Nevertheless there are transitions on the countryside, where the main traditional economic functions (mainly agriculture) have lost main interest, in favor of new functions like landscape preserving, recreation and tourism, other non agricultural activities and housing. This transition towards a post modern rural landscape is the result of changes in agricultural business, society, urbanization process and changing climate. Between these changes there is a strong correlation. In the next four sections the different reason for transition and their spatial effect on the countryside will be explored.

1.1 The effects of agricultural transitions

Since the Second World War the Dutch agriculture has changed dramatically. First of all the scale increase of farming is a result and consequence of technological innovation, stimulating (European) agriculture policy and spatial efficiency interventions. This causes increasing of productivity and efficiency. Second the agricultural sector is intensified and industrialized. The Netherlands is therefore now one of the most productive and efficient in the world. (Daalhuizen et al. 2008)

As a result of this process, new requirements are made to space in the form of re-allotment, the disappearing of traditional parcel division likes ditches and hedges and the development of new agricultural building (replacement and addition of large stables, barns, silos and greenhouses) (Daalhuizen et al. 2008 p34 and De Regtand & Kuiper 2006). This has a huge impact on the character of the landscape (Haartsen 2001)

Next to the scale increasing, as a result of social change (see next section) and the shift in production procedures new agriculture production methods, farming styles as products have influence on the appearance on the landscape. Examples are the rise of organic farming and the new or the major expansion of crops and products.

In this context the changing of farming styles will be further examined; in the dairy farming the cow is more inside than in the meadow, and in the stock farming new animals are kept. Also you see widening of the activities in farming business: next to traditional production function, agriculture is combined and integrated with other functions, which

Fig 3 mega barn
Source: www.ziezo.biz
increase income for the farmer. These activities emerge from economic need and new social demands on the countryside, where citizens demand a new role of the farmer as a producer of food with amenities and have corporate community involvement (healthcare, recreation, education etc) (see Daalhuisen et al. 2008 p30, Pinto-Correia and Breman 2009 p143, Schoorlemmer et al. 2008). Beside the more consumptive functions for social demands, farmers also broadening their incomes with ecologic functions (maintaining and protecting nature) and new production (sell of regional products, new crops for energy demand or chemical industry) (Langeveld et al. 2005).

Above transitions are mostly seen in the extensive agriculture; the arable farming, dairy farming and livestock farming. These sectors also have to deal with new spatial claims of ‘red’ (housing and companies), ‘green’ and ‘bleu’ (nature and water) functions. Reason for this is the relative low economical meaning in production value and employment. (VROM-Raad 2004 p10-11)

The most economical agricultural value is and will be found in the intensive agriculture (the greenhouse industry and intensive stock farming). These sectors use a very small part of the agricultural land. It is expected that in future these knowledge and capital intensive sectors will be further industrialized and intensified, which will make the production even less ground connected. (Idem) These areas can hardly be seen as part of the rural landscape, because of their industrial character. (Daalhuisen et al. 2008)

At the same time with these developments the extensive peasantry in the Netherlands is disappearing faster than expected. If the trend of recent years will be continued than 50,000 farms will be left over 10 years. Although the surfaces are much less declining, there are signs that the farmers will be much more decrease: half of the current farmers are over 55 years and most of them have no successors. Only scaling-up can’t be the total solution for this development. By international competition especially with accession of eastern European countries to the European Union, extensive agriculture in the Netherlands will face difficult times. Because the extensive farming is the main maintainer of the rural landscape, this will have a huge effect on the quality of the landscape. (Pols et al. 2005; pp12-13)

With these agricultural developments it is expected that the agriculture landscape will increasingly deal with new functions. Spatial consequence of this are the change in ground uses for new crops, grow of glasshouses complexes, scaling up of farms and intensive agro-business centers. These functions have a strong influence on the openness of the landscape (Lamers 2007)

Not only the productive function of agricultural land changed, also the appreciation of the rural land has changed. Agricultural production in the middle of last century commonly accepted, nowadays there is much more emphasize on the consumptive qualities that the rural land has to offer. Within this consumer landscape the position of agricultural land is not longer obvious. Small scale landscapes are much more appreciated in recreational way than large scale agricultural land. (Pols et al. 2005 p11) This change in appreciation can be clarified by to the social changes which will be explained in the following part.

1.2 society in the rural landscape: consumptive and protective

Social changes are caused by a huge increasing prosperity. This has led to a increasing of car ownership and mobility. This in combination with the increasing of free time made the countryside more available and accessible for tourism, housing and business activity. This has led to an increase of recreational zones and facilities on the countryside. Not only leisure activities demand space on the countryside, also housing demands asks for green rest and space. (Van Dam et al. 2005 & Heins 2001)
These new consumption activities on the countryside widened the rural economy.

Another social change is due to the increasing interest in environment, nature and landscape. Results of this interest are the increasing demand for organic and ecological products. (Daalhuizen et al. 2008 p29) Also in policy there is stimulation for organic agriculture; the ambitions are to have a robust independent organic agriculture sector with 10% annual growth in consumer spending on organic foods, 5% annual growth in organic area and maintain 10% target for policy and legal research support and research tasks. (LNV1 2009)

These social changes bring new activities and therefore changes in the rural landscape. The demand for rural housing and recreation facilities has led to new housing projects, higher densities of ribbon development and village expansions, recreation areas, holiday parks, golf parks and new roads.

The attention for nature has led to nature protection and the development of new nature at the expense of agricultural land (Daalhuizen et al. 2008) According to Dauvellier (1994) this ‘new nature’ can bee seen as destruction. But Van Dijk argues that this can be seen as part of the creation of new culture, which can have the same value in the future as the old culture nowadays. The development of new nature has a big influence on the landscape; new nature can involves trees and bushes that are blocking the vistas and the openness of the landscape.

1.3 Urbanization in the rural landscape

The process of urbanization of the last decades has a major impact on the landscape, due to development of the industrial city and the increase of prosperity. This causes an increase of mobility which developed a process of suburbanization and this increased the cities dramatically. (Asbeek Brusse, Van Dalen & Wissink 2002 p24)

This development is one of the most important causes of the spatial change on the countryside; by urbanization the agriculture land disappeared in favor of urbanity. This has led to the disappearing of the openness; almost everywhere in the Netherlands you can see from the countryside urbanity on the horizon. The urbanization process brought new housing (for example VINEX development), industrial areas and recreational zones into the rural area. Also these urbanization brought new ‘borders’ trough the landscape in the form of highways, train tracks (HSL and betuwelijn) and electric lines. (Daalhuizen et al 2008 p35)

1.3 spatial claims of climate, water and energy resources

At last the awareness of the climate change leads to new demands of space, especially in the countryside. For example the storage of water will have a huge impact on the Dutch landscape. Although the Dutch landscape is for centuries dealing with new water structures in the battle against water, this wetting of the Dutch lowlands will have huge impact on the appearance of the landscape (Daalhuizen 2007). Also new measures against water like broadening of dikes will have there influence on the landscape.

Next to the space needed for water, climate change can have influence on the cultivation of certain crops. Also the need for new energy recourses can change the landscape. Energy crops for bio-fuel and windmill parks will change the green appearance of today’s Dutch landscape. The effect of windmills in different literature is estimated as negative and contributes to the cluttering (dutch: ‘verrommeling’) of the landscape. (for example Van der Wulp, Veeneklaas, Farjon 2009)

2 strategies in rural spatial policy

2.1 conflicting strategies

The rural landscape is as a result of changing agricultural business, changing society, urbanization process and awareness of a changing climate in a process of change. Nevertheless the agriculture according to Daalhuizen (et al. 2008) and Pols (et al. 2005) still one of the most important bearers of the rural landscape. In the rural policy this assumption of agriculture as bearer for the rural landscape involves two strategies. On the one hand the goal is social economic reinforcement and revitalization of the rural economy, developed by LNV (2006) in the Agenda vitaal platteland. On the other hand there is in the existing policy a focus on the preservation and enhancement of the existing landscape according to the Nota Ruimte (VROM, LNV, VenW en EZ 2005).

Between these rural policies there is a tension; LNV wants to strengthen the rural economy in order that agriculture can cope with international liberalization of the agriculture market. Therefore it stimulates scale increase, new outlets and broadening of functions. Also LNV wants to strengthen the rural economy with possibilities for new housing projects and business development in the rural area. VROM is meanwhile on mission to eliminate cluttering (Dutch = ‘verrommeling’) and stop new building projects in the countryside to enhance the quality of the landscape. (Daalhuizen et al. 2008 pp 10, 18,40)

These two strategies have in common that they use concepts dealing with ‘red’ end ‘green’ functions. In rural development (LNV) economic bearers are stimulated mostly in the form of ‘red’ functions (housing, agricultural activity) and in landscape conservation (VROM) this is done by using the ‘green’ functions as agriculture and the banning of ‘red’ functions. In this context ‘red’ functions are mostly seen as threats for the rural landscape. And green functions are keepers of landscape quality.

2.1 mazes in rural spatial policy strategies

In fact this division between ‘red’ and ‘green’ is more complex. Lamers (2007) notes ‘green’
functions do not always contribute to the quality of the landscape. For example big intensive agriculture farms have more often an industrial appearance, also he wonders of glasshouses complexes and mega stables are able to bring quality to the rural landscape. In this perspective ‘green’ functions make ‘red’ developments.

On the other hand ‘red’ developments can have a positive influence on the quality and attractively of the countryside. Daalhuizen (2001) suggest that by giving former farms new function, where living and working under one roof is made, farms still be landscape defining elements in the rural area. Also new estates can be a way to develop landscape. They can contribute to the accessibility of the agricultural land end have potentials for water storage and energy crops. But these estates will have their influence on the openness of the countryside, because estates are accompanied by compaction of the landscape. (Derckx, Kooiman & Scheffener 2010) These estate are one of the concepts in the Regeling Rood voor Groen (arrangement red for green ). In this concept financial resource in the construction of homes, businesses and / or infrastructure will be used for investing in ‘green’. Another concept is the ruimte voor ruimte regeling (space for space arrangement). Under this arrangement it is allowed to build concentrated housing to compensate for the demolition of former rural buildings or greenhouses. Interesting of these concepts is that it is possible to develop ‘red’ scenario’s that can have the potential to contribute to the quality of landscape. (Daalhuizen et al. 2008)

4 Conclusions
The transition of the countryside into a post-modern rural landscape is characterized by a wide variety of spatial features, space users and space claims. This has led that the traditional role of agriculture is getting less strong in favour of functions like housing, recreation & tourism, new commercial activities, nature development and nature protection. This has also led to the broadened activities of farmers like consumptive functions, ecologic functions and new production. This makes the rural space a multifunctional space with different activities, actors and spatial claims.

The ongoing transition towards a post-modern rural landscape is changing the appearance and uses of the rural landscape. Although agriculture is still the main bearer of the quality of the landscape, but has to deal conflicting policies. The spatial rural policy is still dealing the concept of ‘red’ end ‘green. However ‘red’ functions can not only be seen as threat for the rural landscape. And the industrialization of some ‘green’ functions brings ‘red’ developments in the rural landscape.

5 Recommendations
This shows that the rural policy should view the ‘red’ end ‘green’ with more nuance. This can be done in future rural strategies by defining the spatial effect of the different transitions. Especially in landscape preservation opportunities can be missed to invest in the landscape by the development of ‘red’ functions, while developments in agriculture and new nature can have more negative effect for the openness and quality of the landscape.

6 Acknowledgements
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List of abbreviations

(Endnotes)

1 LNV= ministerie voor landbouw natuur en voedselkwaliteit (Ministry of Agriculture Nature and Food Quality )

2 VROM= ministerie voor Verkeer Ruimelijke Ordening en Milieu (Ministry of Traffic spatial Planning and Environment )

3 VINEX stands for “Vierde Nota Ruimtelijke Ordening Extra”, a notation of the ministry of Housing, Spatial Planning and the Environment in the Netherlands (Ministry of VROM). Large outer city areas were pointed out in this notation for massive new housing development.

4 HSL= Hoge snelheidstlijn (High Speedline ) between the Netherlands and Belgium.

5 Betuwelijn: freight train connection between The Netherlands and Germany.
Van Rij (2006, p28)
Voorstel grondbank midden delfland:

Een beheergrondbank is gericht op het probleem van de hoge grondprijzen. Het doel van zo’n grondbank is het behoud van het landschap door voorwaardenten schepen waardoor ondernemende agrariërs in het gebied blijven. De grondbank koopt gronden van stoppende boeren en verpacht ze aan boeren bij wie bedrijfsuitbreiding noodzakelijk is. De pachtprijs die boeren betalen is lager dan de rente die betaald moet worden over de investering in grond. Het verschil hiertussen is het pachtgat. Dit pachtgat wordt betaald door een organisatie die gericht is op het behoud van het landschap. Omdat dit niet aantrekkelijk is voor commerciële partijen ligt er een rol voor de overheid of partijen in de “goede doelen”-sfeer. Hierbij kan men denken aan "gebietsaanbod" of giften en legaten in de vorm van "fondsen op naam". Hierbij is het wel belangrijk dat er een goede functionerende organisatie is die onafhankelijk en die over voldoende kennis en personeel beschikt om de kaken van een grondbank uit te voeren. Het is belangrijk dat zowel donateurs als boeren hiervan vertrouwen in kunnen hebben. Belangrijke succesfactoren voor een beheergrondbank zijn: draagvlak in het gebied, een eenvoudige opzet, een enthousiaste bestuurder, continuïteit in de ambtelijke ondersteuning en samenwerking met ervaren partijen.

Al met al is het de verwachting dat geen van de hier besproken oplossingen allein voldoende zal zijn om de problemen voor het landschap in Midden-Delfland op te lossen, hiervoor is een combinatie van instrumenten nodig. Zo is een streng ruimtelijke ordeningsbeleid en handhaving hiervan essentieel voor het slagen van een beheergrondbank. Een dergelijke benadering lijkt de aangewezen weg om verloederen van het landschap tegen te gaan en de "koe in de wei" voor de toekomstige generaties in de Zuidvleugel van de Randstad te behouden.

**Attachement B: Groundbank**

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**d. Project 4: Groen Ondernemen, een nieuwe landbouw (incl. grondinstrument)**

- Doel: Bescherming en ontwikkeling van Midden-Delfland als een open gebied door versterking van de landbouw. De mogelijkheden van een grondinstrument zijn door LTO-Noord geïnterviewd en de resultaten zijn aan de Adviescommissie geporteerd. Actualisatie van het project dient in samenhang met de pilot Groen Ondernemen te gebeuren.
- Bestuurlijk verantwoordelijk: gemeente Midden-Delfland.
- Planning: 2005 - 2010

**Financiën**

<table>
<thead>
<tr>
<th>Kostenraming</th>
<th>Dekking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bijdrage Rijk</td>
<td>Bijdrage regio</td>
</tr>
<tr>
<td>€ 20 miljoen</td>
<td>Het Rijk heeft de geïndiceerde geïndiceerde gekapitaliseerde opbrengst van de ruilgronden die overblijven na de Reconstructie van Midden-Delfland toegezegd. Hierbij gaat het om ongeveer 100 ha t.w.v. € 2.5 miljoen.</td>
</tr>
<tr>
<td></td>
<td>In het overleg tussen Verkeer en Waterstaat en Midden-Delfland d.d. 34 mei 2006 heeft Minister van Verkeer &amp; Waterstaat namens het Rijk aangegeven zich in te spannen voor een financiële bijdrage van € 15 miljoen, waarvan € 10 miljoen voor de grondbank en € 5 miljoen voor de overige projecten in Midden-Delfland.</td>
</tr>
</tbody>
</table>
Attachment C: technical elaboration Farming Lane
'wet' connection

hanging gutter
Wet connection:

Assembling on location the beams and columns to each other
Hanging gutter:

To not separate the space under the roof structure from each other a hanging gutter is placed. This makes that the wooden truss construction connects...
Wooden separation:

Above the level of the concrete basis the construction exist out of wooden construction with wooden frames that separate the outside and inside space from each other.
gevelbeplating gemodificeerd vuren (plato)
stijl en eegelwerk
fermacell platen
HSB
isovlas
berkentriplex

-sandwichpanelen eco:
Buitenplaat: staalplaat met polyester
25μ beschermende film
Isolatiekern PUR
Binnenzijde aluminiumplaat (folie)

-vochtbestendige houtspanplaat
-houten ribben
-isofoam
-berkentriplex

houten schuipui

butylband
afdichtingskit
spanbdeen
- houten terras
- balken; koppen met PVAC

- prefab beton dorpel
- rooster
- beton band

- vloer: venoplex 12x4
- vochtbeveiliging houten spaanplaat
- vloerbalken met isovlas
- houten plafond platen 3 lagen

- houten platen:
  - drielagen horizontale richting geplaatst
  - regelwerk
  - polyetheenfolie
  - houten frame met vlas/vol isolatie
- ligger: horizontaal gelamineerd Siberisch lars behandeld met kleurloze basisimpregneer

- stalen kozijn met horizontale stijlen erachter geplaatst

Fagment A details 1:5
1: prefab HSB wand geplaatst tussen hoofddraagconstructie

2: vochtwerende laag: fermacell platen

3: prefab elements verbonden met hoofddraagconstructie
3: Stijl en regelwerk + houten frame voor ligger met glaswol

4: Gevelbekleding/ kozijnen/ deuren
Plananalysis A+U: productive and consumptive architecture and landscapes

what can we learn from the past?
Findings on productive/ consumptive architecture and urbanism

Different urban and architecture examples dealing with consumption and production are researched to find generic solutions and/or concepts for the proposed design and to place this thesis in a broader perspective between city and land relations:

1) what should be the new urban interpretation for the landscape in the 21 century?
   21 century urban/rural estates? (Emo, Gartenreich, Holkham hall)
   urban/landscape plan as modern interpretation Gartenreich?

2) how to relate architecture to the landscape
   creating of vista's (Gartenreich)
   Position of building as vista over the landscape (Emo)
   'castles' in the landscape (Cascina)

3) Productive landscapes and esthetic elements
   designing the productive land as park (Holkham hall)

Veneto Villa; Villa Emo
representative productive architecture and landscape architecture

Holkham Hall
productive and innovative estate

Cascina Colombrera
productive architecture structure

Gartenreich Worlitz Dessau
consumption and production park

Laan van Overvest
consumptive landscape Hof van Delfland
early urban claim for recreational zone
Veneto Villa; Villa Emo

Historical background Veneto Villa:

During the 16th century in interesting development took place in villa development. Where in the 15th century in Toscana Villa’s agriculture was combined with the aestheticization and enjoying the nature, in North Italy an opposite development took place; the focus on agrarian production in the Veneto Villa. The origin can be found in Venetia, because of wars and the change of trade routes, Venetia had an economic decline. The hinterland, the Veneto district, became in these times very important. The agrarian exploitation of the countryside gave possibilities of reinvesting trade capital, which reduce the unemploy- ment and food shortage.

The Veneto Villa was the headquarter of the enormous farming fields, and the owner took the role of padrone. The Veneto Villa was primair an agrarian business, a farm. To get the Venetian aristocrats to the ‘farm’, the was made use of treaties which praised the agrarian labour as high and virtuous activity (Santa agricoltura) and the idealization of the farming culture (by Vita Sobria)

Architectural elements:
Palladio and the agricultural villa: focus Villa Emo:
In these agricultural Villa the agrarian production, the rural idyll, the respectability and the role of Padrone where united. To do this a combination of architectonic elements is used: The traditional farm and the luxury Venetian Pallazo. Interesting element is the change of landscape and garden in both elements; From a closed garden in the palazzo to a building in a open landscape in the agricultural villa.

Architectonic elements and appearance:
The appearance of the Villa is sober, like the ideal of the vita sobria. Ther was no decoration in the exterior. The wealth of the owner was showed in the interior; by fresco’s where the countrylive, the landowner and his belongings where honored. Palladio used architectonic elements in new configu-

rations:

The Hall:
Ideal it should be squared and the function was for parties, weddings and meetings and receptions. Analogies according palladio:
‘public space’ as a square in the where different streets arrive. Like the forum romanum the hall was the centre of the villa for organization and representation.

Location of the hall in the landscape:
The villa lays central in the land, the hall central in the heart of the villa.

The Loggia:
Is the head entrance, opens the hall, relates to the height and width of the hall, gives entrance to the the villa and is a kiund of decoration of the house. From the loggia the owner can see the forecourt where the harvest was brought and plays where held.

Piano Nobile
The piano nobile is the combination of the Hall and the Loggia, and gives the hous its grandeur. By a higher piano nobile the garden is less important than the view on the agricultural landscape, symbolically it means the control of the land.

Temple front:
The use of the temple front was to suggest the divine status of the landowner, to show the head entrance of the building.

The wings
The long wings are the productive elements of the building. They are the working spaces on the ground floor connected with eachother underneath the piano nobile.

Front and back facades:
The front façade is representive and the back façade is agrarian.
The form of the Venetian palace evolved from the basic need of its noble-merchant owner to combine his trading headquarters with living accommodation for himself and his family. The unique physical conditions of the city also had an enormous impact on the development of palace architecture.

The original model for the Venetian palace is the Veneto-Byzantine type called ‘casa fondaco’ - from the Arabic word ‘funduq’ meaning warehouse. It usually featured a ground floor arcade which facilitated the loading and unloading of the merchandise, and an upper floor arcaded loggia occupying the full width of the façade.

Source: RIBA, Architecture.com

1. piano nobile: a large central hall. Predominantly a circulation space, this was also used for more storage space and the servants’ rooms.

2. more storage space and the servants’ rooms.

0: deep hallway (‘androne’) with storage rooms on both sides and a courtyard at the back.

1: representative piano nobile

2: working space

back garden: garden allotments etc

represented frond: for plays and bringing the harvest
axis and the villa:
agriculture land more important than the garden

Back and grond facade: Strong difference between ‘farm’ like backside with functions like garden allotments and view on the agriculture fields and the representative front with trees that are closer to each other to connect the piano nobile and the agriculture fields
Landscape and villa:

In the villa’s of palladio there is no garden like the Italian villa tradition in the 14th en 15th century. It is more an open area before the stairs to the piano nobile. Like in the facades the difference between fore and back are continued in uses: the garden allotments are in the back and the view elements of the garden steer your view on the agricultural landscape. The garden, landscape and villa are organized in one system, where the road, according to palladio, is placed according to the military way of road building: long and straight to oversee the area. The road as connecting element through the landscape is connected to the villa through placing the villa straight on the road. So the land was connected to the villa.

Holkam hall
The importance of estates for economic sources for the lord and the development of new productivity

The English estates in the 18th century:

Background:
Around 1725 a colonization of the countryside developed, as a result of the building of new estates by aristocratic. These houses showed also like the Veneto villas and urban view on the countryside. These colonization became after 1740 also popular for the urban trade bourgeoisie, because of the development of the money economy and the grow of the trade. To have a save and meaningful investment estates were built. Till 1770 this resulted in a lot of estates and parks. The industrialisation shifted the investment later on back to the city.

The productivity end innovations on the estates:
The 18th century landlords invest first mostly in forestry, which lead to an import of a kind of wood from abroad. This forestry had beside an aesthetic infill of the estate also an economic base. Also modern and scientific garden allotments where developed. In the second half of the 18th century the landlords saw an opportunity for strengthen their economic position by developments in the modernization of the agriculture. From 1770 they developed test-farms on their estate to develop for example drainage techniques, improvements of fertilization methods.

Example Holkham Hall:
Thomas coke, Coke of Holkham developed fertile arable land in a wild and grazed heathland. By clay upwards the underlying calcareous layer and spread it on the sandy soil. He also helped new tenants at higher rents to do the same. This led to an increase of tenants, higher productivity and higher tenant prices; which resulted a four times increase of income.

Today a diverse range of thriving businesses operate from premises leased by the estate offering food produce and various services.
urban elements

“consumptive part” = landhouse, garden, closed garden, obelisk

“productive part” with aesthetic axes and forest in agriculture land

1: obelisk
2: landhouse
3: closed garden

entrances

front entrance

edges

surrounding forest

edge with wall

axe; agriculture field, three enclaves
Gartenreich: early regional landscape?

**Background:**
Between 1760 and 1830 a gartenreich developed in the area of Worlitz and Dessau under King Leopold Friedrich Franz. In the time when Leopold Friedrich Franz ruled the kingdom of Anhalt-Dessau it existed out of six loose regions with the biggest of 400 km² was laying around Dessau. His main reforms were education programmers and the introduction of the neo-classicism and the English landscape garden. In this gartenreich these main elements can be found.

His slogan was: ‘beleheren und Nutzlich seyn’

In the gartenreich roads, water streams, meadows, forest arable land, heath lands and urban settlements in the whole region where part of a landscape architectonic plan; the goal was to unite the beauty of the landscape garden with education and the value of the modern agriculture.

The landscape elements:
The area exist out of three landscape types; the river forelands, the culture landscape and the forest. These landscape was transformed by 5 operations;
- the ‘Gestaltung’ of the river forelands
- the staging of the settlements and the gartenlandstrasse
- the parks
- the sight lines and the parklanes marked by buildings

Network of hauptstrassen:
Between the court of Dessau, other fortuned families and the villages a network of roads was developed (the Gartenstrassen). Next to these roads every 5 km a tavern was placed and the unterwegen for pedestrians. Also these roads marked architectonic elements and the parks.

Parken:
On strategic places around Dessau residences where built surrounded by gardens.

Sightlines:
Park: The Pagode in the Englisch-Chinese Garten Oranienbaum

Residence: Oranienbaum

sightlines and elements
The lombardian Cascina is the original element in the rural architecture in the Po area in North Italy. In these farms more families lived together in one architectonic structure. This structure was mostly in the form of a square and exist out of housing and agricultural building functions like barns etc. The functional and housing buildings are surrounding a courtyard which was used for organization and justice and as garden.

The lombardian cascina was mostly an low building built out of red bricks. These structures have a strong appearance in the open flat landscape.
First urban consumption Midden Delfland: Case: Laan van Overvest

In ‘ambachteluijk heerlijkheid hof van Delft’ erise the first kind of recreation area. One of the first urban claims on the rural land. Reinier Boitel tells about this recreational area: “men naar een menigte van tuynen en bleykeryen gaat”. This recreational area are a kind of gardens with garden houses, on the north side the garden houses had views on the ditch and the rural landscape.

Economic side:
These gardens where also used for greenhouses to grow young plants, or fruits and vegetables that can not stand the cold and wind. Also these gardens were rented to gardeners and florists, one of this was Semper Florius (see images.)


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www.hofvandelfland.nl

Especiaally