

PROJECT NEW DUTCH WATERLINE AND PROJECT ARCADIAN LANDSCAPES ; GUIDELINES FOR NEW SPATIAL DEVELOPMENT BASED ON HERITAGE

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Abstract

Fifteen years have passed since the start of the *national project* New Dutch Waterline, presented as an illustrative example of a renewed approach of which spatial design was cross linked to heritage, for it described in the Nota Belvedere (Feddes, 1999). From 1815 until 1940 the New Dutch Waterline was one of the major defence lines, both a system of waterworks for inundating, as well as series of forts, casemates and other military defence objects. In the 1990s the process of revitalisation started as a national project. Spatial planning, public participation and legal protection of single objects -fortresses and so on-, defined areas of interest and the large scale impact was addressed. The basic idea was the use of the cultural history of this area as the backbone for current large scale challenges (Luiten e.a., 2002). Can this approach be of use for other spatial challenges which are related to areas of high historic impact, heritage landscapes? This contribution explores both the spatial characteristics of the New Dutch Waterline as well as the process of this *national project* and to compare it to other another heritage landscape, like the many estate landscapes in a *project* Arcadian Landscapes. In the seventeenth century, rich merchants constructed estates and country houses in the wealthy and strongly urbanised province of Holland, consisting of a luxurious house with design garden in the vicinity of the city and other estates, creating estate landscapes (Verschuure, 2013). This paper compares the New Dutch Waterline to the estate landscape and explore if this could benefit from the protection of estates and areas around cities that are in the process of strong urbanisation. It asks for preservation and re-use of estates in a larger scale.

1. Spatial development and heritage in the Netherlands

1.1 The urbanised landscape

Times are far behind us in which cities were defined by the political, social and economic reasons for their existence and in which they formed a spatial contrast between the more 'open' landscape and the 'closed' cities. The Dutch landscape has changed since World War II in an urbanised hybrid landscape which accommodating all kinds of spatial demands. This transformation of both urban and rural areas is motivated by the limited available space and the large spatial demands. During this process of rapid urbanisation the interrelationship between city and landscape changed rapidly. In the rural areas landscape changes were determined by water management, enlargement of scale of agriculture, 'horsification', recreation and urbanisation. Zones in which urban and rural areas interact are called

the in-between zones or urban-rural fringe. The urban-rural fringes form spatial shells around the existing urban areas. The shapes of the urban-rural fringes follow the irregular contours of the cities and a green character dominates (MNP, 2007; Vreke, e.a., 2007). The rural-urban fringe has been urbanised substantially in the last decades. The urbanised expansions in the rural-urban fringe consist of residential areas, commercial zones, recreational and nature areas and some remaining agricultural areas (Nabieler, e.a., 2012, pp 1-18). The urbanisation process of the rural-urban fringe was accelerated by the growing welfare, global economic forces, improved transportation and an increase of personal mobility. The areas in which agricultural and nature functions were dominant are now transformed into large-scale residential areas, industrial buildings, commercial areas, recreational parks, business parks and retail centres, mostly located near motorways (Nabieler, e.a, 2012, pp.1-18). In the seventeenth and eighteenth century the spatial division between city and rural areas were shown in the landscape by the fortifications, but even then the urban-rural fringe dominated by 'urban' functions like taverns, small scale industry, pleasure gardens as well as the many estates and country houses of wealthy merchant. These functions were strongly connected to city life and so the city determined largely the structure of these areas around the city (Glaudemans, 2000). The urban-rural zones -like parts of the urban and rural areas - are not unwritten landscapes; they have been formed and transformed many times by human activity. They are part of the collective memory, part of the identity of people and form a green, pre-recreational landscape.

1.2 The human landscape and heritage landscapes

The landscape as a merely physical component was challenged in the twentieth century by a view in which the cultural or human aspects were gaining importance. Pierce J. Lewis argued that 'all human landscapes had a cultural meaning and that the human landscape is our unwitting autobiography' reflecting our tastes, our values, our aspirations and even our fears, in tangible visible form' (Meinig, 1979, p 12). Lewis represented the ideas of the 'Berkley school' of cultural geography based on the ideas of Carl Orwin Sauer (1889-1975). Sauer defined the cultural landscape as 'an area made up of a distinct association of forms, both physical and cultural' (Sauer, 1925, p. 25). His method of reading the landscape adapted techniques for tracing geomorphology and topographic change for understanding the cultural landscape.¹ The ideas on the cultural aspects of the landscapes changed in the years to follow and the impact of cultural history was added to these ideas (Riesenweber, 2008). In the Netherlands the human approach was adopted in the 1990's by focusing stronger on among others morphological studies in a differentiated field of specialised studies in landscape architecture, historical geography, geology and urbanism. This view was expressed in the Nota Belvedere. Under the influence of 'Belvedere' and the many essays written during the process of change, cultural aspects of the landscape like its history and the collective memory of the place, became part of the identity and historic continuity of a place or area. We have to distinguish three different kinds of landscapes within the cultural aspect: a landscape *in situ* (the physical place or landscape), a landscape *in visu* (the constructed image of the landscape or a text) and a landscape *in mente* (mental landscape or ideas (from earlier times) which formed the landscape) (Uytenhove, 2012, pp. 238-246). In the mental landscapes, defined as landscapes of memory, ideas of the past leave marks in the physical landscape. These specific places were defined as 'lieux de memoire' or memory places (Nora, 1989, pp.18 -29). A landscape containing memory places, places defined in the past in a tangible or intangible way, can

be called *heritage landscapes*.¹ According to these ideas a heritage landscape can be defined as a landscape which combines physical components of the past with its history, expressed in stories and ideas, experiences and other cultural aspects. In this paper we analyse two important heritage landscapes in the Netherlands and look for similarities and differences: the New Dutch Waterline and the Arcadian landscapes, now focussed in the province of North and South Holland.

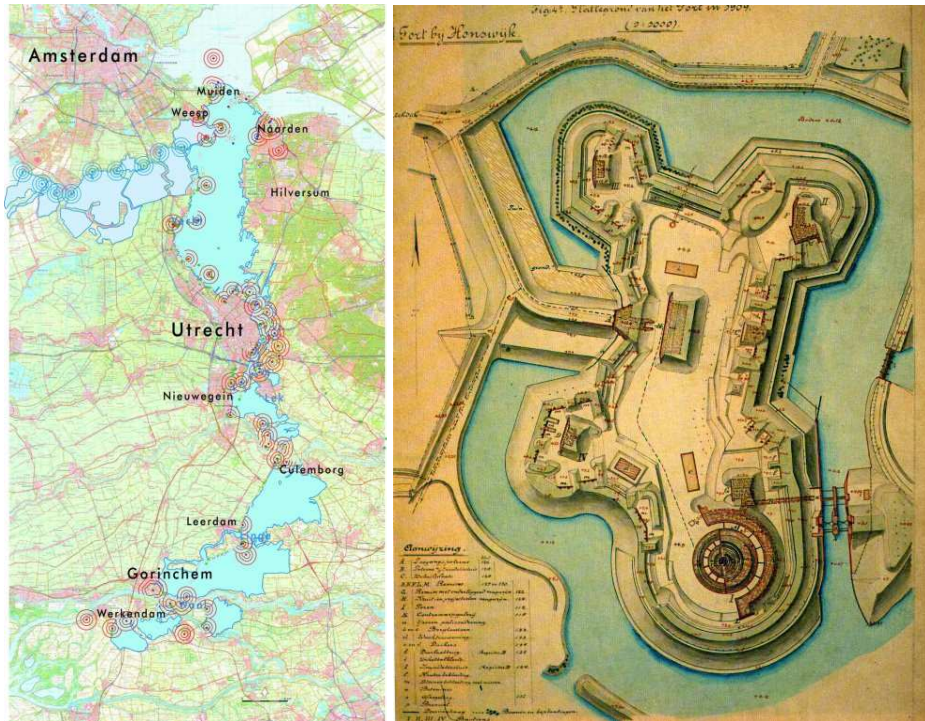
2. New Dutch Waterline

2.1 Water as a defence landscape

The Dutch have a rich, intriguing and internationally renowned tradition of using water management in the urban landscape. This relationship has many different faces; from fight, use, adaptation and so (Hooijmeijer, Meyer, Nienhuis, 2005). The New Dutch Waterline was an example in which water was used for military purposes. Since the Revolt and the Eighty Years War (1568-1648) inundation was used by the rebellious forces, the 'Geuzen', as a strategic mean of warfare. Opposition leader Daniel Sonoy inundated some polders to break the siege of Alkmaar (1573) and Leiden (1574) (Klinkert, 2007, pp451-504). In 1672 a *system or line of inundated fields* was hastily constructed when the Republic of the Seventh United Provinces was attacked by four enemy states': the Dutch Waterline. The Dutch Waterline was the construction of a series of floodable fields or basins and waterworks and groups of defendable objects like fortresses connecting Muiden and the Zuiderzee to Gorinchem at the borders of the Rhine (Maas). (f.e. Brand, Brand, 1986; Luiten, e.a., 2002; Will, 2003; Verschuure, Luiten, 2014). The purpose of the Waterline was the protection of the economic hart of the Netherlands, the province of Holland against enemy attack. It was the French emperor Napoleon Bonaparte who ordered his minister of War, general Cornelis Krayenhoff, to improve the Dutch Waterline in 1811. The new Dutch waterline incorporated the city of Utrecht, chair of the bishop, within the defended area. After Napoleons defeat, king William I ordered the construction of an improved Waterline, which was built between 1815-1885. Later on it was enhanced many times until 1940 when modern warfare proved it outdated. The military strategy of this defence line was inundation, the flooding of large areas of agricultural land with a layer of approximately 40-60 cm of water. This amount of water was not deep enough for foreign ships to sail, but too deep and dangerous to wade through. The construction of the waterline was a clever combination of two major elements; *waterworks* and *military objects*. The first line of defence was a system of flooding fields or inundation basins which could be flooded in a short period of time. The area of flooded land was approximately 6 to 8 km wide as can be seen on figure 1. The system required all sorts of waterworks like among others inundation canals, sluices, dikes. Accompanying the system of floodable fields was a system of military objects to defend specific non-floodable places, the so called *access points*. The access points were situated where the system of floodable lands was crossed by roads, railways or large rivers. The military objects were fortresses and later on smaller objects like casemates, lunettes and bunkers for group shelter. (Klinkert, 2007, p. 486). One of these fortresses is Honswijk which was one of the two guards on the river Lek (figure 2). The number of access points grew as more dikes and

¹ In Belgium, heritage landscape are introduced as a planning tool for landscape with cultural, heritage and landscape aspects.(1999). It is the name of courses landscape and heritage for the master track Landscape architecture (Delft University of Technology).

new roads or waterways were built requiring an intensification of the defensive objects in the landscape.



Figures 1,2. Map of the New Dutch Waterline on the current topographical map (source: Luiten, E. ea.Panorama Krayenhoff, 2002). The circled areas indicate the concentric areas around the fortresses. The historic map is a historic map of fortress Honswijk (source: www.hollandsewaterlinie.nl, beeldbank, (10th April 2014)

2.2 Characteristics of the New Dutch Waterline

The spatial characteristics of this defence line is described in order to understand the spatial elements which define this type of heritage landscape. The New Dutch Waterline was a cleverly designed defence line, strongly connected to the landscape and to its physical form. It was exemplary for the Dutch approach and all kinds of (historic) stories of the places were important for its design. The spatial design used the advantages of geomorphology in close connection to the cultural landscape and on different scales. Its purpose was not to focus on the defence object, but the influence of the territories. It was probably the first 'landscape' with a 'protected' status in legislation.

The position of the Waterline in the landscape was cleverly chosen. On the west side the Waterline was situated in the peat meadow landscape, on the eastside it was situated in the clay landscape of the river as well as the higher grounds of the Utrecht sandy ridge. The waterline thus was positioned on the *transitions* in the Dutch landscape. The transitions are called border areas or gradients. The gradients are the locations of the largest diversity in flora and fauna (Van Leeuwen, 1965).

The design of the Waterline was closely connected to the characteristics of the cultural landscape on three different scales: the entire line, the access points and the individual forts or other military objects

in close connection to its small object like planting. At all three scales the built elements were made in line with the characteristic elements of the landscape like polder structures, dikes, fortresses and fortified cities. They were united in a new, coherent concept. In which the water inlet points were part of the fortresses and other defendable areas. The structure was not visible in peace time, but ready for use in times of war times. The access points were not only defined by the military objects and their spatial connections to the landscape, but also by the defence able zones surrounding the fortresses. Around every military object three concentric zones were defined; the 300-, 600- and 1000-metre zones. The concept was described in the Prohibited Areas Act of 1853. Construction and agricultural regulations were in force within the zones. Within 300 metres of a defensive work only wood-framed houses were allowed; in case of an attack the wooden houses could be burnt quickly and easily. In the middle zone, 300 to 600 metres, houses were allowed to have a stone foundations up to 50 cm above the ground and a stone chimney. In the outermost zone, all building materials were allowed in theory but in case of an official state of war declaration or a mobilisation ordered by a military commander, all buildings, trees and other obstacles were to be cleared without any legal proceedings. All the objects had their own territory, defining the surrounding landscape.

2.3 Military objects in the landscape

The fortresses were planned in the English landscape style for reasons of camouflage using special vegetation (poplars, willows and elms and water lilies in the moats) or difficult to pass for the enemy (hawthorn, blackthorn, elderberry and rose bushes) or even beauty and shade for the soldiers waiting (lime wood and horse chestnut trees). Grass planted on the rooftops of bomb proof buildings ensured that rainwater infiltrated quickly into drinking water reservoirs. It shows that the influence of the Dutch New Waterline was not only on a general scale but also in details. Finally, this military landscape was a protected landscape, not for its monumental value or beauty, but for its military strategy. The Prohibited Areas Act of 1853 ('Kringenwet') was protecting the concentrically zones. In 1874, with the acceptance of the 'Vestingwet', the Waterline became a part of the central defence system of the Netherlands. (Luiten, 2001, p.16). Apart from the strategic importance it had a cultural function. Els Bet described it as a world of see and to be seen, like the Medici villas surrounding Florence and the Roman villegiatura (Steenbergen, Reh, 2005, pp.33-53, 69-77). It was also a landscape of waiting and fear, fear of the appearance of a future enemy, fear of inundation, when the areas were flooded and farmers lost their income. A landscape of life and death, which could be seen in large elements and small details.

2.4 From a historic landscape structure to a national project

In the middle of the 1990s public awareness grew that the New Dutch Waterline was not only a series of forts, but a military mega structure, strongly connected to the landscape. However, the landscape needed modernisation and the matter was to do this without losing sight of the total structure. Several steps were taken to archive the story and working of the Waterline. Fortification foundation Menno Coehoorn and the State Heritage Service (RCE) collected stories of soldiers, entries in archives, original drawings and so on. Regional and local history was captured in maps and written stories. At the end 1990s, the *National Project New Dutch Waterline* started. It consisted of the registration,

listing and description of the remains and was incorporated in the national planning policy. Next to this an overall plan for transformation and re-use of the entire defence line was described.

The registration and listing was previously strongly focused on the objects itself. A more coherent description in combination to its context, the landscape was needed. Next to this, the line became part of several national policies. In 1999 it was described as an exemplary project in the Nota Belvedere. The Nota consisted of integrated plans in which the more protection-driven care for monuments was combined with the ongoing transformation of the landscapes. A great variety of projects was started in which cultural historical quality was supposed to be leading in spatial development. The project was selected as one of ten projects in the Third White paper of Architecture in 2001 (atelier Rijksbouwmeester, 2001) and became part of the White paper Nota Space, published in 2005. It was recognised as a National Landscape as well as part of the National Ecological main frame.(Luiten, 2011).Next to this, the procedure for the application as an UNESCO World Heritage Site was started. The process of inventory of the monumental values was elaborated and published as the '*Aanvullende aanwijzing en verfijning Nieuwe Hollandse Waterlinie*' (RCE, 2009). Although one can argue that the individual objects are important, the cultural historical importance is also found in the coherent story of the entire line. The entire line was divided in almost ninety clusters of built elements, in which the objects and its connection to the landscape was described.

2.5 Panorama Krayenhoff

Next to these policy and legislation aspects, a project group formulated a strategy on the revitalisation of the large-scale historical structure. In 2001, the pre-design of Panorama Krayenhoff was presented as a spatial perspective for the new Dutch waterline, which was established as national policy in 2003 (Luiten ea., 2002). Three spatial meanings of the line were described in three perspectives and drawn in three maps (red, green and blue map). They were the line in the collective memory, as a recreational landscape and as a water storage (Luiten, 2001, pp.12-13). The waterline is part of the collective memory as a defence line in the nineteenth Century and its connection to the growing urbanisation of the Netherlands. It also has its importance in the change of the rural landscape into a recreational landscape. Finally, the historic inundation fields can play a part in the modernisation of water management, being situated between the higher and lower parts of the Netherlands. The main goal of the panorama was plural: it was not only to reactivate the history of the line as an object of collective memory, but also to connect this to the ambition of developing a recreational landscape with chances for future water management. This can be seen as an integrated imbedding of heritage as a leading spatial development (Luiten, e.a, 2001, p.16). By using the historic structure based on the structure of the landscape, the identity and the continuity of the landscape was not only explained, but maintained and used as a guideline for a new spatial development. The master plan was worked out in a development plan, in which seven areas or *envelopes* were named, describing the spatial development and chances. In the combined map, these seven envelopes were described and a social costs-benefit analysis was made. The State invested 70 million euro's in routing, starting up, exploitation and project management. Two of these envelopes were worked out in an integral vision (Van Gessel e.a, 2005). After fifteen years, many stunning or controversial projects were realised like fortress Werk aan het Spoel as part of the Lek access point near Culemborg (figure 3).



Figure 3. Transformation Werk aan het Spoel in the Lek access point, to protect the 'waaiersluis'-design: (source: G.Verschuure-Stuip, 2014)

3. Arcadia of the Dutch landscape

3.1 Golden Age

The first half of the seventeenth Century was a time of great wealth in and political power of the young Republic of the Seven United of the Netherlands and was called the Golden Age. Centre of this wealth was Holland and in this province the rich cities that were ruled by an almost autonomous group of merchant-regents; they earned their fortune in trade and with other investments. This wealth attracted many fortune seekers, which led to the strong urbanisation of the province of over 50 %, which was in the time unique for Western Europe (Harten, 1980; Woude, 1980). The merchant-regent built a country house or estates, next to their possession in the city to improve their status. Country houses or estates are defined as a luxurious house with gardens and other elements.² The country house or estate were their summertime retreat in the time that the cities were hot and smelly. In rural areas near the cities, many country houses were constructed nearby to country houses of other people as part of the social contact necessary for becoming a regent. A recent inventory of the estates in the Dutch landscape shows the large impact of this new fashion on the appearance of the province (Verschuure, 2013) and can be seen in figure 5. In the area around the trade city Amsterdam country houses and estates were constructed on the banks of the river Amstel and in the polder Watergraafsmeer and somewhat further from the city along waterways such as the Vecht, the Angstel, the Gaasp, the Gein, the Holendrecht and the barge canal Amsterdam-Haarlem. They were constructed next to the Herenweg along the Wijkermeer and in reclamation areas such as the 's-Gravenland, the polders Beemster, Zijpe, Purmer, Bijlmer and other dried lake polders. Near the cities of Haarlem and

² This is an abbreviated version of the definition by the *Rijksdienst voor de Monumentenzorg* (State Department for the Preservation of Monuments and Historic Buildings, nowadays the State Heritage department) for the Historic Country Estates Detailing Project. For simplicity's sake I will use the term country houses and estates throughout, making no distinction between country estates, country homes, castles or farmsteads.

Leiden, elongated groups of estates were built on the beach ridges and along the inner dunes, all the way up to The Hague and as far as Naaldwijk, south of the Hague. Next to this, modest country estate landscapes developed along the river Rhine near Alphen and Leiden and along main roads out of Rotterdam, for instance in Kralingen (Verschuure, 2013). These estates were not only connected to the city and the urban life style but also to the differences in geomorphology using the transitions in the landscape, the border areas or gradients. The green areas around the cities were not only intensified green elements in the landscape but they transformed the agricultural polder landscape into a *'landscape of pleasure'* or estate landscape, the start of pre-recreational landscape. Studies (f.e. Bijhouwer, 1940; van der Wijck, 1972; Immerseel, e.a., 2000; Geest, 2002; Reh e.a., 2005; Verschuure, 2013) showed that an important aspect of these estates were the close connection to the landscape which is missing in the current definition. The connection was stressed by the addition of lanes and vistas to elements in the landscape.



Figure 4. Country houses and estates were constructed next to the river Vecht as part of Holland's seventeenth century recreational landscape. Townhouses were built closely to the river side (source: G. Verschuure-Stuip, 2011)

3.2 Estate landscape as a heritage landscape

We can analyse the estate landscape in a similar way as done above with the New Dutch Waterline. Striking are the many similarities when we compare the essential elements of the New Dutch Waterline with those of the estate landscape. The estates were important elements of the social society in the seventeenth and eighteenth century. This is expressed by including the estate landscapes as an individual theme in the *'canon der Nederlandse geschiedenis'*. (www.entoen.nl, 2014). Many stories can be found about the genealogy of these wealthy families and their servants and gardeners, about the transformation of their gardens, about what they owned and about how they lived. But we find here also the four essential elements, the use of the geomorphology, the close connection to the cultural landscape, on different scales and their importance not only as independent objects but in relationship with the territory. The estates were closely connected to the geomorphology as they were built on ridges and on specific lines in the morphology. They thus used the landscape and created large estate

landscapes by building estates next to each other, as can be seen on the map. (Verschuure, 2013)
 These estates were built on the transition zones in the landscape, the gradients, like what happened with the New Dutch Waterline. Next to this, the cultural landscape was used in its own way to form its specific estate landscape.

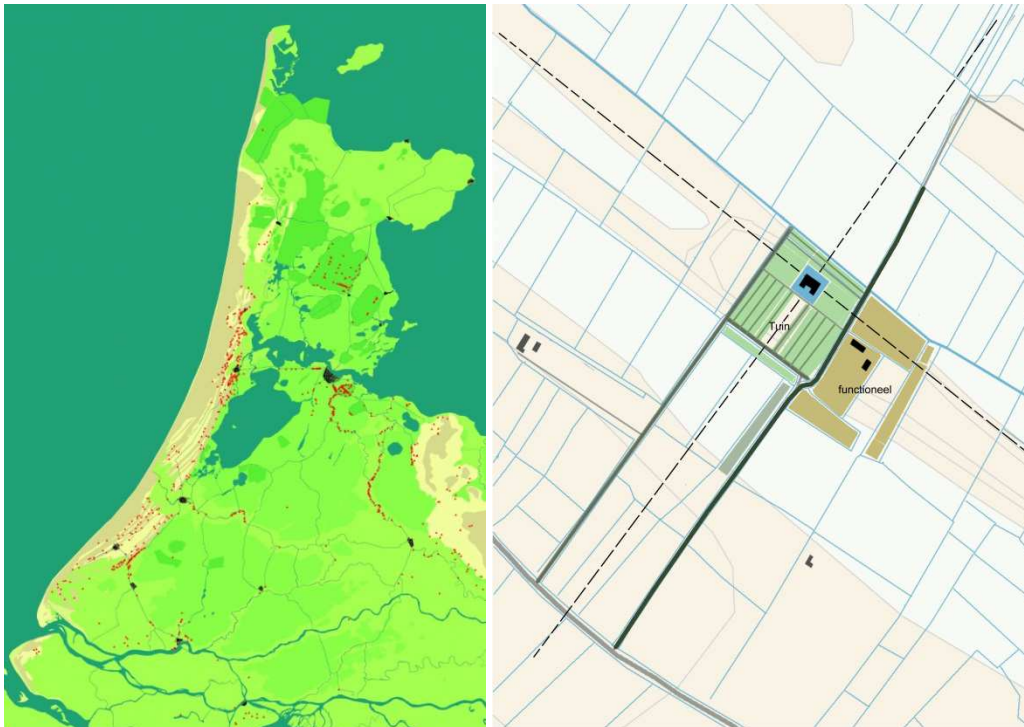


Figure 5, 6. Inventory of the estates and country houses projected on the geomorphology of the province of Holland in the seventeenth century (source: G. Verschuure-Stuip, J.J. Wiers, M. Pouderoijen, I. Pane, O. Diesfeldt, TU Delft, 2013). On the right side, the former garden of Duivenvoorde (Voorschoten) was redrawn on a map, showing the geomorphology (light brown- sandy ridges) and the ditches (blue) and roads (black and grey) (source: M. Schrivezande, 2008)

Important was the connection of the estate to the surrounding landscape by adding vista lines of trees and so on. The fact that the estates were constructed next to each other made them form compositions of several estates resulting in an estate landscape, consisting among other of several houses, gardens, lanes, vistas. Next to this they served as a recreational landscape in which the city also had its function. Different scales were important for design and construction of these estates and estate landscapes. The first and smallest scale was that of the country house (object) described as the micro-cosmos of house and gardens. These country houses were connected to and determined by aspects of both the cultural landscape as well as the geomorphology. The second scale was the grouping of a number of estates into an estate landscape, the meso- cosmos. The estates were carefully constructed next to that of the neighbours using the geomorphology and cultural landscape on a somewhat larger scale. Estates on the transition of the inner dunes differed significantly from those on the peat-meadow ridge. The dunes estates were pretty large and the shape was more or less a square with rounded angles and connected to the dune water coming out of the dune wells. The country houses next to the rivers in the peat-meadow landscape were elongated in shape and built on small plots, depending on water by

the river. Figure 7 shows the spatial essence of the river landscape of the seventeenth century, which is leading to a view on these estates from the borders of the river, as we see here for Hofwijck next to the Vliet. Five major types of estates can be described: inner-dune estates, sandy-ridge estates, river estates, dried lake polders estates and lake estates (Verschuure, 2013). The differences between the types result in large scale structures and can be considered the maxi-cosmos of these houses and gardens. In general the estates form an overall theme of pre-recreational landscapes or landscapes of pleasure, which were defined in general terms, as Arcadian landscapes (Reh, Steenberg, Aten, 2005, pp.251-252). This implies that estates are not individual objects in the landscape but are closely connected to it forming the estate landscapes. The awareness of this idea was concretized in the planning instrument of the estate biotope, which will be discussed further in this paper in the next chapter.

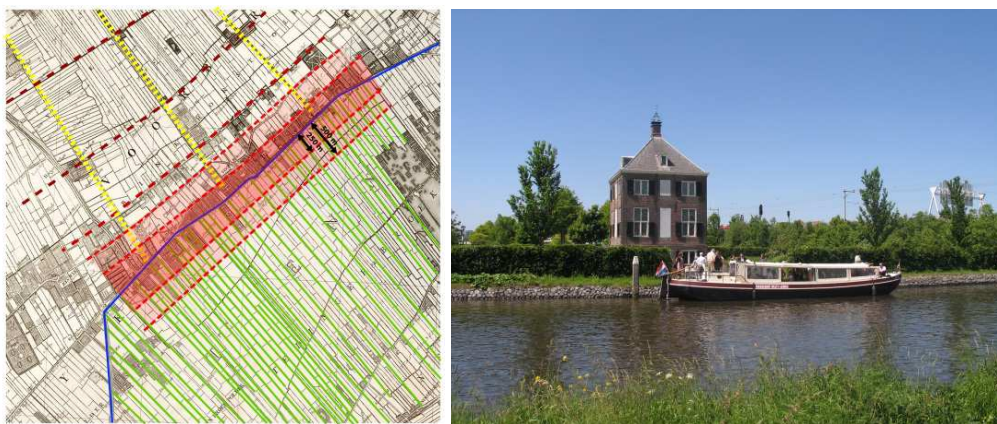


Figure 7 and 8. Based on the water board map of N. Cruquius (1712), the spatial essence of the estate landscape of the Vliet zone (The Hague) is analysed. The photo is showing the famous Hofwijck as an example of an estates next to the river (source: archive Waterboard Delfland, drawings: T. Galesloot, G.Verschuure, 2011)

3.3 Shifting perspectives in policy

In the twentieth century public awareness of the cultural significance of country houses and estates grew slowly. It went from a more natural and ecological driven approach to a more cultural approach in which the object was considered a part of the cultural landscape. This process is even nowadays still influencing maintenance plans (Hilverdam, Schuurkamp, 2012). The legal protection of many historic houses has started relatively late with the main focus on the house and not on its garden. In 1967, legal protection for a more integral approach was discussed and proposed by H. van der Wijck. In 1972, these ideas were presented to the Secretary of State Vonhoff (Van der Wijck, 1974; Kamerlingh Onnes, 1998). He stressed the strong connection between garden and house. This resulted in a national renewed inventory of all estates and country houses by the working group '*Buitenplaatsen*' that visited all estates between 1979-1995. At the time all Dutch country houses and estates were re-organised and described as a *complex* of monuments, listed under one number, but as a number of separate objects, both 'garden objects' as well as 'built objects'. Under the influence of the shifting perspectives on heritage, these estates are starting to be understood in closer connection to the surrounding landscape and in the protection of groups of estates in ensembles, estate landscapes or even Arcadian landscapes.

These shifting ideas led to the introduction of a new spatial planning tool, the *country houses or estate biotope*. The country houses or estate biotope was defined as including aspects of the surroundings of estates; they signify the great importance of the connection between the estate and the landscape. It was a broad definition that could be seen as attention for the territory of the estate (Verschuure, 2009). This tool was worked out for the estates in the province of South Holland, focussing in the visual perception of house and garden (Beek, Kooiman, 2010). In 2013, the province of Utrecht followed this idea with their own definition and provincial legislation for the estate and country houses' biotope, focussing more on the essential elements of the country houses and estates (van Dam, Blok, Blijdestein, 2013). When 2012 was appointed as Year of the Historic Country houses, it led to large attention for this concept and public awareness of it.

4. Conclusions and further steps

4.1 Spatial comparison of the New Dutch Waterline and the estates landscapes

We have seen that the New Dutch Waterline and the estate landscape have great similarities in size, structure and geomorphology. Nevertheless, the main ideas of these landscapes were completely different. The New Dutch Waterline was designed as a complete structure for one purpose, the estate landscapes were built for the same purpose but lacked a grand design and one architect, who made this line into a coherent structure. When we compare the mental, spatial as well as processing and legislation aspects of both the New Dutch Waterline and the estate landscape, we notice differences as well as similarities in approach or scale. Both projects were important for its role in the collective memory, although the stories are very different. Both landscapes consist of a wide spread of larger and smaller objects and elements in the landscape, they are situated near transitions in the landscape, places of diversified flora and fauna, and they show the influence of objects and elements on different scales and are connected to the cultural landscape. Furthermore, the heritage objects are attracting more and more public attention, telling the history of the place. A small part of the objects are privately owned and therefore closed for the public, but the majority is open and publically accessible. And all the items are closely linked to current spatial challenges. The estate landscapes, mostly situated in the urban-rural fringe and less frequent in the rural, non-urbanised areas, can become part of the spatial development of the areas in structuring the non-planned urban development. This is only possible if we view these estates and their connection to the landscape as a large scale structure. The estates that are already preserved, can be transformed into high-quality green areas as suburban city parks with a strong focus on its green, historic identity dating back to the times in which the landscape was transformed into gardens of pleasure. This approach is very similar to what has been realised in the preservation of the New Dutch Waterline.

4.2 Integrated perspective for the future

Although Belvedere has one written motto, two mottos were formulated. The first one was: '*preservation through development*'. It implied that monuments could not be preserved without transformations and the adoption of new functions. But it was also stated the other way around '*no new development should do without preservation of (some elements) of its past*'. It implies that spatial identity and characteristics are crucial elements for a sustainable future (Feddes, 1999, pp. 6-16). Both

mottos should be considered in preservation projects. We can then use the preservation of heritage for new transformations as flywheel or backbone. This was successful in the preservation of the New Dutch Waterline. However, this approach requires a new vision on the maintenance of the estates, not only focussing on the objects (house and garden), but also on the estate landscape as a combination of estates and groups of estates in relation to the city and the natural landscape. New studies of the landscape structures from the seventeenth, eighteenth and nineteenth century, as well as social and mental studies of divers aspects of the interaction between estates, cities and rural landscapes on various scales should give more insight in the possibilities of historic preservation. The studies should be placed in a perspective combing heritage preservation and new spatial developments, like we have seen in the national project New Dutch Waterline.

The importance of estates and country houses are not in its past but in its future. Development of a large scale project like the New Dutch Waterline, could be beneficiary to other large scale historic structures including the estate landscape in its broadest sense.

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