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UNESCO Region: EUROPE AND THE NORTH AMERICA

SITE NAME: Droogmakerij de Beemster (Beemster Polder)

DATE OF INSCRIPTION: 4th December 1999

STATE PARTY: NETHERLANDS

CRITERIA: C (i)(ii)(iv)

DECISION OF THE WORLD HERITAGE COMMITTEE:

Excerpt from the Report of the 23rd Session of the World Heritage Committee

The Committee inscribed the site on the World Heritage List on the basis of criteria (i), (ii), and (iv):

Criterion (i): The Beemster Polder is a masterpiece of creative planning, in which the ideals of antiquity and the Renaissance were applied to the design of a reclaimed landscape.

Criterion (ii): The innovative and intellectually imaginative landscape of the Beemster Polder had a profound and lasting impact on reclamation projects in Europe and beyond.

Criterion (iv): The creation of the Beemster Polder marks a major step forward in the interrelationship between humankind and water at a crucial period of social and economic expansion.

Referring to the particular character of the nominations of the Netherlands, the Observer of the Netherlands informed the Committee that very recently the parliament of the Netherlands had accepted a policy document on the integration of cultural heritage – archaeology, built heritage and cultural landscapes - in national, provincial and local planning policies. World Heritage preservation is explicitly incorporated in this document. The Netherlands would be pleased to share this kind of experience with other States Parties.

BRIEF DESCRIPTIONS

The Beemster Polder, dating from the early 17th century, is the oldest area of reclaimed land in The Netherlands. It has preserved intact its regular landscape of fields, roads, canals, dikes and settlements, laid out in accordance with the principles of classical and Renaissance planning.

1.b State, Province or Region: Province of Noord-Holland

1.d Exact location: 52° 32' N, 4° 55' E

DROOGMAKERIJ DE BEEMSTER
(THE BEEMSTER POLDER)

THE NETHERLANDS

JUNE 1998

CREDITS

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The nomination is presented in the manner as prescribed in paragraph 64 of the *Operational Guidelines for the Implementation of the World Heritage Convention*, UNESCO, Intergovernmental Committee for the Protection of the World Cultural and Natural Heritage, [Paris], WHC-97/2, February 1997, and the *Convention concerning the protection of the World cultural and natural heritage/Format for the nomination of cultural and natural properties for inscription on the World Heritage List*, [Paris], WHC-97/WS/6

INTRODUCTION

In 1995 The Netherlands informed the World Heritage Centre that it was categorising its cultural heritage nominations - relating to the built-up environment and architectonic monuments of exceptional universal significance - for the UNESCO World Heritage List into three themes: The Netherlands - Water Land, the Republic of the Seven United Provinces in the 17th century and the Dutch contribution to the International Movement in architecture at the beginning of this century.

The first three nominations - the "Stelling van Amsterdam" (Defence Line of Amsterdam) (1995), the windmill complex at Kinderdijk-Elshout (1996) and the Wouda-Gemaal (Wouda Pumping Station) at Lemmer (1997) - related to the theme of The Netherlands - Water Land. The nomination of the Beemster polder also falls within this category. At the same time, it must be seen as a nomination within the category of the Republic of the Seven United Provinces in the 17th century.

In many ways the reclamation of the Beemster polder and the development of the historic city centre of Amsterdam, with its unique 17th century ring of canals (nomination of this area for inclusion on the World Heritage List can be expected within a few years) have direct and demonstrable cultural, conceptual and intellectual relationships with each other. The Beemster polder can only be viewed within the context of the economic, cultural and political environment of Amsterdam at the beginning of the 17th century.

The Beemster polder is a unique monument, as is the canal belt of Amsterdam. It is a hydraulic and civil engineering monument of exceptional significance. The creation of De Beemster is particularly the result of an intellectual concept based on theories of the Classics and the Italian Renaissance regarding the 'ideal of the straight line', the 'città ideale' and the discipline of numbers, as worked out by Plato and St. Augustine. The layout of the area also reflects the Vitruvian principles of 'firmitas, utilitas et venustas'. The principles of order, of reason, of mathematics and well-considered planning reign here, implemented on a monumental scale.

The geometrically organised, strictly rational layout and pure composition of the land reclaimed from the water, with its spatial order of interconnected 'green chambers' simultaneously forms a link with other polders created by Dutchmen in many other European countries in later centuries. De Beemster was also the model for reclaimed land and polders (Wieringermeer and Noordoostpolder) created in this century, as part of the Zuiderzee works, whereby The Netherlands converted a large and unpredictable inland sea, the Zuiderzee, into an inland lake, the IJsselmeer.

The Beemster polder is a site as described in Article 1 of the World Heritage Convention. Furthermore, it is a landscape, a "designed landscape, created intentionally by man" as indicated in Article 39 (i) of the Operational Guidelines for the Implementation of the World Heritage Convention.

The momentum of the intellectual, cultural concept that took hold in The Netherlands at the beginning of the 17th century is of exceptional universal significance. The concept spread its image and application across Europe and is consequently part of the European cultural heritage. Town planning views prevailing in the Republic of the Seven United Provinces, which were effectuated in the Beemster polder, were not restricted to old Europe, but were also expanded and applied in the founding of cities in the New World.

The intellectual concept on which De Beemster was founded was both visionary and functional. It was so far ahead of its time that it is still in full use today. Despite subsequent societal changes, the concept has lost none of its currency. The creation, layout and composition of the Beemster polder of the past is still fully usable. The line of history continues here uninterrupted.

The literary image of De Beemster, as worded in 1732, still applies for the attentive audience of today.

"... Let everyone behold with me, with due attention,
the most famous lake with pastures, farmland,
and gardens, which was ever laid out,
De Beemster, which can parade as a queen
In the Northern part of our Commonwealth,
Where many a lord has laid down their estates,
To enjoy this season,
Which in due course will reward him with the fruit of his crops,
From soil of clay and mud"

('Noordhollandsche Arkadia', pp. 143, 144)

"How fine are your fields and pastures,
That throw a cool shade,
How fine your lanes well
planted by a loving hand!
Who would not find peace here,
Among these oaks, elms and lime trees
Which with their multitude of green
Fulfil the heart and eyes!"

('Noordhollandsche Arkadia', p. 157)

Jan Adriaenansz. Leeghwater, one of the people who executed the reclamation of the Beemster, wrote the following about De Beemster in his 'Haarlemmermeerboek' (Haarlemmermeer book) (1643)

"Almighty God has blessed the Beemster with such abundance that it is the largest pleasure garden of Noord-Holland, in pastures, farmland, orchards, houses, gardens, etc. It is said and taken as truth that there is no more joyous and pleasurable road in Holland than the Volgerweg in the Beemster, where all those clean, wonderful houses and orchards are laid out..."

CHAPTER 1. IDENTIFICATION OF THE PROPERTY

1.1. COUNTRY

- The Netherlands

1.2. PROVINCE

- Noord-Holland

1.3. NAME OF THE PROPERTY

- Droogmakerij DE BEEMSTER (THE BEEMSTER POLDER)

1.4. GEOGRAPHICAL LOCATION

- Location:

For an overview of the total structure, please refer to the Topographical map 1:25,000 (sheets 19D, 19E, 19G, edition 1997) (Ill. 7.1.A.29.) and the Aerial View (perpendicular) (1997) (Ill. 7.1.B.1.);

- Coordinates:

(national grid: X=155.000m
Y=463.000m)

119.500-128.500/
502.000-514.000)

- The Beemster polder is situated within a ring canal, the Beemsterringvaart. The boundary of the municipality of Beemster lies in the middle of this canal, as does that of the property to be nominated (Ill. 7.1.A.29). The surface area of the municipality of Beemster is 7,185 hectares.

A 4 to 6 metre high ring-dike runs alongside the Beemsterringvaart at 2 metres on average above Mean Sea Level ("Nieuw Amsterdams Peil" or N.A.P.), with a ring-ditch on the landside of the dike. The dike is called the Oostdijk on the east side, the Westdijk on the west side, the Zuiddijk on the south side and the Noorddijk on the north side. The southern side of the Beemsterringvaart is part of the Noordhollandsch Kanaal, which was dug between 1818 and 1824 and is over 80 kilometres long. The Noordhollandsch Kanaal established a direct shipping link between Amsterdam and the North Sea;

- The municipality of Beemster consists of the following villages and hamlets: Halfweg, Klaterbuurt, Middenbeemster, Noordbeemster, Westbeemster and Zuidoostbeemster. The municipality has 8605 inhabitants;

- The municipality of Beemster is surrounded by the municipalities of

Westerkoggenland, Zeevang, Purmerend, Jisp, Graft-De Rijp and Schermer.
Since 1991 parts of Jisp and Wormer have become part of the municipality of
Beemster;

1.5. LOCAL COUNCIL

- Beemster

CHAPTER 2. JUSTIFICATION

2.1. STATEMENT Of SIGNIFICANCE

De Beemster is a 17th century polder (1607-1613) with a surface area of approximately 5 x 8 kilometres and a ground level of 3.00 metres to 4.80 metres below Mean Sea Level (N.A.P.). Its circumference follows the shores of a drained lake, the Beemster, which used to be linked directly to the former Zuiderzee (now the IJsselmeer).

Ground plan and parcelling in lots according to a rational geometric ground plan with a module of 900 x 900 metres (i.e. 5 x parcel sizes of 180 x 900 metres determined at the time of cultivation). The road system (107 kilometres long) and watercourse system cross each other orthogonally.

The lots have a central axis running north to south, the Middenweg, which in turn is intersected by the Middensloot/Rijperweg running east-west. Six 1,800 x 1,800 metre squares form the rectangular grid of the centre of the polder, measuring the ideal classic measurement ratio of 2:3. The centre is the main town of Middenbeemster. The village of Noordbeemster lies north of Middenbeemster, where Middenweg and Oosthuizerweg intersect. Westbeemster is situated along Jisperweg.

The Beemster is bordered by a circular line (approximately 48.9 kilometres) of ring-dikes and ring-ditches. The reclaimed land is divided into four sections (Bovenpolder, Middenpolder, Arenbergpolder and Kilpolder). The slightly elevated roads and lanes in the open country have been planted with trees. There are farms built in the style of the "bell-jar" farmhouse; some 17th century farms along Middenweg are unique in terms of architecture (Ill. 7.1.B.33, 7.1.B.35).

During the 19th and 20th century, five forts were built along the western, eastern and southern sides of De Beemster: a fort north of Purmerend (1912) (Ill.7.1.B.59), a fort along Nekkerweg (1913) (Ill.7.1.B.58), a fort along Middenweg (1913-1914) (Ill. 7.1.B.57), a fort along Jisperweg (1914) (Ill. 7.1.B.55) and a fort near Spijkerboor (1913) (Ill. 7.1.B.54). They were part of the 'Stelling van Amsterdam' (the national defence line constructed between 1880 and 1920, to protect the country's capital. Since 1996 included on the World Heritage List).

The area was originally drained by means of approximately 40 windmills but these were replaced by two pumping stations (1877 and 1880, later modified, and now replaced) (Ill.7.1.B.44).

Recent changes to the landscape due to the construction of the A7 highway (parallel to Pumerenderweg) are incorporated into the grid of the Beemster layout. The A7 orthogonally intersects the N244/S10 (parallel to Volgerweg) running from Edam/Volendam to Alkmaar.

The reclamation (also called 'impoldering') of 7,000 hectares of land from the large bodies of water of the Beemster between 1607 and 1612 must be seen as a very important and unique moment in the history of land reclamation, in The Netherlands and abroad. The topography and the morphology of the landscape of the north of Noord-Holland, the area to the north of the IJ, in particular, has drastically changed due to the successive reclamation of lakes and ponds.

Land reclamation took place not only in The Netherlands, but also in many other European countries and further afield. Primarily 17th century Dutch engineers, defence engineers and dike builders had the knowledge and skill to reclaim land, design defences, design new cities or expansions of cities and establish hydraulic engineering works throughout numerous countries in Europe. Examples: in England, Holland Fen, the marshland in the Fen District Bedford Level (1629) (300,000 acres), reclaimed by Cornelius Vermuyden (b. 1590) (he wrote 'Discours touching the draining of the Great Fennes', ca. 1655); Dagenham (1621); Royal Park in Windsor (1621) and Hatfield Chase (1626-1629) (75,000 acres), also reclaimed by Vermuyden. They worked in Germany and Denmark (Amager, 1600; the diking in of the Bredstedt Vaerk, the marsh in Bredstedt, based on plans by Johan Sems, 1619; Sems may possibly have been involved

in the expansion of the city of Bredstedt. In 1617/1619 Sems prepared a design for Christianshavn by order of the Danish king.) Jan Claesz. Rolwagen diked in six polders with a surface area of approximately 2,000 hectares, by order of the Duke of Schleswig-Holstein, (1610-1613), in the Vistula delta in Sweden (Gothenburg), founded in 1603 by Karl IX, designed by Hans Fleming and Peter Nicolaes de Kempe, destroyed in 1611, presumably rebuilt by Dutch engineers, in view of the formal affiliation with the urban development layout of Christianhavn (designed by Johan Sems [engineer, surveyor] [1616/1617]), and with the plan for Friedrichstadt in Schleswig-Holstein); in France, e.g., in Marais Vernier (1626) or in Petite Flandre (1607-1639) near Rochefort or in the Marseillette (1622-1625) to the north-east of Carcassone. They also worked in Italy on projects including the Pontine Marshes (the 'Dic Maestro' Gilles van den Houten, later succeeded by Nicolaas Cornelis de Wit, by Nicolaas van der Pellen and Cornelis Jansz. Meyer (who wrote 'Del modo di seccare le Paludi Pontine'), (1622-1623, 1637, 1659-1675, 1707). They also carried out work in various places in Russia, albeit mainly after 1700.

The strict geometric layout of the reclaimed land in the Beemster polder is totally in line with the plan-based approach to the ideal city layout, known, studied and applied in Europe since the theories of Greek antiquity. This layout also encompasses the Vitruvian principles of 'firmitas, utilitas et venustas'. The principles of order, of rationality, of mathematic principles and of well-considered planning are implemented here on a monumental scale. If in urban development much of the theoretical classical concepts were in practice restricted to considerations in treatises, these concepts were directly translated and applied in De Beemster. The concept of the 'ideal city', based on a geometric, rational basis became reality in the Beemster grid.

The Rijperweg and Middenweg, intersect in Middenbeemster. The Hervormde Kerk (Reformed Church) was built in 1621-1623 at this intersection (Ill. 7.1.B.14/15). These intersecting roads truly reflect the classical notion of 'cardo et decumanus'. By placing the church at the intersection, the planners aligned with the Christian symbolism as it had been expressed ever since the Middle Ages, based on the belief that in their day Jerusalem and Rome had also been divided into four quarters, which were created by the intersection of roads.

The Beemster polder is the realisation, the materialisation, of classical literary-philosophical and architectural treatises, of utopian idealistic perceptions of the 'città ideale'. Not only did the 'città ideale' have an ideal spatial order, it was also a reflection of an ideal social order.

As a site and cultural landscape, De Beemster is an intellectual concept which was given form as a designed landscape, an architectonic landscape. The natural landscape and the landscape designed by man, the urban and the rural, the natural and the cultural have merged in De Beemster. This polder was designed in the 17th century as a plantation for practical use and for pleasure, for 'otium et negotium', for spending leisure time in the fresh country air and for working in the sweat of one's face.

The slightly elevated roads offer a wide, impressive view of the surrounding area, a concept previously advanced by Palladio for the roads in the Italian Po plain. De Beemster with its rectangular road layout reflects what Andrea Palladio (1508-1580) described in the third book of his 'I quattro libri dell' architettura' (1570) as follows (Chapter I, Of roads):

'The roads ought to be short, commodius, safe, delightful and beautiful; they will be short and commodius if made in a strait line, and if they be made ample, that so the carts and the cattle meeting, do not impede one another.....The conveniency they afford, and besides being in them able to see at a great distance, and besides to discover a good deal of the country,

whereby great part of the fatigue is alleviated, and our minds (having always a new prospect before our eyes) find great satisfaction and delight'
(Placzek, Andrea Palladio).

Speaking about roads outside of cities, Palladio wrote in that same book (Chap. III, Of the ways without the city) that,

'The ways without the city ought to be made ample, commodius, having trees on either side, by which travellers may be defended from the scorching heats of the sun, and their eyes receive some recreation from the verdure'
(Placzek, Palladio).

The spatial and orderly orthogonal layout and organisation of parcels, roads and ditches has been maintained up to the present time and determines the harmony and proportion of the spatial picture. The 'interior' of the polder, with its set-up of 'green chambers' surrounded by trees determines the characteristic and aesthetics of the layout.

From the 16th century until well into the 18th century, the 'ideal city' was based on the chessboard pattern. Circle-shaped or multi-cornered radial city designs as laid down in manuals on architecture and town planning since the middle of the 16th century, were replaced by the chessboard pattern (Taverne, 'In 't land van belofte...', p. 31). These ideal-typical views regarding the ideal city, which were later adopted in The Netherlands and 'translated' in the layout of the Amsterdam canal belt after 1613, in De Beemster and in the ground plan of the Utrecht canals based on the plan of Hendrick Moreelse, were introduced by Italian defence engineers and other engineers in the service of the House of Habsburg.

Around 1600 in The Netherlands itself, Simon Stevin (1548-1620) worked as a theoretician on, inter alia, town planning (*Vande oirdeningh der Steden*, written prior to 1594 and later published by his son Hendrik Stevin, 1649). The work of Stevin forms a direct link in the transfer of the Italian architecture theories to the Northern Netherlands especially and from there to other countries, in particular Germany, Denmark and Sweden. In his treatise Stevin was in turn strongly led by the theoretical writing of the Italian Pietro Cataneo, 'I quattro primi libri di architettura' (Venice, 1554). In his treatise on the shape of cities Stevin makes an interesting point when he writes that in his opinion a four-sided rectangle set out on a flat piece of land is the most suitable plan for a city, so that with regard to the spatial layout, suitable rectangular construction blocks, lots, houses, courtyards, markets and open spaces are created which cannot be achieved in any other way. The question arises as to whether Stevin derived this view of the 'città ideale' from the Polybius drawings of reconstructed Roman army camps.

Vitruvius (b. 84 BC) and Alberti (1404-1472) wrote about the ideally balanced layout of streets and squares with regard to function and place. Numbers (*numerus*), dimensions (*finitio*) and order (*collocatio*) played distinctive roles in the architecture of Alberti. Preferred numbers were 6 and 10 (the length/width and length/girth ratio of man). Graphically these numbers can be 'translated' into (square) grids. De Beemster reflects these theoretical considerations of Alberti.

To some extent the ideal plan of 1612 of De Beemster reminds one of the plan for the ideal city that Polybius set out, based on the plan of a Roman army camp. In his plans, as in De Beemster, we see a grid that consists of squares. The square as shape and symbol was a special theme for Scamozzi, a particularly well-loved and popular theoretician in The Netherlands of the 17th century. The square in the symbolic sense, because metaphorical meaning was considered the epitome of stability and cohesion. With these features the square returns to the principles of

'utilitas' (the polder as farmland), 'firmitas' (the square, the geometric pattern of lanes, roads, canals, plots, of strict perspective) and 'venustas' (the polder which offers spatial beauty through its layout of spaces enclosed by trees, the 'green chambers').

A second source of inspiration for the modern views of the 16th century on town planning and landscape architecture *avant-la-lettre* was the more mathematical approach. This approach particularly originated from the Leidse Academie (Leiden Academy), where the direction of the 'Duytsche Mathematicque' was taught from 1600 onward to future constructional engineers of fortresses and surveyors by professors Simon Fransz. van Merwen and the mathematician Ludolf van Ceulen, succeeded after his death in 1610 by Franciscus van Schooten Sr. They taught the 'ideal of the straight line', which was applied in urban development, garden art and the 'landscape architecture' of the time. Engineers primarily designed the fortifications and other defence structures. Land surveyors mapped the grounds to be expropriated, drew up the street plans, plotted the lots, established the layout of streets, squares and canals. Following the principles of mathematics, derived from Nature, the Classics (like Plato) and the Church Fathers (St. Augustine), this training focused on acquiring knowledge of geometry, arithmetic and proportion. It has been stated that "the increasing reputation of mathematics in the practice of public life was inevitably accompanied by the reinforcement of the prestige and status of military engineers. In no other country of the Europe of that time was this development stronger than in the Netherlands" (Taverne, 'In 't land van belofte...', p. 50). The primary purpose of the Academy was to train engineers who wanted to serve the country. This training had a great influence, domestically and abroad, on concepts of architecture and fortress building until well into the 17th century.

The Academy also attracted people interested in learning about fortress building and town planning from neighbouring countries and from Scandinavia, where they were encouraged by King Christian IV of Denmark and King Gustav II Adolf of Sweden and his successor Christina. At the time of Gustav II Adolf military staff was educated in defence engineering at the university of Prins Maurits in the Northern Netherlands. Gustav II Adolf himself was in direct contact with Simon Stevin, the most important advisor to Prince Maurits in this field.

A common theme in the 17th century was how art could establish order, use and beauty in and to nature. Or, as it was put at the time, art makes everything orderly. It is art that makes it possible to visualise the underlying order of nature, the harmony and regularity of nature. Order and harmony in nature are achieved by applying the laws of symmetry. The geometry of rectangles, circles and squares determined the gardening and landscape art of the 17th century.

The square was used as the basic principle for order in De Beemster. The six squares that determine the spatial order of De Beemster are grouped from the intersection of Middenweg and Middensloot (Ill. 7.1.A.8). Together these six squares form a rectangle with the ideal ratio of 2:3. Originally thirteen open spaces, square plazas, were projected for the intersections of the registered grid of the rectangle. Settlements were intended for five of them, the others were to be market squares. The square in Middenbeemster, the core of the spatial composition of the geometric rectangle and the heart of the polder, was actually realised.

The central rectangular space in Middenbeemster brings to mind what Palladio wrote about the 'Piazze, and of the edifices that are made round them' (3rd book, Chp. xvi):

'Besides the streets,it is necessary that in cities, according to their bigness, there should be more or fewer piazze comparted, in which people assemble to contract for things useful and necessary for their wants: and as they are applied to different uses, so a proper and convenient

place ought to be given to each. Those ample places are left in cities, besides the said conveniency, that there the people assemble to walk, to discourse, and bargain in; they afford also a great ornament, when at the head of a street, a beautiful and spacious place is found, from which the prospect of some beautiful fabric is seen, and especially of some temple...' (Placzek, Andrea Palladio)

De Beemster received substantial attention from abroad. Cosimo de Medici (1642-1723), governor of Tuscany, visited this polder in 1669. William Temple too travelled along De Beemster, in 1673. His description reads:

'the Bemster, being now the richest part of soil of the Province lying upon a dead flat, divided with Canals, and the ways through it distinguisht with rages of Trees, which make the pleasantest of Summer-landship of any country I have seen of that sort' (Van der Sluis, p. 100).

In 1696 William Mountague wrote "The dutch are great improvers of land, and planters of trees, of ornament as well as profit" (William Mountague, *The delights of Holland*, no pl., 1969).

De Beemster as a work of landscape art, laid out as a technical ideal shape, can be 'read' and 'experienced' from the ring-dike which encircles it at an average height of 2 metres above Mean Sea Level, as if looking down from a balcony. The lanes with their vegetation always offer a view of the horizon. The vegetation functions as a screen, helping to establish and emphasise the three-dimensional aspect of the spaces. In essence the polder is a large bowl inside the ring-dike, which is divided into artificially determined compartments, the 'green chambers' resulting in continual spatial tension and variation. The farms, with their pyramid-shaped roofs, act as silhouettes and abstract spatial features.

The road network runs from north to south and from east to west. Greenery (trees alongside roads, in gardens, orchards) and buildings run alongside the roads - originally only farms, later on residences for farm-workers and gardeners. There were no buildings behind the farms. The polder is characterised by its openness.

The roadside greenery consists of ashes, poplars, elms and here and there fruit trees. The village silhouettes form a strong visual spatial element.

It is of exceptional cultural-historic significance that at the beginning of the 17th century mathematical principles were followed when expanding the cities and, in the case of De Beemster, when reclaiming land. De Beemster, in turn, with its utilitarian and architectonic landscape, was the model for the reclamation of the Wieringmeerpolder, a polder in the province of Noord-Holland, situated in the former Zuiderzee (now the IJsselmeer), diked in from 1927 onward (20,000 hectares of new land reclaimed in 1930). This polder in turn was the example for the creation of the Noordoostpolder (which The Netherlands has included on the Tentative List).

If one looks at the 17th century plan-based and geometric city expansions of Amsterdam, one can see a remarkable parallel between the reclamation of De Beemster and the expansion of Amsterdam. Amsterdam originally grew in accordance with the allotments, which correlated with the existing development patterns, which had previously been drawn up when the peat was extracted. When the city underwent substantial changes at the end of the 16th century and the beginning of the 17th century as a result of increases in scale and far-reaching changes, particularly in an economic sense, a planned expansion was necessary. In 1609 Amsterdam received a patent from the States of Holland to expropriate the houses which had been built

outside of the existing rampart in order to expand the city. 3,330 houses were expropriated. The expansion was finally able to start in 1613. A number of people were involved in this process, the same people who had also played a direct role in establishing the Beemster polder. At that time work started on two new canals, the Keizersgracht and the Prinsengracht (1615 and 1614 respectively) now part of the historic canal belt of the Herengracht (which will also be nominated for inclusion on the World Heritage List). This expansion did not follow the earlier allotment pattern. A geometric mathematical pattern was used with a hierarchical division with lots, streets and side streets. Precise specifications were drawn up as to the width and depth of the grounds alongside the main canals, with broad quays, wider than usual. Special provisions were also drawn up to control the quality of the architecture of the planned houses. The side streets between the canals were interconnected with the street pattern of the heart of the late Medieval city, so that the city in its entirety was more readily accessible by direct connections due to its radial layout. The expansion of 1613 extended to Heiligeweg, the later expansions of 1655 and 1662 extended from that point eastward. These expansions gave Amsterdam the unique historical map that it acquired after 1662 through the town planning of the land surveyor Cornelis Danckertsz. de Jonge, who designed the streets and canals with the city architect Daniël Stalpaert. In later years this plan-based approach was the model for town planning and expansions of cities such as Haarlem and Utrecht.

The influence of Italian renaissance architecture was explicit in the architecture of the Amsterdam city expansion. Albeit not in an academic sense, this influence was incorporated in what was called the Dutch Renaissance, which was followed in the 1630s by Dutch Classicism, which was also inspired by Italy. Architects from Amsterdam also worked outside the city. The Amsterdam architect Hendrick de Keyser (1565-1621), designer of the Zuiderkerk (1603) and the Westerkerk (1631) in Amsterdam designed the Reformed Church in Middenbeemster. Philip Vingboons (1607-1678) built the Cromhout houses along the Herengracht in 1660, a group of four monumental residential homes. In his 'Architectura moderna', published in 1631, the Haarlem painter and master builder Salomon de Bray considered Hendrick de Keyser a pioneer as an architect, who had been able to let go of the Medieval world of architecture.

The exceptional picture arose, that at the beginning of the 17th century new town planning was created for acquiring new land or for founding country estates, such as in the reclaimed area of 's-Graveland and alongside rivers such as the Vecht and the Amstel, whereby a social elite and intellectual elite of regents, statesmen and merchants set the course, rather than plans and initiatives of engineers and master builders.

In the case of Amsterdam there was no comprehensive town planning. Upon further study it has become apparent that a committee came up with proposals for the mathematical ground plan of the canals, which had nothing to do with the existing structure of the site. This also applies for the layout of De Beemster.

2.2. COMPARISON WITH SIMILAR PROPERTIES

Due to the fast-growing population in Holland, a process was started up during the 17th century, mainly in the present-day provinces of Noord-Holland and Zuid-Holland, to drain large expanses of water (lakes) created in the Middle Ages. Approximately 31 reclamation projects were started between 1630 and 1631, the main ones being Wogmeer (1610), the Beemster (1607-1613), Purmer (1622) (Ill. 7.1.B.11), Wormer (1626) (Ill. 7.1.B.12), Watergraafsmeer (1630) and Heerhugowaard (1630) (Ill. 7.1.B.12).

The 17th century Beemster polder was taken as an example for this as well as for the 20th century reclamation projects which were a part of the Zuiderzee/IJsselmeer project (Wieringermeer and Noordoostpolder).

De Beemster, in comparison with other polders created in the 17th century but also with those developed in later centuries, may be considered a unique example within the series of polders reclaimed in previous centuries. It has shown the history of the continuous struggle against the water and the development of the landscape of Holland into an agricultural landscape up to the present.

For a comparison with other impoldering and hydraulic engineering projects carried out elsewhere by the Dutch, the ones in the English Holland district, in Sweden, Denmark, Germany, France and in the lower reaches of the Po and in the Pontine marshes can be mentioned as examples; however they do not have anywhere near the same importance as De Beemster.

2.3. INDICATION AS TO AUTHENTICITY AND INTEGRITY

The intellectual and architectonic concept on which the spatial layout of the Beemster polder was based has remained essentially unchanged since it was created. De Beemster has retained its orthogonal, geometric and rational layout.

The pattern of the roads with trees planted alongside them, the ground plan for the watercourses and belt canal with ring-dike, the dimensions of the plots, the scale of construction, the location of the farms, the historical structure of the settlements and the functional, because agrarian use of this 17th century polder has continued to be the determinative features.

Virtually everywhere, one can feel the typical spatial visual perception of the absolute scope of the polder which it has possessed since its creation. The traditional use of brick and wood still applies.

The historic centre of Middenbeemster was designated a Conservation Area on 26 November 1985, in accordance with the Dutch Monuments and Historic Buildings Act 1988 (Article 35) (Appendices 8.2.). This designation was mainly justified by the systematic layout of this 17th century cruciform village (established 1608-1612), and the historical buildings which still exist (e.g., the Reformed Church (1618-1623) and the former Town Hall (1826), both protected as monuments).

Many monuments (farms, forts and houses) are protected in De Beemster by the Province of Noord-Holland or by the State .

With regard to the environmental policy of the De Beemster region, the Streekplan Waterland (1991) (Province of Noord-Holland's Marshland Regional Plan (1991)) stipulates:

'maintaining and where necessary reinforcing the present character of regions of natural, scenic and cultural-historical importance'.

It has also been noted that the historic land division pattern is of major importance. De Beemster is included in the Nationaal Landschap Centraal Noord-Holland (National Landscape of Central Noord-Holland).

2.4. CRITERIA UNDER WHICH INSCRIPTION IS PROPOSED (AND JUSTIFICATION FOR INSCRIPTION UNDER THESE CRITERIA)

Justification of 'outstanding universal value':

Criteria:

24 (a) (i), (ii), (iv), (vi):

- De Beemster, a clearly defined, systematically laid out reclaimed land, a complex designed and created as a cultural landscape by man, is a site of outstanding universal value from the point of view of history, art, (landscape) architecture, science and academia as well as being a monument in its own right, representing a unique masterpiece of human creative genius (24.(a)(i));

- It is also an outstanding example of an architectural ensemble and physical environment that illustrates a significant stage in the history of land colonisation in The Netherlands and abroad since the 17th century. The historic physical environment of The Netherlands that has been brought to life and developed through ever-improved developments in civil water management techniques. A man-made landscape as a site in a river delta with large areas consisting of fenlands (24.(a).(ii));

- De Beemster was drained, cultivated and colonised - a deliberate intervention in the undeveloped region - at the same time as the city of Amsterdam was first expanded during the 17th century. This expansion was supported by the nouveau riches, by merchants and regents of Amsterdam and was carried out by surveyors, city architects and administrators. They were involved in the expansion of Amsterdam in 1613 as well as in De Beemster polder. At the time, town planning principles and architectural principles were applied that even today show a close relationship to the classic and Italian theories and treatises concerning ideas about radial cities, about the 'città ideale', about chessboard patterns or laying straight, safe, paved and planted roads (Vitruvius/Palladio) (24.(a).(iv));

- There were two main reasons for creating De Beemster. Firstly, to control recurring flooding and reclaim new agricultural land, but also to find a safe way to invest funds. It had been determined as early as 1611 that the region should also realise the pastoral classical nature and agriculture model, because of its spatial design (with lanes, green compartments ('chambers'), pleasure gardens for the wealthy merchants of Amsterdam and plantations)

De Beemster with its rational geometric layout was designed as an architectural landscape. The theory of 17th century urban development and agricultural engineering for reclaiming land was based on the 'ideal of the straight line', in addition to falling back on old-fashioned principles such as (geometric) structure, planning and linear monumentality, symmetry, harmony and order. A landscape in which the square, the basic pattern from analogy of the theories of Scamozzi, induces balance and diffusion (24.(a).(vi));

- The cultural-historical importance of De Beemster polder is determined in the preserved authenticity of the design and setting and by its distinctive character in comparison with other polders (24.(b)(i)).

De Beemster satisfies the description of the term 'site' as set out in the Operational Guidelines (WHC 91/2, February 1997, par. 23).

CHAPTER 3. DESCRIPTION

3.1. DESCRIPTION OF THE PROPERTY

The Beemster polder is situated to the north of Amsterdam and to the west of Purmerend. It is the result of hydraulic and civil engineering works. The initiative to drain the water of the Beemster was taken by a number of wealthy regents and merchants from Amsterdam and a number of high-ranking civil servants in The Hague. In total there were 123 investors, who received a return of 17% on their investment upon completion of the polder in 1612.

The Beemster

The part of Noord-Holland situated above the IJ, is the Noorderkwartier, also called the 'Quarter of the northern land'. At the end of the 13th century the peat area of the Noorderkwartier consisted of a chain of peat bogs diked in by means of ring-dikes, protected against the sea on the western side by the dunes of Kennemerland. The Zeevang to the east of De Beemster and the Waterlant and Zaanstreek to the south were encircled by ring-dikes. In between there were stretches of water, such as the Beemster and the Schermer and the wide inlet, the Ye.

At high tide the water of the Zuiderzee flowed freely to the Beemster via the Korsloot. The Beemster in turn flowed into the Purmer via the Weere, and into the Schermer through the Zwet at Schermerhoorn and into the Starnmeer via the Spijkerboor (Borger/Bruines, pp. 23, 24). It does seem that at some point the Beemster was closed off on the north-eastern side. According to archive data this was the case in 1343/1344. The Beemster no longer had an opening to the Zuiderzee at that point.

Centuries of deposition and erosion (starting several thousand years before Christ), formed a stratum of peat layers along the North Sea behind the coast because the sea level rose less quickly than it had hitherto, which offered favourable conditions for substantial peat production. The excess water flowed away through the lower sections of this peat stratum and through naturally formed peat watercourses. The Schermer and the Beemster were such streams ('Bamestra', first mentioned in 1083). Bank erosion and flooding enlarged the watercourses. It is assumed that the peat watercourse of the Beemster ran more or less north-east to south-west and flowed into the IJ via the Zaan (the IJ was dammed off from the Zuiderzee in 1872).

It is also assumed that the former Beemstermeer was created by the gradual overflow and by low-lying peat land crumbling away after the Zuiderzee had found a way through to this area. The current size of the Beemster polder indicates the size of this body of water at the time. The Zuiderzee itself was created through the centuries. Through floods and storms the (Wadden) sea managed to force its way south. It finally merged with the fresh water of the Almere, which was situated in the heart of the country. This is how the Almere transformed into the Zuiderzee in the 12th century.

The Beemstermeer was once the largest open water of the Noorderkwartier of The Netherlands. It formed a link for the fairways through Noord-Holland. Research by means of aerial photography of the Medieval allotments in the area which was later reclaimed and of archaeological discoveries which were made south of Oosterhuizerweg, give credence to the belief that the Beemster became a lake around 1100.

The location and shape of the original lake and its course in a north-easterly direction show that it was primarily the prevailing south-westerly wind that determined the direction and shape of the water. The surface area of the Beemster is 8 x 5 kilometres, with a more or less straight edge on the western and southern sides contrasting with the undulating northern and eastern sides.

The natural shape of the water of the Beemster must be seen as that of the delta-shaped estuary of a peat watercourse, in this case the Bamestra. The promontories on the northern side make it clear that the water of the watercourse once flowed in two directions (north and east).

The reclamation of the Beemster

In the 16th century (the 60s and 70s) there were already plans to drain the Beemster. In 1601 the States of Holland and West-Friesland discussed the desirability of diking in the Beemstermeer.

In 1607 a patent was granted by the States of Holland to sixteen people, gathered together in the 'Beemstercompagnie', including people from Amsterdam, who provided the requisite capital. The patent speaks of "to work such, that it is possible to make Water into Land".

The investors were primarily Amsterdam merchants and regents who had interests in the East India Company, and high-ranking civil servants of The Hague, e.g. those of the 'Hof van Holland' (Court of Holland) or the 'Hoge Raad' (High Court of Holland). The most important initiators for having more than 7,000 hectares of the Beemster drained were the rich merchant Dirck van Oss (ca. 1556-1615) - one of the founders and administrator of the East India Company (EIC) - and his brother Hendrick van Oss, the mayor of Amsterdam, together with a small group of merchants and regents. The 'Beemstercompagnie' group also included Jacob Poppen (1576-1624), the governor of the EIC, mayor of Amsterdam and trading partner of Dirck van Oss, Jan Claesz. Croock, goldsmith and shareholder of the EIC, Barthold Cromhout (1550-1624), merchant and mayor of Amsterdam, Nicolaas Cromhout (1561-1641), council member and president of the Hof van Holland, Frans Hendriksz. Oetgens (1558-1625), Rombout Hoogerbeets (1562-1625), member of the Hoge Raad, Adriaan Teding van Berkhout (1571-1620), Grand Pensionary of Monnickendam, later counsel to the Hof van Holland, shareholder in the EIC, Jan ten Grootenhuys (1573-1646), Amsterdam merchant, Arent ten Grootenhuys (1570-1615), Amsterdam merchant, Pieter Boom (d. 1609), Jan Basius, councillor and treasurer of Holland, Jan Buijes, counsel to the Hof van Holland, Elias van Oldenbarnevelt (ca. 1563-1612), merchant and Grand Pensionary of Rotterdam, Jan van Santen, member of the Hoge Raad. The members of the 'Beemstercompagnie' immediately appointed themselves as members of the polder board ("ingelanden") of the Beemster upon reclamation.

In preparation of the work, surveyor Pieter Cornelisz. Cort of Alkmaar was instructed to draw up a map of the Beemster and environs (Ill. 7.1.A.2.). This map was necessary in order to determine what the possible consequences of diking in the Beemster could be, because the Beemster was part of the Schermerboezem (Schermer reservoir), which in turn discharged water. It was a prerequisite of the Hoogheemraadschap van de Uitwaterende Sluizen (district water board for outlet sluices) (the reservoir, with an initial surface area of 40,000 hectares, was reduced to approximately 10,500 hectares due to the many 17th century drainage projects [Borger/Bruines, p. 156, Note 26]). This type of map was also needed to establish how the draining of the Beemster itself was to be arranged. A significant issue for the Hoogheemraadschap van de Uitwaterende Sluizen in Kennermerland and West-Friesland was whether a diked-in Beemster, followed by several large diking projects for other lakes, which also

served as outlets, would substantially limit the draining of the marshland. On the other hand, the lakes themselves caused flooding and as a result of storms the shores were eroding, in turn enlarging the lakes.

The map was drawn up with the help of the 'triangulation' method, a method which works as follows. First a distance is measured between two points on the bank. An astrolabe is used to measure the distance between these points and a point on the opposite bank. Because the baseline and the size of both corners of the concomitant triangle are known, the length of the other sides of the triangle can be calculated.

Originally the Hoogheemraadschap went to the States of Holland to prevent the diking in of the Beemster; they did not succeed in this. One condition that the Hoogheemraadschap set for the diking engineers of the Beemster was to dig a drainage canal to the Zuiderzee (now the IJsselmeer) for improved drainage of the outlet water.

After Cort's death (presumably in 1608), he was succeeded by Lucas Jansz. Sinck, land surveyor in Amsterdam. It was he who laid out the first dike section for the Beemster polder (April 1608). Sinck drew up the plan together with Jan Pietersz. Dou (1573-1635) and Jan Adriaansz. Leeghwater (1575-1650).

In 1608 the dike section between Purmerend and Neck was sub-contracted, as was the drainage canal to the Zuiderzee (Ill. 7.1..B 46-51).

Areas such as those of the large lakes were often measured during the winter, across the ice. At the beginning of 1611 the chief members of the polder board decided to measure the Beemster over ice in order to draw up a 'perfect mappe'. Six land surveyors were instructed to draw up the maps. Such a map was necessary in order to determine the layout of the polder. Dou made measurements with an instrument he had developed himself, an angle measuring instrument, called the 'Dutch circle' (*Tractaet vant maken ende gebruycken eens nieu gheordonneerden mathematischen instruments*. Amsterdam, [Willem Jansz.], 1612). Dou had previously written *Pracktjck des landmetens* (1600) together with Johan Sems, who worked abroad.

It was decided in 1611 that Sinck would draw in the roads and canals. In that same year a start was made on laying out the canals and roads to prepare for the allotment.

The weather often played a role, particularly in digging the drainage ditch. In 1610 the dikes burst as a result of the Waterlandse sea wall giving way. The digging work for the ring-ditch had to be partly redone. The greater part of the Beemster was drained in the autumn of 1611. In 1611 a start could be made on digging canals and laying a number of roads. In that year the chief members of the polder board met to discuss the block layout for the first time,

"...on the mappe a division will be made of four roads length wise and four roads broadways, all being at an equal distance from each other and in squares ... and as regards the water outlets or ditches, five in the length and five in the breadth, in between the roads or in between the dikes..."

(Van der Sluis, p. 59).

Within the allotments the owners would be allowed to dig as many canals and ditches as they saw fit. The blocks between the roads were to have a surface area of 400 morgen, divided by canals into four blocks of 100 morgen (1 morgen = approx. 0.85 hectares/2 acres). It was finally decided to divide the land into five allotments. When the land was allotted it was decided to offer

the allotments in 'packages'. The value of each 'package' as compared to the others would be the same, as poor soil was compensated by good.

In 1612 the land surveyor Lucas Jansz. Sinck drew up a plan which set out the various allotment layouts within the allotment modules. The lots were then laid out in the recently reclaimed land.

Because of the differences in the soil relief it was necessary to set up different polder datum lines for proper drainage. The higher lying land of the Bovenpolder is situated to the south; the somewhat lower lying land of the Middenpolder lies to the west, while the Arenbergerpolder and Kilpolder, which lie even lower, are situated to the east and north. The boundaries of these polders can be recognised by low embankments, which in turn follow the geometric pattern of the foundation. Within these four polders the direction of the lots is determined by where the excess water is discharged into the ring-canal. The work, encompassing the ring-ditch with a length of some 48.9 kilometres, the building of the dike on firm soil, and the outlets, was completed in 1612. The two sluices are situated at Lutje Schardam (Ill. 7.1.B.46-51). The "wapenstein" (hewn stone) of the former Waterschap De Beemster (Beemster Water Board) (Ill. 7.1.B.47) lies in the Hornsluis. The wooden sluice which was fitted in 1607/8 to compensate for the reduction of the reservoir following the draining of the Beemster was replaced in 1735 by the stone sluice.

According to Lambert there was:

"A regular pattern of subsidiary dikes, some carrying roads and planted with fruit trees, divided the land into sections for drainage, while a network of ditches and minor canals carried the excess waters to the windmills which discharged into the encircling canal."
(p. 216)

Shovels and pickaxes were used; reclamation was realised by means of 42 windmills. The first windmills were built by various windmill builders, including Jan Adriaensz. Leeghwater (Ill. 7.1.B.4). The reclamation of the Beemster ultimately took place with the construction of fifteen windmill networks. The foundations for sluices and windmills were sunk with manual pile driving installations operated by some 30 to 40 people.

It is not really certain how many windmills were finally used in the reclamation of the Beemster. The many maps which were drawn up of De Beemster show different numbers (see 7.1 Maps and Plans; De Vries, p. 3). The Beemster polder is cartographically well known. Many maps were made on the instructions of the Dijkgraaf (dike board) and Hoogheemraden (District Water Boards). Particularly in the 17th century Amsterdam publishers included maps of De Beemster in their atlases, which were distributed throughout the world.

It is known that at the end of 1607 the construction of 16 windmills was established (10 new windmills, 6 windmills no more than 10 to 12 years old). Soon thereafter there were plans for the construction of another five windmills. According to the data there were supposed to have been a total of 26 windmills in 1609. The map of Balthasar Floris van Berckenrode, measured in 1640, shows 51 windmills with their waterwheels (see Ill. 7.1.A.10.1-4.). The windmills were set up in networks of two or four (Ill.7.1.B.5.).

Further study of map material and archive data shows that during the centuries that windmills drained the land, there were fourteen windmill networks. The number of windmills in a given network could vary over time. One of the most impressive networks was supposed to have been

at Kruisoord, where there were once 21 windmills. The former site of a number of these windmills can still be seen, as can the course of the watercourses (the outlets). At the beginning of the 19th century the water wheels of the windmills started being replaced by Archimedean screws to increase the draining capacity.

The artist Hans Belleman visually and symbolically represented the former windmill drainage. He sank parts of windmill vanes into the ground at five locations where windmills once did their work.

It was presumably one of the chief members of the polder board, Dirck van Oss, who devised a layout of five roads lengthwise and six roads across the width, and four drainage canals lengthwise and five across the width, with the help of the land surveyors Sinck and Gerrit Dirksz. Langedijk (ca. 1561 - 1623). The layout was based on squares.

The designer of the layout of De Beemster is unknown. In the 17th century it was common to leave this up to the governing boards of the polders.

In Article XV of the Allotment Conditions of 1613 it was determined that,

"..five roads in the length and five roads cross-ways will be laid in the Beemster ... a drainage canal will be laid between each road ... in such proportion and distance to each other, that the formation shall be square ..., wherein one end of the lot will touch upon the road and the other end will touch upon one of the ... drainage canals..."
(Bouman, p. 290)

The basic dimension of the allotments consists of an oblong lot of 180 x 900 metres. The short sides of the lots are connected by a drainage canal and an access road. The surface area of a standard lot was 20 morgen. Five such lots formed a unit, a module of 900 x 900 metres; four of these units in turn formed a large square of four hundred morgen. The direction of the six squares of 900 x 900 metres corresponded as much as possible with the original direction of the former shorelines of the lake. This was set up in this manner so as to prevent being left with as few unusable lots along the shoreline as possible. To the south, west and east side the size of the allotments was reduced on the polder side. There are narrow lots in the Kilpolder, large lots alongside the Volgerweg and (very) small lots near Purmerend (intended for gardeners).

The Middenweg, running from north to south, is the axis of the even section of the six squares situated in the heart of the polder. This road runs along the diameter and virtually over the longest linear measurement of the Beemster. The crossroads of Middenweg and Rijperweg/Middensloot is not orientated towards roads situated directly outside the polder. It was laid out in this manner so as to achieve the greatest possible area for rational division into six squares. In the area outside of the central rectangular area, five roads were shifted vis-à-vis the system in order to align with the existing roads of the adjacent old land. Three roads were directed to the church towers of Purmerend, Oosthuizen and Mijzen, while the two others connected with existing roads.

The heart of the polder, with its six modules, forms an even geometric grid. The layout of the allotments laid out between the ring-dike and these modules depends on the soil relief and the spatial situation at the actual site. These lots too had a surface area of 20 morgen. With their varying widths and lengths, the lots consequently reflect the course of the former shorelines. On the southside the lots have a maximum length at the shorelines, while the length is minimal on the northern side. When a number of roads, such as the Purmerenderweg and the Zuiderweg,

were laid, care was taken that the shortest lots alongside the ring-dike were divided as equally as possible into two sections.

The reclamation of the Beemster included both grounds which were governed by the Count of Holland (6700 morgen) and the Arenberg land (2300 morgen). The latter was land which was forfeited in 1600 and accrued to the States of Holland. By granting exemption from various taxes up to twenty or twenty-five years after the land was reclaimed, the States of Holland contributed financially to the reclamation of the Beemster. The price per morgen of land - approximately 1 hectare - was NLG 27. The lands were distributed by drawing lots. On average the owners had 100-250 morgen of count-owned land and 65-200 morgen of Arenberg land. The aforementioned Dirck van Oss received 900 morgen of count's land and 250 morgen of Arenberg land.

The polder finally became a reality on 19 May 1612. In August 1612 the lands were allotted. The bye-law of 1616 includes conditions on 'plants and trees'. This induced the creation of a veritable ideal landscape from 1620 onward by planting the lanes with trees. First only the northern and western side of the roads were planted, so that the sun could dry the roads which were still wet. Originally only alders and willows were planted, replaced by elms in 1680, which in turn were replaced in the 19th century by ashes. These tree-lined lanes encircle and form as it were the 'green chambers' inside the circle. The diminishing perspective of the lanes creates a visual tunnel effect, emphasising the effect of the horizon.

In the 17th century a new type of map was created, the polder map. These maps were both functional and representative. The lot numbers were recorded on the maps, on the basis of which the taxes could be levied and the administration could be carried out for such things as land transactions. As regards the representative character, these maps also gave district water boards, the governors of the polder and the polder prestige. These maps also gave the mapped area status and prestige.

De Beemster in maps

D. de Vries has provided an overview of maps of De Beemster (see literature section). Maps which illustrate the development of De Beemster are:

- Map by Pieter Cornelisz. Cort, 1607, scale 1:40,000. Published by Willem Jansz. Bleau. Can be found in Leiden University Library, among other places.

This map shows the situation before the draining of the Beemster (Ill. 7.1.A.2.);

- Map, undated (presumably ca. 1611), General National Archive ('Algemeen Rijksarchief'), The Hague, Hingman Collection, No. 2500.

This map was to reflect the final land division (Keunen, p. 9);

- Map by Lukas Jansz. Sinck, ca. 1612, scale ca. 1:23,000 (Bodel Nijenhuis Collection, Leiden University Library) (Ill. 7.1.A.3.).

The map indicates the land division, windmills, main ditches, canals and roads. Believed to be the oldest printed map of the drained Beemster;

- Map by Pieter van den Keere (1571-ca. 1646), 1617, scale ca. 1:26,000 (Can be found in Leiden University Library (Ill. 7.1.A.8.), among other places.

The map is included in an Atlas of the Netherlands published by Van den Keere (Germania Inferior, Amsterdam, 1617);

- Map by Lukas Jansz. Sinck, after 1635, scale ca. 1:23,000 (Collection of Leiden University Library) (Ill. 7.1.A.9.).

This map is important because it shows the reclaimed land of the surrounding waters: the Schermer, Purmer, Wormer;

- Map by Balthasar Florisz. van Berckenrode (1591-1645), carved by Daniel van Breen, ca. 1646, scale ca. 1:11,500, 6 loose sheets, 92 x 117 centimetres (Can be found in Leiden UL), among other places (Ill. 7.1.A.10.1-4.).
- Map by Daniël van Breen and Jan Switzers, 1769, scale 1:24,000 (in Leiden UL, among other places).

Daniël van Breen made the map in 1658. On instructions of the chief members of the Beemster polder board the map was revised by Jan Switzers in 1769.

See also Maps and Plans, ill. 7.1.A.12-7.1.A.29.

Construction in De Beemster

The "bell-jar" farm ("stolpboederij") with its typical square base fits in particularly well in the geometric pattern of the polder. The farm in itself can be considered a geometric modular unit.

In 1640, 207 bell-jar farms had already been built. In addition to these farms, some 141 residential homes had been built by 1640. It is also known that 100 barns were built, ten hay and seed stores, a corn mill, two timber wharves, three schools, a church and a parish hall (Lambert, p. 217).

In addition to these buildings a number of country estates had been built, like those along the Volgerweg: country homes with their formal gardens, intended as pleasure farms ("lusthoven") and out-of-town houses (Lambert, p. 217). This group of houses, with a farm often nearby, served as the summer residence for the urban (from Amsterdam) owners. Decoration and practical use interchanged in the design of orchards, arbours, kitchen gardens and footpaths. At the time there were some 52 pleasure gardens, primarily built by Amsterdam merchants and regents. In later years, however, they fell into disuse, and were demolished in the 18th century. What remains is a number of monumental entry gates to farms built at later dates. They were usually located along the Volgerweg and the Zuiderweg.

Along the Volgerweg, Rustenhoven (Ill. 7.1.B.38-39.) recalls the classical, pastoral ideal of rural life. Farms such as the Lepelaer (Ill. 7.1.B.33.) and the Eenhoorn (Ill. 7.1.B.34-35.) at the Middenweg retain the image of the period in the history of De Beemster in which 'otium et negotium' went hand in hand, fully in accordance with the views of Dutch humanistic ideology of the 17th century. Austerity, functionalism and usefulness were the determinative principles for a cultural elite, which founded De Beemster, where it enjoyed the "sweetness of pastoral life" for one generation. It is also known that in 1640, 32 of the more than 50 country homes were only used during the summer.

Architectural-historic research has turned up a lot of knowledge about one of these defunct pleasure gardens, built as a summer country home: Vredenburg, built by Frederick Alewijn (1603-1665), Amsterdam merchant, according to a design by the architect Philip Pieter Post (1608-1669), 1639-1648, who designed both the house and the layout of the gardens (Ill. 7.1.B.6.). Alewijn also instructed the Amsterdam master builder Philip Vingboons (1607-1678) to draft some designs (Ill. 7.1.B.7-8.).

Alewijn lived in Amsterdam in a house along the canal (a "grachtenpand") called 'Sonnewijser' at Herengracht 182. Frederick Alewijn loved architecture. The only Dutch translation of Palladio, 1646, is dedicated to Alewijn (in fact, the Dutch translation of Pierre Lemuet's French Palladio edition). With regard to the pilasters and proticos, the architecture of Vredenburg was inspired by Scamozzi. The central residence with lower proticos followed the designs of Palladio. In 1637 Alewijn inherited a plot of land along the Zuiderweg, with a surface area of 226 x 188 metres. The plot consisted of three lots of land which he converted into two lots, both of different sizes. The lot along the Zuiderweg was doubled in size. Both lots were surrounded by a canal and a windbreak with four rows of trees (elms) on an encircling dike. The western part of the windbreak on the dike was planted with five rows of trees. That part formed the main entrance to the pleasure garden, accessible via a monumental gate on the Zuiderweg. The villa itself, the country home, faced south and was built on the biggest lot, which had a surface area of 130 x 110 metres. The square forecourt in front of the house - a mirror-image of the squares of the geometric layout of the polder - was planted with lime trees. This is also where the ornamental garden and an orchard were laid out. The smaller lot, 143 x 60 metres had a plantation, an orchard and a vegetable garden.

Agriculture in De Beemster

Originally the drained land was used for agriculture (grain). The patent of 1607 stated,

"that, for several years, men have planted land here with colseed, lentil seed and other fruits, as one has been used to do".

As time went by this land gradually turned into pasture land for cattle (72% of the arable land). The reasons for this were the fact that the groundwater level and the soil composition produced a less favourable result for agriculture than the investors in agriculture had anticipated. Consequently De Beemster, along with other polders, turned into an area primarily suitable for cattle. In the 17th century the polder products, such as Beemster wool, butter, cheese and bulls, were famous; cheese production in particular developed into a strong industry.

Until the 1880s, De Beemster was primarily used for cattle breeding. With the introduction of steam-driven pumping stations it was possible to drain even deeper, so that more water could be removed. This resulted in an enormous expansion into horticulture.

The current picture shows a variation in farmland and grazing pastures, fields and orchards (for example, there are still a number of standard tree orchards, particularly along the Middenweg). Agriculture and horticulture account for 24% and 4% of the land use. In addition to dairy farming there is agriculture, greenhouse horticulture and fruit farming. Around 200 hectares of land is used for bulb-growing; the land used is varied annually (the same plot of land can be used for this purpose only once every six years).

The territory of the municipality of Beemster corresponds with that of the Beemster polder. The surface area encompasses 70.37 square kilometres (7,203 hectares); 5,334 hectares is used as arable land. The municipality has 8,605 inhabitants (1998) (in 1975 the number was 7,800). According to the Regional Plan (1991) the number of estimated inhabitants for the year 2000 is 7,840. In 1978 De Beemster had more than 2,500 homes and farms. From its inception Beemster has been one administrative unit. Since the time of the French, from the beginning of the 19th century, Beemster has been an independent municipality.

Villages and roads in De Beemster

Of the residential centres originally projected for De Beemster in the 17th century, Midden-, West- and Noordbeemster were actually developed. Zuid- and Oostbeemster became Zuidoostbeemster. In addition, neighbourhoods arose such as Klaterbuurt, De Blikken Schel, het Hoekje, Kerkebuurtje, Halfweg, de Witte Kan, Assumerbuurt, het Eiland and Vlooijenkriek (Ill. 7.1.A.29.).

The main watercourses from north to south are the Schermerhornerstoot, Oosthuizenstoot, Middensloot, Draaiordersloot and Zuidersloot, which run parallel to each other. From east to west are the Oostersloot, Beetstersloot, Jispersloot and Vrouwsloot, which also run parallel (Ill. 7.1.A.29.).

The road layout is rigidly linear, corresponding with the geometric layout of the polder. In the middle there is the Middenweg, which runs north-east to south-west. Parallel to this, running east to west, are the Purmerenderweg, the Nekkerweg and the Jisperweg. At Middenbeemster, the Middenweg intersects the Rijperweg, which runs north-west to south-east. The main village of Middenbeemster is situated at the crossroads. Parallel to the Rijperweg are the Mijzerweg (the most northerly road), the Vrouwenweg (formerly the Westmyserpad), the Oosthuizerweg, the Hobrederweg, the Rijperweg and the Zuiderweg (the most southerly road).

Of the polder roads, the Wormerweg has retained its old polder road profile. The trees along the Vrouwenweg create a particularly impressive picture. There are no trees on the verges of the dikes along the canal and belt-canal alongside the Beemsterringvaart due to their damming function. After the Second World War, poplars were planted on the dike. They form a prominent screen, distinctively demarcating the polder in the open landscape of the Noorderkwartier.

There is a centrally situated geometric pattern that is formed by the area enclosed by the Oosterhuizerweg, the Jisperweg, the Zuiderweg and the Oostersloot.

The Kruisoord polder is a former upland which is enclosed in the dikes of the polder. Before it was incorporated in the polder, Kruisoord was originally a peat island lying outside the dikes. Instead of a dike this area is surrounded by a quay. The area is characterised by a higher elevation with its own water level and isolated water management, some micro-relief, a different soil composition (peat) and a different land allotment pattern ("block allotment").

Middenbeemster

Middenbeemster, situated at the intersection of the Middenweg and the Rijperweg, is the principal town of De Beemster. An open rectangular space, the former cattle market, can be seen at the four arms of these crossroads. The Reformed Church, built after 1621 (Ill. 7 1.B.13-19.), is located in the south-eastern corner. A former smithy, dating from the 18th century (Ill. 7 1.B.64-

65.), a school and the Heerenhuis [Manor] (rebuilt 1826; rebuilt and expanded in 1860), originally the former Ghemeenlantshuys are also placed around this square.

Neighbourhoods in Middenbeemster are 'het Eiland' (near the Prins Mauritsstraat of a later date), the Lindegracht, the Kerkebuurtje and the Buurt (around the Heerenhuis). Few changes occurred in Middenbeemster between 1640 and 1840. The buildings of that period were situated along the Middenweg and the Rijperweg and became denser closer to the central open space. In the 19th century Middenbeemster underwent a new impulse. The former Raadhuis [town hall] (1826) with its adjoining pub was built and construction was carried out around 'het Landje' and the Lindengracht, on 'het Landje' and along the Middenweg. Three of the four quadrants that form Middenbeemster were built up one after the other in the 19th and 20th centuries. After 1995 the biggest expansions took place to the north-west and the south-east.

The large, monumental bell-jar farms along the Middenweg (the Lepelaar, 1683, restored in 1971 (Ill. 7.1.B.33.); the Eenhoorn, 1682, built for Antonie Houuttuyn, mayor and field officer of Edam) (Ill. 7.1.B.34-35.) and the Volgerweg (the former country estate Rustenhove of 1798) (Ill.7.1.B.38-39.) are unique elements outside of the historic village centre.

In 1982 the historic centre of Middenbeemster was designated a protected townscape pursuant to the Monuments Act. The Notes on the designation as a protected townscape indicate that the designation primarily emphasises the structure and the construction plan of Middenbeemster, viewed from within. The limits lie behind the boundaries of the properties back of the buildings along the Midden- and Rijperweg (see appendix 8.2.: Map 244I).

Westbeemster

Originally this centre was planned at the intersection of the Jisperweg and the Hobrederweg. It was originally an agrarian hamlet. The church and the cemetery were placed to the north of the intersection. Only after the Second World War did a few small expansions actually take place. The buildings are mainly residential housing. Development was never based on any town planning to speak of. The buildings form a ribbon development along the Jisperweg.

The Roman-Catholic community of De Beemster established itself here in Westbeemster. Because the parish here also covered the nearby Schermer, the large-scale neo-gothic church of St. John the Baptist with presbytery (1878, architect Y. Bijvoets), a convent of Our Lady of Lourdes (1910), a parish hall and a few Roman-Catholic schools were built in Westbeemster (Ill. 7.1.B.62.).

Noordbeemster

Noordbeemster was originally an agrarian hamlet and lies to the north of Middenbeemster, along the Middenweg; it. The ribbon development becomes denser near the Oosthuizerweg. There are no expansion or town planning developments to speak of. The labourers' homes are one storey high with a pitched roof or mansard roof.

Zuidoostbeemster

From the time it was created Zuidoostbeemster was the place for horticulturalists. This horticulture area was formerly primarily geared toward Amsterdam. The area grew and grew. Over time it started to take the place of the 17th century country estates, which started to disappear at the end of the 18th century and the beginning of the 19th century. This part of the

Zuidoostbeemster is sometimes called the "Garden Corner". The village is situated at the intersection of the Purmerenderweg and the Zuiderweg.

From the middle of the 19th century onward, more and more retired farmers from De Beemster settled here. Their many homes (called 'rentenierswoningen') along the Purmerenderweg and the Zuiderweg are testimony to this. The 'rentenierswoningen' are usually one-storey houses with a roof and an elevated midsection and many were built along the Purmerenderweg and the Zuiderweg mainly between 1898 and 1910 and 1910 and 1925 respectively. This location allowed the retired farmers to stay in touch with the activities on the marketplace of nearby Purmerend, which was a regional centre.

Zuidoostbeemster expanded in the 1920s and after the Second World War. This expansion process was stopped after 1958, when the Province of Noord-Holland stipulated that Zuidoostbeemster was not permitted to expand any further because of its agrarian function.

Klaterbuurt

Klaterbuurt was originally an old working-class area. The neighbourhood lies to the west of Middenbeemster, near the Westdijk, at the end of the Rijperweg. The homes of the farmhands are sometimes called 'kitchens'. The Klaterbuurt has never had any expansion to speak of. The early buildings have virtually disappeared. A few historic bell-jar farms and the stables of a former country estate which has been converted into a farm, Rijperweg 17, are the noteworthy features in this area.

Halfweg

Halfweg is an old working-class area; it lies along the Volgerweg and the intersecting Nekkerweg. The labourers' homes consist of two houses under one pitched roof and are built parallel to the road. An important element of Halfweg is the Fort at the Nekkerweg (part of the former Stelling van Amsterdam [Defence Line of Amsterdam]). Here too there are primarily small labourers' homes. Situated in the south-eastern part of De Beemster, the main activity is horticulture.

The Stelling van Amsterdam (Defence Line of Amsterdam) and De Beemster

Five forts, an inundation sluice (Ill. 7.1.B.53-59.) and two dam sluices (Ill. 7.1.B.60.) belonging to the Stelling van Amsterdam are located in the southern part of De Beemster. The first Fort is that to the north of Purmerend, situated at the eastern ring-dike (completed 1912), which was built to protect the Beemsterringdijk, the Purmerenderweg and the Rijperweg (Ill. 7.1.B.59.). The Fort at the Nekkerweg, situated on the north-western side at the intersection of Nekkerweg and Volgerweg was intended to defend both roads (Ill. 7.1.B.58.). It was built between 1896 and 1913. The third fort is the Fort at the Middenweg (1895-1913/14), whose location near the southern ring-dike was intended to protect the Middenweg and the Zuiderweg (Ill. 7.1 .B.57.). The next fort at the southern ring-dike is the Fort at the Jisperweg. Its function was to close off the Jisperweg (Ill. 7.1.B.55.). The main fort was the Fort at Spijkerboor, 1910-1913 (Ill. 7.1.B.53-54.). It was built where the Noordhollandskanaal, the Knollerdammervaart and the western part of the Beemsterringvaart intersect. Its purpose was to defend the western part of the belt canal.

Before the forts could be built, the soil was dug out and replaced by a sand core with the same weight as the planned fort. A ditch was dug around the grounds of the fort. To the front,

the forts were faced with soil. Willows or hawthorns were planted along the ditch to prevent the soil from sinking into the ditch (Fort Jisperweg, Ill. 7.1.B.55.). Naturally, the view on the side facing the field of fire has been kept open.

To the east side of the southern ring-dike there is also an inundation sluice of the Stelling (Ill. 7.1.B.61.). The sluice was intended for the inundation of the Beemster polder. This component was built between 1890-1891.

The underlying principle in the inundation of De Beemster was that it was to take place in two sections. In the northern part the water was to reach at such a height that the area would only become marshy. The southern part was to be fully flooded. In order to achieve this, dam sluices were built: one at the Rijperweg in Middenbeemster (1899) and one at the Volgerweg, by the Jispersloot.

The water management of De Beemster polder

The water of the former Beemster once formed part of the Schermerboezem. The current Beemsterringvaart (Beemster Belt Canal) and part of the Groot Noordhollandsch Kanaal (1819-1824, based on plans of the Inspector-General of the Water Authority, Jan Blanken Jansz.) are part of the Schermerboezem (Schermer Reservoir). The reservoir discharges through both natural and manmade watercourses into the Wadden sea (near Den Helder), the IJsselmeer (via the Naamsloot and at Lutje Schardam) and into the Noordzeekanaal (the Channel). Water is supplied mainly from the IJsselmeer.

The water level of the Schermerboezem is managed by the Hoogheemraadschap van de Uitwaterende Sluizen (District Water Board of the Discharging Sluices) in Kennemerland and Westfriesland.

Within the Beemster polder, which forms a closed drainage unit, there are 61 areas with their own water level (see Level Chart 5400, Appendices 8.9).

A surface area of 7220 hectares of De Beemster produces water. There are height differences within the polder. A band runs from east to west in the middle of the polder, which is 50 centimetres lower than the adjacent areas. The average height of the low area is 3.80 metres below Mean Sea Level, with large areas up to 4.00 metres below Mean Sea Level. The higher-lying areas are 3.00 metres below Mean Sea Level. The polder is surrounded by the dike, which in turn is situated higher than the dikes on the other side of the belt canal. This construction was purposely chosen in order to safeguard the large financial investment in the polder in the event that the Zuiderzeedijk might actually give way.

De Beemster is divided into three departments, each with its own water level: the Bovenpolder, the Middenpolder and the Arenbergerpolder. There are two lower-lying areas in the Middenpolder, namely, the Hoge Kilpolder and the Lage Kilpolder. Summer and winter water levels vary between 10 to 30 centimetres.

The main watercourses of the various sections are connected by means of culverts. This enables the water of the higher-lying sections to flow to the lower, directly drained sections. After the conversion from drainage by windmills to steam-driven pumping stations in the late 1800s (1877-1885), the water was discharged into the belt canal by three pumping stations. One was located at Oosthuizen (1877) to drain the Achterbergerpolder, one at De Rijk (1880) to drain the

Bovenpolder and one at the end of the Schermerhornerweg, near Beets (1885), to drain the Middelpolder.

The pumping station at Oosthuizen was built in 1877 (the steam-driven machinery was replaced in 1921 by two centrifugal pumps, driven by two diesel engines, with a total capacity of 200 HP). 125 cubic metres of water was displaced per minute. The steam-driven machinery of the pumping station at De Rijp were also replaced in 1925 by two centrifugal pumps driven by electric motors, with a total capacity of 260 HP and a water displacement of 140 cubic metres per minute. The third pumping station at Beets had two steam installations until 1962, with a total capacity of 280 HP and a displacement of approx. 170 cubic metres per minute, in addition to a centrifugal pump with diesel engine (220 HP) and a water displacement of 100 cubic metres per minute. The pump dates from 1947 and the engine from 1961.

De Beemster is now drained by the fully automated electric pumping station 'Wouter Sluis' along the Westdijk (Middensloot) and by the diesel pumping station 'Jacobus Bouman' along the Oostdijk (Oosthuizen'sloot). The Kilpolders were no longer drained separately when these new pumping stations were implemented.

Six inlet sluices in the 45-kilometre long ring-dike let in water in the summer. The canals around the forts are fed by four inlet sluices, in addition to the inundation sluice.

There is a separate inlet sluice for Kruisoord or Hoogland in the north-eastern section.

A new water management plan was introduced for the Beemster in 1957. In 1962 the old pumping stations were replaced by three new ones (along the Middensloot; at Spijkerboor; along the Oosthuizen'sloot). The Wouter Sluis pumping station came into operation in 1973.

The water from De Beemster is discharged into the IJsselmeer through the outlet which runs along Oudendijk up to Lutje Schardam (Ill. 7.1.B.46-51), the Beemster discharge, and through the Naamsloot to the north, in the direction of Hoorn. A prerequisite for obtaining the permission of the Hoogheemraadschap (District Water Board) to dike in De Beemster in 1607 was that this Beemster discharge be constructed with a wooden sluice at Lutje Schardam. This sluice was built between 1611 and 1616 (in 1735 it was replaced by the current stone sluice with the 'wapenstein' (stone marker) of the Waterschap (Water Board) De Beemster (Ill. 7.1.B.47.). This discharge was also intended to discharge the water of the Schermer. The purpose of the dam in the sea dike is to dam off the sea. A sluice had to be made in the Hoge Dam in Zaandam, 1613, to drain the Beemster (the current situation, a large lock, dates from 1904).

3.2 HISTORY AND DEVELOPMENT

Lagoons and delta type areas take up the greater part of the Dutch land. Over the centuries this land was made habitable by means of land reclamation and protection against the water. Of the approx. 3,400,000 hectares which are now the Netherlands, a third is below sea level. It is believed that originally the lagoons and delta type areas covered some 2,000,000 hectares. If no dikes had been constructed and if there were no permanent, on-going drainage of excess water, approx. 65% of the Netherlands of today would be under water.

The northern Netherlands coastal area of the 'Kop van Noord-Holland' and along the Wadden Sea was once a virtually interconnected series of mud-flats, that went all the way up to south-western Denmark. The earliest habitation was on knolls, locations which offered protection from the water before sea walls and dikes had been put up.

The need to 'create' new land arose from the damage which was caused by the continual flooding. An additional reason was, of course, the added bonus of obtaining excellent agricultural land.

Five factors were of influence on the process of land reclamation: the availability of capital for investment, stable political and economic relationships, the availability of technical means, entrepreneurial spirit and good prices for farmland.

Man started his battle against the water early on, in the northern part of Noord-Holland, in the area situated above the former open waters of the IJ, by keeping out the seawater. From the 16th century onward efforts were geared toward draining lakes and ponds situated further inland.

Land reclamation took place by draining the big lakes, particularly in the northern part of Holland. This process was made possible by the drastic improvement in pumping and draining technology by means of windmills with waterwheels. Since the end of the Middle Ages 'the entire north of the IJ - Hollands Noorderkwartier - was enclosed within a ring of dikes. But considerable areas of water survived within the individual polders and the centre of the region was still occupied by the large Schermer, Purmer and Beemster lakes' (Lambert, p. 112).

More and more land could be reclaimed when the technique of building dikes with discharging structures (sluices) was developed. These developments are sometimes called the deltaworks of the 17th and 18th century.

The use of wind power to drain the polders was applied at an early stage, through the use of wind-driven water-pumping mills. It is known that around 1408 this technology was used in the area around the city of Alkmaar, which is also situated in the province of Noord-Holland. The first windmills were small and inefficient. They powered a paddle- or scoop-wheel, which could only lift the water up to a height of 1.5 to 2.0 metres (Lambert, p. 213). The 16th century development of the revolving cap on windmills made it possible to drain the larger lakes. In particular, from the beginning of the 17th century onward it became possible to drain large bodies of water, such as the Beemster, by using networks of three or four windmills. The invention of this process is attributed to Simon Stevin (1548-1620).

The presence of these windmill networks had been a characteristic feature of drainage works for centuries. Between 1533 and ca. 1875 polders were drained by windmills. The windmill was as indispensable for reclaiming 'new land' as it was to keep the existing polders dry. The required capacity for drainage was determined by the surface area to be drained, the depth of the area that was below the water level of the reservoir, into which the water is discharged, and the excess water resulting from precipitation and possibly from seepage.

Polders and reclaimed land

Internationally the term 'polder' does not always have the same meaning. In the Netherlands it is defined as follows:

"A polder is a level area which was originally subject to a high water level, either permanently or seasonally and due to either groundwater or surface water.

It becomes a polder when it is separated from the surrounding hydrological regime so that its water level can be controlled independently of surrounding regimes" (Segere, in 'Polders of the World', p. 15).

Polders are found virtually throughout the world (e.g. in Japan, Bangladesh, Vietnam, Thailand, Guinea Bissau, Surinam, Canada, Germany, Hungary, Rumania, Spain, Portugal).

The term reclaimed land applies when lakes and ponds or areas which are permanently under water are drained. Reclaimed land is found primarily in Holland (the provinces of Noord-Holland and Zuid-Holland) and in the province of Friesland. The latest, 20th century reclamations are those of the IJsselmeer: the Noordoostpolder (reclaimed in 1942) and eastern and southern Flevoland (reclaimed in 1957, with a surface area of 54,000 hectares; reclaimed in 1968, with a surface area of 44,000 hectares). After their reclamation they jointly became the twelfth province of the Netherlands. On an international level, the Dutch polders are unique.

Characteristic of the draining of an inland lake is the ring-dike with encircling (or belt) canal and ring-ditch. Windmills pumped the water from the lake to be drained into the higher-lying canal. A ring-dike encompasses the relatively small area of drained arable land. The dike protects the reclaimed land from high water levels. Once the lake has been drained, the peat is dug up and the old sea clay is exposed. The lake bottoms are often clay. The land dries during and after reclamation, a stabilising process that occurs with ever-decreasing speed (over a period of 70-100 years). Furthermore, the land has to mature.

The water is drained from the plots by means of canals and/or ditches, as can be seen in De Beemster. The water management system of a drained lake consists first and foremost of a system for the agricultural area. The main elements of this system are the distance between the sub-surface drains or open field drains, the sub-surface drain depth or the depth of the open field drains, the polder water level, the percentage of open water and the pumping capacity. The hydraulic transport system of a drained lake can consist of canals, main ditches and/or structures. In principle, the system has a double purpose, i.e. water storage and the transportation of water to windmills or pumping stations.

Allotments, which are usually rectangular, are a characteristic feature of the layout of a polder. The long sides of the allotment are bordered by canals, one short side is bordered by 'a ditch', which is the outlet of the canals, and on the other side there is a road along which the farms are situated. The 'ditches' carry the water from the canals via the main ditches and watercourses to the windmill(s) or the later pumping stations.

There are two types of polders. Polders that discharge directly into external waters (such as the sea or rivers) and polders that discharge into a reservoir (usually a combination of ponds, lakes, rivers and watercourses). A reservoir is of vital importance: as long as water cannot be discharged to external waters due to high water levels, it can temporarily be 'stored' in the reservoir.

The large reclamations were carried out up until the middle of the 17th century. This work was only recommenced in the 19th century when steam power was used. For example, the Haarlemmermeer (where Schiphol Airport is now situated) was drained by three powerful steam-powered pumping stations. Around 1250 the water of the Haarlemmermeer encompassed a surface area of 9000 hectares and in 1800 it was 17,000 hectares. The last large inpoldering after the construction of the Afsluitdijk (the IJsselmeer Dam) (1932) related to parts of the former Zuiderzee (now the IJsselmeer) of a total of 165,000 hectares, which now form the province of Flevoland.

As far as can be determined, there are 445 drained lakes in The Netherlands with a total area of 311,710 hectares, mainly in the provinces of Friesland, Noord-Holland and Zuid-Holland and Flevoland. They cover 8.5% of the land area of The Netherlands.

Drained lakes can be divided into two groups. The first group consists of drained lakes that came into being by reclaiming lakes or parts of the sea; this group encompasses some 242 drained lakes (227,010 hectares). The second group is formed by dried lakes whereby lakes or ponds were created by peat-digging (there are 203 lakes of this kind; 84,700 hectares). Only six drained lakes are larger than 5,000 hectares (Schultz, p. 25).

Around 1750 some 39,500 hectares had already been laid dry. Of the above-mentioned 242 drained lakes, 123 are in the province of Noord-Holland, covering a total surface area of 82,963 hectares.

Over the past centuries, land reclamation has resulted in the following:

- Low lying lands 1,335,000 hectares
- Drained lakes 315,000 hectares
- Land won from the sea 350,000 hectares

(Schultz, in 'Polders of the World' (p. 33)).

Between 1607 and 1635, the following land was reclaimed in the province of Noord-Holland:

- Wogmeer 1607-1608 2.0-2.5m below sea level;
- Beemster 1607-1612 3.5m;
- Purmer 1617-1622 4.0m;
- Wormer 1624-1626 4.0m;
- Heerhugowaard 1625-1631 2.5m;
- Schermer 1631-1635 3.5m.

(Lambert, p. 215) (See also Ill. 7.1.B.9-12.).

Between 1550 and 1650, 30,000 hectares of new land was reclaimed in the Noorderkwartier through drainage and by diking in the mud flats

The water management in polders and reclaimed land

In principle, the water management system of polders and reclaimed land always consists of the following components: sluices, windmills or pumping stations, canals, main ditches, ditches, open or closed field drains ('Polders of the World', p. 39). This relates to both the drainage and discharge and the supply of water in times of drought. The system of open and closed field drains, ditches, main ditches and canals in a polder is usually determined by the topography, the condition of the soil and the requirements of agriculture. A good drainage system and good soil management are prerequisites for polders. The primary functions of the water management system of a polder are storing and removing water.

In the older polders, the work relating to drainage only concerned the construction of dikes, the building of windmills to move the water (later replaced by pumping stations), drainage and the digging of ditches and canals. The ground was then sold or leased. If more canals subsequently needed to be dug, this was left up to the farmers.

Accessibility and occupation of polders and reclaimed land

Polders are accessible from the edges; reclaimed land is accessible from the roads. The allotment pattern for reclaimed land is rectangular. The density of the canals is related to the expected flooding. Over the centuries the lots have become bigger and bigger.

On reclaimed land, houses are built far into the interior. This is made possible by high and solid dikes around the reclaimed land. In polders (like the Buikslotermeer, the Broekermeer and the Belmermeer) the farms were some distance from the encircling dike and not along the medium.

Reclaimed land in Holland

The first land to be reclaimed in Holland is said to have been in 1532, namely, the Achtermeer (35 hectares) to the south of Alkmaar. At the end of the 16th century (1597) the Zijpe (6776 hectares) was laid dry after three failed attempts (Ill. 7.1.B.11.). This reclaimed land was followed by many more in the first half of the 17th century: the Wogmeer (1608-1609) and the Beemster (1607-1612) with a surface area of 7174 hectares (the first large reclamation). In 1612 the Wieringerwaard was laid dry; diking in of this area commenced in 1610. This drainage project covered a surface area of 1859 hectares. The Purmer was drained between 1617-1622 (2680 hectares) (Ill. 7.1.B.11.). The Wijde Wormer followed in 1626 (reclaimed 1624-1626, 1661 hectares) (Ill. 7.1.B.11.). Heerhugowaard, with a surface area of 3337 hectares, was reclaimed in 1631 (Ill. 7.1.B.12.). In 1635 the last large reclamation project of the 17th century took place by means of 54 windmills: the 4 metre deep water of the Schermer, 4,828 hectares in size (Ill. 7.1.B.9-10.).

In total 32 drainage projects were carried out simultaneously between 1630 and 1631 (Cools, p. 120).

After 1650 no more land was reclaimed. Initial plans for reclaiming the Alkmaardermeer were not implemented then, or later. It was not until the 18th century, following a flood, that another polder was created in 1717, in the northern arm of the Wijkermeer.

Westfriesse Omringdijk (West Frisian Ring Dike)

The course of the medieval Westfriesse Omringdijk (declared a monument by the province of Noord-Holland in 1983), with a length of 126 kilometres, has undergone changes due to flooding over the course of the centuries. The current ground plan virtually corresponds with that of the years 1320 and 1335.

It is not known precisely when this dike was built. It is assumed that most of what exists today was already there in 1250. The entire ring-dike is mentioned for the first time in 1320. The first sections of this dike were probably laid out by local communities. The dike runs by Medemblik, Enkhuizen, Hoorn, Oudendijk, along the IJsselmeer and from Oudendijk to Alkmaar, Schagen and Medemblik. The course of the dike has also partly been determined by the shape of the former lakes of the Beemster and the Schermer.

This dike is still used as a dam at a few locations to keep both the water of the IJsselmeer and of the North Sea at bay

In 1990, its original course was traced by means of aerial photographs. A few later deviations were traced as well. For example, to the north-east of the Beemster at Slimdijk located between Avenhorn and Oudendijk. This dike was originally located further to the west, in what is now De Beemster (Omringdijk, p. 25).

Hoogheemraadschap van de Uitwaterende Sluizen in Kennemerland and Westfriesland (District Water Board of the Discharging Sluices in Kennemerland and Westfriesland) (since 1993 Hoogheemraadschap van de Uitwaterende sluizen in the Netherlands Noorderkwartier)

In order to solve the flooding problems in the northern part of Noord-Holland, called the Noorderkwartier, Kaiser Karl V made a decision on 5 July 1544 which led to the creation of the Hoogheemraadschap van de Uitwaterende Sluizen in Kennemerland and Westfriesland. This Heemraadschap (Water Board), later a Hoogheemraadschap (District Water Board), formed in 1565, was responsible for the water discharge for the entire region of the Noorderkwartier. The reason for this decision was the many complaints that Kaiser Karl V received from Westfriesland and Kennemerland that the drainage via the waters of the Schermer, Beemster, Purmer, Wormer and Waart was deteriorating because the condition of the dikes and the estates was deteriorating due to regular storms and floods, which caused a lot of damage. At the end of 1544 Karl V decided by means of a patent that a reservoir had to be created which was closed off from the Zuiderzee. It was called the Schermerboezem.

On 1 April 1993 the Hoogheemraadschap van de Uitwaterende Sluizen in Kennemerland and Westfriesland and the Hoogheemraadschap Noordhollands Noorderkwartier merged to create the Hoogheemraadschap van Uitwaterende Sluizen of Holland's Noorderkwartier. The Hoogheemraadschap is responsible for managing the water in the reservoir. The Beemsteruitwatering (Beemster discharge) became the property of the former hoogheemraadschap at the end of the '70s. The current Hoogheemraadschap is also responsible for this vital discharge component.

Waterschap De Waterlanden

Waterschap De Waterlanden (water board) was created in 1981 following a merger of a number of water boards. It is in charge of water management in the Amsterdam area (shared), Beemster, Edam-Volendam, Landsmeer, Oostzaan, Purmerend, Waterland, Wester-Koggenland (shared), Wormerland, Zaandstad (shared) and Zeevang, in total an area of approx. 35,000 hectares. One of De Waterlanden's special duties is to manage the (planting of) trees along the public roads of De Beemster. Waterschap De Waterlanden is responsible for water management within De Beemster.

Farms in the northern part of Noord-Holland situated above the IJ

The oldest farm history can only be discovered (if at all) on the basis of archeological finds. In the very distant past it was a type of farm whereby the farmhouse and double-rowed cow-house abutted each other. The farmhouse and cow-shed were one large space. Later on, people started putting up partitions. Gradually this led to the distinction of the 'area for visitors' and the area for everyday use. In the oldest farms the hay must have been put in a separate haystack or just left outside.

However it is assumed that since the late Middle Ages it was common in the Frisian area around what was then the Zuiderzee for hay to be kept inside the farm, inside a square. This square area lay behind the living quarters and the place where the cows were stabled. The need for more room to store the hay entailed the need for a larger square area. Consequently, from the Middle Ages onward a type of farm with a raised shed was used, which over time developed into the typical pyramid shape of the bell-jar farm ("stolpboederij"). It is assumed that around 1600 the bell-jar farm, which is now so characteristic of the area north of the IJ, became the standard farm design.

Characteristic for this type of farm is the compact, well-thought out floorplan (Ill. 7.1.B.2.). In the middle is the storage area for the hay, under the highest part of the pyramid roof. The living and working quarters are grouped around this central area. Near the square, the cattle were lined up single file, against the outer wall.

The core of the construction consists of four vertical posts, which are linked together by beams, for example. This square construction is crowned by the enormous pyramid roof, which is covered with roof tiles and/or thatch; the roof extends over the side aisles on all four sides. The aisles are situated around the square. The square was used to store hay and crops. The living area, the threshing area, rooms for storage and for cattle are grouped around the square. The roof tiles are red, although on the front side, the 'first impression', they are often glazed black (Ill. 7.1B.43., Zuiderweg 21). Because the weight of the roof construction rests on the square with its roof supports, the walls could be kept light, so that the foundations could also be kept light.

The farms can be ten to fifteen metres high. There are also bell-jar farms with a 'tail' - the projecting barn area. Some farms have the entrances facing the road or on the side of the building (sometimes called the 'Westfrieze' farmhouse) and some have the entrance to the rear of the building (also called the 'Noordhollandse' farm).

A later characteristic development was the use of wooden gables on the front (Ill. 7.1.B.23., Hobrederweg 13). These gables, often made of wood, increasingly became 'translations' of examples of gables from urban architecture.

Where there were cattle farms, the hay shed was placed behind the stables and surrounded by a wooden structure.

There are a number of variations of this type of construction. The simplest version is the closed square with the pyramid roof. Sometimes a structure was added to the front, which served as living quarters (Ill. 7.1.B.29., Middenweg 112). Some farms may differ for practical reasons. For prestige reasons one farm may have a somewhat more imposing architecture than the other (Ill. 7.1.B.27., Middenweg 5; Ill. 7.1.B.25., Jisperweg 29). Prestige, presentation and representation played a role for farms which were built by city dwellers (e.g., merchants and regents) as an investment. The exterior shows how important status and prestige were to its former owners. The living quarters were usually to the front of the building. In the more imposing farms this section was emphasised by, for example, placing gables above the front wall, or affixing a decoratively scrolled board along the eaves at the front, where the thatch and tiles met (called a 'mirror' or 'panel').

Urban owners used their farms as summer residences. In such cases the front part of the house was built in a more extravagant architectural style. This section, encompassing the living quarters, was separated from the section where the farming was carried out. The farmer and his family lived and worked in the back of the building.

Elsewhere in Noord-Holland, for example in Wieringen, there are farms which are L-shaped. The hay was placed in the side section so that all one had to do was push the hay to the cows through hatches.

The layout of what is called the mixed farm used to be different. The hay was kept next to the farm, not on the side where the cows were, but on the side where the work was carried out.

A general feature of the farms to the north of the IJ is the design of the stables. In the traditional layout the cows faced the outside wall, standing two by two between wooden

partitions. Behind them was a trough for the manure and for the feed. There was no separate corridor for the cattle. This type of farm is called the 'Frisian house group'.

The archetypical farm in the northern section of Noord-Holland, to the north of the IJ, characteristic of the reclaimed land and historical inpolderings, is the bell-jar farm with its high pyramid-shaped roof (Ill. 7.1.B.42., Beemster, Wormerweg 2). From the second decade of the 17th century onward this type of farm became commonplace throughout the new polders of the Beemster, the Purmer, the Wormer and the Schermer. The zenith of the bell-jar farm was between 1600 and 1640, the years of land reclamations and inpolderings.

The 18th century saw a stagnation in the further development of the Beemster. Rustenhoven (Ill.7.1.B.38-39.) was still built along the Volgerweg, an imposing farm-cum-country estate. In the 19th century, particularly between 1875 and 1885, once again bell-jar farms were built for cattle farming (Ill. 7.1.B.41., Volgerweg 79). After 1885, when an agricultural crisis arose, only simple farms were built (Ill. 7.1.B.28., Middenweg 95). The 20th century development has been to adapt bell-jar farms to meet modern housing requirements and to detach the living quarters from the farming section.

The development of the various types of farms was partly dependent on social-cultural and economic developments, as well as differences in soil composition. Technological developments in construction also played a role. The tradition of wood construction was maintained in the area north of the IJ for a very long time. This was partly related to the weak sub-soil. This inhibited the use of brick (which was also partly due to the lack of brickworks). Furthermore, there was substantial wood import from Scandinavia, Germany and Russia, facilitated by the intensive ship construction industry in the Zaanstreek.

Urban expansion and land reclamation at the beginning of the 17th century

At the beginning of the 17th century, the Golden Age of the Republic of the Northern Netherlands (also called the Republic of the Seven United Provinces, established after the Peace of Westphalia in 1648), there was a great deal of urban expansion, especially in the cities in the provinces of Holland and Utrecht. This development had already started in the 16th century. Or, as Lambert wrote:

'During the sixteenth and seventeenth centuries the inhabitants of the small, poorly-endowed territories of the Seven United Provinces were able to defy the might of Spain, then the greatest military power in Europe, and at the same time present to the world an example of urban prosperity and artistic brilliance combined with a commercial enterprise which carried their merchant vessels from Archangel to the Cape and from Recife to Nagasaki'.
(p. 179)

The glory days of the Republic of the Seven United Provinces occurred primarily after the Peace of Westphalia, which recognised the Republic as a sovereign state and which closed the Scheldt, the link to Amsterdam's competitor Antwerp, to international shipping.

As a result of its religious tolerance the Northern Netherlands, in particular Holland, had become a refuge for southern Germans, for people from the Rhinlands, for refugees from Antwerp, and the Flemish, Walloons and Huguenots already in the 16th century. Spanish and Portugese Jews were able to settle here in safety. These refugees directly contributed to the material and spiritual wealth and well-being of the Republic.

The population, which had been growing steadily since the middle of the 16th century, required more housing, particularly in the cities. The demand for farmland also increased.

There are some similarities between the history of early 17th century urban expansion and the large-scale draining of the big lakes. Reclaimed lands, with their rational allotment layout and good discharge facilities, increased the yield of estates. Famous names in the process of land reclamation and urban expansion in the early 17th century are Simon Stevin, Jan Adriaensz. Leeghwater, carpenter and windmill builder in De Rijp, located at the edge of the Beemster. As a windmill builder and overseer, Leeghwater not only worked for the Beemster, but he also worked on the Purmer, the Wormer, the Bijlmer, the Waard and the Schermer, as well as abroad.

The substantial material wealth made it possible to invest in urban expansion and reclaimed land. It was primarily city regents and merchants who provided the funds for these projects. They built homes for themselves, both within and outside the cities: merchant homes and country estates. It is they who determined the scene along the Amsterdam canals (Prinsengracht, Herengracht and Keizergracht), as well as the arcadian world of life on the land with their many country estates along the rivers De Vecht, Angstel and Amstel.

The waters of the Beemster were drained by regents and merchants of The Hague and Amsterdam. They built their country estates on these newly reclaimed lands.

In his 'The Embarrassment of Riches, an interpretation of Dutch culture in the Golden Age' (1987), the English historian Simon Schama looks at the battle of the Netherlands against Spain from the middle of the 16th century until the 17th century and metaphorically compares the battle against the water in the northern Netherlands to the battle against Spain. He points out that simultaneously with the struggle for freedom, the Dutch landscape underwent far-reaching changes. Politically and geographically those years determined the creation of an independent nation, the Republic of the Seven United Provinces.

The battle against the water, against floods, but also wresting land from the water was allegorically seen as an exceptional privilege, a special gift from God, to be able to do all this, as a country and as a nation. The Dutch believed that they were granted special permission, as it were, to create both a political nation and a new geographical land.

For example, to the north of Amsterdam farmland was increased by forty percent thanks to the drainage projects. The drainage projects not only drastically changed the landscape, they also changed the economy. Amsterdam, which grew dramatically between the fourth quarter of the 16th century and the middle of the 17th century, could well use this extra farm and pasture country.

Land surveyors

The land surveyors, whose work contributed so much to the 17th century drainage projects in large sections of Noord Holland, in the area to the north of the IJ, did not practise this profession exclusively. They often held additional posts: mayor, dike warden, dike-grave or some other provincial officer's function. It was an exception that Lucas Jansz. Sinck, who was 'master land surveyor' on the Beemster drainage project, was also a land surveyor of Amsterdam, where he worked on the third city expansion and on the layout of the Jordaan district. The land surveyors were responsible for measuring and drawing the allotment map and laying out the allotments.

The office of land surveyor was official and the surveyor had to take an oath upon admission. Educated in 'geometria aritmetica', they had to sit exams before an admissions committee. Many surveyors were educated in Leiden, where they studied defence engineering (the 'Duytse Mathematicque').

A number of land surveyors worked in the Beemster, such as the afore-mentioned Sinck, Jan Pietersz. Dou (1573-1635) (who was also involved in the fifth city expansion of Leiden), Augustijn Bas and Maerten van de Eynde. Pieter Cornelisz. Cort, a land surveyor from Alkmaar, drew up a map in 1607 of the as yet undiked Beemster (printed by Blaeu) (Ill. 7.1.A..2.). Sinck drew up the allotment map of 1612, together with a number of other land surveyors (Ill. 7.1.A.3.).

The plan of De Beemster

The original plan was to build five villages in De Beemster, each with its own church. The only one built in the 17th century was that of Middenbeemster. There were also plans to lay eight crossroads for market squares, situated at the crossroads. It was decided that the squares "be well planted with high and lofty trees, be they elms, or others as are fit..." (Van der Sluis, p. 65). The squares were to be accessible by ship via canals (a situation which can be recognised in Middenbeemster).

It was already decided in 1616 not to proceed with the layout of eight squares. The maps from after 1616 therefore show five squares. Although construction of the Reformed Church in Middenbeemster started on a somewhat hesitant note, it was decided in 1618 to plant trees around the four future church squares.

Soon, in 1613, bye-laws came into effect which indicated what distance there should be between the canals and the houses situated on the squares. The idea was to achieve a homogenous townscape. To achieve this, another provision came into effect in 1615 regarding the distance between the houses themselves.

Another special element in the layout of De Beemster is the plan-based planting of trees along the roads. The first so-called plantation manager was appointed in 1612, a Laurens Jansz. Spieghel. Later on it was decided that an owner was allowed to plant trees on the section of land on the inner side of the ring-dike or verge that lay across from his piece of land. In various places one can still see that it was common to plant fruit trees there.

3.3 FORM AND DATE OF MOST RECENT RECORDS OF PROPERTY

De Beemster has been the topic of a number of studies (see bibliography).

Inventories are:

- J.J.F.W. van Agt, *De Provincie Noordholland. Eerste stuk: Waterland en Omgeving*. The Netherlands Monuments of History and Art. Illustrated Description published on behalf of the Rijkscommissie voor de Monumentenbeschrijving (National Committee for Description of Monuments). Staatsdrukkerij- en Uitgeverijbedrijf, 's-Gravenhage, 1953;
- E.Raap, R.L. Lourijzen, *Beemster. Monumenten Inventarisatie Project Noord-Holland*. Provincial Authority of Noord-Holland, Haarlem, October 1993;
- Monumenten Selectie Project. Gemeente Beemster*. Province of Noord-Holland. Haarlem, April 1996;

-Register Stelling van Amsterdam. Het Noorden. Gemeenten Edam-Volendam, Zeevang, Beemster, Graft-De Rijk. Provincial Monuments of Noord-Holland. Province of Noord-Holland, Dienst Welzijn, Economie en Bestuur (Welfare, Economics and Administration Dept.), Haarlem, December 1990.

The Geïllustreerde Beschrijving van de Nederlandse Monumenten van Geschiedenis en Kunst (Illustrated Description of the Netherlands Monuments of History and Art) is the official, governmental, scientific description of monuments, groups of monuments and of historic cityscapes and townscapes.

Work on the Illustrated Description, the first volume of which appeared in 1912, and to which new volumes are systematically added, is carried out based on a Guideline which was established by the Minister of Culture (1983).

The descriptions are based on a typological organisation of the cultural heritage. Separate descriptions and reviews are given for important monuments. Especially over the last few years a lot of emphasis has been placed on the research into the history of houses, of farm buildings and of the historical spatial environment. The volumes of the Illustrated Description are a reference work which provide details on the (construction) history of monuments and historic city and village centres. At the same time they provide material for studying construction in the past, as well as providing information on restoration work.

In the last two years, two related inventories of town planning structures and monuments dating from the period 1850-1940 were drawn up for the municipality of Beemster, as is done for all municipalities of the Netherlands. These inventories are related to a governmental (national, provincial and municipal government) countrywide inventory, the Monuments Inventory Project for Recent Town Planning and Architecture 1850-1940 (MIP) (1987-1993) and a selection, the Monuments Selection Project for Recent Town Planning and Architecture 1850-1940 (MSP) (1994-1998/99). The objective was to achieve a balanced overview of these topics in a short period of time. The key point was to determine from the point of view of conservation which works from this time are important and which of those works should be designated as a monument or a protected cityscape or townscape.

The work was carried out on the basis of a manual and guidelines provided by the Minister of Culture. Both projects were supervised by teams of experts.

The projects served not only to provide an overview or to achieve legal protection. The information is also used to evaluate new spatial developments and to help draw up regional and zoning plans as referred to in the Regional Planning Act ("Wet op de Ruimtelijke Ordening").

The Stelling van Amsterdam Register contains the official description of, e.g., the parts of the Stelling van Amsterdam that are situated in the municipality of Beemster and are protected as a monument by the province of Noord-Holland. These components are also part of the Defence Line of Amsterdam, which was included on the World Heritage List in 1996.

3.4 PRESENT STATE OF CONSERVATION

The subsidy system that the Netherlands uses for restoring and maintaining monuments is geared toward the architectural condition of historic monuments being systematically improved and kept in good condition.

The same applies for the maintenance, repair, improvement, redivision or redevelopment of municipal land (pursuant to the Regional Development Act). This programme will continue until the beginning of the next century.

In the past it was common that every so many years (with an interim period of 30 to 50 years) restoration work would be carried out on a protected monument. In view of the often drastic measures which would then have to be taken, the policy has increasingly moved in the direction of limiting large restorations as much as possible and stimulating regular maintenance. Subsidies can only be awarded for work which is geared toward keeping the architecture of the monument in good condition for the future.

Municipalities are invited to draw up a multi-year programme for restorations. The municipality of Beemster has drawn up such a programme for the period 1997-2002. A total of 7 monuments has been included.

The national government has granted the municipality a restoration budget of NLG 98,980 for the year 2002; NLG 100,077 for the year 2001; NLG 99,746 for the year 2000; NLG 103,489 for 1999; NLG 88,549 for 1998. The monies can be given to owners as a subsidy toward the costs which exceed normal maintenance and which relate to work aimed at maintaining the building as a monument.

Because as of 1997 additional national funds have become available for restorations (NLG 275 million), the municipality of Beemster has the option of appealing for extra financial funds. For the years 1998, 1999 and 2000 it has an implementation programme for restoration subsidies with an annual budget of NLG 117,964 for houses and farms, NLG 13,735 for religious buildings and NLG 5105 for other monumental buildings.

CHAPTER 4. MANAGEMENT

4.1 OWNERSHIP

In order to achieve an understanding of the ownership relationships of the monuments of the municipality of Beemster which are protected by the Monuments Act 1988, reference is made to Appendices ... 'Excerpts from the Monument Register for the Municipality of Beemster'.

In total there are 62 monuments in De Beemster which are protected pursuant to the Monuments Act 1988. The province of Noord-Holland has protected five forts (Fort Spijkerboor, the Fort at the Jisperweg, the Fort at the Middenweg, the Fort at the Nekkerweg, the Fort to the north of Purmerend, Ill. 7.1.B.53-59.), which formed part of the former Stelling van Amsterdam (this Defence Line of Amsterdam was included on the World Heritage List of UNESCO in 1996) (see map, Appendix 8.5). Two inlet sluices of the Stelling are situated here: one at Volgerweg 20 (Ill. 7.1.B.60.) and one at Zuiddijk, near No. 14 (Ill. 7.1.B.61.); there is also a dam sluice in the centre of Middenbeemster.

Classified into categories of monuments, the following items are protected by the national government:

- Reformed Church of Middenbeemster (Ill. 7.1.B.13-19.).

A rectangular church hall, construction of which must have commenced in 1618 or 1621 and which was finished in 1623. The architects were the Amsterdam master builders Hendrick de Keyser (1565-1621) and Cornelis Danckerts. It is the second protestant church built in the northern Netherlands after the Reformation. Additions were made to either side of the tower (vestry and fireplace/stoves with tiled hearth, Ill. ...) in 1626. The tower was built between 1618 (stone inscribed with date and municipal arms above the entrance) and 1621 (year on the clock).

The crown of the tower was designed in 1660 by Pieter Post (1608-1669) - he was the architect of the Princes of Orange, later on the architect of the States-General, the States of Holland, the Hoogheemraadschap (District Water Board) of the Rhineland and of prominent private individuals) - and realised in 1661 - 1662 by Arent Lauren Heemskerck (master carpenter from Rijswijk in the province of Zuid-Holland). In the 19th century the steeple was renewed in its original design and renewed again in 1950 (design by C.W. Rooyaards). The church was restored in 1959.

In the church hall itself stand an oak pulpit and a baptismal screen dating back to the first quarter of the 17th century and a few 17th century oak church pews. There is also a 17th century wooden panel, 156 x 129 centimetres, painted with a representation of the church and the arms of De Beemster (Ill. 7.1.B.19.).

The 18th century pillars of the entrance gate, Ill. 7.1.B.14., at the front of the church building which is situated on higher ground, originally belonged to farm 'Vredeveld in Zuidoostbeemster.

- Doopsgezinde Vermaning (Mennonite Admonition) at Middenweg 87, 88 (Ill. 7.1.B.20-21.)

According to a memorial stone, this building was constructed in 1784. The church hall and the parsonage, built as living quarters in the front of the church, form part of a building under a high hip roof. The simple rectangular interior of the church hall has a wooden barrel vault. The simple architecture and the situation of the church building at some

distance from the road are characteristic of the Mennonites in the Netherlands.

- The R.C. Church of St. John the Baptist at the Jisperweg in Westbeemster (Ill. 7.1.B.62.).

A neo-gothic cruciform basilica church based on the design of H. Bijvoets, 1878-1879. Most of the original fittings are still present. The organ stems from 1890, built by the Franssen brothers of Roermond.

- Former Orphanage, Middenbeemster, at the Rijperweg.

The orphanage is located along the Rijperweg, behind the Reformed Church. The orphanage was founded in 1681 and was in use until the beginning of this century. The building is currently a private residence.

- Examples of 17th century farms:

- Farm, Middenweg 103, with a plaque in the side wall with the inscription 'Duysburgh', with a picture of a castle and the year 1629 (Ill. 7.1.B.68.);

- Farm, Middenweg 104, with a memorial stone in a side wall with the inscription 'DE OUDE LYNBAEN IS MYN NAEM' (The old Lynbaen is my name) (Ill. 7.1.B.67.);

- Farm De Lepelaer, Middenweg 194, (Ill. 7.1.B.33.), with a picture of a spoonbill on a polychrome plaque and a brick inscribed with the year 1683;

- Farm De Eenhoorn, Middenweg 196, (Ill. 7.1.B.34-35) with facade in the style of the Amsterdam architect Philip Vingboons. Cartouche above the entrance with the year 1682. A Unicorn bearing a shield sits atop the facade;

- Farm Broedersbouw, Oostdijk 13 (Ill. 7.1.B.37.). The facade with elevated midsection, in the form of a Dutch gable, bears the name of the farm and the year 1642;

- Hobrederweg 26, 17th or 18th century farm (Ill. 7.1.B.24.);

- Farm Vredenrust, Volgerweg 42, originally 17th century, adapted in the 19th century.

- Examples of 18th century farms:

- Wooden bell-jar farm, Middenweg 105;

- Farm Poortugal, Westdijk 6/5, which has a cartouche with the year 1780 on its facade.

- Examples of 19th century farms:

- Farm Hoogerlust, Jisperweg 103. Bell-jar farm. Plaque with a picture of a paper mill, 1774. There are stone crowns on the brick gate posts, dating from the second half of the 18th century (Ill. 7.1.B.26);

- Bell-jar farm, Jisperweg 109. The wooden gable on the front side is a special feature dating from the first half of the 19th century;

- Farm, Middenweg 185, dating from the second half of the 19th century;

- Farm 'De Meerwaarde', 1892, Middenweg 189, with brick facade (Ill. 7.1.B.30.);

- Middenweg 190, bell-jar farm built partly of wood, with brick facade (Ill. 7.1.B.31.);

- Farm 'De Kleine Bijenkorf', Middenweg 193 (Ill. 7.1.B.32). The building itself dates from the 19th century. A polychrome wooden relief has been placed against the facade; the relief represents two angels holding a beehive and is decorated with garlands and the symbols of agriculture and fishery (second half of the 18th century).

- Examples of houses:

- Middenweg 178, Elisabeth (Betje) Wolff née Dekker (1738-1804) museum (founded 1950; restored 1976 at a cost of NLG 300,000). It is the former parsonage dating from 1666. A new facade with multi-cornered bay window was built in the 19th century. The writer Elisabeth Dekker, called Betje Wolff, lived here from 1759 to 1777. Until 1876 it was used as a parsonage and from then until 1950 it was used as a private residence (Ill.7.1.B.63);
- The Heerenhuis (Manor) at the Rijperweg 83. Originally the town hall and hotel. The most important wing dates from 1826; because of the building's dual function there are two entrances. Restored between 1982-1983;
- 'Rustenhoven', Volgerweg 25. A prominent 18th century, symmetrically laid out house with two storeys, with the allure of a country estate. The year 1768 and an 'alliance arms' are carved over the entrance. The farm is behind the house, which is two windows deep and positioned diagonally (Ill. 7.1.B.38-39, 66.);
- House from ca. 1860, Volgerweg 41.

- Mill:
 - Flour mill 'De Nachtegaal', octagonal smock mill from ca. 1700, situated at Hobrederweg 4. Restored in 1973 (Ill. 7.1.B.22.);

- Buildings for the water authorities
 - Former Polderhuis (Water Board House) at the Noorddijk (23, now used as a private residence) (Ill. 7.1.B.36.);
 - Building of the former 19th century pumping station (now in use for exhibitions, among other things) and separate double machinist's dwelling, Noorddijk 18 (Ill. 7.1.B.44-45.).

- Smithy:
 - Former smithy, situated at the intersection of the Rijperweg and the Middenweg, with an 18th century 'Travalje' (dated 1744). A 'travalje', a trave, is a roof-covered structure where horses were shod (Ill. 7.1.B. 64-65.).
 - Taken over by the municipality of Beemster around 1950 with the objective of preserving the smithy for the future.

- Monumental wrought-iron entrance gates:
 - Middenweg 192. Belonged to the farm 'De Groote Bijenkorf';
 - Volgerweg 25, entrance gate from the fourth quarter of the 18th century belonging to the Rustenhoven house (Ill. 7.1.B.66.).

- Bridges:
 - Of the former country estate Zwaansvliet - built in 1628 for François van Oss - the brick arched bridge with brick gate posts at Volgerweg 83;
 - Arched bridge of the former country estate Volgerwijck, Volgerweg 36, with two gate posts crowned with lions, 17th century.

- Parts of the Stelling van Amsterdam:
 - (data taken from the Monument Register of the Province of Noord-Holland)

-Fort at Spijkerboor
Westdijk 46, 1464 PC Westbeemster

Land registry municipality: Beemster
Section: F Number: 1331
Coordinates: 117.950 / 506.050

Owner: Association for the Preservation of Nature Reservations (Vereniging tot Behoud van Natuurmonumenten)
Lessee: Netherlands Film Museum and two music bands
Use: Military purposes

Zoning plan: Rural Area 1994 (adopted in 1994)

Status: Provincial Monument of Noord-Holland, 02.09.1992
Maintenance: Original condition, reasonable architectural condition
Restoration: The armour-plated gun-turret was recently restored. Further restorations under preparation
Access: Public access

Characteristics

Location: The fort is situated along the southern ring-dike, at the south-western corner of the Beemster polder. The front axis is directed to the north. The Noordhollands Kanaal runs behind the fort and the dike, while the Beemsterringvaart lies to the west

Function: Closing off and defending the western Beemster ring-dike

Dates: 1889 - sand core fort island
 1913 - completion of fort with concrete buildings

Design: Type B, built of concrete. As an exception this fort has two storeys, due to the height of the dike which had to be defended. Unique in the Stelling and extremely rare in Europe is the intact artillery in the turret (double quick-firing cannon of 10.5 cm 1.25, 1911, Krupp-Gruson).
Other special features of the interior are the water reservoirs, the washing area and the lavatories. The fort watchman's house is situated on the inland side of the fort.

Nature: **

Environs: The original situation around the fort site remained unchanged: the open polder landscape outside the Stelling and the dike and watercourses along the fort.

- Fort along the Jisperweg
Zuiddijk / Jisperweg, Middenbeemster

Land registry municipality: Beemster
Section: F Number: 1212
Coordinates: 119.650 / 504.200

Owner: Association for the Preservation of Nature Reserves
Lessee: -
Use: Military purposes

Zoning plan: Rural Area 1994 (adopted in 1994)

Status: Provincial Monument of Noord-Holland, 09.02.1992
Maintenance: Original condition, good architectural condition
Restoration: None
Access: Not accessible

Characteristics

Location: The fort is situated along the southern ring-dike of the Beemster polder. The front axis is directed to the north. The Noordhollands Kanaal runs behind the fort and the dike.

Function: Closing off and defending the Jisperweg

Dates: 1889 - sand core fort island
 1914 - completion of fort with concrete buildings

Design: Type B, built of concrete; simplified version with a single control turret at the end of the postern at the site of the front building. Four machine-gun positions in the front rampart. Together with the Fort along the Middenweg, this is one of the last forts of the Stelling to be completed.

Special features of the interior are the water reservoirs, the washing area, the water purifier and the pumping installation.

Nature: **

Environs: The original situation around the fort site has remained unchanged: the open polder landscape outside the Stelling and the dike and canal within.

- Fort at the Middenweg
Zuiddijk / Middenweg, Middenbeemster

Land registry municipality: Beemster
Section: E Number: 1029
Coordinates: 121.400 / 503.600

Owner: Association for the Preservation of Nature Reserves

Lessee: Eurometaal
Use: Military purposes

Zoning plan: Urban Area 1994 (adopted in 1994)

Status: Provincial Monument of Noord-Holland, 02.09.1992
Maintenance: Original condition, reasonable architectural condition
Restoration: None
Access: Not accessible

Characteristics

Location: The fort is situated along the southern ring-dike of the Beemster polder. The front axis is directed to the north. The Noordhollands Kanaal runs behind the fort and the dike. To the east is the inundation sluice for the Beemster (Ill. 7.1.B.61.)

Function: Closing off and defending the Middenweg and the Zuiddijk

Dates: 1889 - sand core fort island
1914 - completion of fort with concrete buildings

Design: Type B, built of concrete; simplified version with a single control turret at the site of the front building. Four machine-gun positions in the front rampart. One of the last completed forts of the Stelling. Special features of the interior are the water reservoirs, the washing area, the water purifier and the pumping installation. There is a fort watchman's house at the inland side of the fort.

Nature: **

Environs: The original situation around the fort site has remained unchanged: the open polder landscape outside the Stelling and the dike and canal within.

- Fort along the Nekkerweg Nekkerweg 24, 1461 LC Zuidoost-Beemster

Land registry municipality: Beemster
Section: G Number: 576
Coordinates: 123.850 / 504.600

Owner: Province of Noord-Holland
Lessee: Department of Roads, Traffic and Transportation
Use: Military purposes

Zoning plan: Rural Area 1994 (adopted in 1994)

Status: Provincial Monument of Noord-Holland, 02.09.1992
Maintenance: Original condition, reasonable architectural condition
Restoration: None

Access: Operations-related access

Characteristics

Location: The fort is situated not at the edge but somewhat forward in the Beemster polder, due to the height of the site. The front axis is directed to the north.

Function: To the south-west lies the inundation sluice for the Beemster. Closing off and defending the Nekkerweg and the Volgerweg

Dates: 1889 - sand core fort island
1911 - completion of fort with concrete buildings

Design: Type B, built of concrete.
Special features of the interior are the water reservoirs and the water purifier.
There is a fort watchman's house at the inland side of the fort.

Nature: **

Environs: The original situation around the fort site has remained unchanged: the open polder landscape stretches from all sides.

- Fort Benoorden Purmerend Kwadijkerweg 8, 1461 DW Zuidoost-Beemster

Land registry municipality: Beemster
Section: D Number: 3183 / 3184 / 3187
Coordinates: 125.850 / 505.450

Owner: J. Bart en Zoon Holding B.V.
Lessee: J. Bart en Zoon Holding B.V.
Use: Military purposes

Zoning plan: Rural Area 1994 (adopted in 1994)

Status: Provincial Monument of Noord-Holland, 02.09.1992

Maintenance: Original condition, reasonable architectural condition
Restoration: Under preparation
Access: Operations-related access

Characteristics

Location: The fort is situated along the ring-dike in the south-east of the Beemster polder. The front axis is directed to the north.

Function: Closing off and defending the Beemsterringdijk and the Purmerenderweg and Rijperweg

Dates: 1886 - sand core fort island

1912 - completion of fort with concrete buildings

- Design: Type B, built of concrete.
Special features of the interior are the water reservoirs and parts of the kitchen.
There is a fort watchman's house at the inland side of the fort.
- Nature: **
- Environs: The original situation around the fort site has remained unchanged: the open polder landscape outside of the Stelling and the dikes

- Dike between the forts to the north of Purmerend and at Spijkerboor;
- Inundation sluice in the southern Beemsterringdijk (Ill. 7.1.B.61.);
- Bridge/dam sluice in the Rijperweg in Middenbeemster;
- Culvert in the Volgerweg - Jispersloot (Ill. 7.1.B.60.).

4.2. LEGAL AND ADMINISTRATIVE PROTECTION

Conservation of Monuments and Sites - State:

- * Armour or Backbone. Cultural Policy 1997-2000
(Ministry of Education, Culture and Science, 1996)

In this document the State Secretary for Education, Culture and Science set out his policy on culture for the Lower Chamber of the States General. His document includes:

'Alongside cultural education, in the coming period selection will be a major theme in the field of cultural heritage. Selection is a continuous and critical process of surveying and appraising and, depending on the results, preserving or putting aside. In the case of the cultural heritage, naturally one must take account of the past and, given its constant increase, of the future too.....' (p. 49, Summary);

'Major changes to the environment will radically alter the look of the Netherlands. If we do not pay careful attention the result could be a levelling down, metaphorically, of town and country. So my aim is to strengthen the cultural contribution to physical planning. The link with the past is an essential element in reshaping the Netherlands. The quality of the physical environment is enhanced by the conservation and development of cultural and historical values as embodied in views of towns and villages or valuable man-made landscapes. The point is to use existing qualities as a base for new developments which should preferably be creative and inspiring, and where necessary restrictive... I therefore propose to strengthen the existing cooperation with the Ministry of Agriculture, Nature Management and Fisheries and the Ministry of Housing, Spatial Planning and the Environment, for example by drawing up a joint policy memorandum' (op. cit., p. 50).

- * The architecture of space. Paper on the architecture policy 1997-2000

This Paper was drawn up by the State Secretary of Education, Culture and Science, the Minister of Housing, Regional Development and the Environment, the Minister of Agriculture, Nature Management and Fisheries and the Minister of Transport and Public Works. These

ministers set out for the Lower Chamber their policy for 1997-2000 relating to architecture and how it is expressed.

The Paper reads:

"... It is therefore of great importance that environmental development takes the cultural-historical context into account. In many situations this context can be used as a starting point for further developments. This safeguards the recognition and identity of the every-day living environment. Research into new dynamic concepts for the integration of existing and new environmental qualities will be stimulated. An analysis of historical environmental developments is indispensable in an integrated, quality policy. It can provide insight into the existing characteristics and the development potential, which can entail an major quality impulse for the plan-forming process..."

(p. 50).

* 1988 Dutch Monuments Act (Ministry of Education, Culture and Science)

State monuments are defined as:

- "1. Everything constructed over at least fifty years ago that is of public importance because of its beauty, its importance to science or its cultural-historical value;
2. Sites which are of public importance because of the presence of matters as mentioned in point 1"

(Article 1, item a).

The following has been determined for their conservation:

- "1. It is forbidden to damage or destroy a protected monument;
2. Without or in departure from a written permit, it is forbidden to:
 - a. demolish, interfere with, move or in any way change a protected monument;
 - b. restore or use a protected monument or allow it to be used, in a manner which can damage or endanger the monument."

(Article 11).

Properties and their monumental value are described in the State Monument Register (1988 Dutch Monuments Act, Art. 6).

Cityscapes and townscapes are:

"groups of real estate which are of general importance because of their beauty, their mutual spatial or structural relationship or their importance to science or their cultural-historical value and which include one or more monuments"

(Art. 1.f, 1988 Dutch Monuments Act)

Protected cityscapes and townscapes:

"cityscapes and townscapes which have been designated as such by Our Minister and our Minister of Housing, Regional Development and the Environment in accordance with Article 35 of the 1988 Dutch Monuments Act, commencing on the date of publication of the designation in the Nederlandse Staatscourant (Netherlands Government Gazette)"

(Art. 1.g, 1988 Dutch Monuments Act).

To preserve a protected cityscape or townscape, a local council must draw up a zoning plan as referred to in the Regional Development Act (1985 Statute Book, 626) (Art. 36.1, 1988 Dutch Monuments Act).

The Act not only regulates the procedure for the designation of monuments as protected monuments (Arts. 1-10), it also contains articles setting out the procedure for granting permits to modify, demolish or remove protected monuments (Arts. 11-21). The Act also contains articles regarding compensation grants for damage which it would be unreasonable for the owner to bear in whole or in part (Arts. 22-29), the use of forceable means (Arts. 30-33), subsidy grants (Art. 35), as well as articles specifically geared toward archeological monuments. It also contains articles relating to penalty clauses (Arts. 56-58).

The Netherlands implemented its first Monuments Act in 1961. The current act, a revision of the act of 1961, came into effect in 1989.

In the meantime the national government has protected more than 43,000 monuments, covering a wide range of categories (from border posts to factories) and designated 320 protected cityscapes/landscapes.

In the years 1987-1993, in conjunction with the provinces and the municipalities, there was a national stock-take of monuments from the period 1850-1940. At the time, areas with a special historical spatial town planning significance were also traced.

Between 1994 and 1998/99 selections will be made from the above study of properties which are eligible for protected status or designation as a protected cityscape/townscape. It is expected that an additional 16,000 monuments will be awarded protected status and another 120 cityscapes/townscapes will be designated as protected.

The municipality of Beemster has submitted a list of nominations to the national government of 17 monuments from the period 1850-1940 for protection pursuant to the 1988 Monuments Act. This would bring the total number of nationally protected monuments in the municipality of Beemster to 77.

Conservation in the Netherlands is a direct joint responsibility of the three administrative layers: the national, provincial and municipal governments.

Protection of monuments and designation of protected cityscapes/townscapes is the task and responsibility of the national government. Monuments are generally protected following a proposal of a local council. As the Netherlands has "open monument lists", any interested party can submit a proposal to the Minister/State Secretary of Culture for including a structure on the monument list. As regards cityscapes/townscapes to be designated as protected by the national government, such designation takes place after consultation with the municipalities where such cityscapes or townscapes are situated.

The national government also makes funds available for the restoration and regular architectural maintenance of protected monuments.

The granting of a permit to modify or demolish a protected monument is in principle granted by the municipalities after a recommendation from the national government. If the permit relates to a protected monument which lies outside of the built-up area, a recommendation from the provincial government is required as well.

If the issue concerns buildings within a protected cityscape or townscape which do not have protected monument status, the municipality must issue a permit for the entire or partial demolition (Municipalities Act, article 125). This is to prevent total loss and to ensure that protected monumental values of the cityscape or townscape are protected.

It is also the municipalities who grant subsidies for the restoration and maintenance of protected monuments on the basis of funds allocated by the national government on the basis of multi-year plans.

Regional Development - State

* Regional Development Act (Act dated 5 July 1962)

Re regional plans:

"The Provincial Executive (of a Province) does whatever is necessary in preparation of the stipulation of the Provincial policy concerning regional development...."
(Art. 4, item 1, Regional Development Act)

"The Provincial Executive can determine a regional plan for one or more parts of the Province or for the whole Province. The regional plan outlines the future development of the area included in the plan. The Provincial Executive can also revise a previously determined regional plan"
(Art. 4a, item 1, Regional Development Act)

"A regional plan is reviewed at least once every ten years, subject to exemption granted by Our Minister for a maximum of ten years"
(Art. 5, Regional Development Act)

Re zoning plans:

A zoning plan is drawn up by municipalities, insofar as such is necessary for good spatial planning, for their areas

"not belonging to what is called a built-up area. The zoning plan designates the use of the land included in the plan. If necessary and in connection with the designation, the zoning plan stipulates regulations concerning the use of the land included in the plan and the structures situated on that land...."
(Art. 10.1, Regional Development Act)

Art. 44, item 1b of the Regional Development Act stipulates that when a permit has not been granted for activities requiring a permit in pursuance of the 1988 Dutch Monuments Act or in accordance with a Provincial or a municipal monuments bye-law, the municipal executive must refuse to grant what is called a development permit (a permit for carrying out activities that have a permanent impact on the use of the land).

"In departure from what is stated above the municipal executive shall postpone the decision concerning a permit request (...) if no grounds exist for refusing the permit and the permit request involves a project or an activity in an area belonging to a protected cityscape or townscape in the sense of the 1988 Dutch Monuments Act , for which no zoning plan covering its protection applies"
(Art. 46, item 5, Regional Development Act)

This 'postponement' shall apply until a zoning plan which is to be determined or revised in order to meet Art. 36 of the 1988 Dutch Monuments Act is irrevocably approved.

The municipal executive can

"grant a construction permit if the project or the activity does not conflict with the zoning plan being prepared for the preservation of the protected cityscape or townscape and the Provincial Executive (of a Province) has declared in advance that there are no objections to granting the permit'

(Art. 46, item 10, Regional Development Act)

* Fourth Policy Document on the Extra Regional Development. On to 2015. Part III: Government opinion. Dutch Lower Chamber, 1990-1991 meeting year, 21 879, nos. 5-6. Ministry for Housing, Regional Development and the Environment. SDU Publishers, Plantijnstraat. [The Hague, 1991] (Relevant excerpt):

"The relationship to environmental development is given greater importance within the policy regarding the preservation of monuments and historic buildings aimed at maintaining and restoring cultural-historical values"

In this Paper the Beemster polder has been designated a rural area for which the so-called 'brown course' applies. This entails that good options must be offered for the development of soil-related forms of agriculture.

* Nota Landschap. Regeringsbeslissing Visie Landschap (Agriculture Paper. Government Decision on Landscape Vision). Ministry of Agriculture, Nature Management and Fisheries. The Hague, October 1992

This Paper provides further details with regard to the vision of the national government on the landscape and on the rural area for which the Fourth Paper on Additional Regional Development has already set out the general direction. The Agriculture Paper lays down the government policy for agriculture. It is furthermore one of the building blocks for the Green Area Structure Plan (see hereafter). The Agriculture Paper will apply for approximately 30 years.

"The main objective of the landscape policy reads as follows:

To promote of the preservation, the restoration and the development of high quality landscape, i.e., a landscape where identity and sustainability are the focal point"

(p. 10)

"In order to realise this objective a landscape must meet aesthetic, ecological and functional-economic requirements"

(p. 92)

The Agriculture Paper speaks of a 'generic' landscape policy. This applies to all parts of the Dutch culture landscape. It is aimed at:

"- Maintaining and improving the identity of the Dutch landscape;

- Increasing social support for caring for the landscape"

(p. 93)

The Paper specifies the following focus points for the 'polder'-types landscapes:

"- Alignment with the rational layout of the polders and the landscape features that are

- interrelated with this layout (e.g., main direction of the pattern of roads and watercourses, design and spaces);
- Align new developments to - or contrast them with - this plan, in such a way that justice is done to the geometric, monumental character of the polders;
 - Attention for the design of the roads, watercourses and embankments and for the detailing of connecting points between these elements;
 - Align the range of choices and style of trees to the characteristics of the polders (substantial sizes, cultural and geometric character, good stand factors)
- p. 108, 109)

With regard to the landscape policy to be followed, the Government adheres to the 'Area Visions For Nature, Forests and Landscape'. These visions, to be drawn up jointly by the government and a province, set out a more concrete plan per area, based on integration of landscape, nature and forest management (p. 126);

- * Structuurschema Groene Ruimte. Het landelijk gebied de moeite waard. Deel 3 Kabinetsstandpunt (Green Area Structure Plan. Rural land is worth the effort. Part 3, Position of the Cabinet). Ministry of Agriculture, Nature Management and Fisheries, The Hague, September 1993

(Relevant excerpts):

- "This planological core decision (PKB) summarises the objectives, the main outline and the most important measures of the national environmental policy for agriculture and horticulture, nature, landscape and cultural history, open air recreation, tourism, forestry and fisheries..." (p. 13);
- "This PKB relates to the period up to the year 2010. The formulated policy specifically relates to the period 1993 through 2000 (first phase). It includes a view to the year 2010 (second phase)" (p. 15).

A distinction is made between the 'generic' and 'specific' policy to be implemented by the government. 'Generic' relates to a policy that applies to the entire country; 'specific' relates to particular areas.

The Structure Plan is a planological decision of the government. In the context of regional development and with regard to their environmental policy, the provinces and the municipalities must take into account the guidelines as set out in the Structure Plan. When the regional plans (provinces) and zoning plans (municipalities) are reviewed, they are checked among other things against the principles of the Structure Plan.

With regard to regional development for polders, the Structure Plan sets out the following 'generic policy':

- Alignment with the rational layout of the polders and the landscape features which correlate with this layout (e.g., main direction of the pattern of roads and watercourses, design of the spaces);
- Attention for the differences between the older and younger polders in the western Netherlands, the IJsselmeer polders and the Frisian peat polders;
- Align new developments to - or contrast them with - this plan, in such a way that justice is done to the geometric, monumental character of the polders;
- Attention for the design of roads, watercourses and embankments and for the detailing of

connecting points between these elements;

- Attention for the specific character of the remaining upland in the polders;
- Preservation of belt canals, ring-dikes and windmill networks;
- Align the range of choices and style of trees with the characteristics of the polders (substantial measurements, cultural and geometric character, good stand factors).

Under the Structure Plan, De Beemster also has a 'specific' importance. This is the conservation and restoration of the existing landscape quality'. This relates to the conservation and restoration of cultural-historical and geographical elements and patterns, the small scale, the spatial interrelationships and its beauty (= the integrity of such a landscape).

The national policy does not allow environmental interventions and developments which affect the cultural-historical values, the spatial cohesiveness, beauty and/or geographical values. Only in the event of substantial societal interest can actions be taken that are contrary to this policy. The presence of such interest must be determined through prior research. According to the Structure Plan, it must also be determined whether this interest can be met in some other manner or some other place.

The Plan further indicates that "policy relating to the preservation of historical-geographical elements and patterns in correlation with the policy for the preservation and management of archeological and historical-architectural elements is to be further developed".

According to the Structure Plan (Map 11), De Beemster forms part of the "recreative spatial structure" planned for the Netherlands.

Under the Structure (Map 12), the Beemster polder forms part of the designated national landscape pattern, whereby the key issue is the preservation and restoration of the existing landscape quality.

As in the Fourth Policy Document on the Extra Regional Development, the Structure Plan follows the 'brown course'.

With regard to De Beemster, the Structure Plan indicates that agriculture is the main function of the area.

Conservation of Monuments and Sites - Province of Noord-Holland:

* Provincial Monument Decree 1996 (see Appendix 8.3)

Under the Decree a monument is defined as:

"real estate property, which is of public interest due to its cultural-historical value".

The Decree defines a cityscape or townscape as:

"a group of real estate properties which are of public interest due to their cultural-historical value, their spatial or structural cohesion, and in which group there are one or more monuments designated as protected by the national and/or provincial government".

Furthermore, the Decree sets out provisions regarding the procedures for including monuments on the provincial monument list, as well as prohibitory provisions and provisions

regarding the granting of permits. The procedure regarding designation as a protected cityscape or townscape is a separate chapter in the Decree.

The province of Noord-Holland possesses a permanent independent advisory committee which advises the Board of the Provincial Executive on the Provincial Monument Decree 1996.

The province has an ordinance relating to restoration and maintenance of monuments protected by the Province, namely, the "Ordinance regarding the Restoration and Maintenance of Monuments in Noord-Holland" (see Appendix 8.4). This ordinance came into effect in 1996.

The province can make funds available for the restoration and maintenance of monuments protected by the province of Noord-Holland (see Appendix 8.4). These funds can be in the form of subsidies, with a maximum of 40% of the restoration costs which the province has stipulated as being eligible for subsidy. With regard to restoration, the province attaches the condition that the owner will not modify the building and will maintain it in the condition achieved through restoration (Ordinance, art. 5.a). After restoration the owner is also obliged to join the Monumentenwacht (Monument Trust).

For maintenance the province can grant a subsidy of 40% of the costs eligible for subsidy with a maximum subsidy amount of NLG 40,000 per calendar year. Windmills can receive an annual subsidy of NLG 5,000 to operate them.

Regional Development - Province of Noord-Holland

* Streekplan Waterland. Beschrijving en Toelichting. (Waterland Regional Plan. Description and Explanation). Province of Noord-Holland, September 1991

The regional plan sets out the environmental policy up to the year 2000. The main lines of the environmental policy are "geared toward the preservation and improvement of urban and landscape structures ... The policy is further geared toward frugal use of the scarce space" (p. 16). When discussing rural areas, the Regional Plan states that the policy "is geared toward preserving, restoring and improving the unique characteristic and quality of the rural area and on the differentiation of town and country" (p. 20).

As regards the wind energy policy, the Regional Plan states on p. 22 that:

"there is a conservative policy for the placement of wind turbines for ... cityscapes and townscapes worthy of protection. Placing groups of medium-sized turbines far afield from any town is excluded, with the exception of the Beemster, Wijdewormer and Purmer polders".

(NB: the municipality of Beemster has stated that it does not agree with any plans for this in view of the spatial character of the Beemster).

The Beemster polder is part of the National Central Landscape of Noord-Holland.

The Regional Plan states the following about the polders:

"Preservation and development of the agrarian function and the characteristic spatial structure are basic principles of the policy for the Beemster ... The historical allotment pattern is an essential fact." (p. 34).

"The withdrawal of farmland in the polders for other purposes must be restricted as much as

possible because of the good physical features of the soil and so as not to impede the required increases in scale, particularly in agriculture" (p. 34).

As regards traffic facilities in the Beemster it is stated that they:

"must fit within the geometric structure of the Beemster" and that "the Kruisoord polder may not be intersected" (p. 34).

The Regional Plan states that Zuidoostbeemster is characterised by a:

"relatively closed character as a result of a concentration of (greenhouse) horticulture" (p. 34).

In view of the open character of the Beemster greenhouse horticulture may only be expanded in Zuidoostbeemster, while a more stringent policy will apply to the rest of the polder (p. 34).

From a landscape point of view, the dikes at Zuidoostbeemster must be:

"visually reinforced, while the foot of the dikes and the reed-land must allow for nature development in relation to the belt canal" (p. 35).

It is proposed that the forts along the northern side of the belt canal:

"be included in the framework of the Randstadgroenstructuur (Randstad Green Structure) in the development of recreational use, partly for the benefit of Purmerend" (p. 35).

"From an ecological point of view, the uplands of the Beemster (Kruisoord) are important ... It is essential to keep the different soil, water level and allotment structure as distinct entities" (p. 35).

"Building capacity may not be expanded in the centres of Noordbeemster (situated at the Middenweg-Oosthuizerweg intersection), Westbeemster and Zuidoostbeemster" (p. 35).

"It is desired that the traffic facilities in Middenbeemster be improved by the municipality by means of a peripheral road to the south, directly along the built-up area" (p. 35).

Page 57 of the Explanation belonging to the Regional Plan states that it is possible to connect the Oosthuizerweg to the A7 by means of a 'semi-connection', i.e., only in southerly direction. The objective of this connection is to alleviate the traffic on the Middenweg and possibly the Purmerenderweg.

Conservation of Monuments and Sites - Municipality of Beemster

On 24 April 1991 the municipality of Beemster adopted a monument decree. The Decree was revised in 1994 and then re-adopted as the '1994 Beemster Monument Decree' (16 June 1994).

On 8 July 1993 the Municipal Council of Beemster decided to appoint the Stichting Noordhollandse Welstandscommissie as its monument committee (as referred to in the Monuments Act 1988, Art. 15).

This committee advises the municipality on restoration plans for monuments protected by the national government and on modification plans for buildings situated within the boundaries of the protected townscape of Middenbeemster.

Regional Development - Municipality of Beemster

- * Zoning plan 'Zuid-Oost' 1971 of the municipality of Beemster. Vink VandeKuilen N.V., Amsterdam

Adopted by the Municipal Council on 28.8.1971.

Relates to the Volgervaart area, the Beemsterringvaart, the Noordhollandskanaal and Rijksweg A7;

- * Zoning plan Middenbeemster Noordoost 1980. Municipality of Beemster. Vink VandeKuilen Klei BV. Architecture and Town Planning, Amsterdam, 1980.

Detailed Plan for 'Middenbeemster Noordoost - First Phase 1981' pursuant to Article 3 of the '1980 Middenbeemster Noordoost Regulations'. Municipality of Beemster. Vink VandeKuilen Klein BV, August 1981.

The zoning plan was adopted by the Municipal Council on 24.4.1980. It was approved by the Board of the Provincial Executive of the province of Noord-Holland on 3 March 1981. The Detailed Plan was adopted by the town council on 11.8.1981.

The zoning plan relates to the first construction, primarily residential construction, to take place in the north-eastern quadrant of Middenbeemster, the 'Leeghwater' plan. The area covers approx. 11 hectares. It is surrounded by lot boundaries to the north and east. The southern boundary is formed by the Rijperweg, the western boundary by the Middenweg. The land there was originally for agrarian purposes (cattle farming). The transition to the construction along the Rijperweg and the adjacent area of the former cattle market is demarcated by the former Leeghwater farm, formerly the 'Kerkzicht' farm (plaque with the year 1722) and the open space of the former plum garden, which has been reinstated.

The basic principle of the zoning plan was that the expansion was to connect up with the existing construction of the cross-roads town of Middenbeemster. It is also to be a transition area to the surrounding area.

A characteristic element in the construction of these houses is the requirement that the roofs have an angle of 51°, which is typical of De Beemster. In principle, the ridges run parallel to the roads.

- * Zoning plan 'Middenbeemster 1983'. Municipality of Beemster. VVK Architectuur en Stedebouw BV, Amsterdam, September 1983

Adopted by the Municipal Council on 29.9.1983.

This zoning plan anticipates the formal designation of Middenbeemster as a protected townscape, in conformity with Art. 35 of the Monuments Act (the townscape was registered on 26.11.1985).

Zoning regulations in the plan provide a number of safeguards which are to protect the historic spatial character. These regulations relate to construction on the building lines, the scale of construction, reconstruction and rebuilding, as well as the partial or total construction character that exists or could arise.

The use of colour and material, the design of the facades, the size and location of dormers are not regulated. The building regulations committee provides guidelines in this respect (the building regulations refer to aspects of the form in relation to the environment).

The zoning plan further states:

"In anticipation of the designation and in order to protect the cultural-historical values in the original cross-roads village, a legal regime has been opted for the lands and structures which, in accordance with their current location and shape will be more stringently applied than has been done in the surrounding area. Specifically, the often characteristic primary form of the main building (construction profile, determined by the height of the gutter, the height of the ridge, the width of the front wall and the depth of the building, as well as the direction of the ridges and the angle of the roof), has been laid down for each building or group of buildings" (p. 23T).

The trees along the roads and lanes and on the squares which belong to the protected townscape may not be cut down without a permit (Art. 28, p. 50T).

* Zoning plan 'Westbeemster 1986'. Municipality of Beemster. VVK Architectuur en Stedebouw BV, January 1987

Adopted by the Municipal Council on 22.1.1987.

* Zoning plan 'Middenbeemster Noordoost'. De Groene Poort, 1991. Municipality of Beemster. VVK Architectuur en Stedebouw BV, Amsterdam, May 1991

Adopted by the Municipal Council on 29.8.1991. Approved by the Board of the Provincial Executive of the Province of Noord-Holland on 31.12.1991.

The zoning plan relates to the expansion of Middenbeemster to the north-east, i.e., the land situated to the north of the 'Leegwater' plan in the north-eastern quadrant of Middenbeemster. The boundaries to the north and east of this plan are formed by allotment boundaries; to the south the plan is bordered by the built up area of the Leegwater area; the boundary to the west is formed by the Middenweg (with De Groene Poort farm, from which the plan derives its name).

Beemster forms part of the 'open space' specified by the national government. The surrounding townships may not undertake any construction here.

An intermediate area of 110 metres has been planned between the residential area of 'De Groene Poort' and the Middenweg, so that this open space will offer free space between the buildings along the Middenweg and the new construction. This will do justice to the significance of the historic construction and its structure.

The plan stipulates, as does the Leegwater plan, that the Netherlands Department of Conservation is to be informed of the plans for the most western part in view of the nearby protected townscape.

- * Zoning plan 'Middenbeemster, zuidwest 1993'. Municipality of Beemster. Council offices of the Beemster, Department of Regional Development and the Environment, Technical Department of Beemster and Zeevang, Middenbeemster, December 1993

Adopted by the Municipal Council on 24.3.1994; approved by the Board of the Provincial Executive of the province of Noord-Holland, 27.9.1994.

The plan covers the south-western quadrant of Middenbeemster, the borders of which are formed by the Rijperweg, the Jispersloot to the western side, by the boundaries of the lots and the ice-rink grounds to the south and by the Churchillpark, among other things, to the east. This area will house an institute, set up on the basis of anthroposophic principles, for the mentally handicapped. The plan also covers business premises.

The plan also speaks of a future peripheral road at Middenbeemster to relieve the pressure in the town centre and for accessibility of the business premises. The road must connect with the S10 and subsequently the A7.

- * Zoning plan 'Landelijk Gebied 1994' (1994 Rural Area). Municipality of Beemster. VVK Architectuur en Stedebouw BV, Amsterdam, March 1994

The zoning plan was approved by the Municipal Council of Beemster on 24 March 1994. The plan was adopted by the Board of the Provincial Executive of Noord-Holland on 1.11. 1994.

4.3 PROTECTIVE MEASURES AND MEANS FOR IMPLEMENTING THEM

Under the 1994 'Rural Area' zoning plan, the dimensions of 50, 20 and 10 metres have been indicated for the primary, secondary and tertiary roads, depending on their function.

It has also been established in the zoning plan that the construction boundaries will be laid directly around bell-jar farms and that other construction boundaries will be placed further away from the farms, so that the view of the bell-jar farms is not impeded. The objective is to maintain the open spatial character of the bell-jar farms. For bell-jar farms protected as monuments, the construction border has been placed explicitly behind the back wall of the building. The farms have the functions of 'civilian use', 'characteristic building and 'monument' in the zoning plan.

The zoning plan specifies for the 'characteristic building' category that such buildings are to be given adequate zoning regulations. At the same time, restrictive provisions have been included in the zoning plan (art. 32).

"In the first place it has been determined that the external principal shape, which greatly determines its character, is to be preserved."

The external principal shape determines the height of the gutters and ridges and the direction of the ridges, the shape of the roof, the angle of the roof, the design of the facade and the surface area.

Characteristic and non-characteristic farmhouses which will no longer be used for agrarian purposes can be given a residential function in accordance with a power of amendment in the zoning plan (Art. 38), if need be retaining their characteristic shape. These are new civilian residences in the planning area of the zoning plan.

Farmhouses must have roof timbers, even those being newly built, in order to distinguish them from the other buildings, as well as to reinforce their rural character. Outbuildings and farm buildings must also have roof timbers. These regulations relate to farms which are no longer used for agrarian purposes and which are being used as private residences.

For the period 1994-2004, the Waterschap De Waterlanden is bound by the Roadside Trees Policy Plan (1994) for managing the trees along the 167 kilometres of roads in De Beemster. 28 kilometres has been judged moderate/poor, 13.95 kilometres as reasonable and 125 kilometres as good. The plan specifies when any replacement and replanting is to commence. The Policy Plan also sets out that a total of 33 kilometres of bare road sections will be planted: Purmerenderweg, Hobrederlaan, Hobrederweg (east), Oosthuizerweg (east) and the Zuiderpad. There are poplars, ashes, elms and lime trees in many parts of De Beemster.

The different types of trees on either side of the entrance from the public road to a farm are exceptional. The Policy Plan sets out that the water district board will continue to follow this historic use in the future. In many cases, chestnut trees have been used in addition to lime trees, sycamores and maple trees.

The trees along the roads are also covered by the Forestry Act. The Forestry Act has provisions relating to felling and replanting. Prior to felling, notice thereof must be given to the Ministry of Agriculture, Nature Management and Fisheries. After felling one is obligated to replant within three years. In principle, the new tree or trees must be planted in the same spot.

The protection of monuments and the designation (of parts) of historic cities and towns as protected cityscapes or townscapes takes place on the basis of the Monuments Act (see also 4.2). In other words, the national government is responsible for this protection. Provinces and municipalities can also draw up additional lists of monuments on the basis of their own monument ordinances, provided these properties are not already protected by the national government. In principle, the provinces and municipalities are allowed to designate their own protected cityscapes and townscapes.

Monuments which are protected by the national government are included in the monument register which the Minister of Culture has set up for every eligible municipality (Art. 6.1, 1988 Monuments Act). In the Netherlands there are only a few municipalities where no monuments are protected by the national government.

Cityscapes and townscapes protected by the national government are included in the monument register which the Minister for Culture has established for every eligible municipality (Art. 35, 1, 1988 Monuments Act). The municipal council of a municipality within which a protected cityscape or townscape is situated must adopt a specific zoning plan for that area. This zoning plan is to protect the cityscape or townscape in view of the special character of the designated area

4.4 AGENCY/AGENCIES WITH MANAGEMENT AUTHORITY

- Municipality of Beemster
Rijn Middelburgstraat 1

P.O. Box 7
1462 ZG Middenbeemster /The Netherlands

Telephone: ++31 299 682 121

Telefax: ++31 299 681 771

Alderman: Mrs J.B.P. Benningen-Harlaar

- Provincial Administration of Noord-Holland
Dreef 3
2012 HR Haarlem
The Netherlands

Telephone: ++31 23 514 31 43

Telefax: ++31 23 531 44 82

- Waterschap 'De Waterlanden'
Middenweg 181

P.O. Box 13
1462 ZG Middenbeemster
The Netherlands

Telephone: ++31 299 682222

Telefax: ++31 299 681951

Dike-warden: H.A. van Alderwegen

- District Water Board for Discharging Sluices in Holland's Northern Quarter
(Hoogheemraadschap van Uitwaterende Sluizen in Hollands Noorderkwartier)
Schepenmakersdijk 16
1135 AG Edam
The Netherlands

Telephone: ++31 299 39 13 91

Dike-warden: J. van der Vlist

- Netherlands Department for Conservation (Rijksdienst voor de Monumentenzorg)/Ministry of Education, Culture and Science
Broederplein 41
3703 CD Zeist

P.O. Box 1001
3700 BA Zeist
The Netherlands

Telephone: ++31 30 698 32 11

Telefax: ++31 30 691 61 89

Director: Drs. A.L.L.M. Asselbergs

- Association for the Conservation of Nature Monuments in the Netherlands (Vereniging

tot Behoud van Natuurmonumenten in Nederland)

(Relates to the former Spijkerboor forts, Fort at the Jisperweg, Fort at the Middenweg which belong to the Stelling van Amsterdam, which is included on the World Heritage List)

Noordereinde 60
1243 JJ 's-Graveland
The Netherlands

Telephone: ++31 35 655 99 33

4.5 WHICH MANAGEMENT IS EXERCISED AND NAME AND ADDRESS OF THE CONTACT PERSON

The municipality of Beemster is the responsible authority. With regard to water management within De Beemster, responsibility lies with the Waterschap De Waterlanden.

See further under 4.2, 4.3 and 4.4.

4.6 AGREED PLANS RELATING TO THE PROPERTY

For list and description, see 4.4.

4.7 SOURCES AND LEVELS OF FINANCE

See under 3.4.

In general, restoration of protected monuments is financed on an on-going basis in the Netherlands. Although in the middle of the '80s the total restoration budget of the national government decreased every year, this situation has now been reversed. For example, recently an extra donation of 275 million guilders was made available in order to accelerate the restoration of many monuments up to the year 2003 on the basis of a Monument Preservation Work Plan (from 1995).

In order to ensure that restoration and maintenance monies are awarded by the national government in line with need and effectiveness, allocation is based on three schemes: National Government Subsidy Scheme for the Restoration of Monuments Decree (Brrm 1997), National Government Subsidy Scheme for Monument Conservation Decree (Brom) and the National Government Subsidy Scheme for Historic Country Estates (Brhb) (see Appendices 8.6, 8.7 and 8.8). In the fiscal sense tax deductions apply for substantially conserving a protected monument.

Pursuant to the 1984 City and Town Renovation Act ("Wet op de Stads- en dorpsvernieuwing") cities and towns in the Netherlands have been systematically restored in the past few years, and will continue to be restored until the beginning of the 21st century

"in the area of town planning, but also in social, economic, cultural and environmental protection respects, geared toward conservation, restoration, improvement, reallocation or demolition of built-up areas of the municipal territory" (City and Town Renovation Act, Art. 1.1).

The monuments and the historic public area are also part of the city and town renovation activities.

In addition to the regular restoration budget of the national government there is also the option of obtaining subsidies in the framework of the 1997-2000 Deltaplan for Cultural Conservation for combatting environmental damage to protected monuments such as stained glass, stone statues, gates, tombstones and the like. An annual amount of NLG 3 million has been set aside for this.

The restoration of monuments is increasingly geared toward regular maintenance rather than carrying out substantial restoration every so many years. Not only financial considerations, but considerations of principle play a role.

Implementing regular maintenance (maintenance which has been made possible by the government) prevents intrusive restoration work with regard to historic building materials and/or constructions, as is often the case with restorations. Thanks to this working method the monument will be better able to retain its significance as a historic material source.

One of the tools used in this respect is the existence of the Monument Trust (an equivalent of an automobile association).

For 25 years the Monument Trust has been carried out bi-annual inspections on the architectural condition of monuments that are registered with the Trust, in order to establish in due time what, usually minor, maintenance work has to be carried out to prevent unnoticed deterioration.

45 teams of experienced architects work throughout the entire country, on a province-by-province basis.

For a membership of approx. NLG 90 per year and for around NLG 32.50 per hour, owners of national, provincial and municipal monuments can have a specialised architectural employee of the Monument Trust carry out an inspection. In total there are some 12,500 inspections per year (500 public buildings; 50 defence structures; 3,500 churches; 5,500 houses; 550 agrarian buildings). Minor defects are rectified on the spot. After the inspection the owner receives a written report. On the basis of this report, long-range maintenance plans can be drawn up which in turn can be used in the framework of the National Government Subsidy for Monument Conservation Decree (Brom).

The plan is that 20,000 inspections are carried out annually by the year 2000.

The 1997 National Government Subsidy for the Restoration of Monuments Decree allows for a restoration subsidy for monuments protected by the national government. The reason for the subsidy is the technical need for restoration. The following percentages apply: 40% for church monuments, 40% for windmills and pumping stations, 30% for provincial monuments and 40% for monuments owned by institutions which seek to preserve the monuments. All other categories receive 20%, which can be increased to 30% depending on the legal/fiscal position of the owner.

The National Restoration Fund is a special entity. It is a financial fund with which subsidies which will only become available later on can be pre-financed at a lower interest rate than that used by the banks for mortgages.

The National Government Subsidy for Monument Preservation Decree (Brom), which relates to a number of categories of monuments, has a subsidy percentage of 50%. This subsidy relates to the maintenance of monuments such as country estates and castles, but also such things as former military forts or farms with thatched roofs which are still used for agricultural purposes. There are special options for church buildings. Their subsidy is granted to cover the

costs of maintenance which is carried out over a period of ten years on the basis of a maintenance plan which has been approved by the State Secretary of Culture in advance. For five years after the work has been completed, the owners are obliged to draw up an annual report on the architectural condition of the monument.

When proper conservation is in place and has been well-rooted in society, then it too will be subject to changes following the social-cultural changes that occur in society. For example, there is the option of taking on experiments and projects which have to research new developments within conservation (with regard to restoration and preservation) and which could serve as national examples. The national government has made an annual amount of NLG 2.5 million available for the next two years.

There is a provincial subsidy scheme for the protected monuments of the province of Noord-Holland. See further under 4.3 above.

4.8 TOURISM

No specific tourism facilities have been set up for the Beemster. Tourists can obtain information about the polder at the VVV (Tourist Information Office) in Middenbeemster. The Betje Wolff Museum also provides a picture of De Beemster as it was in the past.

The ANWB (Royal Dutch Touring Club) has set out a tourist route in the province of Noord-Holland, the 'Koggen', which runs partly through De Beemster (see Appendix 8.10). Cyclists can follow a 38 kilometre route, the Beemsteroute, through the polder. Five cycling routes have been set out along the entire Stelling van Amsterdam. The Beemsterlandroute goes past Fort Spijkerboor (which can be visited on the last Saturday of the month), the Forts at the Jisperweg, the Middenweg and to the north of Purmerend (which has a restaurant).

Chapter 5 FACTORS AFFECTING THE PROPERTY

5.1 DEVELOPMENT PRESSURES

Urban and rural development in the Netherlands does not take place just like that. Government permits are required to expand existing buildings and for new construction. Plans must be in accordance with the zoning plan which applies for a given municipality.

Municipalities are also obliged to review the zoning plan every ten years which does not always occur in practice.

Zoning plans must be in accordance with the province's regional plan. The regional plan must in turn further detail the environmental development policy as indicated by the national government for the entire country by means of papers on regional development. For a further specification of the various papers and plans which apply (including for De Beemster), see 4.3.

An essential point for the spatial quality of De Beemster is that the regional plan does not permit any further urban development in the small area of Zuidoostbeemster.

As described above, the historic centre of Middenbeemster was designated a protected townscape under the 1988 Monuments Act.

Gradual changes are occurring in agriculture, as the course of history and the above discourse shows. The provisions of the municipal zoning plan also apply to changes in farming.

5.2 ENVIRONMENTAL PRESSURES

This is not really an issue in De Beemster.

5.3 NATURAL DISASTERS

Large sections of the west of the Netherlands, in particular the provinces of Holland, were reclaimed throughout a centuries-long struggle against the water, the 'water wolf'. In particular, since the Middle Ages a system of collective water management, developed by the citizens and the cities in the form of water boards, polder boards and district water boards, has developed which is permanently geared toward preventing the risk of floods. These are public authorities which under the Water Authority Act are obliged to take care of dikes and water drainage. The provincial administration monitors these authorities.

It is the task of the Waterschap De Waterlanden and of the Hoogheemraadschap van Uitwaterende Sluizen in Hollands Noorderkwartier to permanently, i.e., day and night, monitor the status of the water and the dikes in and around De Beemster. The same applies for the polders surrounding De Beemster.

In contrast to the preceding centuries, De Beemster is no longer in any immediate risk of flooding by the IJsselmeer because the former Zuiderzee (now the IJsselmeer) was closed off from the Wadden Sea through the construction of the Afsluitdijk (the IJsselmeer Dam) (completed in 1932)

5.4 VISITOR/TOURISM PRESSURES

In view of what has been set out under 4.8, there are no demonstrable pressures caused by tourism.

5.5 NUMBER OF INHABITANTS WITHIN THE PROPERTY, BUFFER ZONE

As previously indicated, De Beemster has a population of 8,605.

CHAPTER 6 MONITORING

6.1 KEY INDICATORS FOR MEASURING THE STATE OF CONSERVATION

6.2 ADMINISTRATIVE ARRANGEMENTS FOR MONITORING PROPERTY

One of the key indicators is the long-range programme / requirement estimate, which a municipality draws up with an eye to the National Government Subsidy for the Restoration of Monuments Decree (Brrm).

An important tool in this respect can be the public register maintained by the Municipal Executive or the Minister of Culture. This register contains all permits which have been granted pursuant to the 1988 Monuments Act (art. 12-21).

The permits which have been granted pursuant to a zoning plan can serve as a key indicator on the basis of which regional development developments and changes in and to the area to which the zoning plan relates can be measured and evaluated.

Further important factors are the annual budget articles of the province or the municipality for provisions for the public area.

Monitoring in accordance with policy can take place on the basis of the policy papers and plans set out under 4.3.

Actually, it is a type of reactive monitoring, as the governmental policy in the Netherlands is periodically adjusted and updated on the basis of societal changes or as stipulated by legislation and rules. In this process, the experiences of the preceding period are always evaluated.

6.3 RESULTS OF PREVIOUS REPORTING EXERCISES

De Beemster has not yet been monitored in accordance with the Operational Guidelines. For insight into the level of maintenance, please refer to 3.4.

CHAPTER 7 DOCUMENTATION

7.1.A MAPS AND PLANS

- 7.1.A.1 Purmerend.
[Reproduction from: R. Fruin, *Nederlandsche steden in de 16e eeuw. Plattegronden van Jacob van Deventer. 111 teekeningen en 97 cartons in facsimile etc.* (Dutch cities in the 16th century. Maps by Jacob van Deventer.) Martinus Nijhof, The Hague, 1916-1923].

The maps by Jacob van Deventer were made by order of the King Philip II of Spain, 1588. The still undrained water of the Beemster is set out to the north-east of Purmerend.

- 7.1.A.2 'Caerte van de gheleghentheynt van de Beemster met de landen die daer omme ghelegen zijn, na rechte landmetersche conste op perfecte maet aldus ghestelt, Pieter Cornelisz Cort, 1607' (Map of the location of the Beemster with the lands surrounding it, drawn up to perfect scale after land survey, Pieter Conrelisz Cor, 1607). Willem Jansz. Blaeu, Amsterdam, 1607. Scale approx. 1:40.000;

- 7.1.A.3 [Map of the Beemster inside the dikes with specification of the distribution of land, windmills, watercourse, canals and roads. Lukas Jansz. Sinck, ca. 1612, Purmerend]. Scale approx. 1:23.000.
[Bodel Nijenhuis Collection, Leiden University Library].

Believed to be the oldest printed map of the Beemster polder. The copper plate with which this map was printed is still in the archives of the Waterschap De Waterlanden;

- 7.1.A.4. A/B 'Caerte vande Beemster, vertonende hoe deselve bedijckt, met Wegen Wateringen en Polders afgedeelt, en met Watermoles beset is, perfectelijck gemeten en afgesteken, door Mr. Luycas Jansz. Sinck, Mr. Augstijn Bas Medenblick, Mr. Adriaen Bruijn, Mr. Jan Pietersz. dou, Mr. Gerrit Dircksz. Langedijck, Mr. Reyer Cornelisz. Schout, gesworen Lantmeters etc. Gedruckt t' Amsterdam, by Willem Jansz. opt Water inde Sonnewijzer'. [Map of the Beemster, showing how the said Beemster is diked in, laid out with roads, watercourses and polders, and furnished with windmills, perfectly measured and set out by... sworn land surveyors, etc. Printed in Amsterdam] Willem Jansz. Bleau, ca. 1613.

Map printed on two sheets. One copy of this map is known to exist. Shows the situation shortly after the draining of the Beemster.

- 7.1.A.5 Novus XVII Inferioris Germaniae Provinciarum.
[Reproduction from Pieter van den Keere, *Germania inferior Amsterdam 1617. Theatrum Orbis Terrarum LTD, Amsterdam, 1956*];

- 7.1.A.6 Hollandia Comitatus (Willem Blaeu). [Reproduction published by Uitgeverij Noorderbroek, Groningen].

- 7.1.A.7 Hollandiae comitatus.
[Reproduction from Pieter van den Keere, *Germania inferior Amsterdam 1617*.
Theatrum Orbis Terrarum LTD, Amsterdam, 1956];

- 7.1.A.8 'Agri Biemstrani descriptio a P. Kaerio 1617'. P. v.d. Keere, Amsterdam, 1617.
Coloured.
From: P. Kaerius, *Germania inferior, id est XVII Provinciarum ejus.....*'.
[Reproduction: Library of the University of Agriculture, Wageningen
(Bibliotheek Landbouwwuniversiteit Wageningen), dept. of Special Collections,
Wageningen];

- 7.1.A.9 'BEEMSTER LANTS CAERTE. Met syne Dycken ende Ommelanden. Soo
als de selve, inden Iare MDC en XII met XL meulens, droochge: malen Ende
in syne Weg: en, Wateringen, Polders en Cavelen respectie, afge: leyt: Op den
XXX. Iuly den Ingelanden ende Bedyckers derselve is toegecavelt'.
[BEEMSTER LAND MAP. With its dikes and surrounds. As laid dry in the
year MDC and XII with XL windmills, with its roads, watercourses, polders
and lots. ") Lukas Jans. Sinck, Midden Beemster, after 1635. Scale approx.
1:23.000;

- 7.1.A.10. 1-4 'Ware afbeeldinge vande bedyckte Beemster-landen inden iare 1644. Gemeten
en opde mate gestelt door Baltasar Floris van Berckenrode...inden jare 1640. In
coper gesneden door Daniel van Breen tot Amsterdam inden jare 1644'. (True
picture of the diked Beemster lands in the year 1644. Measured and set to scale
by ... in the year 1640. Engraved in copper by Daniel van Breen of Amsterdam
in the year 1644") Amsterdam, 1644. Print.
[Reproduction: Library of the University of Agriculture, Wageningen, dept. of
Special Collections, Wageningen];

- 7.1.A.11 Purmerendaa vulgo Purmer-eynd. F. de Wit. Scale 1:2.000. Print.
[Reproduction from: Wit, Frederick de, *Perfekte aftekeningen der steden van de XVII
Nederlandsche Provincien in plattegronden*. (Perfect drawing of the cities of the XVII
Dutch Provinces in maps) Amsterdam, ca. 1698. Facsimile published by Van
Hoeve, Amsterdam, 1980];

- 7.1.A.12 Municipality of Beemster
[From: J. Kuyper, *Gemeente atlas van de provincie Noord-Holland naar de officiele
bronnen bewerkt, 1869*](Municipal map of the province of North-Holland
derived from the official sources);

- 7.1.A.13.A/B Page 19 Alkmaar.
[Reproduction from: *Topographical and military map of the Kingdom of the Netherlands
produced by the Officers of the General Staff, printed at the Topographical Office of the
Ministry of War on the Scale of 1:50.000*].

The sheet, reproduced here in two parts, was explored in 1858 and engraved
by the Topographical Office in 1864;

- 7.1.A.14 *Chromotopographical map of the Nation, 1:25.000, p. 279, Schermer, explored 1892,
partly revised 1904;*

- 7.1.A.15 *Chromotopographical map of the Nation, 1:25.000, p. 280, Beets, explored 1892, partly revised 1904;*
- 7.1.A.16 *Chromotopographical map of the Nation, 1:25.000, p. 295, De Rijp, explored 1892, partly revised 1904;*
- 7.1.A.17 *Chromotopographical map of the Nation, 1:25.000, p. 296, Midden Beemster, explored 1892, partly revised 1906;*
- 7.1.A.18 *Topographical map of the Netherlands, 1:25.000, p. 19 D, Wormerveer, revised 1959, published 1961;*
- 7.1.A.19 *Topographical map of the Netherlands, 1:25.000, p. 19 D, Wormerveer, revised 1969, published 1971;*
- 7.1.A.20 *Topographical map of the Netherlands, 1:25.000, p. 19 D, Wormerveer, revised 1979, published 1983;*
- 7.1.A.21 *Topographical map of the Netherlands, 1:25.000, p. 19 E, Berkhout, explored 1939, partly revised 1946, published 1950;*
- 7.1.A.22 *Topographical map of the Netherlands, 1:25.000, p. 19 E, Berkhout, revised 1959, published 1961;*
- 7.1.A.23 *Topographical map of the Netherlands, 1:25.000, p. 19 E, Obdam, revised 1969, published 1971;*
- 7.1.A.24 *Topographical map of the Netherlands, 1:25.000, p. 19 E, Obdam, revised 1980, published 1983;*
- 7.1.A.25 *Topographical map of the Netherlands, 1:25.000, p. 19 G, Purmerend, explored 1939, partly revised 1946, published 1950;*
- 7.1.A.26 *Topographical map of the Netherlands, 1:25.000, p. 19 G, Purmerend, revised 1959, published 1961;*
- 7.1.A.27 *Topographical map of the Netherlands, 1:25.000, p. 19 G, Purmerend, explored 1969, published 1971;*
- 7.1.A.28 *Topographical map of the Netherlands, 1:25.000, p. 19 G, Purmerend, revised 1980, published 1983;*
- 7.1.A.29 *Topographical map of the Netherlands, 1: 25.000. Topographical Dept., Emmen. Page 19 E, Obdam (1997 edition); Page 19 D Wormerveer (1997 edition); Page 19 G Purmerend (1997 edition);*

7.1.B PHOTOGRAPHIC DOCUMENTATION

- 7.1.B.1 Orthogonal aerial photos, scale 1:17.750, taken 1996, Topographical Dept., Emmen:

Pages 19 413; 19 415 (northern section);
Pages 19 513; 19 515; 19 517;
Pages 19 612; 19 614; 19 616;
Pages 19 711; 19 713; 19 715 (southern section)
(In order from north to south and from west to east. The photos partly overlap);

- 7.1.B.2 Survey of farm at the Volgerweg 1, Beemster. [From: *Landelijke bouwkunst Noord-Holland*. (Rural Architecture In Noord-Holland) Stichting Historisch Boerderij-onderzoek (Historic Farm Research Association), Arnhem, 1989. 2 pages];
- 7.1.B.3 No. XI Natrus, From: Natrus, Leendert van, Vuuren, Cornelis van, Polly, Jacob, *Groot volkomen moolenboek of nauwkeurig ontwerp van Allerhande tot nog toe bekende en verscheyde nieuwe, tot nu toe nooyt in het licht gebragte, Soorten van Moolens*. (Comprehensive mill book or exact design of all sorts of known and various new but as yet never described types of mills), Johannes Covens, Cornelis Mortier, Amsterdam, 1736;
- 7.1.B.4 Drawing of a Beemster windmill by Leeghwater, 1632;
- 7.1.B.5 Drawing of windmill network in the Beemster Arenbergpolder;
- 7.1.B.6 Original scale-model of 'Huis Vredenburgh' at the Zuiderweg, based on the design by Pieter Post, 1638-1649 (Betje Wolff Museum, Middenbeemster);
- 7.1.B.7 Wall version of 'Huis Vredenburgh', Middenbeemster, design by Philip Vingboons (1607-1678);
- 7.1.B.8 Cross-section of 'Huis Vredenburgh', Middenbeemster, design by Philip Vingboons (1607-1678);
- 7.1.B.9 'Caerte van de Scher-meer alsoo deselve is bedyckt, ende by cavels van 15 morgen suyver landt door lotinge uytgedelt, op den 25 October Anno 1635 ende aldus met groote verbeteringe int licht gegeven'. ("Map of the Schermer as diked, and the lots of 15 morgen of pure land allotted by lots, on 25 October in the year 1635") W. en J. Blaeu, Amsterdam, ca. 1635. Coloured.

[Reproduction: Library of the University of Agriculture, Wageningen, dept. of Special Collections, Wageningen];
- 7.1.B.10 'Caerte vande Scher-meer met hare dycken, wegen, watering en ende cavelslooten, in voegen als de selve is bedyckt, gerooyt, ende in cavels van vyfthien morgens....suyver land verdeelt....op den 25. October 1635. Te samen gestelt ende geteykent door Pieter Wils. Salomon Rogeri sculpsit'. ("Map of the Schermer with its dikes, roads, watercourses and lot canals, divided into lots of fifteen morgen of pure land on 25 October 1635. Put together and drawn by ...") Amsterdam, ca. 1635. Print.
[Reproduction: Library of the University of Agriculture, Wageningen, dept. of Special Collections, Wageningen];

- 7.1.B.11 'De Zype. Petrus Kerius caelavit. Beemster. De Purmer gemeten ende geteekent door Mr. Lucas Jansen Sinck Anno 1622. De Wormer. Caerte van Waterland, vertonende de gelegentheynt der Meer en onlangs bedyckt als Buyckslooter Broecker en Belmer meer met de naest gelegen steden. Tot Amsterdam by Henricus Hondius'. ("The Purmer measured and drawn by ... 1622. The Wormer. Map of water land, showing the situation of the lake and recently diked in Buyckslooter Broecker and Belmermeer with the nearby cities.") H. Hondius, Amsterdam, ca. 1630. Print.
[Reproduction of the Library of the University of Agriculture, Wageningen, dept. of Special Collections, Wageningen];
- 7.1.B.12 'Caerte van de Heer-Huygen-waert met de omliggende dorpen en huysen, soo die tegenwoordich bedyckt en afgegraven is, aen stuckken van 15 morgens suyver landt, sonder slooten ofte wegen gemeten wesende Geestmerambachts binnebans maet, van 600 int morgen, ofte Zypsche dyckmaet.....aldus gecavelt ende gemeten, by dees ondergheschreven geadmiteerde lantmeters Anthonis Metius Cornelis Corneliss, Baert Claess, Dirk verdoes en Thomas Sevenhuysen. Anno 1631.' ("Map of the Heer-Huygen-waert with the surrounding villages and houses, as now diked and dug out, in pieces of 15 morgen of pure land, measured without canals or roads ... thus allotted and measured by the undersigned, recognised land surveyors ...") J. Visscher, Amsterdam, 1631. Print.
[Reproduction: Library of the University of Agriculture, Wageningen, dept. of Special Collections, Wageningen];
- 7.1.B.13 Middenbeemster. Drawing by C.E. Termitten, 1777;
- 7.1.B.14 Middenbeemster, Ref. Church, 1621-1623, with gate posts from former farm Vredeveld;
- 7.1.B.15 Middenbeemster, Ref. Church, from the south-east;
- 7.1.B.16 Middenbeemster, Ref. Church, interior;
- 7.1.B.17 Middenbeemster, Ref. Church, organ;
- 7.1.B.18 Middenbeemster, Ref. Church, tiled room for stoves, to the side of the tower;
- 7.1.B.19 Middenbeemster, Ref. Church, painted panel depicting the Ref. Church and the arms of De Beemster, 17th century;
- 7.1.B.20 Middenbeemster, Middenweg 87, Doopsgezinde Vermaning (Mennonite Admonition), 1784;
- 7.1.B.21 Middenbeemster, Middenweg 87, Doopsgezinde Vermaning, interior;
- 7.1.B.22 Flour mill 'De Nachtegaal', ca. 1700, Hobrederweg 4;
- 7.1.B.23 Farm, Hobrederweg 13;
- 7.1.B.24 Farm, 17/18th century, Hobrederweg 26;

- 7.1.B.25 Farm, Jisperweg 29;
- 7.1.B.26 Farm 'Hoogerlust', 1st half of the 19th century, Jisperweg 103;
- 7.1.B.27 Farm, Middenweg 5;
- 7.1.B.28 Farm, Middenweg 95;
- 7.1.B.29 Farm, first quarter of the 19th century, Middenweg 112;
- 7.1.B.30 Farm, 19th century, Middenweg 189;
- 7.1.B.31 Farm, 19th century, Middenweg 190;
- 7.1.B.32 Farm 'De Kleine Bijenkorf', 19th century, wooden relief depicting a beehive between angels, 18th century, Middenweg 193;
- 7.1.B.33 Farm 'De Lepelaer', plaque 1683, Middenweg 194;
- 7.1.B.34 Farm 'De Eenhoorn', cartouche 1682, Middenweg 196;
- 7.1.B.35 Farm 'De Eenhoorn', Middenweg 196;
- 7.1.B.36 Former Polderhuis (seat of polder authority), Noorddijk 23;
- 7.1.B.37 Farm 'Broedersbouw', 1642, Oostdijk 11;
- 7.1.B.38 'Rustenhoven', Volgerweg 25;
- 7.1.B.39 'Rustenhoven', 1768, Volgerweg 25;
- 7.1.B.40 Entrance gate to 'Volgerwijck', 17th century, Volgerweg 36-37;
- 7.1.B.41 Farm, Volgerweg 79;
- 7.1.B.42 Farm, Wormerweg 2;
- 7.1.B.43 Farm, Zuiderweg 21;
- 7.1.B.44 Former pumping station, 1885, Noorddijk 18;
- 7.1.B.45 Machinist homes at former pumping station, Noorddijk 18;
- 7.1.B.46 Sluice at Lutje Schardam;
- 7.1.B.47 'Wapenstein', stone plaque bearing the arms of Beemsterlandt, 1735, sluice at Lutje Schardam;
- 7.1.B.48 Sluice at Lutje Schardam, with 'wapenstein';

- 7.1.B.49 Sluice at Lutje Schardam, with 18th century 'wapenstein';
- 7.1.B.50 Sluices at Lutje Schardam, as seen from the IJsselmeer;
- 7.1.B.51 Sluice at Lutje Schardam, as seen from the IJsselmeer;
- 7.1.B.52 Demarcation post for the jurisdiction of the city of Hoorn, at the sluices of Lutje Schardam;
- 7.1.B.53 Stelling van Amsterdam (Defence Line of Amsterdam), Fort Spijkerboor;
- 7.1.B.54 Stelling van Amsterdam, Fort Spijkerboor;
- 7.1.B.55 Stelling van Amsterdam, Fort at the Jisperweg;
- 7.1.B.56 Stelling van Amsterdam, Fort at the Jisperweg;
- 7.1.B.57 Stelling van Amsterdam, Fort at the Middenweg;
- 7.1.B.58 Stelling van Amsterdam, Fort at the Nekkerweg;
- 7.1.B.59 Stelling van Amsterdam, Fort to the north of Purmerend;
- 7.1.B.60 Stelling van Amsterdam, sluice at the Volgerweg, near no. 20;
- 7.1.B.61 Stelling van Amsterdam, inlet sluice at the Zuiddijk;
- 7.1.B.62 Westbeemster, R.C. Church of St. John. the Baptist;
- 7.1.B.63 Middenbeemster, Musem Betje Wollf, Middenweg 178;
- 7.1.B.64 Middenbeemster, 'Travalje', a trave, Middenweg 171, (roof covered structure where horses were shod);
- 7.1.B.65 See 7.1.B.65;
- 7.1.B.66 Middenbeemster, Rustenhoven, Volgerweg 125, entrance gate (fourth quart 18th Century);
- 7.1.B.67 Middenbeemster, Middenweg 104, memorial stone;
- 7.1.B.68 Middenbeemster, Middenweg 103, memorial stone (1629);

7.2 COPIES OF PROPERTY MANAGEMENT PLANS AND EXTRACTS OF OTHER PLANS RELEVANT TO THE PROPERTY

There is no specific management plan for the Beemster polder. The policy papers, plans and regulations set out under 4.2 apply to the entire Beemster area (the zoning plans in particular).

In 1994 the Waterschap De Waterlanden drew up a Policy Plan and an Implementation Plan for the trees along the roads in De Beemster, see 4.3. The plan is being implemented.

As regards the effects of the regulations that apply to the monuments and townscape of Middenbeemster which are protected pursuant to the 1988 Monuments Act, reference is made to 4.2 and 4.3.

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7.4 ADDRESS WHERE INVENTORY, RECORDS AND ARCHIVES ARE HELD

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Waterlandlaan 63
1441 RS Purmerend

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- Association for the Preservation of Nature Monuments in the Netherlands (Vereniging tot Behoud van Natuurmonumenten in Nederland)
Noordereinde 60
1243 JJ 's-Graveland

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8 APPENDICES

8.1 List of protected monuments in the municipality of Beemster pursuant to the 1988 Monuments Act:

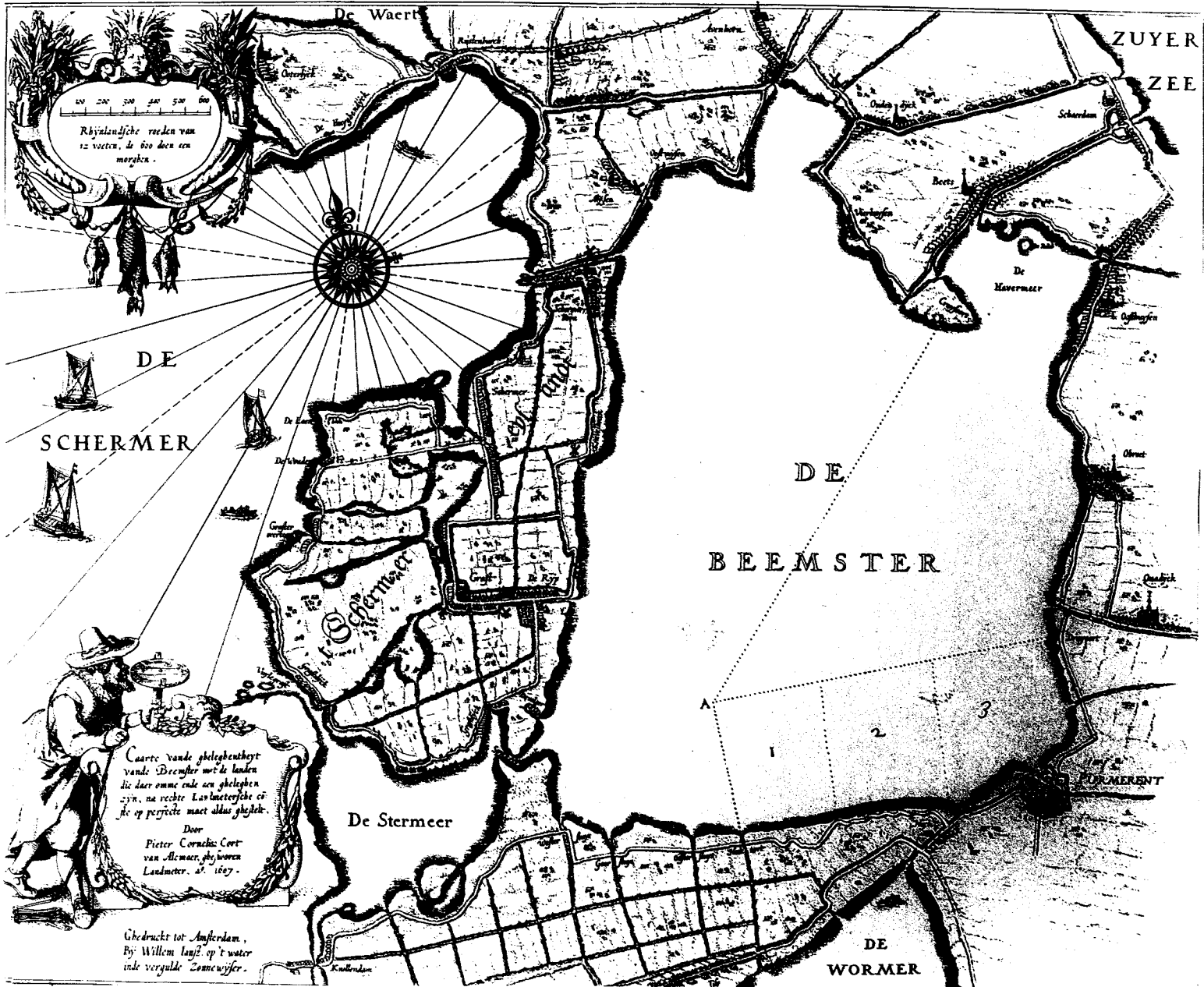
- Hobrederweg 4	(Middenbeemster)	Flour mill
- Hobrederweg 26	(Middenbeemster)	Farm
- Jisperweg 55	(Westbeemster)	R.C. Church of St. John the Baptist
- Jisperweg 103	(Middenbeemster)	Farm 'Hoogerlust'
- Jisperweg 109	(Middenbeemster)	Farm
- Middenweg 87/88	(Middenbeemster)	Doopsgezinde Vermaning
- Middenweg 103	(Middenbeemster)	Farm
- Middenweg 105	(Middenbeemster)	Farm
- Middenweg 112	(Middenbeemster)	Farm
- Middenweg 126	(Middenbeemster)	House
- Middenweg 130	(Middenbeemster)	House
- Middenweg 132/134 136	(Middenbeemster)	House
- Middenweg 138	(Middenbeemster)	House
- Middenweg 139	(Middenbeemster)	House
- Middenweg 140	(Middenbeemster)	House
- Middenweg 148	(Middenbeemster)	Ref. Church
- Middenweg 150	(Middenbeemster)	House
- Middenweg 154	(Middenbeemster)	House
- Middenweg 156	(Middenbeemster)	House
- Middenweg 165	(Middenbeemster)	Caf�
- Middenweg 167	(Middenbeemster)	House
- Middenweg 169	(Middenbeemster)	House
- Middenweg 171	(Middenbeemster)	Smithy/'travalje' (trave)
- Middenweg 173	(Middenbeemster)	House
- Middenweg 178	(Middenbeemster)	Former Ref. Parsonage
- Middenweg 183	(Middenbeemster)	Arched bridge
- Middenweg 185	(Middenbeemster)	Farm
- Middenweg 189	(Middenbeemster)	Farm
- Middenweg 190	(Middenbeemster)	Farm
- Middenweg 192	(Middenbeemster)	Entrance gate
- Middenweg 193	(Middenbeemster)	Farm 'De Kleine Bijenkorf'
- Middenweg 194	(Middenbeemster)	Farm 'De Lepelaer'
- Middenweg 196	(Middenbeemster)	Farm 'De Eenhoorn'
- Oostdijk 13	(Middenbeemster)	Farm 'Broedersbouw'
- Oost- huizerweg 25	(Middenbeemster)	House
- Rijperweg 40	(Middenbeemster)	Farm
- Rijperweg 59	(Middenbeemster)	House
- Rijperweg 61/63	(Middenbeemster)	House
- Rijperweg 66	(Middenbeemster)	House
- Rijperweg 67	(Middenbeemster)	House
- Rijperweg 69	(Middenbeemster)	House

- Rijperweg 71	(Middenbeemster)	House
- Rijperweg 83	(Middenbeemster)	Former Town Hall/Hotel
- Rijperweg 85	(Middenbeemster)	House
- Rijperweg 87	(Middenbeemster)	House
- Rijperweg 89	(Middenbeemster)	House
- Rijperweg 91	(Middenbeemster)	House
- Rijperweg 95	(Middenbeemster)	House
- Volgerweg 1	(Middenbeemster)	Farm
- Volgerweg 25	(Middenbeemster)	House 'Rustenhoven'
- Volgerweg 26	(Middenbeemster)	Farm
- Volgerweg 27	(Middenbeemster)	Farm
- Volgerweg 36	(Middenbeemster)	Arched bridge with gate posts of former country estate 'Volgerwijck'
- Volgerweg 41	(Middenbeemster)	House
- Volgerweg 42	(Middenbeemster)	Farm 'Vredenrust'
- Volgerweg 46	(Middenbeemster)	Farm
- Volgerweg 59	(Middenbeemster)	Farm
- Volgerweg 83	(Middenbeemster)	Arched bridge with gate posts from former country estate 'Zwaansvliet'
- Westdijk 6/5	(Middenbeemster)	Farm 'Poortugal'
- Zuiderweg 68	(Middenbeemster)	Wing of former country estate Vredenburgh

- 8.2 *Notes on the proposal to designate Middenbeemster as a protected townscape.* Protected cityscapes and townscapes pursuant to article 20 of the Monuments Act. RDMZ, February 1982. With map;
- 8.3 '1996 Provincial Monuments Ordinance' (ordinance dated 11 December 1995);
- 8.4 'Ordinance for the restoration and maintenance of monuments in Noord-Holland' (ordinance dated 11 December 1995);
- 8.5 'Map of the Stelling van Amsterdam and Nieuwe Hollandse Waterlinie (strip of land flooded as a defence line)'. Publication of the Province of Noord-Holland;
- 8.6 *National Government Subsidy for the Restoration of Monuments Decree.* Netherlands Department for Conservation. Amendments to the National Government Subsidisation of the Restoration of Monuments Decree have been attached separately;
- 8.7 'Decree of 5 July 1997, containing an amendment of the National Government Subsidy for the Monuments Conservation Decree and of the National Government Subsidy for Historic Country Estates Decree to increase the effectiveness thereof as well as to amend the law of 20 June 1996 to supplement the General Administrative Law Act (Algemene wet bestuursrecht or Awb) (Third tranche Awb) (Staatsblad van het Koninkrijk der Nederlanden, vl. 1997, 314);
- 8.8 'Decree of 27 March 1997, containing new regulations with regard to granting subsidies for the restoration of protected monuments (1997 National Government Subsidy for the Restoration of Monuments Decree)', Staatsblad van het Koninkrijk der Nederlanden, vl. 1997, 145;

8.9 Level chart 5400 Beemster. Waterschap De Waterlanden. 1997 Service Year (1993 Appendix Level Decree);

8.10 *Koggen*. ANWB VVV Tourist route. ANWB bv, 1997.



Rhijnlandische reeden van
 12 voeten, de 600 deen een
 morken.

DE
 SCHEMER

DE
 BEEMSTER

De Stermeer

DE
 WORMER

ZUYER ZEE

Carte vande gheleghenthyt
 vande Beemster met de landen
 die daer omme eyle een ghelepen
 zyn, na rechte Landmeterfche of
 fe of perfecte maet alles ghelede.
 Door
 Pieter Corneis Cort
 van Almeer, ghywonen
 Landmeter. a. 1607.

Gedrukt tot Amsterdam,
 By Willem Iayz, op 't water
 inde vergulde Zandwyfje.



De Ryp

DE SCHERMER



Schermerhorn

Oosthuyzen

AGRI BIEMSTRANI
1682

Oosterdyck

Deeff

Purmer end

Onderdyck

Hobbes

Oosthuyzen

Eylantische Rivier

Schermer







Beemster Polder (The Netherlands)

No 899

Identification

<i>Nomination</i>	Droogmakerij de Beemster (The Beemster Polder)
<i>Location</i>	Province of Noord-Holland
<i>State Party</i>	The Netherlands
<i>Date</i>	26 June 1998

Justification by State Party

De Beemster, a clearly defined, systematically laid out reclaimed land, a complex designed and created as a cultural landscape by man, is a site of outstanding universal value from the point of view of history, art, (landscape) architecture, science, and learning, as well as being a monument in its own right, representing a unique masterpiece of human creative genius. **Criterion i**

It is also an outstanding example of an architectural ensemble and physical environment that illustrates a significant stage in the history of land colonization in The Netherlands and elsewhere since the 17th century. The historic physical environment of The Netherlands has been brought to life and developed through ever-improved developments in civil water-management techniques. It is a man-made landscape that constitutes a site in a river delta with large areas consisting of fenlands. **Criterion ii**

De Beemster was drained, cultivated, and colonized - a deliberate intervention in this undeveloped region - at the same time as the city of Amsterdam first expanded during the 17th century. This expansion was supported by the *nouveaux riches*, the merchants and regents of Amsterdam, and was carried out by surveyors, city architects, and administrators. They were involved in the expansion of Amsterdam in 1613 as well as in De Beemster polder. At the time, town-planning and architectural principles were applied that even today show a close relationship to the classical and Italian theories and treatises of Vitruvius, Palladio, and others concerning radial cities, about the *città ideale*, about checkerboard patterns, and about laying out straight, safe, paved, and planted roads. **Criterion iv**

There were two main reasons for creating De Beemster: to control recurrent flooding and reclaim new agricultural land, and also to find a safe way to invest funds. It had been determined as early as 1611 that the region should also realize the pastoral classical nature and agriculture model, because of its spatial design with lanes, green

compartments ('chambers'), pleasure gardens for the wealthy merchants of Amsterdam, and plantations.

De Beemster with its rational geometric layout was designed as an architectural landscape. The theory of 17th century urban development and agricultural engineering for reclaiming land was based on the 'ideal of the straight line', and in addition fell back on old-fashioned principles such as (geometric) structure, planning and linear monumentality, symmetry, harmony, and order - a landscape in which the square, the basic pattern from analogy of the theories of Scamozzi, induces balance and diffusion. **Criterion vi**

Category of property

In terms of the categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, this is a *site*. It is also a *cultural landscape* as defined in paragraph 39 of the *Operational Guidelines for the Implementation of the World Heritage Convention*.

History and Description

History

Lagoons and deltas take up the greater part of the Dutch land. Over the centuries this land was made habitable by means of land reclamation and protection against the water. Of the 3.4 million ha which now constitute The Netherlands, a third is below sea level. If no dikes had been constructed and if there were no drainage of excess water, 65% of The Netherlands of today would be under water.

The northern coastal area of the Kop van Noord-Holland and along the Wadden Sea was once a virtually interconnected series of mud-flats that extended to south-western Denmark. The earliest habitation was on knolls, which offered protection from the water before sea walls and dikes had been constructed. The need to 'create' new land arose from the damage caused by the continual flooding, with the added bonus of obtaining excellent agricultural land.

Five factors influenced on the process of land reclamation: the availability of capital for investment, stable political and economic relationships, and the availability of technical means, entrepreneurial spirit, and good prices for farmland.

The battle against the water began in the northern part of Noord-Holland, in the area situated above the former open waters of the IJ, by keeping out the sea-water. From the 16th century onward efforts were geared toward draining lakes and ponds situated further inland. Land reclamation took place by draining the big lakes, particularly in the northern part of Holland. This process was made possible by the drastic improvement in pumping and draining technology using windmills driving waterwheels. From the end of the Middle Ages the entire north of the IJ (*Hollands Noorderkwartier*) was enclosed within a ring of dikes; however, considerable areas of water survived within the individual polders and the centre of the region was still occupied by the large Schermer, Purmer, and Beemster lakes. More and more land could be reclaimed when the

technique of building dikes with discharging structures (sluices) was developed. These developments are sometimes called the delta-works of the 17th and 18th century.

Wind power was used to drain the polders as early as the 15th century, through the use of wind-driven water-pumping mills. The 16th century development of the revolving cap on windmills made it possible to drain the larger lakes. From the beginning of the 17th century onward it became possible to drain large bodies of water, such as the Beemster, by using networks of three or four windmills. The invention of this process is attributed to Simon Stevin (1548-1620).

The initiative to drain the water of the Beemster was taken by a number of wealthy regents and merchants from Amsterdam and a number of high-ranking civil servants in The Hague. In 1607 a patent was granted by the States of Holland to sixteen people who founded the *Beemstercompagnie* to provide the requisite capital. The patent speaks of "work such, that it is possible to make Water into Land." In total there were 123 investors, who received a return of 17% on their investment upon completion of the polder in 1612.

As a preliminary to the work, a map of the Beemster and its environs was made by the surveyor Pieter Cornelisz. Cort of Alkmaar, to determine the possible consequences of diking and to establish how to drain the Beemster itself. After Cort's death in 1608, he was succeeded by Lucas Jansz. Sinck, land surveyor in Amsterdam, who laid out the first dike section for the Beemster polder. In 1608 the dike section between Purmerend and Neck was sub-contracted, as was the drainage canal to the Zuiderzee.

It was decided in 1611 that Sinck would draw in the roads and canals. In that same year a start was made on laying out the canals and roads to prepare for the allotment of land. Within the allotments the owners would be allowed to dig as many canals and ditches as they saw fit. The blocks between the roads were to have a surface area of 400 *morgen*, divided by canals into four blocks of 100 *morgen* (1 *morgen* = c 0.85ha). It was finally decided to divide the land into five allotments. The allotments were made in "packages"; the value of each package compared to the others would be the same, as poor soil was compensated by good.

Shovels and pickaxes were used in the basic engineering works; the foundations for sluices and windmills were sunk using manual pile-driving installations operated by 30-40 people. Reclamation was effected by means of windmills. The reclamation of the Beemster ultimately took place with the construction of fifteen windmill networks.

The polder finally became a reality on 19 May 1612, and in August 1612 the plots of land were allotted. The by-law of 1616 includes conditions on "plants and trees." This created an "ideal" landscape from 1620 onward with the planting of the lanes with trees. First only the northern and western side of the roads were planted, so that the sun could dry the roads, which were still waterlogged.

After the conversion from drainage by wind to steam power in the late 1800s, the water was discharged into the belt canal by three pumping stations. In the 20th century these were converted to diesel power. De Beemster is now

drained by the fully automated electric pumping station Wouter Sluis along the Westdijk (Middensloot) and by the diesel pumping station Jacobus Bouman along the Oostdijk (Oosthuizenloot).

Description

The Beemster polder is situated to the north of Amsterdam and to the west of Purmerend. De Beemster was formerly a chain of peat bogs diked in by means of ring-dikes and protected against the sea on the western side by the dunes of Kennemerland. The Zeevang to the east of De Beemster and the Waterlant and Zaanstreek to the south were encircled by ring-dikes. In between there were stretches of water, such as the Beemster and the Schermer and the wide inlet, the Ye.

At high tide the water of the Zuiderzee flowed freely into the Beemster via the Korsloot. The Beemster in turn flowed into the Purmer via the Weere, and into the Schermer through the Zwet at Schermerhoorn and into the Starmeer via the Spijkerboor. At some time in the early 14th century the Beemster was closed off on the north-eastern side and no longer had an opening to the Zuiderzee at that point.

The former Beemstermeer, which was once the largest open water of the Noorderkwartier of The Netherlands, was created by the gradual overflow and by low-lying peat land crumbling away after the Zuiderzee had found a way through to this area. This process was completed by around 1100. The current size of the Beemster Polder indicates the size of this body of water at the time.

The land was allocated in oblong lots of 180m by 900m. The short sides of the lots are connected by a drainage canal and an access road. Five such lots formed a unit, a module of 900m square, and four of these units in turn formed a large square of 400 *morgen*. The direction of the squares corresponded as much as possible with the original direction of the former shorelines of the lake so as to avoid creating unusable lots along the shoreline.

- Buildings in De Beemster

The "bell-jar" farm (*stolpboederij*) with its typical square base fits in particularly well in the geometric pattern of the polder. The farm in itself can be considered a geometric modular unit with barns, hay and seed stores, stables, and other outbuildings.

There is also a number of country homes with their formal gardens, intended as pleasure farms (*lusthoven*) and out-of-town houses which served as summer residences for urban proprietors, mainly from Amsterdam. Decoration and practical use interchanged in the design of orchards, arbours, kitchen gardens, and footpaths. However, most of these were demolished in the 18th century, and all that remains is a number of monumental entry gates to farms built at later dates.

- Agriculture in De Beemster

The drained land was originally used for cereal production, but as time went by it was gradually turned into pasture land for cattle because the high water table and soil conditions were not suitable for arable farming. Until the 1880s, De Beemster was primarily used for cattle breeding. With the introduction of steam-driven pumping stations it was possible to drain more deeply and to remove more

water, and this resulted in an enormous expansion into horticulture.

The current picture is a mixed one of arable land, pastures for dairy farming, greenhouse horticulture, and fruit farming, whilst around 200ha are used for bulb-growing.

- *Villages and roads in De Beemster*

Of the five residential centres originally projected for De Beemster in the 17th century, only Midden-, West-, and Noordbeemster were actually developed as such; Zuid- and Oostbeemster became Zuidoostbeemster. In addition, a number of other neighbourhoods developed.

The main watercourses from north to south are the Schermerhornersloot, Oosthuizenersloot, Middensloot, Draaiordersloot, and Zuidersloot, which run parallel to each other. From east to west are the Oostersloot, Beetstersloot, Jispersloot, and Vrouwsloot, which also run parallel to one another.

The road layout is rigidly linear, conforming with the geometric layout of the polder. In the middle there is the Middenweg, which runs north-east to south-west. Parallel to this are the Purmerenderweg, the Nekkerweg, and the Jisperweg. At Middenbeemster, the Middenweg intersects the Rijperweg, which runs north-west to south-east. Parallel to the Rijperweg are the Mijzerweg (the most northerly road), the Vrouwenweg (formerly the Westmyserpad), the Oosthuizenersweg, the Hobrederweg, the Rijperweg, and the Zuiderweg (the most southerly road).

Of the polder roads, the Wormerweg has retained its old profile. The trees along the Vrouwenweg create a particularly impressive picture. There are no trees on the verges of the dikes along the canal and belt-canal alongside the Beemsterringvaart because of their damming function. After the Second World War, poplars were planted on the dike. They form a prominent screen, distinctively demarcating the polder in the open landscape of the Noorderkwartier.

Middenbeemster, situated at the intersection of the Middenweg and the Rijperweg, is the principal town of De Beemster. An open rectangular space, the former cattle market, can be seen at the four arms of these cross-roads. The Reformed Church, built after 1621, is located in the south-eastern corner. A former smithy, a school, and the Heerenhuis (manor house) are also placed around this square. The monumental bell-jar farms along the Middenweg (the Lepelaar, the Eenhoorn, and the Volgerweg) are unique elements outside the historic village centre.

Westbeemster was originally planned at the intersection of the Jisperweg and the Hobrederweg as an agrarian hamlet. The church and the cemetery were placed to the north of the intersection. The buildings are mainly residential housing, forming a ribbon development along the Jisperweg. The Roman-Catholic community of De Beemster established itself here and a large Neo-Gothic church, a convent, and a few Roman-Catholic schools were built in the 19th and 20th centuries.

Noordbeemster, also conceived as an agrarian hamlet, lies to the north of Middenbeemster, along the Middenweg. The labourers' homes are single-storey buildings with pitched or mansard roofs.

Zuidoostbeemster has always been a horticultural area primarily geared toward Amsterdam, and has expanded considerably. The village is situated at the intersection of the Purmerenderweg and the Zuiderweg. From the middle of the 19th century retired farmers from De Beemster settled here, and their single-storey homes (*rentenierswoningen*) along the Purmerenderweg and the Zuiderweg are testimony to this.

Klaterbuurt was originally a working-class area. The homes of the farmhands are sometimes called "kitchens." A few historic bell-jar farms and the stables of a former country estate which has been converted into a farm, Rijperweg 17, are the noteworthy features in this area.

Halfweg, located along the Volgerweg and the intersecting Nekkerweg, is also an old working-class area. The labourers' homes consist of two houses under a single pitched roof, built parallel to the road.

Five forts, an inundation sluice, and two dam sluices belonging to the *Stelling van Amsterdam* (Defence Line of Amsterdam) are located in the southern part of De Beemster.

- *Water management of De Beemster polder*

A surface area of 7220ha of De Beemster produces water. There are height differences within the polder. A band runs from east to west in the middle of the polder, which is 50cm lower than the adjacent areas. The average height of the low area is 3.80m below Mean Sea Level, with large areas up to 4.00m below; the higher areas are 3.00 metres below. The polder is surrounded by the dike, which in turn is situated higher than the dikes on the other side of the belt canal. This construction was deliberately chosen to safeguard the large financial investment in the polder in the event that the Zuiderzeedijk gave way.

The current Beemsterringvaart (Beemster Belt Canal) and part of the Groot Noordhollandsch Kanaal (1819-24) are part of the Schermerboezem (Schermer Reservoir). The reservoir discharges through both natural and manmade watercourses into the Wadden Sea (near Den Helder), the IJsselmeer (via the Naamsloot and at Lutje Schardam), and the Noordzeekanaal (the Channel). Water is supplied mainly from the IJsselmeer.

De Beemster is divided into three departments, each with its own water level: the Bovenpolder, the Middenpolder, and the Arenbergpolder. There are two lower-lying areas in the Middenpolder - the Hoge Kilpolder and the Lage Kilpolder. Summer and winter water levels vary between 10cm and 30cm. The main watercourses of the various sections are connected by means of culverts, enabling the water of the higher-lying sections to flow to the lower, directly drained sections.

Six inlet sluices in the 45km long ring-dike let in water in the summer. The canals around the forts are fed by four inlet sluices, in addition to the inundation sluice. There is a separate inlet sluice for Kruisoord or Hoogland in the north-eastern section.

Management and Protection

Legal status

At State level, the 1988 Monuments Act defines as State Monuments "everything constructed over at least fifty years ago that is of public importance because of its beauty, its importance to science, or its cultural-historical value." The State Monument Register extends to townscapes, for which there must be zoning plans drawn up by local authorities under the provisions of the 1985 Rural Development Act. Currently 60 monuments in the Municipality of Beemster, which corresponds exactly with the polder, are protected monuments, and a further list of seventeen has been submitted for consideration.

There is provision at regional, provincial, and municipal level for the preparation and implementation of comprehensive land-use and zoning plans, which are regularly updated. Cultural heritage protection forms an integral part of these plans. The Beemster Polder forms part of the National Central Landscape of Noord-Holland, as defined in the 1991 Waterland Regional Plan.

The 1996 Monument Decree of the Province of Noord-Holland covers monuments, buildings, and townscapes and is directly applied to the Beemster Polder. In 1991 the Municipality of Beemster adopted its own Monument Decree; this was updated in 1994.

Management

Management at different levels, in accordance with zoning and land-use plans, is shared by the Municipality of Beemster, the Provincial Administration of Noord-Holland, and the Waterschap De Waterlanden.

The last-named is a water board of a type that is unique to The Netherlands. It was created in 1981 following a merger of a number of water boards, and is in charge of water management in an area of c 35,000ha, including De Beemster. One of its special duties is to manage the planting of trees along the public roads of De Beemster.

State protected monuments are the concern of the Netherlands Department for Conservation (*Rijksdienst voor de Monumentenzorg*), an agency of the Ministry of Education, Culture and Science. The Association for the Conservation of Nature Monuments in The Netherlands (*Vereniging tot Behoud van Natuurmonumenten in Nederland*) manages the forts of the Stelling van Amsterdam.

All these bodies have programmes of regular and systematic monitoring of conservation and protection measures within their respective competences.

The boundaries of the nominated area are clear-cut and logical, being based on the functional dikes and canals created in the early 17th century when the Beemster project was completed and never changed. There is a logical and adequate buffer zone, comprising the North Holland Canal and other polders (including the historic town of Rijk), in which protection is provided under the Dutch legislation listed above.

Conservation and Authenticity

The Beemster Polder is a living organic landscape that has evolved over nearly four centuries and continues to play an important role in the economic life of The Netherlands. With changing social and economic conditions certain elements, such as the pleasure farms and windmills, have disappeared, whilst others have changed their functions. There has been a shift from primarily arable farming to a mixed economy, with emphasis on dairy farming and horticulture, which has changed certain aspects of the landscape.

However, the basic structure of dikes, canals, roads, and human settlements laid down in the early 17th century remains intact and authentic, since any fundamental disturbance would put the physical integrity of the entire region in jeopardy.

Evaluation

Action by ICOMOS

An ICOMOS expert mission visited the Beemster Polder in January 1999. ICOMOS also benefited from the expertise of its International Scientific Committee on Historic Gardens and Sites.

Qualities

The Beemster Polder represents a very important event in the history of land reclamation. It combines the genius of the Dutch water engineers, who were to carry out similar reclamation projects in many parts of the world, with an intellectual concept, that of the fully planned architectonic landscape, that stems from the classical and Renaissance ideal of the "ideal city," imposing both spatial and social order upon the landscape and fusing natural and manmade elements into an integrated and ordered whole. As such it had a profound influence on subsequent reclamation and landscaping projects throughout Europe and beyond.

Comparative analysis

The example of the Beemster Polder was followed rapidly by other projects in The Netherlands in the 17th century, occasioned by the pressures created by a rapidly expanding population. It was to be adopted as a model for the ambitious 20th century reclamation project for draining the Zuiderzee/IJsselmeer. None of these, however, can be considered to compare with the Beemster Polder because of the latter's intellectual and technological creativity, advanced approach.

Brief description

The Beemster Polder is the oldest area of reclaimed land in The Netherlands, dating from the early 17th century. It has preserved intact its regular landscape of fields, roads, canals, dikes, and settlements, laid out in accordance with the principles of classical and Renaissance planning.

Recommendation

That this property be inscribed on the World Heritage List on the basis of *criteria i, ii, and iv*:

Criterion i The Beemster Polder is a masterpiece of creative planning, in which the ideals of antiquity and the Renaissance were applied to the design of a reclaimed landscape.

Criterion ii The innovative and intellectually imaginative landscape of the Beemster Polder had a profound and lasting impact on reclamation projects in Europe and beyond.

Criterion iv The creation of the Beemster Polder marks a major step forward in the interrelationship between humankind and water at a crucial period of social and economic expansion.

ICOMOS, September 1999

Polder de Beemster (Pays-Bas)

No 899

Identification

<i>Bien proposé</i>	Droogmakerij de Beemster (Le polder de Beemster)
<i>Lieu</i>	Province de Hollande-Septentrionale
<i>Etat Partie</i>	Pays-Bas
<i>Date</i>	26 juin 1998

Justification émanant de l'Etat partie

Beemster, terre conquise sur les eaux, clairement définie et planifiée systématiquement, paysage culturel complexe, conçu et créé volontairement par l'homme, est un site d'une valeur universelle exceptionnelle du point de vue de l'histoire, de l'art, de l'architecture (landscape), des sciences et de la connaissance ainsi qu'un monument à part entière. Il représente un chef-d'œuvre unique du génie créateur humain. **Critère i**

C'est aussi un exemple remarquable d'ensemble architectural et d'environnement physique qui illustre un stade important de l'histoire de la colonisation des terres aux Pays-Bas et dans d'autre partie du monde, depuis le XVII^e siècle. L'environnement physique et historique des Pays-Bas a été conçu et a évolué avec le perfectionnement des techniques de gestion des eaux et des terres humides. Beemster est un paysage façonné par l'homme. Il constitue un site dans le delta d'une rivière qui comporte de vastes zones marécageuses. **Critère ii**

Beemster a été drainé, mis en culture et colonisé – mise en valeur voulue par l'homme d'une zone jusqu'alors inexploitée – en même temps que la ville d'Amsterdam prenait son premier essor au XVII^e siècle. La réalisation du polder Beemster en 1613 fut soutenue par les élus et la riche bourgeoisie commerçante de la ville d'Amsterdam. Elle est l'œuvre des ingénieurs hydrographes, architectes, géomètres et gestionnaires qui prirent part dans le même temps à l'expansion d'Amsterdam. Les principes d'urbanisme et d'architecture qui dominaient à l'époque, et qui transparaissent encore aujourd'hui, s'inspiraient largement des théories et traités classiques et italiens, développés par Vitruve et repris par Palladio et d'autres architectes, qui préconisaient des villes à plan radial ou à damier - la *città ideale* - ordonnées par des voies droites, sûres, pavées et plantées d'arbres. **Critère iv**

Deux objectifs principaux présidèrent à la création du polder de Beemster : la lutte contre les inondations répétées et la conquête de nouvelles terres cultivables. C'était par ailleurs un moyen sûr et rentable de faire fructifier les richesses produites par la ville. Dès 1611, il fut décidé que la région refléterait une nature pastorale classique et deviendrait un modèle agricole par sa conception spatiale, avec ses routes rectilignes, ses compartiments verts (chambres), ses cultures et ses jardins d'agrément pour les riches marchands d'Amsterdam.

Le tracé rationnel et géométrique de Beemster en fait, dès l'origine, un paysage architectural. Les théories d'urbanisme et les techniques de conquête des terres agricoles, telles qu'elles étaient pratiquées au XVII^e siècle, étaient fondées sur « l'idéal de la ligne droite » et reposaient sur des principes anciens tels que la structure (géométrique), la monumentalité planifiée et linéaire, la symétrie, l'harmonie et l'ordre – un paysage dans lequel le carré, figure de base des théories de Scamozzi, induit équilibre et diffusion.

Critère vi

Catégorie de bien

En termes de catégories de biens culturels, telles qu'elles sont définies à l'article premier de la convention du Patrimoine mondial de 1972, le polder de Beemster est un *site*. C'est aussi un *paysage culturel* tel que défini au paragraphe 39 des *Orientations devant guider la mise en œuvre de la Convention du patrimoine mondial*.

Histoire et description

Histoire

Lagunes et deltas occupent la plus grande partie des Pays-Bas. Au cours des siècles, ces terres basses ont été rendues habitables grâce à la conquête de territoires et la protection contre les eaux. Un tiers des 3,4 millions d'hectares qui composent actuellement les Pays-Bas est situé en dessous du niveau de la mer. Sans la construction de digues et le drainage de l'eau excédentaire, 65% de la superficie des Pays-Bas seraient aujourd'hui immergés.

La région littorale nord de la péninsule de la Hollande-Septentrionale et de la mer des Wadden était autrefois constituée d'une succession de terres basses et marécageuses qui s'étendaient jusqu'au sud-ouest du Danemark. Les premières habitations furent construites sur des tertres qui offraient une protection contre les eaux, et cela avant que soient construits des murs et des digues. La « création » de nouveaux territoires résulte de la nécessité de lutter contre les inondations incessantes et fournit de surcroît d'excellentes terres agricoles.

Les facteurs ayant influencé le processus de la conquête de territoires sont au nombre de cinq : la disponibilité de capitaux à investir, un climat politique et économique stable, l'existence de moyens

techniques, l'esprit d'entreprise et le bon prix des terres arables.

La lutte contre les eaux a commencé dans le nord de la Hollande-Septentrionale, dans la zone située au-delà des eaux autrefois libres de l'IJ, en l'isolant de la mer. A partir du XVI^e siècle, tous les efforts tendent à éliminer l'eau des lacs et des marais situés à l'intérieur de cette limite. La conquête des terres a été réalisée par le drainage des grands lacs, en particulier dans le nord de la Hollande. Ce processus a été rendu possible par l'amélioration radicale des techniques de pompage et de drainage qui utilisaient le moulin à vent et la roue hydraulique. A partir de la fin du Moyen Age, toute la partie nord de l'IJ (*Hollands Noorderkwartier*) était fermée par un ensemble de digues. Toutefois, de vastes étendues d'eau subsistaient à l'intérieur de chacun des polders et le centre de la région était encore occupé par les grands lacs de Schermer, Purmer et Beemster. Il devint possible de conquérir davantage de terres avec la mise au point de digues comportant des vannes de régulation et des écluses. Ces aménagements sont parfois appelés les travaux du delta des XVII^e et XVIII^e siècles.

Dès le XV^e siècle on utilisa la force du vent pour drainer les polders à l'aide des moulins à vent qui actionnent les pompes à eau. Au XVI^e siècle, les améliorations techniques apportées aux moulins permirent le drainage de lacs plus grands. A partir du début du XVII^e siècle, il devint possible de drainer de grandes étendues d'eau comme le Beemster, en utilisant trois ou quatre moulins à vent en chaîne. L'invention de ce procédé est attribuée à Simon Stevin (1548-1620).

L'initiative de drainer l'eau du Beemster revient à plusieurs administrateurs prospères et riches marchands de la ville d'Amsterdam et à un certain nombre de hauts fonctionnaires de La Haye. En 1607 un droit d'exploitation fut accordé par le gouvernement des Provinces-Unies à seize personnes qui fondèrent la *Beemstercompagnie* chargée de réunir le capital nécessaire. Le droit d'exploitation fait mention de "travailler de manière à transformer des étendues d'eau en terres (arables)". Au total, 123 investisseurs bénéficièrent d'un retour sur investissement de 17% à l'achèvement du polder en 1612.

Avant le début des travaux, une carte du Beemster et de ses environs fut dressée par l'ingénieur Pieter Cornelisz Cort de Alkmaar, afin de déterminer les possibles conséquences de la construction de digues et de définir la manière de drainer le Beemster lui-même. Cort décéda en 1608 et son successeur, Lucas Jansz. Sinck, géomètre à Amsterdam, dessina la première partie de la digue du polder de Beemster. En 1608, la construction de la digue entre Purmerend et Neck fut confiée à une entreprise, de même que le creusement du canal de drainage jusqu'au Zuiderzee.

En 1611 Sinck fut chargé de tracer les routes et les canaux. La même année, les travaux de construction de ces derniers commencèrent et on délimita les

parcelles. Sur chacune d'elles, les propriétaires auraient le droit de creuser autant de canaux et de fossés qu'ils jugeraient nécessaire. Les terrains compris entre chaque route devaient avoir une superficie de 400 *morgen*, être divisés par des canaux en quatre unités de 100 *morgen* (1 *morgen* = 0.85ha). Il fut finalement décidé de diviser la terre en cinq parcelles qui, réunies, constitueraient des unités de valeur équivalente, car les sols pauvres seraient compensés par d'autres plus riches.

Les travaux de gros œuvre furent effectués à la pelle et à la pioche. Les pieux des fondations destinées à recevoir les écluses et les moulins à vents étaient enfoncés à l'aide de dispositifs manuels manœuvrés par 30 à 40 personnes. L'assèchement des terres se faisait au moyen des moulins à vent. Celui du Beemster nécessita la construction d'une série de quinze moulins à vent.

Le polder devint une réalité le 19 mai 1612 et en août 1612 les parcelles de terres étaient attribuées. Un arrêté municipal de 1616 précise les conditions de plantation des arbres et haies. Ainsi était créé à partir de 1620 un paysage « idéal » avec des routes bordées d'arbres. Au début, seuls les côtés nord et ouest devaient être plantés afin de permettre au soleil de sécher les routes encore détremées.

Vers la fin du XIX^e siècle, les pompes à vapeur remplacent les moulins à vent et l'eau est refoulée vers le canal périphérique par trois stations de pompage. Au XX^e siècle, la vapeur fait place au diesel. Le Beemster est maintenant drainé par la station de pompage électrique entièrement automatique de Wouter Sluis sur le Westdijk (Middensloot) et par la station de pompage au diesel Jacobus Bouman sur l'Oostdijk (Oosthuizenloot).

Description

Le polder de Beemster est situé au nord d'Amsterdam et à l'ouest de Purmerend. Le Beemster était autrefois constitué d'un ensemble de tourbières entourées de digues et protégées de la mer sur le flanc ouest par les dunes du Kennemerland. Le Zeevang à l'est de Beemster et les Waterlant et Zaanstreek au sud étaient encerclés de digues. Entre ces polders demeuraient des étendues d'eau comme le Beemster et le Schermer et le bras de mer Ye.

A marée haute, l'eau du Zuiderzee remontait librement dans le Beemster via le Korsloot. Le Beemster à son tour se déversait dans le Purmer via le Weere, et dans le Schermer par le Zwet au niveau de Schermerhoorn, et enfin dans le Starneer via le Spijkerboor. Pendant quelques temps au début du XIV^e siècle, le Beemster fut fermé sur le côté nord-est et était coupé du Zuiderzee à cet endroit-là.

L'ancien Beemstermeer, qui fut autrefois la plus grande étendue d'eau de mer du Noorderkwartier des Pays-Bas, fut créé par les inondations répétées et l'effritement des tourbières basses après que le Zuiderzee eut fait irruption dans les terres. Le processus d'envahissement de la terre par la mer prit

fin vers 1100. Les dimensions actuelles du polder de Beemster correspondent à celles de l'ancien lac.

La terre fut attribuée par parcelles rectangulaires de 180m sur 900m. Les côtés les plus courts des parcelles sont reliés par un canal de drainage et une route d'accès. Cinq de ces parcelles forment une unité, un module de 900m carrés, et quatre de ces unités forment un grand carré de 400 *morgen*. L'orientation des parcelles correspondait autant que possible à celle des rives de l'ancien lac de manière à éviter la création de parcelles inutilisables le long de cette ancienne rive.

- *Les constructions dans le polder de Beemster*

La ferme à toit en cloche (*stolpboederij*), avec son plan carré caractéristique, convient particulièrement bien au dessin géométrique du polder. La ferme en elle-même est une unité modulaire géométrique flanquée d'étables, de silos à grains, de granges à foin, d'écuries et d'autres dépendances.

Il existe aussi des maisons de campagne avec leur jardin à la française conçues comme des fermes d'agrément (*lusthoven*) et des maisons rurales qui servent de résidences d'été pour des habitants des villes, essentiellement d'Amsterdam. Les fonctions décoratives et utilitaires des jardins guidaient de la même façon la création de vergers, de charmilles, de jardins aromatiques et de chemins. La plupart des constructions et des jardins disparurent cependant au XVIII^e siècle et il ne reste qu'un certain nombre d'entrées et de grilles monumentales menant à des fermes construites ultérieurement.

- *Agriculture dans le Beemster*

Les terrains drainés furent au départ consacrés à la production de céréales, mais ces cultures furent abandonnées au profit de pâturages, car le niveau élevé de l'eau et l'état du sol ne permettaient pas l'exploitation d'une terre arable. Jusqu'à vers 1880, le Beemster fut essentiellement consacré à l'élevage bovin. Grâce à l'introduction des stations de pompage à vapeur, il fut possible de drainer l'eau plus profondément et de l'éliminer davantage, ce qui permit une grande extension de l'horticulture.

Actuellement, le Beemster est partagé entre l'exploitation de terres arables, les prairies pour la production laitière, l'horticulture sous serre, la production fruitière, 200ha étant consacrés à la culture de la tulipe.

- *Villages et routes du Beemster*

Sur les cinq centres résidentiels prévus dès l'origine au XVII^e siècle, seuls Midden-, West-, et Noordbeemster ont été effectivement construits. Zuid- et Oostbeemster sont devenus Zuidoostbeemster. De plus, un certain nombre d'autres centres se sont développés.

Les principaux canaux, orientés nord sud, et creusés parallèlement les uns aux autres sont le

Schermerhornersloot, l'Oosthuizenloot, le Middensloot, Draaiordersloot, et le Zuidersloot. D'est en ouest on trouve l'Oostersloot, le Beetstersloot, le Jispersloot et le Vrouwsloot, dont le tracé est également parallèle.

Le réseau routier est parfaitement rectiligne, conforme au dessin géométrique du polder. Au milieu se trouve le Middenweg, orienté nord-est sud-ouest. Parallèlement à celui-ci sont tracés le Purmerenderweg, le Nekkerweg et le Jisperweg. A Middenbeemster, le Middenweg croise le Rijperweg dont le tracé suit l'axe nord-ouest sud-est. Parallèlement au Rijperweg se trouve le Mijzerweg (la route la plus au nord), le Vrouwenweg (autrefois appelé le Westmyserpad), l'Oosthuizenweg, le Hobrederweg, le Rijperweg, et le Zuiderweg (la route la plus au sud).

Parmi les routes du polder, le Wormerweg a conservé son aspect ancien. Les arbres qui le bordent offrent une vision particulièrement frappante. Aucun arbre n'est planté à proximité des digues le long du canal collecteur ni du canal périphérique longeant le Beemsterringvaart à cause de leur fonction de barrage. Après la Deuxième Guerre mondiale, la digue fut plantée de peupliers. Ils forment un écran proéminent et dessinent nettement les limites du polder dans le paysage ouvert du Noorderkwartier.

Middenbeemster, situé à l'intersection du Middenweg et du Rijperweg, est la principale ville du Beemster. L'ancien marché aux bestiaux, correspondant à un espace ouvert de forme rectangulaire, se trouve à l'intersection de ces routes. L'église réformée, construite après 1621, s'élève dans l'angle sud-est. Une ancienne forge, une école et le manoir (Heerenhuis) sont également disposés autour de cette place. Les fermes monumentales à toit en cloche construites en bordure du Middenweg, dénommées Lepelaar, Eenhoorn, et Volgerweg, sont des éléments originaux situés en dehors du centre historique du village.

Westbeemster fut dès l'origine conçu comme hameau agricole situé à l'intersection du Jisperweg et du Hobrederweg. L'église et le cimetière furent implantés au nord du croisement des routes. Les bâtiments sont essentiellement des maisons d'habitation construites de façon linéaire en bordure du Jisperweg. La communauté catholique romaine de Beemster s'est installée dans ce village et une grande église néogothique, un couvent et quelques écoles religieuses catholiques furent construits aux XIX^e et XX^e siècles.

Noordbeemster, également conçu comme un hameau agricole, est situé au nord de Middenbeemster, sur le Middenweg. Les maisons des agriculteurs comportent un seul niveau et un toit pentu ou mansardé.

Zuidoostbeemster, qui a toujours été une région d'horticulture destinée à approvisionner Amsterdam, s'est considérablement développé. Le village est situé à l'intersection du Purmerenderweg et du Zuiderweg. A partir du milieu du XIX^e siècle, les fermiers du

Beemster s'installait ici pour prendre leur retraite, ce dont témoignent leurs maisons à un seul niveau (*rentenierswoningen*) construites en bordure du Purmerenderweg et du Zuiderweg.

Klaterbuurt était à l'origine une région destinée à la classe ouvrière. Les habitations des ouvriers agricoles s'appellent parfois des "cuisines." Quelques fermes anciennes à toit en cloche et les étables d'un ancien domaine agricole transformé en ferme, Rijperweg 17, sont des caractéristiques remarquables de la région.

Halfweg, situé sur le Volgerweg et à l'intersection du Nekkerweg, est également un ancien village ouvrier. Les maisons des ouvriers agricoles, construites parallèlement à la route, sont constituées de deux habitations réunies sous un toit en pente.

Cinq forts, une écluse d'inondation et deux vannes de régulation appartenant à la ligne de défense d'Amsterdam (*Stelling van Amsterdam*) se trouvent dans la partie sud du Beemster.

- *Gestion de l'eau du polder Beemster*

Le polder de Beemster produit de l'eau sur une superficie de 7220ha. Il existe des différences de niveaux à l'intérieur du polder. Une bande de terre orientée est ouest et passant par le milieu du polder est à 50cm en dessous des zones adjacentes. L'altitude moyenne est de 3,80m sous le niveau de la mer, de grandes étendues se trouvant à moins 4m ; les zones les plus élevées sont à 3m en dessous du niveau de la mer. Le polder est entouré d'une digue qui elle-même est surélevée par rapport aux digues situées de l'autre côté du canal périphérique. Ce type de construction a été réalisé afin de protéger les importants investissements réalisés dans le polder au cas où la digue du Zuiderzee céderait.

L'actuel Beemsterringvaart (canal périphérique du Beemster) et une partie du Groot Noordhollandsch Kanaal (1819-24) appartiennent au Schermerboezem (réservoir du Schermer). Le réservoir se déverse à la fois via des cours d'eau naturel et des canaux artificiels dans la mer des Wadden (près de Den Helder), dans l'IJsselmeer (via le Naamsloot à Lutje Schardam), et le Noordzeekanaal (le Canal). L'eau provient essentiellement de l'IJsselmeer.

Le Beemster est divisé en trois parties, chacune ayant son propre niveau d'eau : le Bovenpolder, le Middenpolder et l'Arenbergerpolder. Il existe deux zones plus basses dans le Middenpolder - le Hoge Kilpolder et le Lage Kilpolder. Le niveau des eaux en été et en hiver varie entre 10cm and 30cm. Les principaux cours d'eau des différentes parties du polder sont reliés par des caniveaux qui permettent l'écoulement de l'eau des zones les plus hautes dans les zones plus basses qui sont drainées.

Six écluses pratiquées dans les 45km de digue laissent pénétrer l'eau pendant l'été. Les canaux autour des forts sont alimentés par quatre de ces écluses, en plus des vannes d'inondation. Il existe une écluse

d'admission d'eau pour Kruisoord ou Hoogland dans la partie nord-est.

Gestion et protection

Statut juridique

Au niveau de l'Etat, la loi de 1988 sur les monuments définit comme monument d'Etat "tout ce qui est construit depuis plus de cinquante ans et qui présente un intérêt général en raison de son esthétique, de son importance pour la science ou de sa valeur historique-culturelle." Le Registre des monuments d'Etat comporte les paysages urbains pour lesquels il doit exister des plans réalisés par les autorités locales dans le cadre de la loi de 1985 sur le développement rural. Actuellement, 60 monuments de la municipalité de Beemster, dont les limites sont calquées sur celles du polder, sont des monuments protégés et une liste complémentaire de 17 autres bâtiments a été soumise à examen.

Des dispositions sont prises au niveau régional, provincial et municipal en faveur de la préparation et de la mise en œuvre de plans de zonage et d'utilisation des sols qui sont régulièrement mis à jour. La protection du patrimoine culturel fait partie intégrante de ces plans. Le polder de Beemster est un élément constitutif du paysage national de Hollande Septentrionale tel qu'il est défini dans le plan régional des terres humides de 1991.

Le décret de 1996 de la Province de la Hollande-Septentrionale concerne les monuments, les bâtiments et les paysages urbains et s'applique directement au polder de Beemster. En 1991, la municipalité de Beemster a adopté son propre décret portant sur les monuments ; il a été mis à jour en 1994.

Gestion

Conformément aux plans de zonage et d'utilisation des sols, la gestion est partagée à différents niveaux par la Municipalité de Beemster, l'administration Provinciale de Hollande-Septentrionale et le Waterschap De Waterlanden.

Ce dernier organisme est une agence de l'eau de type particulier aux Pays-Bas. Il a été créé en 1981 à la suite de la fusion de plusieurs services et s'occupe de la gestion de l'eau sur un territoire d'environ 35000ha qui comporte le Beemster. Il est entre autre responsable des plantations d'arbres le long des routes du domaine public dans le Beemster.

Les monuments d'Etat protégés sont placés sous la tutelle de la direction de la Conservation des Pays-Bas (*Rijksdienst voor de Monumentenzorg*) qui dépend du Ministère de l'Education, de la Culture et des Sciences. L'Association pour la Conservation de la nature des Pays-Bas (*Vereniging tot Behoud van Natuurmonumenten in Nederland*) gère les forts de la Ligne de défense d'Amsterdam.

Tous ces organismes ont des programmes de conservation systématiques et prennent des mesures

de protection et de conservation dans leur domaine de compétence.

Les limites de la zone proposée pour inscription sont clairement délimitées et logiques, du fait qu'elles suivent le tracé des digues et des canaux qui furent créés au début du XVII^e siècle au moment de la réalisation du projet du Beemster et qui ne subit aucune modification ultérieure. Il existe une zone tampon logique et appropriée, comprenant le canal de Hollande-Septentrionale et d'autres polders (et la ville historique de Rijk), à laquelle s'applique une protection découlant de la loi néerlandaise précitée.

Conservation et authenticité

Le polder de Beemster est un paysage organique vivant qui évolue depuis plus de quatre siècles et continue de jouer un rôle important dans la vie économique des Pays-Bas. Avec l'évolution des conditions économiques et sociales, certains éléments tels que les fermes d'agrément et les moulins à vent ont disparu tandis que d'autres ont changé de fonction. L'économie de la zone, à l'origine essentiellement fondée sur l'agriculture, est actuellement diversifiée, l'accent étant mis sur la production laitière et l'horticulture, ce qui a modifié certains aspects du paysage.

Toutefois, la structure de base des digues, des canaux, des routes et de la colonisation définie au début du XVII^e siècle demeure intacte et authentique, car toute modification fondamentale mettrait l'intégrité physique de la région en péril.

Evaluation

Action de l'ICOMOS

Une mission d'expertise de l'ICOMOS a visité le polder de Beemster en janvier 1999. L'ICOMOS a également bénéficié de l'expertise de son Comité scientifique international sur les jardins et sites historiques.

Caractéristiques

Le polder de Beemster représente un événement très important dans l'histoire de la conquête de terres. Il allie le génie des ingénieurs hydrographes néerlandais, qui devaient mener des projets similaires dans d'autres parties du monde, et un concept intellectuel, celui du paysage architectonique entièrement dessiné, issu de l'idéal classique et Renaissance, à savoir la « ville idéale », qui impose au paysage à la fois l'ordre social et spatial et qui opère la fusion des éléments naturels et ceux créés par la main de l'homme en un tout intégré et ordonné. Le polder de Beemster a exercé une profonde influence sur les entreprises d'assèchement ultérieures et sur les projets de façonnage du paysage en Europe et dans le monde.

Analyse Comparative

L'exemple du polder de Beemster fut rapidement suivi par d'autres projets réalisés aux Pays-Bas au XVII^e

siècle, sous la pression d'une démographie en expansion rapide. Il devait servir de modèle à l'ambitieux projet du drainage du Zuiderzee, actuel IJsselmeer, entrepris au XX^e siècle. Aucun de ces projets ne peut cependant lui être comparé, car il représentait à l'époque une innovation et une audace technologique et intellectuelle incomparables.

Brève description

Datant du début du XVII^e siècle, le polder de Beemster est la plus ancienne région conquise sur l'eau aux Pays-Bas. Il a conservé intact son paysage régulier de champs, de routes, de canaux, de digues et de villages dessinés selon les principes urbanistiques de l'antiquité et de la Renaissance.

Recommandation

Que ce bien soit inscrit sur la Liste du Patrimoine mondial sur la base des *critères i, ii, et iv* :

Critère i Le polder de Beemster est un chef-d'œuvre de planification créatrice dans lequel les idéaux de l'antiquité et de la Renaissance furent appliqués à la conquête d'une terre.

Critère ii Le paysage innovateur et imaginatif du polder de Beemster a eu un impact profond et durable sur les projets de reconquête des terres en Europe et au-delà de ses frontières.

Critère iv La création du polder de Beemster marque une étape majeure dans la relation entre l'homme et l'eau à une période cruciale d'expansion économique et sociale.

ICOMOS, septembre 1999