Dutch Water Defence Lines
UNESCO

Executive Summary
Country
Kingdom of the Netherlands

Province
Provinces of Noord-Holland, Utrecht, Gelderland, Noord-Brabant, and Zuid-Holland

Name of the World Heritage Property
Dutch Water Defence Lines

Geographical coordinates
Edam: 52.505556, 5.063889
IJmuiden: 52.458611, 4.619444
Muiden: 52.329167, 5.071389
Fort Vechten: 52.058611, 5.168333
Woudrichem: 51.812778, 5.000278

Textual description of the World Heritage Property
The site consists of the Defence Line of Amsterdam, already a World Heritage Site, extended to include the New Dutch Waterline. The extension mostly consists of a contiguous area stretching from Muiden (in the north) as far as the Biesbosch nature reserve (in the south). Three small separate attributes are also added, in addition to the five separate attributes of the current World Heritage Site: Werk IV in Bussum, Tiel Inundation Canal, and Fort Pannerden.

A4 maps showing the World Heritage Property
Maps 1.4 – 1.12, 2.1 - 2.5, 4.1 en 5.1

Criteria on the basis of which the World Heritage Site has been nominated
Criteria (ii), (iv), and (v)
Statement of Outstanding Universal Value

a) Brief synthesis

The Dutch Water Defence Lines form a complete defence system that extends over 200 km along the edge of the administrative and economic heartland of Holland, consisting of the elongated New Dutch Waterline and the Defence Line of Amsterdam defensive ring. Built between 1815 and 1940, the system consists of an ingenious network of 96 forts, acting in concert with an intricate system of dikes, sluices, pumping stations, canals and inundation polders, and is a major example of a fortification based on the principle of temporary flooding of the land. Since the 16th century, the people in the Netherlands have used their special knowledge of hydraulic engineering for defence purposes. The polders along the line of fortifications each has its own inundation facilities. The water level was a critical factor in the success of the Dutch Water Defence Lines; the water had to be too deep to wade through and too shallow for boats to sail on.

Because the Dutch Water Defence Lines have continually been adapted to the development of defence techniques and knowledge of hydraulics, they offer a complete and unique insight in a 125-year period of military water management in combination with fortifications. The extraordinary consistency of the Strategically Deployed Landscape, Water Management System, and Military Fortifications is still clearly visible. The New Dutch Waterline contains well-preserved, extraordinary water management structures, including the first fan sluice, a type of sluice that was later used worldwide. The Defence Line of Amsterdam includes forts that have an important place in the development of military engineering worldwide: They mark the shift from the conspicuous brick/stone casemated forts of the Montalembert tradition, in favour of the steel and concrete architecture between 1815 and 1940, in particular the transition from brick construction to the use of reinforced concrete in the Defence Line of Amsterdam. This transition, with its experiments in the use of concrete and emphasis on the use of non-reinforced concrete, is an episode in the history of European architecture of which material remains are only rarely preserved.

The Dutch Water Defence Lines still are a coherent man-made landscape, one in which natural elements such as water and soil have been incorporated by man into a built system of engineering works, creating a clearly defined military landscape. The military use has been terminated, but the landscape and built attributes are clearly recognisable. As the surrounding area of each fort was in mutual connection and in relation to the landscape. The series of fortified areas, policy has been developed to safeguard the visual integrity of the inundation fields and the main defence line. Inundation fields that have lost their visual integrity have not been incorporated in the property. The range of hydraulic works and the military fortifications that supported the inundation system is a complete and intact entity, in mutual connection and in relation to the surrounding landscape. The series of forts, batteries and ramparts make up a group of connected buildings in which the consecutive phases of military architecture are clearly recognisable. As the surrounding area of each fort was a restricted military zone for many decades, its setting has been preserved through planning development control, although it could in the future be vulnerable to development pressures.

b) Justification for the criteria

Criterion (ii) The Dutch Water Defence Lines are an exceptional example of an extensive integrated European defence system of the modern period which has survived intact and well conserved since it was created from the beginning of the 19th century. It is part of a continuum of defensive measures that both anticipated its construction and were later to influence some portions of it immediately before and after World War II.

Criterion (iv) The Dutch Water Defence Lines are an outstanding example of an extensive and ingenious system of military defence by inundation, that uses features and elements of the country’s landscape. The well-preserved collection of fortifications in the context of the surrounding landscape is unique in the European history of (military) architecture. The forts illustrate the development of military architecture between 1815 and 1940, in particular the transition from brick construction to the use of reinforced concrete in the Defence Line of Amsterdam. This transition, with its experiments in the use of concrete and emphasis on the use of non-reinforced concrete, is an episode in the history of European architecture of which material remains are only rarely preserved.

c) Statement of integrity

The Dutch Water Defence Lines and their individual attributes are a complete, integrated defence system. The defence system has not been used for military purposes since World War II and is formally out of operation since 1963. The main defence line and inundation fields remain clearly recognisable in the landscape, because many of these attributes also had a civil function. The characteristic openness of the inundation fields is preserved integrally in the parts of the Dutch Water Defence Lines where the pressure of spatial development was low after its military use has ended. Especially in more urbanised areas, policy has been developed to safeguard the visual integrity of the inundation fields and the main defence line. Inundation fields that have lost their visual integrity have not been incorporated in the property.

The range of hydraulic works and the military fortifications that supported the inundation system is a complete and intact entity, in mutual connection and in relation to the surrounding landscape. The series of forts, batteries and ramparts make up a group of connected buildings in which the consecutive phases of military architecture are clearly recognisable. As the surrounding area of each fort was a restricted military zone for many decades, its setting has been preserved through planning development control, although it could in the future be vulnerable to development pressures.

d) Statement of authenticity

The Dutch Water Defence Lines still are a coherent man-made landscape, one in which natural elements such as water and soil have been incorporated by man into a built system of engineering works, creating a clearly defined military landscape. The military use has been terminated, but the landscape and built attributes are still present. The large majority of fortifications has been preserved...
as they were designed and specified. The Outstanding Universal Value is expressed in the authenticity of the design (the typology of forts, sluices, batteries, line ramparts), of the specific use of building materials (brick, non-reinforced concrete, reinforced concrete), of the workmanship (meticulous construction apparent in its constructional condition and flawlessness), and of the structure in its setting (as an interconnected military functional system in the manmade landscape of the polders and the urbanised landscape).

Since the nineties the defence line and its individual attributes are being maintained, restored, made accessible, put to use and exploited sustainably. There have been no major reconstructions, for educational purposes, some attributes have been refurbished and are recognisable as such. A great number of forts now has an educational, economical or recreational function. The military history remains tangible, because the story of the Dutch Water Defence Lines continues to be told in the area and through various media.

e) Protection and management

The national government obliges provinces and municipalities to include the preservation of Outstanding Universal Value in regional and local plans and legislation. The basis for this obligation lies in the Spatial Planning (General Rules) Decree (Besluit algemene regels ruimtelijke ordening, or Barro) and, from 2021, the Environment and Planning Act already adopted. In addition, all structures of the New Dutch Waterline are protected as nationally listed buildings, and the connection with the landscape is also protected through clustering of these structures. A number of built attributes of the Defence Line of Amsterdam are also protected as nationally listed buildings; the remaining built attributes in the Defence Line of Amsterdam are protected as provincially listed buildings. In all these cases, there is a licensing requirement for architectural and spatial planning developments, which is linked to the preservation of the monumental character.

Together, the provinces of Noord-Holland, Utrecht, Gelderland, and Noord-Brabant act as site-holder of the Dutch Water Defence Lines. The administrative portfolio holders of these provinces work together in the Dutch Water Defence Line Committee. Actual implementation is currently in the hands of two project offices, namely the project office for the Defence Line of Amsterdam and the programme office for the New Dutch Waterline. The two management organisations will merge to form one joint executive organisation (starting 1/7/2020), which will be executing the comprehensive management plan.

The Dutch Water Defence Lines protected the economic and administrative heartland of the Netherlands. The pressure of urban development is great in some parts, in particular where the defence system was constructed a short distance from urban areas. Developments are only permitted if they fall within the planning framework and they have been designed in such a way that they preserve or reinforce the OUV. This requires of the site-holder and other governments involved a meticulous consideration and precise assessment against the integrity and authenticity of the World Heritage Site. For this, checks and balances have been integrated. Large-scale initiatives with a potentially large impact are subjected to a Heritage Impact Assessment (HIA). A strategic HIA of the relation to the World Heritage Site is carried out in the case of potentially far-reaching developments (such as energy transition). Recommendations from independent experts are structurally enshrined in the process, both on the level of the World Heritage Site (spatial quality advisory team), the provincial level (provincial spatial quality advisor), and the local level (building aesthetics committee and listed buildings committee).

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Geographical coordinates to the nearest second

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<thead>
<tr>
<th>ID No</th>
<th>Name of Component Part</th>
<th>Region(s)/District(s)</th>
<th>Coordinates of the central point</th>
<th>Area of Nominated component of the Property (ha)</th>
<th>Bufferzone (ha)</th>
<th>Map No</th>
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<tbody>
<tr>
<td>759-001</td>
<td>Dutch Water Defence Lines, consisting of existing The Defence Line of Amsterdam and the extension New Dutch Waterline</td>
<td>Noord-Holland Utrecht Gelderland Noord-Brabant Zuid-Holland</td>
<td>Coordinates 01: 52 31 4.59 °N 5 4 2.84 °E, Coordinates 08: 52 32 1.62 °N 4 46 52.60 °E, Coordinates 31: 52 13 40.83 °N 4 50 16.03 °E, Coordinates 41: 52 20 9.59 °N 5 4 0.74 °E, Coordinates 47: 52 17 42.24 °N 5 9 41.14 °E, Coordinates 22: 52 20 23.73 °N 4 39 14.87 °E, Coordinates 42: 52 14 9.10 °N 5 3 32.17 °E, Coordinates 56: 52 7 10.49 °N 5 5 19.78 °E, Coordinates 68: 52 4 30.18 °N 5 10 37.07 °E, Coordinates 80: 51 57 43.42 °N 5 10 32.40 °E, Coordinates 82: 51 52 37.25 °N 5 7 14.93 °E, Coordinates 94: 51 47 59.58 °N 4 5 2.70 °E</td>
<td>54,746.78 ha</td>
<td>191,630.82 ha</td>
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<tr>
<td>759-006</td>
<td>Fort along the Pampus (44)</td>
<td>Noord-Holland</td>
<td>52 21 53.24 °N 5 4 18.18 °E</td>
<td>2.64 ha</td>
<td>see bufferzone Main Defence Lines</td>
<td>1.8</td>
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<td>759-007</td>
<td>Works along the U before Duykerdam (Vuurtoereiland; 45)</td>
<td>Noord-Holland</td>
<td>52 22 20.58 °N 5 0 49.28 °E</td>
<td>1.81 ha</td>
<td>see bufferzone Main Defence Lines</td>
<td>1.9</td>
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<tr>
<td>759-009</td>
<td>Fort Werk IV (48)</td>
<td>Noord-Holland</td>
<td>52 16 17.03 °N 5 10 33.65 °E</td>
<td>1.13 ha</td>
<td>see bufferzone Main Defence Lines</td>
<td>1.10</td>
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<td>759-010</td>
<td>Tiel Inundation Canal</td>
<td>Gelderland</td>
<td>51 52 35.20 °N 5 24 26.17 °E</td>
<td>15.54 ha</td>
<td>see bufferzone Main Defence Lines</td>
<td>1.11</td>
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<td>759-011</td>
<td>Fort Pannerden (95)</td>
<td>Gelderland</td>
<td>51 52 51.33 °E 6 1 36.15 °E</td>
<td>1.00 ha</td>
<td>87.29 ha</td>
<td>1.12</td>
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</table>

Total area 54,779.02 ha 191,722.63 ha
DUTCH WATER DEFENCE LINES
1.4 BOUNDARY
DUTCH WATER DEFENCE LINES
759-001
PROPOSED BOUNDARY
World Heritage Site
World Heritage Site extension
World Heritage Site reduction

BACKGROUND: 2018, DIENST VOOR HET KADASTER EN OPENBARE REGISTERS, APELDOORN
PROVINCIE UTRECHT, LFO - GIS / 30-11-18 / NHW & SVA
1.6 Fort near Heemstede
759-003

Proposed Boundary

World Heritage Site
World Heritage Site extension
World Heritage Site reduction

0.5 km

1:25,000

Dutch Water Defence Lines

BACKGROUND: 2018, DIENST VOOR HET KADASTER EN OPENBARE REGISTERS, APELDOORN
PROVINCIE UTRECHT, LFO - GIS / 30-11-18 / NHW & SVA

1.7 Works along the IJ before Diemerdam 759-005

Boundary

World Heritage Site
World Heritage Site extension
World Heritage Site reduction

0.5 km

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1.8 Fort Along the Pampus 759-006
BOUNDARY

World Heritage Site
World Heritage Site extension
World Heritage Site reduction

1.9 Works Along the IJ Before Durgerdam 759-007
BOUNDARY

4°59'0"E
5°0'0"E
5°1'0"E
5°2'0"E
5°3'0"E
5°4'0"E
5°5'0"E
5°6'0"E
52°21'0"N
52°22'0"N
52°23'0"N
52°24'0"N
52°25'0"N
52°26'0"N
52°27'0"N

Dutch Water Defence Lines
BACKGROUND: 2018, DIENST VOOR HET KADASTER EN OPENBARE REGISTERS, APELDOORN
PROVINCIE UTRECHT, LFO - GIS / 03-12-18 / NHW & SVA

MARKERMEER & IJMEER
(Natuurreservaat)
Gemeente Gooise Meren

IJMEER
Amsterdam
Gemeente Amsterdam
Gemeente Gooise Meren

IJMEER
Gemeente Gooise Meren

Gemeente Gooise Meren

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Executive Summary

Dutch Water Defence Lines

1.10 Fort Werk IV
759-009
PROPOSED BOUNDARY

World Heritage Site
World Heritage Site extension
World Heritage Site reduction

1.11 Tiel Inundation Canal
759-010
PROPOSED BOUNDARY

World Heritage Site
World Heritage Site extension
World Heritage Site reduction

1:25,000

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Dutch Water Defence Lines

Name and contact information

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