Ramsar Information Sheet
Published on 14 April 2015

Netherlands
Markiezaat

Designation date 4 March 1987
Site number 2211
Coordinates 51°27'46"N 4°17'4"E
Area 1 831,90 ha

https://rsis.ramsar.org/ris/2211
Created by RSIS V.1.6 on - 5 October 2016
## 1 - Summary

**Summary**

A stagnant shallow freshwater lake with reedbeds and wet meadows. It is adjacent to Oosterschelde in the west, the Zoommeer in the north-west, with the city of Bergen op Zoom at the north-eastern border, and the Schelde–Rhine canal at the west side. It lays on the natural transition from the Holocene tidal landscape to the Pleistocene higher sandy landscape.

The Markiezaat originates from the Sint Felix flood in 1530, which resulted in a landscape with the name “Verdronken land van het Markiezaat van Bergen op Zoom” ("Drowned land of the Marquis of Bergen op Zoom"). After the closing from Kreekrak in 1868, it became a part of the estuary of Oosterschelde. It was cut off from the Oosterschelde by the construction of the Markiezaatkade (and the Oesterdam) in 1983. After that the area was compartmented by the creation of the Bergse Plaat (1984) and the Binnenschelde (1988). The remaining part grew in the course of years to a freshwater lake: Markiezaatsmeer or Markiezaat.

The site consists of former tidal channels and creeks, mud flats, salt marshes and higher grounds with young shifting dunes. Because of the great diversity in abiotic circumstances a large diversity in vegetations could develop with a unique composition of species.
2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

<table>
<thead>
<tr>
<th>Name</th>
<th>Ms. A. Pel-Roest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institution/agency</td>
<td>Ministry of Economic Affairs</td>
</tr>
<tr>
<td>Postal address</td>
<td>Prins Clauslaan 8, P.O. Box 20401, 2500 EK The Hague, the Netherlands</td>
</tr>
<tr>
<td>E-mail</td>
<td><a href="mailto:a.j.pel@minez.nl">a.j.pel@minez.nl</a></td>
</tr>
<tr>
<td>Phone</td>
<td>+31 70 378 6868</td>
</tr>
</tbody>
</table>

2.1.2 - Period of collection of data and information used to compile the RIS

To year: 2013

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish): Markiezaat

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image

<1 file(s) uploaded>

Boundaries description (optional):

The Ramsar site ‘Oosterschelde & Markiezaat’ has also been designated as two separate European Natura2000 sites, one named Oosterschelde and the other named Markiezaat. A logical step as both sites are not connected and the ecology of both sites is actually very different.

For this RIS-version, the new Ramsar site boundaries have therefore been adjusted to the Natura 2000-boundaries, while the names for the respective Natura 2000-sites have been adopted.

For the Markiezaat some area has been included along the canal in the south, while some area has been excluded along the railway in the east. The area measures 1831.9 ha, which is an increase of approx. +10 ha compared to the former situation for the Markiezaat.

2.2.2 - General location

a) In which large administrative region does the site lie?

Provinces of Noord-Brabant and Zeeland

b) What is the nearest town or population centre?

South-west of Bergen op Zoom (population 66.287 per 1-1-2013; source CBS, Netherlands Statistics)

2.2.3 - For wetlands on national boundaries only

a) Does the wetland extend onto the territory of one or more other countries?

Yes ☐ No ☑

b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party?

Yes ☐ No ☑

2.2.4 - Area of the Site

Official area, in hectares (ha): 1831.9

Area, in hectares (ha) as calculated from GIS boundaries: 1831.92

2.2.5 - Biogeography

Biogeographic regions:

Data & location, S2 - Page 1
<table>
<thead>
<tr>
<th>Regionalisation scheme(s)</th>
<th>Biogeographic region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other scheme (provide name below)</td>
<td>Atlantic</td>
</tr>
</tbody>
</table>

The bio-geographic regions dataset used, contains the official delineations used in the Habitats Directive (92/43/EEC) and for the EMERALD Network set up under the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention).
3 - Why is the Site important?

3.1 - Ramsar Criteria and their justification

- **Criterion 2**: Rare species and threatened ecological communities
- **Criterion 3**: Biological diversity
- **Criterion 4**: Support during critical life cycle stage or in adverse conditions
- **Criterion 5**: >20,000 waterbirds
- **Criterion 6**: >1% waterbird population

**Justification**

The Markiezaat is designated as a Natura 2000 site and can therefore be considered important for maintaining the biodiversity of the Atlantic biogeographic region. Besides the species mentioned under criterion 2, the site has also been designated as a SPA for a number of bird species that are not on Annex I of the BD.

3.2 - Plant species whose presence relates to the international importance of the site

<table>
<thead>
<tr>
<th>Scientific name</th>
<th>Common name</th>
<th>Criterion 2</th>
<th>Criterion 3</th>
<th>Criterion 4</th>
<th>IUCN/ Red List</th>
<th>CITES Appendix I</th>
<th>Other status</th>
<th>Justification</th>
</tr>
</thead>
</table>

3.3 - Animal species whose presence relates to the international importance of the site

<table>
<thead>
<tr>
<th>Phylum</th>
<th>Scientific name</th>
<th>Common name</th>
<th>Species qualifies under criterion</th>
<th>Species contributes under criterion</th>
<th>Pop.</th>
<th>Period of pop.</th>
<th>% occurrence</th>
<th>IUCN/ Red List</th>
<th>CITES Appendix I</th>
<th>CITES Appendix I</th>
<th>Other Status</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHORDATA/ AVES</td>
<td>Anas acuta</td>
<td>Northern Pintail</td>
<td>2 4 6 9 7</td>
<td>2 4 6 9 7</td>
<td>732</td>
<td>2006-2010</td>
<td>1.2</td>
<td>LC</td>
<td></td>
<td></td>
<td></td>
<td>Biogeographic population: NW-Europe (Nonbreeding)</td>
</tr>
<tr>
<td>CHORDATA/ AVES</td>
<td>Anas clypeata</td>
<td>Northern Shoveler</td>
<td>2 4 6 9</td>
<td>2 4 6 9</td>
<td></td>
<td></td>
<td></td>
<td>LC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHORDATA/ AVES</td>
<td>Anas crecca</td>
<td>Common Teal</td>
<td>2 4 6 9</td>
<td>2 4 6 9</td>
<td></td>
<td></td>
<td></td>
<td>LC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHORDATA/ AVES</td>
<td>Anas penelope</td>
<td>Eurasian Wigeon</td>
<td>2 4 6 9</td>
<td>2 4 6 9</td>
<td></td>
<td></td>
<td></td>
<td>LC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHORDATA/ AVES</td>
<td>Anas strepera</td>
<td>Gadwall</td>
<td>2 4 6 9</td>
<td>2 4 6 9</td>
<td></td>
<td></td>
<td></td>
<td>LC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHORDATA/ AVES</td>
<td>Anas strepera</td>
<td>Greylag Goose</td>
<td>2 4 6 9</td>
<td>2 4 6 9</td>
<td></td>
<td></td>
<td></td>
<td>LC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Overall waterbird numbers: **20423**, Start year: **2005**
## CHORDATA / AVES

<table>
<thead>
<tr>
<th>Scientific name</th>
<th>Common name</th>
<th>Pop. Size</th>
<th>Period of pop. Est.</th>
<th>% occurrence</th>
<th>IUCN Red List</th>
<th>CITES Appendix I</th>
<th>CMS Appendix I</th>
<th>Other Status</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cygnus columbianus bewickii</td>
<td>Bewick's Swan</td>
<td>3.4</td>
<td>681</td>
<td>2006-2010</td>
<td></td>
<td></td>
<td></td>
<td>Biogeographic population: W-Siberia / NE-NW Europe (Nonbreeding). Justification criterion 4 The site is of particular importance for many breeding and non-breeding bird species (see criterion 2, 3 and 6), of which several species gather in relatively small areas like for resting during wintering and migration periods or in breeding colonies like for Eurasian Spoonbill Platalea leucorodia and Avocet Recurvirostra avosetta.</td>
<td></td>
</tr>
<tr>
<td>Fulica atra</td>
<td>Common Coot</td>
<td>LC</td>
<td>681</td>
<td>2006-2010</td>
<td></td>
<td></td>
<td></td>
<td>Biogeographic population: Eastern Atlantic (Nonbreeding). For Breeding Birds: Eastern Atlantic, 183 average number of birds between 2006-2010, 1.7% at site Justification criterion 4 The site is of particular importance for many breeding and non-breeding bird species (see criterion 2, 3 and 6), of which several species gather in relatively small areas like for resting during wintering and migration periods or in breeding colonies like for Eurasian Spoonbill Platalea leucorodia and Avocet Recurvirostra avosetta.</td>
<td></td>
</tr>
<tr>
<td>Phalacrocorax carbo</td>
<td>Great Cormorant</td>
<td>LC</td>
<td>681</td>
<td>2006-2010</td>
<td></td>
<td></td>
<td></td>
<td>Biogeographic population: Eastern Atlantic (Nonbreeding). For Breeding Birds: Eastern Atlantic, 183 average number of birds between 2006-2010, 1.7% at site Justification criterion 4 The site is of particular importance for many breeding and non-breeding bird species (see criterion 2, 3 and 6), of which several species gather in relatively small areas like for resting during wintering and migration periods or in breeding colonies like for Eurasian Spoonbill Platalea leucorodia and Avocet Recurvirostra avosetta.</td>
<td></td>
</tr>
<tr>
<td>Pluvialis squatarola</td>
<td>Grey Plover</td>
<td>LC</td>
<td>681</td>
<td>2006-2010</td>
<td></td>
<td></td>
<td></td>
<td>Biogeographic population: Eastern Atlantic (Nonbreeding). For Breeding Birds: Eastern Atlantic, 183 average number of birds between 2006-2010, 1.7% at site Justification criterion 4 The site is of particular importance for many breeding and non-breeding bird species (see criterion 2, 3 and 6), of which several species gather in relatively small areas like for resting during wintering and migration periods or in breeding colonies like for Eurasian Spoonbill Platalea leucorodia and Avocet Recurvirostra avosetta.</td>
<td></td>
</tr>
<tr>
<td>Podiceps cristatus</td>
<td>Great Crested Grebe</td>
<td>LC</td>
<td>681</td>
<td>2006-2010</td>
<td></td>
<td></td>
<td></td>
<td>Biogeographic population: Eastern Atlantic (Nonbreeding). For Breeding Birds: Eastern Atlantic, 183 average number of birds between 2006-2010, 1.7% at site Justification criterion 4 The site is of particular importance for many breeding and non-breeding bird species (see criterion 2, 3 and 6), of which several species gather in relatively small areas like for resting during wintering and migration periods or in breeding colonies like for Eurasian Spoonbill Platalea leucorodia and Avocet Recurvirostra avosetta.</td>
<td></td>
</tr>
<tr>
<td>Podiceps nigricollis</td>
<td>Black-necked Grebe</td>
<td>LC</td>
<td>681</td>
<td>2006-2010</td>
<td></td>
<td></td>
<td></td>
<td>Biogeographic population: Eastern Atlantic (Nonbreeding). For Breeding Birds: Eastern Atlantic, 183 average number of birds between 2006-2010, 1.7% at site Justification criterion 4 The site is of particular importance for many breeding and non-breeding bird species (see criterion 2, 3 and 6), of which several species gather in relatively small areas like for resting during wintering and migration periods or in breeding colonies like for Eurasian Spoonbill Platalea leucorodia and Avocet Recurvirostra avosetta.</td>
<td></td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Phylum</th>
<th>Scientific name</th>
<th>Common name</th>
<th>Pop. Size</th>
<th>Period of pop. Est.</th>
<th>% occurrence</th>
<th>IUCN Red List</th>
<th>CITES Appendix</th>
<th>CMS Appendix</th>
<th>Other Status</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHORDATA/AVES</td>
<td>Tadorna tadorna</td>
<td>Common Shelduck</td>
<td>LC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>LC</td>
</tr>
<tr>
<td>CHORDATA/AVES</td>
<td>Tringa erythropus</td>
<td>Spotted Redshank</td>
<td>LC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>LC</td>
</tr>
</tbody>
</table>

3.4 - Ecological communities whose presence relates to the international importance of the site

<no data available>
4 - What is the Site like? (Ecological character description)

4.1 - Ecological character

The site is important for breeding birds of scarcely covered banks, of small lakes and reed marshes, for fish eating birds and as resting area during high tide for birds which forage in the Oosterschelde.

The waters in the Markiezaat developed in a similar way like the other former tidal areas that are separated from the influence of the sea (Volkerak-Zoommeer and Binnenschelde). Firstly, a strong increase of the stickleback population, followed by a period with relatively clear water and small fish biomass, followed up by an increase of fish populations and nutrients. This caused a decrease in water quality, oxygen fluctuations cyanobacteria blooms.

The site consists of former tidal channels and creeks, mud flats, salt marshes and higher grounds with young shifting dunes. Due to the great diversity in abiotic circumstances a large diversity in vegetations could develop with a unique composition of species. Seepage occurs at the transition zone from higher sandy grounds to recent saltwater up-welling, resulting in brackish conditions and vegetations.

A small part of the Markiezaat is open for public. There is a hide, a small hiking route and a bird watching tower. Recreation is prohibited on the water.

4.2 - What wetland type(s) are in the site?

<table>
<thead>
<tr>
<th>Inland wetlands</th>
<th>Wetland types (code and name)</th>
<th>Local name</th>
<th>Ranking of extent (1: greatest - 4: least)</th>
<th>Area (ha) of wetland type</th>
<th>Justification of Criterion 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh water &gt; Lakes and pools &gt;&gt; O: Permanent freshwater lakes</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fresh water &gt; Lakes and pools &gt;&gt; Tp: Permanent freshwater marshes/ pools</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.3 - Biological components

4.3.1 - Plant species

<no data available>

4.3.2 - Animal species

<no data available>

4.4 - Physical components

4.4.1 - Climate

<table>
<thead>
<tr>
<th>Climatic region</th>
<th>Subregion</th>
</tr>
</thead>
<tbody>
<tr>
<td>C. Moist Mid-Latitude climate with mild winters</td>
<td>Cfb: Marine west coast (Mild with no dry season, warm summer)</td>
</tr>
</tbody>
</table>

4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres) -9

a) Maximum elevation above sea level (in metres) 6

Please name the river basin or basins. If the site lies in a sub-basin, please also name the larger river basin. For a coastal/marine site, please name the sea or ocean.

The catchment area is the higher parts South East of the city Bergen op Zoom. The surface area of the catchment is approximately twice as large as the wetland itself. Geologically and geomorphologically it consists of Quaternary sediments.

4.4.3 - Soil

Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)? Yes ☐ No ☑

Please provide further information on the soil (optional)
4.4.4 - Water regime

The soil type is Alluvial.

Please add any comments on the water regime and its determinants (if relevant). Use this box to explain sites with complex hydroteology:

The Markiezaat was cut off from the Oosterschelde in 1983 with the construction of the Markiezaatdam. The area gradually turned into a fresh water site. Freshwater is supplied mainly by precipitation and a little bit by seepage and the small brook the Blaffert. The water level is kept at NAP + 0.5 m.

4.4.5 - Sediment regime

<no data available>

4.4.6 - Water pH

<no data available>

4.4.7 - Water salinity

<no data available>

4.4.8 - Dissolved or suspended nutrients in water

<no data available>

4.4.9 - Features of the surrounding area which may affect the Site

Please describe whether, and if so how, the landscape and ecological characteristics in the area surrounding the Ramsar Site differ from the site itself:

i) broadly similar

ii) significantly different

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Other ecosystem service(s) not included above:

a) within the Ramsar site:

Dairy farming, Forestry <5%, Walking, horseriding and non-motorised vehicles <5%.

b) in the surroundings/catchment:

Mainly agriculture and urban area.

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site? Yes ☐ No ☐ Unknown ☑

4.5.2 - Social and cultural values

<no data available>

4.6 - Ecological processes

<no data available>
5 - How is the Site managed? (Conservation and management)

5.1 - Land tenure and responsibilities (Managers)

5.1.1 - Land tenure/ownership

Provide further information on the land tenure / ownership regime (optional):

a) within the Ramsar site:
The site is partly owned by Noordbrabants Landschap (1807 ha); the remainder is state (Dienst der Domeinen, Ministerie van Financiën) and private ownership.

b) in the surrounding area:
Surrounding area: the water is state owned, on land several private owners.

5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:

Stichting Het Noord-Brabants Landschap
P.O. Box 80
5076 ZH Haaren
+31 (0)411 622775

5.2 - Ecological character threats and responses (Management)

5.2.1 - Factors (actual or likely) adversely affecting the Site’s ecological character

<table>
<thead>
<tr>
<th>Factors adversely affecting site</th>
<th>Actual threat</th>
<th>Potential threat</th>
<th>Within the site</th>
<th>In the surrounding area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial and industrial areas</td>
<td>Medium impact</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

Agriculture and aquaculture

<table>
<thead>
<tr>
<th>Factors adversely affecting site</th>
<th>Actual threat</th>
<th>Potential threat</th>
<th>Within the site</th>
<th>In the surrounding area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non specified</td>
<td>Medium impact</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

Transportation and service corridors

<table>
<thead>
<tr>
<th>Factors adversely affecting site</th>
<th>Actual threat</th>
<th>Potential threat</th>
<th>Within the site</th>
<th>In the surrounding area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utility and service lines (e.g., pipelines)</td>
<td>Low impact</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

Please describe any other threats (optional):

a) within the Ramsar site: (A = serious threat covering large part of the area; B = moderate threat or local threat; C = minor threat): Agricultural intensification/ expansion (B -); Industrialization and urbanization (B - waste water discharge); Infrastructure (C - power lines); Natural events (B -).

b) in the surrounding area:
Nothing particular

5.2.2 - Legal conservation status

Regional (international) legal designations

<table>
<thead>
<tr>
<th>Designation type</th>
<th>Name of area</th>
<th>Online information url</th>
<th>Overlap with Ramsar Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU Natura 2000</td>
<td>Markiezaat (SPA)</td>
<td></td>
<td>whole</td>
</tr>
</tbody>
</table>

5.2.3 - IUCN protected areas categories (2008)

IV Habitat/Species Management Area: protected area managed mainly for conservation through management intervention

5.2.4 - Key conservation measures
5.2.5 - Management planning

Is there a site-specific management plan for the site? In preparation

Has a management effectiveness assessment been undertaken for the site? Yes ☐ No ☒

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning processes with another Contracting Party? Yes ☐ No ☒

Please indicate if a Ramsar centre, other educational or visitor facility, or an educational or visitor programme is associated with the site:

The visitor centre Kraaijenberg is located near the city Bergen op Zoom. Two nature trails start here. The area also has a 13 m watch tower. Hides are constructed at the end of the hiking trails.

5.2.6 - Planning for restoration

Is there a site-specific restoration plan? No need identified

5.2.7 - Monitoring implemented or proposed

Ongoing biodiversity monitoring is one of the obligatory activities in relation to the designation as a Natura 2000-site. Rijkswaterstaat (www.rws.nl), the Center for Marine and Estuarine Ecology (NIOO/CEMO, www.nioo.nl) and IMARES (part of the Wageningen University and Research Centre; www.imares.wur.nl) in Yerseke are the main research institutes in the Delta, among which the Markiezaat.
6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references


6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)
   <no file available>
ii. a detailed Ecological Character Description (ECD) (in a national format)
   <no file available>
iii. a description of the site in a national or regional wetland inventory
   <no file available>
iv. relevant Article 3.2 reports
   <no file available>
v. site management plan
   <no file available>
vi. other published literature
   <no file available>

<no data available>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:

<no data available>

6.1.4 - Designation letter and related data

Designation letter

Date of Designation | 1987-03-04