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Committee for the activities of the Council of Europe in the field of biological and landscape diversity

(CO-DBP)

Group of specialists – European Diploma for Protected Areas

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Room 2, Palais de l'Europe, Strasbourg

Naardermeer Nature Reserve (Netherlands)

Application for the European Diploma for Protected Areas

Document established by
the Directorate of Culture and Cultural and Natural Heritage

Council of Europe

European Diploma

Information form
For Candidate Sites

Site code								

1. SITE IDENTIFICATION

1.1 SITE NAME

NAARDERMEER

1.2 COUNTRY	**NETHERLANDS**							
1.3 DATE CANDIDATURE								
1.4 SITE INFORMATION COMPILATION DATE								

1.5 ADDRESSES: administrative Authorities

National Authority	Regional Authority	Local Authority
Ministerie van Landbouw, Natuurbeheer en Visserij Bezuidenhoutseweg 73 Postbus 20401 2500 EK DEN HAAG tel. + 31 70 3785770 fax +31 70 3786146	Provincie Noord Holland Dreef 3 Postbus 123 2000 MD HAARLEM Tel. + 31 23 514 31 43 Fax + 31 23 514 40 40	Gemeente Naarden Raadhuisstraat 2 1411EC NAARDEN tel: 035-6957811
		Gemeente Hilversum Postbus 9900 1201 GM HILVERSUM Tel. 035 - 629 2111 Telefax : 035-6292129 E-mail : gemeente@hilversum.nl
		Gemeente Muiden Postbus3 1398 ZG MUIDEN Telefoon 0294-210210 Telefax : 0294-261386 E-mail **:** info@muiden.nl
		Gemeente Weesp Postbus 5099 1380 GB WEESP Telefoon 0294-491391 Telefax 0294-414251 E-mail info@weesp.nl

1.6 ADRESSES: Site Authorities

Site manager	Site information Centre	Council of Europe Contact
G. Lemmen Vereniging Natuurmonumenten, Meerkade 8 1412 AB NAARDEN Tel. +31 35 6951840 Fax +31 35 6951840 Email: g.lemmen@natuurmonumenten.nl		F.W. PRINS Vereniging Natuurmonumenten Noordereinde 60 Postbus 9955 1243 ZS 's-Graveland tel. + 31 35 6559714 fax +31 35 6559871 email: f.prins@natuurmonumenten.nl

1.7 SUMMARY DESCRIPTION

Naardermeer is a marshland region of 1077 hectares in the centre of The Netherlands. The area consists out of lakes, reedbeds, brushes en forests. It is surrounded by a bufferzone area, agricultural land in a transition to a more natural phase.
The region derives its greatest value from the fact that various rare breeding birds and migrating birds that can be found there as well as the rich variety of types of vegetation which are characteristic of a marshland area that is fed with seepage. Naardermeer forms part of the Vechtplassen region, which consists of various lakes and marshes for which it functions as a core zone.
Motorways, railways and cities bound the nature reserve in the West, North and East. Cooperation with the authorities and other institutions is well developed to guarantee and to improve the quality of the area.

1.8 EUROPEAN INTEREST JUSTIFYING THE CANDIDATURE

Presence of many species, mentioned in the international conventions and European Habitat and Bird Directive

	Bonn	Bern	Habitat Directive	Bird Directive
Mammals	6	5	6	
Birds	27	45		48
Amphibians and Reptiles	2	2	2	
Fishes			3	
Plants			1	

Habitats of Annex 1 of the Habitat Directive	Syntaxa present
3140 Calciferous oligo-mesotrophic waters with Stone Worts	Charion fragilis
3150 lakes eutrophic by nature	Hydrocharition
3150 lakes eutrophic by nature	Magnopotamion
91D0 bog forests: birch woods with bog moss	Betulion pubescentis

1.9. SELECTION METHODOLOGY

Provincie Noord-Holland, 1993. Restoration Plan Naardermeer. Provincie Noord-Holland and DHV water, file F1312-10-100

Vereniging Natuurmonumenten, 1995. Nature Management Plan Naardermeer 1995. Vereniging Natuurmonumenten, ‘s Graveland.

1.10. MAIN AIM OR MOTIVATION

1. The awarding of the Diploma will strenghten the position of this nature reserves in the midst of the urbanised western parts of the Netherlands.

2. The owner, the Vereniging tot Behoud van Natuurmonumenten in Nederland (the Society for Preservation of Nature Monuments in the Netherlands) will celebrate her centenary in 2005. The Naardermeer was the first acquisition of Natuurmonumenten in 1906 and got a high symbolic value. In awarding the European Diploma to the Naardermeer, the management of Natuurmonumenten as a nature conservation organisation is honoured.

1.11. DATES *(to be filled in by the Council of Europe)*

DATE OF FIRST EXAMINATION	DATE OF EXPERT VISIT

DATE OF SECOND EXAMINATION	DATE OF AWARD

2 SITE LOCATION

2.1. SITE CENTRE LOCATION

LONGITUDE	LATITUDE
E 5 º 1 0 ‘	N 5 2 º 1 7 ‘

2.2. AREA (ha) . 2.3 SITE LENGTH (km)

Total Area		1	0	7	7	,							,		
Core			6	7	7	,									
Buffer			4	0	0	,									

2.4. ALTITUDE (m)

MINIMUM	MAXIMUM	MEAN
-1 m	-0,8m	

2.5. ADMINISTRATIVE REGION

REGION NAME	% COVER		
provincie NOORD-HOLLAND	1	0	0
gemeente NAARDEN		6	0
gemeente MUIDEN		2	0
gemeente HILVERSUM		1	0
gemeente WEESP		1	0

3. NATURAL HERITAGE

3.1 GENERAL ABIOTIC DESCRIPTION (Geomorphology, geology and hydrogeology)

Naardermeer is situated in the transition area starting at the Gooise dam and stretching out as far as the valley of the river Vecht. The higher grounds of the Gooi district (approx. 30 above +NAP at the most (Normal Amsterdam Level)) largely consist of soil or gravel and sand with good drainage which was deposited here before the ice age and was stowed during the ice age before last. The Pleistocene sand pack dips towards the west under a layered parcel of young Holocene deposits consisting of peat, course and fine sand, river clay and marine clay. Naardermeer lies at 0.8 – 1 meter below NAP (Normal Amsterdam Level).

Naardermeer is a natural lake by origin, which arose from an influx from the river Vecht. The bottom of the lake consists of peat soil on a layer of sand. The thickness of the peat layer varies from 30 cm to 1 meter on the eastside to 1 to 2.5 meters on the westside. Under the peat layer there is a layer of clay in the western section of Naardermeer, increasing in thickness in westerly direction.

The **water management** of Naardermeer strongly depends on that of the surrounding area (Appendix 5). Due to its location in the transition of the high sands of the Gooi district into the polderland of the Western part of the Netherlands, the eastside of Naardermeer is fed with seepage. This seepage has only a moderate buffer and it is of importance for the rare peat forming vegetations that are present in this zone. The volume of seepage has, decreased as a result of water collection in the ridge of hills. Partly as a consequence of a sharp fall in the water collection, the volume of seepage is being restored. On account of the low water level in the surrounding polders, which are being used for agriculture, leakage from Naardermeer into these polders occurs. By maintaining a high water level in the buffer zone, it is attempted to reduce leakage from Naardermeer. In summer the water level in Naardermeer is maintained by letting in water from IJmeer. Before it is allowed to flow in, this water is dephosphated. In case of a large surplus of rain water in winter, drainage takes place in the north-west by a windmill. The water in Naardermeer consists of seepage, rainwater and dephosphated influx water. Dephosphating and dredging have improved the water quality considerably since 1990. The water in the larger lakes is quite clear, so that vast beds of water vegetation can grow there.

3.2. HABITATS

open water	225 HA (21 %)	Charatea	Charion fragilis
		Potametea	Magnopotamion
			Hydrocharition
reed beds	118 ha (11 %)	Phragmitetea	Phragmition
			Cicution virosae
			Caricion curto-nigrae
hayfields	32 ha (3 %)	Molinio-Arrhenatreretea	Calthion palustris
		Parvocaricetea	cf. Caricion davallianea

woods	270 ha (25%)	Alnetea glutinosae	Alnion glutinosae
		Vaccinio-Piceetea	Betulion pubescentis

3.3. FLORA

Charatea	Charion fragilis	*Chara aspera, Nitellopsis optusa, Chara contraria, Chara globularis, Nitella mucronata, Nitella opaca and Nitella hyalina*
Potametea	Magnopotamion	*Nymphaea alba, Nuphar lute, Najas marina, Fontinalis antipyretica, Sagittaria sagittifolia, Hottona palustris, Myriophyllum spicatum, Sparganium emersum, Ranunculus circinatus, Utricularia vulgaris, Zannichellia palustris*
	Hydrocharition	*Stratiotes aloides, Hydrochris morsus-ranae*
Phragmitetea	Phragmition	*Scirpus lacustris, Phragmites australis*
	Cicution virosae	*Cicuta virosa, Carex pseudocyperus, Carex paniculata, Thelypteris palustris, Mentha aquatica, Rumex hydrolapathum*
	Caricion curto-nigrae	*Caltha palustris*
Molinio-Arrhenatreretea	Calthion palustris	*Lychnis flos-cuculi, Lotus pedunculatus, Dactylorhiza majalis, Pedicularis palustris*
Parvocaricetea	cf. Caricion davallianea	*Carex diandra, Valeriana dioica, Liparis loeselii, Epipactis palustris, Sphagnum spec., Erica tetralix, Hierochloe odorata, Eriophorum angustifolium,Eriophorum vaginatum*
Alnetea glutinosae	Alnion glutinosae	*Alnus glutinosa, Humulus lupulus, Solanum dulcamara, Calystegia sepium, Ribes nigrum*, *Cardamine flexuosa*, *Thelypteris palustris*, *Iris pseudacorus*
Vaccinio-Piceetea	Betulion pubescentis	*Sphagnum spec.*, *Betula pubescens, Sorbus aucuparia, Lonicera periclymenum*

3.4. FAUNA

Mammals: *Neomys fodiens, Pipistrellus pipistrellus*, *Myotis dasycneme*, *Eptesicus serotinus*, *Nyctalus noctula*, *Pipstrellus nathusii*, *Myotis daubentonii*

birds

open water		*<u>breeding birds</u>:* *Anas clypeata*, *Aythya ferina*, *Tadorna tadorna*, *Anas penelope*, *Anas strepera*, *Netta rufina*, *Anas querquedula, Anas crecca, Chlidonias niger, Tachybaptus ruficollis*, *Alcedo atthis, Cygnus olor*, *Podiceps cristatus, Fulica atra*.

reed beds		*breeding birds:* *Acrocephalus schoenobaenus*, *Locustella luscinioides*, *Locustella naevia*, *Acrocephalus arundinaceus*, *Acrocephalus scirpaceus, Panurus biarmicus, Ardea purpurea*, *Circus aeruginosus, Rallus aquaticus*
brush wood		*Luscinia Svecica, Acrocehalus palustris, Phalacrocorx carbo, Ardea cenerea*, *Strix aluco*, *Buteo buteo, Dendrocopos major, Falco subbuteo*, *Accipiter gentilis*
woods		*Certia brachydactyla*
grasslands (bufferzone)		*breeding birds:* *Porzana porzana*, *Anas clypeata*, *Gallinago gallinago*, *Limosa limosa, Tringa totanus* *feeding area for:* *Tadorna todorna*, *Anas crecca*, *Anas querquedula*, *Mergus albellus*, *Philomachus pugnax*, *Tringa totanus*, *Tringa ochropus*, *Tringa nebularia*, *Tringa glareola*, *Calidris alpina*, *Charadrius dubius*, *Charadius hiaticula, Sterna hirundo, Sterna caspia*, *Chlidonias niger*, *Egretta garzetta, Egretta alba, Platalea leucorodia* *winterguests:* *Anser anser*, *Anser albifrons, Anser brachyrhyngus, Anas strepera, Haliaetus albicilla, Pandion haliaetus*

Herpetofauna: *Bufo calamita*, *Rana arvalis, Natrix natrix*

Fishes: *Esox lucius, Tinca tinca, Rutilus erythropthalmus*

Insects: *Brachytron pratense*, *Aeshna isosceles, Cordulia aenea*, *Libellula fulva, Aeshna viridis*

3.5. LANDSCAPE

The landscape is determined by the location of the bog forests. Starting from the region's centre and moving to the edges the following gradient becomes visible:

- centre: large open waters
- transition of hayfields and reed beds
- zone with bog forest
- dyke
- beyond the dyke: open (agricultural meadows) or semi-open (buffer zone) polder landscape
- surrounded further out by urban territories of Weesp, Muiden, Naarden and Hilversum and the motorway A1 on the north side.

Furthermore, Naardermeer contains a rectangular pattern of ditches, which resulted from the attempt to lay the land dry at the end of 19th Century.

Within this gradient there is much variety, which accounts for a dynamic landscape. The lakes, for instance, vary in size and the structure of the hayfields, reed beds and bog forests vary in age and abiotics.

4 CULTURAL HERITAGE AND SOCIO-ECONOMIC CONTEXT

4.1 CULTURAL HERITAGE

The Naardermeer marshland area arose after several failing attempts to lay the land dy in the 17th Century and at the end of the 19th Century. The current pattern of ditches and canals in Naardermeer is the result from the failed attempts to lay the land dry. A relic of the last attempt is the Machine, a building which contained the steam-driven pumping station.

The *Eendenkooi* (duck decoy) is also of cultural historical importance; of old a typically Dutch trade. It is the only remaining duck decoy in the region.

The original parcellation pattern in the northern part of the buffer zone is of the ferry-type parcellation that is quite rare. Although this parcellation pattern is not actively preserved, which is due to the restructuring of this polder, it continues to be visible in the vegetation (e.g. by the location of the reed beds).

4.2 SOCIO-ECONOMIC CONTEXT

1. The region is of importance for nature directed recreation, see 5. Educational and scientific interest
2. Agricultural use is concentrated in the bufferzone. About 10 farmers use these grasslands (ca. 150 ha)
3. Yearly budget for contractors: ca € 140.000
4. Budget of the Restoration Plan ca. € 4 million

5. EDUCATIONAL AND SCIENTIFIC INTEREST

The part of Naardermeer within the quay is accessible by ferry excursions. The number of visitors taking part in the ferry excursions now is 8000 a year, which in the years ahead is expected to grow to 15000 a year. For the participants there is a informationcentre in the north-western part of Naardermeer.

The extension of the region with the buffer zone has resulted in more recreational possibilities. E.g. a 17.5 km long walking tour was created in 1998. This tour leads the hiker around the lake of Naardermeer, across the quay, through the buffer zone and then through the bog forest. The bird life in Naardermeer can be watched in several places from an observation hut or tower. Along the trail there are information panels. The part of the trail through the bog forest can also be covered separately along a distanced of 5 kilometres. Some twenty or thirty thousand hikers and a

multiple amount of hikers visit the area each year.

6. SITE DESCRIPTION

6.1. VULNERABILITY

- Hydrology: For a nature reserve as Naardermeer, which derives its greatest value from the water management and the accompanying type of vegetation as well as the large variety of waders, disturbance in the area and damage to its hydrology may prove fatal. The Recovery plan has the objectiove to solve this problems
- Isolation: As the Naardermeer is part of a larger area of fenland (Vechtplassen), the construction of infrastructure has an adverse effect on the area on account of the space it requires and the fragmentation it involves, the enormous disturbance it causes and the resultant greater traffic density after the construction projects are completed (noise, artificial light and air pollution).

6.2. PROTECTION STATUS

- Wetland of International Importance'under the Ramsar Convention (1980)

- In the area there are various fauna species which come under the protected of the Bonn Convention (Convention on migratory species of wild animals) as well as the Bern Convention.

- Bird Directive (EU): The are was assigned the status of Special Protection Area in 1986 based on the Bird Directive.

- Habitat Directive (EU): In 1998 the Special Area for Conservation of the area was applied for under the Habitat Directive.

6.3. OWNERSHIP

Conservation NGO 100 %: Vereniging tot Behoud van Natuurmonumenten in Nederland

6.4. DOCUMENTATION

Aquasense, 2001. Inventory of fish population Naardermeer 2001. Ordered by Provincie Noord-Holland. Report number: 1840.

Boosten, A. (editor), 1999. Monitoring Restoration Plan Naardermeer 1992-1997. Restoration of Naardermeer by Combining Efforts. BNL report number 99-15. Vereniging Natuurmonumenten, 's Graveland.

Bouman, A.C. 1998 – 2001. Botanic notes from nature management unit Naardermeer. Vereniging Natuurmonumenten, 's Graveland.

Ministry of Agriculture, Nature Management and Fisheries, 1990. Nature Policy Plan; Government decision. House of Parliament, 1989-1990, 21 149, numbers 2-3.

Provincie Noord-Holland, 1993. Restoration Plan Naardermeer. Provincie Noord-Holland and DHV water, file F1312-10-100.

Provincie Noord-Holland, 1998. Regional Plan for Gooi and Vechtstreek. Provincie Noord-Holland, Haarlem.

Vereniging Natuurmonumenten, 1995. Nature Management Plan Naardermeer 1995. Vereniging Natuurmonumenten, 's Graveland.

7. SITE MANAGEMENT

7.1. MANAGEMENT PLANS

Vereniging Natuurmonumenten is responsible for the nature management of the reserve.
The guidelines in this respect are 'Nature Management Plan Naardermeer 1995-2010' and the Restoration Plan Naardermeer (1993). The Polder Board of Amstel, Gooi and Vecht is responsible for the water management. The Polder Board is also one of the collaborating organisations of the Restoration Plan Naardermeer.

The general objective of the nature management policy is as follows:
'The objective in Naardermeer nature reserve will be to conserve and whenever possible also improve the current biological and scenic values as well as the diversity of ecological communities. In the adjacent polders the foremost objective is to strengthen the hydrological buffer function with regard to Naardermeer. A second objective is to enhance the natural values and to create a functional connection with the other waters of Vechtplassen and IJsselmeer' (quote taken from: Restoration Plan Naardermeer, 1995).

7.2. BUDGET AND PERSONNEL

Yearly budget 2003 costs:

Yearly budget:	Costs € 460.000
	Income € 172.000
Projects	Restoration project, budget ca. € 2 million
Staff	8 ft employees

8. MAP OF THE SITE

• Physical map:

NUMBER	MAP	SCALE
1	Situation Naardermeer in the Netherlands	1:1.000.000
2	Situation Naardermeer in urban agglomeration of western Holland	1:165.000
3	Tophographic map Naardermeer	1:25.000
4	Global vegetation map	1:25.000

Maps are included in attachment: the application report

• Aerial photograph(s) included:

yes ☐

NR	AREA	SUBJECT	COPYRIGHT	DATE
1	Naardermeer and the buffer zone	Aerial view	G. Lemmen, Natuurmonumenten	1998

9. SLIDES

NR	PLACE	SUBJECT	COPYRIGHT	DATE
1	Naardermeer and buffer zone	Aerial view	G. Lemmen, Natuurmonumenten	1998
2	Point of water inlet	Under water vegetation and mill	G. Lemmen, Natuurmonumenten	2000
3	Naardermeer	National railway	KINA	1996
4	Naardermeer	Hayfields	KINA	1996
5	Naardermeer, under water	Pike (*Esox lucius*)	S. Rotteveel, RIZA	2002
6	Naardermeer, under water	Yellow Waterlily *(Nuphar lutea)*	S. Rotteveel, RIZA	2002
7	Naardermeer	Duck decoy	G. Lemmen, Natuurmonumenten	1999
8	Naardermeer	Bog forest	G. Lemmen, Natuurmonumenten	2002
9	Naardermeer	Great Cormorant *(Phalacrocorax carbo)*	G. Lemmen, Natuurmonumenten	1998
10	Naardermeer, buffer zone	Great Egret *(Egretta alba)*	M. de Jonge, KINA	2001
11	Naardermeer, buffer zone	Bird observation hut	G. Lemmen, Natuurmonumenten	1998
12	Naardermeer	Excursion ferry	G. Lemmen, Natuurmonumenten	1998
13	Naardermeer	Walking tour	G. Lemmen, Natuurmonumenten	2002
14	Naardermeer	Reed being cut	G. Lemmen, Natuurmonumenten	1999

Slides are included in attachment: the application report

10. ATTACHMENT

1. Application report