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# Information Sheet on Ramsar Wetlands

## (RIS) – 2009-2012 version

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### 1. Name and address of the compiler of this form:

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Designation date

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Site Reference Number

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### 2. Date this sheet was completed/updated:

September 2013

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### 3. Country:

the Netherlands

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### 4. Name of the Ramsar site:

Hollands Diep

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### 5. Designation of new Ramsar site or update of existing site:

This RIS is for:

- a) Designation of a new Ramsar site ; or  
b) Updated information on an existing Ramsar site

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### 6. For RIS updates only, changes to the site since its designation or earlier update:

#### a) Site boundary and area

The Ramsar site boundary and site area are unchanged:

or

If the site boundary has changed:

- i) the boundary has been delineated more accurately ; or  
ii) the boundary has been extended ; or  
iii) the boundary has been restricted\*\*

and/or

If the site area has changed:

- i) the area has been measured more accurately ; or  
ii) the area has been extended ; or  
iii) the area has been reduced\*\*

**\*\* Important note:** If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

**b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:**

No major changes. Nevertheless the site does not qualify anymore for the average peak number (criterion 5). For the former RIS the average peak number was 32.540 (period 1999/2000-2003/2004), while this was only 15.991 for the period 2005/2006-2009/2010 (Source: Sovon, Dutch Centre for Field Ornithology).

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**7. Map of site:**

**a) A map of the site, with clearly delineated boundaries, is included as:**

- i) a hard copy (required for inclusion of site in the Ramsar List):
- ii) an electronic format (e.g. a JPEG or ArcView image)
- iii) a GIS file providing geo-referenced site boundary vectors and attribute tables

**b) Describe briefly the type of boundary delineation applied:**

Ramsar site Hollands Diep has been designated as the European Natura2000 site Hollands Diep. For this RIS-version, the new Ramsar site boundary has been adjusted to the (proposed) Natura 2000-boundary. Nature development areas in the northwest and northeast are now included within the Ramsar site. In total this new boundary resulted in an increase of +247,2 ha.

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**8. Geographical coordinates** (latitude/longitude, in degrees and minutes):

51°42'N - 04°30'E

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**9. General location:**

Province of Zuid-Holland, ca. 20 km south of Rotterdam (population 616.294 per 1-1-2013; Source: CBS, Statistics Netherlands).

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**10. Elevation:** (min & max)

NAP -20 / -1 m

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**11. Area:**

4139,1 ha

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**12. General overview of the site:**

The Hollands Diep is a former estuary making part of the delta of the rivers Rijn and Meuse, which respectively drain their waters in the Hollands Diep through Boven-Merwede and the Amer respectively. The western 'border' has an open connection with the Ramsar site Haringvliet. This site lost its open connection with the North Sea since November 1970 due to closure of the Haringvlietdam. The water level of the Hollands Diep is under influence of the Haringvlietssluisen and barrages upstream. The Hollands Diep became a fresh water lake after closure of the Haringvliet. The shores are home to reed beds, osier-beds and alluvial forests.

### 13. Ramsar Criteria:

1 • 2 • 3 • 4 • 5 • 6 • 7 8 • 9

### 14. Justification for the application of each Criterion listed in 13 above:

The Ramsar site Hollands Diep has been designated under Natura 2000 as well. Natura 2000 is the centrepiece of EU nature & biodiversity policy. It is an EU-wide network of nature protection areas which aims to assure the long-term survival of Europe's most valuable and threatened species and habitats. It is comprised of Special Areas of Conservation (SAC) designated by Member States under the Habitats Directive, and also incorporates Special Protection Areas (SPAs) designated under the Birds Directive. Natura 2000 applies to SACs and SPAs which are divided into biogeographical regions. The Ramsar site Hollands Diep applies to both and the justification for the application of each Ramsar criterion below, greatly refers to its designation as a SAC and SPA.

#### Justification criterion 2

The table below shows Annex II species (HD) and Annex I species (BD) for which the site has been designated as a SAC and SPA respectively, as well as their current status on the National Red List. Some other threatened species of the National Red Lists have also been added to the table.

*Species of Annex II of the European Habitat Directive (HD) and Annex I of the European Bird Directive for which the site has been designated as a SAC and SPA respectively, as well as species of annex IV, V (HD) and some threatened species of the National Red Lists (- = Not Applicable). Year of adoption of the National Red List in parentheses. Species marked with an \* are priority species.*

Species(group)	Species code	HD Annex	BD Annex	National RL category
<b>Vascular plants</b>				(2004)
Triangular Club-rush <i>Schoenoplectus triquetus</i>	-	-	-	EN
<b>Mosses</b>				(2004)
<i>Orthotrichum rogeri</i>	-	-	-	VU
<b>Mammals</b>				(2009)
* Root Vole <i>Microtus oeconomus arenicola</i>	H1340	II, VI	-	VU
<b>Non-breeding birds</b>				
Eurasian Spoonbill <i>Platalea leucorodia</i> ,	A034	-	I	-
Barnacle Goose <i>Branta leucopsis</i>	A045	-	I	-
<b>Fish</b>				(2004)
Sea Lamprey <i>Petromyzon marinus</i>	H1095	II	-	LC
River Lamprey <i>Lampetra fluviatilis</i>	H1099	II, V	-	LC
Allis Shad <i>Alosa alosa</i>	H1102	II, V	-	LC
Twaite Shad <i>Alosa fallax</i>	H1103	II, V	-	LC
Salmon <i>Salmo salar</i>	H1106	II, V	-	LC
Barbel <i>Barbus barbus</i>	-	-	-	EN

#### Justification criterion 3

The Hollands Diep is designated as a Natura 2000 site (both SAC and SPA) 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 SAC for a range of habitat types (Annex I of HD) and SPA for a number of bird species that are not on Annex I of the BD. See the tables below.

Habitat types (according to interpretation manual of EU-Habitat Directive; \* = priority habitat type) for which the site has been designated as a SAC.

Habitat code	Habitat type
H6430B	Hydrophilous tall herb fringe communities of plains
H91E0	*Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> ( <i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i> )

Bird species (not on Annex I of the BD) for which the site has been designated as a SPA.

Species	Species code
<b>Non-breeding birds</b>	
White-fronted Goose <i>Anser albifrons</i>	A041
Greylag Goose <i>Anser anser</i> ,	A043
Eurasian Wigeon <i>Anas [Mareca] penelope</i> ,	A050
Gadwall <i>Anas strepera</i> ,	A051
Mallard <i>Anas platyrhynchos</i>	A053
Tufted Duck <i>Aythya fuligula</i>	A061

#### 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 for roosting during wintering or in breeding colonies like for the Eurasian Spoonbill *Platalea leucorodia*.

#### Justification criterion 6

Species meeting the 1% threshold (WPE-4, Wetlands International 2006; Source: Sovon, Dutch Centre for Field Ornithology). (NB = nonbreeding, BR = breeding period 2006-2010).

Species (UK)	Species	NB / BR	Biographical population	1% threshold	Average number of birds between 2006-2010	% at site
Gadwall	<i>Anas strepera</i>	NB	NW-Europe	600	1324	2.2
Eurasian Spoonbill	<i>Platalea leucorodia</i>	BR	East Atlantic	110	207	1.9
Eurasian Spoonbill	<i>Platalea leucorodia</i>	NB	East Atlantic	110	112	1.0

Compared to the period of 1992-98 (previous updated version) the species Greylag Goose *Anser anser* does not meet the 1%-threshold anymore, though Gadwell *Anas strepera* and Eurasian Spoonbill *Platalea leucorodia* (both BR and NB) do.

#### Justification criterion 8

The site has an important function as a spawning, nursery and feeding ground for a range of fish species and is part of the migration route for many others. The site has among others been designated as a SAC for the conservation of a range of fish species like Sea lamprey *Petromyzon marinus*, River lamprey *Lampetra fluviatilis*, Allis shad *Alosa alosa*, Twaite shad *Alosa fallax* and Salmon *Salmo salar* (see criterion 2).

## 15. Biogeography

### a) biogeographic region:

The Ramsar site belongs to the Atlantic biogeographical region.

### b) biogeographic regionalisation scheme (include reference citation):

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)

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## 16. Physical features of the site:

The Hollands Diep is some 21 km long, 905-2070 m wide and average 6,80 m deep. Before the building of the Haringvlietdam in 1970 the Hollands Diep was part of an estuary. After the closure from the sea the site quickly became a freshwater area. Because there was no tidal variation anymore large amounts of polluted sediment were deposited. Erosion of the banks became a serious problem soon after the closure. To stop the erosion some bank protection measures were taken. Tidal variation is reduced to about thirty centimetres.

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## 17. Physical features of the catchment area:

The Haringvliet is part of the Rhine/Meuse Delta.

- The surface area of the Rhine catchment is 185.000 km<sup>2</sup>. Geologically and geomorphologically it consists mainly of Quarternary, Paleozoic and Mesozoic sediments and Tertiary mountains. The general soil types are: Alluvial, Brown forest soils and montane soils. The climates according to Köppen are rainy (Cbf) and montane (EH).
- The surface area of the Meuse catchment is 33.000 km<sup>2</sup>. Geologically and geomorphologically it consists mainly of Quarternary and Mesozoic sediments and Paleozoic (eroded) mountains. The general soil types are: Alluvial, Brown forest soils and montane soils. The climate according to Köppen is rainy (Cbf).

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## 18. Hydrological values:

Part of the water from the river Rhine and Maas flows via this wetland into the former sea arm Haringvliet (another Ramsar site). This river water is regularly discharged into the North Sea (i.e. Ramsar site Voordelta) through the sluices at the west side of the Haringvliet. The site has a function in flood control and sediment trapping.

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## 19. Wetland Types

### a) presence:

Marine/coastal: A • B • C • D • E • F • G • H • I • J • K • Zk(a)

Inland: L • M • N •  • P • Q • R • Sp • Ss • Tp • Ts • U • Va •  
Vt • W • Xf • Xp • Y • Zg • Zk(b)

Human-made: 1 • 2 • 3 •  • 5 • 6 • 7 • 8 • 9 • Zk(c)

### b) dominance:

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## 20. General ecological features:

The landscape is characterized by open water (approx. 90%). In the middle of the Hollands Diep there is a man-made island, covered with bushes and scrub, to store contaminated dredged materials. The part which has been designated under the EU Habitat Directive concerns sand flats and marshes at the northern border of the Hollands Diep. The Esscheplaat, Zeehondenplaat and Sasseplaat largely consist of tidal osier-beds and tidal forests which were under influence of the tide in the past. The eastern marshes are former tidal mud and sand flats, reed and grass marshes. The Hoogezandsche Gorzen is formed by grass marshes. The area is important for migratory fish species (after opening of the sluices in the Haringvlietdam) and water birds.

Plant communities of European interest that occur are:

- *Lemno-Nitellatum capillaries*
- *Utricularietum vulgaris*
- *Salicetum Albo-fragilis*

The ecosystem services mainly refer to:

- the opportunities for water recreation;
- flood control during wet periods
- the ability to retain fresh water (especially i.r.t. impacts of climate change) to be drained mainly via the Haringvliet into the North Sea;

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## 21. Noteworthy flora:

Most noteworthy flora has been listed under no. 14.  
Other species are listed below.

*Species of the National Red List (2004)*

Mosses	National RL Category
<i>Lophocolea minor</i>	NT

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## 22. Noteworthy fauna:

Most noteworthy fauna has been listed under no. 14.

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## 23. Social and cultural values:

**a) Describe if the site has any general social and/or cultural values e.g., fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values:**

See 25. Current land use.

**b) Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning?**

No

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## 24. Land tenure/ownership:

**a) within the Ramsar site:**

The site is partly owned by Staatsbosbeheer. The main part is state ownership (Dienst der Domeinen, Ministerie van Financiën).

**b) in the surrounding area:**

the adjacent waters (Haringvliet, Krammer-Volkerak and Biesbosch) are state owned, on land several private owners.

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**25. Current land (including water) use:**

**a) within the Ramsar site:**

Forestry 1%, Boating 90%, Farming 5%, Commercial fisheries 80%, Shipping traffic 10%, Conservation and research 8%, Water management 100%.

**b) in the surroundings/catchment:**

The land-use in the immediate surrounding is dominated by farming. On the broader scale of the catchment areas the general land-use concerns a substantial part of Northwest-Europe:

- General land-use of Rhine-catchment: the general land use is forestry, pasture farming, arable farming, inproductive land (high mountains);
- General land-use of Meuse catchment: The general land use is pasture farming, arable farming and forestry.

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**26. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land (including water) use and development projects:**

**a) within the Ramsar site:**

- Industrialization and urbanization (B – water/sediment pollution and wind turbines);
- Recreation/ tourism (B - );
- Pollution (not Industrial discharge) (A - eutrophication).

**b) in the surrounding area:**

- Construction (B - Increase of recreational capacity of harbours in the region and potential increase of boating).

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**27. Conservation measures taken:**

**a) List national and/or international category and legal status of protected areas, including boundary relationships with the Ramsar site:**

- Special Protection Area (Birds Directive 79/409/EEC, 2000);
- Special Area of Conservation (Habitats Directive 92/43/EEC);
- Natura 2000-site

**b) If appropriate, list the IUCN (1994) protected areas category/ies which apply to the site:**

Ia ; Ib ; II ; III ; IV ; V ; VI

**c) Does an officially approved management plan exist; and is it being implemented?:**

The Ramsar site matches 100% with the (proposed) designation for Natura 2000.  
The process for developing the Natura 2000 management plan has started.

**d) Describe any other current management practices:**

Nothing particular.

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### **28. Conservation measures proposed but not yet implemented:**

In 2004 it was decided to partly open the Haringvlietdam by 1 January 2008 to allow salt water enter the 'line' Middelharnis - Spui (so-called "Kierbesluit") aiming for a gradual transition between salt and fresh water. In December 2007 this was postponed towards December 2010. However the government decided in December 2010 to keep the dam closed due to the high costs (approx. 40 million euro) and the damage that the salt water will cause to agriculture in the region. In June 2011 the final decision was taken to implement the so-called "Kierbesluit".

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### **29. Current scientific research and facilities:**

Ongoing biodiversity monitoring is one of the obligatory activities in relation to the designated Natura2000 habitat types and/or species. SOVON, the Dutch Bird Research Organisation, coordinates for instance a continues national bird monitoring program in which it cooperates with 7000 volunteers, research institutes and organisations in the monitoring of birds throughout the Netherlands (among others the Haringvliet).

Main research in the Delta (including the Hollands Diep) is carried out by Rijkswaterstaat ([www.rws.nl](http://www.rws.nl)).

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### **30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:**

Nothing particular. Most information about natural values of the site is available in the visitor centres of the adjoining Ramsar sites in the Biesbosch in the east and the Haringvliet in the west. Boat excursions are organised at the site.

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### **31. Current recreation and tourism:**

The site offers among others opportunities for water recreation, hiking, cycling, horse riding and small scale camping. The number of visitors is not well known.

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### **32. Jurisdiction:**

Territorial: Dienst Domeinen (Ministerie van Financiën); Functional jurisdiction (conservation purposes): Ministry of Economic Affairs.

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### **33. Management authority:**

Main management authorities:

- Rijkswaterstaat (Ministry of Infrastructure and Environment), Zuid-Holland, Boompjes 200, 3011 XD Rotterdam, P.O. Box 556, 3000 AN Rotterdam, Tel. +31 (0)10 402 62 00, Fax +31 (010) 404 79 27.
- Staatsbosbeheer, P.O. Box 1300, 3970 BH Driebergen, the Netherlands, tel. +31 (0)30-6926111

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### **34. Bibliographical references:**

- BirdLife International, 2004. Birds in Europe, population estimates, trends and conservation status. Cambridge, UK: BirdLife International. (BirdLife Conservation Series No. 12).
- Hornman, M., Hustings, F., Koffijberg, K., Kleefstra, R., Klaassen, O., van Winden, E., SOVON Ganzen- en Zwanenwerkgroep & L. Soldaat, 2012. Watervogels in Nederland 2009/2010. SOVON-rapport 2012/02, Waterdienst-rapport 12.06. SOVON Vogelonderzoek Nederland, Nijmegen.
- Janssen, John, A.M. & Joop, H.J. Schaminée, 2009. Europese Natuur in Nederland. Laag Nederland Natura 2000-gebieden. KNNV-Uitgeverij. 248p.
- Ministerie van EL&I. Ontwerpbesluit Natura 2000 gebied Hollands Diep.



- Van Roomen M.W.J, Boele A., van der Weide M.J.T., van Winden E.A.J, Zoetebier D. 2000. Belangrijke vogelgebieden in Nederland, 1993-97. Actueel overzicht van Europese vogelwaarden in aangewezen en aan te wijzen speciale beschermingszones en andere belangrijke gebieden. SOVON-informatierapport 2000/01. SOVON Vogelonderzoek Nederland, Beek-Ubbergen.
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