

Regional Report for Irish Sea

General Report

Regional Scale

General Report: UK_SACs		
Name	Area [ha]	Perimeter [km]
Croaker Carbonate Slabs (Annex I extent)	810.73	92.28
Dee Estuary	6942.06	146.71
Drigg Coast	709.10	54.48
Lune Deep reconsultation	917.47	21.03
Morecambe Bay	55178.56	546.46
Pisces Reef Complex (Annex I extent)	197.58	24.96
Shell Flat	9656.43	42.20
Solway Firth	14589.34	210.46

General Report: UK_SACs, contd.	
Name	Regional MCZ Project
Croaker Carbonate Slabs (Annex I extent)	Irish Sea
Dee Estuary	Irish Sea
Drigg Coast	Irish Sea
Lune Deep reconsultation	Irish Sea
Morecambe Bay	Irish Sea
Pisces Reef Complex (Annex I extent)	Irish Sea
Shell Flat	Irish Sea
Solway Firth	Irish Sea

Table 1

General Report: UK_SPAs			
sitename	Area [ha]	Perimeter [km]	Regional MCZ Project
The Dee Estuary	5866.42	94.30	Irish Sea
Upper Solway Flats and Marshes	14588.54	210.23	Irish Sea

Table 2

General Report: SSSI			
SSSI_NAME	Area [ha]	Perimeter [km]	Regional MCZ Project
Dee Estuary	3907.51	88.05	Irish Sea
Drigg Coast	709.46	54.75	Irish Sea
Duddon Estuary	5199.62	141.67	Irish Sea
Lune Estuary	6229.65	159.20	Irish Sea
Mersey Estuary	5700.80	58.53	Irish Sea
Mersey Narrows	89.74	11.99	Irish Sea
Morecambe Bay	22551.04	292.52	Irish Sea

General Report: SSSI			
SSSI_NAME	Area [ha]	Perimeter [km]	Regional MCZ Project
New Ferry	71.66	8.22	Irish Sea
North Wirral Foreshore	1954.04	60.57	Irish Sea
Ribble Estuary	6871.23	167.85	Irish Sea
Sefton Coast	2858.80	66.15	Irish Sea
South Walney & Piel Channel Flats	1981.19	92.20	Irish Sea
Upper Solway Flats & Marshes	8623.90	299.07	Irish Sea
Wyre Estuary	1227.52	100.09	Irish Sea

Table 3

Ecology Report

Representativity Regional Scale

To be representative an MPA network needs to protect the range of marine biodiversity found in our seas. To do this examples of each of the following features should be protected within MPAs in each regional MCZ project area, where they occur:

- 23 broad-scale habitats;
- 22 habitats of conservation importance;
- 29 low or limited mobility species of conservation importance; and
- 3 highly mobile species.

Broad-scale habitats present in sites	
Habitat Description	EUNIS Level 3 Code
Coastal saltmarshes and saline reedbeds	A2.5
Intertidal biogenic reefs	A2.7
Intertidal coarse sediment	A2.1
Intertidal mixed sediments	A2.4
Intertidal mud	A2.3
Intertidal sand and muddy sand	A2.2
Intertidal sediments dominated by aquatic angiosperms	A2.6
Low energy circalittoral rock	A4.3
Low energy infralittoral rock	A3.3
Low energy intertidal rock	A1.3
Moderate energy circalittoral rock	A4.2
Moderate energy infralittoral rock	A3.2
Moderate energy intertidal rock	A1.2
Subtidal biogenic reefs	A5.6
Subtidal coarse sediment	A5.1
Subtidal mud	A5.3
Subtidal sand	A5.2

Table 4

Broad-scale habitats matrix					
Site Name	Site Type	A1.2	A1.3	A2.1	A2.2
Croaker Carbonate Slabs (Annex I extent)	SAC	Absent	Absent	Absent	Absent
Dee Estuary	SAC	Present	Absent	Absent	Present
Drigg Coast	SAC	Absent	Absent	Absent	Present
Lune Deep reconsultation	SAC	Absent	Absent	Absent	Absent
Morecambe Bay	SAC	Present	Present	Present	Present
Pisces Reef Complex (Annex I extent)	SAC	Absent	Absent	Absent	Absent
Shell Flat	SAC	Absent	Absent	Absent	Absent
Solway Firth	SAC	Absent	Present	Absent	Present
The Dee Estuary	SPA	Absent	Absent	Absent	Present
Upper Solway Flats and Marshes	SPA	Absent	Absent	Absent	Present
Dee Estuary	SSSI	Absent	Absent	Absent	Present

Broad-scale habitats matrix					
Site Name	Site Type	A1.2	A1.3	A2.1	A2.2
Drigg Coast	SSSI	Absent	Absent	Absent	Present
Duddon Estuary	SSSI	Absent	Absent	Absent	Present
Lune Estuary	SSSI	Absent	Absent	Absent	Present
Mersey Estuary	SSSI	Absent	Absent	Absent	Absent
Mersey Narrows	SSSI	Absent	Absent	Absent	Present
Morecambe Bay	SSSI	Absent	Absent	Absent	Present
New Ferry	SSSI	Absent	Absent	Absent	Absent
North Wirral Foreshore	SSSI	Absent	Absent	Absent	Present
Ribble Estuary	SSSI	Absent	Absent	Absent	Absent
Sefton Coast	SSSI	Absent	Absent	Absent	Absent
South Walney & Piel Channel Flats	SSSI	Absent	Absent	Absent	Present
Upper Solway Flats & Marshes	SSSI	Absent	Absent	Absent	Present
Wyre Estuary	SSSI	Absent	Absent	Absent	Present

Broad-scale habitats matrix, contd.					
Site Name	A2.3	A2.4	A2.5	A2.6	A2.7
Croaker Carbonate Slabs (Annex I extent)	Absent	Absent	Absent	Absent	Absent
Dee Estuary	Present	Absent	Present	Absent	Present
Drigg Coast	Absent	Present	Absent	Absent	Present
Lune Deep reconsultation	Absent	Absent	Absent	Absent	Absent
Morecambe Bay	Present	Present	Present	Present	Absent
Pisces Reef Complex (Annex I extent)	Absent	Absent	Absent	Absent	Absent
Shell Flat	Absent	Absent	Absent	Absent	Absent
Solway Firth	Present	Present	Present	Absent	Present
The Dee Estuary	Present	Absent	Present	Absent	Absent
Upper Solway Flats and Marshes	Present	Present	Present	Absent	Present
Dee Estuary	Present	Absent	Present	Absent	Absent
Drigg Coast	Absent	Absent	Absent	Absent	Absent
Duddon Estuary	Present	Absent	Present	Absent	Absent
Lune Estuary	Present	Absent	Absent	Absent	Absent
Mersey Estuary	Present	Absent	Absent	Absent	Absent
Mersey Narrows	Present	Absent	Absent	Absent	Absent
Morecambe Bay	Present	Absent	Present	Absent	Absent
New Ferry	Present	Absent	Absent	Absent	Absent
North Wirral Foreshore	Absent	Absent	Absent	Absent	Absent
Ribble Estuary	Present	Absent	Present	Absent	Absent
Sefton Coast	Absent	Absent	Present	Absent	Absent
South Walney & Piel Channel Flats	Present	Absent	Absent	Present	Absent
Upper Solway Flats & Marshes	Present	Absent	Present	Absent	Absent
Wyre Estuary	Absent	Absent	Absent	Absent	Absent

Broad-scale habitats matrix, contd.					
Site Name	A3.2	A3.3	A4.2	A4.3	A5.1
Croaker Carbonate Slabs (Annex I extent)	Absent	Absent	Present	Absent	Present
Dee Estuary	Absent	Absent	Absent	Absent	Absent
Drigg Coast	Absent	Absent	Absent	Absent	Absent
Lune Deep reconsultation	Absent	Absent	Present	Absent	Absent
Morecambe Bay	Present	Absent	Absent	Absent	Absent
Pisces Reef Complex (Annex I extent)	Absent	Absent	Absent	Present	Absent
Shell Flat	Absent	Absent	Absent	Absent	Absent
Solway Firth	Absent	Absent	Absent	Absent	Absent
The Dee Estuary	Absent	Absent	Absent	Absent	Absent
Upper Solway Flats and Marshes	Absent	Absent	Absent	Absent	Absent
Dee Estuary	Absent	Absent	Absent	Absent	Absent
Drigg Coast	Absent	Absent	Absent	Absent	Absent
Duddon Estuary	Absent	Absent	Absent	Absent	Absent
Lune Estuary	Absent	Absent	Absent	Absent	Absent
Mersey Estuary	Absent	Absent	Absent	Absent	Absent
Mersey Narrows	Absent	Present	Absent	Absent	Absent
Morecambe Bay	Absent	Absent	Absent	Absent	Absent
New Ferry	Absent	Absent	Absent	Absent	Absent
North Wirral Foreshore	Absent	Absent	Absent	Absent	Absent
Ribble Estuary	Absent	Absent	Absent	Absent	Absent
Sefton Coast	Absent	Absent	Absent	Absent	Absent
South Walney & Piel Channel Flats	Absent	Absent	Absent	Absent	Absent
Upper Solway Flats & Marshes	Absent	Absent	Absent	Absent	Absent
Wyre Estuary	Absent	Absent	Absent	Absent	Absent

Broad-scale habitats matrix, contd.			
Site Name	A5.2	A5.3	A5.6
Croaker Carbonate Slabs (Annex I extent)	Present	Absent	Absent
Dee Estuary	Present	Absent	Absent
Drigg Coast	Absent	Absent	Absent
Lune Deep reconsultation	Absent	Absent	Absent
Morecambe Bay	Present	Absent	Present
Pisces Reef Complex (Annex I extent)	Absent	Present	Absent
Shell Flat	Present	Absent	Absent
Solway Firth	Present	Absent	Absent
The Dee Estuary	Absent	Absent	Absent
Upper Solway Flats and Marshes	Present	Absent	Absent
Dee Estuary	Absent	Absent	Absent
Drigg Coast	Absent	Absent	Absent
Duddon Estuary	Absent	Absent	Absent
Lune Estuary	Absent	Absent	Absent
Mersey Estuary	Absent	Absent	Absent
Mersey Narrows	Absent	Absent	Absent

Broad-scale habitats matrix, contd.			
Site Name	A5.2	A5.3	A5.6
Morecambe Bay	Absent	Absent	Absent
New Ferry	Absent	Absent	Absent
North Wirral Foreshore	Absent	Absent	Absent
Ribble Estuary	Absent	Absent	Absent
Sefton Coast	Absent	Absent	Absent
South Walney & Piel Channel Flats	Absent	Absent	Absent
Upper Solway Flats & Marshes	Absent	Absent	Absent
Wyre Estuary	Absent	Absent	Absent

Table 5

Habitats of conservation importance present in sites
Habitat Name
Blue Mussel beds (including intertidal beds on mixed and sandy sediments)
Coastal saltmarsh
Estuarine rocky habitats
Honeycomb worm (<i>Sabellaria alveolata</i>) reefs
Intertidal mudflats
Intertidal underboulder communities
Peat and clay exposures
Saline lagoons
Seagrass beds
Subtidal sands and gravels
Tide-swept channels

Table 6

Habitats of conservation importance matrix						
Site Name	Site Type	Blue Mussel beds (including intertidal beds on mixed and sandy sediments)	Coastal saltmarsh	Estuarine rocky habitats	Honeycomb worm (Sabellaria alveolata) reefs	Intertidal mudflats
Dee Estuary	SAC	Absent	Absent	Present	Present	Absent
Lune Deep reconsultation	SAC	Absent	Absent	Absent	Absent	Absent
Morecambe Bay	SAC	Present	Absent	Present	Present	Absent
Shell Flat	SAC	Absent	Absent	Absent	Absent	Absent
Solway Firth	SAC	Absent	Absent	Present	Present	Absent
The Dee Estuary	SPA	Absent	Absent	Absent	Absent	Absent
Upper Solway Flats and Marshes	SPA	Absent	Absent	Present	Absent	Absent
Dee Estuary	SSSI	Absent	Present	Absent	Absent	Present
Duddon Estuary	SSSI	Absent	Present	Absent	Absent	Present
Lune Estuary	SSSI	Absent	Present	Absent	Absent	Present
Mersey Estuary	SSSI	Absent	Present	Absent	Absent	Present
Morecambe Bay	SSSI	Absent	Present	Absent	Absent	Present
New Ferry	SSSI	Absent	Absent	Absent	Absent	Present
North Wirral Foreshore	SSSI	Absent	Present	Absent	Absent	Present
Ribble Estuary	SSSI	Absent	Present	Absent	Absent	Present
South Walney & Piel Channel Flats	SSSI	Absent	Present	Absent	Absent	Present

Habitats of conservation importance matrix, contd.						
Site Name	Intertidal underboulder communities	Peat and clay exposures	Saline lagoons	Seagrass beds	Subtidal sands and gravels	Tide-swept channels
Dee Estuary	Absent	Absent	Absent	Absent	Present	Absent
Lune Deep reconsultation	Absent	Absent	Absent	Absent	Absent	Present
Morecambe Bay	Absent	Present	Absent	Present	Absent	Present
Shell Flat	Absent	Absent	Absent	Absent	Present	Absent
Solway Firth	Absent	Absent	Absent	Absent	Present	Absent
The Dee Estuary	Absent	Absent	Absent	Absent	Present	Absent
Upper Solway Flats and Marshes	Absent	Absent	Absent	Absent	Present	Absent
Dee Estuary	Absent	Absent	Absent	Absent	Absent	Absent
Duddon Estuary	Absent	Absent	Present	Absent	Absent	Absent
Lune Estuary	Absent	Absent	Absent	Absent	Absent	Absent
Mersey Estuary	Absent	Absent	Absent	Absent	Absent	Absent
Morecambe Bay	Absent	Absent	Absent	Absent	Absent	Absent
New Ferry	Absent	Absent	Absent	Absent	Absent	Absent
North Wirral Foreshore	Absent	Absent	Absent	Absent	Absent	Absent
Ribble Estuary	Absent	Absent	Absent	Absent	Absent	Absent
South Walney & Piel Channel Flats	Present	Absent	Present	Absent	Absent	Absent

Table 7

The proposed sites did not intersect with any species of conservation importance.

Replication Regional Scale

All features should be replicated within the MPA network and replicates should be spatially separate. The MPAs within each regional MCZ project area should protect at least two separate examples of each broad-scale habitat where their distribution allows; and at least three to five separate examples of each feature of conservation importance where their distribution allows.

Replication of broad-scale habitats		
Habitat Name	Habitat Code	Replication
Moderate energy intertidal rock	A1.2	2
Low energy intertidal rock	A1.3	2
Intertidal coarse sediment	A2.1	1
Intertidal sand and muddy sand	A2.2	10
Intertidal mud	A2.3	9
Intertidal mixed sediments	A2.4	4
Coastal saltmarshes and saline reedbeds	A2.5	6
Intertidal sediments dominated by aquatic angiosperms	A2.6	1
Intertidal biogenic reefs	A2.7	4
Moderate energy infralittoral rock	A3.2	1
Low energy infralittoral rock	A3.3	1
Moderate energy circalittoral rock	A4.2	2
Low energy circalittoral rock	A4.3	1
Subtidal coarse sediment	A5.1	1
Subtidal sand	A5.2	6
Subtidal mud	A5.3	1
Subtidal biogenic reefs	A5.6	1

Replication of broad-scale habitats, contd.		
Habitat Name	SAC Replication	SPA Replication
Moderate energy intertidal rock	2	0
Low energy intertidal rock	2	0
Intertidal coarse sediment	1	0
Intertidal sand and muddy sand	4	2
Intertidal mud	3	2
Intertidal mixed sediments	3	1
Coastal saltmarshes and saline reedbeds	3	2
Intertidal sediments dominated by aquatic angiosperms	1	0
Intertidal biogenic reefs	3	1
Moderate energy infralittoral rock	1	0
Low energy infralittoral rock	0	0
Moderate energy circalittoral rock	2	0
Low energy circalittoral rock	1	0
Subtidal coarse sediment	1	0
Subtidal sand	5	1
Subtidal mud	1	0
Subtidal biogenic reefs	1	0

Replication of broad-scale habitats, contd.	
Habitat Name	SSSI Replication
Moderate energy intertidal rock	0
Low energy intertidal rock	0
Intertidal coarse sediment	0
Intertidal sand and muddy sand	10
Intertidal mud	10
Intertidal mixed sediments	0
Coastal saltmarshes and saline reedbeds	6
Intertidal sediments dominated by aquatic angiosperms	1
Intertidal biogenic reefs	0
Moderate energy infralittoral rock	0
Low energy infralittoral rock	1
Moderate energy circalittoral rock	0
Low energy circalittoral rock	0
Subtidal coarse sediment	0
Subtidal sand	0
Subtidal mud	0
Subtidal biogenic reefs	0

Table 8

Replication of habitats of conservation importance	
Habitat Name	Replication
Blue Mussel beds (including intertidal beds on mixed and sandy sediments)	1
Coastal saltmarsh	8
Estuarine rocky habitats	3
Honeycomb worm (<i>Sabellaria alveolata</i>) reefs	3
Intertidal mudflats	9
Intertidal underboulder communities	1
Peat and clay exposures	1
Saline lagoons	2
Seagrass beds	1
Subtidal sands and gravels	5
Tide-swept channels	2

Replication of habitats of conservation importance, contd.	
Habitat Name	SAC Replication
Blue Mussel beds (including intertidal beds on mixed and sandy sediments)	1
Coastal saltmarsh	0
Estuarine rocky habitats	3
Honeycomb worm (<i>Sabellaria alveolata</i>) reefs	3
Intertidal mudflats	0
Intertidal underboulder communities	0

Replication of habitats of conservation importance, contd.	
Habitat Name	SAC Replication
Peat and clay exposures	1
Saline lagoons	0
Seagrass beds	1
Subtidal sands and gravels	3
Tide-swept channels	2

Replication of habitats of conservation importance, contd.	
Habitat Name	SPA Replication
Blue Mussel beds (including intertidal beds on mixed and sandy sediments)	0
Coastal saltmarsh	0
Estuarine rocky habitats	1
Honeycomb worm (<i>Sabellaria alveolata</i>) reefs	0
Intertidal mudflats	0
Intertidal underboulder communities	0
Peat and clay exposures	0
Saline lagoons	0
Seagrass beds	0
Subtidal sands and gravels	2
Tide-swept channels	0

Replication of habitats of conservation importance, contd.	
Habitat Name	SSSI Replication
Blue Mussel beds (including intertidal beds on mixed and sandy sediments)	0
Coastal saltmarsh	8
Estuarine rocky habitats	0
Honeycomb worm (<i>Sabellaria alveolata</i>) reefs	0
Intertidal mudflats	9
Intertidal underboulder communities	1
Peat and clay exposures	0
Saline lagoons	2
Seagrass beds	0
Subtidal sands and gravels	0
Tide-swept channels	0

Table 9

The proposed sites did not intersect with any species of conservation importance.

Adequacy Regional Scale

To be considered adequate an MPA network needs to be of sufficient size and include a large enough proportion of features. For each broad-scale habitat the MPAs within each regional MCZ project area should collectively protect a proportion of habitat known to occur in that area as specified in the Ecological Network Guidance.

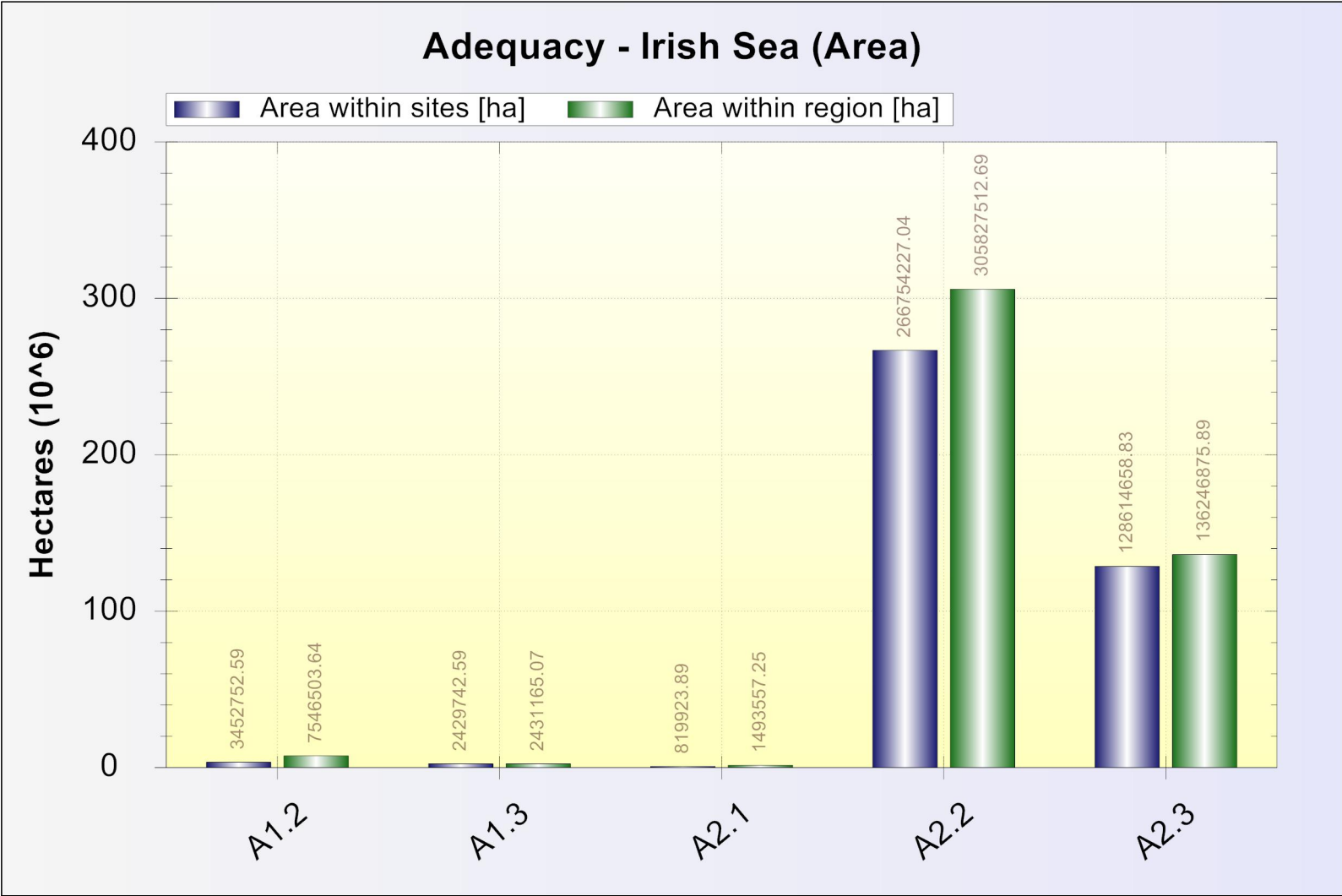


Fig. 1/1

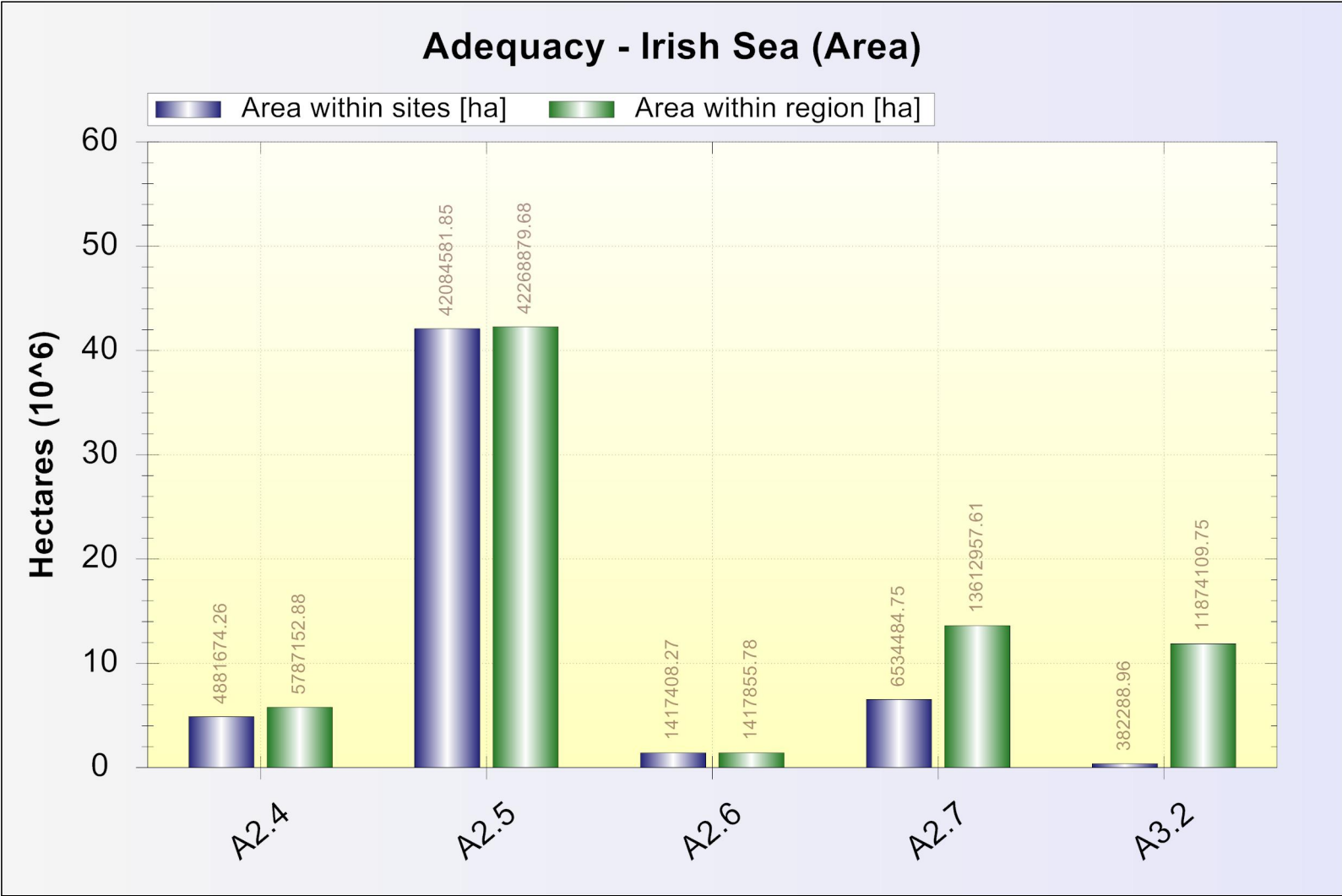


Fig. 1/2

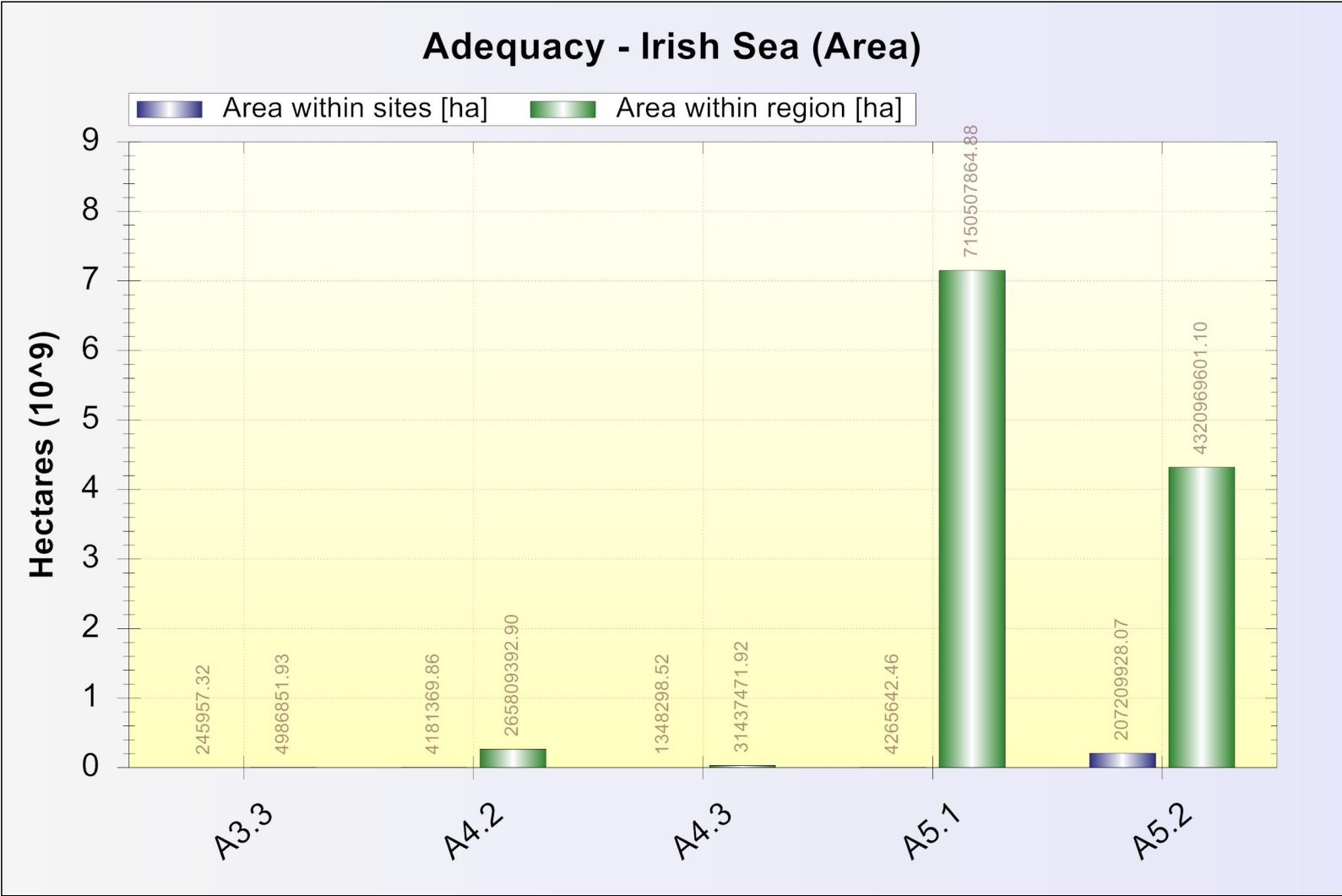


Fig. 1/3

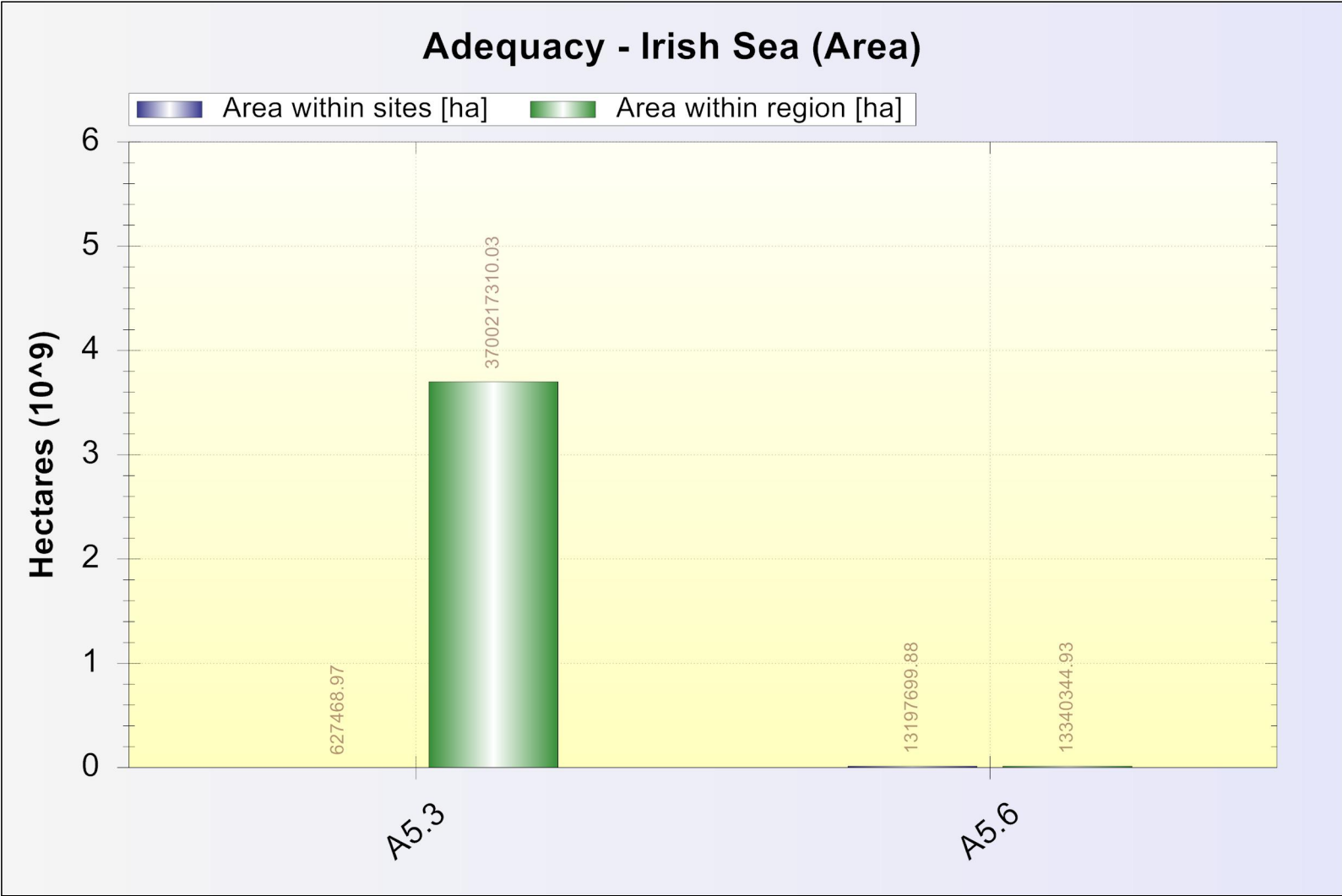


Fig. 1/4

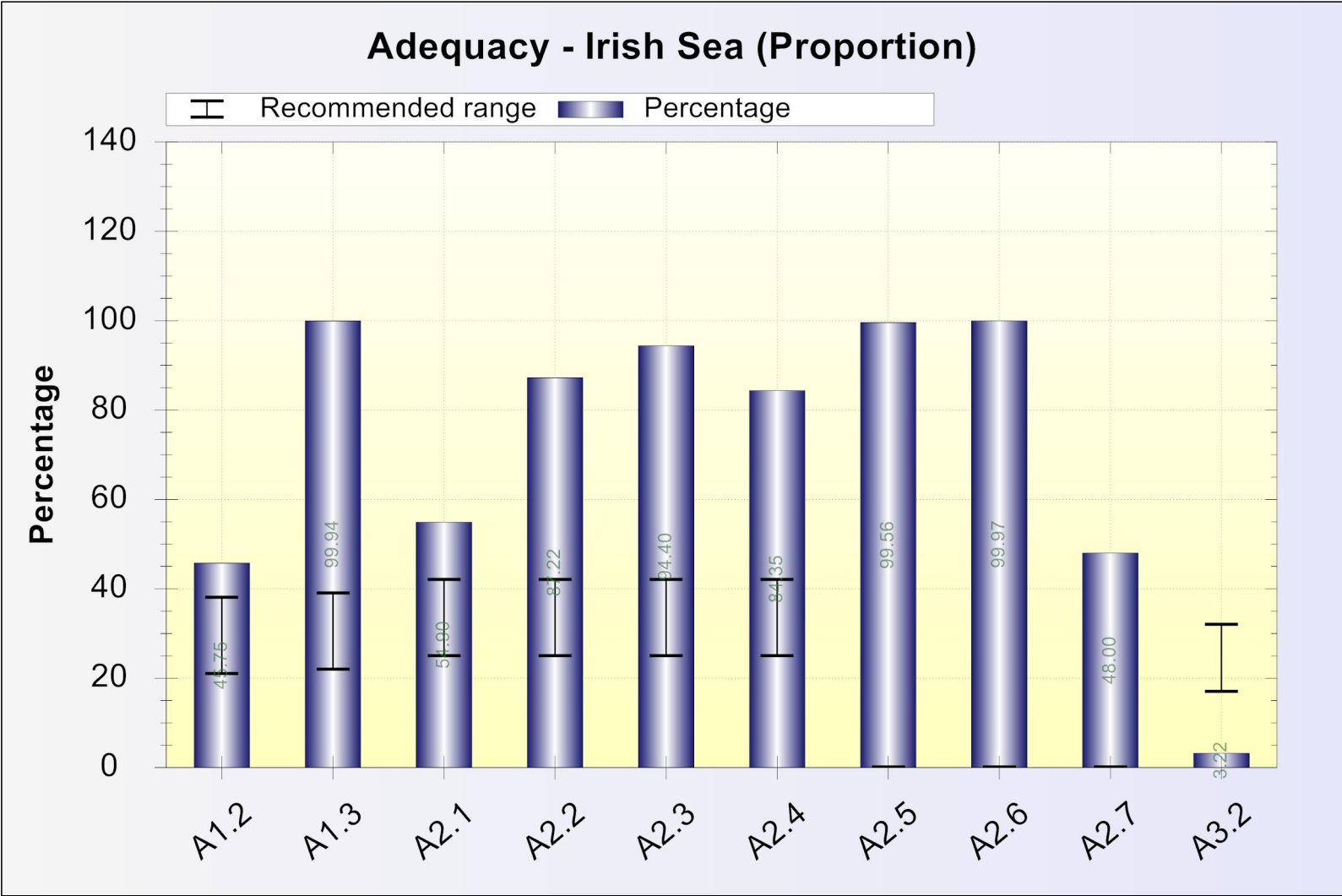


Fig. 2/1

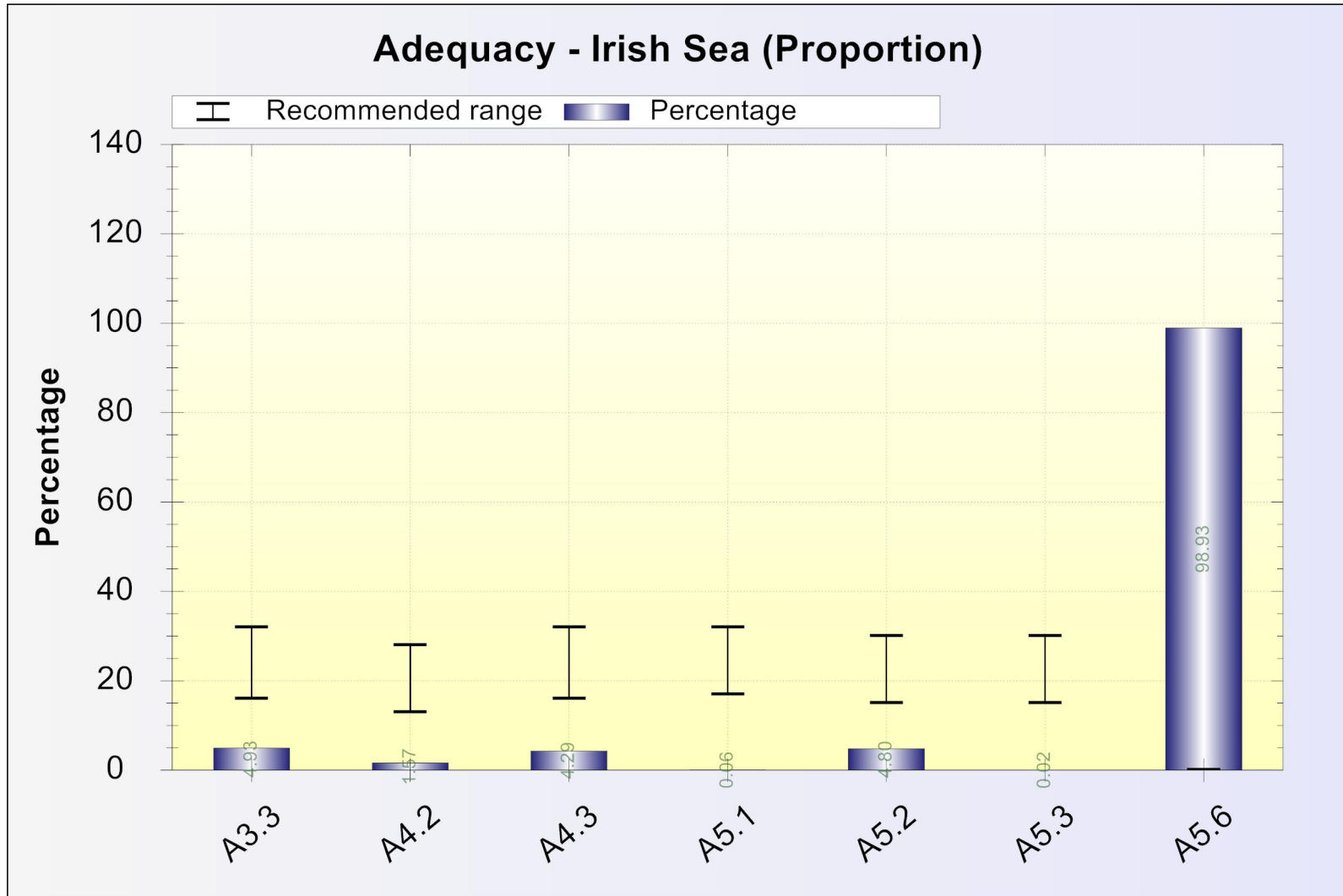


Fig. 2/2