

RIVER BASIN MONITORING PLAN

# WATER FRAMEWORK DIRECTIVE 2<sup>ND</sup> CYCLE CLASSIFICATION SUMMARY

2015-2021

Coastal Heavily Modified Water Body  
(HMWB) – Larne Lough North

31/05/2015



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	<p>Version Date: 31/05/2015</p>
	<p><b>MONITORING &amp; ASSESSMENT TEAM</b></p>

## LARNE LOUGH NORTH

### Water body Information

- River Basin District: North Eastern
- Water body type: CW8
- Water Body Code:UKGBNI6NE050
- Water body characteristics: Euhaline, mesotidal, sheltered
- Water body area: 1.29 km<sup>2</sup>
- Heavily Modified Water Body (HMWB): Yes
- 2021 Classification Objective: Good Ecological Potential

<b>2015 CLASSIFICATION</b>	<b>MODERATE ECOLOGICAL POTENTIAL</b>	<b>PASS/FAIL 2021 OBJECTIVE</b>	<b>FAIL</b>
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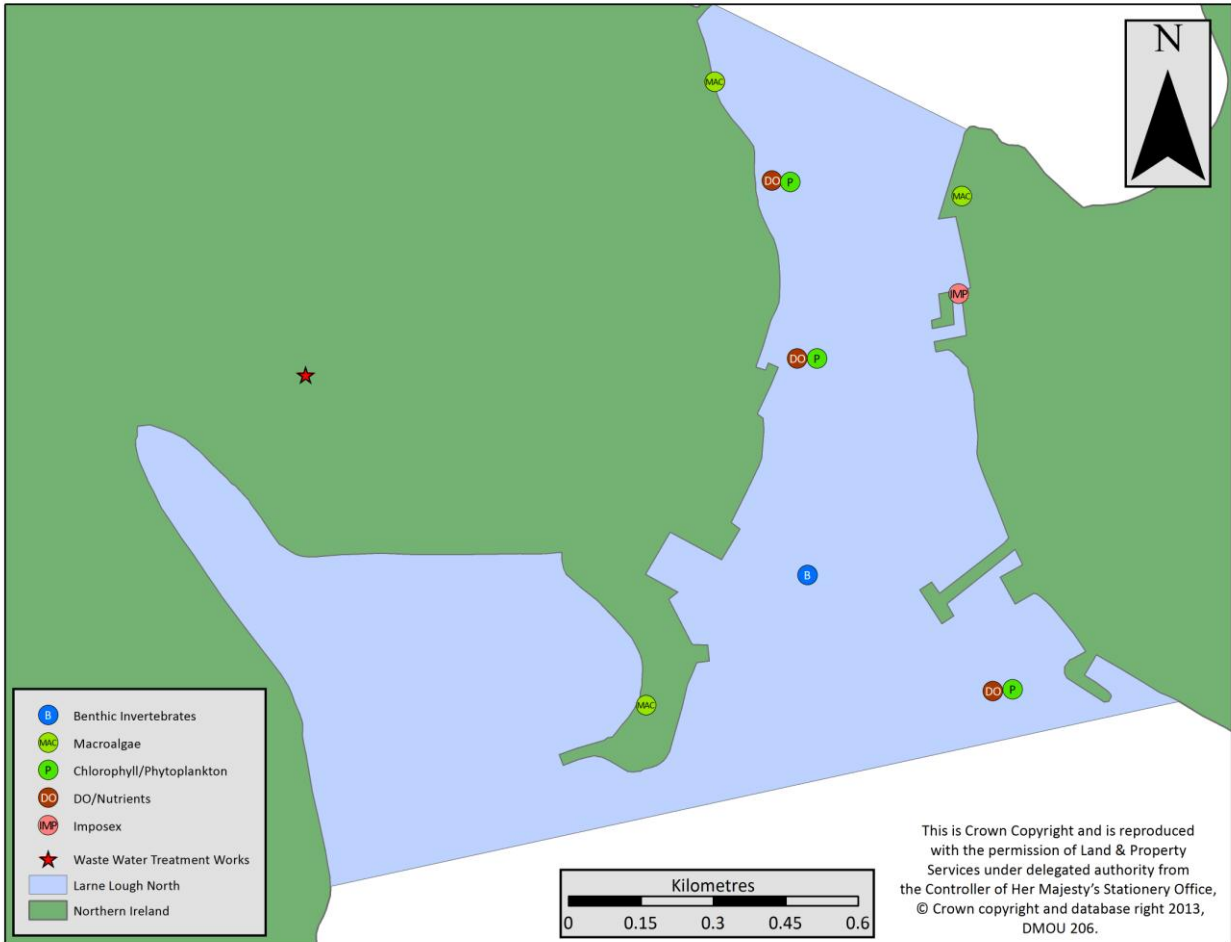


Figure 1: Waste water treatment pressures and monitoring points within Larne Lough North (Coastal Water).

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Table 1: Parameters for which classification systems are available and have been used in the previous round of classification. Some biological assessment tools are not suitable for all water bodies due to habitat type.

Ecological Quality Element			
Main Element	Sub-Element	Applied	Comment
<b>Macroalgae (seaweed)</b>	Opportunistic Macroalgae	<input checked="" type="checkbox"/>	Tool Not Applicable
	Reduced Species List	✓	
<b>Angiosperms</b>	Seagrass	<input checked="" type="checkbox"/>	Tool Not Applicable
<b>Phytoplankton</b>	Chlorophyll Biomass Index	✓	
	Elevated Taxa Count Index	✓	
<b>Benthic Invertebrates</b>	Infaunal Quality Index	✓	
	Imposex	✓	
<b>Physico-chemical</b>	Dissolved Oxygen	✓	
	Nutrients		
	Specific Pollutants ( Annex VIII subs)	✓	
<b>Hydromorphological Quality Elements</b>	SEPA Rapid Designation	✓	
	TraC MIMAS	✓	
Chemical Status			
<b>Priority Hazardous Substances (Annex X)</b>	Annex X Substances	✓	

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Table 2: Sampling frequency for each quality element

*Monitoring Level: Surveillance*

Quality Elements		Data years contributing to classification	No. of sites/samples
Phytoplankton	Chlorophyll Biomass Index	2009-2014	5 sites 55 samples
	Elevated Taxa Count Index	2009-2014	5 sites 55 samples
Macroalgae	Reduced Species List	2009, 2014	3 sites 6 surveys
Benthic Invertebrates	Infaunal Quality Index	2012	1 site 3 samples
	Imposex	2010, 2013	2 sites
<b>Physico-chemical</b>			
Nutrients		2011-2015	8 sites, 43 samples
Dissolved Oxygen (DO)		2008, 2010-2015	
Specific polluting substances (Annex VIII)		2010-2014	
<b>Hydromorphology</b>		2007	
<b>Water chemistry</b>			
(Annex X)		2010-2014	

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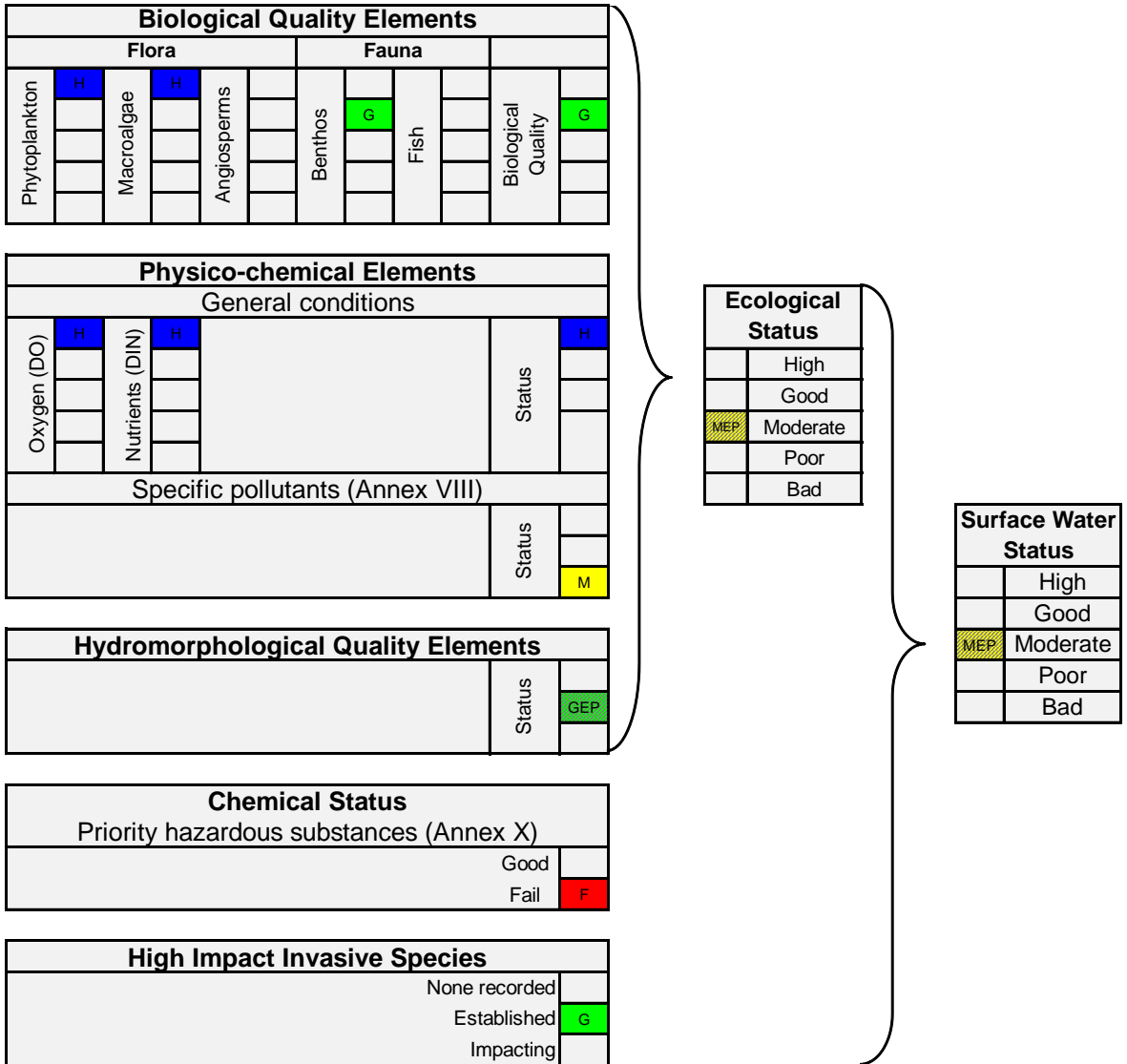


Figure 2: Overall classification of Larne Lough North (Coastal Water).

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### ANNEX A: Classification of Biological Quality Elements

#### QE: Phytoplankton

QE Phytoplankton assessment (data confidence):	<b>HIGH (100%)</b>	
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#### Classification metrics:

1. Chlorophyll biomass index (90%ile)
2. Elevated taxa count index:
3. Seasonal succession: Not applied, insufficient data.

#### 1. Chlorophyll Biomass Index

Data store <M:\Projects 14\Phycology 2014\MM14-14 Phytoplankton and Chlorophyll\classification 15\Coastal data\LARNE NORTH2015 - Copy - Copy.XLS>  
<M:\Projects 14\Phycology 2014\MM14-14 Phytoplankton and Chlorophyll\classification 15\Coastal data\Larne 90th Percentile.xls>

Data Availability (spot & continuous samples): spot (2009-2014) NIEA/MD

#### Thresholds:

Water Ref. Area		Status				
		High	Good	Moderate	Poor	Bad
North/Irish Sea	Chl $\mu\text{g l}^{-1}$	<5	5-10	10-15	15-20	>20
	EQR	0 -1.0	1.0-0.8	0.8-0.6	0.6-0.4	0.4-0.2

#### Results:

90%ile	Status	EQR	Data Years	No. of Sites	No. of Samples	Data Confidence
3.35	<b>HIGH</b>	0.87	2009-2014	5	55	97.6%

Data confidence: 97.6%

Data analysed using [M:\Projects 14\Phycology 2014\MM14-14 Phytoplankton and Chlorophyll\classification 15\2015CW\\_Phytoplankton CoC tool v10 7 UKTAG.xls](M:\Projects 14\Phycology 2014\MM14-14 Phytoplankton and Chlorophyll\classification 15\2015CW_Phytoplankton CoC tool v10 7 UKTAG.xls)

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## 2. Elevated Taxa Count Index

### Waterbody Elevated Taxa Assessment

#### Thresholds:

Tool	Thresholds	
	North/Irish Sea	Atlantic
I <sub>1</sub> - Individual Species Count (excl. Phaeocystis) (%)	500,000 (cells l <sup>-1</sup> )	
I <sub>2</sub> - Total Taxa Count (%)	10 <sup>7</sup> (cells l <sup>-1</sup> )	
I <sub>3</sub> - Elevated Biomass Count (%)	>10 (µg l <sup>-1</sup> )	>5 (µg l <sup>-1</sup> )

#### EQR Boundaries:

% exceedances (Face value range)	Metric range (0-1)	Class
0 - <10	≥0.8 - 1.0	High
≥10 - < 20	≥0.6 - < 0.8	Good
≥20 - < 40	≥0.4 - < 0.6	Moderate
≥40 - <60	≥0.2 - < 0.4	Poor
≥60 - 100	≥0 - < 0.2	Bad

#### Results (% Exceedence):

I <sub>1</sub>	I <sub>2</sub>	I <sub>3</sub>	Elevated Count EQR	Status	Data Years	No. of phytoplankton samples	Data confidence
1.8%	0	0%	0.988	<b>HIGH</b>	2009-2014	55	95.6%

Data confidence: 99.4%

.Data analysed using <M:\Projects 14\Phycology 2014\MM14-14 Phytoplankton and Chlorophyll\classification 15\2015CW Phytoplankton CoC tool v10 7 UKTAG.xls>

Presence of alien/ nuisance species: *none*

#### Overall Waterbody Status

**HIGH (100%)**



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### QE: Macroalgae Larne North

QE macroalgal assessment (+ Data confidence):	<b>HIGH (75.2%)</b>	
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#### Classification tools:

1. Reduced species list (RSL),
2. Macroalgal Blooming Tool – Not applicable.
3. Angiosperms – Not applicable

#### Reduced Species List (RSL)

- WFD surveillance monitoring: 2009, 2014
- Data Availability (classification): 2009, 2014 3 sites each year.
- Data Store: [M:\Projects 14\Phycology 2014\MM14-12 Intertidal Rocky Shore\FSL-RSL Classification update 2015 \(09-14\)\Datasheet.xls](M:\Projects 14\Phycology 2014\MM14-12 Intertidal Rocky Shore\FSL-RSL Classification update 2015 (09-14)\Datasheet.xls)

#### Boundaries

Parameters	Quality Status	Bad	Poor	Moderate	Good	High
	Sub-metric quality status	0.0 – 0.2	0.21 – 0.4	0.41 – 0.6	0.61 – 0.8	0.81 – 1.0
Species richness (adj. for shore)		0 – 3	3 – 10	10 – 20	20 – 34	34 – 68
Proportion of Chlorophyta (% G)		80 – 100	45 – 80	30 – 45	20 – 30	0 – 20
Proportion of Rhodophyta (% R)		0 – 10	10 – 25	25 – 35	35 – 45	45 – 100
Ecological Status Group ratio (ESG)		0.0 – 0.2	0.2 – 0.4	0.4 – 0.6	0.6 – 0.8	0.8 – 1.2
Proportion of opportunists (% opp)		50 – 100	35 – 50	25 – 35	15 – 25	0 – 15

#### Results

Shore	Sub-Metric EQR							RSL EQR	Status
	Shore desc.	Sp. richness	Adj. Sp. Richness	% G	% R	ESG	% Opp		
Chaine Monument 09	12	44	53.24	18.18	50.00	1.10	13.64	0.830	HIGH
Curran Point 09	12	31	37.51	19.35	48.39	0.82	19.3	0.753	GOOD
Ferris Point 09	15	51	51	13.73	56.86	1.22	11.7	0.867	HIGH
Chaine Monument 14	15	42	47.62	14.29	47.62	1.1	7.14	0.864	HIGH
Curran Point 14	13	34	38.76	20.59	50.0	0.62	14.71	0.733	GOOD
Ferris Point 14	14	54	57.78	12.96	50.00	1.08	11.1	0.864	HIGH
<b>Mean</b>								<b>0.819 ±0.06</b>	<b>HIGH</b>

#### Confidence of Classification: High (75.2%)

- Data analysed for Confidence of Class using PIRATES (V04) [M:\Projects 14\Phycology 2014\MM14-12 Intertidal Rocky Shore\PIRATES\\_v04 - Class update 2015 \(09-14\) for UKTAG.xls](M:\Projects 14\Phycology 2014\MM14-12 Intertidal Rocky Shore\PIRATES_v04 - Class update 2015 (09-14) for UKTAG.xls)
- Standard Deviation (±) is included with the mean EQR.
- Data QA (expert team).
- WFD specific data (reduced species list completed; full species list not yet carried out).
- Three shores (good spatial coverage) over two years (moderate temporal trend assessment).

**Alien taxa:** Not present

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**QE: Angiosperms – Tool not applicable**

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**QE: Benthic Invertebrates**

QE benthic invertebrate assessment (+ Data confidence):	<b>GOOD (L)</b>	
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Classification tools:

1. Infaunal Quality Index (IQI)
2. Imposex tool (VDSI)

**1. IQI (UKTAG v01 20140228)**

Water body IQI assessment:

**Good (Low)**

WFD surveillance monitoring:

- **Data store:** [..Larne Lough North \(HMWB\)\Larne Lough North Water Body 08-13 fauna data 1mm.xlsx](#)
- **Benthic invertebrates** UNICORN (NMMT) Database
- **Supporting Parameters** Water Quality Data Set
- **Digital images** AMAP Project folder
- **Availability (classification):** 1 site, 3&5 reps, 1 years, Day Grab, 1 mm sieve, n=3.

**Boundaries (Intercalibrated NEAGIG):**

Class	Bad	Poor	Moderate	Good	High
<b>IQI</b>	>0.0 ≤0.24	≥0.24 <0.44	≥0.44 <0.64	≥0.64 <0.75	≥0.75

**Results:**

Year	Survey	Station	n	Annual Mean	Annual ± S.D	Status
2010	-	-	-	-	-	-
2011	-	-	-	-	-	-
2012	MM-Benthos	LLN (3)	3	0.78	0.04	High
2013	MM-Benthos	LLN (5)	-	-	-	-
2014	MM-Benthos	LLN (5)	-	-	-	-
2015	MM-Benthos	LLN (5)	-	-	-	-
<b>Overall 6 year waterbody means</b>			<b>3</b>	<b>0.78(*0.74)</b>	<b>0.04</b>	<b>Good</b>

\* IQI derived from data averaged minus Standard Deviation (see issues with tools paper). This figure is used for classification

**Data confidence:**

**Low**

- Sample analysis QA'd through NMBAQC (Good)
- Database QA'd (Good)
- No specific WFD data (single point with reps)

**Alien Species:** *Styela clava* reported in 2009 classification

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## 2. VDSI (*Nucella lapillus*)

Waterbody VDSI assessment:

**Good (M)**

- **Data store:** [..\..\BIOEFFECTS\Imposex\Imposex 2013\Report\IMPOSEX MASTER DATA SHEET TEMPLATE.xls](#)
- **Data availability:** 2010/2013 NI survey

**Boundaries:**

Class	Good	High
VDSI	≥0.3 to <4.0	<0.3
EQR	≥0.34 to <0.95	≥0.95

**Results:**

Year	Shore	VDSI	EQR	Status
2013	Ballylumford	0.95	0.84	Good
2013	Chaine Monument	0.08	0.99	High
	<b>Mean</b>	<b>0.52</b>		<b>Good</b>

**Data confidence:**

**Medium**

- Sample analysis QA through QUASIMEME (High)
- <3 sites (Medium)

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## ANNEX B: Classification of physico-chemical Quality Elements: General

### QE: Dissolved Oxygen

<b>QE Dissolved oxygen assessment (+ data confidence):</b>	<b>HIGH (L)</b>	
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Classification tools: Comparison of 5% ile against reference standards

- **Data Store:** [..\DO Classification 2012\Shortcut to DO FIELD VALUES 2006 -2010.Ink](#)
- **Data Availability:** 2008, 2010-2015
- **Data Availability** (spot & continuous samples): Spot.

### Thresholds:

WFD Status	Marine 5%ile	Objectives
HIGH	≥5.7 mg/L	All life stages of salmonids and transitional fish
GOOD	≥4.0 <5.7 mg/L	Presence of salmonids and transitional fish
MODERATE	≥2.4 <4.0 mg/L	Most life stages of non-salmonid adults
POOR	≥1.6 <2.4 mg/L	Presence of non-salmonids, poor survival of salmonids
BAD	<1.6 mg/L	No salmonids present, marginal survival of resident species

### Results:

5% ile DO (mg/L)	Status	Data years	Data Quality	No. of daily averages	Data Coverage (proportion of possible months with data*)
7.94	HIGH	2008, 2010-15	**		

\* Proportion of possible months for which data are available

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**QE: Nutrients – N regulation**

<b>QE N regulation (+ Data confidence):</b>	<b>HIGH (100%)</b>	
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- **Data store:** [..\Coastal WB inc AFBI 15.xls](#)
- **Data Availability:** 2011-15  
DIN & salinity (Nov to Feb)
- **Data Source (spot & continuous samples):** spot

**Thresholds:**

Area	Salinity range	DIN (uM) Winter mean H	DIN (uM) Winter mean G	DIN (uM) Winter mean M
Coastal (at salinity 32)	30-34.5	<12	12-18	18 +

**Results:**

Mean Winter DIN (uM) (Avg DIN)*	Winter DIN Daily average (n)	No. of samples (n)	No. of sites	Data Years	Data Quality	Status
8.07		43	8	2011-15	Database not yet QA'd	HIGH

\*Average DIN used as  $r^2$  value of regression model is less than 0.75

**Data confidence source:** [..\CofCDINth.xlsx](#)

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**ANNEX C: Classification of physico-chemical quality elements: Specific Pollutants  
(Annex VIII)**

Specific pollutants assessment (+data confidence)	<b>MODERATE</b>	
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**Classification tools:** Comparison with EQS levels.

**Data assessed for 2013 Update:**

**Specific Pollutants:**

Suite	Parameter	Data Availability
Trace Metals	Chromium	CSEG 2012 / SWMP 2012
Trace Metals	Iron	CSEG 2012 / SWMP 2012
Trace Metals	Copper	CSEG 2012 / SWMP 2012
Trace Metals	Zinc	CSEG 2012 / SWMP 2012
Trace Metals	Arsenic	CSEG 2012 / SWMP 2012
Trace Organics (OPONS)	Dimethoate	NOV10 - MAY11
Trace Organics (OPONS)	Diazinon	NOV10 - MAY11
Trace Organics (OPONS)	Fenitrothion	NOV10 - MAY11
Urea Herbicides	Linuron	OCT 2011 – JUL 2012
Nutrients (Winter Nutrients)	Unionised Ammonia (at pH8)	WIN NUTS 2012-2013
Candidate Specific pollutant	Glyphosate	NOV 2012 – MAR 2013

**Other Pollutants – DSD list 2 (with existing EQS):**

Suite	Parameter	Data Availability
Trace Metals (DSD list 2)	Vanadium	CSEG 2012
Trace Organics (OPONS)	Mevinphos	NOV10 - MAY11
Trace Organics (OPONS)	Triazaphos*	NOV10 - MAY11
Trace Organics (OPONS)	Dichlorvos	NOV10 - MAY11

Triazaphos\* LOD above the EQS.

LL4 data used for both Larne Lough North and Larne Lough Mid

\*Further data available for classification when assessment of 2011 Larne Sandy Bay WWTW trace organics monitoring data is completed.

**Link to Data, Assessment and EQSs:**

[G:\MARINE\Water Framework Directive\WFD ANNUAL CLASSIFICATION UPDATE 2013\Chemistry](#)

**Data assessed for 2014 Update:**

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Suite	Parameter	Data Availability
Trace Metals	Chromium	CSEG 2013
Trace Metals	Iron	CSEG 2013
Trace Metals	Copper	CSEG 2013
Trace Metals	Zinc	CSEG 2013
Trace Metals	Arsenic	CSEG 2013

**Other Pollutants – DSD list 2 (with existing EQS):**

Suite	Parameter	Data Availability
Trace Metals (DSD list 2)	Vanadium	CSEG 2013
Trace Metals (DSD list 2)	Boron	CSGE 2013

No EQS failures

**Link to Data, Assessment and EQSs:**

[..\Data](#)

**Data assessed for 2015 Update:**

Suite	Parameter	Data Availability
Trace Organics	Permethrin	June 2013 – June 2014
Trace Organics	Cypermethrin	June 2013 – June 2014
Trace Organics	Toluene	Nov 2013 – Sept 2014
Trace Organics	Xylene	Nov 2013 – Sept 2014
Trace Metals	Chromium	Sept 2014 – Dec 2014
Trace Metals	Iron	Sept 2014 – Dec 2014
Trace Metals	Copper	Sept 2014 – Dec 2014
Trace Metals	Zinc	Sept 2014 – Dec 2014
Trace Metals	Arsenic	Sept 2014 – Dec 2014

**Other Pollutants – DSD list 2 (with existing EQS):**

Suite	Parameter	Data Availability
Trace Metals (DSD list 2)	Vanadium	Sept 2014 – Dec 2014

**EQS failures:**

**Cypermethrin**


**Link to Data, Assessment and EQSs**

[G:\MARINE\Water Framework Directive\WFD ANNUAL CLASSIFICATION UPDATE 2015\2015 QE sheets](#)



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#### ANNEX D: Hydromorphological quality elements

<b>Overall hydromorphology assessment</b>	<b>HMWB - GEP</b>	
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**Classification tools:**

1. TRaC Hydromorphology metrics
2. MIMAS

**Alternative approach assessment (CIS guidance 2006):** Good Ecological Potential.

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### ANNEX E: Chemical Status

Priority hazardous substances (+data confidence)	FAIL	
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**Classification tools:** Comparison with EQS levels.

Annex X: Overall Compliance	Fail
Annex X: Pass/Fail	Fail

#### Data Assessed for 2013 Update:

Suite	Parameter	Data Availability
Trace Metals	Nickel	CSEG 2012
Trace Metals	Cadmium	CSEG 2012
Trace Metals	Lead	CSEG 2012
Trace Metals	Mercury	CSEG 2012
Trace Organics (OPONS)	Atrazine	NOV 2010 – MAY 2011
Trace Organics (OPONS)	Chlorfenvinphos	NOV 2010 – MAY 2011
Trace Organics (OPONS)	Chlorpyrifos	NOV 2010 – MAY 2011
Trace Organics (OPONS)	Simazine	NOV 2010 – MAY 2011
Urea Herbicides	Isoproturon	OCT 2011 – JUL 2012
Urea Herbicides	Diuron	OCT 2011 – JUL 2012
PAH	Anthracene	NOV 2010 – JUN 2011
PAH	Fluoranthene	NOV 2010 – JUN 2011
PAH	Naphthalene	NOV 2010 – JUN 2011
PAH	Benzo (a) pyrene	NOV 2010 – JUN 2011
PAH	*Benzo(b)fluoranthene	NOV 2010 – JUN 2011
PAH	*Benzo(k)fluoranthene	NOV 2010 – JUN 2011
PAH	*Benzo(g,h,i)perylene	NOV 2010 – JUN 2011
PAH	*Indeno(1,2,3 cd) pyrene	NOV 2010 – JUN 2011

\*AA - EQS = Sum of Benzo(b)fluoranthene and Benzo(k)fluoranthene = 0.03ug/l  
(No Marine MAC – EQS)

\*AA - EQS = Sum of Benzo(g,h,i)perylene and Indeno(1,2,3 cd) pyrene = 0.002ug/l (No Marine MAC – EQS)

#### EQS Failures: No failures

Further data will be available for classification once assessment of Larne Sandy Bay WWTW 2011 data is completed.

#### Link to Data, Assessment and EQSs

[G:\MARINE\Water Framework Directive\WFD ANNUAL CLASSIFICATION UPDATE 2013\Chemistry](#)

#### Data Assessed for 2014 Update:

RIVER BASIN MANAGEMENT PLAN	
 <p>Department of the <b>Environment</b> www.doeni.gov.uk <b>Marine Environment Division</b></p>	<p><b>WFD TRANSITIONAL WATER BODY CLASSIFICATION</b> Larne Lough North</p>
	<p>Version Date: 31/05/2015</p>
<p><b>MONITORING &amp; ASSESSMENT TEAM</b></p>	

Suite	Parameter	Data Availability
Trace Metals	Nickel	CSEG 2012
Trace Metals	Cadmium	CSEG 2012
Trace Metals	Lead	CSEG 2012
Trace Metals	Mercury	CSEG 2012

No EQS failures

**Link to Data, Assessment and EQSs**

[..\Data](#)

**Data Assessed for 2015 Update:**

Suite	Parameter	Data Availability
Trace Metals	Nickel	Sep 2014 – Dec 2014
Trace Metals	Cadmium	Sep 2014 – Dec 2014
Trace Metals	Lead	Sep 2014 – Dec 2014
Trace Organics	Benzene	Nov 2013 – Sept 2014
Trace Organics	Nonylphenol	April 2014 – Dec 2014
Trace Organics	Octylphenol	April 2014 – Dec 2014
Pesticides	Pentachlorobenzene	April 2014 – Dec 2014
Pesticides	Trifluralin	April 2014 – Dec 2014
Pesticides	HCH	April 2014 – Dec 2014
Pesticides	Hexachlorobenzene	April 2014 – Dec 2014
Pesticides	Alachlor	April 2014 – Dec 2014
Pesticides	Cyclodienes	April 2014 – Dec 2014
Pesticides	Endosuphan	April 2014 – Dec 2014
Pesticides	DDT	April 2014 – Dec 2014
Pesticides	pp DDT	April 2014 – Dec 2014

**EQS Failures:**

**HCH**

**Link to Data, Assessment and EQSs**

[G:\MARINE\Water Framework Directive\WFD ANNUAL CLASSIFICATION UPDATE 2015\2015 QE sheets](#)

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### ANNEX F: Protected Areas



Protected areas within Larne Lough North (Coastal Water).

The following Protected Areas are situated either wholly or partly within the Larne Lough North water body:

#### Natura 2000 sites (Habitats Directive and Birds Directive):

Site Name	2014 Condition Status	Designated Water Dependant habitat/species	Feature(s) not meeting objective	Reason for not meeting objective
Larne Lough SPA	Favourable	Common Tern; Roseate Tern; Sandwich Tern; Light Bellied Brent Goose	None	n/a

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 <p>Department of the <b>Environment</b> www.doeni.gov.uk Marine Environment Division</p>	<p><b>WFD TRANSITIONAL WATER BODY CLASSIFICATION Larne Lough North</b></p>
	<p>Version Date: 31/05/2015</p>
	<p><b>MONITORING &amp; ASSESSMENT TEAM</b></p>

### ANNEX G: High Impact Invasive Species

QE High Impact Invasive Species assessment	<b>GOOD</b>
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#### Ecoregion 17 Marine High Impact Invasive Species List

Phylum	Species	P	E	I	Record
<i>Chordata</i>	<i>Didemnum spp.</i>				
<i>Chordata</i>	<i>Styela clava</i>		Y		
<i>Crustacea</i>	<i>Eriocheir sinensis</i>				
<i>Mollusca</i>	<i>Crassostrea gigas</i>				
<i>Mollusca</i>	<i>Crepidula fornicata</i>				
<i>Phaeophyceae</i>	<i>Sargassum muticum</i>				
<i>Angiosperms</i>	<i>Spartina anglica</i>				

P= Present; E= Established; I= Impacting

NB Established populations of high impact species automatically downgrade overall surface water classification from 'high' to 'good'.

Record should be inputted as follows. PO= personal observation outside of surveys; W= WFD survey; M= museum / institute records.

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 <p>Department of the <b>Environment</b> <a href="http://www.doeni.gov.uk">www.doeni.gov.uk</a> <b>Marine Environment Division</b></p>	<p><b>WFD TRANSITIONAL WATER BODY CLASSIFICATION Larne Lough North</b></p>
	<p><b>Version Date:</b> 31/05/2015</p>
<p><b>MONITORING &amp; ASSESSMENT TEAM</b></p>	

## GLOSSARY

<b>AFBI</b>	Agri-Food and Biosciences Institute (under contract to NIEA)
<b>AMBI</b>	AZTI Marine Biotic Index
<b>Annex X</b>	Annex 10 Priority Hazardous Substances
<b>Annex VIII</b>	Annex 8 Specific Pollutants
<b>Article 5</b>	Characterisation, typology, pressures and impacts analysis
<b>ASSI</b>	Area of Special Scientific Interest
<b>CIS</b>	Common Implementation Strategy
<b>DIN</b>	Dissolved Inorganic Nitrogen
<b>DO</b>	Dissolved Oxygen
<b>EQR</b>	Ecological Quality Ratio
<b>EQS</b>	Ecological Quality Status
<b>EUNIS</b>	European Nature Information System
<b>FSL</b>	Full Species List
<b>GEP</b>	Good Ecological Potential
<b>gH</b>	Good/High
<b>H/G/M/P/B</b>	High/Good/Moderate/Poor/Bad (Classification Status)
<b>H/M/L</b>	High/Medium/Low (Confidence)
<b>HMWB</b>	Heavily Modified Water Body
<b>IQI</b>	Infaunal Quality Index
<b>IRBD</b>	International River Basin District
<b>LOD</b>	Limit of Detection
<b>MBT</b>	Macroalgal Blooming Tool
<b>MEP</b>	Moderate Ecological Potential
<b>NB</b>	Neagh Bann
<b>ND</b>	No data
<b>NE</b>	North Eastern
<b>NEAGIG</b>	North Eastern Atlantic Geographical Intercalibration Group
<b>NIEA</b>	Northern Ireland Environment Agency
<b>N-regs</b>	Nitrogen Regulation
<b>NVZ</b>	Nitrate Vulnerable Zone
<b>NW</b>	North Western
<b>Physico-chem</b>	Physical and chemical monitoring
<b>RSL</b>	Reduced Species List
<b>SAC</b>	Special Area of Conservation
<b>SEPA</b>	Scottish Environment Protection Agency
<b>SPA</b>	Special Protected Area
<b>TNA</b>	Tool Not Applicable
<b>TraC MImAS</b>	Transitional and Coastal Morphology Impact Assessment System
<b>TUD</b>	Tool Under Development
<b>UKAS</b>	United Kingdom Accreditation Service
<b>UKTAG</b>	United Kingdom Technical Advisory Group for Water Framework Directive
<b>UNICORN</b>	Database for marine organisms.
<b>UWWTD</b>	Urban Waste Water Treatment Directive (91/271/EEC)
<b>VDSI</b>	Vas Deferens Sequence Index
<b>WFD</b>	Water Framework Directive