

## NATIONAL MARINE BIOLOGICAL AQC SCHEME

2<sup>nd</sup> November 2014. 10.30-15.30

Location: SEPA, Clearwater House, Heriot Watt Research Park, Avenue North, Riccarton,  
EDINBURGH, EH14 4AP, Tel: 0131 449 7296

**Attending:** David Johns (DJ, Chair, SAHFOS), Myles O'Reilly (MoR, SEPA), Claire Mason (CM, CEFAS), Astrid Fischer (AF, Technical Secretary, SAHFOS), Matthew Green (MG, Natural Resources Wales), Graham Phillips (GP, EA, Finance Manager –replacing Mandy Prior), Grant Rowe (contractor's representative), Sarah Hussey (SH, Thomson Ecology Ltd), Lydia Finbow (LF, Apem Ltd), David Hall (DH, Apem Ltd).

**(via teleconference):** Tim Mackie (TM, NI EA), Carol Milner (CMi, Apem Ltd), Paul Whomersley (PW, JNCC).

**Apologies:** Clare Scanlan (CS, SEPA), Joe Silke (JS, Marine Institute), Rafael Salas (RS, MI), Amy Ridgeway (AR, JNCC), Keith Cooper (KC, CEFAS), Jim Ellis (JE, CEFAS).

### Item 1. Minutes of the last meeting

#### *Meeting Actions from August meeting & minutes*

##### All

- Send comments to QA proposal for the Regional Seabed Monitoring Programme to Keith.  
*Action Myles to send his comments to Keith.*

##### Rafael

- take legal advice in the matter of obtaining the name BEQUALM. *BEQUALM is still ongoing-see Astrid's actions. The committee agreed that the name BEQUALM should be dropped from the paperwork.*

##### Astrid

- Update NMBAQC terms of references to reflect the ISO17043 standard. *Action on hold, due to ongoing investigation into ISO 17043 content, together with Clare Scanlan.*
- Find out what exactly has happened to BEQUALM. Comment from John Bignell (Cefas) *“Following the three year EU funded programme that began in 1998, BEQUALM was split into 3 components for the self-funded phase that still operates in principle today. These components were (1) Whole Organism (2) Biomarkers and (3) Community Analysis. Each component had a lead lab that organised intercalibration exercises. Cefas was designated as the lead lab for the Whole Organism component (Bioassays and Fish Disease); NIVA, Norway oversaw the biomarker component (EROD and VTG measurement); and NMBAQC was lead lab for Community Analysis (Phytoplankton and Benthic Community). To be fair, this structure was somewhat awkward for overall administration of the programme but nevertheless continued.*

*Historically, there has been several key issues related to lack of sufficient participation:*

- a) There hasn't been a mandatory requirement for individuals to participate, therefore it was hard to attract participation.*
- b) It has been hard to cost individual inter calibrations at a price that attracts people to sign up e.g. the bioassay work was expensive to prepare and the fees needed to cover those costs as well as the admin.*
- c) The more people that sign up or show interest, the cheaper the registration fees become, although this resulted in a chicken and egg scenario so far as it was hard to come up with an initial starting cost.*

- d) *With the transferral of the project office from Yvonne Allen to Tom Fisher and now nobody, it has lost direction somewhat, although I continue to organise fish disease schemes under the BEQUALM umbrella.*

*BEQUALM is still ongoing although the fish disease programme appears to be the only aspect that is continuing on a regular basis i.e. every 2 years. The "Biomarker Component" has not had any attention for a considerable length of time and is somewhat adrift. Furthermore, ICES WGBEC recently conducted a intercalibration concerning PAH measurement in bile, although this was not strictly a BEQUALM exercise and I am not sure that this was officially registered with the ICES Databank to correspond to submitted data (although Brett could clarify).*

*I would encourage any future schemes to utilise the BEQUALM name as a result of the biological effects community's previous efforts- to discard the BEQUALM name would send the wrong message. I would also argue that the Phytoplankton element should sit wholly under the NMBAQC umbrella without the BEQUALM affiliation- I expect the reasons for initially including this under BEQUALM are no longer relevant (technically it is not a biological effect tool). This would certainly centralise the programme somewhat."*

*The committee are of the view that BEQUALM is effectively a "ghost organisation" and adds little value to the scheme and reference to it in future documentation should be avoided.*

- *Contact Charlotte Johnston to find out who is going to replace Emma on the NMBAQC committee. The plan is to divide the NMBAQC work up so that Paul Whormersley leads specifically on the epibiota work and Amy Ridgeway leads in terms of being the main liaison with the Secretariat.*
- *Update the web site with information to indicate which exercises of the benthic inverts and PSA component participants take part in. Done.*
- *Send Jim comments on the fish photo protocol. Done.*
- *draft a general paragraph on discrepancy procedures that can be included by all the contract managers, in liaison with Myles and David H. Done- on agenda.*
- *Put pass/fail on the agenda for next time and to make a table with all the exercises which includes whether or not it currently has a pass/fail. Done- on agenda.*

#### **Claire Mason**

- *Check within Cefas that tender contracts, including those for universities, should provide a sampling and processing protocol as well as a QA specification). Cefas ensures that all tenders use QA specifications. However, on bigger projects where Cefas does not take the lead, this is not always the case. This is mostly for universities, so it may be worthwhile to invite NERC to the next PSA workshop. Action All: Send university contacts to Astrid. Action Astrid to send info and application note to universities.*
- *Send references to assist smoothing PS curve prior to applying pass fail criteria so that odd anomalies in the gravel do not produce false fails to David Hall. Done, David, Lydia and Claire are still working on this.*

#### **David H./Carol**

- *To come up with transport guidance of samples (together with Myles and Paul McIlwaine from Cefas). A note on transport will be added to the revised process and requirement protocol. Ongoing, will be included in the new Benthic invertebrate guidelines for next year.*
- *Update the Benthic Invertebrate Guidelines for next year. Ongoing.*
- *Draft an expression of interest for a Benthic Beginner's workshop for 2015-2016. Done, unfortunately there was not enough interest to run a workshop.*
- *Forward allegations that have been made against APEM's auditing methods, for example, swapping specimens and adding specimens into residues, to Myles. Done. These comments*

*appear to be subcontractors defending their position with a contractor perhaps unaware that their comments would be inadvertently passed on to the scheme administrator. Decided not to respond unless the comments are clearly intended for the scheme administrator.*

- Send information to indicate which exercises of the benthic inverts and PSA component participants take part in to Astrid. *Done. Action Myles to talk to his colleagues to ensure that NMBAQC participation queries from SEPA get resolved internally.*

#### **Clare S**

- Discuss if the saltmarsh ring test could be an NMBAQC field test instead of a photo exercise with Mandy/ Tina.
- Circulate costs for Macroalgal blooming/Seagrass workshop to the committee for comment.
- Look into guidance protocol and the financial viability of a Saltmarsh ring test (with Mandy).
- Send more information on Macroalgal blooming/Seagrass workshop to Committee. *Done.*
- further expand on the requirements where we think we may be lacking on ISO 17043 and all contract managers to further expand on this.

#### **Grant**

- Contact the deep sea species for offshore monitoring contractor to see if he would be able to provide specimens for a ring test for deep sea species and to assess how many labs would be interested in such a test. *Yes, Craig can provide specimens from Rockall bank infauna and reef material and some pan Atlantic species, plus a few deep sea species.*
- Send an email gauging interest from participants for a deep sea species test, even if it was only for a one-off test. *This is a bit pre-emptive, there is no licensing for this yet. We can circulate around normal participants and have a talk about this. It is still in the remit of the scheme. Suggest to include a few specimens, above the 25 for the normal test, which will not get marked, to gauge interest among current participants.*
- Liaise and investigate people outside NMBAQC doing deep sea species for offshore monitoring. *JNCC do most of the deep sea monitoring. Action Paul to find out who is responsible for the deep sea monitoring within JNCC. Action Grant to follow this up with Paul and also to find out if Craig is willing to give a presentation on this matter.*
- Get a contractor's perspective on Saltmarsh ring test, we might need to add terrestrial contractors to our list

#### **Jim**

- Inform Sarah that if she cannot make a meeting, a deputy will be required as a contractual obligation. *Done.*
- Discuss reporting of communication logs with Sarah and come up with ideas. *Jim and Sarah have discussed to include a basic table, with comments and actions.*
- Together with Clare S: Discuss communications logs and residual outcomes in the reports for the transparency of data.
- Send Astrid comments on the Fish photo protocol. *Done.*

#### **Mandy/ Graham**

- Look into the pricing of the Fish component for next year. *There is some flexibility in the costing to possibly accommodate the IFCAs. Action Graham to look into this.*
- discuss with Tina regarding timing of Macroalgal blooming/Seagrass workshop *Outstanding*
- Send specifications on the phytoplankton type of contract and reporting requirements back to the NMBAQC committee to Astrid. *Outstanding*

August meeting minutes were approved.

Some notes for today's meeting arrived very late so committee members had little or no time to pre-read them. **Action all- to send reports for the meeting at least one working day before the actual meeting. Contractors should provide reports around one week beforehand.**

## **Item 2. Epibiota update**

Joe Turner from JNCC has been working on the analysis guidelines, which say how data should be processed when collected. This document has been distributed to the epibiota googlegroup of experts, and is now out for a 2<sup>nd</sup> review, and comments should be given by the end of the week. JNCC aims to finalise the document by the end of January.

We also would like to get an idea of the level of species identification for different types of organisms.

The next steps for the future are still unsure. We have done a ringtest with video imagery before, but this was very expensive (£8000 per participant). We tried to do an in-house test but other work pressures took over. We need to come up with a consensus level of what can be identified, but experts who know the area may come up with a species level identification where the imagery of the video cannot show the difference- should you be marked down for knowing what is there in an area? It may be an idea to create a document of what can and cannot be identified once the guidelines are in place. We can then look at the resources we have and see what we can come up with. An idea would be to have 5 or 10 clips of about 30s long, and we should know what we are expected to find on these clips – otherwise marking would be impossible.

**Action Tim and Paul to catch up with what material have already been collected and discuss a way forward.** David had contacted Emma Sheehan at Plymouth University before and she is happy for NMBAQC to use her materials in a ring test. Paul mentioned that there is also a massive resource at Cefas. Matt Green also has data and connecting datasets. It would be good to create another ring test or learning exercise.

**Action Paul to send a few lines on what he thinks is the way forward.**

## **Item 3. Phytoplankton update**

The Phytoplankton workshop will be held next week in Denmark, Astrid will be attending.

**Action Astrid to get a phytoplankton update from Rafael.** Carol asked who signs the Phytoplankton Statement of Performance certificates. **Action Astrid to enquire.** Post meeting note: The SOP now provided by Carol indicates these are signed by Joe Silke and Rafael Salas from the Marine Institute.

All results from this summer's test, sample enumeration and identification, have come in. 84 Participants took part in the exercise, and only 4 participants failed their tests. As part of the exercise a HAB online quiz was held, the deadline for submission of results was 23<sup>th</sup> October 2015. A workshop has been held from 8-12 November, in Hillerød, Denmark. This was a 2½ day workshop comprising of 1½ day lectures, practicals, cultures and microscope sessions, focussing on Prorocentrum, Chaetoceros, Pseudo-Nitzschia and Protoperidinium. The first day focussed on statistics and results, and gave participants a chance to showcase their work.

The phytoplankton certificates are currently only signed by the Marine Institute (MI), Galway. The MI is trying to form stronger international partnerships, and is in the progress of updating its Terms of Reference. For UK participants only, this would mean that the certificates could be countersigned by NMBAQC, but only if UK NMBAQC participants should wish this to happen. The MI would not be releasing any confidential information about any

participants to NMBAQC unless participants in these labs would be happy with this happening

**Item 4. Priorities from HBDSEG**

NMBAQC name – Roger has now also suggested a name change for NMBAQC with the N in the acronym changing to North Atlantic instead of National. A brief discussion was held by the NMBAQC committee whether North or Northeast Atlantic would be more appropriate, and it was decided to be North Atlantic. *Action Astrid to update the web site, including leaflet and poster, once name change has been approved by MARG.*

QUASIMEME update- Roger has said that QUASIMEME are tentatively keen to take NMBAQC on. There has been a short piece on NMBAQC in the last QUASIMEME newsletter and we should have an extended piece, including all the exercises, for the next newsletter.

*Action David to investigate what QUASIMEME will do for us and to find out if we have funding for the secretariat for next year. Action Graham to get the current Technical Secretary contract extended to March 2016.*

**Item 5. Contractor’s update APEM**

**Item 5.1 - PSA Update**

**PARTICLE SIZE ANALYSIS COMPONENT PROGRESS REPORT**

**2014-15, Year 21**

**1. Subscriptions**

LabCode	PS52/53/54/55	PS-OS01/02/03
PSA_2101	1	1
PSA_2102	1	1
PSA_2103	1	1
PSA_2104	(1)	(1)
PSA_2105	1	1
PSA_2106	1	-
PSA_2107	1	-
PSA_2108	1	-
PSA_2109	1	-
PSA_2110	1	(1)
PSA_2111	1	-
PSA_2112	1	-
PSA_2113	1	-
PSA_2114	1	-
PSA_2115	1	-
PSA_2116	-	1
PSA_2117	-	1
PSA_2118	-	1
PSA_2119	-	1
PSA_2120	-	(1)
	<b>14 (15)</b>	<b>8 (11)</b>

**2. 2014-2015, Year 21 Operations**

Exercises have been distributed in line with the 2014-2015 timetable (available on the scheme website), with slightly delayed circulations of PS54 and PS55. The deadline for PS-

OS submission was extended to increase returns. Returns and results, to date, are summarised in the table below.

Exercise	Status	Returns / Comments
PS52	Samples distributed 15/09/14 Interim report circulated 19/12/14 Final version submitted for website Exercise complete	Mud/Sand Test 13 out of 14(15) returns received Excluding 1 extra multi data set
PS53	Samples distributed 15/09/14 Interim report circulated 19/12/14 Final version submitted for website Exercise complete	Diamicton Test 13 out of 14(15) returns receive Excluding 1 extra multi data set
PS54	Samples distributed 19/12/14 Interim report circulated 10/03/15 Final version submitted for website Exercise complete	Gravel Test 13 out of 14 (15) returns received
PS55	Samples distributed 19/12/14 Interim report circulated 10/03/15 Final version submitted for website Exercise complete	Diamicton Test 13 out of 14 (15) returns received
PS-OS01-03	Samples requested 14/10/14 Data and sample submission deadlines passed Deadlines extended Exercise complete	8 out of 8(11) lists of samples 8 out of 8(11) datasets received 24 out of 24(33) samples selected 12 out of 24(33) samples received

**a. Issues arising**

The deadline for PS-OS submission was extended to encourage full participation. Twelve of the twenty-four requested samples are still outstanding (these all relate to one participant). Pass/Fail criteria and new z-score formulae are yet to be applied in interim reports, but will be trialled in the annual PSA component report.

It appears that some of the received PS-OS samples are not complete samples. PS-OS submissions require all sample components, i.e. <1mm, >1mm and laser sub-sample, if they are to be analysed by the AQC laboratory effectively so that results can be compared.

It is important that all relevant sections of the workbooks are filled prior to submission. Correct completion will also highlight any processing or data entry errors that may have occurred, ahead of data submission. Except for minor issues, e.g. a missing value, the results and workbooks will not be altered for mistakes that have been realised by the participant after the circulation of interim reports.

*Apem Ltd are currently finalising the annual report, it will then be sent to Claire Mason and Kenneth Pye for comment. This should also include information on the sub-sampling method, e.g. if you are competent you don't need to do 3 replicates every single time. Action Claire to send PSA annual report with new methodology to committee.*

*Interim reports have been sent out and we are working on the pass/fail criteria.*

*Comment from the NMBAQC committee: there should be an explanation of numbers in the brackets in the above meeting report.*

**2015-16, Year 22**

**1. Subscriptions**

LabCode	PS56/57/58/59	PS-OS04/05/06
PSA_2201	1	-
PSA_2202	1	-
PSA_2203	1	-
PSA_2204	1	1
PSA_2205	1	-
PSA_2206	-	1
PSA_2207	-	1
PSA_2208	1	1
PSA_2209	1	-
PSA_2210	1	1
PSA_2211	1	1
PSA_2212	1	1
PSA_2213	1	1
PSA_2214	1	-
PSA_2215	1	-
PSA_2216	1	-
PSA_2217	1	-
PSA_2218	1	-
PSA_2219	-	1
	<b>16</b>	<b>9</b>

**2. 2015-2016, Year 22 Operations**

Exercises PS56, PS57, PS58 and PS59 have been distributed in line with the 2015-2016 timetable (available on the scheme website). The deadline for PS-OS submission has been extended to increase returns. Returns and results, to date, are summarised in the table below.

Exercise	Status	Returns / Comments
PS56	Samples distributed 13/05/15 Sample deadline 31/07/15 Interim report complete (08/09/15) Exercise complete	Mud/Sand Test 16 out of 16 returns received
PS57	Samples distributed 13/05/15 Sample deadline 31/07/15 Interim report in progress (08/09/15) Exercise complete	Gravel Test 16 out of 16 returns received
PS58	Samples to be distributed 14/10/15 Sample deadline 18/12/15 Exercise active	Diamicton Test
PS59	Samples to be distributed 14/10/15 Sample deadline 18/12/15 Exercise active	Diamicton Test
PS-OS04-06	Samples requested 13/05/15 Data submission deadline passed (08/06/15) Sample submission deadline passed (31/07/15) Deadlines extended Analysis in progress Exercise active	5 out of 9 lists of samples 5 out of 9 datasets received 15 out of 15 (27) samples selected 15 out of 15 (27) samples received

**a. Issues arising**

The deadline for PS-OS submission has been extended to encourage full participation. Four out of nine datasets are still outstanding. Pass/Fail criteria and new z-score formulae were trialled in the annual (2014/2015) PSA component report and will be applied in the 2015/2016 interim reports. Pass/fail criteria for the PS-OS module were trialled on PS-OS 01 – 03. The criteria will need to be altered as it puts too much emphasis on the gravel fraction and could miss more subtle differences in the sand/silt/mud fraction. This is currently being worked on and updated criteria could be trialled in the PS-OS 04 – 06 results next year.

It appears that some of the received PS-OS samples are not complete samples. PS-OS submissions require all sample components, i.e. <1mm, >1mm and laser sub-sample, if they are to be analysed by the AQC laboratory effectively so that results can be compared.

It is important that all relevant sections of the workbooks are filled prior to submission. Correct completion will also highlight any processing or data entry errors that may have occurred, ahead of data submission. Except for minor issues, e.g. a missing value, the results and workbooks will not be altered for mistakes that have been realised by the participant after the circulation of interim reports.

*From Myles: Can we have a quick discussion on the following: NMBAQC PSA ring test, need clarity over whether or not we should buy sieves to separate fractions >8mm as this is not a requirement for WFD IQIv4 spreadsheet.*

*From Claire Mason: The guidance clearly states that sieving at ½ phi between 63mm down to 1mm required. WFD does not set the goals for PS requirements- it just utilises the data at a coarser resolution. All parties agreed when guidance put together that we should be aiming for quality data that can be utilised for multiple purposes. Myles indicated SEPA are now purchasing additional sieves to bring their procedure into line with the NBAQC guidance.*



## Item 5.2 Benthic Invertebrates update

*The year 20 final report has been sent to Myles and the statements of performance are ready for signing by David Johns.*

### 2014-15, Year 21

#### 1. Subscriptions

LabCode	RT47/48	LR19	MB22	OS56/57/58
BI_2101	1	1	1	1
BI_2102	1	1	1	1
BI_2103	1	1	-	1
BI_2104	1	1	-	1
BI_2105	1	1	-	1
BI_2106	1	1	-	1
BI_2107	1	1	-	1
BI_2108	1	-	-	-
BI_2109	1	-	-	-
BI_2110	1	1	1	-
BI_2111	1	-	1	-
BI_2112	1	-	-	1
BI_2113	1	-	-	1
BI_2114	1	-	-	1
BI_2115	1	-	-	1
BI_2116	1	-	-	1
BI_2117	1	-	-	-
BI_2118	1	-	-	1
BI_2119	1	-	-	-
BI_2120	1	-	-	-
BI_2121	-	1	-	1
BI_2122	-	-	-	1
BI_2123	-	-	-	1
BI_2124	-	-	-	1
BI_2125	-	-	-	1
BI_2126	-	-	-	1
BI_2127	-	-	-	1
BI_2128	-	-	-	1
BI_2129	1	-	-	1
BI_2130	-	-	-	1
BI_2131	-	-	-	1
BI_2132	-	-	-	1
BI_2133	-	-	-	1
BI_2134	-	-	-	1
BI_2135	-	-	-	1
BI_2136	-	-	-	1
BI_2137	-	-	-	1
BI_2138	-	-	-	1
BI_2139	-	-	-	1

21	9	4	32
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## 2. 2014-2015, Year 21 Operations

Exercises have been distributed in line with the 2014-2015 timetable (available on the scheme website), with a slightly delayed circulation for RT48. All circulations have been sent out to participants; RT48 bulletin is now complete; OS56-58 module report has been published. The draft Annual report has been completed and Statement of Performance documents are awaiting the signatures of the NMBAQC Chair and Benthic Invertebrate Contract Manager. Returns and results are summarised in the table below.

Exercise	Status	Returns / Comments
<b>RT47</b>	Samples distributed 15/09/14 Submission deadline passed, 31/10/14 Interim reports circulated 25/11/14 Ring Test Bulletin circulated 13/02/15 Exercise complete	General Ring Test 20 out of 21 returns received
<b>RT48</b>	Samples distributed 18/12/14 Submission deadline passed 06/02/15 Interim reports circulated 19/03/15 Ring Test Bulletin in progress Exercise active	Targeted (Syllidae and alike) 18 out of 21 returns received
<b>LR19</b>	Request for specimens distributed 15/09/14 Submission deadline passed, 31/10/14 Analysis / reporting complete Exercise complete	General 5 out of 9 returns received and reported
<b>MB22</b>	Samples distributed 15/09/14 Submission deadline passed, 31/10/14 Exercise complete	Marine Sample (1mm) 2 out of 4 returns received
<b>OS56 - 58</b>	Samples requested 15/09/14 Data submission deadline passed, 26/09/14 Sample submission deadline passed, 31/10/14 Analysis / reporting in progress Exercise complete	31 out of 32 lists of samples 31 out of 32 datasets received 93 out of 93(96) samples received 12 samples externally audited 93 samples reported

### a. Issues arising

Delays with the external Own Sample process have impacted the OS and Annual Reporting. The Contract Manager has approved an additional external auditor to increase future external auditing capacity, when required.

*The year 21 Annual report is nearly finished and the final Identification guide to Northern European interstitial opisthobranchs is now on the NMBAQC web site.*

### 3. Taxonomic Workshops & Taxonomic Guides

Bastian Brenzinger's 2014 workshop guide to interstitial opisthobranchs has been updated and uploaded to the website.

#### 2015-16, Year 22

#### 1. Subscriptions

LabCode	RT49/50	LR20	OS59/60/61
BI_2201	1	1	1
BI_2202	1	-	1
BI_2203	1	-	1
BI_2204	1	1	1
BI_2205	1	1	1
BI_2206	1	-	-
BI_2207	1	1	1
BI_2208	1	-	1
BI_2209	1	-	1
BI_2210	1	1	1
BI_2211	1	1	1
BI_2212	1	-	-
BI_2213	1	-	1
BI_2214	1	1	-
BI_2215	1	-	-
BI_2216	1	-	1
BI_2217	1	-	-
BI_2218	1	-	1
BI_2219	1	1	1
BI_2220	1	-	1
BI_2221	1	-	-
BI_2226	-	-	1
BI_2227	-	-	1
BI_2228	-	-	1
BI_2229	-	-	1
BI_2230	-	-	1
BI_2231	-	-	1
BI_2232	-	-	1
BI_2233	-	-	1
BI_2234	-	-	1
BI_2235	-	1	1
BI_2236	-	-	1
BI_2237	-	-	1
BI_2238	-	-	1
BI_2239	-	-	1
BI_2240	-	-	1
BI_2241	-	-	1
BI_2242	-	-	1
BI_2243	-	-	1
BI_2244	-	-	1
	<b>21</b>	<b>9</b>	<b>34</b>

## 2. 2015-2016, Year 22 Operations

Exercises have been distributed in line with the 2015-2016 timetable (available on the scheme website). All circulations have been sent out to participants; all exercises are active. Returns and results are summarised in the table below.

Exercise	Status	Returns / Comments
RT49	Samples distributed 27/05/15 Submission deadline passed, 31/07/15 Interim report circulated 19/8/15 Ring Test Bulletin in progress Exercise active	General Ring Test 19 out of 21 returns received
RT50	Samples distributed 09/10/15 Submission deadline 18/12/15 Exercise active	Targeted (Amphipoda)
LR20	Request for specimens distributed 08/05/15 Submission deadline passed, 05/06/15 Analysis / reporting in progress Exercise active	General 6 out of 9 returns received, to date 4 sets of samples analysed and reported
OS59-61	Samples requested 08/05/15 Data submission deadline passed, 05/06/15 Sample submission deadline passed, 31/07/15 Analysis / reporting in progress Exercise active	23 out of 34 lists of samples received 23 out of 34 datasets received, to date 48 out of 102 samples received, to date Currently unknown number samples to be externally audited 33 samples analysed, to date

### a. Issues arising

The deadline for data submission for some participants OS59-61 could not be met due to sampling being carried out over the summer months. It has been extended for 15 participants until the end of October to allow for completion of 2015 sample by external contractors. This may have a knock on effect on the Annual Report but should not impact the component reporting, which will still be completed by the end of March 2016.

Own Sample system is potentially being abused with minimum criteria not being met (2 separate labs submitted less than the stipulated 12 samples for selection) and questionable residues being supplied (one lab submitted sediment <0.5mm for a >0.5mm sample). It is also apparent that some commercial laboratories are selecting samples for OS submission/selection before processing, which could result in disproportionate effort being applied to a subset of samples. *Action Carol to send more details about participants abuse to Myles. We have got to make it difficult to cheat the system, but participants should also realise that the exercises are made for their own benefit.*

*Query from a lab regarding the many fail-bad category in the year 21 exercise:*

We would like to raise a concern with the overall application of the benthic invertebrate aspect of the NMBAQC scheme. While we appreciate the scheme is extremely useful as a resource to enable our industry to be consistent with our identifications, we are concerned about the overall usefulness of the scheme as we are unsure of what consistent remedial action is taken to action poor results and mitigate against future occurrences. The year 21

Own Sample exercise results show numerous examples of BCSI results falling into the 'Fail-Bad' category. Our concern surrounds the follow-up on these results and if this indicates a general trend for a decline in quality in the industry; participation in the scheme represents a considerable commercial investment not just in participation in the scheme but also the maintenance of this standard of result on a consistent basis. As such we would like to be assured that the UK competent monitoring authorities (CMAs) take notice of all the results recorded through the scheme, are not solely interested only in participation but also performance and that this is subsequently reflected in their procurement requirements. There is no question that the ring tests and the discussions they initiate are valuable, however the own sample exercise is not if there is no effort to improve these numbers. We feel that participating in the scheme should be more than a 'tick in the box' exercise and should represent an industry standard that all participants should achieve in order to ensure the quality of the data provided to our end clients.

Should the scheme reconsider its position on being an accreditation scheme? Currently the scheme is not considered an accreditation, however it could be perceived as this if it is being used to demonstrate quality in a commercial context e.g. participation being mandatory in order to bid for certain work (not limited to work for CMAs), or the standard of the delivered work being required to meet NMBAQC guidelines.

We would welcome a wider discussion on these topics.

*Scoring is based on people's ability. For CMAs the criteria for QA specification is that the contractor has performed well in the QA scheme. The list of contractors gets reviewed each year. Under CSEMP this was mandatory but now that CMAs have stopped submitting to CSEMP we may need to make this clearer? Action Myles to circulate information about CMAs and participants to Tim, Keith and Matt and to draft a formal response together. The Ring Tests should not be seen as a performance test, they are merely a training exercise, but it would be good to cover all areas, including the issuing of contracts. For getting a contract, most CMAs stipulate that commercial labs take part in the Own Sample module and a selection of samples will get checked via the CMA random sampling. However, most CMAs don't ask for Statement of Performance when tendering, maybe we should consider asking for these annually. Action Myles, Carol, David H and Claire to have a discussion about sample submission protocol for audit. We may wish to change the minimum level of participation and minimum number of submitted samples for the next info& participation note.*

#### *Query from another lab:*

We were wondering if the taxonomic discrimination protocol was still being developed. We have discussed this for a while and there have been a few instances with regards to the NMBAQCS own sample QC and LR exercises where it seems this protocol would be useful.

We received results from the recent LR and the ID of 4 of our specimens were not confirmed as according to APEM policy they are not ID'd to species level. This is both a waste of our time and money sending specimens that do not get confirmed. Also, should we be trying to ID these to species level and under what authority had this decision been made?

Many of our OS exercises come back with differing ID's due to inconsistencies between our and APEM ID policy for example scale-less worms are routinely ID'd by us as Polynoidae based upon comments made by Ruth Barnich at the NMBAQCS workshop, these were ID'd as Harmothoe impar after external QC. Whilst I realise we don't get marked down for this by using APEM ID policy during NMBQCS QC it implies this is the NMBAQC taxonomic discrimination protocol. I understand that a policy has to be used and it is probably agreed upon awarding the NMBAQC contract but it is confusing as to when it is accepted that we should ID to species level and when not especially for work with the public agencies which surely requires a particularly high level of consistency between contractors.

*The Taxonomic Discrimination Protocol was developed some years ago and specifies to what level you identify specific taxonomic groups. It is fairly basic now and requires a lot of work. It would probably be better to have a more detailed report on the lab reference, similar to the FRRT, to show labs what specimens people have submitted and there the taxonomic difficulties are. Action David H to send the year 21 data to Myles. Action David H to find out from participants if they would agree to a fuller report for this current year- if agreed- Action Myles and David H to advance LR report. Action Myles to draft response to query. An audit on reference collections from contractors would be useful for CMAs and may be something that could be specified in contracts.*

*Pricing may go up for postage- Action David/Carol to investigate phenoxytol as a substitute for alcohol preservation.*

*Apem Ltd is slightly concerned by the residue of one of the laboratory samples, as it appears that some of the smaller than <0.5mm residual fractions are missing.*

*There will be a few late returns this year due to summer sampling- samples used to be from the previous year but the WFD samples have to be presented from the same year. But the deadlines should still be met.*

*Action Astrid and Myles to work on the year 20 and 21 overall annual reports now that benthic invertebrate component information is here.*

### **3. Taxonomic Workshops & Taxonomic Guides**

APEM provided competitive costs for both a beginner's workshop at Millport Marine Station and at APEM's Letchworth laboratory. Less than 9 participants signed up for each option and, so the plans for a beginner's workshop have been postponed  
Benthic invertebrate workshop for Beginner's cancelled due to lack of interest.

#### **Item 6. Macroalgae Update**

1. Macroalgal blooming/seagrass –
  - a. The next set of ring tests will be sent out in early January 2016.
  - b. Due to an administrative error, four labs were sent the wrong tests in January 2015. By the time this was discovered it was too late to send out biomass samples to three of them (EA labs), as this would have set the whole timetable back considerably. The labs were therefore, regrettably, excluded from this module. Biomass samples in particular take time to prepare so the contractor needs notification of participants in good time, preferably by mid-November, or earlier if possible. *Action Clare to clarify: was that our error or was it the error of the Environment agency? If it was our error, are there now measures in place that this won't happen again in the future? Post meeting note: This was an EA administrative error. The EA should have put something in place to ensure this doesn't happen again.*
  - c. 2015 certificates have been sent out.
2. Rocky shore macroalgae –
  - a. The next set of ring tests will be sent out in early January 2016.
  - b. 2015 certificates have been sent out.
  - c. There is a proposal to update and enlarge the WFD guide for the RSL. I am seeking feedback from users as to whether they think this is a worthwhile project. If so, what improvements would they like to see? Could you please canvass any of your staff who use it and let me

have any comments? *Myles thought this might be the FSL guide, as he was under the impression that the RSL for WFD had been finalised. Action Clare to explain further. Post meeting note: Myles is confusing the list with the ID guide. The list is finalised, but we were thinking to update the ID guide for the RSL only, as this is what most agencies are using.*

d.

3. Macroalgal blooming/Seagrass workshop
  - a. SEPA has come up with some money to facilitate this. Unfortunately it was too late for organising a field-based workshop for this year as algae have now died back. We can get some of the proposed prep work done this financial year, but it's most likely that any workshop would be in the next financial year.
  - b. There has been a proposal that we split the workshop and have a desk-based one this year (focussing more on things like how we map using aerial photography and GIS) and then a practical one next spring.
  - c. I have asked various people for their views on what they would like to be included and when, but all views are welcome, so please consult any colleagues who may have an interest in this and get back to me as soon as possible. Views on a two-part workshop would be appreciated.
4. Saltmarsh – I need to check with Tina Ainsley at the EA if they are planning to run a ring test in 2016.

Macroalgae/saltmarsh workshop

**Draft outline for Macroalgal blooming/Seagrass Workshop (Clare Scanlan, 10/10/2014)**

#### ***Business need***

Monitoring has now taken place within the various competent monitoring authorities (CMAs) over a number of years for the WFD macroalgal blooming tool. Application of intertidal seagrass monitoring has been less widespread among CMAs, with most WFD experience residing within the EA. However, the various countryside agencies also have experience of both types of monitoring though to varying degrees. While all agencies broadly follow the same methodologies, in practice there are differences in how data are collected and in some cases in how they are analysed and applied.

The NMBAQC has run proficiency tests for macroalgal blooming percentage cover assessment and biomass for a number of years, and more recently also for percentage cover of seagrass. However, feedback from the proficiency tests has highlighted the need for discussion to determine best practice. There are plans for a British standard for mapping seagrass beds and macroalgal blooms.

It is recognised that there are similarities in the mapping requirements for both quality elements, and also issues that can best be explored and resolved by holding a workshop. Mapping is generally carried out by a combination of remote imagery and ground-truthing. Remote sensing methods are various and still developing, so sharing best practice would be beneficial to all agencies. Mapping discussions could be extended to include saltmarsh mapping, but it is considered premature and impractical to try to cover all saltmarsh monitoring issues within the same workshop. The EA has recently approved guidance on mapping saltmarsh.

Overall there are issues we need to resolve to ensure consistent, high quality data collection and interpretation among the UK CMAs.

### ***Aims of the workshop***

- To identify any significant discrepancies between CMAs' practices and to highlight best practice (significant differences can be highlighted in advance of the workshop)
- To look at various field survey techniques, e.g. use of hovercraft, foot sampling
- To seek best practice and standardisation in data collection and treatment, e.g. delineating patches
- to evaluate different methods of assessing percentage cover (SG and OMA)
- the collection and treatment of OMA biomass samples
- the definition of "available intertidal habitat"
- clarification of what is meant by "entrainment"
- treatment of unsurveyed (e.g. unsafe) areas
- To discuss data requirements
- To discuss harmonisation of monitoring approaches for the purposes of different Directives (WFD, Habitats, OSPAR)
- To discuss mapping best practice, in relation to field and remote sensing methods

### ***Length of workshop***

2 to 3 days

*Please give feedback on this*

### ***Pre-workshop prep***

- Analysing all ring test results for macroalgal blooming and seagrass and summarising results and any trends
- Comparison of SOPs (either by examining all SOPs or by questionnaire)

### ***Proposed outline***

#### *Discussion topics 1*

- Conclusions/trends from NMBAQC exercises
- Defining blooming macroalgae – which are/are not
- Definition of Available Intertidal Habitat – give practical examples
- Mapping methods
- Methods of quadrat assessment (% cover) – OMA and seagrass
- Collection of algal biomass samples – definitions of entrainment
- Processing of algal biomass samples
- Discussion of any other field/lab related issues

#### *Field/Lab*

- In-field definition of patches
- Methods of quadrat assessment (% cover) – algae and seagrass
- Seagrass ID – is guidance adequate?
- Collection of algal biomass samples
- Processing of algal biomass samples collected

#### *Discussion topics 2*

- Report back on field/lab activities
- Quality control
- Internal procedures
- External PTs (NMBAQC)
- Calculation of EQRs
- Agree approaches to issues discussed
- Mapping – examples of current practices, field and remotely sensed



- Developments in remote sensing mapping
- Quality control aspects for mapping
- Discuss harmonisation of approach for different Directives
- Agree any further actions needed

**Possible locations for workshop**

- Lough Foyle; Strangford Lough Northern Ireland using Portaferry Marine Station (gives the opportunity to assess use of the EPA hovercraft)
- Milford Haven, south Wales, possibly using Orierton Field Station
- Foryd Bay, near Bangor, north Wales

**Costs**

Depending on where it's held, these would need to cover:

- Hire of meeting space/labs, if applicable
- Employment of the NMBAQC contractor to help organise and facilitate the workshop
- Participants will have to cover their own travel and accommodation

**Timing**

April 2016? is proposed *Action all to comment on proposed workshop to Clare.*

**Item 7 - Contractor's update Thomson Ecology**

**Fish update**

**2015 / 2016 Participation** (List correct as of 20th October 2015)

Laboratory Code	Fish Reverse Ring Test	Fish Ring Test
F_2201		Y
F_2202	Y	
F_2203	Y	
F_2204	Y	
F_2205	Y	
F_2206	Y	
F_2207	Y	
F_2208	Y	
F_2209		Y
F_2210	Y	
F_2211	Y	
F_2212	Y	Y
F_2213	Y	Y
F_2214	Y	Y
F_2215	Y	
F_2216	Y	Y
F_2217	Y	
F_2218	Y	
F_2219		Y
F_2220	Y	Y
F_2221	Y	Y
F_2222		Y
F_2223	Y	
F_2224		Y
F_2225	Y	Y
F_2226	Y	Y
F_2227	Y	
F_2228		Y

F_2229		Y
F_2230	Y	
F_2231	Y	
<b>Total</b>	<b>24</b>	<b>15</b>

**Progress on circulations**  
**Scheme Year 2014/15 Fish**

The 2014/2015 year is complete with all three reports published on the website.

**Scheme Year 2015/16 Fish component**

<b>Exercise / Report</b>	<b>Event / Date</b>	<b>Notes</b>
<b>F_RRT07</b>	Protocol and request for specimens to be distributed 07-09-15. <b>Completed.</b>  Specimen submission deadline 11-12-15.  Bulletin deadline 11-03-15.	<u>Fifteen fish taxa to be from Northwest European waters</u> (CSEMP samples where appropriate).
<b>F_RT09</b>	Distribution of samples 04-12-2015.	<u>General Fish Ring Test – Assorted Fish Taxa</u> (fifteen taxa).
<b>Annual Report</b>	Bulletin deadline 31-03-15.	<u>Annual Report – detailing exercises and results from RRT and RT exercises.</u>

- We submitted a poster at the Institute of Fisheries Management's (IFM) Annual conference for the poster session.

- The article for the IFM quarterly magazine is due for release in the next couple of weeks.

*A request for specimens has been sent out with a deadline for December. One EA section has said that they would be late with submission for the F-RRT. **Action Sarah to remind people of deadlines.***

*Sarah presented a poster at the IFM conference and people were very interested. We have our first Italian laboratory signed up this year.*

*Fish workshop: The IFM holds a workshop in spring and EA now receive inhouse training. **Action Graham to talk to Roger Proudfoot and find out what is happening within EA. Maybe we should hold more specialist workshops, e.g. fish larvae.***

**Item. 8 - Zooplankton update**

*The Trial UK Zooplankton Ring Test has now been completed and the certificates of attendance are ready for embossing and sending out to participants. The workshop was received very positively and SAHFOS is intending to hold another Ring Test in the next NMBAQC year 2016/2017, which will be open to all NMBAQC participants (not just UK).*

**Item 9 - AOB**  
**ISO 17043**

Including communications log and residual outcomes in the reports for the transparency of data. *Awaiting feedback from Clare Scanlan.*



**Discrepancies paragraph:**

Identification of non-conforming work, problems with the management system or with technical activities may occur. Should the participant feel that there are discrepancies with results or other work carried out by the contractor, the procedure is outlined below:

1. In first instance, the participant should contact the Contractor for the relevant component. In the case of possible misidentifications, samples may be sent to an external expert to resolve the dispute.
2. If the matter cannot be resolved between the participant and the Contractor, the participant should contact the NMBAQC Contract manager, who can mediate between the Contractor and participant.

If no agreement can be reached between the Contract manager and the participant, the participant can contact the Contractor’s representative, who will take the matter up with the NMBAQC Committee. The NMBAQC Committee decision will be final in all cases.

*This paragraph will be included in the new information and application note. Action all to send comments to Astrid.*

**Pass/Fail**

Do we want to have pass/fail flags for all exercises?

Exercises	Pass/Fail flag
<b>Benthic Inverts</b>	
RT	no
MB	module suspended
LR	no
OS	yes
<b>PSA</b>	
PS	yes
PSO	yes
<b>Fish</b>	
FRRT	no
RRT	no
<b>Phyto</b>	
PHY	yes
<b>Macroalgae</b>	
RMRT	suggested > 80%
OMBRT	yes
OMCRT	yes
<b>Zooplankton</b>	
ZRT	no

*The pass/fail was originally included for CSEMP, but it is being used mostly for chemical data, not biological data on MERMAN. Our biological data is now largely driven by the WFD, so we should have QA where possible and would like to have some pass/fail criteria where practicable. If you include a pass/fail in an exercise, you would also need to consider remedial actions. Action Sarah/Jim to discuss further. The pass/fail is useful for data validation; it can be used as a tool or leverage for CMA contracts. You will need to submit a full list of identified taxa as well. Each component is to assess whether pass/fail is useful. Action Astrid to email all contract managers.*

**Asbestos**

*Asbestos at low levels has been found in sediments from ports and harbours, as well as some disposal sites. Therefore please could the committee through their respective CMAs alert labs to this potential health risk. If anyone has further information or queries please contact Claire Mason.*

*Action Claire to flag the asbestos issue up in the revised PSA protocol.*