

**NE ATLANTIC MARINE BIOLOGICAL AQC SCHEME**  
**Teleconference, 23 May 2017. 10.00-13.00**

**Attending:** David Johns (DJ, SAHFOS, Chair), Myles O'Reilly (MoR, SEPA, Benthic Invertebrate Contract Manager), Claire Mason (CM, CEFAS, PSA Contract Manager), Astrid Fischer (AF, SAHFOS, Technical Secretary), Graham Phillips (GP, EA, Finance Manager), Lydia Finbow (LF, Apem Ltd), David Hall (DH, Apem Ltd), Grant Rowe (Contractor's representative), Hayley Hinchey (HH, JNCC), Keith Cooper (KC, CEFAS), Jim Ellis (JE, CEFAS, Fish Contract Manager), Annika Clements (AC, AFBI-NI), Phil Aldous (PA, Thomson Ecology Ltd).

**Apologies:** Rafael Salas (RS, MI), Claire Young (CY, DAERA, Macroalgal Contract Manager), Paul Brazier (PB, Natural Resources Wales), Joe Silke (JS, Marine Institute, Phytoplankton Contract Manager), Tim Mackie (TM, Department of Agriculture Environment & Rural Affairs DAERA– Marine & Fisheries Division), Henk van Rein (HvR, JNCC), Ruth Barnich (RB, Thomson Ecology Ltd), Karina Jacobsen (KJ, Thomson Ecology Ltd), Adele Boyd (AB, AFBI-NI), Matt Service (MS, AFBI-NI).

**Meeting Actions from February 2017 meeting & minutes**

**All**

- to look out for grants to develop epibiota component further. (If we focus on epibiota imaging to ensure fish stocks in Wales, this may be an opportunity: <http://www.waterloofoundation.org.uk/EnvironmentMarine.html>)  
HH: There has been some discussion about the NERC call for innovative monitoring approaches.  
AC: Envision has created an initial document which is very useful. It would be good to set up an initial teleconference with Envision, JNCC, Tim.  
DJ asked if there is a monitoring option for MSFD for epibiota defined within HBDSEG? No, not as a component, but it feeds in to other monitoring options.

**Keith**

- contact Ian regarding copyright of bivalve images. Keith has sent an email but not had a reply, he will follow this up. Action Keith to follow up.

**Astrid**

- contact Emma to remind that reports should go via the contract manager or technical secretary first. Done
- forward Keith's email regarding QA/QC requirements in tenders to committee. Done
- contact Mark about bringing current protocols together for easy reference Done, but Mark is currently on leave.

**Tim**

- send bivalve growth series images to Keith
- send most recent UK TAG watch list of invasive species to David H. Done, but this list was quite out of date. DH wanted to use the list to include some of the relevant species in the ring tests.
- confirm with Patrick Collins at Queen's University if he wishes to continue his population genetics study and send out reminder if the study continues this year.
- contact Henk to discuss epibiota component development.
- liaise with Henk, Hayley and Annika to take epibiota component further. Ongoing
- with David H to come up with agreement for terminology for SOPS Done
- with Myles and David H to have a discussion and come up with a first draft for a Taxonomic Discrimination Protocol. Done

**Graham**

- continue to make enquiries about developing UNICORN There has been some progress. This is a matter of the legal Escrow agreement to get the ability to modify the database and GP has talked to the business partners about this. From the finance side we have been asked to put

a business case forward why we need to have UNICORN, it would be good to have HBDSEG support for UNICORN. Action Graham to ask Roger for UNICORN support. It is likely that we will have to agree to find funding for this, either via NMBAQC or via HBDSEG.

### Myles

- send responses to Astrid for archive purposes. Post meeting note- done.
- send feedback about unclear bits of the PSA component forms to Claire M. Action Myles to send feedback about unclear bits of the PSA component at the next round.
- with Tim and David H to have a discussion and come up with a first draft for a Taxonomic Discrimination Protocol. Done
- call Merman and find out more about the ambiguous names in species lists, plus point them in the correct direction. Done. Myles did a lot of updates for Merman.
- draft a holding response to the query regarding unsolved taxonomic issues providing a summary of how we intend to take this forward. Done. Myles sent a holding response to Grant which he in turn forwarded to Daisy.
- inform Dave Hall about the taxonomic discrimination protocol and extended LR reports, initiate the proposals and keep Graham cc-ed regarding costs. Done.

### Hayley

- send around link to ICES *Nephrops* report when this comes out. This was actually Annika who had attended a *Nephrops* burrow counting working group in November 2016—the report is now publicly available on the ICES website (at: <https://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/SSGIEOM/2016/WKNEPS/WKNEPS%202016.pdf> )

Hayley also sent around another ICES report on *Nephrops* burrows:  
<http://ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/SSGEPD/2016/01%20BEWG%20-%20Report%20of%20the%20Benthos%20Ecology%20Working%20Group.pdf>

- to liaise with Henk, Tim and Annika to take epibiota component further Ongoing

### David J

- remind Rafael to send his update in time for meeting. Ongoing, despite two reminders we didn't receive a phyto update.

### David H

- Send questionnaire for workshop in October to discuss appropriate sample size and the best way to retain samples for subsequent QA to Astrid for circulation among participants. Ongoing, as the idea is to send the questionnaire together with an expression of interest for the workshop.
- with Tim to come up with agreement for terminology for SOPS Done, a dummy version with the new terminology (please read the small print) has been circulated to the committee, and Dave H will roll the new SOP out for the 2017/2018 scheme year.
- with Myles, Tim to have a discussion and come up with a first draft for a Taxonomic Discrimination Protocol. Done, DH has gone through a review of ID policies of Apem Ltd, and he looked at 1268 comments from participants of the scheme on the ID policies and the extent of the differences, as a first step towards a TDP.

### Jim

- ask Vlad if the Cephalopod guide in its current form can be uploaded on the NMBAQC web site. Done

## **Approval of February meeting minutes**

The February meeting minutes were approved.

## **Epibiota update**

Not much has been done, but we are thinking about the next steps for arranging the ring test and how to use existing guidance. We have some ideas on how to take this forward and would like to set up a teleconference to take this forward. It would be useful to get some feedback from the committee on how to proceed.

**Action Hayley to discuss with Henk, Annika and Tim how to take this further**

Hayley has had a request from Helen Lillis from JNCC habitat classification. She has been working on developing some habitat mapping standards / protocols for data collection. There are a lot of mapping and monitoring issues, e.g. change in area, change in monitoring methods. There was a report by James Strong that has looked at the uncertainty in production solutions. A subsequent workshop identified priority solutions, including writing or updating standard operating procedures, classification analysis and attribute a distribution optimum. The idea would be to hold a workshop where the data for the map has been collected, and everyone is then asked to make a map, to look at the differences. Would the NMBAQC committee be interested to be involved?

This is the logical step forward, to update the MESH guidelines to fit the MSFD requirements and it sets well within the epibiota component. There is an ICES workgroup that looks at marine monitoring and we should be careful not to duplicate efforts. It may also fit well in the geological community. Some actions may therefore be taken forward by other groups, but it would be useful to have access to what is out there and to have some guidance on how to produce maps, as everyone uses different methods and therefore has different results. It would be good to organise a workshop on producing maps and give everyone the same data, and then compare.

## **Phytoplankton update**

The call of interest has been sent out to previous participants. The deadline for registration was 5<sup>th</sup> May, and the samples will be sent out in June.

## **Priorities from HBDSEG**

At the last HBDSEG meeting, the chair thanked all of the NMBAQC committee for their hard work. There was some talk on monitoring updates, including JNCC leading on seals, bird, cephalopods etc. All topic guidelines are in place, for some of these Henk will need to talk to Ian Mitchell to see if we can have these on the NMBAQC website as well. Mark Lewis JNCC would like to recommend the European Seabird at Sea monitoring protocol as the standard protocol, however, if there is more than one protocol, we should ideally come up with Best Practice Guidance.

Graham Pierce gave a presentation on cephalopod identification, but these are very difficult to identify. There was also a discussion on organisations providing data to MEDIN and DASSH. Myles thought that MERMAN data was automatically fed into MEDIN/DASSH. **Action David J to investigate what data archives there are and how the data gets in these.**

**Action all to let David J know if there is anything you want bringing up at the next HBDSEG meeting.**

**2016-17, Year 23**

**1. Subscriptions**

LabCode	PS60/61	PS62/63	PS-OS07/08/09
PSA_2301	1	1	-
PSA_2302	1	1	1
PSA_2303	1	1	1
PSA_2304	1	1	-
PSA_2305	1	1	-
PSA_2306	1	1	1
PSA_2307	1	1	-
PSA_2308	1	1	-
PSA_2309	1	1	1
PSA_2310	1	1	-
PSA_2311	1	1	1
PSA_2312	1	1	1
PSA_2313	1	1	1
PSA_2314	-	-	1
PSA_2315	-	-	1
PSA_2316	-	-	1
PSA_2317	-	-	1
PSA_2318	-	-	1
PSA_2319	-	-	1
PSA_2320	1	1	1
	<b>14</b>	<b>14</b>	<b>14</b>

## 2. 2016-2017, Year 23 Operations

All PS exercises were distributed in line with the 2016-2017 timetable (available below). The deadline for PS-OS submission was extended to increase returns. Returns and results are summarised in the table below.

Exercise	Status	Returns / Comments
<b>PS60</b>	Samples distributed 25/05/16 Sample deadline passed (29/07/16) Interim report issued (15/08/16) Exercise complete	Mud/Sand Test 14 out of 14 returns received
<b>PS61</b>	Samples distributed 25/05/16 Sample deadline passed (29/07/16) Interim report issued (15/08/16) Exercise complete	Sand/ Gravel Test 14 out of 14 returns received
<b>PS62</b>	Samples distributed 12/10/16 Sample deadline passed (16/12/16) Interim report issued (13/01/17) Exercise complete	Diamicton Test 14 out of 14 returns received
<b>PS63</b>	Samples distributed 12/10/16 Sample deadline passed (16/12/16) Interim report issued (13/01/17) Exercise complete	Gravel Test 14 out of 14 returns received
<b>PS-OS07-09</b>	Samples requested 25/05/16 Data submission deadline passed (08/06/16) Sample submission deadline passed (27/07/16) Deadlines extended to end Oct 16 Reports issued (10/05/17) Exercise complete	10 out of 14 lists of samples received 10 out of 14 datasets received  30 out of 42 samples selected  30 out of 42 samples received  3 LabCodes had samples externally audited outside of the scheme. 1 LabCode did not provide data but sent email of non-participation.

### a. Issues arising

The PS-OS interim reports were delayed due to review and clarification of discrepancies; the reports were issued on 10/05/2017. There remain ongoing discussions with one participant, which we hope to resolve soon. Statement of Performance documents, with proposed new wording (due to confusion of previous “n/a” text), will be produced and circulated after participants have had time to review/query their PS-OS interim reports. The annual report has been written and reviewed by Ken Pye, an updated draft has been sent to Claire Mason for review / sign off.

## b. Workshop

A workshop is to be planned for October 2017. It is suggested that a questionnaire is circulated as soon as possible to gather feedback on the scheme's modules (e.g. fit for purpose, value for money, etc.) and gather topics for the workshop. An expression of interest form for the workshop will be produced with a tentative programme following analysis of the PSA questionnaire returns.



# NMBAQC

NE Atlantic Marine Biological Analytical Quality Control Scheme

## Particle Size Component 2016-2017 Timetable (Scheme Year 23)

Module / Exercise	Event	Date
PS60 & PS61	Samples distributed	25/05/16
	Results deadline	29/07/16
	Interim reports	12/08/16
	Final report	28/10/16
PS62 & PS63	Samples distributed	12/10/16
	Results deadline	16/12/16
	Interim reports	13/01/17
	Final report	13/03/17
PS-OS07-09	Request for sample data distributed	25/05/16
	Data submission deadline for sample selection	08/06/16
	Selected samples submission deadline	27/07/16
	Interim reports	24/02/17
	Final report	31/03/17
Workshop - TBC	TBC	TBC – Oct 17



# NMBAQC

NE Atlantic Marine Biological Analytical Quality Control Scheme

## Particle Size Component 2017-2018 Timetable (Scheme Year 24)

Module / Exercise	Event	Date
PS64 & PS65	Samples distributed	16/06/17
	Results deadline	<b>28/07/17</b>
	Interim reports	11/08/17
	Final report	27/10/17
PS66 & PS67	Samples distributed	13/10/17
	Results deadline	<b>15/12/17</b>
	Interim reports	12/01/18
	Final report	09/03/18
PS-OS10-12	Request for sample data distributed	16/06/17
	Data submission deadline for sample selection	07/07/17
	Selected samples submission deadline	<b>11/08/17</b>
	Interim reports	02/03/18
	Final report	30/03/18
Workshop - TBC	TBC	TBC – Oct 17

The PSA results show a good match with the QA, the biggest problem seems to be the later analysis. We ask for detailed metadata but when this is not available, it is difficult to understand where the errors occur. In the next scheme year, we will explain better why the metadata is needed. The annual report has been reviewed by Kenneth Pye and will be sent to Claire Mason today. We are also planning a workshop at National Oceanography Centre, Southampton for next year, provisionally booked for 10am on Wednesday 4<sup>th</sup> until midday Thursday 5<sup>th</sup> October. The costs will be £300, based on ½ the number of participants of the previous workshop (if we have a higher number of participants, the costs will be reduced). We will send out a questionnaire to discuss what items to cover, together with a call of interest. The last time we had 30 participants but the workshop was free.



## 1. Subscriptions

LabCode	RT51/52	LR21	OS62/63/64
BI_2301	1	-	-
BI_2302	1	1	1
BI_2303	1	-	-
BI_2304	1	1	1
BI_2305	1	-	-
BI_2306	1	-	-
BI_2307	1	-	1
BI_2308	1	-	-
BI_2309	1	1	1
BI_2310	1	-	-
BI_2311	1	-	1
BI_2312	1	1	1
BI_2313	1	1	1
BI_2314	1	1	-
BI_2315	1	1	1
BI_2316	1	-	1
BI_2317	1	-	1
BI_2318	1	-	-
BI_2319	1	1	-
BI_2320	1	1	1
BI_2321	1	-	1
BI_2322	1	-	1
BI_2323	1	1	1
BI_2324	1 (RT52)	-	-
BI_2328	-	-	1
BI_2329	-	-	1
BI_2330	-	-	1
BI_2331	-	-	1
BI_2332	-	-	1
BI_2333	-	-	1
BI_2334	-	-	1
BI_2335	-	-	1
BI_2336	-	-	1
BI_2337	-	-	1
BI_2338	-	-	1
BI_2339	-	-	1
BI_2340	-	-	1
BI_2341	-	-	1
BI_2342	-	-	1
BI_2343	-	-	1
BI_2344	-	-	1
BI_2345	-	-	1
BI_2346	-	-	1
	<b>24</b>	<b>10</b>	<b>33</b>

## 2. 2016-2017, Year 23 Operations

Exercise	Status	Returns / Comments
<b>RT51</b>	Specimens distributed 15/06/15; Submission deadline passed 29/07/15; Interim reports issued 12/08/16; Ring Test Bulletin issued 31/10/16; Exercise complete.	General Ring Test; out of 23 returns received; two laboratories also supplied an extra set of analyst results; 3 labs did not participate; 1 lab was given an extension until 8/8/16.
<b>RT52</b>	Specimens distributed 12/10/16; Submission deadline passed 16/12/16; Interim reports issued 13/01/17; Ring test Bulletin issued 14/03/17; Exercise complete.	Targeted Ring Test (Bivalves); 21 out of 24 returns received; 3 labs did not participate; 3 labs were given an extension; 1 new participant added for this exercise; growth series images included in RTB where possible.
<b>LR21</b>	Request for specimens distributed 15/06/16; Submission deadline passed 29/07/16; LR Module Summary Report issued 08/05/16; Exercise complete.	General; 6 out of 10 returns received; 1 lab will not participate this year; all reported.
<b>OS62-64</b>	Samples requested 15/06/16; Data submission deadline passed 01/07/16; Sample submission deadline passed 12/08/16; Extension deadline (14 labs) passed 31/10/16; Interim report final deadline 03/03/17; OS Module Summary Report drafted 12/05/17; Exercises complete.	28 out of 33 lists of samples received including two labs not participating this year; 28 out of 31 datasets received; 84 out of 93 samples received, including 7 samples for external audit; all samples analysed; 31 sets of samples reported; remedial action and evaluation assessments on-going.

## 3. Issues arising

The values and credibility of the NMBAQC Scheme continue to be undermined by the recent acceptance of an NMBAQC 'compliant' OS audit conducted by a laboratory that is not a scheme participant. Government contracts placing selection and management

of external AQC suppliers under the control of primary processing laboratories should be addressed.

The Taxonomic Policy 'Green Comments' Review Report has been drafted and will be circulated for comment. Subsequently, all module protocols should be updated to reflect the use of standardised 'green comments', where appropriate.

The next version of the NMBAQC Standard Taxonomic Literature List will be available for circulation at the start of the 2017/18 (Yr24) scheme year.

An in-house reference collection 'starter kit' could be considered for circulation to all LR22 (2017/18) participants to promote best practice.

It was queried what this was: It is a template to create LR labels for each taxon in a survey, for trays and vials. It is a starter system of organising your laboratory reference. Myles said it was asophisticated linked spreadsheet format and looked like it would be very useful.

An updated Statement of Performance document template, with clarified text regarding non-participation, has been circulated for comment / sign off.

#### **4. Outstanding issues**

Remedial actions are continuing to be tracked from 2013/14 (Year 20) and are summarised at the end of this report.

**Remedial Action: Year 20 (2013/2014)**

Lab code	OS reported	OS53		OS54		OS55	
		Score	RA	Score	RA	Score	RA
BI_2016	18 March 2015	88.213	RA completed 8/4/15	85.482	RA outstanding	-	-
BI_2017	27 March 2015	-	-	-	-	70.588	RA outstanding
BI_2019	25 March 2015	-	-	78.431	RA outstanding	78.161	RA outstanding
BI_2033	27 March 2015	43.478	RA outstanding	63.768	RA outstanding	69.333	RA outstanding
BI_2047	30 March 2015	-	-	40.000	RA completed 2/7/15	77.362	RA completed 2/7/15 - evaluated Aug 2016 - Fail, further RA required
BI_2048	30 March 2015	70.424	RA completed 2/7/15 - evaluated Aug 2016 - Fail, further RA required	89.384	RA completed 2/7/15 - evaluated Aug 2016 - Fail, further RA required	86.607	RA completed 2/7/15 - evaluated Aug 2016 - Fail, further RA required
BI_2056	30 March 2015	63.758	RA outstanding	71.795	RA outstanding	88.446	RA outstanding
BI_2058	25 March 2015	-	-	66.667	RA outstanding	-	-
BI_2059	30 March 2015	84.058	RA outstanding	-	-	85.714	RA outstanding
BI_2071	19 May 2015	15.942	RA outstanding	40.945	RA outstanding	49.505	RA outstanding

\*NB – Outstanding remedial action includes 4 CMA labs that sub-contract analysis

Year 2014/2015 (Year 21)

Lab code	OS reported	OS56		OS57		OS58	
		Score	RA	Score	RA	Score	RA
BI_2106	14 May 2015	72.607	RA undertaken; unable to evaluate as residue discarded	52.174	RA undertaken; unable to evaluate as residue discarded	-	-
BI_2118	26 May 2015	-	-	55.039	RA outstanding	-	-
BI_2121	26 May 2015	-	-	78.987	RA outstanding	89.431	RA outstanding
BI_2126	24 April 2015	89.320	RA outstanding	82.784	RA outstanding	78.008	RA outstanding
BI_2127	15 May 2015	68.803	RA completed 24/08/15 (without APEM agreement) - TO BE EVALUATED	63.106	RA completed 24/08/15 (without APEM agreement) - TO BE EVALUATED	55.738	RA completed 24/08/15 (without APEM agreement) - TO BE EVALUATED
BI_2128	19 May 2015	85.584 (from 76.43)	Specimens reviewed May 2016; RA outstanding	87.879	RA outstanding	76.471	Specimens reviewed May 2016; RA outstanding
BI_2131	24 September 2015	-	-	-	-	75.000	RA outstanding
BI_2132	26 May 2015	-	-	-	-	FAIL	RA outstanding
BI_2133	29 September 2015	83.426	RA outstanding	-	-	-	-

\*NB – Outstanding remedial action includes 5 CMA labs that sub-contract analysis (or CMA samples submitted under a contractor's subscription)

Year 2015/2016 (Year 22)

Lab code	OS reported	OS59		OS60		OS61	
		Score	RA	Score	RA	Score	RA
BI_2203	18 December 2015	6.48	RA outstanding	0.300	RA outstanding	0	RA outstanding
BI_2205	23 March 2016	86.588	RA undertaken; unable to evaluate as residue discarded	-	-	-	-
BI_2213	05 January 2016	-	-	85.623	RA outstanding	85.106	RA outstanding
BI_2239	06 January 2016	72.165	RA outstanding	85.625	RA outstanding	89.971	RA outstanding

**\*NB – Outstanding remedial action includes 2 CMA labs that sub-contract analysis (or CMA samples submitted under a contractor’s subscription)**

Year 2016/2017 (Year 23)

Lab code	OS reported	OS62		OS63		OS64	
		Score	RA	Score	RA	Score	RA
BI_2304	10 March 2017	77.612	RAE audit (residue only) reported 24/04/17 (P1681) - fail - bad; Further RAE required; FRAE audit (residue only) reported 8/5/17 (P1723) - fail - poor; Further Further RAE required	84.797	RA completed 24/04/17	-	-
BI_2320	22 March 2017	83.333	RA outstanding	75.000	RA outstanding	87.324	RA outstanding
BI_2331	18 August 2016	-	-	82.819	RA outstanding	83.186	RA outstanding
BI_2343	02 May 2017	-	-	-	-	88.889	RA outstanding
BI_2346	18 August 2016	78.095	RA outstanding	-	-	-	-

**\*NB – Outstanding remedial action includes 23CMA labs that sub-contract analysis (or CMA samples submitted under a contractor’s subscription)**

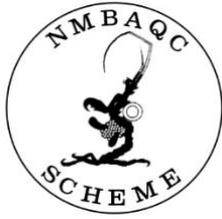


# NMBAQC

NE Atlantic Marine Biological Analytical Quality Control Scheme

## Invertebrate Component 2016-2017 Timetable (Scheme Year 23)

Module / Exercise	Event	Date
RT51 - General	Samples distributed	15/06/16
	Results deadline	29/07/16
	Interim reports	12/08/16
	Final report	28/10/16
RT52 - Targeted	Samples distributed	12/10/16
	Results deadline	16/12/16
	Interim reports	13/01/17
	Final report	13/03/17
LR21	Protocol and request for specimens distributed	15/06/16
	Specimen submission deadline	29/07/16
	Final reports	03/03/17
OS62–64	Request for sample data distributed	15/06/16
	Data submission deadline for sample selection	01/07/16
	Selected samples submission deadline	12/08/16
	Interim report final deadline	03/03/17
	Final report	31/03/17
Workshop –expert	Spionidae and Paraonidae with Vasily Radashevsky and Joao Gil, Millport Field Station, Isle of Cumbrae	11-15 <sup>th</sup> October 2016



# NMBAQC

NE Atlantic Marine Biological Analytical Quality Control Scheme

## Invertebrate Component 2017-2018 Timetable (Scheme Year 24)

Module / Exercise	Event	Date
RT53 - General	Samples distributed	16/06/17
	Results deadline	28/07/17
	Interim reports	11/08/17
	Final report	27/10/17
RT54 - Targeted	Samples distributed	13/10/17
	Results deadline	15/12/17
	Interim reports	12/01/18
	Final report	09/03/18
LR22	Protocol and request for specimens distributed	16/06/17
	Specimen submission deadline	28/07/17
	Final reports	02/03/18
OS65–67	Request for sample data distributed	16/06/17
	Data submission deadline for sample selection	07/07/17
	Selected samples submission deadline	11/08/17
	Interim report final deadline	02/03/18
	Final report	30/03/18
Workshop beginners	– TBC	Oct/Nov 2017

The info and application note has not gone out yet, so the deadline may be tight for circulations.

Grant had a query about the short turnaround time to provide results on the Own sample module. David H replied that the deadline has always been six

weeks. He understands that providing data for audit samples may be tight and he does try to be flexible with the deadlines, however, this is dependent on the number of participants.

The new LR report is on the website, David H had asked for approval from all participants for the new type of report.

David H is proactive in chasing failed samples. Audits are being undertaken outside NMBAQC, in contact with Myles. CMAs ask for 5% external audit, then CMAs should also recommend the external auditor and that they have a good record of participation in the scheme. For TDPs we have an example with oligochaete identification, and we should standardise comments. As part of the TDP development, Myles has asked Apem to look where their identification policy differs from others as a start. This is informally called the “Green Comments review” and is part of our drive to ensure we make the NMBAQC operating procedures and protocols more transparent. It is not a simple process, but Myles will circulate the first steps soon and would like to receive comments to start developing the TDP.

David H said that all participants will receive a new taxonomic literature list (in Word format), with a request for comments, and a revision to the new taxonomic list will be sent out in three months.

Contractor query: All their work is CMA work, and the CMAs are requesting to have 5% of the projects to be audited externally. So all the projects they have, already have their samples audited. Apem Ltd has replied that they need a definite project for samples. NMBAQC committee thinks they can use other samples from one of these projects. Apem will need to find another 3 samples that are not audited within these projects. The problem is that NMBAQC has done all the hard work to get everything standardised and we are now suffering from our own success. The OS module is designed to assess the CSEMP dataset, but should we look at the quality of the dataset or the quality of the lab? The survey quality gets assessed by the 5% audit, and consistencies within a dataset are assessed.

Another question that was raised was if it was appropriate for a laboratory to commission their own QA by participating in the NMBAQC scheme. This opens up the auditing, and it is good that auditing takes place, but it should not undermine the scheme. Five years ago we relied on the OS module for the quality of the dataset, and we have come a long way since then. Everybody is working together collectively to raise the bar. There should be guidelines for CMAs how to write the 5% external auditing and how the process on how to contract this out. **Action Myles, Keith and Tim to discuss. Action Grant to discuss with Myles and write a holding reply until this has been sorted.**

CMAs having to sub-contract out infaunal processing: share experiences on the most appropriate wording in contracts and costs of remedial actions

It was suggested that at the next face-to-face meeting in November everybody brings their contract wording and discuss this. It would also be good to come up with a standard line on remedial actions. Annika mentioned that we need to be careful how we word the contracts, it should be clear that any remedial action costs are borne by the contractor. The CMAs issuing

contracts would have adjusted their small print on contracts to reflect any issues they might have had and it would be good to share this information. Keith has already shared his contracts, and Tim has had some contract writing training. Another issue that should be specified is how to deal with second failing remedial action, to ensure that all is covered. **Action Keith, Myles, Annika and Tim to take discuss and take this further.**

Spionid key, David H has requested €550 so that the key can be published as open access. This has been done before, and it is related to NMBAQC workshop. This will be discussed in the finance section. If agreed, Apem Ltd will pay and invoice NMBAQC.

### **Macroalgae**

Myles commented on the inconsistencies in terminology in the report, below is the amended report with consistent terminology. **Action Myles to send comments to Claire Y.** David H also mentioned that some of the macroalgal reports on the web use the incorrect acronym NEAMBAQC. **Action David H to send Astrid info on these. Action Astrid to get updated versions and upload on web.**

All three components were circulated to participants in January 2017 with a completion date of 17<sup>th</sup> February. Participation and performance details are given below.

#### ***Rockyshore Macroalgae Identification – Ring Test (RM-RT)***

Number of Subscribing Laboratories – 6

Number of Participating Laboratories – 6

Number of Results Received – 15

This component consisted of a single macroalgae exercise (RM-RT11) the analytical procedures of which remained consistent with previous rounds of the component. Images of twenty macroalgae specimens were distributed to the six subscribing laboratories. Round eleven of the ring test produced a good degree of agreement between identifications made by participating laboratories and initial identification as made by Wells Marine. The level of performance between laboratories and participants varied considerably with scores ranging from 24, with 6 incorrect genus names and 10 incorrect species names, to 39, with just one incorrect species name. Five species were correctly identified by all participants. Most incorrect species identifications were made at the species level with three species showing considerably difficulty at both genus and species levels.

#### ***Opportunistic Macroalgae/Seagrass Percentage Cover and Biomass (OMC –RT and OMB-RT)***

These modules consisted of macroalgae and seagrass exercises, one which was subsequently split into three Test Options, from which laboratories could complete one or more tests. Two sets of fifteen quadrat photographs showing various % covers of opportunistic macroalgae and seagrass were used for the exercise. These sets of photographs were duplicated to produce the three separate modules incorporating the different assessment methods utilised by the various participating laboratories. The set of quadrat photos differed using grid squares of varying quantities; open quadrat, 5 x 5 square grid, and 10 x 10 square grid. Each photo represented natural levels of opportunistic macroalgae and seagrass cover.

Results for % cover of both opportunistic macroalgae and seagrass varied between participants and between the different methods used. A number of results deviated from the sample mean and from the % cover as calculated by image analysis. However, deviation from the latter was more noticeable. In general, the correlation between image analysis results and mean % cover was closer than had been in previous years, which may have resulted from improved image analysis methods. As in previous years the preferred method was Test A (open quadrat) with Test B being the least favoured method. However, Test C still remains the least accurate with regards to the number of 'Fails'.

***Opportunistic Macroalgae & Seagrass Percentage Cover Ring Test (OMC-RT)***

Number of Subscribing Laboratories - 14

Number of Participating Laboratories - 12

Total Number of Participants - 40

***Opportunistic Macroalgae Biomass Ring Test (OMB-RT)***

Number of Participating Laboratories - 9

Number of Results Received - 8

Wells Marine has produced final versions of reports of each module (from which information above was taken). These have been sent to participants and should be uploaded onto the scheme website.

**Contractor's update Thomson Ecology**

**Fish update**

**2016 / 2017 Participation**

<b>Laboratory Code</b>	<b>Fish Reverse Ring Test</b>	<b>Fish Ring Test</b>
F_2301	Y	Y
F_2302	-	Y
F_2303	Y	-
F_2304	Y	-
F_2305	Y	Y
F_2306	Y	Y
F_2307	Y	-
F_2308	Y	-
F_2309	Y	Y
F_2310	Y	-
F_2311	Y	-
F_2312	-	-
F_2313	Y	-
F_2314	Y	-
F_2315	Y	-
F_2316	Y	-
F_2317	-	-
F_2318	-	Y

F_2319	-	Y
<b>Laboratory Code</b>	<b>Fish Reverse Ring Test</b>	<b>Fish Ring Test</b>
F_2320	-	Y
F_2321	Y	Y
F_2322	-	Y
F_2323	Y	Y
F_2324	Y	Y
F_2325	-	Y
F_2326	-	Y
F_2327	Y	Y
<b>Total</b>	<b>18</b>	<b>15</b>

(List correct as of 17 May 2017; four labs not participating in FRRT due to lack of fish)

David J asked about the four labs not participating due to lack of fish:

With regards to the 4 labs not participating, we originally had 22 participants expected for the FRRT as of 1st Nov 2016.

As of the 23 Jan 2017, this number was reduced to 18 due to 4 labs dropping out (labs 2312, 2318, 2322 and 2317). This was noted on the meeting report 34, and was carried over into meeting report 35.

Labs 2312 and 2318 withdrew. Lab 2322 and 2317 did not supply any fish despite reminders and email follow-ups highlighting the deadline. We also followed up after the deadline had passed.

Emails from Lab 2322 repeatedly bounced back, we contacted the general enquiries email asking to be provided with the relevant contact info. No response was provided.

Interestingly, this lab did participate in the RT and sent in their results via post. No contact info included. So as we did not receive fish from 2322 or 2317, we counted them as not participating.

## Progress on circulations

### Scheme Year 2016/17 Fish component

Exercise / Report	Event / Date	Notes
<b>F_RRT08</b>	Protocol and request for specimens distributed 05/09/16. <b>Completed.</b>  Fish boxes for sending RRT specimens prepared and distributed to participants upon request. <b>Completed.</b>  Specimen submission deadline 09/12/16. <b>Completed.</b>  Bulletin deadline 10/03/17. <b>Completed.</b>	<u>Fifteen fish taxa to be from NW European waters</u> (CSEMP where appropriate).
<b>F_RT10</b>	Distribution of samples 05/12/2016. <b>Completed.</b>  Results deadline 03/02/2017. <b>Completed.</b>  Bulletin deadline 17/02/17. <b>Completed.</b>	<u>General Fish Ring Test Assorted Fish Taxa</u> (15 taxa).
<b>Annual Report</b>	Bulletin deadline 31/03/17. <b>Completed.</b>	<u>Annual Report</u> Detailing exercises and results from RRT and RT exercises.

The year 2016/2017 is now completed, and overall it went well. There were a few delays due to late submissions, but this has happened before and we have worked around it.

The SOP's are due to be issued soon and we are in the process of starting the next year.

The RT had erroneously included Mediterranean horse mackerel among the sample of common horse mackerel. This was detected by one RT participant and then other participants were asked to check. This was a useful reminder to check for Lusitanian species in UK waters. There was an unusual gurnard in the reverse ring test, a piper gurnard, which is uncommon in UK waters.

#### Species that are listed on the Wildlife and Countryside Act

One of the FRT had a Couch's Goby in it, a species listed on the Wildlife and Countryside Act (WCA). It was agreed that the NMBAQC website should include reference to those species that are protected, as various marine and estuarine fish and invertebrates are included on the WCA. Action Jim to draft a few sentences for the NMBAQC web site, with a link to the up-to-date JNCC list. Action AF to upload on web.

### **Zooplankton update**

The Zooplankton workshop has been held and we have gone over the results with everyone. The final report is now with the senior analyst. SAHFOS is not holding another ring test this year, but is planning one for 2018.

### **AOB**

Graham asked if Mike Berlinson from the EA could join the committee as an extra member. He has a benthic background and has worked on developing phytoplankton methods. Action Graham to provide background information, but in principle the committee agreed.

### **Contractor queries**

There has been a complaint by one of the contractors against Apem Ltd. Myles and the EA have discussed the issue with the committee and have drafted response with an apology to the contractor, and a reprimand to Apem Ltd. In cases like these, the role of the contract manager is to defuse the situation, and act professionally to ensure the scheme's good reputation is not put at risk.

Annika queried a case where there seemed to be a perpetual audit loop, if remedial action could be done outside of NMBAQC- the answer is no. But there may be an argument for the NMBAQC committee to say 'stop here' at a certain point. **Action Annika to send details of issue to Myles.**

### **Info and application note**

Please send any comments Astrid before Friday.

### **Finance update**

There has been a revision of the financing structure for the next NMBAQC year. This update has been to balance the participation fees with the running costs of each module, and to ensure the underlying running costs of the scheme are covered sufficiently by all participants to maintain the sustainability of the scheme. In 2017-2018 an intermediate costing has been applied, with the intention to perform a final update to the costings in 2018-2019. The committee agreed the new costings.

### **Tenders due for renewal next year**

The invertebrates and fish contracts are due for renewal next year. Contract managers and procurement team will be working on these shortly. **Action all: if any of the committee have something they would like to see in the new contracts, please let Graham know.**