

NE ATLANTIC MARINE BIOLOGICAL AQC SCHEME

Meeting Agenda – Draft 8 November 2016. 10.30-15.30

Meeting location: Boardroom, DAERA Environment, Fisheries and Marine Group Laboratory, Water Management unit, 17 Antrim Road, Lisburn Co. Antrim, Northern Ireland, BT28 3AL

Attending: David Johns (DJ, SAHFOS, Chair), Astrid Fischer (AF, SAHFOS, Technical Secretary), Lydia Finbow (LF, Apem Ltd), David Hall (DH, Apem Ltd), Myles O'Reilly (MoR, SEPA, Benthic Invertebrate Contract Manager), Graham Phillips (GP, EA, Finance Manager- **phone in**), Tim Mackie (TM, DAERA), Claire Young (CY, DAERA, Macroalgal Contract Manager), Grant Rowe (contractor's representative- **phone in**), Henk van Rein (JNCC), Adele Boyd (AFBI-NI).

Apologies: Paul Whomersley (PW, JNCC), Paul Brazier (PB, Natural Resources Wales), Joe Silke (JS, Marine Institute, Phytoplankton Contract Manager), Claire Mason (CM, CEFAS, PSA Contract Manager), Ruth Barnich (RB, Thomson Ecology Ltd), Jim Ellis (JE, CEFAS), Keith Cooper (KC, CEFAS), Rafael Salas (RS, MI).

Meeting Actions from April meeting & minutes

Astrid

- Check with David J and confirm with Graham if there will be additional postage costs for helping with embossing and sending of certificates. **Post meeting note: this is fine.**
- Forward to Carol to see if she is happy with inclusion of changes in LR reporting for next year in the next Info & Application Note. There will be additional funding required for the extra time needed. **Text was agreed and included in info & application note**
- Send revised logo with the image to contractors as well. **Post meeting note- this has been done.**
- send all information that Clare S has left her to Claire Young. **Post meeting note- this has been done**
- With Myles- continue to work on the Annual Report for 2014/2015. **Annual Report 2014/2015 is completed and on our web site.**
- Link module protocols on our web site. **The Benthic Invertebrate protocols are published <http://www.nmbaqcs.org/scheme-components/invertebrates/reports/>**
- Send all relevant paperwork to Claire Young and to chase up Emma Wells for results from this year's exercise. **Done.**

Carol/ David H.

- Send potential costs involved in LR reporting to Graham, as recommended by Myles. **Outstanding, David H. to do this by end of week.**
- Send an updated table of outstanding remedial actions to Myles. **Done**
- Send Myles all the relevant information regarding the chart in the RT which might affect the SOPs. **Done**
- Find out from Jamie which other SOPs might be affected. **Done**
- With Myles- discuss further QA of JNCC/Marine Scotland contract. **Done**
- Send module protocols to Astrid. **These have been received.**
- Send emails to Myles to see what corrections need to be undertaken to previous benthic invertebrates' reports. **Done**

Myles

- With Dave H- discuss further QA of JNCC/Marine Scotland contract. **Done**
- Send Astrid the embossing stamp. **Post meeting note: embossing stamp has been received by Astrid.**
- Chase up outstanding remedial actions. Dave H will also be more proactive on the remedial actions. **Done**
- With Astrid- continue to work on the Annual Report for 2014/2015. **Annual Report 2014/2015 is completed and on our web site.**

Tim

- Speak with Paul W/ Amy about organising a small photo or video test together with Committee members who have an interest in epibiota. *Outstanding. Tim to arrange a meeting with Henk.*
- Send Astrid Claire Young's email. *Post meeting note- this has been done.*
- Discuss options for support for UNICORN with Graham. *Tim has had a brief discussion with Graham. Roger is making enquiries if Thomson failed to provide support if we are entitled to continue to develop the escrow agreement. It is with the Business partners at the moment. Action Graham to chase.*
- Send the Population Genetics project run by Dr Patrick Collins at QUB information to Astrid. *Tim has forwarded the details to Astrid.*

Claire Young

- Send standard operating procedures regarding macroalgae to Astrid after the meeting. *Post meeting note: these have been received.*
- Send her contact details to Astrid. *Done.*

David J

- Ask Joe and Rafael to call in at meetings. *Done.*

Keith

- Contact David H to offer any information that can be of value for the Taxonomic Discrimination Protocol. *This was in regards to the bivalve identification images that Cefas has, which show at which level a bivalve can be taken to genus, to family or just to 'bivalve'. Action Keith to find out if these can be made available or if the photos are copyrighted.*

Sarah/Ruth

- Find out if IFM have gone ahead with their workshop (if they had enough interest) and to try to cooperate with IFM to collaborate with workshops.

All

- If anyone can find an appropriate link for the list of invasive species to send it to David H so he can use it to source materials for invertebrates, and also send it to Claire Y for macroalgae. *Action Tim to send most recent list to David H.*

Claire M

- Ask around at Cefas if new surveys wish to contribute to Population Genetics project run by Dr Patrick Collins at QUB. *Completed – Paul McIlwaine collected samples. Tim will send a reminder if Patrick would like to continue his study this year.*

A query was raised what has happened with the asbestos within labs? David H. can only remember one project where asbestos was suspected. SEPA are refraining from doing PSA samples in shipping channels and harbours and are awaiting guidance.

Minutes of the last meeting

April meeting minutes were approved.

Epibiota update

The sampling and analysis guidelines have now been put together and we are considering developing a ring test for final guidelines for quality control. The last test by Envision was a few years back and NMBAQC had considered an inhouse test before to reduce costs, however, other priorities have prevented this from happening. Tim has some video footage that we could use to produce a small test, but we would need some more including what species are identified in these. We could have 10 images you need to identify or short videoclips, with arrows showing what needs to be identified. The test would run to standardise levels of identification and not forcing them. The videos could be shared via a dropbox account. We could look at for example nephrops burrows, hard substratums, and deep-water species. Astrid has the old Envision material that was used in previous ringtests. **Action Astrid to send this to Henk, Paul W. and Tim.** David J. mentioned that he had asked Emma Sheehan from University of Plymouth about this before and she is happy to share video imagery from Lyme Bay surveys. Myles may have some Sepa video material with nephrops burrows, SNH have analysed these so he will have to enquire about the results.

It would be good to also include some locations near fish-farms. Tim mentioned his 'pin the tail on the donkey' PSA exercise in which it has been proven that from imagery alone fine particles are generally underestimated. It would be good to include some fine materials as well as communities in a test. **Action Tim, Paul W. and Henk to get together and discuss the possibility of a ring test and subsequent workshop.**

Phytoplankton update

The ring test enumeration and identification exercises have been completed. The preliminary results have been sent to participants for checking. The workshop will be held from 26 Nov -1 December in Hillerød, Denmark, and will include lectures on dinoflagellates from the *Diplopsalis* group, *Tripes* (*Ceratium*) and *Protoperidinium*.

Priorities from HBDSEG

David J went to the last HBDSEG meeting. They are keen for us to focus on MSFD indicator development, including seabird and cetacean monitoring. The next meeting is in February 2017, **action all to let David J know if there is anything you would like to be discussed.** HBDSEG also mentioned that they should approve the NMBAQC annual report. David J also mentioned that the Seafish Industry Authority had offices in Edinburgh that they rent out (via Bill Turrell), which may be an option for future NMBAQC meetings.

Contractor's update APEM - PSA Update

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

LabCode	PS60/61	PS62/63	PS-OS07/08/09
PSA_2316	-	-	1
PSA_2317	-	-	1
PSA_2318	-	-	1
PSA_2319	-	-	1
PSA_2320	1	1	1
	14	14	14

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. All exercises are active. Returns and results are summarised in the table below.

Exercise	Status	Returns / Comments
PS60	Samples distributed 25/05/16 Sample deadline passed 29/07/16 Interim report deadline (12/08/16) Exercise complete	Mud/Sand Test 14 out of 14 returns received
PS61	Samples distributed 25/05/16 Sample deadline passed 29/07/16 Interim report deadline (12/08/16) Exercise complete	Sand/ Gravel Test 14 out of 14 returns received
PS62	Samples distributed 12/10/16 Sample deadline 16/12/16 Interim report deadline (13/01/17) Exercise active	Diamicton Test 0 out of 14 returns received
PS63	Samples distributed 12/10/16 Sample deadline 16/12/16 Interim report deadline (13/01/17) Exercise active	Gravel Test 0 out of 14 returns received
PS-OS07-09	Samples requested 25/05/16 Data submission deadline passed (08/06/16) Sample submission deadline passed (27/07/16) Deadlines extended Report deadline (24/02/2017) Exercise active	9 out of 14 lists of samples 9 out of 14 datasets received 27 out of 42 samples selected 27 out of 42 samples received

a. Issues arising

The final versions of the PS60 & 61 reports for upload to the website have been delayed due to the re-analysis of the sample PS60 by one laboratory. There were issues arising from their laser data therefore they were sent one of the benchmark replicates to re-analyse to determine whether the problem was the sample or equipment/procedural. Investigations are still on-going and hope to be resolved soon.

After the circulation of the interim reports there were a few comments from participants on the new format of the report as it no longer includes Pass/Fail flags based on z-scores. At the end of Year 22 it was decided that instead of z-scores, the PS reports would be more like the PS-OS reports with participants receiving a "Good" or "Review" flag based on the laser processing, sieve processing, data merging and sample statistics. It was felt that this was more informative than a pass/fail based on overall statistics, where methodological errors are overlooked. One lab commented that changing

the report format makes it difficult to carry out any trend monitoring on their submissions as they are unable to compare like with like. The final PS60 & 61 reports and future PS reports will contain z-scores on the sieve and laser data separately rather than the final data, although the result of the z-score will be taken into consideration it will not determine whether a Good or Review flag is awarded.

The PS-OS deadline had been extended to the end of October for many of the Government agencies, reminders have been sent to these participants to collect data and samples.

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

Claire M is looking into what outliers make the z-score wrong, and also into the use of dispersants. Claire M will have a meeting with Ken Pye to discuss the annual report. There will possibly be a workshop next year spring, in Swansea.

Contractor's update APEM - Benthic Invertebrates update

2016-17, Year 23

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

LabCode	RT51/52	LR21	OS62/63/64
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
	24	10	33

2. 2016-2017, Year 23 Operations

Exercise	Status	Returns / Comments
RT51	Specimens distributed 15/06/16; Submission deadline passed 29/07/16; Interim reports issued 12/08/16; Ring Test Bulletin issued 31/10/16; Exercise complete.	General Ring Test; 20 out of 23 returns received; two laboratories also supplied an extra set of analyst results; three labs did not participate; 1 lab was given an extension until 8/8/16.
RT52	Specimens distributed 12/10/16; Submission deadline 16/12/16; Interim report deadline 13/01/17; Ring test Bulletin deadline 13/03/17; Exercise in progress.	Targeted Ring Test (Mollusca); 0 out of 24 returns received; new participant added for this exercise.
LR21	Request for specimens distributed 15/06/16; Submission deadline passed 29/07/16; Analysis / reporting deadline 03/03/17; Exercise in progress.	General; 6 out of 10 returns received; 1 lab will not participate this year; 2 reported, to date.

Exercise	Status	Returns / Comments
OS62-64	Samples requested 15/06/16; Data submission deadline passed 01/07/16; Sample submission deadline passed 12/08/16; Extension until 31/10/16 for 14 laboratories has passed; Interim report final deadline 03/03/17; Final report deadline 31/03/17; Exercise in progress.	21 out of 33 lists of samples received including two labs not participate this year; 19 out of 31 datasets received; 56 out of 93 samples received; 2 samples to be sent for external audit (TBC); 24 samples analysed (+21 at reporting stage); 8 out of 31 sets reported, to date.

3. Outstanding issues

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

A number of Own Sample data sets are still outstanding; final reminders will be issued to ensure that these samples can be processed and fully reported before April 2017.

4. Workshop

The taxonomic workshop was held on 11th – 15th October 2016 at the FSC Millport Field Centre. Vasily Radashevsky presented an update on Spionidae and João Gil presented on Paraonidae. There were 26 participants from 18 organisations (excluding APEM & leaders). A £45 reduction in the workshop fee was applied because the total number of attendees exceeded 30 (inclusive of external leaders and APEM staff). A summary of the workshop feedback forms has been supplied to Myles O'Reilly; the workshop was well received by all accounts. The workshop was delivered within budget. The lecturers would like to publish their keys and there may be a small fee to NMBAQC for open-source publishing. Cost-wise the venue was very good, but the seating in the laboratory was not ideal.

Remedial Action
Year 20 (2013/2014)

Lab code	OS reported	OS53		OS54		OS55	
		Score	RA	Score	RA	Score	RA
BI_2001	26 March 2015	-	-	-	-	88.889	RA outstanding
BI_2002	26 March 2015	85.714	RA completed 2/4/15	-	-	-	-
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_2023	27 March 2015	80.000	RA completed 29/4/15	-	-	-	-
BI_2029	25 March 2015	89.899	RA completed 4/6/15	83.706	RA completed 4/6/15	-	-
BI_2030	18 February 2015	-	-	-	-	89.916	RA completed 16/7/15
BI_2033	27 March 2015	43.478	RA outstanding	63.768	RA outstanding	69.333	RA outstanding
BI_2046	18 March 2015	66.667	RA completed 18/3/15	-	-	-	-
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 outstanding	52.174	RA outstanding	-	-
BI_2113	24 November 2015	-	-	88.889	RA completed 8/12/14	-	-
BI_2115	23 April 2015	89.283	RA completed 30/6/15	70.852	RA completed 30/6/15	-	-
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	-	-	-	-
BI_2138	26 May 2015	-	-	88.889	RA completed 11/12/15	77.512	RA completed 11/12/15

***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 outstanding	-	-	-	-
BI_2213	05 January 2016	-	-	85.623	RA outstanding	85.106	RA outstanding
BI_2218	04 March 2016	-	-	81.000	RA completed 18/5/16	-	-
BI_2229	29 March 2016	-	-	73.684	RA completed 5/5/16	-	-
BI_2232	23 March 2016	-	-	88.889	RA completed 22/4/16	-	-
BI_2234	23 March 2016	84.564	RA completed 12/09/16	-	-	-	-
BI_2236	18 February 2016	88.571	RA completed 18/2/16	-	-	-	-
BI_2239	06 January 2016	72.165	RA outstanding	85.625	RA outstanding	89.971	RA outstanding
BI_2240	23 December 2015	-	-	-	-	76.923	RA completed 19/1/16

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

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 th October 2016

Benthic Invertebrate literature database

The Benthic Invertebrate literature database has not been updated since 2013 and it is only working with older versions of internet explorer. Apem Ltd has a word document with all the recent literature on it which could be made into a pdf. We could then ask the participants to feedback on this to see if any recent literature is missing.

Taxonomic discrimination protocol

There is great variety in taxonomic identification and sometimes an overcautious level of identification. At the moment we are using the workshops to determine taxonomic discrimination levels for species discussed and the outcome from these discussions should be included on the web site.

Macroalgae

The certificates have been sent out. Claire Y will call Emma soon to discuss the programme for next year. Emma pointed out the conflict of interest, with Claire Y both participating and being the contract manager for the test, so wanted to know how we could demonstrate impartiality. Myles had just been on a course and the conclusion there was that if you were involved in writing the tender, then you shouldn't be involved in the evaluation of the contracts. These are all training exercises and there is no financial gain, and as long as we undertake safeguards, this shouldn't make a difference. **Action Astrid to draft a sentence to state this.**

**Contractor's update Thomson Ecology- Fish update
2016 / 2017 Participation**

Laboratory Code	Fish Reverse Ring Test	Fish Ring Test
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	Y	-
F_2313	Y	-
F_2314	Y	-
F_2315	Y	-
F_2316	Y	-
F_2317	Y	-
F_2318	Y	Y
F_2319	-	Y
F_2320	-	Y
F_2321	Y	Y
F_2322	Y	Y
F_2323	Y	Y
F_2324	Y	Y
F_2325	-	Y
F_2326	-	Y
F_2327	Y	Y
Total	22	15

(List correct as of 1 November 2016)

Progress on circulations- Scheme Year 2016/17 Fish component

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

Other news

All SOP certificates have been signed and sent to participants. Thanks to Astrid Fischer for her help in distributing them.

Due to Sarah Hussey leaving Thomson Unicomarine Ltd. recently, the fish component is currently administered by a team of three people: Ruth Barnich and Karina Jacobsen for administration and Mike Hill for fish identification.

There have been a few issues with reports, Jim has had some comments, and will discuss these with Ruth. Substantiated comments should be specified in the next tender. Some bulletins have been reissued- this should be clear on the NMBAQC web site- e.g. 'revision 1'. **It should be the contract managers who send the approved documents to Astrid, not the contractor, action all contract managers to ensure this is done. Action all contractors to send contract managers files in editable format (e.g. word, not pdf).**

Zooplankton update

The ring test is being prepared to be sent out next week. There are 11 laboratories participating, 4 of which are competent monitoring agencies, 3 international laboratories and several contractors. The committee commented that it was good to see the ring test

being set up, as it will help to getting people to use the same data and setting quality control.

AOB

Annual Report 2015/2016

% Re-analysis for external QC

CMAs should state this in their tenders. This should be 5% or at least 3 samples (whichever is higher) and a reference check or targeted reference check. If you want quality of a dataset you would need at least OS and LR exercise. It would be good to have example contract requirements with legally scrutinized words that everyone could copy to include in CMA tenders. The 3 samples is the barest minimum and the committee is aspiring to 5% of project plus reference collection. **Action Jim/Keith to send documents that they have used to specify QA/QC requirements.** The level of QA is important and any contracting agency should be looking for external QA that is contracted out. There should be some guidance on the NMBAQC web site but there is the potential to give the idea that NMBAQC is trying to get the monopoly for contracts. It needs to be open for others to do this, but it would be good to have an umbrella under which the specific requirements are laid out. CMAs should be insisting on best practise. **Action Astrid to draft a paragraph on this.**

Seabird and cetacean monitoring methods

David J and Astrid were recently emailed by Mark Lewis from JNCC, regarding best practice and data standards for seabird and cetacean monitoring methods. David J explained to Mark that NMBAQC does not accredit existing methods, but suggested that Mark would take a similar route as for the epibiota component and draft some best practise guidelines. At the moment all the analysis undertaken is very different, but the same was true for epibiota, and it should be possible to collate this all to a common standard. This can then be followed up with a workshop. **Action David J to send the email correspondence to Henk.** ECAS have a training scheme for specific types of seabirds, and their scheme is up and running. It would be good if the endorsement comes from an industry expert and explains the minimum standard which needs to be adhered to. **Action David J to get back to Mark.**

Contractor's queries

In the OS exercise some contractors felt that they were being judged against the Apem Ltd taxonomic discrimination protocol for damaged and juvenile individuals, and that overcautious IDs were penalised. They felt that it was Apem Ltd leading the scheme rather than NMBAQC. Myles said that he had asked Apem Ltd to put their protocols on the web site to increase transparency but it seemed to have backfired. It was meant to open up discussions for taxonomic discrimination protocols (TDP). The workshop TDPs will be on the web site and we should work towards a draft TDP which can be updated. The wording needs to be rephrased so that it is clear this is coming from NMBAQC not Apem Ltd. It is also important to gauge the caution in the ID- 10% overcautious would be OK, but 50% wouldn't. Tim suggested taking the 100 most abundant species in Unicorn (action Graham to extract) and then ask participants to what level they would take this e.g. if the limbs are missing, if it is a

juvenile. Use a pragmatic approach. Action Astrid to create a list to send out to participants, together with Myles/Tim/Graham.
Action Myles to respond to contractors' queries, first circulate around committee, and then directly to contractor with a cc to Grant.