



OFFICIAL DAERA MINUTES

MEETING TITLE	EMFG-NIEA Blue Green Algae Meeting
DIVISION/BRANCH REFERENCE	AE1/23/1843875
VENUE	MS Teams
DATE/TIME	Monday 11 December 2023 10.30am
LIST OF ATTENDEES	██████████ Director of MFD (Co-chair) ██████████ Director RED NIEA (Co-chair) ██████████ (CD) Head of Water Management Unit RED NIEA ██████████ Deputy Director of Strategy and Delivery MFD ██████████ Head of Marine Strategy & Catchment MFD ██████████ Head of Inland Fisheries Business Support MFD ██████████ River Basin District RED NIEA ██████████ River Basin District RED NIEA ██████████ Freshwater Monitoring & Assessment RED NIEA ██████████ Freshwater Monitoring & Assessment RED NIEA ██████████ Drinking Water Inspectorate RED NIEA ██████████ Head of Marine Monitoring & Assessment Team MFD ██████████ Marine Monitoring & Assessment Team MFD ██████████ DAERA Press Office ██████████ Executive Support, Director's Office MFD
APOLOGIES	██████████ Drinking Water Inspectorate RED NIEA ██████████ River Basin District RED NIEA ██████████ Water Regulation Unit RED NIEA ██████████ Marine Monitoring & Assessment MFD ██████████ DAERA Press Office ██████████ DAERA Press Office ██████████ DAERA Press Office ██████████ Executive Support, Director's Office MFD

KEY POINTS DISCUSSED

- Nothing significant to report. Cyanotoxin report published by MFD. Winter Monitoring Programme application being prepared but constrained by AFBI capacity.
- Cross-departmental Monitoring Group. Monthly meetings are ongoing.
- Agreement for:
 - By 31 January 2024, Monitoring Group and NIEA to prepare a paper on the protocol for capture of BGA reports, monitoring and reporting for the 2024 season and identify resource needs, and Directors and Grade 6s RED and MFD to review paper and make recommendations to Grade 3s;
 - By 29 February 2024, Director MFD to draft TORs for a Tactical Co-ordination Group and identified members;
 - By 31 March 2024, to have a desktop exercise to test protocols ahead of 2024 BGA season.

ACTION POINTS/OFFICIAL RESPONSIBLE/TARGET DATE:

- N/A

Minutes written by:



Date: 11th December 2023

Annex A: Action Log

Actions Carried Forward from Previous Meetings.

Action & Timescale		Meeting Date	Responsible and target Date	Update

EMFG-NIEA Blue Green Algae Tactical Co-ordination Group (TCG)

TERMS OF REFERENCE

1. PURPOSE AND ROLE

EMFG and the NIEA have agreed to set up a group to deal with the ongoing blue green algae issues. The main focus will be to prioritise work; to co-ordinate activities; to agree external and internal LTTs to inform the public and staff; and to ensure appropriate resourcing is in place. Meetings will cover the impact of blue green algae for inland and coastal areas.

2. MEMBERSHIP

The EMFG-NIEA Blue Green Algae Operational Group will comprise of the following officers:

Director RED NIEA	[REDACTED] (Co-
chair)	
Head of WMU RED NIEA	[REDACTED]
Freshwater Monitoring and Assessment	[REDACTED]
	[REDACTED]
River Basin District RED NIEA	[REDACTED]
Freshwater Data Insights	[REDACTED]
RBD Catchments Team NIEA	[REDACTED]
Drinking Water Inspectorate	[REDACTED] / [REDACTED]
	[REDACTED]
Director MFD NIEA	[REDACTED] (Co-chair)
Deputy Director MFD	[REDACTED]
Marine Strategy & Catchments Team MFD	[REDACTED]
Marine Monitoring and Assessment Team MFD	[REDACTED]
Marine Monitoring and Assessment Team MFD	[REDACTED]
AFBI	[REDACTED]
AFBI	[REDACTED]
CSAO	[REDACTED]
Press Office	[REDACTED]
	[REDACTED]
Secretariat – RBD Catchment Team	[REDACTED]

N.B. G6s to adjust attendance as required.

3. MEETINGS

Meetings will be held every two weeks (max. 30mins) to maintain an overview of the situation relating to blue-green algae in Lough Neagh and at other locations across Northern Ireland to ensure EMFG and NIEA are joined-up and have consistent messaging. The frequency and duration of the meetings will be kept under review.

4. AGENDA

The outline agenda is:

- Welcome
- Minutes and actions of previous meeting
- NIEA update
- EMFG update
- AFBI update
- Issues arising
- Prioritisation and resourcing
- Communications – LTTs
- AOB

5. RECORD OF MEETING

A short update briefing will be completed in advance of each meeting using the template provided by the secretariat. The secretariat will issue notes and actions of the meetings by the end of the next working day to the membership and other attendees.

A copy of the weekly briefing note will be shared with members of the Blue-Green Algae Monitoring Group when agreed and finalised.

6. REPORTING

A weekly update on numbers of BGA reports will be prepared in advance of the weekly meeting and also issued as part of the WBR/BI update each Friday morning.

Director RED NIEA and Director MFD EMFG will update CE NIEA and Deputy Secretary EMFG.

7. RESPONSIBILITIES

Director RED NIEA and Director MFD EMFG will co-chair the meeting. G6s NIEA and EMFG will deputise, as required. Key areas of responsibility:

Freshwater protection and regulation	WMU RED NIEA
Blue green algae	WMU RED NIEA
Bathing waters	MFD EMFG
Bathing waters monitoring & analysis	MFD EMFG

8. INFORMATION REQUIREMENTS

Documentation will be retained on Content Manager (AE2-24-66099) to ensure an adequate audit trail. The secretariat will set-up a Content Manager container for the Group with access for RED NIEA and MFD EMFG.



OFFICIAL DAERA MINUTES

MEETING TITLE	TCG Blue-green Meeting
DIVISION/BRANCH REFERENCE	TCG BG Meeting – Preliminary meeting
VENUE	MS Teams
DATE/TIME	30 May 2024, 3:30pm
LIST OF ATTENDEES	(NIEA), (EMFG), (NIEA), (NIEA), (NIEA), (DAERA)
APOLOGIES	
KEY POINTS DISCUSSED	
The meeting was called to establish the current position on BGA reports and decide whether the Tactical Co-ordination Group should be stood up. <u>NIEA Update</u> • There was discussion on getting the catchment map of Lough Neagh on the website as requested by the Minister and the possibility of making it more interactive. The map is to be added to website as first step and [REDACTED] to look into making it interactive in consultation with DSD - AP1 • [REDACTED] raised the need for stakeholder engagement and comms following a meeting with [REDACTED] and a small group of stakeholders. The group requested that a series of public meetings be held to inform communities around the Lough about the work already being done as there is a perception that there is nothing going on. It was felt that events would be better after the election period to enable the Minister to engage. [REDACTED] to engage with Internal Comms team to pick this up – AP2 <u>EMFG Update</u> • [REDACTED] updated on the work on the Mutli-Agency Monitoring Protocol which has been ongoing. The Protocol is now approved by the Minister and to be published on the website this afternoon or tomorrow. • [REDACTED] sent copies of signage to council bathing water contacts.	

Issues arising

- Following the meeting with council representatives on 16 May [REDACTED] advised that [REDACTED] had reported that she could not co-ordinate a paragraph on behalf of all councils to insert into the protocol document. It was agreed that we would move to publish as is and review content at the end of the season as planned.
- Resourcing is an issue for any potential increased monitoring at additional sites around the lough which are not currently bathing water identified / candidate sites.
- The need to set up regular meetings was agreed, with a short, structured agenda and more detailed discussions taken off-line as required – Weekly meetings to be set up. [REDACTED] agreed to arrange – **AP3**
- The timing of the meeting was agreed to be in advance of the weekly WBR/BI update so that the most up to date figures could be reported each week. It was agreed meetings would be held Thursday afternoons and AFBI colleagues would be invited as they are out on the lough regularly and could provide valuable input.

ACTION POINTS/OFFICIAL RESPONSIBLE/TARGET DATE:

- **Action 1.** The map is to be added to website as first step and [REDACTED] to look into making it interactive in consultation with DSD - **Complete**
- **Action 2.** [REDACTED] to engage with internal comms team re stakeholder engagement. - **Complete**
- **Action 3.** [REDACTED] to set up weekly meetings for 30mins (Thurs pm) - **Complete**

Minutes written by:

[REDACTED]

Date:

27 June 2024



OFFICIAL DAERA MINUTES

MEETING TITLE	TCG Blue-green Meeting
DIVISION/BRANCH REFERENCE	TCG BG Meeting #2
VENUE	MS Teams
DATE/TIME	06 June 2024, 2:30pm
LIST OF ATTENDEES	██████████ (NIEA), ██████████ (EMFG), ██████████ (EMFG), ██████████ (NIEA), ██████████ (NIEA), ██████████ (NIEA), ██████████ (NIEA), ██████████ (NIEA), ██████████ (NIEA), ██████████ (DAERA), ██████████ (AFBI), ██████████ (AFBI)
APOLOGIES	██████████ (NIEA), ██████████ (NIEA)
KEY POINTS DISCUSSED In the absence of ██████████, ██████████ chaired the meeting. <u>NIEA Update</u> • Current position: 33 confirmed reports at 19 unique locations. 41 reports have been received via the BA App with 27 of those confirmed. Last year at this time we had 5 reports. • There is a challenge with the ability to verify if duplicate photos / social media photos are being submitted via the App. • ██████████ has been in contact with ██████████ in graphics team re printing of pull up signs and leaflets for use in stakeholder events. • The Lough Neagh catchment map has been uploaded onto website and ██████████ liaising with DSD to make this more interactive. ██████████ was unable to attend but sent the following update for DWI: • First detections of blue-green algae in a few of the raw water sources in May 2024, namely Clay Lake, Dorisland, Fofanny, and in Lough Neagh at the Moyola abstraction but this is not dissimilar to previous years; • Toxin results up to end of April 2024 all below the LoQ; • To date no notable increase in consumer complaints for characteristic earthy / musty taste. • NI Water are starting their comms in advance of any drinking water quality issues arising this summer, this includes an invite for the DAERA Minister and other stakeholders for a tour of Moyola WTW in June. <u>EMFG Update</u> • ██████████ requested that ██████████ be included in the invitation for the meeting - AP1.	

- The Operational Task Team had secretariat provided by MFD last year but resources do not permit that this year. [REDACTED] agreed to consider secretariat provision from WMU – **AP2**
- There was a high micro count from Rea's wood last week and 'advice against bathing notice' issued for two days. It was clear for BGA cell count. Micro samples will now be collected up until September in the BW season.
- There was a bloom in the sheugh at Rea's Wood, toxin levels low in the Lough; phytoplankton samples to be lifted and preparing for biovolume samples.
- Preparations underway for biovolume samples.
- The Multi-Agency Monitoring Protocol was published on 30 May 2024.

AFBI Update

- There have been indications that chlorophyll has started to increase. AFBI are working on getting almost real time data on chlorophyll using the fluoroprobe. There were 6 stations monitored overwinter with the fluoroprobe but data not yet worked up.
- The fluoroprobe could potentially identify Microcystis levels if it was calibrated.

Press Office Update

- [REDACTED] advised that draft PR had been circulated for approval.
- One media query had been received in relation to Moy Park following Spotlight.

Issues arising

- There was discussion on the level of cloud cover over the past few weeks hampering satellite images and the potential use of drones.
- There is a meeting with ESRI on Monday ([REDACTED]) as a follow up to the Hackathon.
- Weekly updates on reports and locations are to be provided prior to this meeting on a weekly basis.
- Agreed to continue with a weekly meeting for 30mins.

ACTION POINTS/OFFICIAL RESPONSIBLE/TARGET DATE:

- **Action 1:** [REDACTED] to invite [REDACTED] to meeting - **Complete**
- **Action 2:** [REDACTED] agreed to consider secretariat provision from WMU - **Complete**

Minutes written by:

[REDACTED]

Date:

27 June 2024



OFFICIAL DAERA MINUTES

REMOVE COMMENTS IN RED BEFORE COMPLETING

MEETING TITLE	TCG Blue-green Meeting
DIVISION/BRANCH REFERENCE	TCG BG Meeting #3
VENUE	MS teams
DATE/TIME	13 June 2024 2:30pm
LIST OF ATTENDEES	(NIEA), (NIEA), (EMFG), (EMFG), (NIEA), (NIEA), (NIEA), (NIEA), (DAERA), (AFBI), (AFBI), (DSD)
APOLOGIES	(NIEA), (EMFG), (NIEA)
KEY POINTS DISCUSSED TEXT ARIAL 12 JUSTIFIED - provided a demo on the Interactive Blue-green report map - A discussion followed on what information could be incorporated into the viewer and it was agreed that 2 phases to development. The first phase and minimum viable project to be delivered within next 2 weeks and consideration then given to what further can be obtained. Weekly updates were provided by each branch. NIEA - No new reports this past week - Promotional material for stakeholder events are being progressed with graphics branch - No taste/odour reports received AFBI - Data buoy link is now working - DO and Temp will be ready to deployed if required. - Investigating into use of fixed-point cameras	
ACTION POINTS/OFFICIAL RESPONSIBLE/TARGET DATE: - Action 1 to arrange names for access to map prototype - completed - Action 2 to arrange workshop to discuss phase 1 and 2 requirements. Completed Phase 1 held 17 June 2024	

- Action 3 [REDACTED] to send [REDACTED] link to AFBI real time data buoy

Minutes written by:

[REDACTED]

Date:

17 June 2024



OFFICIAL DAERA MINUTES

MEETING TITLE	TCG Blue-green Meeting
DIVISION/BRANCH REFERENCE	TCG BG Meeting #4
VENUE	MS Teams
DATE/TIME	20th June 2024, 2:30pm
LIST OF ATTENDEES	(NIEA), (NIEA), (EMFG), (EMFG), (NIEA), (NIEA), (NIEA), (NIEA), (DAERA), (AFBI), (CSAO), (NIEA)
APOLOGIES	(NIEA), (EMFG), (NIEA), (AFBI)
KEY POINTS DISCUSSED <u>Minutes and actions of previous meeting</u> • Action 1. to arrange names for access to map prototype - Completed • Action 2. to arrange workshop to discuss phase 1 and 2 requirements. Completed - Phase 1 held 17 June 2024 • Action 3. to send link to AFBI real time data buoy - Completed <u>NIEA Update</u> • one new notification from NI Water of Blue/Green at Spelga. Several other reports were made through the App but none of them were confirmed. • informed the group that NI Water had recently provided stakeholders with a tour of the Moyola treatment works and that they were still keen to obtain regular updates from DAERA. • to liaise with re. Communication Strategy and forthcoming stakeholder engagement. Progress also being made with plans to add to the staff resource required to address ongoing issues around Lough Neagh. • to update minutes of the previous two meetings of the Technical Group AP1. <u>EMFG Update</u> • no new reports, work ongoing in respect of bathing waters. • asked that a short briefing paper be presented to the group in advance of the weekly meeting, to provide briefing paper template AP2.	

AFBI Update

- [REDACTED] Data buoy is now operational and will keep the group updated if there is resource to commission any additional instrumentation. At this point no stratification has taken place in Lough Neagh. [REDACTED] continuing with work on chlorophyll and working on calibrating a Fluro-tube for predicting cyanobacteria.
- [REDACTED] currently monitoring a clear upward trend in Chlorophyll and there were specks of Microcystis visible at the surface. They will maintain a watching brief given the predicted warmer weather.

Issues arising

- [REDACTED] to consider a possible rewrite of the Press release on protocol document given the potential warmer weather to come – will take advice and report back.
- [REDACTED] keen to raise awareness of work being carried out by DAERA DSD, including satellite imagery and stressed there was no need to be duplicating ongoing work.
- [REDACTED] recent proposals around Lough Neagh currently being evaluated by AFBI research group and they are seeking input from the Scientific Advisory Group.

ACTION POINTS/OFFICIAL RESPONSIBLE/TARGET DATE:

- **Action 1.** [REDACTED] to update minutes of the previous two meetings of the Technical Group.
- **Action 2.** [REDACTED] to provide short briefing paper template in advance of next meeting.

Minutes written by:

[REDACTED]

Date:

20th June 2024



OFFICIAL DAERA MINUTES

MEETING TITLE	TCG Blue-green Meeting
DIVISION/BRANCH REFERENCE	TCG BG Meeting #5
VENUE	MS Teams
DATE/TIME	27th June 2024, 2:30pm
LIST OF ATTENDEES	(NIEA), (EMFG), (NIEA), (NIEA), (NIEA), (NIEA), (NIEA), (CSAO), (NIEA), (AFBI), (DAERA)
APOLOGIES	(NIEA), (EMFG), (NIEA), (AFBI), (AFBI), (DAERA), (EMFG)
KEY POINTS DISCUSSED <u>Minutes and actions of previous meeting</u> • Action 1. to update minutes of the previous two meetings of the Technical Group – Carried forward • Action 2. to provide short briefing paper template in advance of next meeting – Completed <u>NIEA Update</u> • As of 27/6/24 there have been 37 confirmed reports of blue green algae from 22 unique locations. There were 2 new confirmed reports this week from Brantry Lough and Copeland Reservoir • No new reports of BGA at drinking water abstraction points; no incidents of taste and odour complaints relating to BGA in public drinking water supply; monitoring ongoing with no results of note. • circulated email with photos of BGA to the group. <u>EMFG Update</u> <u>Phytoplankton work</u> • Chlorophyll analysed for Reas Wood beach and Sheugh (13.9 ug/l and 6.7 ug/l) Samples sent to APEM for biovolume and Full species list. Count and Biovolume of Cyanobacteria completed for 10th and 17th June 2024	

- All biovolumes at Rea's Wood below vigilance levels. Levels in sheugh above alert level 1.
- Algal mats from Rea's Wood Beach and Slip analysed – contains non harmful algae -*Spirogyra*, *Oedeogonium*, *Ulothrix* and *Cladophora* and *Tabellaria* diatoms. Fragments of leaves trapped within mat had the Cyanobacteria *Phormidium/Oscillatoria spp* but only a few cells.
- All Beach samples contain a diatom bloom predominantly *Melosira* and *Synedra*.
- [REDACTED] asked for quicker sharing of information if potential BGA's are reported even if samples are negative.
- [REDACTED] micro currently trialling lateral flow tests to measure microcystin, potentially help monitor bathing waters.
- [REDACTED] results from CEFAS still to be added.

Micro-biology team info.

- ELISA – validation is underway and in its infancy.
- Lateral Flows - To date, none of the lateral flows have indicated levels above 5ppb, this has been corroborated with the CEFAS results. – even with the green picture passed around on socials.
- Aquafluor handheld is being calibrated for PC & PE (phycocyanin & Phycoetherin) to give us a ready reckoner on site.

AFBI Update

Recent visit 26/6/24

- A sample with a good amount of Cyanobacteria-the algae was moving about the Lough, yesterday there was a large amount in the west but not that much in the middle of the Lough where sampling was undertaken.
- [REDACTED] most recent surface samples showing wide variation throughout the lough.
- [REDACTED] 5 points were sampled around the lough but have not carried out any species analysis, focus was on identifying the dominant algal community.
- [REDACTED] shared phytoplankton report showing an increase in chlorophyll and BGA.

Issues arising

- [REDACTED] NI water currently sending off drinking water samples weekly for analysis (raw & final) but having delays in getting results back, therefore are compiling a tender evaluation for instrumentation to undertake microcystin analysis.
- [REDACTED] micro failure at Reas Wood could be a result of a private pumping station discharging into the sheugh, possibly having a significant impact. [REDACTED] NI Water layer of discharge points & CSO's will not include private sewage treatment plants.
- [REDACTED] on behalf of [REDACTED] suggested there should be an offline discussion as regards to who was doing what analysis and where, no need to duplicate.

Comms

- [REDACTED] update have been useful thus far and was keen to see the action plan being made public. Wants to be prepared for when BGA becomes visible on shoreline, marinas, beaches etc. [REDACTED] sunlight and still conditions are optimum for new blooms, ongoing monitoring will ensure the group is much better prepared to respond to any new challenges.
- [REDACTED] would like a discussion around what other agencies will be given the opportunity to come to the stakeholder events. [REDACTED] keen that the message is clear and consistent at all times & need to highlight measures already in place.
- [REDACTED] queried if DAERA policy should have an input given the Agri-environment section of the Lough Neagh plan?
- [REDACTED] in agreement that the operational group may need to proceed with stakeholder engagement irrespective of the plan.
- [REDACTED] suggested an invitation across the department giving 1 month notice.
- [REDACTED] to float stakeholder event at sustainable catchments meeting.
- [REDACTED] @DSD to have interactive map up and running, Monday week.
- [REDACTED] satellite imagery is poor at the moment given the amount of cloud cover.
- [REDACTED] suggested updating BGA page to reflect recent changes and asked if press office can update social media, need to contact [REDACTED] with text and or image/ link.

ACTION POINTS/OFFICIAL RESPONSIBLE/TARGET DATE:

- **Action 1.** [REDACTED] to update minutes of the previous two meetings of the Technical Group.

Minutes written by:

[REDACTED]

Date:

27th June 2024



OFFICIAL DAERA MINUTES

MEETING TITLE	TCG Blue-green Meeting
DIVISION/BRANCH REFERENCE	TCG BG Meeting #6
VENUE	MS Teams
DATE/TIME	4th July 2024, 2:30pm
LIST OF ATTENDEES	(EMFG), (NIEA), (NIEA), (EMFG), (NIEA), (NIEA), (NIEA), (AFBI), (CSAO), (DAERA), (NIEA)
APOLOGIES	(NIEA), (NIEA), (NIEA), (EMFG), (AFBI), (DAERA)
KEY POINTS DISCUSSED	
<u>Minutes and actions of previous meeting</u>	
• Action 1. to update minutes of the previous two meetings of the Technical Group – Completed. • Group given time to agree minutes from initial two meetings and Terms of Reference at next meeting, 11th July. • Will give the briefing paper one more week to see if it is working effectively, if majority feel it is a duplication of work it can be dropped from next meeting.	
<u>NIEA Update</u>	
• There have been 8 reports of blue green algae this week from 3 new locations i.e. Lower Bann at Portglenone, Ligoniel Dams and Loughbrickland. As of 4/7/24 there have now been 45 confirmed reports of blue green algae from 25 unique locations • Nothing of note to report for drinking water. • raised the issue of the flood gates at Toome being opened or closed and whether this could be contributing to the emergence of BGA in the Lower Bann. to liaise with DFI to seek further information on timings of the opening/ closing of the gates to try to establish if it could have been flushed through or whether BGA is becoming more prevalent in the Lower Bann regardless AP1.	
<u>EMFG Update</u>	
• thanked AFBI for providing method testing samples, lateral flow tests showed levels above the threshold in two of the samples provided. • Remote sensing is being curtailed due to cloud cover; intends to begin weekly aerial survey at Rea's Wood when conditions allow.	

- Use of drones has been suggested for monitoring however this might not be feasible for the entirety of the Lough given extent. [REDACTED] supportive of this idea and adds that training should be straight-forward although collating data is slightly more difficult due to complexities with NICS IT systems.
- [REDACTED] cited governance issues around flying drones however Marine and Fisheries Division ensure compliance with CAA regulations.
- MFD are considering the possibility of purchasing FluoroProbe for monitoring at Rea's Wood and other BG impacted Bathing Waters.
- [REDACTED] there is no resource for additional in lake monitoring or monitoring of Rea's Wood at present. [REDACTED] keen to ensure no duplication of work, wants to identify what knowledge gaps exist at present and refine what needs to be done to cover all eventualities. [REDACTED] suggested a separate offline meeting to ongoing monitoring programme.

AFBI Update

- [REDACTED] monitoring for the most part will be carried out remotely using buoys, sensors and sondes. May be an opportunity to use a remote boat for collecting samples.
- No AFBI staff out on the Lough this week, samples collected last week were from localised as opposed to from the centre of the Lough which is generally considered as representative of the Lough as a whole.
- Prevailing winds appear to be blowing localised accumulations of BGA around the Lough.
- AFBI have had discussions with the manufacturers of the FluoroProbe who have said that it is calibrated for Microcystis. High readings for Cyanobacteria will have a good read across for increases in BGA.
- [REDACTED] asked if the data collected from the buoys would be compatible with EDAP, [REDACTED] says it's possible to have it converted to make it compatible. DSD have said previously that they would like to be involved at a very early stage when data is being shared with the department.
- [REDACTED] stated that one Lough Neagh related AFBI project has been received by CSAO. [REDACTED] currently working on a 2nd Lough Neagh proposal and further proposals are expected. [REDACTED] still scope to refine high frequency monitoring of Lough Neagh catchments.

Issues arising

- N/a

Prioritisation and resourcing

- [REDACTED] currently working through additional resourcing for NIEA.

Communications

- Ministers statement on the Lough Neagh plan received a reasoned response from UFU, expecting more publicity generally around Lough Neagh in the coming weeks.
- [REDACTED] a number of stakeholder engagement events are planned for around the Lough. Seeking collaboration with various delivery partners such as Rivers Trusts, NI

Water etc. to showcase workshops highlighting work that has been going on historically and outline additional planned work going forward.

- [REDACTED] keen to stress the good work that has been done up to this point, such as improvements resulting from EFS and Water Quality Improvement Schemes.
- [REDACTED] highlighted concerns by LNFCS that negative BGA publicity was impacting sales of fish despite FSA and LNFCS showing no toxins in fish flesh. He suggested DAERA comms needed to emphasise this as appropriate. [REDACTED] keen to stress that there is no mixed messaging around commercially caught fish and fish caught through recreational angling.
- [REDACTED] highlighted some stakeholders conflating BGA issue with low eel stocks. AFBI modelling in 2019 had projected poor eel stocks in this period. Relationship is more complex especially against a backdrop of the collapse of eel stocks across Europe in the 2000's. [REDACTED] eel productivity in the Lough is related to the bio availability of algae, stressed the need provide a better understanding of the relationship between chlorophyll and BGA in the Lough in a bid to manage expectations. [REDACTED] & [REDACTED] both agreed we need a better understanding of the issues and agreed bottom line before presenting that message to stakeholders.

AOB

- [REDACTED] informed the Group of ongoing CSAO/DSD work to bring forward a number of data projects for Lough Neagh which could include predictive tools for BGA. The work is in early development.
- [REDACTED] new interactive BGA map launched today, functionality to zoom in on locations and extract data into a CSV file. Static map will be dropped from the page next week. [REDACTED] asked if this could be Tweeted out on social media. [REDACTED] to ask [REDACTED] to promote on social media **AP2**.

ACTION POINTS/OFFICIAL RESPONSIBLE/TARGET DATE:

- **Action 1.** [REDACTED] to liaise with DFI to seek further information on timings of the closing/ opening of the Toome flood gates.
- **Action 2.** [REDACTED] to ask [REDACTED] [REDACTED] to promote new interactive BGA map on social media.

Minutes written by:

[REDACTED]

Date:

4th July 2024



OFFICIAL DAERA MINUTES

MEETING TITLE	TCG Blue-green Meeting
DIVISION/BRANCH REFERENCE	TCG BG Meeting #7
VENUE	MS Teams
DATE/TIME	11th July 2024, 2:30pm
LIST OF ATTENDEES	(EMFG), (EMFG), (NIEA), (NIEA), (CSAO), (AFBI), (NIEA)
APOLOGIES	(NIEA), (NIEA), (NIEA), (NIEA), (NIEA), (EMFG), (NIEA), (AFBI), (DAERA), (DAERA)
KEY POINTS DISCUSSED <u>Minutes and actions of previous meeting</u> • Action 1. to liaise with DFI to seek further information on timings of the closing/ opening of the Toome flood gates – Carried Forward. • Action 2. to ask to promote new interactive BGA map on social media – Carried Forward. <u>NIEA Update</u> • 47 reports from 26 unique locations. • Two new reports this week. Report for first time from Lower Bann Kilrea via the App. Report from Reas Wood made by FMA staff approx. 200m from shore • Successful data collection from the NIEA monitoring buoy at Rea's Wood; Temperature, Conductivity, Turbidity, DO, Blue/green Phycocyanin. Provides a bloom risk analysis showing change over time. Hopefully can be used as training data for satellite tools. Currently investigating adding telemetry to act as a warning system. <u>Interesting Read</u> Microcystis Rising: Why Phosphorus Reduction Isn't Enough to Stop Cyanobacteria Environmental Health Perspectives Vol. 125, No. 2 (nih.gov) • confirmed that Bathing Waters have been informed • hoping to have a report on the telemetry available to the group in 2 weeks	

EMFG Update

- **1/7/24**
Lateral flow – not detected.
CEFAS toxin results - <LOR
Biovolume - 2.8277 mm³/L. Within WHO Vigilance Level threshold 1-4mm³/L.
- **8/7/24**
Lateral flow – not detected.
CEFAS toxin results – awaiting results.
Biovolume – awaiting results.
Chlorophyll - 12.8ug/l
- Species Composition -Algal mats from Reas Wood Beach contain non-harmful algae - *Spirogyra*, *Oedeogonium*, *Ulothrix*, and *Cladophora* but also clumps of *Microcystis* attached to the mat (photo).
- [REDACTED] sample showed a change in phytoplankton community- previous diatom blooms have reduced significantly and been replaced by a mix of Cyanobacterial cells and other algal groups.
- Next sampling date- 16th July
Permission granted by [REDACTED] for drone flights- starting 11/7 weather permitting.
Samples continue to be sent to APEM for biovolume and Full species list.



- [REDACTED] if the wind direction changes next there is a possibility it could affect the large clump of BGA sitting off Rea's Wood.
- [REDACTED] commented that the information coming from the data buoy/ telemetry could be useful in ground truthing the satellite imagery.

AFBI Update

- [REDACTED] no staff on lough this week due to phytoplankton training course. AFBI buoy still reporting back, preference would be for all data reporting from various instrumentation (buoys & sondes) to be measured in micrograms per litre of chlorophyll.

Issues arising

- [REDACTED] work still ongoing with AFB/ [REDACTED]

Prioritisation and resourcing

- [REDACTED] initial exercise completed, expects DTN's to come out in due course. [REDACTED] queried whether it was only DTN's as this would only be moving staff around, [REDACTED] confirmed there may be scope for Agency Staff in the short term.

Communications

- [REDACTED] meeting with [REDACTED] & [REDACTED] to consider comms plan for Lough Neagh.
- [REDACTED] keen to share results from Reas Wood on interactive map.
- [REDACTED] will be sending invites to [REDACTED] & [REDACTED] in respect of any future comms discussions.
- [REDACTED] consideration also being given to a Bathing Water App going forward.

AOB

- [REDACTED] asked if drone footage was internal. [REDACTED] confirmed it would be shared with DSD and hopefully made available to everyone eventually. [REDACTED] confirmed it would be a weekly grid patterned pass, not a full survey.
- [REDACTED] confirmed the budget for the Small Business Research Initiative (SBRI) is being finalised with the intent to launch in August once agreed with the Minister.

ACTION POINTS/OFFICIAL RESPONSIBLE/TARGET DATE:

- **Action 1.** [REDACTED] to liaise with DFI to seek further information on timings of the closing/ opening of the Toome flood gates.
- **Action 2.** [REDACTED] to ask [REDACTED] to promote new interactive BGA map on social media.

Minutes written by:

[REDACTED]

Date:

11th July 2024



OFFICIAL DAERA MINUTES

MEETING TITLE	TCG Blue-green Meeting
DIVISION/BRANCH REFERENCE	TCG BG Meeting #8
VENUE	MS Teams
DATE/TIME	18th July 2024, 2:30pm
LIST OF ATTENDEES	(EMFG), (NIEA), (NIEA), (NIEA), (CSAO), (AFBI) (NIEA)
APOLOGIES	(NIEA), (EMFG), (NIEA), (NIEA), (NIEA), (EMFG), (NIEA), (AFBI) (DAERA), (DAERA)
KEY POINTS DISCUSSED	
<u>Minutes and actions of previous meeting</u>	
• Action 1. to liaise with DFI to seek further information on timings of the closing/opening of the Toome flood gates – Carried Forward. • Action 2. to ask to promote new interactive BGA map on social media – Carried Forward.	
<u>NIEA Update</u>	
63 confirmed reports of blue green algae from 33 unique locations (up to and including 18/07/2024). BW 9 unconfirmed reports. 7 of these were new locations this week – added to interactive map, to be updated Friday morning.	
• Lower Lough Erne - Tully Castle • Lough Nalughoge - Crom Estate • Lough Neagh - Sandy Bay • Lough Neagh - Battery Bar • Lower Lough Erne - Camagh Bay • Killylane Reservoir • Ballysaggart Lough	
Locations are added to the new interactive map - Blue-Green Algae - Confirmed Locations (arcgis.com)	
Meetings will be held with DSD for phase-2 – member to consider build requests.	
We have ordered a telemetered head for the sonde so hopefully we will get some real time data in the next month or so. Currently data is being downloaded every two weeks.	

to seek on-call funding and overtime then identify staff willing to be on call.
received press query re dead swan @Rea's Wood – vet to sample for HPN1, bird flu.
Toome canal group requesting NIEA monitoring data – keen to highlight that data is not sufficient for making decisions based on risk to human health.

EMFG Update

Rea's Wood Sampling Week beginning 16/7/24

Microbiology Section update.

RW bathing site lateral flow pilot testing– no toxicity detected.

[NOTE - RW sample was run 3 times. 2 times in the bathing water site and once on the scum & algae on the shore.]

Visual assessment - Evidence all along BW shoreline. Some bright green scum and small parts of blue die-off. Evidence in Six-mile water of BGA buildup on rocks and in the main flow of water.

On the basis of the visual assessment, **Advice Against Bathing was notified** to the council and press office on 16 July.

■ Bloomin Algae notification for Rea's Wood was initially made on 12th July but there is a requirement to share information and act swiftly in respect of bathing waters so that signs can be erected to alert the public.

■ to speak with Pollution Response Team in relation to Bloomin algae notifications and sharing of information in relation to BGA Protocol **AP3**.

■ may need to change the wording around the protocol i.e. if there is a visual thick scum then you should not go in.

■ stressed the need for vigilance and asked that FMA share any new information on potentially affected coastal or bathing waters when carrying out BGA observations.

■ FMA have monitoring instrumentation on inflowing rivers into Lough Neagh.

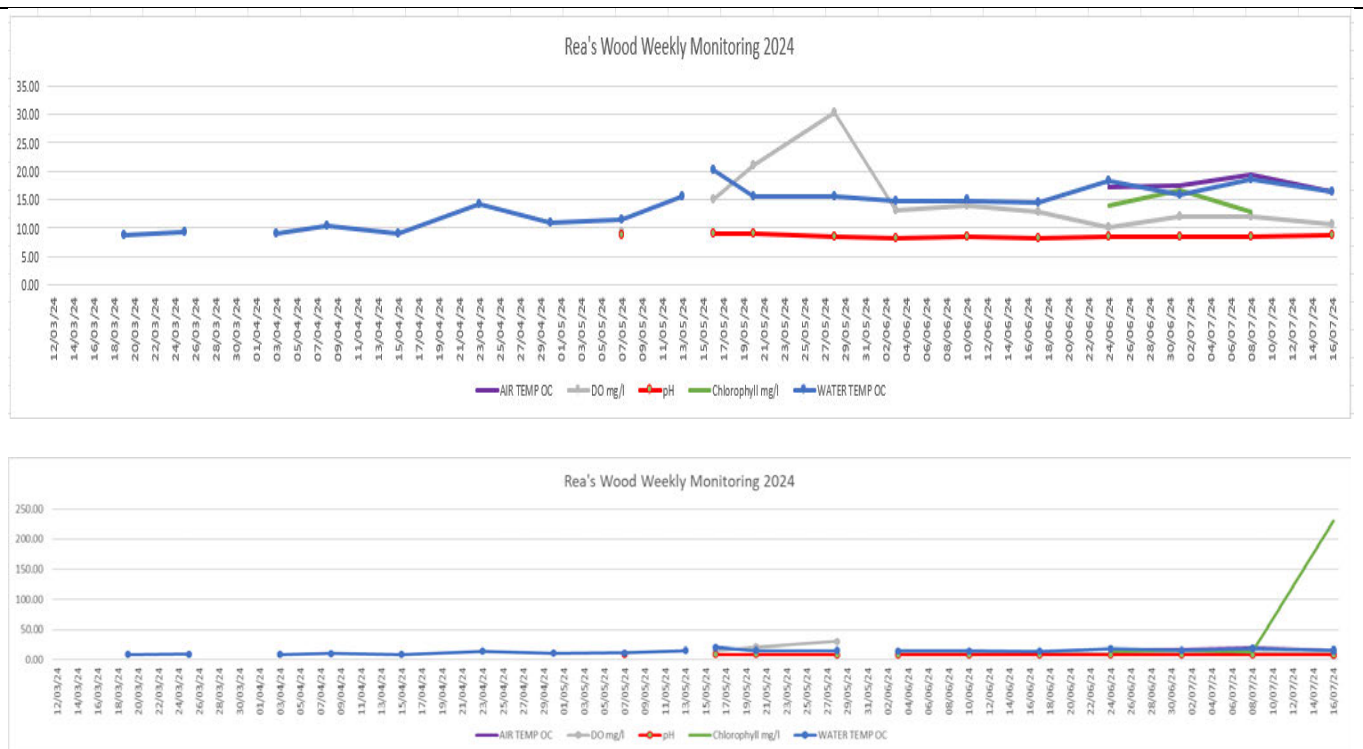
Seaton's Marina, Lower Bann lateral flow pilot testing – no toxicity detected.

Visual inspection of Downhill, Castlerock, Portstewart, and Portrush West – nothing visible.

CEFAS toxin results from 01/07/24 - <LOR

Drone flights for both RW and Seaton's complete. Issues with ITSO and data retrieval. Have sought availability and agreement for PCZ to fly over Seaton's to the back end of the incoming weeks, to capture anything coming down the Bann towards the BW.

As of 17/07/2024 – Toome gates closed, water level below statutory limits. [Lough Neagh levels | Department for Infrastructure \(infrastructure-ni.gov.uk\)](#)
[Farson Digital Watercams - Hi-def webcam at Lough Neagh Toome](#) – this website shows rainfall info and water level heights in multiple locations on the Bann.



Phytoplankton all samples from 16/7/24

Chlorophyll a RW Beach – 230ug/l previously 13ug/l

Chlorophyll a Seatons – 2.16 ug/L (low for the Bann)

Biovolume – awaiting results.

Biovolume from 8/7/24 was significantly below the vigilance level.

RW Beach Mat – Large amount *Microcystis* colonies, *Anabaena* and small Cyanophytes trapped within a large macroalgal mat.

RW Beach – Large volume of *Microcystis* and *Anabaena*

North Coast beaches Castlerock, Downhill, Portrush Mill and Portstewart all clear for Cyanobacteria. All samples contained diatom blooms with a large amount of *Attheya armata* which causes foam.

AFBI Update

AFBI were out on Lough Neagh 17/07/2024, visually looks much the same as before - blue/green algae around the shore but not a lot gathering in the middle.

The Chlorophyll level has gone down a bit at White Horse Flats to 20ug/l, however a little bit to the west of white horse flats we picked up a sample that was reading 91ug/l, so still high in certain parts.

Attached photo of a sample we took to the west - species identified under the microscope as *Microcystis*, mainly *Microcystis aeruginosa*.

Fluoroprobe data will follow.

Date	0m	5m	10m	Comp
11/01/2024	1	1	0.9	1.1
30/01/2024	3.6	3.5	4.3	3.6
13/02/2024	1.9	1.8	1.9	1.9
26/03/2024	3.3	3.1	3.5	3.5
17/04/2024	4.6	4.6	5.2	4.3
01/05/2024	9.9	10	11.3	10.7
14/05/2024	23.9	28.5	18.1	20.9
03/06/2024	8	7.4	5.7	5.7
19/06/2024	10.4	11.1	10.1	9.1
26/06/2024	135.1	50.4	34.5	51
17/07/2024	21	18	3.3	14.9



- AFBI met with LNP last week for a constructive discussion about the communication of science and facts to broader stakeholders.
- AFBI has permission from DfI Rivers to establish fixed point cameras on their infrastructure at Toome and will progress.
- AFBI seeking permission to license lough bed for a new monitoring bouy in the lough.

█ has received various data requests from █, also had a constructive meeting with Lough Neagh Partnership who are keen to have access to data as they see it as an important tool in terms of stakeholder engagement and transparency.

█ will be meeting with ESRI to consider technical challenges of pushing out real time data from the buoy. May also require a licence from the █ to attach moorings to the bed of the lough as a matter of courtesy.

Issues arising

■ keen that all data could eventually be shared on a common platform. ■ having initial discussions with ESRI on this issue, ■ added that DSD are keen to take forward plans to collaborate on data sharing science platform.

■ asked if 2nd camera at Toome gates could capture the gauging board for accurate real time data.

■ may be an opportunity to install telemetry – independent acoustic gauge, permission has been granted by DFI.

■ discussions on Phase 2 and sharing of information going forward.

Prioritisation and resourcing

N/a

Communications

N/a

AOB

■ keen to manage expectations around recovery during stakeholder engagement events. management measures which proved successful for N, may be transferable for P also.

■ FSA considering a fish monitoring programme for Lough Neagh.

■ need for Inter Agency Group to review/ update the Monitoring Protocol.

ACTION POINTS/OFFICIAL RESPONSIBLE/TARGET DATE:

- **Action 1.** ■ to liaise with DFI to seek further information on timings of the closing/ opening of the Toome flood gates.
- **Action 2.** ■ to ask ■ to promote new interactive BGA map on social media.
- **Action 3.** ■ to speak with Pollution Response Team in relation to Bloomin algae notifications and sharing of information in relation to BGA Protocol.

Minutes written by:

■

Date:

18th July 2024



OFFICIAL DAERA MINUTES

MEETING TITLE	TCG Blue-green Meeting
DIVISION/BRANCH REFERENCE	TCG BG Meeting #9
VENUE	MS Teams
DATE/TIME	25th July 2024, 14:30 - 15.30
LIST OF ATTENDEES	(NIEA), (NIEA), (NIEA), (NIEA), (EMFG), (EMFG), (NIEA), (NIEA), (NIEA), (CSAO), (AFBI), (NIEA), (EMFG), (NIEA), (EMFG), (AFBI), (DAERA), (DAERA)
APOLOGIES	
KEY POINTS DISCUSSED	
<u>Minutes and actions of previous meeting</u>	
• Action 1. to liaise with DFI to seek further information on timings of the closing/opening of the Toome flood gates – Carried Forward. • Action 2. to ask to promote new interactive BGA map on social media – Carried Forward. • Action 3. to liaise with Pollution Response Team in relation to Bloomin algae notifications and sharing of information in relation to BGA Protocol – Complete.	
would be useful to know what DFI are doing at Toome gates to help understand if blooms in the Lower Bann are happening regardless of overflow from the Lough. we can monitor levels through DFI website, expects levels to begin to be lowered coming into October in expectation of higher autumn rainfall. to liaise with DFI to seek further information on timings of the closing/opening of the Toome flood gates – AP1. Biaillinrees WTW may can shut off their intake <u>from Lower Bann</u> if <u>Toome gates open and BGAbga</u> flows from the Lough are increased.	
on annual leave, to ask to promote new interactive BGA map on social media once he comes back from leave – AP2.	
Bloomin Algae app notifications not being monitored over the bank holiday weekend, if report had been sent to Pollution Response Team it would have been responded to. would like to see an immediate response particularly in respect of bathing waters, asked if FMA & PRT can come to an agreement to cover weekends to bank holidays? to have discussion with around resource for overtime cover, and possibly need to amend Protocol to meet statutory duty. would like more frequent notifications and out of hours would also need to inform the Drinking Water Inspectorate (DWI) <u>as well as NI Water</u>. & to agree a process for responding to Bloomin algae notifications (out of hours/ weekends) and sharing of information in relation to BGA Protocol – AP3.	

NIEA Update

■ number of correspondences has increased, would like to see a clear strategy for responses differentiating between heavily used recreational areas as opposed to designated bathing waters.

■ Minister is keen to do more around bathing waters, limited in terms of 1-year budgets, also some concerns about substantial numbers of bathers at other sites. ■ protocol still needs to be implemented even if the location is not a designated bathing water. ■ keen to get more engagement ~~from-with~~ councils so that there are no gaps in the ■ may need to steer independent operators towards QUB in terms of any toxicity testing

Total BGA confirmed reports now 78 reports at 39 unique locations.

New unique locations this week:

- Stoneyford Lough
- Lough Bracken
- South Middle Woodburn Reservoir
- Shaws Lake
- Race Course Lough - County Fermanagh
- Lower Bann - Drumaheglis Marina

DWI Update:

- Report of BGA at Woodburn reservoir on 22/07/2024, greatly reduced by 23/07/2024.
- Monitoring results for algae counts, Microcystin-LR and Geosmin & MIB, up to end of June 2024, are generally typical of what would be expected across the WTWs historically. Overall algae count results are a bit lower in 2024 than 2023 year to date.
- Microcystin levels in final waters from WTWs are all below the LoQ to date.
- No reports of increasing levels of taste & odour complaints associated with algae.

■ BGA now a widespread issue with a large geographical spread.

■ seeking meeting with Marine colleagues in respect of Phase 2 Web mapper, ■ has already had a constructive meeting with DSD & ■ now making great progress after initial problems with data access. E-mail to be sent around seeking further engagement, 2-week timeframe.

EMFG Update

Reas Wood Sampling Week beginning 22/7/24.

Drone flights for both RW and Seaton's complete for 23/7/24 and 16/7/2. Flight from 16/7/24 shows the bloom hugging the shore at Reas Wood and around the sand bar.

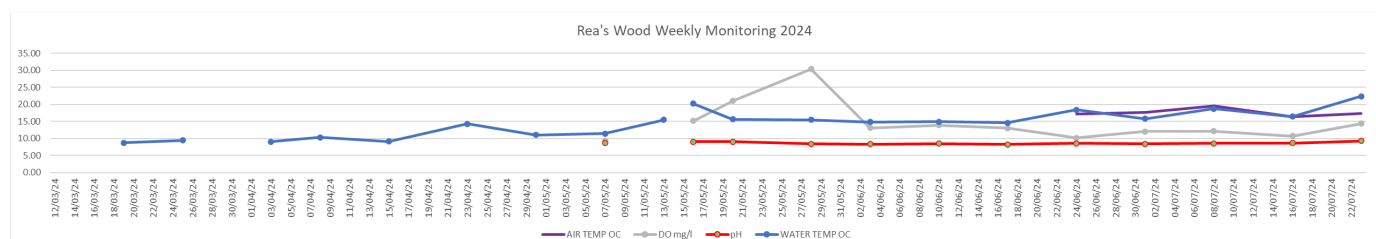
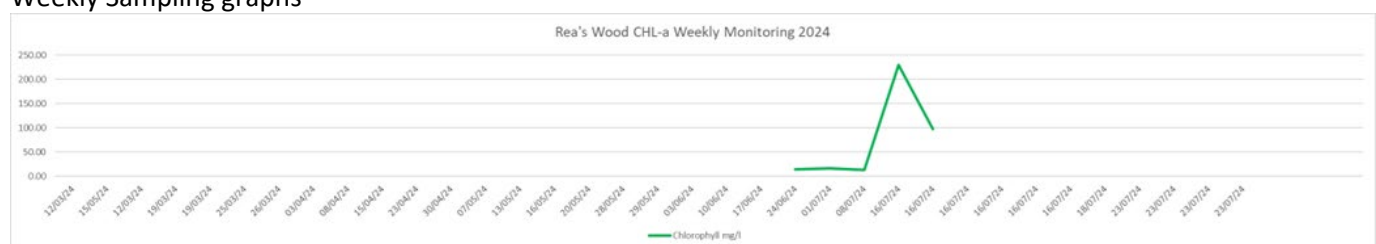
Issues with ITSO and data retrieval. Have sought availability and agreement for PCZ to fly over Seaton's to the back end of the incoming weeks, to capture anything coming down the Bann towards the BW.

Date	Site	CEFAS toxin	Biovolume mm3/l	WHO Alert level
16/7/24	Reas Wood	<LOR*	333	Level 2
16/7/24	Seaton's Marina	<LOR	0.13	None

Date	Site	Chlorophyll	Lateral flow pilot testing	Phytoplankton	Visual
23/7/24	Reas Wood	90 ug/l (230ug/l the previous week)	No toxicity detected	Large amount of <i>Microcystis</i> , large reduction from last week.	Evidence all along BW shoreline. But less than previous week. No blue patches evident as previous week and not as vividly green.
23/7/24	Seaton's Marina	1.72 ug/L (low)	No toxicity detected	<i>Microcystis</i> , <i>Oscillatoria</i> and <i>Anabaena</i> present in small quantities.	No evidence in water of BG 'clumps'.
23/7/24	Castlerock	n/a	n/a	Diatom bloom	Nothing visible
23/7/24	Portstewart	n/a	n/a	Small amount of <i>Microcystis</i> and a diatom bloom.	Nothing visible

*<LOR for both dissolved toxins and intracellular toxins, below limit of detection.

Weekly Sampling graphs



■■■ advised against bathing @Rea's Wood last week due to high biovolume, less this week although visually it's still there. ■■■ getting data onto systems had been an issue, DSD pitching new ways of collecting raw data, so staff so clean it themselves and process the data quicker.

no reports of toxicity from CEFAS so far, this is being confirmed by the lateral flow testing. Keen to take forward plans to set up inter-agency protocol group – **AP4**. QUB likely to have funding for researching a genetics piece around Lough Neagh, can be discussed further at the monitoring meeting.

AFBI Update

likely to see a PhD on phytoplankton genetics coming on board. No staff out on Lough Neagh this past week as they were on Lough Erne, nothing new to report from there. had a constructive meeting with regard to data management, progress being made. received photos of flight over Lough Neagh which was shared with the group – apparent that prevailing winds and wind shear are influencing what is happening on the surface. some evidence to show that wind force and preceding days wind are likely responsible for bioaccumulations on the eastern side of the lough.

buoy @Rea's Wood indicating that temperature increases are related to surface blooms. to engage with NED in relation to consents/ permissions in respect of commissioning monitoring instrumentation in Lough Neagh – **AP5**.

Issues arising

Keen to get more photography in as this year has been very poor so far in relation to 2023. currently working with – potential for 4 projects, wants to ensure there is no duplication of work and that proposed work is consistent with policy. Thematic boards are currently evaluating projects, hope to commission end of August or start of September so that some assessment can be carried out before the end of the blooms. has an E&I capital bid for equipment to undertake high resolution monitoring work on rivers, would like to progress the procurement of the equipment whilst waiting on sign off. the CSAO position on the selection of projects is that those with high ministerial priority are likely to be commissioned. added that has already begun a scoping exercise with a view to proceeding with procurement.

grateful to the group for the invitation to the meeting, thanked everyone for their ongoing diligence and hard work to get to this point and keen to support new initiatives going forward.

Prioritisation and resourcing

N/a

Communications

high level of interest since the ministerial launch of the Lough Neagh plan. need to coordinate the outcomes of previous meetings with delivery partners so that they dovetail with the planned stakeholder events. may need to revisit the strategic comms strategy and pick up again with. asked if we needed to do more around engagement this year as we currently have a plan and a report going forward? Keen to proceed with a piece around meeting the needs of community/ interest groups to keep them informed. important to ask community /interest groups for their input into what they would like to see, rather than make assumptions.

AOB

current update – biovolume for Rea's Wood still very high, at alert level 2.

– Lower Bann site @Toome highest of all the Lough Neagh rivers. – will be out on the Lough next week and will provide the AFBI update for next meeting.

█ need to allocate an hour for the meeting going forward due to range of issues being covered.

ACTION POINTS/OFFICIAL RESPONSIBLE/TARGET DATE:

- **Action 1.** █ to liaise with DFI to seek further information on timings of the closing/ opening of the Toome flood gates.
- **Action 2.** █ to ask Martin Moore to promote new interactive BGA map on social media once he comes back from annual leave.
- **Action 3.** █ & █ to agree a process for responding to Bloomin algae notifications (out of hours/ weekends) and sharing of information in relation to BGA Protocol.
- **Action 4.** █ & █ to bring forward plans to set up inter-agency protocol group.
- **Action 5.** █ to engage with NED in relation to consents/ permissions in respect of commissioning monitoring instrumentation in Lough Neagh.

Minutes written by:

█

Date:

25th July 2024



OFFICIAL DAERA MINUTES

MEETING TITLE	TCG Blue-green Meeting
DIVISION/BRANCH REFERENCE	TCG BG Meeting #10
VENUE	MS Teams
DATE/TIME	1 st August 2024, 14:30 - 15.30
LIST OF ATTENDEES	(EMFG), (NIEA), (NIEA), (EMFG), (EMFG), (EMFG), (NIEA), (NIEA), (CSAO), (DAERA), (NIEA), (NIEA), (NIEA), (AFBI), (AFBI), (AFBI), (DAERA), (DAERA)
APOLOGIES	
KEY POINTS DISCUSSED	<u>Minutes and actions of previous meeting</u> • Action 1. [REDACTED] to liaise with DFI to seek further information on timings of the closing/ opening of the Toome flood gates – Complete. • Action 2. [REDACTED] / [REDACTED] to ask [REDACTED] to promote new interactive BGA map on social media once [REDACTED] comes back from annual leave – Carried Forward. • Action 3. [REDACTED] & [REDACTED] to agree a process for responding to Bloomin algae notifications (out of hours/ weekends) and sharing of information in relation to BGA Protocol – Complete. • Action 4. [REDACTED] & [REDACTED] to bring forward plans to set up inter-agency protocol group – Complete. • Action 5. [REDACTED] to engage with NED in relation to consents/ permissions in respect of commissioning monitoring instrumentation in Lough Neagh - Carried Forward. [REDACTED] DFI to send out a daily e-mail outlining information on the levels in the Lough, update will include status of the flood gates, will ask to include bathing waters in the notification e-mail. May be useful over time to compare with monitoring data in the Lower Bann. [REDACTED] on annual leave, has sent an e-mail to [REDACTED] with a request to promote new interactive BGA map on social media once [REDACTED] comes back from leave – AP1. <u>NIEA Update</u> 102 confirmed reports of blue green algae from 46 unique locations (up to and including 31/07/2024).

Additional 24 reports this week.

Locations blooms reported for the first time.

- Hillsborough Park Lake
- Lower Bann – Coleraine
- Lower Lough Erne - Boa Island
- Lower Lough Erne - Kesh
- Lough Neagh - Rea's Wood - Six Mile River slip
- Six Mile Water - Antrim
- Upper Lough Erne - Carrybridge

FMA FI team continue to monitor temperature and dissolved oxygen at six inflowing river sites around Lough Neagh. The buoy located at Rea's Wood continues to record Temperature, Conductivity, turbidity, dissolved oxygen and Phycocyanin (Blue Green). A solution for telemetry has been added and is currently in trial. It is hoped that this will provide real time data (hourly) with the capability of adding trigger/warning levels.

Site meeting offered with Ligoniel Improvement Association re the BG in Wolfhill Dam a high recreation site in North Belfast.

once telemetry is up and running it will start giving results every hour on the hour. hopeful that telemetry will be useful to ground truth work being done on the ground by EMFG.

queried how live data might be used in terms of a practical response. Protocol response will remain the same.

increased correspondence regarding Lough Neagh/ Lower Bann, what advice can we give to use recreational users looking for testing?

& both agreed that there would be an expectation to do more testing now given the extra funding despite the lag to put resources in place.

would like to bring councils on board and utilise any resource that they can provide. of the opinion that a greater number of sites need monitored and it may be better to release information on Seaton's Marina into the public domain as we may receive an FOI for it regardless. only person capable of doing bio-volumes at present, may be a possibility to contract out some of the work.

to ask QUB if they have manpower to do some of the toxin analysis. toxicity is main issue/ risk for recreational users, would like to be able to signpost them to labs that can do toxicity testing.

will there be an issue if QUB is not accredited, have they any plans to seek accreditation?

toxicity testing is complex and potentially 1 year away from having the capability to carry out large scale toxicity testing.

ELISA machine is showing positive results, still work ongoing on calibrations, the system is not plug and play but working towards large scale testing.

would like to explore if there is any capacity in ROI to undertake Biovolume analysis or toxicity testing.

asked about reliability of lateral flow tests, tests are expensive, but finance is available and therefore a secondary issue, tests are informative in terms of presence/ absence. keen to compile a list of labs capable of undertaking the work.

DWI update – [REDACTED] NI Water send toxin samples to England but there is a very slow turnaround, will be sending samples weekly going forward to speed up the process. NIW have gone out to tender for equipment to allow in-house toxin analysis. [REDACTED] of the view that method will take a year for training and calibration before becoming fully operational. Currently no reports of complaints in respect of taste and odour associated with BGA.

EMFG Update

Reas Wood Sampling Week beginning 29/7/24.

Drone flights for both RW and Seaton's complete for 23/7/24 and 16/7/2. Flight from 29/7/24 shows the bloom has increased at Reas Wood and around the sand bar. At Seaton's Marina the bloom is not visible from the air but suspended in the water. [REDACTED] flight on 31/7/24 confirms this.



Date	Site	CEFAS toxin	Biovolume mm ³ /l	WHO Alert level
23/7/24	Reas Wood	<LOR*	68.9	Level 2
23/7/24	Seaton's Marina	<LOR	0.02	None

Date	Site	Chlorophyll	Lateral flow pilot testing	Phytoplankton	Visual
29/7/24	Rea's Wood	120(90)ug/l the previous week)	Nd	Large amount of Microcystis and Anabaena large increase from last week.	Evidence all along BW shoreline. But less than previous week. No blue patches evident as

					previous week and not as vividly green.
29/7/24	Seaton's Marina	3.38 ug/L (doubled from last week but still low)	nd	<i>Microcystis</i> , <i>Oscillatoria</i> and <i>Anabaena</i> present in small quantities.	Patches along the side.

29/7/24	Castlerock	n/a	n/a	Diatom bloom <i>Microcystis</i> colonies <i>M. rubra</i> (red tide non toxic)	Nothing visible
29/7/24	Portstewart	n/a	n/a	Small amount of <i>Microcystis</i> and a diatom bloom. <i>M. rubra</i> (red tide non toxic)	Nothing visible
29/7/24	Downhill	n/a	n/a	Small amount of <i>Microcystis</i>	Nothing visible
29/7/24	Portrush Mill	n/a	n/a	None	Nothing visible

*<LOR for both dissolved toxins and intracellular toxins, below limit of detection.

MICRO

team returned BG samples to lab Fri 26th July.

Samples were lifted from both the water column and the algal mat.

All samples returned 'nd' (not detected) for the lateral flows.

However, it was noted that there was a slight fading of the test line on the RW algal mat sample the following day.

Repeat lateral flow testing on Mon 29th, again returned 'nd'.

Additional lateral flow tests for anabaena and clindrospermopsin also returned 'nd' values.

Microbiology results

Site	Date	E.coli (cfu)	IE (cfu)
RW	26/07/2024	410	70
Seaton's Marina	26/07/2024	130	20
RW	29/07/2024	1600	5
Seaton's Marina	29/07/2024	740	50

Area 1,2 Bathing water being sampled Fri 2nd August.

■■■ SAG Group stated that we need toxicity testing here in NI, currently working with AFBI, QUB & NI Water to build up capacity.

■■■ Drone flights continue each week at Seaton's Marina and Rea's Wood, imagery being affected by cloud cover.

■■■ Biovolumes are into alert Level 2, advising against bathing, North Coast beaches still clear at present but operators have been put on alert. Need to be sure to liaise with council press offices before releasing statements.

■■■ gave an example of a sample left in the lab at room temperature for between 24 and 36 hours, very high levels of toxins were observed in a very short time frame.

■■■ keen to keep measuring lateral flow tests against results coming back from CEFAS.

AFBI Update

AFBI carried out further Phytoplankton surveys on the Lough this week. AFBI staff were out this week on the boat and around the shoreline with the Fluoroprobe, as you can see the levels of algae are very high at the minute, particularly around Rae's wood and Toome. See current data set and photographs below.



Lough Neagh
Phytoplankton data 0'



Algae at Lough Neagh



Algae Rea's Wood

Issues arising

█ Met last week with █ carried out previous work around Covid in wastewater – may be an option use DNA analysis to determine species composition.

█ QUB genetics project important for understanding the evolution of blooms in the long term, QUB have done some work on species composition at Rea's Wood.

█ there are several proposals now to be evaluated by external reviewers, █ looking at possibility of removing plant material from waterbodies.

█ going to thematic boards at end of August, █ still waiting on approvals alongside AFBI, █ to engage with NED in relation to consents/ permissions in respect of commissioning monitoring instrumentation in Lough Neagh – **AP2**.

█ SBRI press release currently being formalised.

█ DSD work ongoing to bring data into a public facing portal. AFBI project for Lough Neagh in development.

█ and █ still keen for lateral flow testing to be rolled out as a rapid assessment technique for recreational users to give reassurance to the public.

lateral flow tests still take an hour to complete and need to be done in lab conditions by a trained operator.

would like to explore training EHS staff in councils and utilise that resource.

need to invite all councils and not just those connected to Lough Neagh given that the prevalence of BGA.

not just as easy as covid test, would require somebody with lab experience, a clean room and some training but could work.

need to escalate outcome of TCG group to senior management and inform Civil Contingencies for now.

Biovolumes at Rea's Wood currently at Alert level 2, may need to escalate further if material becomes present on beaches.

queried what the final plan would be in respect of lateral flow testing, and to discuss availability and possible procurement offline and report back to group – **AP3**.

need to ascertain the capacity of the lab for testing samples, need to purchase more tests and require resource to undertake sampling.

the company that make the tests, Gold Standard could possibly provide training at a cost. would like to include the councils in any potential training.

would like to see casual staff recruited over the summer months to undertake testing with timely results being relayed to recreational users.

there are specific readers that can help to interpret results of the test and may even provide concentrations.

would be keen to get the tests bought now and be seen to be making progress, i.e. qualitative results to start with.

to arrange another meeting next week ahead of the Monitoring Meeting – **AP4**.

Prioritisation and resourcing

N/a

Communications

aware that there is increased media interest and need to be seen to be on top of the issue. AFBI interview will go out on BBC, Friday 2nd August.

AOB

N/a

ACTION POINTS/OFFICIAL RESPONSIBLE/TARGET DATE:

- **Action 1.** to confirm if is to promote new interactive BGA map on social media once he comes back from annual leave.
- **Action 2.** to engage with NED in relation to consents/ permissions in respect of commissioning monitoring instrumentation in Lough Neagh.
- **Action 3.** and to have an offline discussion on availability of lateral flow testing and if they can be purchased, then report back to the group.
- **Action 4.** to arrange a meeting next week ahead of the Monitoring Meeting.

Minutes written by:

Date:

1st August 2024



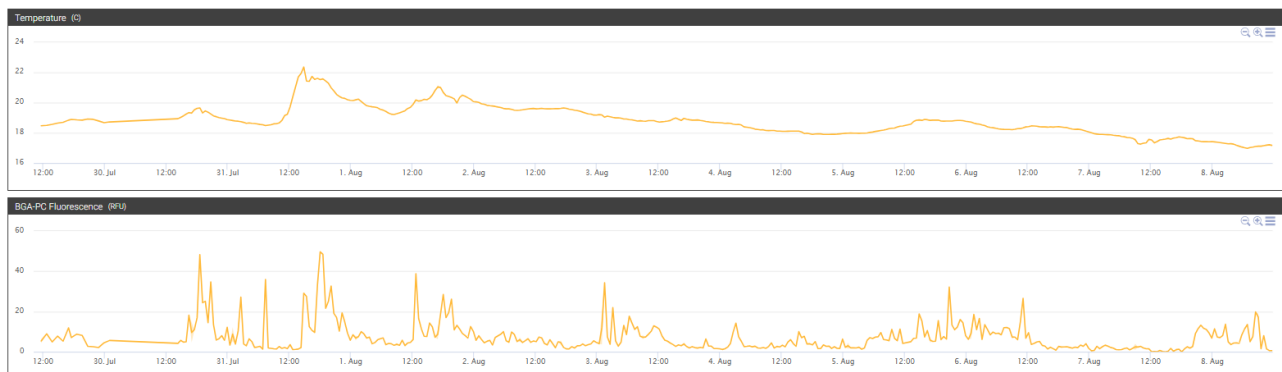
OFFICIAL DAERA MINUTES

MEETING TITLE	TCG Blue-green Meeting
DIVISION/BRANCH REFERENCE	TCG BG Meeting #11
VENUE	MS Teams
DATE/TIME	8 th August 2024, 14:30 - 15.30
LIST OF ATTENDEES	(EMFG), (NIEA), (EMFG), (NIEA), (EMFG), (NIEA), (NIEA), (NIEA), (NIEA), (AFBI), (AFBI), (AFBI), (CSAO), (NIEA), (NIEA)
APOLOGIES	(NIEA), (NIEA), (DAERA), (DAERA), (NIEA), (EMFG), (DAERA)
KEY POINTS DISCUSSED <u>Minutes and actions of previous meeting</u> • Action 1. to confirm if is to promote new interactive BGA map on social media once comes back from annual leave – Complete. • Action 2. to engage with NED in relation to consents/ permissions in respect of commissioning monitoring instrumentation in Lough Neagh – Carried Forward. • Action 3. and to have an offline discussion on availability of lateral flow testing and if they can be purchased, then report back to the group – Complete. • Action 4. to arrange a meeting next week ahead of the Monitoring Meeting – Carried Forward. <u>NIEA Update</u> <u>FMA</u> Monitoring buoy at Reas wood is now set up with telemetry initially feeding data weekly now hourly as of this week. Annex A below has a data screenshot. Total confirmed BG reports now 127 from 57 unique locations New locations since 31/7/24 Lough Neagh Gawleys Gate Lough Neagh Castor Bay Lough Neagh Derrymore Quay Lough Neagh Washing Bay	

Lower Bann Ballymoney

Lower Lough Erne Castle Archdale

McAuleys Lake



FMA Reas wood buoy telemetry data

greater spread of BGA and new reports on the Lower Bann outside Ballymoney. now receiving an hourly data feed from the telemetry coming from the data buoy. will start receiving dissolved oxygen data next week once the DO is up and running. keen to get access to the real time data coming from the buoy. supply with log in details to access telemetry data – **AP1**.

asked if there are any plans to share that information with the public? the telemetry is in a very early stage and just up and running but will consider sharing publicly once he is happy that the system is fully operational.

Phytoplankton samples from the lough are showing very little in the 5m & 10m samples with the vast majority being concentrated on the surface, therefore the current surface sensor should be sufficient for monitoring purposes.

large algal mats are interspersed throughout more clear areas of the lough.

there is an opportunity for the department to share data more openly, also keen for access to telemetry data will look at opening some new accounts for others to have access to the telemetry data.

asked if public sharing of data should include everything or be selective?

stressed that the data will be for trend analysis only and should not necessarily focus on the raw data figures.

referenced the Great Lakes science platform where users can click on a GIS map showing the buoy network and click into any location and get the most up to date sampling point and information – in the long term a similar system may help to reduce information/ data requests from the public.

DSD Project aiming for some functionality by mid/ late Autumn, but there is also a risk they may not be able to deliver until next Spring.

Hydrosphere and Xylem can be integrated into a data sharing platform, currently it is fragmented but it can be brought together through the E&I Project into a more encompassing platform to make the systems compatible.

to liaise with & DSD regarding Phase 2 development.

will seek clarification from DSD regards potential timeframes for development – **AP2**.

keen to get more information out into the public arena, requires time to pilot test the system initially, needs to come with the caveat that the purpose is for trend analysis.

Catchments Team met with site operators at Ligoniel. It was a positive meeting – we went through the protocol and suggested dip sticks. Followed up by email.

■ increased correspondence and Lough Neagh Sailing Club had a query in respect of risk assessments.

■ stakeholder at Ligoniel Dam were appreciative of the engagement – bloom had lasted for two weeks but was now gone. Had sought advice on carrying out visual assessments and content to follow the guidance.

■ concerns over dead Otter at Newferry – feels Veterinary Science are reluctant to do autopsies on anything outside of TB and won't fall under disease surveillance.

■ believes NED have an agreement with VSD but may not be an established methodology to consider such cases, if there was an opportunity to send fallen animals to CEFAS for toxin analysis that would be quite useful.

■ keen to liaise with NED on this is possible as it could potentially become an issue with implications for other wildlife – ■ to discuss with NED colleagues.

■ spoke to Lough Neagh Partnership but unable so far to be able to verify details of the photograph.

■ had further contact with DFI regarding Toome flood gates, there is a possibility to have some staff added to a What's App Group detailing updates of situation with the gates and the lough levels etc.

■ WQI will be monitoring Lower Bann Friday 9th and will be keeping a watching brief at locations further down the system closer to the coast.

DWI Update: Monitoring of raw and final waters by NI Water ongoing; currently no issues of blue-green algae affecting drinking water quality reported. NI Water only test for Microcystin-LR and not ~~for Anabaena~~ other algal toxins such as anabaenopeptins. NI Water currently investing in LCMS method but will take 12 months to get up and running and accreditation, likely only be suitable for use with drinking water samples.

EMFG Update

Advice against bathing remains in place at Rea's Wood. North Coast bathing water monitoring continues but no presence of Blue Green as yet. Bathing water operators have been advised to be vigilant and have put up Vigilance Posters.

■ Still no toxins being reported by CEFAS or on lateral flows.

■ report of BGA on Downhill unconfirmed.

■ tried to find additional labs in ROI for toxin analysis, they either had no resource or were already using CEFAS themselves.

■ has been in contact with a University in Netherlands that can carry out quantitative analysis at a competitive price, approx. 150 Euros per sample. Seeking clarification on turnaround times. ■ to add details to document in CM - AE1/24/1608704

■ any E&I project to deliver toxin analysis in NI will require discussions with NI Water.

■ equipment currently exists within VSD, needs to be resourced and need to avoid duplication.

■ may be implications for NI Water, may be unable to utilise equipment for algal samples if it is required for sampling clean water.

■ Lab in Netherlands and CEFAS are the most favourable options at present whilst waiting on local capability which will come in time.

Reas Wood Sampling Week beginning 5/8/24.

Drone flights for both RW and Seaton's complete for 5/8/24 and being processed today.

Date	Site	CEFAS toxin	Biovolume mm3/l	WHO Alert level
29/7/24	Reas Wood	<LOR*	356	Level 2
29/7/24	Seaton's Marina	<LOR	0.07	None

Date	Site	Chlorophyll	Lateral flow pilot testing	Phytoplankton	Visual
2/8/24	Reas Wood Bathing	Unable to analyse due to thickness	>10ppb	-	Very thick scum, very green
2/8/24	Seaton's Marina	-	nd	Large amount of <i>Microcystis</i> .	Signs of BG mid-stream & evident on slip at marina
2/8/24	Castlerock	n/a	n/a	1 large colony of <i>Microcystis</i>	Nothing visible
2/8/24	Portstewart	n/a	n/a	3 small colonies of <i>Microcystis</i>	Nothing visible
2/8/24	Downhill	n/a	n/a	2 small colonies	Nothing visible
2/8/24	Portrush Mill	n/a	n/a	1 small colony	Nothing visible
5/8/24	Reas Wood Bathing	106 (120)ug/l the previous week)	nd	Large amount of <i>Microcystis</i> and <i>Anabaena</i> large increase from last week.	Evidence all along BW shoreline. But less than previous week. No blue patches evident.
5/8/24	Seaton's Marina	9.1 ug/L (1.7-9.1 in 2 weeks)	nd	<i>Microcystis</i> , <i>Oscillatoria</i> and <i>Anabaena</i> present in large quantities.	Patches along the side.
5/8/24	Castlerock	n/a	nd	Diatom bloom No Cyanobacteria	Nothing visible
5/8/24	Portstewart	n/a	n/a	Diatom bloom No Cyanobacteria	Nothing visible
5/8/24	Downhill**	4.64 ug/L	n/a	Small amount of <i>Microcystis</i>	Algae on beach was freshwater plants
5/8/24	Portrush Mill	n/a	n/a	Diatom bloom No Cyanobacteria	Nothing visible

5/8/24	Magilligan	n/a	n/a	Diatom bloom No Cyanobacteria	Nothing visible
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*<LOR for both dissolved toxins and intracellular toxins, below limit of detection.

** WR 1/24/0505 Any sample with suspected Cyanobacteria will be analysed for chlorophyll.

MICRO

- BW team returned BG samples to lab Mon 5th Aug.
- Samples were lifted from both the water column and the algal mat.
- All samples returned 'nd' (not detected) for the lateral flows.
- Additional lateral flow tests for anabaena also returned 'nd' values.



Drone images from Rea's Wood on Monday 5th August.

AFBI Update

Chlorophyll levels in the middle of the lough haven't changed much these past two weeks. However, the amount of BGA coming down the Lower Bann at the outlet of the Lough has increased significantly, Chlorophyll readings at the start of July were 3.1 micrograms per litre, end of July 45.6 micrograms per litre, 6th August – 65 micrograms per litre, now at its highest level.

starting to see the emergence of a benthic algae coming through, likely due to increased clarity and light penetration.

shared a photo of gelatinous toxin producing algae currently being picked up by the AFBI Fisheries Team carrying out benthic trawls.

would like to send a sample away to confirm identification of the species.

confirmed it was very similar to samples observed on the North Coast in 2023 and asked if she could possibly get a sample to look at herself? should be possible to share images from the microscope for comparison.

no need at this stage to make any changes or reference in the Latest News section.

Issues arising

thanked colleagues in AFBI, EMFG & FMA working towards a single output and aiming to keep everyone aligned as much as possible.

thematic board chiefs might choose to commission a project slightly ahead of schedule but would keep the group informed of progress.

expects panel of experts to provide a robustness in defending the merits of any project that does get commissioned.

Prioritisation and resourcing

N/a

Communications

increased media interest especially since the Otter story on social media and the release of the QUB paper.

also been a recent query in relation to the functioning of the Toome flood gate. Aware that it is in the remit of DFI but will require some thinking to cultivate a considered response to the query.

may be possible for some flows to be manipulated and there could be discussions around that, although the opportunity to do that might present itself better at Portna lock.

aware that Fisheries colleagues have had successful discussions with DFI in the past around management of Toome gates in relation to the passage of Eels and Salmon.

SBRI now live, upcoming event next week including a webinar - to give a presentation Wednesday 14th 10.30-12pm and would like some staff to volunteer their expertise in helping to answer queries or specific scientific questions that may arise during the event.

one company has already asked for details of nutrient concentrations in the lough.

stressed the need to present a professional approach to stakeholders and media.

event will include information on how to apply and follow up FAQ's.

asked if a proposal is put forward for a location outside of Lough Neagh itself will it be considered? Phase 1 will focus on the concept of dealing with BGA in the first instance and will be open people to propose and generate feasible ideas. if a proposal has merit it also has to meet the criteria. If proof of concept comes from outside of Lough Neagh, then it must have scalability. need for some experts information event to at least provide

holding answers but wants to show a clear commitment that DAERA are serious about addressing the issue through SBRI. Detailed responses can be provided after.

■ must have close involvement with NED in relation to Habitat Regulations Assessments. ■ for these types of events it can be hard to prepare for questions in advance, there would be merit suggesting that those planning on attending the event might want to submit some preliminary questions in advance so it could be possible to have an idea of some common themes that are likely to be raised.

■ keen to flag the Scottish guidance around BGA with the Public Health Agency and see if they might want to adopt some of that as it may help to evolve the BGA protocol and help to implement risk assessments. ■ committed to reviewing protocol in 2025.

■ has been engagement with EPGNI, keen for more input from local councils and pushing for a link to PHA advice with respect to specific health conditions.

■ Scottish guidance is comprehensive hopes the Emergency Preparedness Group take on the task as part of a bigger piece which will be helpful to both councils and NIEA.

■ aware there is a greater focus on Public Health considering QUB report, need to formulate lines to take with respect to Otter ASAP.

AOB

N/a

ACTION POINTS/OFFICIAL RESPONSIBLE/TARGET DATE:

- **Action 1.** ■ to supply ■ with log in details to access telemetry data.
- **Action 2.** ■ will seek clarification from DSD regards potential timeframes for development of data sharing platform.
- **Action 3.** ■ to engage with NED in relation to consents/ permissions in respect of commissioning monitoring instrumentation in Lough Neagh
- **Action 4.** ■ to arrange a meeting next week ahead of the Monitoring Meeting.

Minutes written by:

■

Date:

8th August 2024



OFFICIAL DAERA MINUTES

MEETING TITLE	TCG Blue-green Meeting
DIVISION/BRANCH REFERENCE	TCG BG Meeting #12
VENUE	MS Teams
DATE/TIME	15 th August 2024, 14:30 - 15.30
LIST OF ATTENDEES	(NIEA), (NIEA), (NIEA), (EMFG), (EMFG), (EMFG), (NIEA), (NIEA), (NIEA), (AFBI), (AFBI), (AFBI), (NIEA), (NIEA), (EMFG), (NIEA) (EMFG), (DWI), (CSAO), (DAERA), (DAERA), (DAERA), (NIEA)
APOLOGIES	
KEY POINTS DISCUSSED	<u>Minutes and actions of previous meeting</u> • Action 1. to supply with log in details to access telemetry data -Complete. • Action 2. will seek clarification from DSD regards potential timeframes for development of data sharing platform-Carried Forward. • Action 3. to engage with NED in relation to consents/ permissions in respect of commissioning monitoring instrumentation in Lough Neagh-Carried Forward. • Action 4. to arrange a meeting next week ahead of the Monitoring Meeting-Carried Forward – to check calendar for meeting date. <u>NIEA Update</u> <u>FMA</u> <u>150 reports from 67 locations</u> <u>New locations</u> <u>Mount Stewart Lake 09/08/2024</u> <u>Lower Lough Erne – Lusty Beg Island 14/08/2024</u> <u>Lower Lough Erne – White Island 11/08/2024</u> <u>Camlough, Newry 11/08/2024</u> <u>Lough Neagh – Castle Bay 11/08/2024</u> <u>Lough Neagh – Ardboe 11/08/2024</u>

Lower Bann - Gortgole Forest 12/08/2024

Lower Bann - Ferrystown 10/08/2024

Lower Bann - Seaton's Marina 08/08/2024

Lower Lough Erne - Crevinshaughy Island 12/08/2024

Lower Neagh – Farsnagh Point 13/08/2024

confirmed reports of BGA mainly in Lough Neagh, but some around Lough Erne. was at Newferry on Sunday and will forward photos of BGA bloom.

there has been a drop of this week in the amount of BGA being picked up.

BGA is moving away from Reas Wood, zero Reactive Fluorescence Units recorded this week. While on site visits collecting biomass, noted western shore of Lough Neagh and Sixmile are clear this week.

pictures from drone earlier in the week, show location of BGA, due to prevailing wind. number of BGA queries over weekend was 7, last weekend the number was 5. BGA heading down Lower Bann.

Catchments Team

SBRI launched this week.

SBRI should reduce correspondence. Process to be agreed with Private Office, standard response to be prepared.

at SBRI launch there were a few questions on chat asking if fund related to in lake management or is it focused on a catchment-based approach.

also at SBRI launch, query on QUB cyanotoxin paper, are we testing for this in drinking water?

DWI do carryout research on cyanotoxins. to send paper round- **AP2**.

DWI Update

Monitoring by NI Water ongoing; currently no issues of blue-green algae affecting drinking water quality reported. Research published by the Drinking Water Inspectorate in Eng & Wales - [Cyanotoxins in Raw Surface Waters](#).

EMFG Update

biovolume at Reas Wood and Seatons marina at level 2. Nothing on North coast beaches. Table of toxins from CEFAS on 2nd August show alert levels. Samples collected on the 5th and 12th August are not showing same toxicity. Charts with chlorophyll, dropping off more recently. Micro results ok. River levels inserted for interest. Drone shots from Reas Wood and Seatons marina earlier this week, show BGA being driven by wind currents and ebb and flow.

cyanolakes app shows the bloom sitting offshore. westerly winds will force bloom into shore.

SBRI query if NIEA would collect 1000l sample and carry out analysis, answer to query would be no. A lot of interest in NIEA data.

need to ensure consistency of provision of information requests relating to SBRI.

have received two information requests on BGA, requesting minutes of meetings. From talking to regarding inter agency meetings, has taken out list of attendees and saved as a working document in CM.

must ensure notes / minutes are finalised each week.

internal investigations can be withheld from EIR, if request is external cannot withhold information.

will need to request an extension for large requests.

may also need to request an extension on subs for Private Office.

BGA meeting last year didn't start until 18th August. Have started weekly BGA much earlier this year.

query if we should Tweet images of what BGA looks like on the coast, as algae takes on a different appearance.

do not add images on Twitter until EMFG pick up algae on coast. Staff are out regularly, and message will be put out if occurs.

two drone surveys, Barr mouth, Seaton's Marina and Portstewart, no evidence of BGA. Nothing noted today.

MICRO

BW team returned BG samples to lab Mon 12th Aug.
 Samples were lifted from both the water column and the algal mat.
 All samples returned 'nd' (not detected) for the lateral flows.
 Additional lateral flow tests for anabaena also returned 'nd' values.

Microbiology results **Have not been QC checked**

Date	Site	E.Coli	IE
06/08/2024	SM	4200	190
06/08/2024	RW	5	10
06/08/2024	RW Riv	260	190

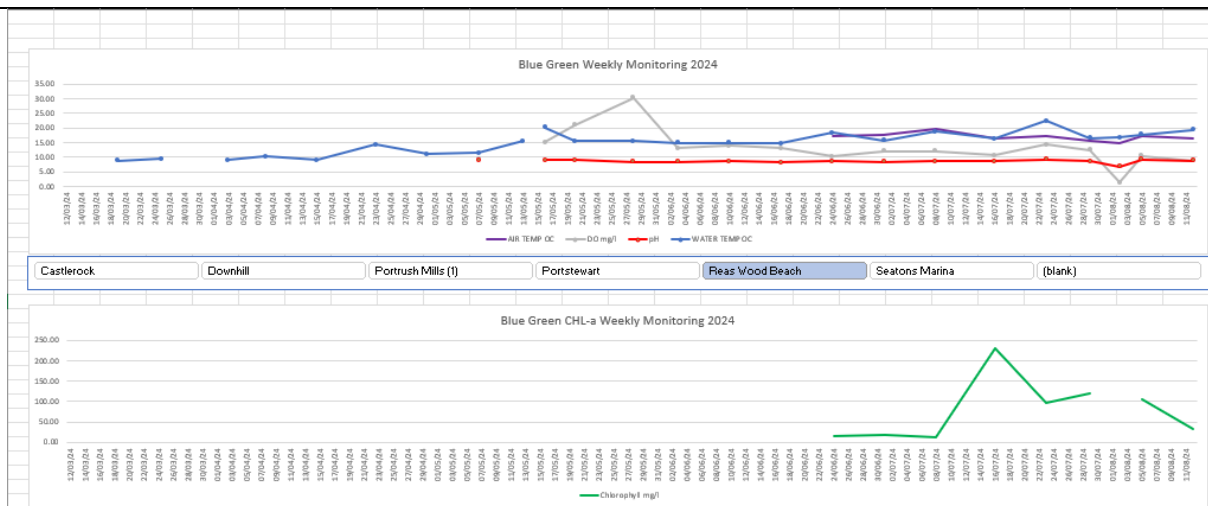
Micro was lifted 14/08/24, results not confirmed, but no failures of BW limits.

Reas Wood Sampling Week beginning 12/8/24.

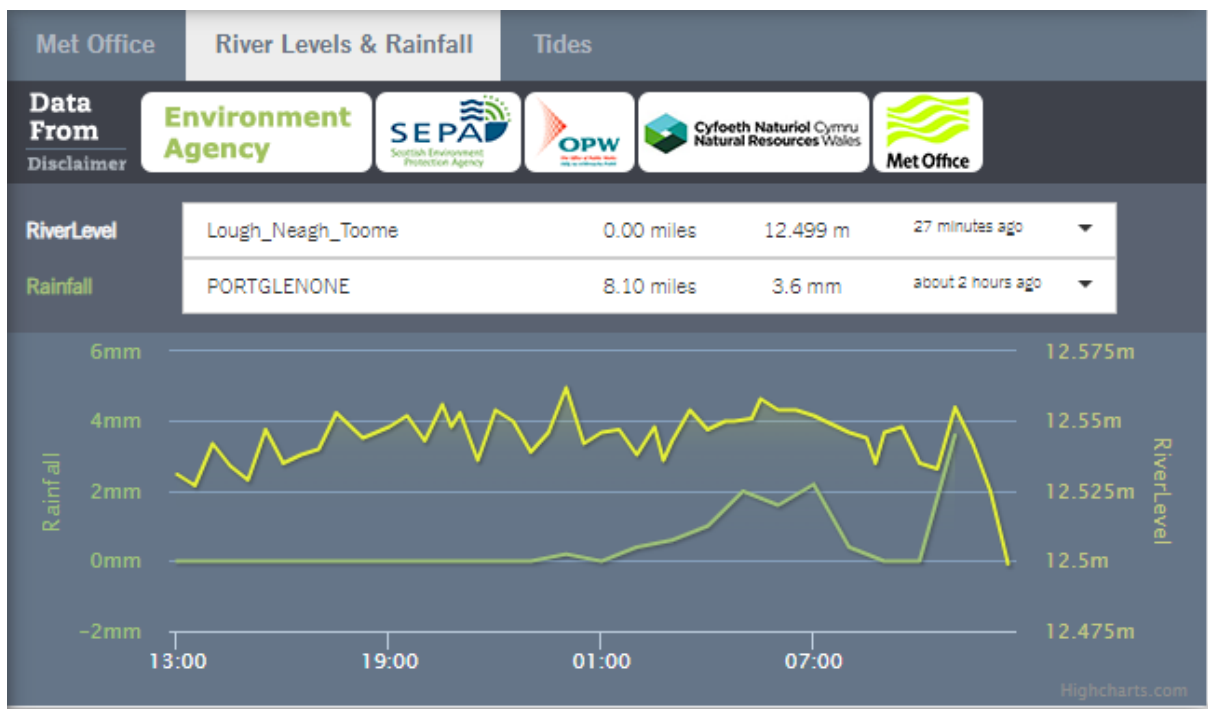
Drone flights for both RW and Seaton's complete for 12/8/24.

Date	Site	CEFAS toxin	Biovolume mm3/l	WHO Alert level
5/8/24	Reas Wood	<LOR*	187	Level 2
5/8/24	Seaton's Marina	<LOR	0.78	None
12/8/24	Reas Wood	<LOR	208	Level 2
12/8/24	Seaton's Marina	<LOR	94	Level 2

Date	Site	Chlorophyll	Lateral flow pilot testing	Phytoplankton	Visual



Reas Wood weekly chart





Drone flight over Seatons Marine 12/08/24





Drone flight over Reas Wood & Six Mile River input 12/08/24

AFBI Update

██████████ samples collected, no chlorophyll data yet. Fluoroprobe results available. Results from June and July this and last year compared. Halfway through BGA season, blooms were still seen in September last year.

██████████ shared screen. Long periods of settled weather have been less frequent this year.

██████████ concentration of BGA is mostly on surface. Chlorophyll data available later in week. Buoy data shows BGA tailing off.

██████████ 2nd August seen biggest BGA result, weather is due to become more settled.

██████████ rainfall levels have been up and Lough gate opened.

██████████ last page of website mentions SBRI and BGA at Reas Wood, should this be updated?

██████████ worth updating webpage, if BGA is present in lough, where it appears depends upon wind conditions.

██████████ map on webpage updated on a weekly basis, each Friday.

██████████ AFBI biomass sampling by ██████████ for characterisation with a view to anaerobic digestion or disposal. Update list of all sampling ongoing. **AP 3**

██████████ collecting biomass / scum / macrophytes. The macrophytes are a good important part of ecosystem. Data needs to be brought together within one hub or dashboard.

██████████ has been involved in lifting and identifying alien and native species of macrophytes around Lough Neagh. Samples of filamentous algae. Project is in its infancy, identifying natives, pests and aliens. Purpose of project to identify opportunities in algae.

██████████ Inland Fisheries proposed using a harvester to collect scum, NED would not permit this.

██████████ ██████████ project and SBRI is this being looked at. ██████████ to talk to ██████████ and chief Scientist Office. **AP 4**

Issues arising

Prioritisation and resourcing

N/a

Communications

■■■■ two activities. Ecology team out with ■■■■ (BBC), fauna and fisheries piece to camera, to air tomorrow night. ITV plankton community change and overall cyanobacteria, tools used for detection. ■■■■ to chase when article will be aired / published. **AP 5**

■■■■ interest in QUB paper, Nolan programme on otter death and carrying out postmortems. Stakeholder meeting tomorrow, DAERA communications officer to attend. What message do we wish to deliver on BGA and how we go about this. Possible dates for events 2nd, 9th, 16th October.

■■■■ draft terms of reference for BGA group to be circulated with minutes

AOB

N/A

ACTION POINTS/OFFICIAL RESPONSIBLE/TARGET DATE:

- **Action 1.** ■■■■ to update meeting invites from thirty minutes to one hour to allow calendar management.
- **Action 2.** ■■■■ DWI do carryout research on cyanotoxins. ■■■■ to send paper round.
- **Action 3.** All Update list of all sampling ongoing.
- **Action 4.** ■■■■ to talk to ■■■■ and Chief Scientist Office.
- **Action 5.** ■■■■ to chase when article will be aired / published.

Minutes written by:

■■■■■

Date:

15th August 2024



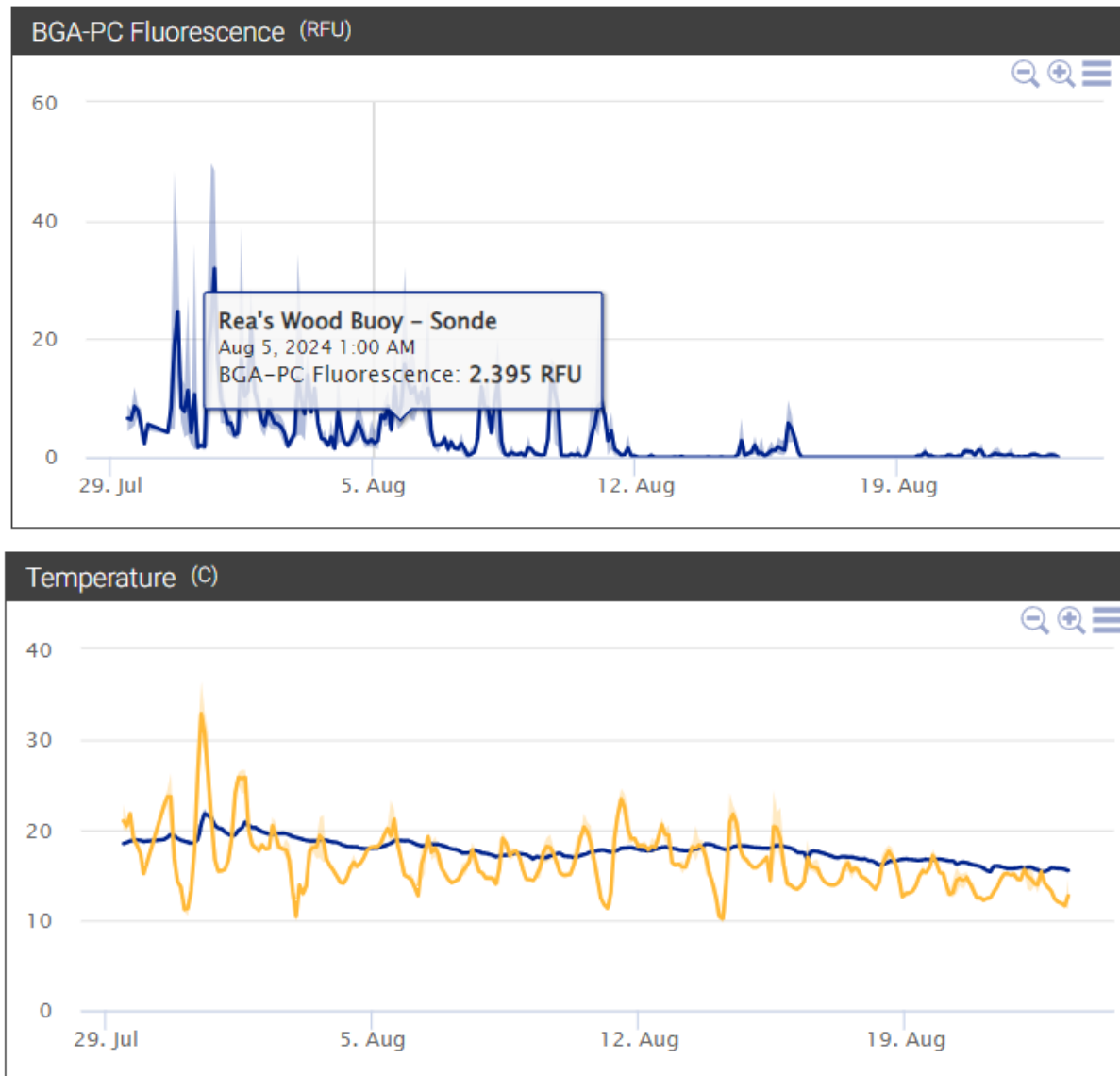
OFFICIAL DAERA MINUTES

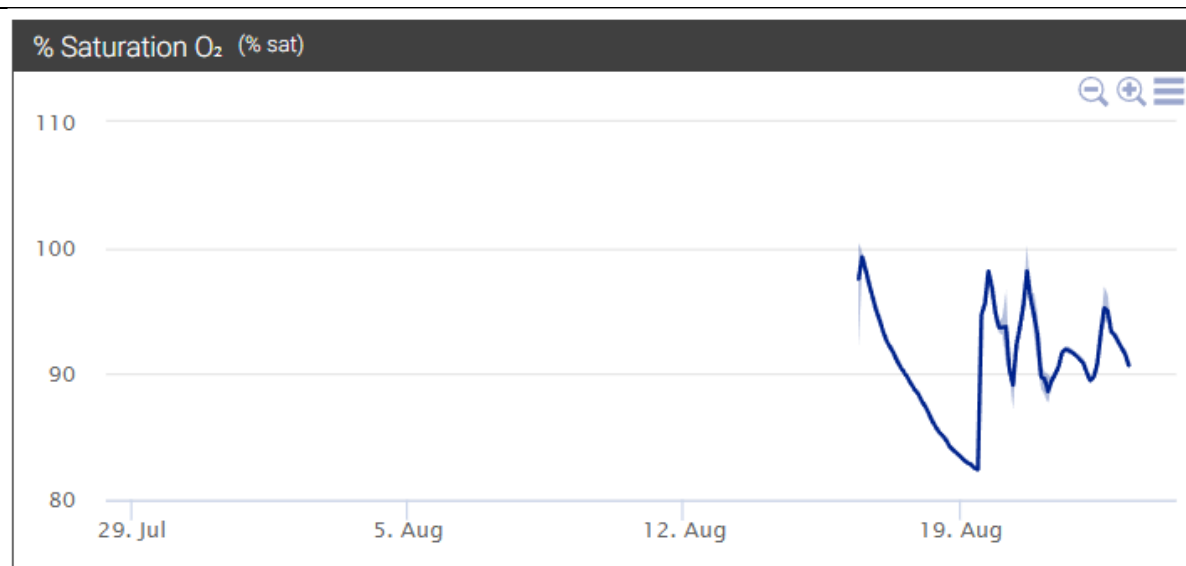
MEETING TITLE	TCG Blue-green Meeting
DIVISION/BRANCH REFERENCE	TCG BG Meeting #13
VENUE	MS Teams
DATE/TIME	22nd August 2024, 14:30 - 15.30
LIST OF ATTENDEES	(EMFG), (NIEA), (DWI), (EMFG), (CSAO), (EMFG), (NIEA), (NIEA), (NIEA), (AFBI), (AFBI), (NIEA), (NIEA), (EMFG), (NIEA) (NIEA), (NIEA), (EMFG), (DAERA), (DAERA), (AFBI), (NIEA)
APOLOGIES	
KEY POINTS DISCUSSED	<u>Minutes and actions of previous meeting</u> • Action 1. will seek clarification from DSD regards potential timeframes for development of data sharing platform-Carried Forward • Action 2. engage with NED in relation to consents/ permissions in respect of commissioning monitoring instrumentation in Lough Neagh-Carried Forward. • Action 3. to arrange a meeting next week ahead of the Monitoring Meeting-Carried Forward – to check calendar for meeting date. • Action 4. to update meeting invites from thirty minutes to one hour to allow calendar management. - Complete • Action 5. DWI England and Wales do carryout research on cyanotoxins. to send paper round. - Complete (added link to paper to minutes from 15/8/24 & to MS Teams chat during meeting held on 22/8/24) • Action 6. to talk to and Chief Scientist Office. – Complete (Discussion held during meeting between, and noted under issues arising). <u>NIEA Update</u> <u>FMA</u> 160 reports at 71 unique locations New reports since last week

- Clea Lakes 15/08/2024
- Lower Bann - Movanager 15/08/2024
- Lower Bann - Estuary 15/08/2024
- Lower Bann - Castleroe Wood 18/08/2024

FMA Update –

Monitoring at the offshore Rea's Wood location and the six main inflowing rivers to Lough Neagh continues. A Rugged Dissolved Oxygen (RDO) sensor was added to the sonde at Rea's wood on the 16th, measuring DOMg/L and DO%Sat. This addition caused some calibration errors, and a subsequent visit was made on the 19th to reinstall and recalibrate. All sensors are now working and transmitting hourly data as expected. See below for the latest graphs from Rea's wood for BG, Temperature, and DO (%Sat). From the data it is evident that BGs have decreased in volume and bloom frequency at the Rea's wood location. Lake temperature (blue line) has also started to decrease in line with falling air temperatures. DO displays typical diurnal patterns.





additional 10 sites recorded for BGA, total of 160, new points on Lower Bann and Clay Lakes.

Is Clay Lake drinking water? – no.

Catchments Team

– have received a lot of BGA correspondence. Most of the information requested is already available on the website. Check website contains up to date information. **AP 1**

– gave update on stakeholder meeting held on 16/08/24. NIW, PHA, Councils and internal branches including communications attended. Dates proposed of 9th, 16th and 23rd October for outreach events. A MS Teams channel has been set up and a spreadsheet is to be circulated for organisations to populate with key messages, with all attendees to create an agreed message. Key contacts spreadsheet produced. Once spreadsheet is circulated, all to input what their team could bring to these events. **AP 2** Team from communications () are to send out a tender tomorrow to engage an events co-ordinator for the events.

how long would events company take to arrange Lough Neagh stakeholder events? 3-4 weeks.

DWI Update

Low levels of Microcystin-LR detected in raw water for at Clay Lake, Moyola, and Dunore Point, Clay Lake and Ballinreagh water treatment works (WTW). One of pickups. Wind direction now favouring Castor Bay with lower levels of bga than in east of Lough. Recent increase in levels of bga in Lower Bann source feeding into Ballinreagh WTW, though levels appear lower this week than last week. NIW have reduced intake from Lower Bann and Have increased Carbon dosing at WTW to manage this. Instrumentation (LC-MS) has been purchased for toxin analysis but not yet on-site, analyst position advertised.

EMFG Update

Reas Wood Sampling Week beginning 19/8/24.

Drone flights were not possible due to weather at the start of the week. Seaton's Marina completed today, 22/8/24.

Date	Site	CEFAS toxin	Biovolume mm ³ /l	WHO Alert level
19/8/24	Reas Wood	<LOR	>8	Level 2
19/8/24	Seaton's Marina	<LOR	>8	Level 2

Date	Site	Chlorophyll (ug/l)	Lateral flow pilot testing	Phytoplankton	Visual
19/8/24	Reas Wood Bathing	25.44	ND	Water Column has a large amount of Microcystis colonies and Anabaena	Fine green particles in water, no scum on shore.
19/8/24	Seaton's Marina	17.6	ND	Water Column has a large amount of Microcystis colonies.	Thick plume in water column, scum on slip at marina
19/8/24	Castlerock	n/a	n/a	Small amount of Microcystis	Nothing visible
19/8/24	Portstewart	n/a	n/a	Small amount of Microcystis	Nothing visible
19/8/24	Downhill	n/a	n/a	Increase in Microcystis but below Alert level	Nothing visible
19/8/24	Portrush Mill	n/a	n/a	None	Nothing visible

*<LOR for both dissolved toxins and intracellular toxins, below the limit of detection. Any sample with suspected Cyanobacteria will be analysed for chlorophyll.

22/8/24

Visual inspections from Magilligan, Castlerock, Portstewart, Downhill, and Portrush = all clear.

Foam is still present on Magilligan, the sample checked on 20/8/24 contained algal breakdown and sediment.

Reas Wood- no scum on shore, visible green particles in water.

Seaton's Marina – Scum is still on slip and banks; water is very turbid due to rain but visible BG in water.



Images from Seaton's Marina on 22/8/24

MICRO

BW team returned BG samples to lab on Mon 19th Aug. Samples were lifted from both the water column and the algal mat. All samples returned 'nd' (not detected) for the lateral flows.

Micro was lifted on 14/08/24, with no failures of BW limits. The next BW run is today, 22/08/2024.

level 2 at Raes Wood, same as last week. Continue weekly sampling.
 all bathing water sites are screened, small amount of colonies present.
 what is the risk to North Coast beaches? given that it is a bank holiday weekend.
 level on Lough appears lowish, there has been a build up at Seatons Marina.
 weather is receiving the tail end of a hurricane.
 prevailing south westerly winds, would mean the weather appears to be in our favour.
 AM shared a chart on screen. Depends upon winds, charts show strong possibility of BGA on beaches.
 bathing water operators are on alert. No advise has been issued against bathing. If in doubt stay out, not at stage where we would advise no bathing.
 message is to be vigilant, not many reports this year of BGA effecting dogs.
 bathing water operators now have second year experience of BGA and what to look out for.
 to check lines of communication for on call over the weekend. **AP 3**
 is officer on call over the weekend for pollution response.

AFBI Update

decrease in levels of BGA from last week, sample from Toome show levels of 40ug/l, this week result was 13ug/l.

is algae less visible? due to winds AFBI have not been out on the boat this week. AFBI are looking to utilise the communications team, to publicise the transfer of the DAERA vessel Sallar, to AFBI. ABC want the vessel to be moored in Kinnego Marina.

to write a few lines on vessel transfer for press office **AP 4** SBRI launch due at Peatlands Park with a visit to Lough Neagh. Boat transfer could be included in this visit, as an example of Department increasing capacity and capability to address the issue.s working together.

Issues arising

thanked colleagues in AFBI, EMFG & FMA working towards a single output and aiming to keep everyone aligned as much as possible. (AFBI) project has been redesigned. Funding from Chief Scientists Office, project covering NAP review, monitoring project, recovery of N & P from algae, source apportionment with modelling project.

Lough science and catchment science, mapping using GIS acoustic maps quantifying zebra mussels, toxin analysis being done by VSD, awaiting peer review from CSAO. Able to carry out hourly or daily measurements, allowing source apportionment, like SWELL and Catchment Care projects. Physical and biochemical model within the Lough, will show that the issue is not just with P.

39 projects submitted by AFBI to CSAO costing £15 – 20 million. 8 or 9 £3 million projects waiting in line for approval.

Asked if high resolution monitoring is tied in with capital works, replied yes. (AFBI) has been less impressed with mobile compared to permanent stations.

The current SBRI is allocated for focuses on pre procurement researching to deal with algal blooms. MFD receiving queries on solutions for dealing with nutrients which is not within MFD remit. A decision will be required in due course on procurement next decision on BGA in Lough Neagh. SBRI applications must be raised at stage 1 to allow progress to stage 2. AFBI research projects will come from a different funding scheme than the SBRI.

asked if (AFBI) had been in contact with bathing water team? Theory to co sample with marine team, then work on speciation.

phase 1 map is complete. Phase 2 is to add data. There has been a lot of cloud cover, but it would still be good for the public to see. DSD to build into phase 2.

Prioritisation and resourcing

N/a

Communications

AOB

terms of reference for BGA group, still in draft format, currently sent round with last weeks minutes of 15/8/24. All to forward any comments by next weeks meeting. **AP 5**

prevailing winds southwest / northeast, is this the general norm normal for Lough Neagh? Do we have data on winds around Lough Neagh?

meteorological data will be built into phase 2.

good info at Aldergrove on weather.

currently building a hydrodynamic model for Lough on how much algae on shore is driven by wind direction, DAERA funded PhD.

ACTION POINTS/OFFICIAL RESPONSIBLE/TARGET DATE:

- **Action 1.** [REDACTED] check website contains up to date information.
- **Action 2.** All once Lough Neagh stakeholder event spread sheet is circulated, all to input what their team could bring to these events.
- **Action 3.** [REDACTED] to check lines of communication for on call over the weekend.
- **Action 4.** [REDACTED] to write a few lines on vessel transfer for press office.
- **Action 5.** All to agree terms of refence for BGA group, currently in draft format, sent with last weeks minutes of 15/8/24.

Minutes written by:

[REDACTED]

Date:22nd August 2024



OFFICIAL DAERA MINUTES

MEETING TITLE	TCG Blue-green Meeting
DIVISION/BRANCH REFERENCE	TCG BG Meeting #14
VENUE	MS Teams
DATE/TIME	29 th August 2024, 14:30 - 15.30
LIST OF ATTENDEES	(NIEA), (EMFG), (EMFG), (DWI), (NIEA), (NIEA), (CSAO), (AFBI), (AFBI), (NIEA)
APOLOGIES	(NIEA), (EMFG), (NIEA), (NIEA), (EMFG), (EMFG), (NIEA), (DAERA), (DAERA), (NIEA)
KEY POINTS DISCUSSED	<u>Minutes and actions of previous meeting</u> • Action 1. and to meet and discuss what information might be best presented to the public on the DAERA webpage – Carried Forward. • Action 2. Lough Neagh stakeholder event spread sheet has been circulated, all to input what their team could bring to these events, ongoing - Carried Forward. • Action 3. to check lines of communication for on call over the weekend – Complete. • Action 4. & (AFBI) to agree date for announcement of vessel transfer for press office - Carried Forward. • Action 5. All to agree terms of reference for BGA group, currently in draft format, sent with minutes of 15/8/24 - Complete. <u>NIEA Update</u> <u>Catchments Team</u> correspondence has slowed down, website is currently up to date but would be keen to direct public to webpage for updates on current situation which might help reduce the amount of correspondence overall. asked if there might be a requirement to build a register of information requests to gauge what information the public are generally seeking? and to meet and discuss what information might be best presented to the public on the DAERA webpage – AP1. Lough Neagh stakeholder event spread sheet has been circulated, all to input what their team could bring to these events – AP2.

FMA

The FMA BG algae inventory is up to date with all verified samples/photos for 2024, see 'Summary stats' and 'Map update' tabs for all details. A brief summary below.

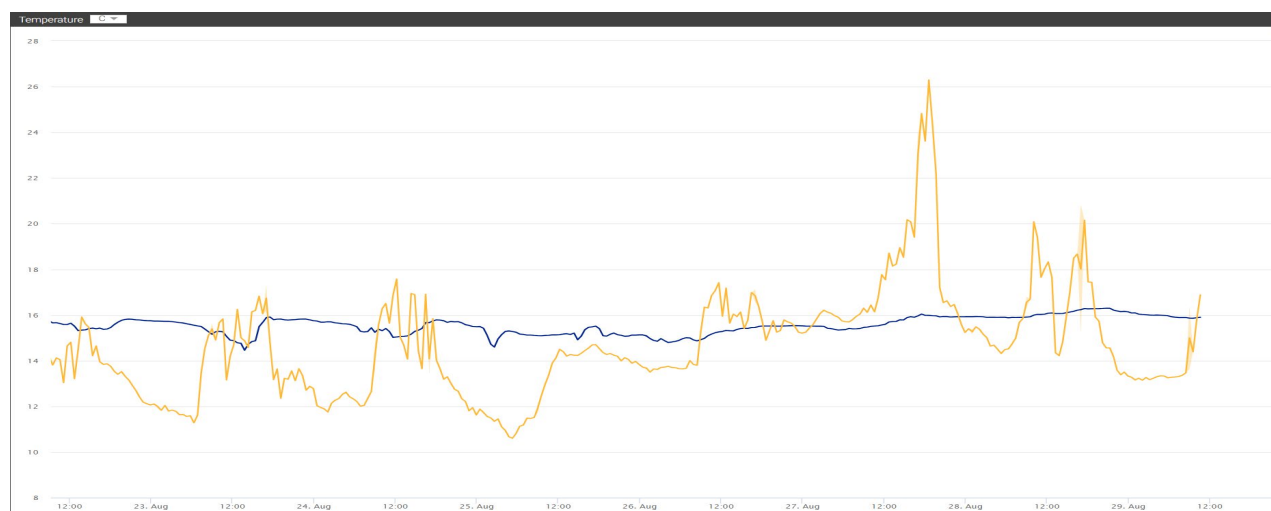
168 confirmed reports of blue green algae from 71 unique locations (up to and including 29/08/2024).

No new locations confirmed this week except a plausible report from new location Portstewart Harbour (29/08/2024).

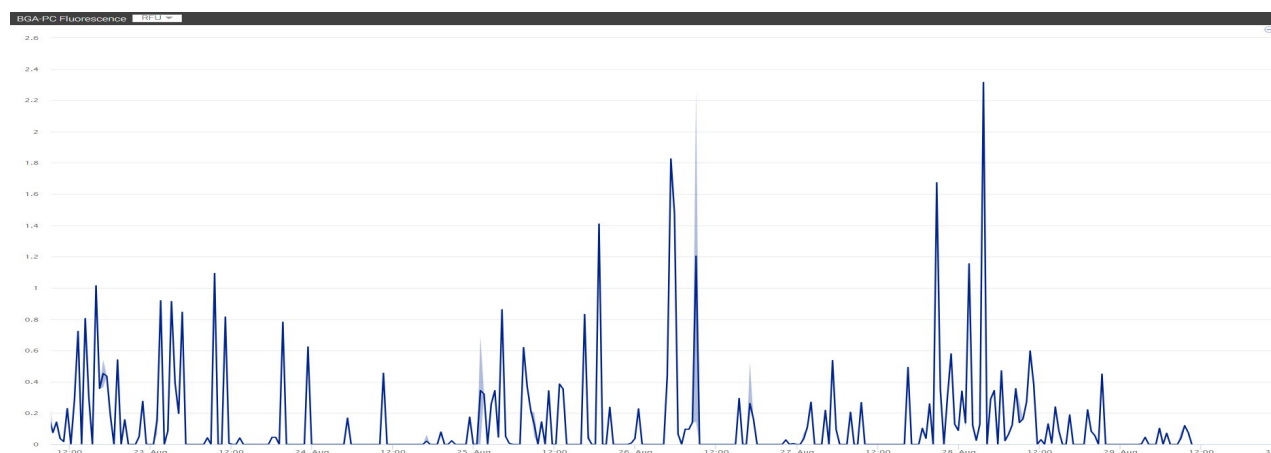
An up-to-date list of coordinates will be passed on to DSD for inclusion in the web mapper.

Update – Rea's Wood Buoy

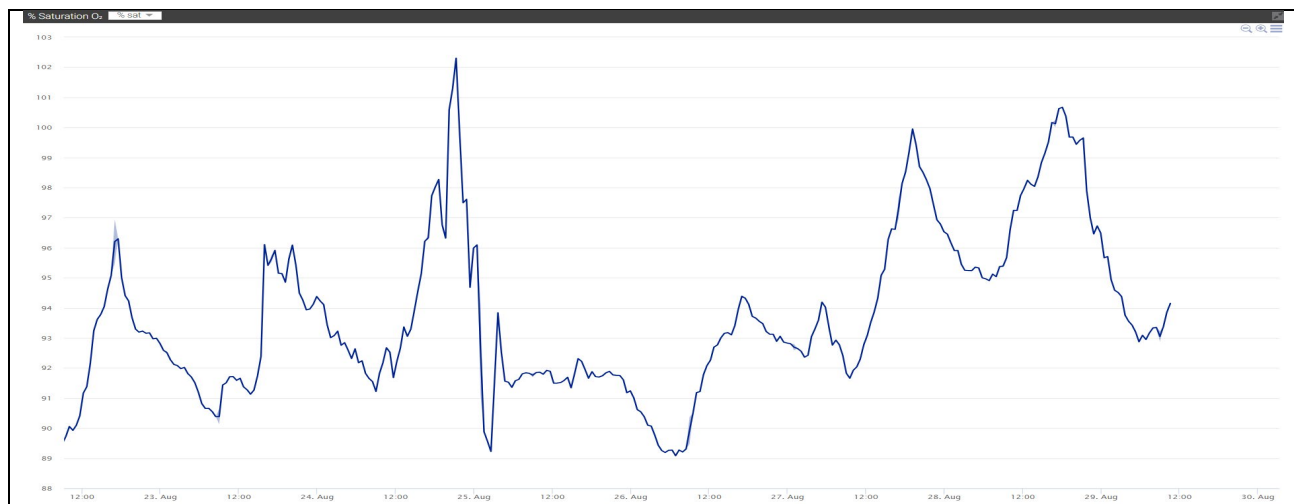
Below is the latest week of temperature, BG and Dissolved oxygen (DO) data from the monitoring buoy at Rea's Wood. Again, there is consistent low levels of BG recorded (max 2.3 RFU on 28th compared with a high of 48.4 RFU on July 31st) and expected diurnal patterns in DO. Current surface temperature is 18.44°C.



Temperature °C



Blue Green (phycocyanin) RFU



Dissolved Oxygen (%Sat)

data buoy currently showing low levels of BGA, and temperature readings are currently stable.

has met with to have initial discussions around data sharing of data being collected by the buoy, need to confirm accessibility for multiple users.

DWI Update

Monitoring ongoing by NI Water; no reports of drinking water quality issues associated with blue-green algae. Site visit to Ballinrees WTW, which abstracts from the Lower Bann, planned for tomorrow.

EMFG Update

now at Amber level of awareness for Benone & Portrush, material/ globules of BGA washing out of Lower Bann. Lateral flows are not suitable for testing in saline waters. bathing Waters staff have upped their vigilance and are currently monitoring Portrush harbour.

there are posters at recreational sites which are not designated bathing waters, needs to be a clear differentiation between the two.

monitoring protocol contains templates for use by councils.

may be a provision in the future to recalibrate the sensitivity of the lateral flows so that they can give reliable results for more brackish waters.

micro team already undertaking dilutions for samples taken from Seaton's Marina.

if Marine staff do identify BGA at a site please inform so that it can be included in the map.

AFBI Update

AFBI staff were out on the Lough, Wed, 28th – seeing reductions in open water and chlorophyll readings of 5-10 micrograms per litre. Currently seeing more mixing and the algae being broken up.

█████ noted that although there has been a reduction in the Lough there is now an Amber alert for the North Coast.

█████ lough is currently high, and the gates will be open all week from Monday. Fluoroprobe is currently being used to take shoreline samples and most stations are down to background levels of cyanobacteria, part from Toome which is still high in comparison.

█████ prevailing winds appearing to be pushing BGA accumulations northwards.

█████ the priority is to get BGA under control but worth pointing out that there is not enough algae in the Lough at other times of the year.

█████ stakeholder event could be an opportunity to relay this important message to increase understanding of the ecological change taking place in the lough – this aspect requires further discussion in advance of the events.

█████ has circulated news of the vessel transfer to the comms team in AFBI, █████ has circulated to comms team in DAERA. Vessel has been moved, █████ keen to get budgets in place for operational work. █████ Minister keen to see announcement made public.

█████ █████ (AFBI) to agree date for announcement of vessel transfer for press office – **AP3**.

CSAO

█████ discussions with DSD who are exploring other avenues with OSNI in respect of aerial photography. Indications that they make be able to supply photographs would be useful in the long term and would see a joined up government approach. █████ suggests avoiding duplication and encouraged working together.

Issues arising

N/a

Prioritisation and resourcing

N/a

Communications

N/a

AOB

█████ asked if there was any update on cameras being installed at Toome gates, █████ going to install on Friday 30th August. received permission from DFI and hoping to have real time digital observations from terrestrial platforms.

█████ work on data buoy at Toome has stalled on issues around Environmental Assessment.

█████ CSAO approached NED previously and asked for assistance in habitat assessments to progress in-lough monitoring attempts.

█████ to follow up with █████ on discussions with NED around obtaining consents for deploying instrumentation in the Lough – **AP4**.

ACTION POINTS/OFFICIAL RESPONSIBLE/TARGET DATE:

- **Action 1.** [REDACTED] and [REDACTED] to meet and discuss what information might be best presented to the public on the DAERA webpage
- **Action 2.** Lough Neagh stakeholder event spread sheet has been circulated, all to input what their team could bring to these events.
- **Action 3.** [REDACTED] & [REDACTED] (AFBI) to agree date for announcement of vessel transfer for press office.
- **Action 4.** [REDACTED] to follow up with [REDACTED] on discussions with NED around obtaining consents for deploying instrumentation in the Lough.

Minutes written by:

[REDACTED]

Date:

29th August 2024



OFFICIAL DAERA MINUTES

MEETING TITLE	TCG Blue-green Meeting
DIVISION/BRANCH REFERENCE	TCG BG Meeting #15
VENUE	MS Teams
DATE/TIME	5 th September 2024, 14:30 - 15.30
LIST OF ATTENDEES	(NIEA), (NIEA), (NIEA), (NIEA), (EMFG), (EMFG), (EMFG), (EMFG), (DWI), (NIEA), (NIEA), (NIEA), (NIEA), (CSAO), (AFBI), (NIEA)
APOLOGIES	(NIEA), (EMFG), (AFBI), (AFBI), (DAERA), (DAERA), (DAERA), (NIEA)
KEY POINTS DISCUSSED <u>Minutes and actions of previous meeting</u> • Action 1. [REDACTED] and [REDACTED] to meet and discuss what information might be best presented to the public on the DAERA webpage – Carried Forward. • Action 2. Lough Neagh stakeholder event spread sheet has been circulated, all to input what their team could bring to these events – Ongoing. • Action 3. [REDACTED] & [REDACTED] (AFBI) to agree date for announcement of vessel transfer for press office - Carried Forward. • Action 4. [REDACTED] to follow up with [REDACTED] on discussions with NED around obtaining consents for deploying instrumentation in the Lough - Carried Forward. <u>NIEA Update</u> <u>Freshwater Ecology:</u> The FMA BG algae inventory is up to date with all verified samples/photos for 2024. A brief summary below. 192 confirmed reports of blue green algae from 78 unique locations (up to and including 05/09/2024). New locations since last update: • Lower Lough Erne - Devenish Island (05/09/2024)	

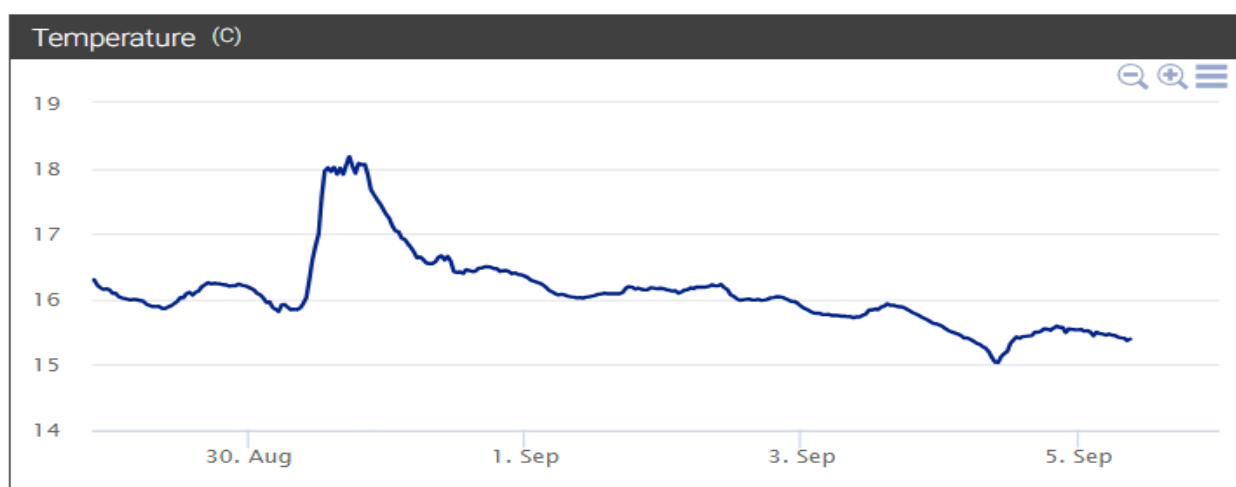
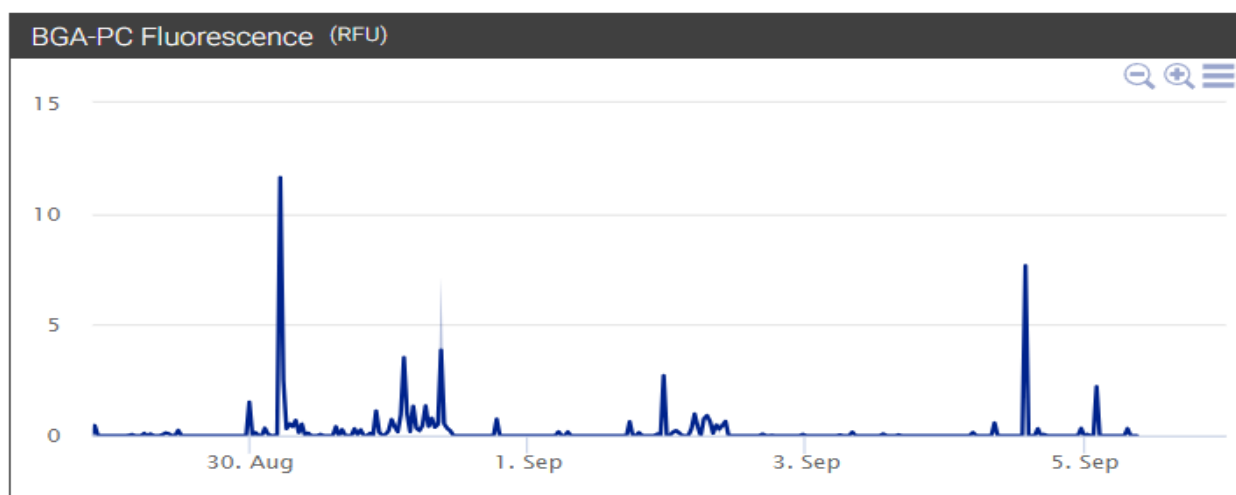
- Ballydoolagh Reservoir (03/09/2024)
- Portna Canal (02/09/2024)
- Portstewart Harbour (02/09/2024)
- Portrush Harbour (30/08/2024)
- Castlewellan Lake (29/08/2024)
- Dibney River – Killyleagh (19/08/2024)

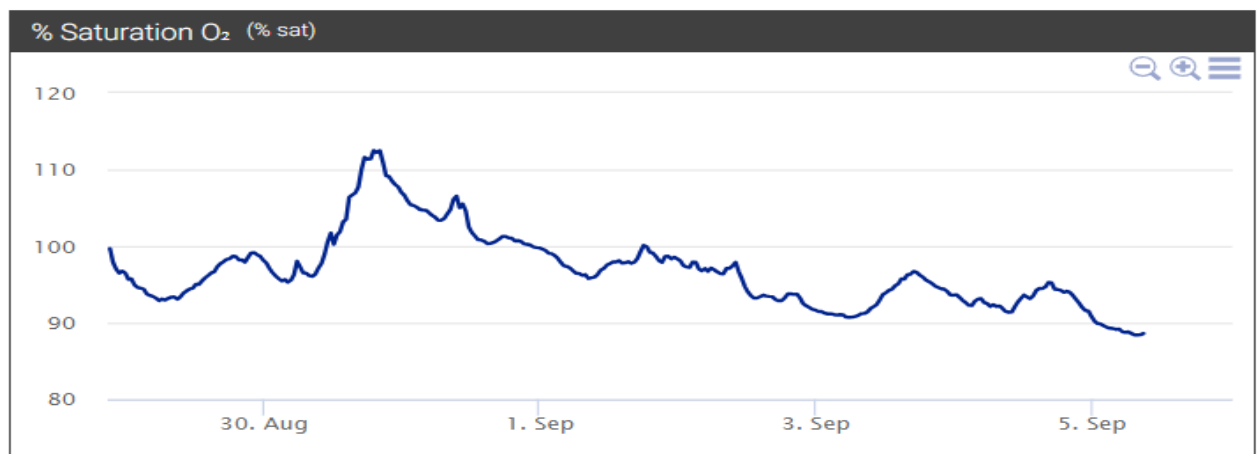
Freshwater Investigations:

Monitoring of the LN in flowing rivers (DO and Temp) and at the Lough Neagh Rea's wood buoy, continued this week without interruption.

The latest telemetered data from the Rea's wood buoy is as follows. Temp at 9am on 5th Sept was 15.4°C, DO was 88.6%Sat, and BG Phycocyanin was 0 RFU.

From the data it is evident that there were several low scale elevations in BG levels at the Rea's Wood Bouy location on the 30th, 31st August (correlating to increased temp and DO), and 4th of September. Minor fluctuations in BG levels are recorded over the last week but are very low scale in relation to the previous month's blooms.





Catchments Team

█ received couple of press queries re Castlewella Lake, were able to make contact with organisers of the triathlon to provide guidance. There have been repeated blooms in the lake over several years and some have been more intense and more prolonged.

█ rapid testing could be useful for organisers in advance of planned events.

█ good example of comms message working to good effect. Lake being monitored by council who may wish to take a more proactive approach going forward.

█ policy led on the Castlewella Lake FOI, EMFG did the redacting.

█ to pick up with █ own team.

█ identified sites should be greyed off after 3 weeks. █ sitings can be very transient which like to have a way of reflecting this on the interactive map. █ asked if we grey out sites do we need confirmation that BGA is now absent? █ could report timeframe from first initial report. █ asked if WQI's could confirm presence/ absence of BGA. █ dipstick may not show any biofouling but could still be in excess of the WHO alert level for Cyanobacteria.

DWI Update

Monitoring in both raw and final water ongoing. No drinking water quality issues to report. Water abstraction pumps ~~will be going back~~ into on for the Lower Bann.

EMFG Update

█ Reas Wood at lowest level in 3 months, Seaton's out of alert level 1 and down to vigilance level. North Coast sites are all low with all beaches passing this week. Chlorophyll is still high with a diatom bloom emerging. Everything below detection limit apart from Rea's Wood. Colonies still present at Seaton's but biovolumes are exceptionally low at present.

█ shows that the framework of the protocol is working as intended as management tool. Need to be mindful that toxicity will only increase as the BGA breaks down.

█ Inter-agency group to meet in November to review protocol.

█ asked if PHA had arranged any engagement with councils, but not as yet.

Reas Wood Sampling Week beginning 2/9/24.

Drone for Seatons, Reas Wood completed 2/9/24

Date	Site	CEFAS toxin	Biovolume mm3/l	WHO Alert level
28/8/24	Reas Wood	<LOR	71.08	Level 2
28/8/24	Seaton's Marina	11.8	>100	Level 2

Date	Site	Chlorophyll (ug/l)	Lateral flow pilot testing /ELISA	Phytoplankton	Visual
2/9/24	Reas Wood Bathing	20.7	0.36ppb	Water Column has a large amount of very fine Microcystis colonies and Anabaena. Biovolume 9.28	Fine green particles in water and tideline.
2/9/24	Seaton's Marina	11.6	<LOD	Water Column has a large amount of Microcystis colonies. Biovolume 1.65	Fine particles in water. Reduced amount on slip.
2/9/24	Castlerock	8.3	<LOD	Small amount of Microcystis	Nothing visible.
2/9/24	Portstewart	2.8	<LOD	Microcystis and Anabaena. Vigilance level	Clumps on the beach. Foam on beach
2/9/24	Downhill	9.9	<LOD	Increase in Microcystis but below Alert level	Nothing on shore
2/9/24	Portrush Mill	1.9	<LOD	Microcystis and Anabaena present . Vigilance level	Nothing visible
2/9/24	Magilligan	20.7	<LOD	Microcystis and Anabaena present but below Alert levels	Nothing onshore
30/08/24	Seaton's Marina	43.6	<LOD	Large amount of Microcystis present Biovolume >20	Thick scum on slip and water
30/08/24	Castlerock	12.8	<LOD	Biovolume 1.0	Nothing visible
30/08/24	Portstewart	4.3	<LOD	Biovolume 1.2	Nothing visible
30/08/24	Downhill	6.9	<LOD	Biovolume <1	Nothing esent in the harbour.visible

30/08/24	Portrush Mill	2.5	<LOD	Biovolume 1.2	Nothing visible. Present in the harbour.
30/08/24	Magilligan	7.3	<LOD	Biovolume <1	Nothing visible
29/08/24	Seaton's Marina	17.2	<LOD	Biovolume >100	Scum on slip and fine particles in water
29/08/24	Castlerock	14.0	<LOD	Biovolume 1.03	Clear
29/08/24	Portstewart	3.0	<LOD	Biovolume <1	Clear
29/08/24	Downhill	9.8	<LOD	Biovolume <1	Clear
29/08/24	Portrush Mill	17.7	<LOD	Biovolume <1	Clumps in tide line
29/08/24	Magilligan	8.0	<LOD	Biovolume <1	Cyano present on shore

*<LOD for both dissolved toxins and intracellular toxins, below limit of detection.

Foam collected from 30/8/24 Downhill and Portstewart contained algae breakdown, river detritus.

Foam collected from Portstewart and all north coast beaches on 2/9/24 contains *Attheya armata* non-toxic diatom which can cause foam and discolouration.



RW bathing water 28/08/24

AFBI Update

■ data buoy showing a gradual decrease, current level of 10 micrograms per litre at Toome. Staff had also been out on Lough Erne, low levels of Algae in comparison but still some BGA in sheltered bays and signs of a diatom bloom.

■ out on new boat today, still no update yet from ■ on official press release.

■ good to get additional information from Lough Erne in the context of BGA overall.

CSAO

■ peer reviewers currently going through conflict of interests.

■ would be keen to agree a set of lines on why the boat was transferred and what it is going to work on. Would like a standard line that all partners can use as a response to press queries.

■ discussions planned with AFBI in 3 weeks to see what peer reviewers have come back with.

■ discussions with DSD ongoing regarding future of Lough Neagh platform, tanked ■ & ■ for help in providing data to get the platform up and running. Potential to use ESRI storyboard resource on the Web-viewer.

Issues arising

■ OSNI may be in a position to undertake flights over Lough Neagh (2000 metres) and possibly have photography for 4 or 5 months of the year. Photos could show up to 3.5km by 2km with minimal distortion. They own the plane so don't need to charter and should be able to go at optimal times. Could be Christmas before anything definite is in place.

Prioritisation and resourcing

N/a

Communications

N/a

AOB

N/a

ACTION POINTS/OFFICIAL RESPONSIBLE/TARGET DATE:

- **Action 1.** ■ and ■ to meet and discuss what information might be best presented to the public on the DAERA webpage – **Carried Forward**.
- **Action 2.** Lough Neagh stakeholder event spread sheet has been circulated, all to input what their team could bring to these events – **Ongoing**.
- **Action 3.** ■ & ■ (AFBI) to agree date for announcement of vessel transfer for press office - **Carried Forward**.
- **Action 4.** ■ to follow up with ■ on discussions with NED around obtaining consents for deploying instrumentation in the Lough - **Carried Forward**.

Minutes written by:

■

Date:

5th September 2024



OFFICIAL DAERA MINUTES

MEETING TITLE	TCG Blue-green Meeting
DIVISION/BRANCH REFERENCE	TCG BG Meeting #16
VENUE	MS Teams
DATE/TIME	12 th September 2024, 14:30 - 15.30
LIST OF ATTENDEES	(NIEA), (EMFG), (EMFG), (EMFG), (EMFG), (DWI), (NIEA), (NIEA), (NIEA), (CSAO), (DAERA), (AFBI), (AFBI), (AFBI), (NIEA)
APOLOGIES	(NIEA), (EMFG), (NIEA), (NIEA), (NIEA), (NIEA), (NIEA), (DAERA), (DAERA),
KEY POINTS DISCUSSED <u>Minutes and actions of previous meeting</u> • Action 1. and to meet and discuss what information might be best presented to the public on the DAERA webpage – Carried Forward. • Action 2. Lough Neagh stakeholder event spread sheet has been circulated, all to input what their team could bring to these events – Complete. • Action 3. & (AFBI) to agree date for announcement of vessel transfer for press office (Fisheries Protection branding since removed) - Carried Forward. • Action 4. to follow up with on discussions with NED around obtaining consents for deploying instrumentation in the Lough - Carried Forward. <u>NIEA Update</u> <u>Freshwater Ecology:</u> 203 confirmed reports of blue green algae from 82 unique locations (up to and including 12/09/2024). 9 unconfirmed reports. New locations confirmed this week: • Erne River - Erne Marina 06/09/2024 • Lower Bann - Camus 09/09/2024 • Lough Neagh - Derrycrow 09/09/2024 • Lower Lough Erne - Ross Point 06/09/2024	

Freshwater Investigations:

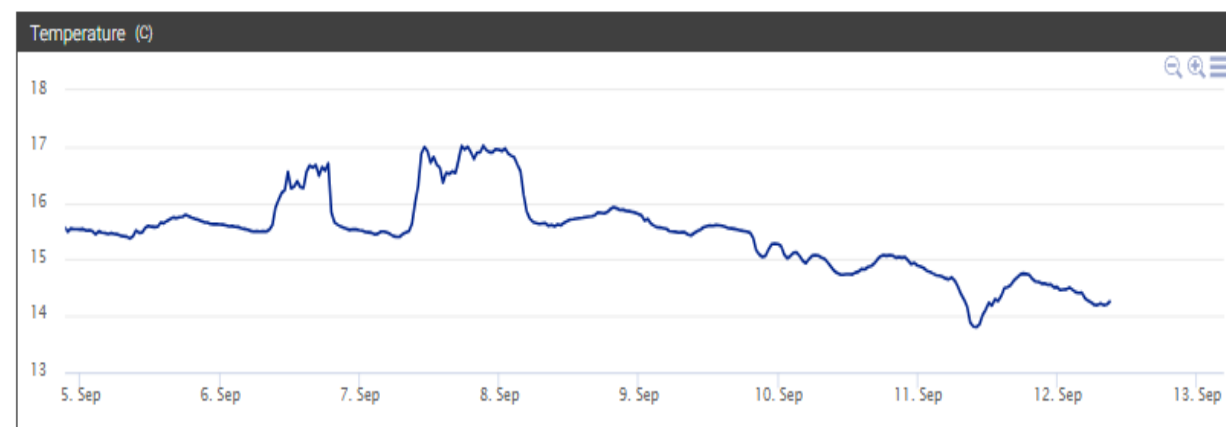
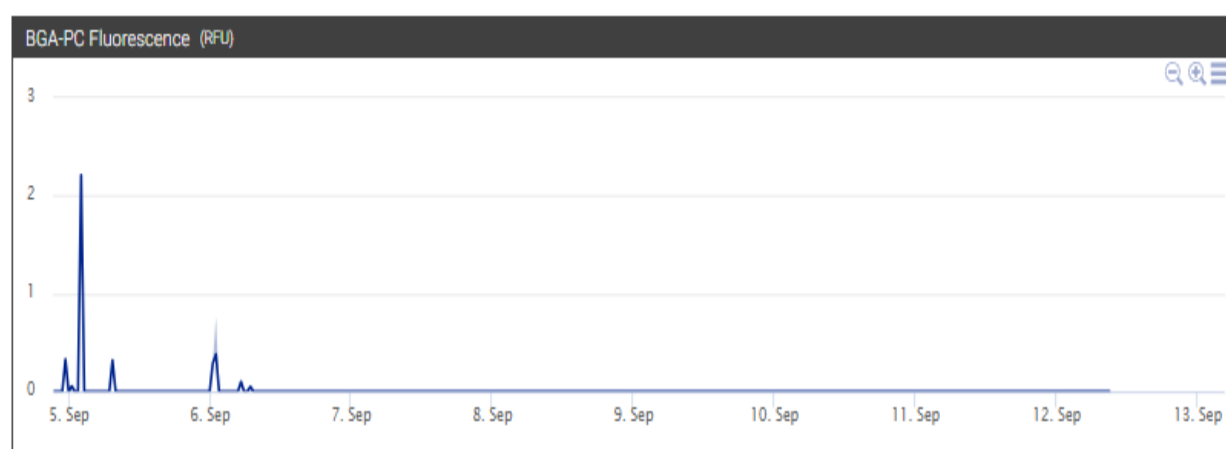
Monitoring of the LN in flowing rivers (DO and Temp) and at the Lough Neagh Rea's wood buoy, continued this week without interruption.

The latest telemetered data from the Rea's wood buoy is as follows. Temp at 9am on 12th Sept was 14.25°C, DO was 87.2%Sat, and BG Phycocyanin was 0 RFU.

From the data it is evident that there were several low scale elevations in BG levels at the Rea's Wood Bouy location on the 5th, 6th of September. These fluctuations in BG levels are recorded are very low scale in relation to the previous month's blooms.

Sensor calibration and maintenance has taken place today.

Business Case submitted for new sondes.



DWI Update

Increased number of complaints about taste and odour of final water in Moyola supply. NI Water reported significant taste and odour issues for Moyola supply on 9th Sept – category 3 incident at present. Increase of BGA in raw water at Moyola intake in the past few weeks. Toxin results are only available up to 13th August so far, requested to be fast-tracked. Moneymore borehole currently out of action so less capacity to dilute, working on bringing water across from Lough Fea. DWI assessing NIW data and monitoring their response.

EMFG Update

Rea's Wood Sampling Week beginning 11/9/24.
Drone for Seaton's, Reas Wood completed 11/9/24.

Sample number provided	Date Sample Collected	Comments	Total cyanotoxins (high)	Total Dissolved toxins (high)
Magilligan (Benone) Beach	28/08/2024	Lots of sediment, W/A poured off before extraction	<LOR	<LOR
Downhill Beach	28/08/2024		<LOR	<LOR
Casterock	28/08/2024		<LOR	<LOR
Portstewart Beach	28/08/2024		<LOR	<LOR
Portrush Mills Beach	28/08/2024		<LOR	<LOR
Magilligan (Benone) Beach	29/08/2024		<LOR	<LOR
Downhill Beach	29/08/2024	No pellet formed, tested for dissolved toxins only		<LOR
Casterock Beach	29/08/2024		<LOR	<LOR
Portstewart Beach	29/08/2024		<LOR	<LOR
Portrush Mills Beach	29/08/2024		26.4	<LOR
Seaton's Marina	29/08/2024	Sample dated 28/09/24	86.4	<LOR
Magilligan (Benone) Beach	30/09/2024		<LOR	<LOR
Downhill Beach	30/09/2024	No pellet formed, tested for dissolved toxins only		<LOR
Casterock Beach	30/09/2024		<LOR	<LOR
Portstewart Beach	30/09/2024	No pellet formed, tested for dissolved toxins only		<LOR
Portrush Mills Beach	30/09/2024	No pellet formed, tested for dissolved toxins only		<LOR
Seaton's Marina	30/09/2024		<LOR	<LOR
Magilligan (Benone) Beach	02/09/2024		<LOR	<LOR
Downhill Beach	02/09/2024		<LOR	<LOR
Casterock Beach	02/09/2024		<LOR	<LOR
Portstewart Beach	02/09/2024	No pellet formed, tested for dissolved toxins only		<LOR
Portrush Mills Beach	02/09/2024		<LOR	<LOR
Seaton's Marina	02/09/2024		<LOR	<LOR
Rae's Wood Beach	02/09/2024		<LOR	<LOR

While there were toxins in the samples sent from Portrush Mill (West Strand) please note that in the following 2 days, there was <LOR in both intracellular and dissolved toxins. Demonstrating the transient nature of blue-green material during that week.

Date	Site	Chlorophyll (ug/l)	Lateral flow pilot	Phytoplankton	Visual
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			testing /ELISA		
11/09/24	Portstewart	6.965		Biovolume <1	Clear
11/09/24	Downhill	12.63		Biovolume 0	Clear
11/09/24	Portrush Mill	5.155		Biovolume <1	Clear
11/09/24	Magilligan	11.57		Biovolume 0	clear
11/09/24	Castlerock	37.93		Biovolume 0	Clear
11/09/24	Seatons Marina	8.13		Biovolume <3	Clearing
11/09/24	Reas Wood	3.91		Biovolume <4	Almost clear. Nothing visible in water

*<LOD for dissolved and intracellular toxins below the detection limit.

ELISA is currently being run on the samples from yesterday. All samples have been sent to CEFAS for toxin analysis.

Overall, visual quality has improved in Reas Wood and at Seaton's Marina, with most of BG now starting to disappear.



Seaton's Marina 12/9/24



Rea's Wood 11/9/24

meeting of the Science oversight group – research on rapid sequencing of BGA could be shared. has been in touch with science advisory group and have identified a particular species which could potentially produce toxins without showing any scum.

dominant algal species which potentially produce toxins have always been present in the Lough. worth looking through taxonomic records to see if the species has been present previously.

need to differentiate between genuine research interest and management of the issues, although there still need to be lines of communication between SOG to provide advice to the Lough Neagh group.

capital has also been identified to fund the flow cam.

chlorophyll high in coastal waters, particularly high at Castlerock. BGA still visible on the slipway @Seaton's, drone pictures from Rea's Wood & mouth of Six Mile.

hasn't got to the same levels as it did in 2023.

seems like it hasn't taken off to the same degree as last year.

dull wet summer with limited sunshine has likely lessened the impact.

AFBI Update

chlorophyll levels were really low before last weekend. which could explain nil results that is picking up from the buoy. Offered to share monitoring data for comparison

Fluoroprobe results showing that BGA is more spread out and mixed through the water column. Could be looking more promising given the light conditions in the coming weeks.

considerably lower levels being observed in comparison to 2023.

latest qualitative observations show that Microcystis are shrinking in size.

asked if there should be an end of season comparison against weather conditions.

could also consider chlorophyll concentrations, added that each year will show variations but that it is more likely that we will see blooms more frequently going forward

CSAO

another 2-3 weeks to report back on peer review of proposed projects.

in discussions with DSD, will be setting up Lough Neagh platform over the winter as a trial period. Requesting assistance with testing days in expectation of redeployment of sondes in April/ May.

Phase 2 to be scaled back and more limited, there will be a handover from DSD to FMA to carry on with updates. expecting a renewed focus on Lough Neagh platform.

no recent correspondence, although SBRI still yet to close.

no bidders for tender to organise stakeholder events, work ongoing.

made members aware of Ministers upcoming engagement on Climate Change on October 7th, two days before the first stakeholder event. Some issues could overlap with Lough Neagh.

keen to have some input from Water side in terms of having continuity on policy.

potentially requires some input from Policy side and would be useful to know what issues are on that agenda for discussion prior to our own events.

Issues arising

N/a

Prioritisation and resourcing

N/a

Communications

N/a

AOB

N/a

ACTION POINTS/OFFICIAL RESPONSIBLE/TARGET DATE:

- **Action 1.** [REDACTED] and [REDACTED] to meet and discuss what information might be best presented to the public on the DAERA webpage – **Carried Forward**.
- **Action 2.** [REDACTED] & [REDACTED] (AFBI) to agree date for announcement of vessel transfer for press office (Fisheries Protection branding since removed) - **Carried Forward**.
- **Action 3.** [REDACTED] to follow up with [REDACTED] on discussions with NED around obtaining consents for deploying instrumentation in the Lough - **Carried Forward**.

Minutes written by:

[REDACTED]

Date:

12th September 2024



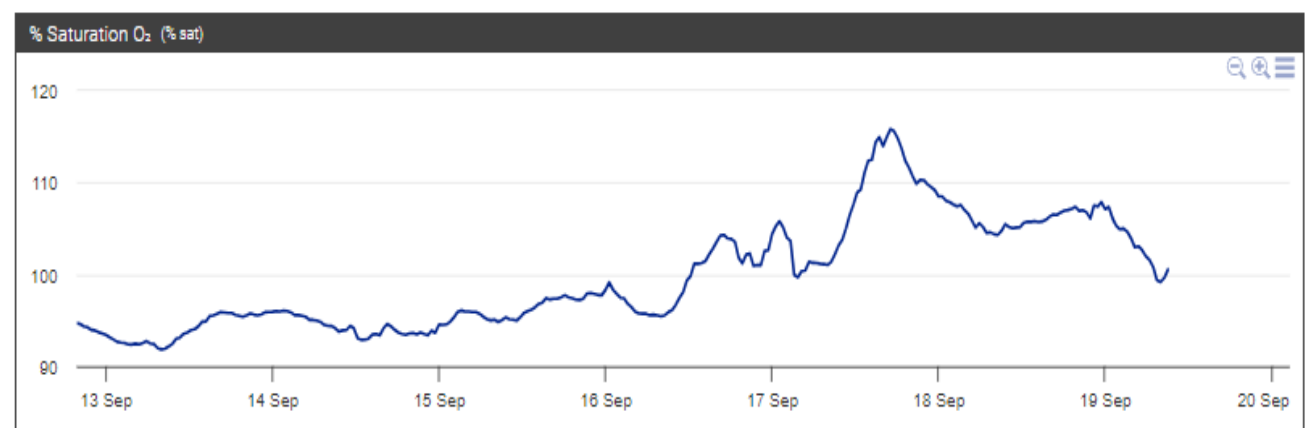
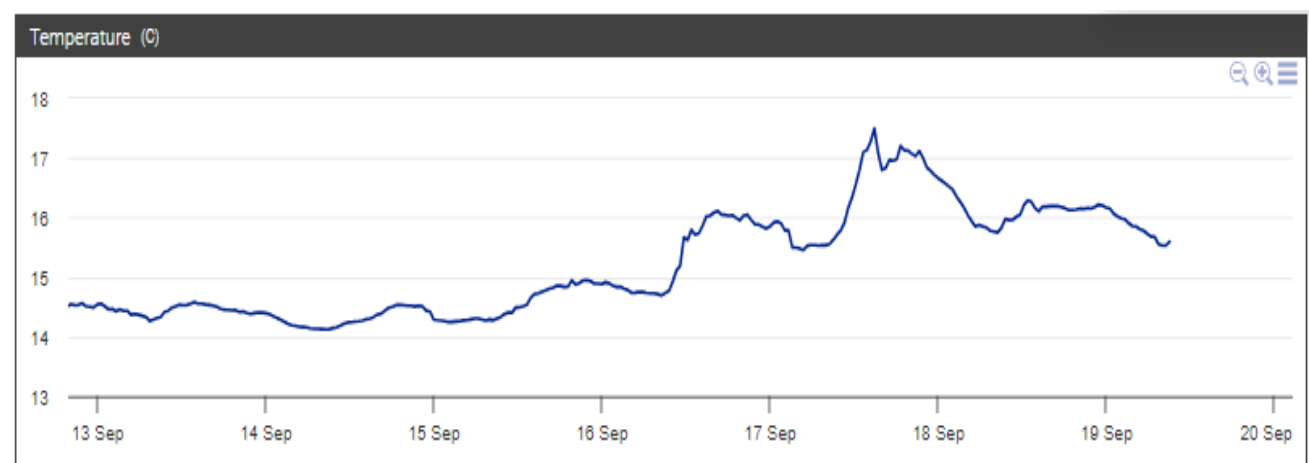
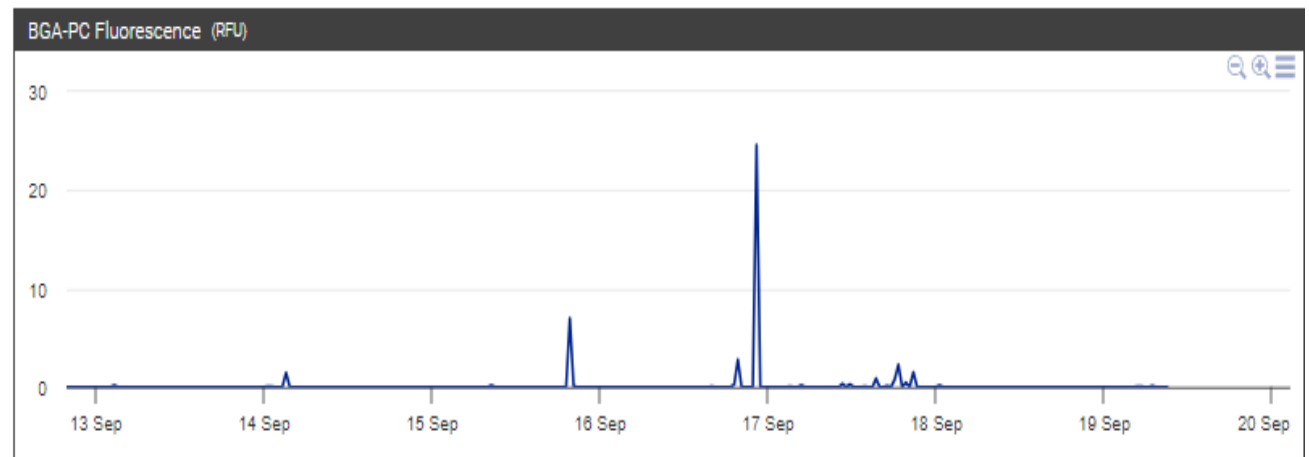
OFFICIAL DAERA MINUTES

MEETING TITLE	TCG Blue-green Meeting
DIVISION/BRANCH REFERENCE	TCG BG Meeting #17
VENUE	MS Teams
DATE/TIME	19 th September 2024, 14:30 - 15.30
LIST OF ATTENDEES	(EMFG), (EMFG), (EMFG), (DWI), (NIEA), (NIEA), (NIEA), (NIEA), (CSAO), (AFBI), (NIEA)
APOLOGIES	(NIEA), (EMFG), (NIEA), (EMFG), (NIEA), (NIEA), (NIEA), (AFBI), (AFBI), (NIEA), (DAERA), (DAERA), (DAERA),
KEY POINTS DISCUSSED <u>Minutes and actions of previous meeting</u> • Action 1. and to discuss what information might be best presented to the public on the DAERA webpage (Likely to be phased out once the shared Lough Neagh platform is operational) – Carried Forward. • Action 2. & (AFBI) to agree date for announcement of vessel transfer for press office (Decision needed on where the vessel will be berthed prior to any press release) - Carried Forward. • Action 3. to follow up on discussions with NED around obtaining consents for deploying instrumentation in the Lough - Carried Forward. <u>NIEA Update</u> <u>Freshwater Ecology:</u> 204 confirmed reports of blue green algae from 82 unique locations (up to and including 19/09/2024). Only one confirmed report @Rea's Wood since last update. No new locations confirmed this week but there was a plausible report from new location White Park Bay (17/09/2024). However, a site visit the next day showed no BG algae visible. <u>Freshwater Investigations:</u>	

Monitoring of the LN in flowing rivers (DO and Temp) and at the Lough Neagh Rea's Wood buoy, continued this week without interruption.

The latest telemetered data from the Rea's Wood buoy is as follows. Temp at 9am on 19th Sept was 15.6°C, DO was 100.5%Sat, and BG Phycocyanin was 0 RFU.

From the data it is evident that there was a bloom with elevated levels in BG at the Rea's Wood Bouy location on the 15th, 16th and 17th of September, peaking at 24.58RFU on the 16th. Both lake temperature and DO increased during this period. This follows the period of settled warm weather and is expected to continue over the coming days.



DWI Update

Drinking water quality events have been reported for both the water supplied from both Moyola WTW and Castor Bay WTW with a high volume of consumer complaints regarding the taste and odour of their water supply.

The cause of the taste and odour is principally due to levels of 2-Methylisoborneol (MIB), a chemical released by algae, which has a very low taste and odour threshold but no health impact upon consumers.

All test results for the final waters reported to date show that Microcystin-LR levels are below the World Health Organisation (WHO) guideline value (1µg/l).

NI Water has consulted with the Public Health Agency (PHA) for health advice. PHA has not advised of any restrictions required on the use of the Moyola or Castor Bay water supplies.

These events are ongoing and remain under investigation.

EMFG Update

■ Bathing season finished on 15th September, will be meeting to discuss and plan the next 10 weeks sampling programme and stakeholder events.

■ Rea's Wood up to exceptionally high biovolumes over 100 micrograms per litre. Samples almost 50/50 Anabaena and Microcystis. Seaton's Marina is low, and the beaches are currently fine, although there have been signs of some Marine blooms. Rea's Wood at 1PPB, all other sites below limit of detection. No toxicity results back yet from CEFAS.

■ Two summer temps working in the lab have had contract extensions for 51 weeks, both well experienced and the intention is to make good use of this resource in the 'off season'.

AFBI Update

■ No sampling on Lough Neagh this week, but shared useful satellite imagery with the group. Chlorophyll started showing an upward trend on 16th September with increases also evident at Toome. Cameras at Toome gates are now operational, working off an automated GCC and may be other opportunities to use them potentially at the outflow of some rivers. Further shoreline sampling with the fluoroprobe planned for next week. ■ no update on the press release for the vessel, ■ & ■ (AFBI) to agree date for announcement (Decision needed on where the vessel will be berthed prior to any press release) – **AP2**.

CSAO

Work ongoing in the development of the Lough Neagh platform, receiving data from the buoy whilst it is still operational in anticipation of making the platform accessible to the public next year. Also having positive discussions around incorporating data from DFI Rivers. All data sets currently being amalgamated into one entity. SBRI assessments taking slightly longer than anticipated. DSD working on shared Lough Neagh platform, ■ keen that webpage directs public to the platform hosting the relevant data. ■ and ■ to discuss what information might be best presented to the public on the DAERA webpage (Likely to be phased out once the shared Lough Neagh platform is operational) – **AP1**.

Issues arising

█ gave an update on the Stakeholder Engagement Events – 9th, 16th & 23rd October.
Ballyronan Marina
St. Clare's Community Hall, Glenavy
Craigavon Civic Centre

█ and █ in graphics unit have been progressing plans, a contract for an events co-ordinator to awarded and details will be shared.

█ UK Space Agency researcher from Plymouth (█) is looking at remote sensing of BGA in Lough Neagh. █ to set up a call for an initial chat, invites to █ & █.
█ asked that █ and █ be copied in.

Prioritisation and resourcing

█ DTN for DWI Lough Neagh post being advertised tomorrow.
█ DTN for FMA Lough Neagh due to close 20th September.

Communications

█ would like to agree lines across the department in respect of the boat transfer to AFBI.
█ will be attending press office meetings prior to the stakeholder events.

AOB

█ ongoing discussion with DFI who are seeking advice in respect of dredging quays. Important for TCG group to facilitate those conversations and making group aware there has been an approach. Keen to get agreement/ consent in place for deploying instrumentation. █ to follow up on discussions with NED around obtaining consents for deploying instrumentation in the Lough – **AP3**.

ACTION POINTS/OFFICIAL RESPONSIBLE/TARGET DATE:

- **Action 1.** █ and █ to discuss what information might be best presented to the public on the DAERA webpage (Likely to be phased out once the shared Lough Neagh platform is operational).
- **Action 2.** █ & █ (AFBI) to agree date for announcement of vessel transfer for press office (Decision needed on where the vessel will be berthed prior to any press release).
- **Action 3.** █ to follow up on discussions with NED around obtaining consents for deploying instrumentation in the Lough.

Minutes written by:

█

Date:

19th September 2024



OFFICIAL DAERA MINUTES

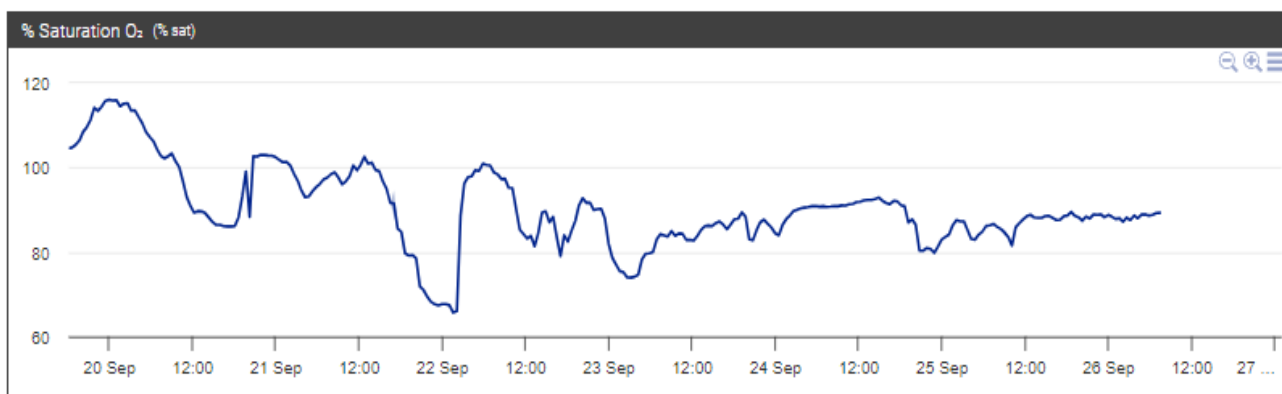
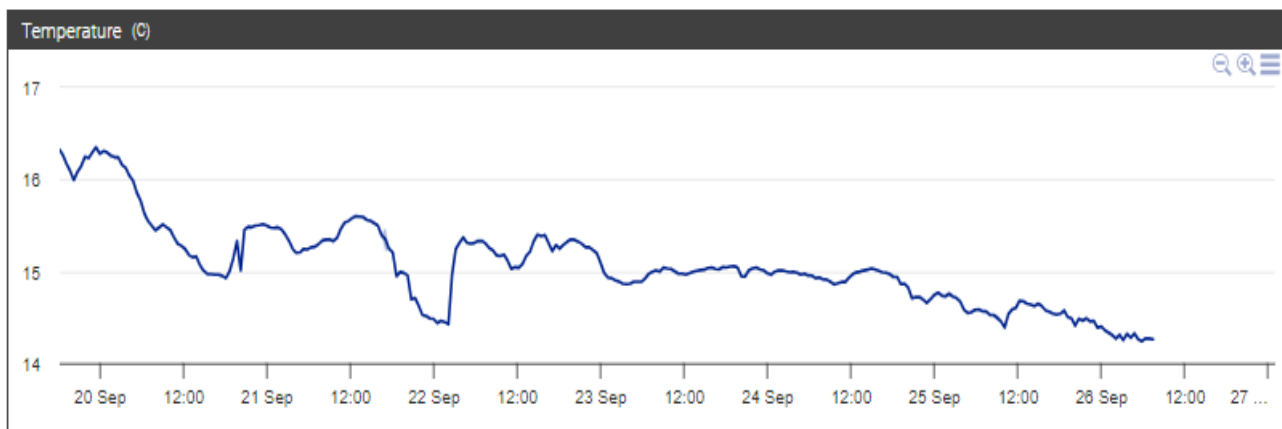
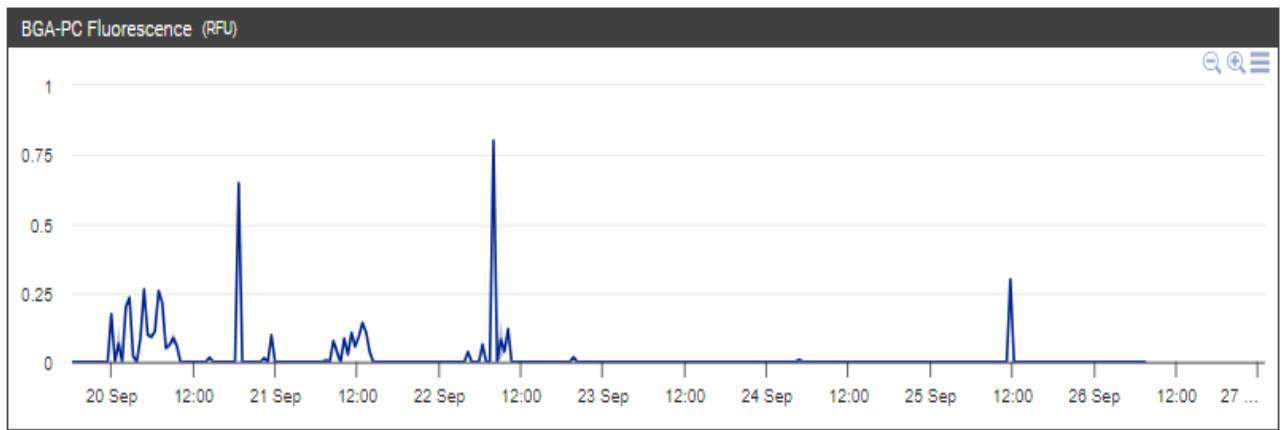
MEETING TITLE	TCG Blue-green Meeting
DIVISION/BRANCH REFERENCE	TCG BG Meeting #18
VENUE	MS Teams
DATE/TIME	26 th September 2024, 14:30 - 15.30
LIST OF ATTENDEES	(NIEA), (DWI), (NIEA), (NIEA), (NIEA), (EMFG), (NIEA)
APOLOGIES	(NIEA), (EMFG), (EMFG), (EMFG), (EMFG), (EMFG), (NIEA), (NIEA), (NIEA), (NIEA), (CSAO), (AFBI), (AFBI), (AFBI), (NIEA), (DAERA), (DAERA), (DAERA),
KEY POINTS DISCUSSED	
<u>Minutes and actions of previous meeting</u>	
Action 1. and to discuss what information might be best presented to the public on the DAERA webpage (Likely to be phased out once the shared Lough Neagh platform is operational) – Carried Forward. Action 2. & (AFBI) to agree date for announcement of vessel transfer for press office (Decision needed on where the vessel will be berthed prior to any press release) – Carried Forward. Action 3. to follow up on discussions with NED around obtaining consents for deploying instrumentation in the Lough – Complete.	
<u>NIEA Update</u>	
– Events co-ordinator approved for stakeholder events, ready to handover for company to proceed with event preparation and co-ordination of all the various agencies. to read over press release and invitations. – Correspondence has slowed with only 3 in the past week.	
<u>Freshwater Ecology:</u>	
- Stats today - 206 reports at 83 unique locations Only two additional confirmed reports this week Seaghan reservoir reported by NIW and another report from Castlewellaan Lake.	

Freshwater Investigations:

Monitoring of the LN in flowing rivers (DO and Temp) and at the Lough Neagh Rea's wood buoy, continued this week without interruption.

The latest telemetered data from the Rea's wood buoy is as follows. Temp at 7.24am on 19th Sept was 14.26°C, DO was 89.28%Sat, and BG Phycocyanin was 0 RFU.

From the data it is evident that there were several very small-scale elevations in BG levels at the Rea's Wood Bouy location over the last week, peaking at just 0.801RFU on the 22nd.



DWI Update

Two ongoing drinking water quality events regarding the taste and odour of the water supplied from both Moyola and Castor Bay WTWs. Consumer complaints have decreased but still elevated for Castor Bay supply. Samples with taste and odour detections are low but intermittent. Moneymore borehole has been brought back online. Where possible water has been rezoned. PHA has not advised any restrictions on the use of the water from these supplies. DWI has issued consumer questionnaires to households throughout the Moyola and Castor Bay supply areas to get feedback on their experience, received 27 responses out of 50 from the Moyola area. Results of NI Water testing for ammonia in Lough Neagh supplies have all been below agreed regulatory standards.

EMFG Update

█ - have stepped down monitoring of north coast beaches after 4 clear weeks. Rea's Wood and Seaton's Marina both currently at vigilance level. The intention is to still monitor for the next 10 weeks but looking quiet at present. Weekly samples will still go to CEFAS for toxicity testing for the foreseeable.

AOB

█ – received correspondence asking if booms have been deployed at Toome to prevent BGA moving down into the Lower Bann.

█ – still require the continuation of the TCG meetings consider the anticipated increase in toxicity.

█ – will need to consider when best to undertake review of BGA Protocol. Will continue to allocate 1 hour for meeting for now at least.

ACTION POINTS/OFFICIAL RESPONSIBLE/TARGET DATE:

- **Action 1.** █ and █ to discuss what information might be best presented to the public on the DAERA webpage. █ to send █ text for stakeholder engagement events – **AP1**.
- **Action 2.** █ & █ (AFBI) to agree date for announcement of vessel transfer for press office. █ to discuss with █ & █ the possibility of getting the vessel to Ballyronan Marina for 9th October, stakeholder event/ press release – **AP2**.

Minutes written by:

█

Date:

26th September 2024



OFFICIAL DAERA MINUTES

MEETING TITLE	TCG Blue-green Meeting
DIVISION/BRANCH REFERENCE	TCG BG Meeting #19
VENUE	MS Teams
DATE/TIME	3 rd October 2024, 14:30 - 15.30
LIST OF ATTENDEES	(NIEA), (DWI), (NIEA), (NIEA), (EMFG), (CSAO), (AFBI), (NIEA)
APOLOGIES	(NIEA), (EMFG), (EMFG), (EMFG), (EMFG), (EMFG), (NIEA), (NIEA), (NIEA), (NIEA), (NIEA), (AFBI), (AFBI), (NIEA), (DAERA), (DAERA), (DAERA),
KEY POINTS DISCUSSED	
<u>Minutes and actions of previous meeting</u>	
Action 1. and to discuss what information might be best presented to the public on the DAERA webpage. to send text for stakeholder engagement events. Press release approved and will go out on social media – Complete. Action 2. & (AFBI) to agree date for announcement of vessel transfer for press office. to discuss with & the possibility of getting the vessel to Ballyronan Marina for 9th October, stakeholder event/ press release. Minister wants to compete handover on 10th October, preferably at Antrim shore – Complete.	
<u>NIEA Update</u>	
– Fewer correspondence in relating to blue greens. 4 additional staff have been recruited via an agency to work alongside the catchment team identifying catchment pressures.	
<u>Freshwater Ecology:</u>	
- Stats today - 208 reports at 83 unique locations Only two additional confirmed reports this week Both reports from Lough Neagh - Kinnego Bay.	
<u>Freshwater Investigations:</u>	
to ask or to update briefing paper with data from telemetry/ monitoring buoy.	

DWI Update

Drinking water quality events regarding the taste and odour of the water supplied from both Moyola and Castor Bay WTWs both ongoing. Consumer complaint numbers are reduced in both water supply areas. Samples with taste and odour detections are low but still intermittent. Good level of response to DWI consumer questionnaires. Responses will be collated, and DWI will follow up as required.

EMFG Update

■ – All toxin levels currently below limit of detection. Biovolumes are less than 1 which is below vigilance level. Still some evidence of BGA @Seaton's and Rea's Wood. Monitoring will continue for now, EMFG would like to see fortnightly meetings going forward.

AFBI

■ – Algae levels at the buoy have been decreasing for the past two weeks. Chlorophyll showing 3 micrograms per litre. Not predicting any further increases in BGA. Starting to see decreasing temperature in inflowing rivers to Lough Neagh.

CSAO

■ – held further meeting with OSNI regarding aerial photography for Lough Neagh. They are slightly more restrained in what they can offer, as photos will have to be knitted together in a collage or mosaic format. Will still be able to produce views of large areas of the Lough which will be beneficial given that satellite imagery is disrupted by cloud cover. Current IT systems may not be able to knit the photos together but confident there are other options available to complete this step.

■ – drone footage only gives a snapshot and not suitable for the entire Lough, would be keen to see this explored further.

■ – needs further discussion within the group ■ – DSD of the opinion that it can be improved upon going forward and there is merit in the approach.

■ trying to agree date for Lough Neagh integrated data hub, aiming for January/ February 2025.

■ – peer review due back 7th October, main concern at present is the level of expenditure given the finite budget.

AOB

It was noted that DAERA have been made aware of mortalities at Loughinsholin fish farm in Portna, which are potentially associated with cyanobacteria moving down the Lower Bann.

■ (AFBI) spoke to the owner who attributed the pulses of cyanobacteria as coming through when the lock gates are operational. A pathology report carried out by AFBI VSD noted gill clogging by blue greens (environmental debris, possibly cyanobacterial, entangled in the gill filaments) however, there are other pathologies and bacterial infections associated in the reports.

■ – will need to keep a watching brief.

ACTION POINTS/OFFICIAL RESPONSIBLE/TARGET DATE:	
• Agreed to fortnightly meetings for 30 minutes to begin 17th October.	
Minutes written by: 	Date: 3 rd October 2024





OFFICIAL DAERA MINUTES

MEETING TITLE	TCG Blue-green Meeting
DIVISION/BRANCH REFERENCE	TCG BG Meeting #20
VENUE	MS Teams
DATE/TIME	17 th October 2024, 14:30 - 15.00
LIST OF ATTENDEES	(EMFG), (EMFG), (EMFG), (EMFG), (DWI), (NIEA), (NIEA), (NIEA), (CSAO), (AFBI), (AFBI), (NIEA)
APOLOGIES	(NIEA), (EMFG), (NIEA), (NIEA), (NIEA), (NIEA), (NIEA), (AFBI), (EMFG), (NIEA), (DAERA), (DAERA), (DAERA),
KEY POINTS DISCUSSED <u>Minutes and actions of previous meeting</u> N/a <u>NIEA Update</u> RBD Team: –_correspondence have slowed to a more manageable level. Outreach events are proving positive with meaningful engagement with the lough community and stakeholders. 4 additional Lough Neagh catchment investigators are in post, their essential H&S training is complete and training specific to their role is underway. We are expecting them to be hitting LN's rivers in the next two weeks. <u>Freshwater Ecology:</u> 210 confirmed reports of blue green algae from 84 unique locations (up to and including 17/10/2024). Only 1 new location since last meeting on 3 rd October (Upper Lough MacNean - 03/10/2024). – 1 new report at Rea's Wood and nothing really to report from the data buoy at present. – nothing new to report. <u>Freshwater Investigations:</u> N/a	

DWI Update

Numbers of consumer complaints reduced in the water supplied from both Moyola and Castor Bay WTWs. These drinking water quality events continue to be investigated. Responses to DWI consumer questionnaires are being collated, and DWI will follow up as required. ■ – social media highlighting that BGA has reappeared around Toomebridge area, but from a drinking water perspective things appear to have improved.

EMFG Update

■ – biovolumes from 7th October are both clear. Rea's Wood up to 1 this week (range for vigilance level is 1-4), increased from 0.1 to 1. Toxin analysis has all been negative for the past two weeks.

■ – new SBRI, pilot project for remote sensing – information event next Monday. 84 companies have come forward so far, UK Space Agency are providing funding and tech support for the 1st phase and depending on results there may be funding for phase 2.

■ – expects to put together panels similar to the last SBRI – will likely consist of UK Space Agency, CSAO and EMFG. Closing date is 8th November, with assessment due to commence Monday 11th November.

AFBI

■ – AFBI Were out on the lough on Monday, was a very calm day and algae was clearly visible on the surface in the middle of the lough. 36 micrograms per litre, which is the highest it's been for a few weeks. The data buoy is having technical difficulties and will be brought in for repairs, therefore it will be out of action for a few weeks.

New boat, Salar was handed over last Thursday – ■ tanked everyone involved.

■ – had spoken to ■ around the difficulties of chartering boats out on the Lough, thanked DAERA and hoped it would reap rewards in coming years.

CSAO

■ – starting to get a good handle on the live data sets from AFBI & NIEA for the Lough Neagh platform. Would like to see all data sets hosted on one single viewer, may be issues in respect of ownership of individual data sets/ layers – DSD appear keen to have a viewer per data set – ■ not sure this is the required approach and would prefer the data is amalgamated onto a single platform/ viewer. ■ had received some questions at the Stakeholder Event around the Lough Neagh plan, asked if it would be possible for the authors to be at the next event to field questions. ■ – to email directors and ask that staff are familiar with the plan and to see if some copies can be made available for the event in Craigavon next week.

AOB

■ – Save Our Shores have highlighted on social media BGA at Cranfield, will be carrying out extra sampling in that location next week. ■ – even though there is a lack of visible scum and toxins are low, BGA is still present in the lough. Public are still keen for quicker results from rapid testing. ■ – ■ to take shore samples again next week and could have a look at particular sites such as Cranfield.

ACTION POINTS/OFFICIAL RESPONSIBLE/TARGET DATE:	
• All to update Briefing Paper for 17th October, and any other previous, outstanding Briefing Papers – Action Point 1.	
Minutes written by:	Date:
	17 th October 2024



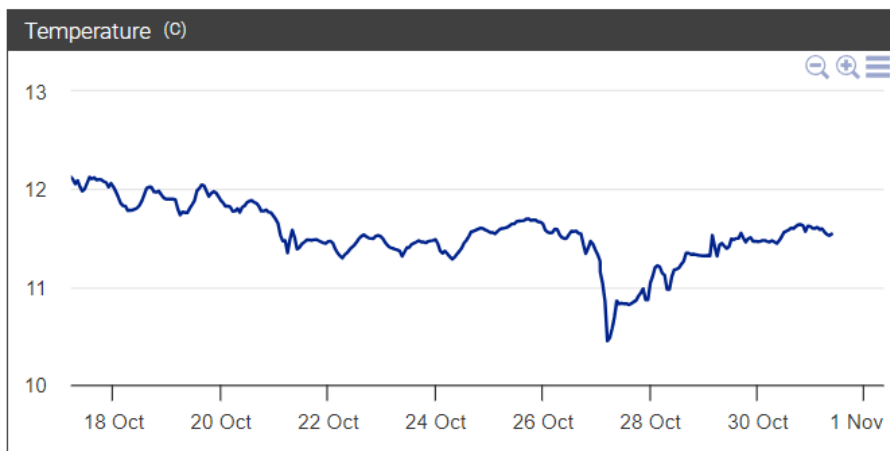
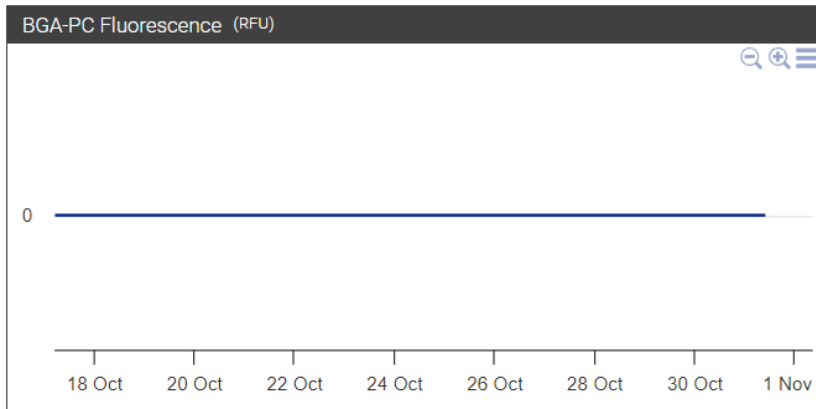


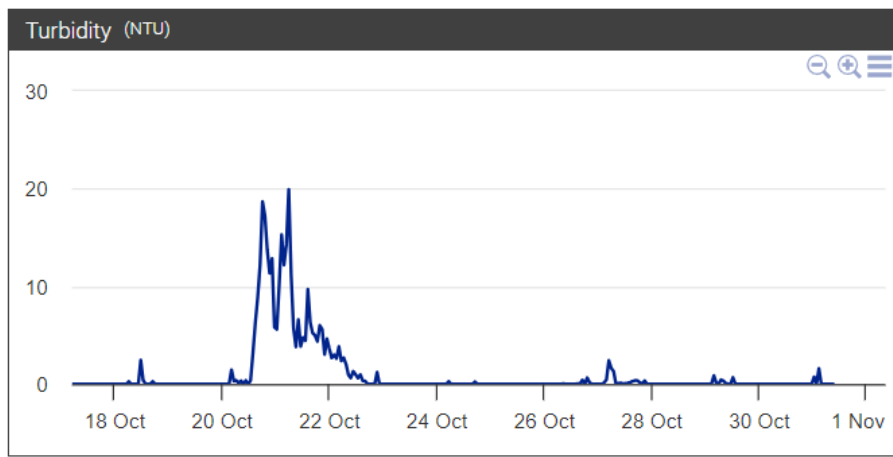
OFFICIAL DAERA MINUTES

MEETING TITLE	TCG Blue-green Meeting
DIVISION/BRANCH REFERENCE	TCG BG Meeting #21
VENUE	MS Teams
DATE/TIME	31 st October 2024, 14:30 - 15.00
LIST OF ATTENDEES	(EMFG), (EMFG), (EMFG), (EMFG), (DWI), (NIEA), (NIEA), (NIEA), (NIEA), (AFBI), (AFBI), (NIEA)
APOLOGIES	(NIEA), (EMFG), (NIEA), (NIEA), (NIEA), (NIEA), (AFBI), (NIEA), (CSAO), (EMFG), (NIEA), (DAERA), (DAERA), (DAERA),
KEY POINTS DISCUSSED <u>Minutes and actions of previous meeting</u> Action Point 1. All to update Briefing Paper for 17th October, and any other previous, outstanding Briefing Papers – Complete <u>NIEA Update</u> RBD Team: –Information on Lough Neagh stakeholder events is being collated. 460 /470 members of the public attended the three events. <u>Freshwater Ecology:</u> One report confirmed this week. (Bantry Lough, 29/10/2024). 211 confirmed reports of blue green algae from 84 unique locations. ■ - Query last week on Bantry Lough from the press office. Concentrated algae in a few areas. ■ – Algae appeared thick into a few different areas, depending on wind direction. <u>Freshwater Investigations:</u> ■ – ORFU recorded this week. Query on how data looks, extremes at night and day, likely low flow in these areas. Possibly relocate a number of sites. Data will support where we go next.	

A summary report of the data from the Lough Neagh in flowing rivers and buoy monitoring location is available in CM AE1/24/2299029. The report details several findings to date and proposes several recommendations to improve monitoring going forward. The rivers Upper Bann and Blackwater have been highlighted to CMO staff as priority investigative catchments due to lower summertime DOs and potential for acting as nutrient hotspots.

The real time monitoring at the offshore location at Reas's wood continues. The latest data is shown in the graphs below. No blooms of blue green algae have been recorded and levels have remained at 0RFU for the last two weeks. Lough Temp at 9am on 31st Oct was 11.54°C, Dissolved Oxygen was 94.48%. The fluctuations observed in surface turbidity are directly related to storm events which have mixed sediments from the lough bed.





DWI Update

█ - Normal business, regarding taste and odour now, low/zero consumer contacts for Moyola /Castor Bay WTW. Works not reporting any issues, no T&O failures. Responses to DWI consumer questionnaires are being collated, and DWI will follow up as required. Monitoring is ongoing by NI Water.

EMFG Update

█ – biovolumes <1, no toxins two weeks in a row. █ has been informed to alert information to Councils and bathing water and micro inbox have been emailed.

Date	Site	Chlorophyll (ug/l)	Lateral flow pilot testing /ELISA	Phytoplankton Biovolume (mm3/l)	Visual
21/10/24	Reas Wood	22.8	<LOR	0.35	Nothing visible
28/10/24	Reas Wood	7.0	<LOR	0.08	Nothing visible

AFBI

█ – AFBI were out on the Lough yesterday, low chlorophyll levels.

█ – 2ug/L shown on surface, nothing to see. Secchi tight sites and Secchi transparency 3.8m, chlorophyll levels decreasing.

█ – Secchi only used in summer during lake surveys, transparency has doubled from results three years previously. Lough Neagh Team, headed by █ has picked eight sites and Secchi depth, along with chemistry, will be monitored monthly. Work starts in December.

■ – Suggested using a control site.
■ – Lough Erne hasn't seen the same effect in transparency.
■ – Zebra mussel mass brought up by ■. Adhoc surveys, numbers have increased since 2014 / 2015. N & P have both increased. Will have something more definitive in next year.

CSAO

AOB

■ – Tenders for quick test dip sticks received no response. One company has supplied dip sticks to NIEA. ■ – Only one supplier for dip sticks.

■ – Chatted to a farmer at recent Lough Neagh event about beef reduction scheme. ■
– issue was raised with CAFRE at last meeting, if you want to finish cattle early, you need to feed more, which in turn produces more slurry. ■ to capture points and send to ■ and ■ **Action Point 1.**

■ – Flowcam purchase, CPD two-month lead in prior to purchase. Risk assessments have been done; goods would not be received before the end of the financial year. ■ – [money can be indicative](#) bid [made through Lough Neagh](#) for next year. ■ – ready to progress in April if funds available, 70 days for delivery. ■ – Do we need two of these Flowcams? **Action Point 2.**

■ – When will this meeting group stand down? ■ – To Discuss with ■ Next meeting to be held on 21st November 2024 (three weeks away), to allow for telemetry meeting completion on 18th November. Next meeting could be closure with a proviso that the group could be reconvened if required. All to look at terms of refence with a view to ending the meetings. **Action Point 3.**

ACTION POINTS/OFFICIAL RESPONSIBLE/TARGET DATE:

- **Action Point 1-** ■ to capture points on farmers comments at recent Lough Neagh event on beef reduction and send to ■ and ■ **AP 1.**
- **Action Point 2.** ■ to arrange a meeting with ■ and ■ prior to telemetry meeting on 18th November. **AP 2**
- **Action Point 3.** All to look at terms of refence with a view to ending the meetings. **AP 3**

Minutes written by:

■

Date:

31st October 2024



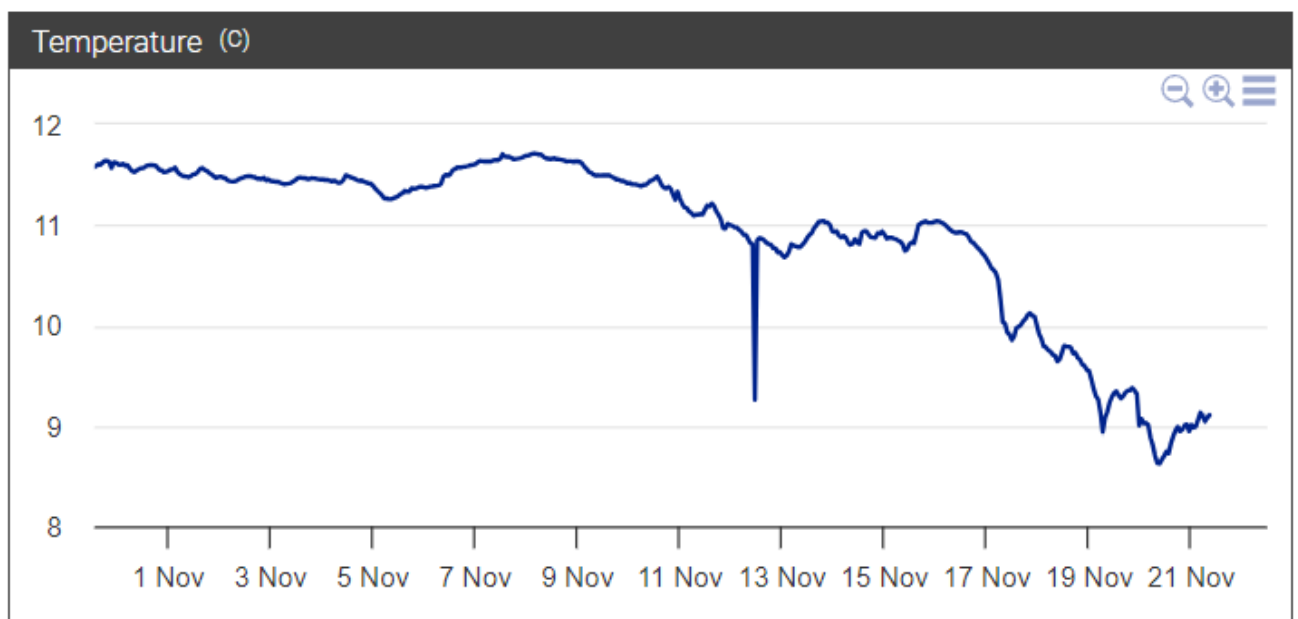
OFFICIAL DAERA MINUTES

MEETING TITLE	TCG Blue-green Meeting
DIVISION/BRANCH REFERENCE	TCG BG Meeting #22
VENUE	MS Teams
DATE/TIME	21 st November 2024, 14:30 - 15.00
LIST OF ATTENDEES	(NIEA), (NIEA), (NIEA), (NIEA), (NIEA), (EMFG), (EMFG), (DWI), (CSAO), (AFBI), (AFBI), (NIEA),
APOLOGIES	(NIEA), (EMFG), (EMFG), (EMFG), (NIEA), (NIEA), (NIEA), (AFBI), (DAERA), (DAERA), (DAERA),
KEY POINTS DISCUSSED	
<u>Minutes and actions of previous meeting</u>	
Action Point 1- to capture points on farmers comments at recent Lough Neagh event on beef reduction and send to and – to follow up. Action Point 2. to arrange a meeting with and prior to telemetry meeting on 18th November – Complete. Action Point 3. All to look at terms of refence with a view to ending the meetings – Complete.	
<u>NIEA Update</u>	
– correspondence very quiet and catchment surveys ongoing, prioritisation and site selection also progressing. Currently considering reporting measures for end of December. – putting together maps for DSD to bring across from I-Hub into phase 2.	
<u>Freshwater Ecology:</u>	
221 confirmed reports of blue green algae from 89 unique locations (up to and including 21/11/2024). Since last week, 2 new locations: Lough Scolban and Upper Lough Erne – Crom. Since last TCG meeting on 31st Oct, quite a few blooms in smaller lakes across NI including Lough Jenkin, Kiltybane Lough, Castlewellan Lake and Lough Macrory as well as sites on Lough Neagh and Lough Erne.	

■ – hopes to have a BGA training course delivered before the end of the financial year, should also be an opportunity for freshwater/ bathing water staff to attend (February). Procurement for dipsticks is now live.

Freshwater Investigations:

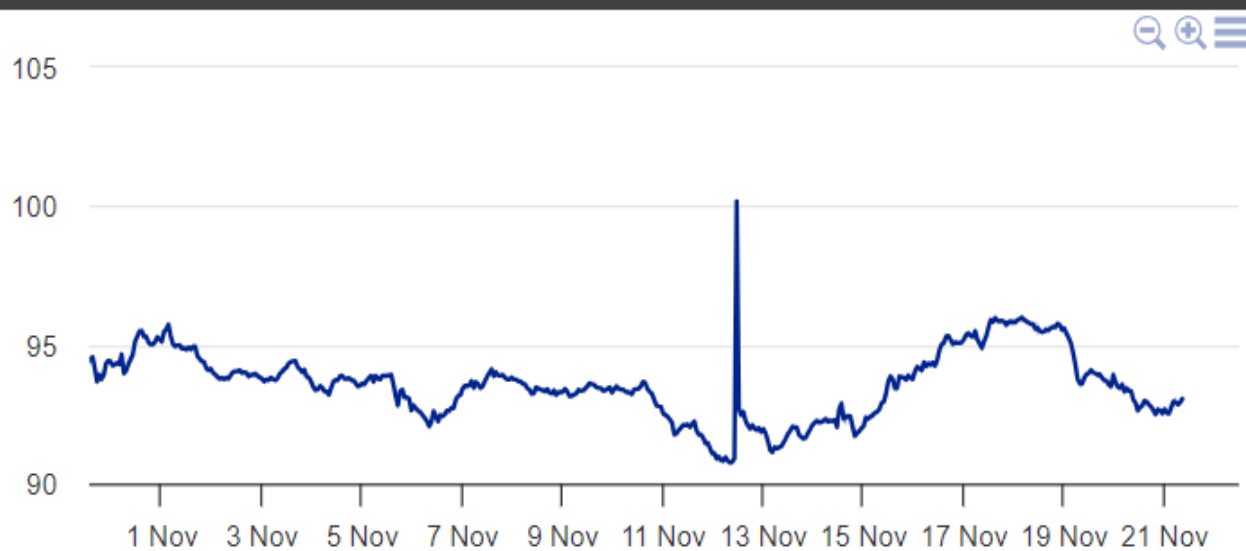
The real time monitoring at the offshore location at Reas's wood continues. The latest data is shown in the graphs below. With the exception of very low levels of BG algae detected on the 3rd of Nov, the levels have remained at 0RFU for the monitoring period. The anomaly in DO and Temp seen on the 12th of Nov is a result of a calibration and maintenance event. Lough Temp at 9.00am on 21st Nov was 9.1°C, Dissolved Oxygen was 93.08%, BG was 0RFU. The fluctuations observed in surface turbidity over the last three weeks are directly related to storm events which have mixed sediments from the lough bed.

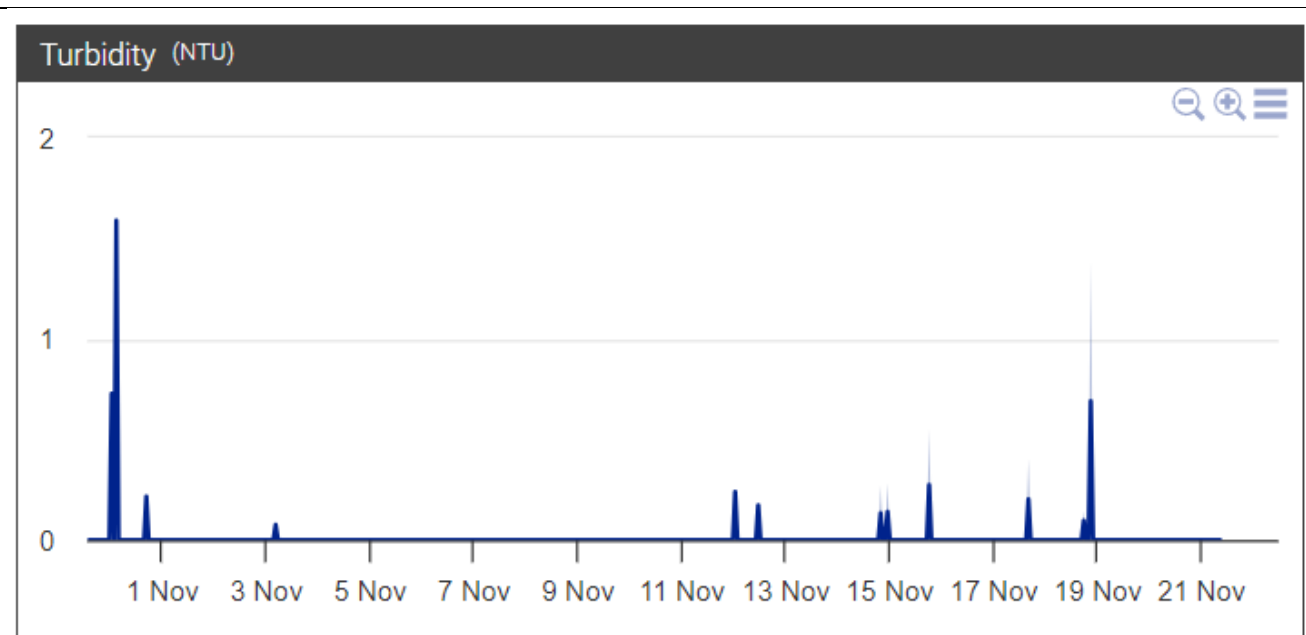


BGA-PC Fluorescence (RFU)



% Saturation O₂ (% sat)





DWI Update

No current drinking water quality issues relating to blue green algae. Consumer survey issued following taste & odour events at Moyola and Castor Bay WTW closed on 31 October 2024 and responses have been collated. DWI are reviewing the data from these events and considering next steps.

Recent NI Water results show Microcystin-LR levels well below the WHO guideline value of 1ug/l for both raw and final water samples, and raw and final water Geosmin and MIB results at the Lough Neagh related WTWs continuing to reduce from the peak levels recorded in mid-September.

Monitoring of algae counts, Geosmin/MIB and Microcystin-LR by NI Water will be somewhat reduced from December 2024 to March / April 2025, however, weekly algae counts will remain in place for Lough Neagh related sites for the whole year.

EMFG Update

■ – Latest SBRI was of a very high standard resulting in 3 successful bids. An expectation that it will require data sharing with the companies and a quick turnaround with delivery planned for March. May consider a phase 2 depending on the outcomes.

■ – No toxins found in any samples up to 11th November although there is a bit of a lag. Low levels of toxins recorded back in August. Last sample to be taken on 25th November.

AFBI

■ – sonde back up and running again, current chlorophyll levels are low, between 2/3 micrograms per litre. ■ have been able to deploy the fluoroprobe on 17 sampling occasions at 6 different sites around the Lough between March and November. ■ – have picked up an increase in Blue/green pigments at Toome although it is a small change in the grand scheme of things. Will continue sampling over winter to build up the baseline data set.

CSAO

■ – DSD still progressing work on the shared platform and CSAO happy to offer scientific advice going forward. ■ – there will be an upcoming meeting between the Minister and Lough Neagh Partnership, may be an opportunity for the groups like Earthwatch to collaborate on citizen science projects and for this to be potentially incorporated into the shared Lough Neagh platform. ■ asked if this was worth promoting through angling groups and Rivers Trusts. ■ – some PeacePlus projects may offer the opportunity to engage with Citizen Science groups but with Scientific oversight for analysis. Possible advantage in collating more information with greater coverage and more spatial distribution. Still requires clarity on how information is captured and assessed. ■ – Queen's PHD currently looking at data mining and remote sensing on Lough Neagh. ■ – has also had an invitation to the Climate Workshop for knowledge exchange. ■ providing some broad scope workshops and presentations.

AOB

It was agreed by all members that the TCG meetings would be stood down as the number of reports has reduced and monitoring results indicated a stable position.

■ thanked the group for their continued efforts and advised that ■ is to convene an Interagency Monitoring Group meeting to initiate a review of Interagency Protocol – AP2.

ACTION POINTS/OFFICIAL RESPONSIBLE/TARGET DATE:

- **Action Point 1** - ■ to capture points on farmers comments at recent Lough Neagh event on beef reduction and send to ■ and ■ – ■ to follow up.
- **Action Point 2** – ■ to convene IMG meeting initiate review of Interagency Protocol.

Minutes written by:

■

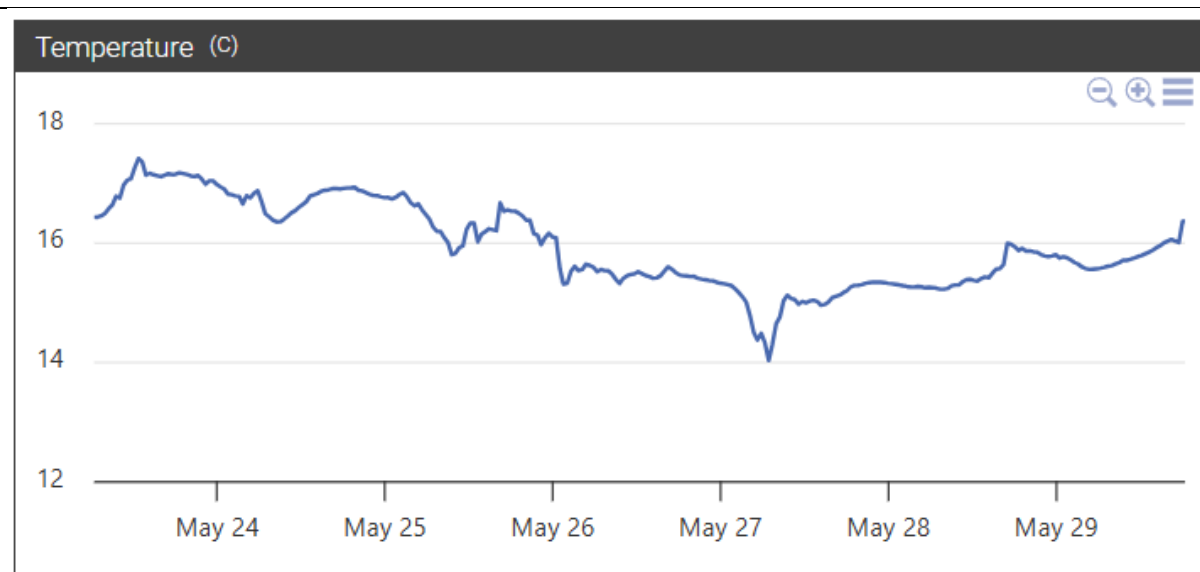
Date:

21st November 2024

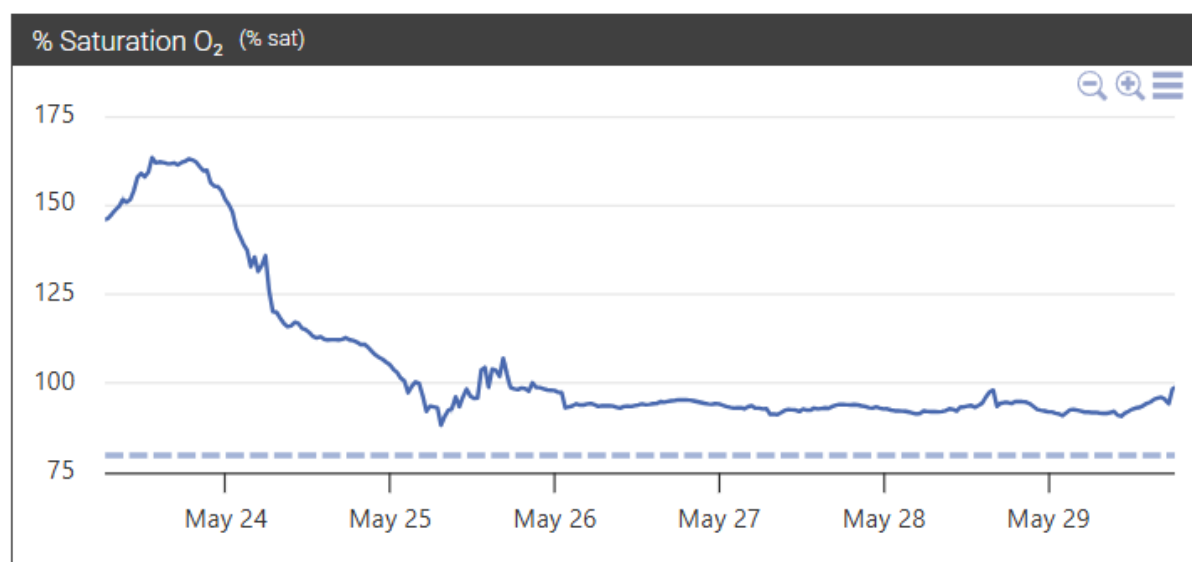


OFFICIAL DAERA MINUTES

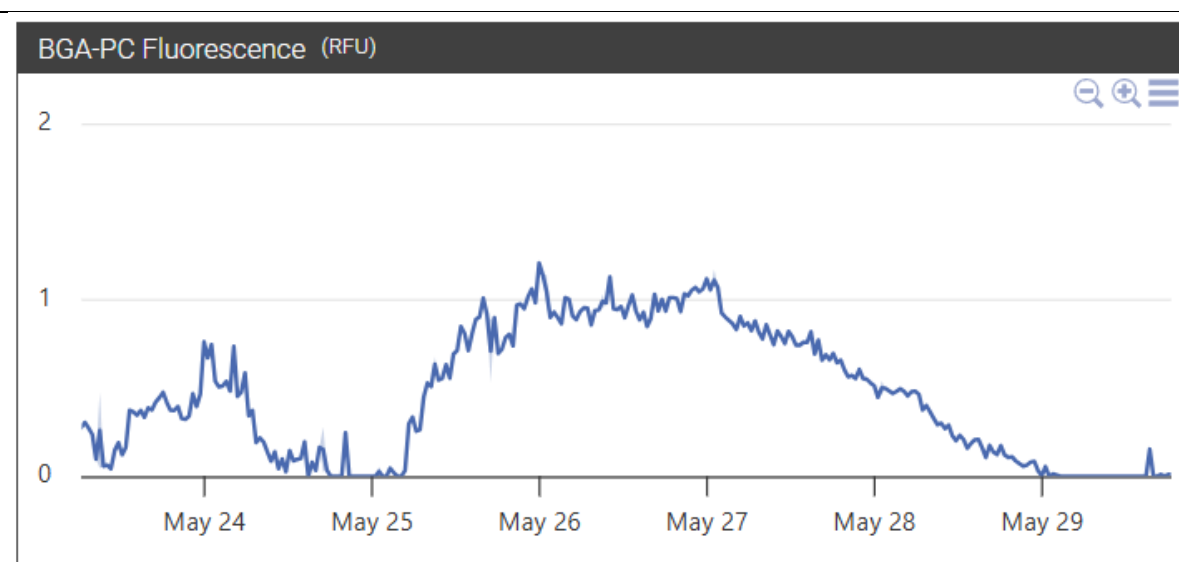
MEETING TITLE	TCG Blue-green Meeting
DIVISION/BRANCH REFERENCE	TCG BG Meeting #23
VENUE	MS Teams
DATE/TIME	30 th May 2025, 12.00 - 13.00
LIST OF ATTENDEES	(NIEA), (NIEA), (NIEA), (NIEA), (EMFG), (EMFG), (EMFG), (EMFG), (DWI), (AFBI), (AFBI), (CSAO), (DAERA), (DAERA), (NIEA)
APOLOGIES	(NIEA), (EMFG), (NIEA), (NIEA), (NIEA), (EMFG), (EMFG), (NIEA), (NIEA), (NIEA), (NIEA), (AFBI), (DAERA)
KEY POINTS DISCUSSED <u>Minutes and actions of previous meeting</u> • Action Point 1- to capture points on farmers comments at recent Lough Neagh event on beef reduction and send to and – Complete. • Action Point 2. to arrange a meeting with and prior to telemetry meeting on 18th November – Complete. • Action Point 3. All to look at terms of refence with a view to ending the meetings – Complete. • to close off action points from 2024, new TOR to be discussed at end of meeting in AOB. <u>NIEA Update</u> FMA Freshwater Investigations: Telemetered data from the multiparameter sonde deployed offshore (sub-surface) at Rea’s Wood, Antrim is displayed in the graphs below. The data represents the last 7 days of monitoring.	



Temperature is typical for the time of year and variations are in line with the recent unsettled weather following long dry sunny spell.



Dissolved Oxygen levels (DO) have returned to normal levels following a period of hyperoxygenation. Hyperoxygenation, or excessive dissolved oxygen in water, can occur in lakes due to various factors, including algae blooms and rapid macrophyte growth. This has been recorded in the epilimnion (upper layer), concentrated due to the very settled dry sunny period of weather. Since conditions have become more unsettled in the last week, the lake has experience mixing, bringing surface levels back to more normal and expected levels.



Blue green algae (Phycocyanin) levels remain present but low. There have been no spikes in abundance recorded at Rea's Wood over the last 7 days. This is also helped by the period of unsettled weather, causing surface mixing and cooling. The presence of BGA indicates that that a bloom could occur if conditions are optimal.

FMA Lake Monitoring & Evidence:

So far in 2025, 14 confirmed reports of blue green algae from 12 unique locations (up to and including 29/05/2025). One new confirmed location this week at Lough Neagh – Scaddy Island.

Confirmed locations so far in 2025:

Confirmed blue green algae locations 2025	Latest confirmed report
Lough Neagh - Scaddy Island	23/05/2025
Lower Lough Erne - Ross Harbour	17/05/2025
Craigavon Lakes	15/05/2025
Lower Lough Erne - Tully Castle	13/05/2025
Portmore Lough	07/05/2025
Lower Bann - Seatons Marina	28/04/2025
Lough Aghery	17/04/2025
Lough Neagh - Curran's Quay (Kinturk)	11/04/2025
Lough Neagh - White Horse Flats	11/04/2025
Ballysaggart Lough	09/04/2025
Lough Neagh - Traad point	09/04/2025

█ – no progress to date on Phase 2 of Blue/green web viewer – may be superseded by Lough Neagh platform.

█ – no real change from 2024, still applying the procedure. █ suggested that █, █ and █ liaise on guidelines for identifying reports from similar locations and how to differentiate and report going forward. █ – need to categorise severity in the context of the Inter Agency Protocol. █ – █ has criteria for differentiation between distinct blooms. DQ to organise meeting between FMA, Marine & OPS for 2 weeks' time. █ – no BG report confirmed for Castlewellan Lake as yet, received query re proposed triathlon and council removing notice, OPS team to have a closer look at situation on the ground.

DWI Update

No reports or consumer complaints of drinking water quality issues relating to blue green algae in 2025 to date. Data from NI Water's weekly monitoring of algae counts, Geosmin/MIB and Microcystin-LR across all Water Treatment Works is being monitored. Query raised on testing for anatoxins, confirmed NI Water only monitor Microcystin-LR.

EMFG Update

█ – Anabaena bloom has dispersed since end of April. Diatom bloom at both Rea's Wood & Seaton's Marina, shift in species in the past 3 weeks (which is normal), none in the Bann. █ – will publish 2024 Bathing Water Cyanotoxin and BGA Monitoring Results soon, Phase 2 of UK Space Agency Project for prediction & detection to proceed in the few weeks. Blue/green monitoring App also being developed, asked if others might be able to make use of this. Data to hopefully be made available on Lough Neagh platform in due course.

Date	Site	Chlorophyll (ug/l)	Lateral flow pilot testing /ELISA	Phytoplankton Biovolume (mm3/l)	Species detected	Visual
6/5/25	Seaton's Marina	20.4	<LOD	0.000	Anabaena Snowella	Some visible on slip, none in water column
6/5/25	Rea's Wood	4.15	<LOD	0.001	Anabaena	Few particles of Cyano visible in water column

12/5/25	Seaton's Marina	3.69	<LOD	0.000	None	Nothing visible
12/5/25	Rea's Wood	7.15	<LOD	0.421	Oscillatoria Aphanizomenom	Few particles of Cyano visible in water column
19/5/25	Seaton's Marina	1.52	<LOD	0.000	None	Nothing visible
19/5/25	Rea's Wood	11.6	<LOD	0.000	Oscillatoria	Nothing visible
22/5/25	Seaton's Marina	3.44	<LOD	0.000	Snowella	None
22/5/25	Rea's Wood	45.245	<LOD	0.000	Oscillatoria	None
27/5/25	Seaton's Marina	1.56	-ve lateral flow	0.000	None	None
27/5/25	Rea's Wood	25.285	-ve lateral flow	0.000	Oscillatoria	None

CSAO

Lough Neagh Platform – buoys are working, technical side is looking good, and data is clean. Small changes to the testing and the governance still to be ironed out. Soft launch planned for 3 weeks' time, official launch by the Minster closer to mid-July, need to co-ordinate closely with Marine colleagues.

AFBI

█ – very low chlorophyll levels in the middle of the Lough, 6mg/L, would normally be closer to 60mg/L by now. 49mg/L was recorded in Lower Bann during a pollution incident. TP was slightly lower than expected, a positive for now. Still plenty of nutrients around, water is very clear, so the stage is set for Microcystis to potentially take hold.

█ – Ex DAERA vessel Salar had its first run out on the Lough, training to proceed and will help to deploy the buoy. █ - referenced other less obvious data sets, had a conversation with an owner of a trout farm who has a long data set of twice daily DO readings.

█ – AFBI Shield Project given the go ahead, high frequency monitoring of inflowing rivers, instrumentation to be deployed before the end of the year. Will complement the FMA monitoring programme which is also being expanded. █ – SBRI Projects also seeking real time data sets to help build their predictive models. █ – █ also has some recent data that can feed into any relevant platforms.

Communication & LTT's

■ – quiet on the Comms front, updates on occurrence are a valuable tool for press office/ comms. ■ – needs to be made clear that the web viewer is the definitive source for all confirmed reports. ■ – there will be regular updates on LTT for Minister by both Marine & FMA. ■ keen to collaborate with AFBI on publicising New Harmonica Project to promote findings and share information – ■ confirmed that ■ would be best POC.

AOB

■ – wider discussion ongoing around civil contingencies, need to consider TOR for the TCG, FSA & PHA may benefit from inclusion and information sharing from the group. ■ & ■ agreed to look at TOR after TEO meeting.

■ – would like to set frequency of TCG meetings initially to every 2 weeks, Thursday afternoon for 30 mins, to be reviewed as the season progresses.

■ – asked about possible retrospective permissions for deployment of instrumentation/ moorings, ■ – seeking 5-year all-encompassing licence for all partners to deploy sondes, buoys, moorings and drones. Advice from NED is that using existing infrastructure is considered less of a risk. ■ questioned whether moorings associated with buoy deployment did fall within the remit of 'notifiable operations'. NED currently advising that permissions for Lough Neagh instrumentation will not be expedited ahead of routine business.

■ – also keen to have one overall application for consent as it would also keep the process cleaner and should be consistent with any permissions sought from the Shaftesbury Estate.

■ – final comment for all field staff to be mindful of the strength of feeling about the current NAP review.

ACTION POINTS/OFFICIAL RESPONSIBLE/TARGET DATE:

- **Action Point 1** – All to review membership of the TCG after TEO Meeting.

Minutes written by:

■

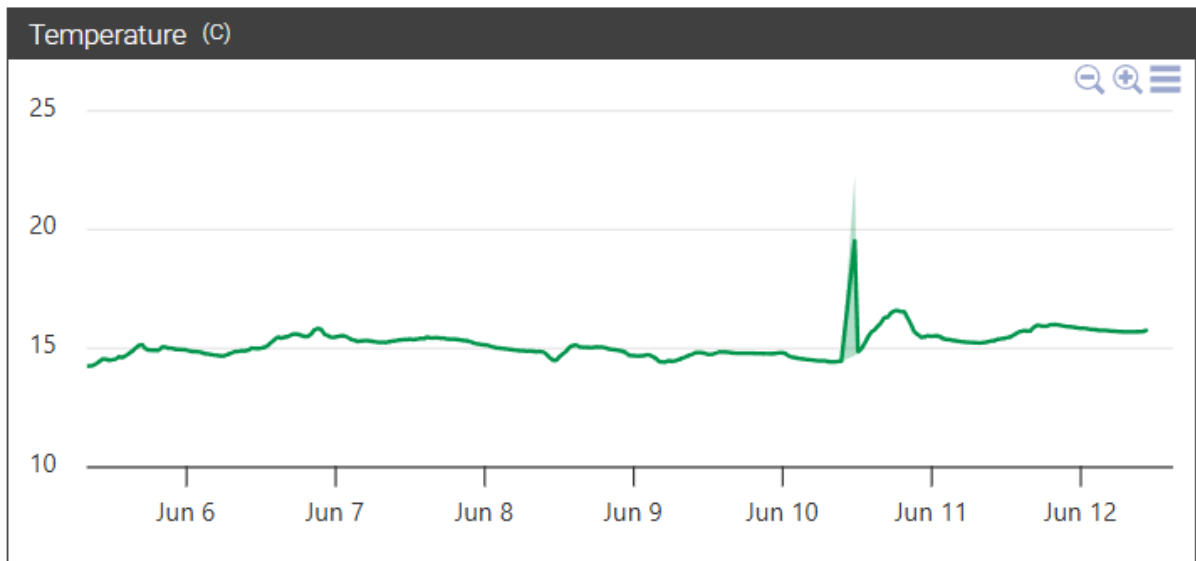
Date:

30th May 2025

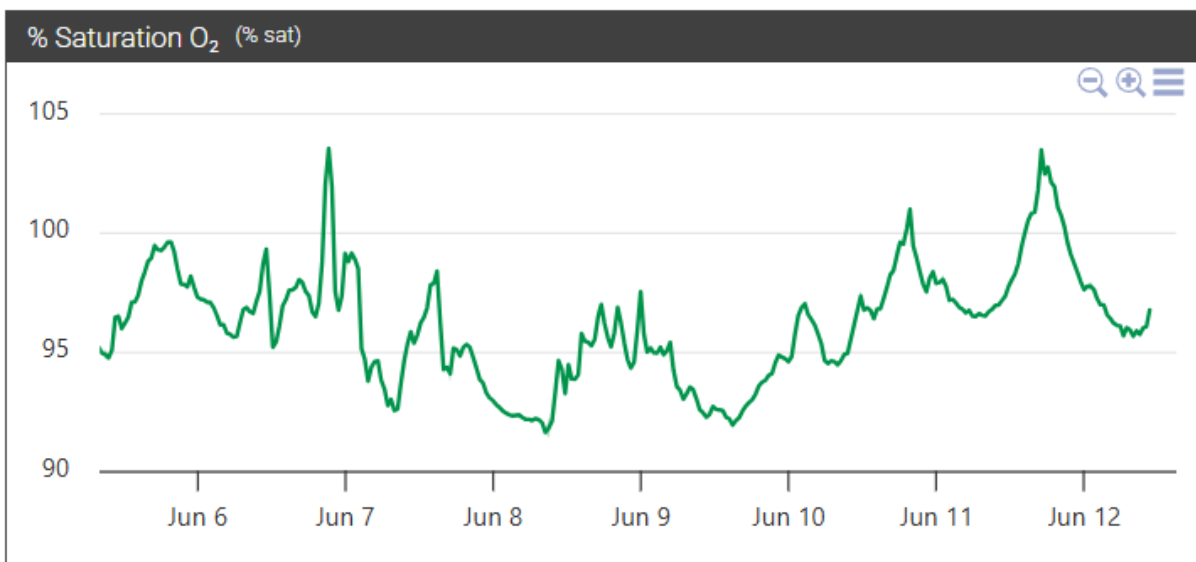


OFFICIAL DAERA MINUTES

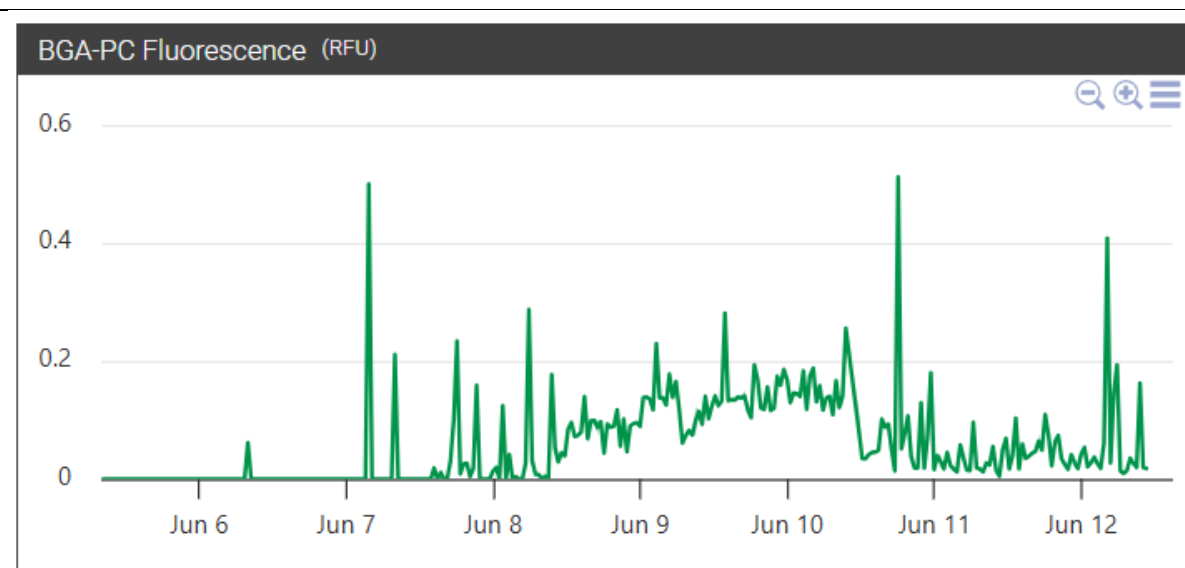
MEETING TITLE	TCG Blue-green Meeting
DIVISION/BRANCH REFERENCE	TCG BG Meeting #24
VENUE	MS Teams
DATE/TIME	12 th June 2025, 14.00 – 14.30
LIST OF ATTENDEES	(NIEA), (EMFG), (EMFG), (NIEA), (DWI), (NIEA), (AFBI), (DAERA), (NIEA) (NIEA), (EMFG), (NIEA), (NIEA), (NIEA), (NIEA), (EMFG), (EMFG), (NIEA), (EMFG), (EMFG), (NIEA), (AFBI), (AFBI), (CSAO), (NIEA), (NIEA), (DAERA), (DAERA)
APOLOGIES	
KEY POINTS DISCUSSED	<u>Minutes and actions of previous meeting</u> Action Point 1 – All to review Terms of Reference of the TCG after TEO Meeting – Carried Forward <u>NIEA Update</u> FMA Freshwater Investigations: Telemetered data from the multiparameter sonde deployed offshore (sub-surface) at Rea's Wood, Antrim is displayed in the graphs below. The data represents the last 7 days of monitoring.



Temperature is typical for the time of year. The anomaly on the 10th is due to the sensor temporarily being removed (air) for calibration.



Surface Dissolved Oxygen levels (DO) levels are as expected for the time of year and current atmospheric conditions.



Blue green algae (Phycocyanin) levels remain present but low. There have been no significant spikes in abundance recorded at Rea's wood over the last 7 days. The presence of BGA indicates that that a bloom could occur if conditions are optimal.

█ – Blue/green sensor updated, so far, no significant spike at Rea's Wood. Consent applied for to deploy additional instrumentation, including plans to deploy at Washing Bay. Will work through adhering the conditions outlined in the consent.

FMA Lake Monitoring & Evidence:

So far in 2025, 19 confirmed reports of blue green algae from 17 unique locations (up to and including 12/06/2025). Four new confirmed location this week at Upper Lough Macnean, Lower Lough Erne - Castle Archdale, Lower Lough Erne - Castle Caldwell and Lower Lough Erne - Muckcross Bay. █ – No thick scums visible as yet on the on the shore so not in full bloom.

Confirmed blue green algae locations 2025	Latest confirmed report
Lower Lough Erne - Castle Archdale	10/06/2025
Lower Lough Erne - Muckcross Bay	10/06/2025
Upper Lough Macnean	10/06/2025
Black Glen Lake - Castlerock	02/06/2025
Lower Lough Erne - Castle Caldwell	01/06/2025
Lough Neagh - Scaddy Island	23/05/2025
Lower Lough Erne - Ross Harbour	22/05/2025
Craigavon Lakes	15/05/2025
Lower Lough Erne - Tully Castle	13/05/2025

Portmore Lough	07/05/2025
Lower Bann - Seatons Marina	28/04/2025
Lough Aghery	17/04/2025
Lough Neagh - Curran's Quay (Kinturk)	11/04/2025
Lough Neagh - White Horse Flats	11/04/2025
Ballysaggart Lough	09/04/2025
Lough Neagh - Traad point	09/04/2025
Martray Lough	02/04/2025

Priority Catchments

■ – Fieldwork and baseline sampling continuing. Initial baseline now complete for Grange Water Curran & Keenaght waterbodies, will move on to commence sampling in Milltown Burn next week. A total of 169 surveys completed in the Moyola catchment at present.

DWI Update

No reports of consumer complaints of drinking water quality issues relating to blue green algae in 2025 to date. Data from NI Water's weekly monitoring of algae counts, Geosmin/MIB and Microcystin-LR across all Water Treatment Works is being monitored. Rising levels of Geosmin noted in River Bann source used for Ballinrees WTW.

Visit to NI Water lab on 11/06/2025 to see new equipment for Geosmin/MIB and Microcystin-LR analysis. Instrumentation not yet being used for operational samples.

EMFG Update

Reas Wood Sampling Week 2/6/25 to 12/6/25

Date	Site	Chlorophyll (ug/l)	Lateral flow testing /ELISA	Phytoplankton Biovolume (mm3/l)	Species detected	Visual
2/6/25	Seatons Marina	1.66	<LOD	0.003	<i>Oscillatoria</i>	Nothing visible
2/6/25	Reas Wood	3.98	<LOD	0.012	<i>Oscillatoria</i>	Nothing visible
9/6/25	Seatons Marina	1.44	<LOD	0.000	None	Nothing visible
9/6/25	Reas Wood	3.75	<LOD	0.000	<i>Pseudoabaena</i>	Nothing visible

*<LOD for dissolved and intracellular toxins below the detection limit.

Nothing seen in UAV surveys

██████ – Biovolumes mostly zero, nothing at Seaton's Marina. Chlorophyll exceptionally low for River Bann. No toxins in the system at present and not much to report as nothing visible in the June surveys. Worth considering that issues around shores of Lough Beg could be as a result of a more localised effect and not necessarily connected to the timings of flood gates being opened at Toome.

AFBI

██████ – Chlorophyll very low, results showing under 10mg/L in the Bann and Lough Neagh. Data Buoy currently out of action at present. Anecdotal information from fishermen that zooplankton numbers are increasing on the Lough. Possible down to a change in the dominant species but there does appear to be more zooplankton in samples. ██████ – agreed that she also thinks there has been a change in the zooplankton population from last year.

Press Office

██████ – all quiet on the Blue/ green front except for one query which is currently being dealt with.

AOB

Next meeting to be held after the TEO meeting.

██████ - TCG to tie in with the civil contingencies group if need be and consider the main risks in a worst-case scenario, which will focus on drinking water supply.

ACTION POINTS/OFFICIAL RESPONSIBLE/TARGET DATE:

- **Action Point 1** – All to review Terms of Reference of the TCG after TEO Meeting – Carried Forward

Minutes written by:

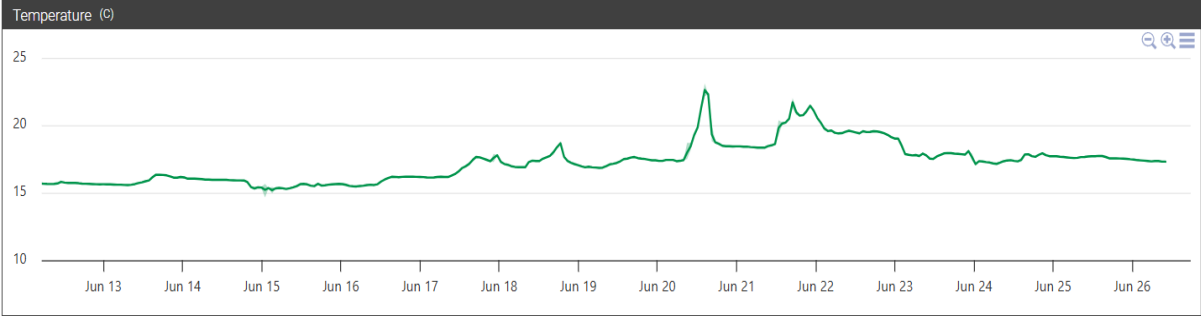
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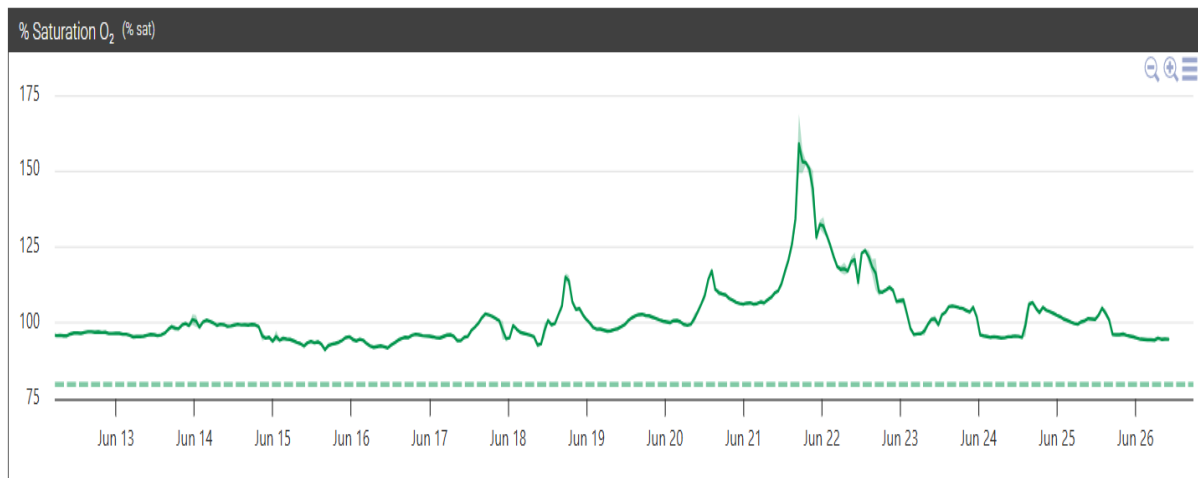
12th June 2025



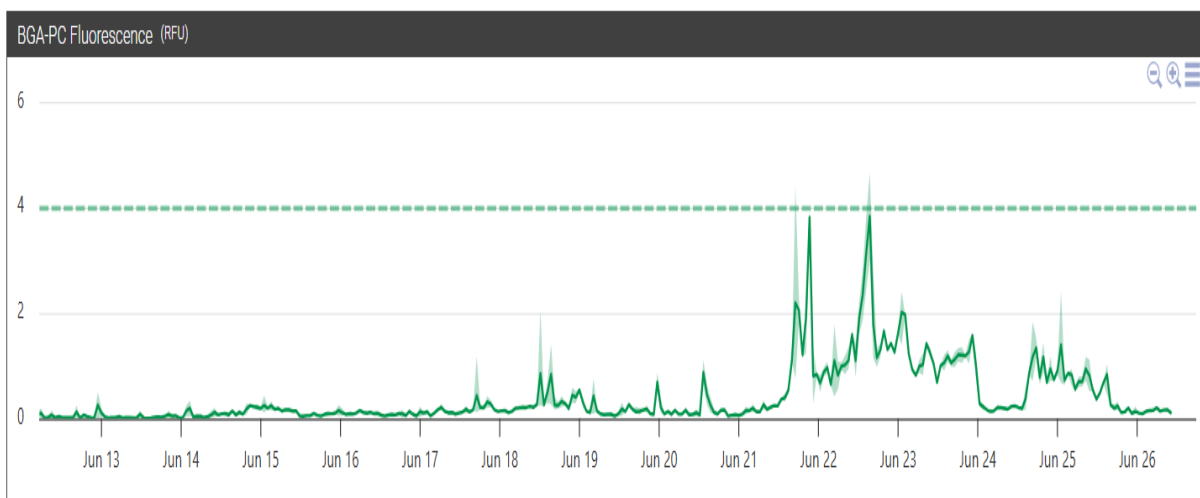
OFFICIAL DAERA MINUTES

MEETING TITLE	TCG Blue-green Meeting
DIVISION/BRANCH REFERENCE	TCG BG Meeting #25
VENUE	MS Teams
DATE/TIME	26 th June 2025, 14.30 – 15.00
LIST OF ATTENDEES	(NIEA), (NIEA), (NIEA), (NIEA), (NIEA), (EMFG), (EMFG), (DWI), (EMFG), (CSAO), (AFBI), (DAERA), (NIEA)
APOLOGIES	(NIEA), (EMFG), (NIEA), (EMFG), (NIEA), (EMFG), (NIEA), (AFBI), (AFBI), (AFBI), (NIEA), (NIEA), (DAERA)
KEY POINTS DISCUSSED <u>Minutes and actions of previous meeting</u> • Action Point 1 – All to review Terms of Reference of the TCG after TEO Meeting – Carried Forward <u>NIEA Update</u> FMA Freshwater Investigations: Telemetered data from the multiparameter sonde deployed offshore (sub-surface) at Rea's Wood, Antrim is displayed in the graphs below. The data represents the last 14 days of monitoring.	
	

Temperature is typical for the time of year. Increases observed in surface temperature during the 20th-23rd of June correspond to the recent 'heatwave' experienced in NI.



DO Levels are as expected with exception of the period during the recent 'heatwave'. The increased surface temperature has allowed for a short period of hyperoxygenation and increased production, which was quickly broken down following more unsettled weather conditions.



Again, the BG data corresponds with an increase in surface temperature and DO levels during the 'heatwave'. These conditions have allowed for the low levels of BG, previously observed, to increase in concentration. These conditions also correlate to recent areal footage of blue green blooms forming on the lough surface. Whilst levels remain low there is potential for a blue green bloom in this location if favourable conditions were to persist. BG levels have since decreased reflecting the more unsettled atmospheric conditions.

FMA Lake Monitoring & Evidence:

So far in 2025, 27 confirmed reports of blue green algae from 20 unique locations (up to and including 26/06/2025). Two new confirmed locations this week at Closet River, Craigavon-(outflow from Craigavon Lakes) and Lower Bann at Portglenone.

Confirmed blue green algae locations 2025	Latest confirmed report
Lower Bann - Portglenone	24/06/2025
Closet River - Craigavon	20/06/2025
Lower Lough Erne - Muckcross Bay	19/06/2025
Hillsborough Forest Park	17/06/2025
Lower Lough Erne - Castle Archdale	13/06/2025
Upper Lough Macnean	10/06/2025
Black Glen Lake - Castlerock	02/06/2025
Lower Lough Erne - Castle Caldwell	01/06/2025
Lough Neagh - Scaddy Island	23/05/2025
Lower Lough Erne - Ross Harbour	22/05/2025
Craigavon Lakes	15/05/2025
Lower Lough Erne - Tully Castle	13/05/2025
Portmore Lough	07/05/2025
Lower Bann - Seatons Marina	28/04/2025
Lough Aghery	17/04/2025
Lough Neagh - Curran's Quay (Kinturk)	11/04/2025
Lough Neagh - White Horse Flats	11/04/2025
Ballysaggart Lough	09/04/2025
Lough Neagh - Traad point	09/04/2025
Martray Lough	02/04/2025

■ – Having been having issues with Blue/green algae app with some people being unable to upload photos. People are being made aware and are being asked to submit photos to Pollution Response Hotline. Blue/ greens being reported at Derryadd but they are not Cyanobacteria. ■ – queried whether there were any thoughts on whether confirmation from Portglenone was due to backwaters or possible flush from Toome into the Lower Bann?

Priority Catchments

■ – Processing new Blue/green content for the webpage. ■ – 16 new sites completed for Baseline Sampling in the Moyola catchment since the start of this week.

Pollution Response

██████ – One issue still to be resolved around the identification of different blooms. The temporal timeframe of 2 weeks seems to have consensus but still no agreement on geospatial framework for differentiating between separate blooms. ██████ – FMA still having ongoing discussions around agreeing a process for spatial distribution and some issues still need to be ironed out. Pollution Response working with ██████ to agree a classification going forward for High/Medium/Low severity blooms. ██████ – asked if we need to include species as part of the classification, ██████ – there is not always a sample included with a WR report and there are also difficulties around classifications in a river context with the ability of blooms to move more quickly in a dynamic environment.

DWI Update

No reported drinking water quality issues associated with blue green algae in 2025 to date. Ongoing review of NI Water's monitoring data for raw and final waters and controls in place to mitigate algae risk to drinking water quality.

EMFG Update

Date	Site	Chlorophyll (ug/l)	Lateral flow testing /ELISA	Phytoplankton Biovolume (mm3/l)	Species detected	Visual
16/6/25	Seatons Marina	1.51	<LOD	0.002	<i>Oscillatoria</i>	Nothing visible
16/6/25	Reas Wood	24.86	<LOD	0.262	<i>Oscillatoria</i>	Nothing visible
23/6/25	Seatons Marina	2.96	<LOD	0.003	<i>Pseudoanabaena</i>	Nothing visible
23/6/25	Reas Wood	15.96	<LOD	0.135	<i>Dolichospermum/Anabaena</i> <i>Microcystis</i> <i>Aphanizomenon</i>	Nothing visible

██████ - *Dolichospermum/Anabaena* bloom started, Reas Wood contained a lot of fragmented chains in water possibly due to windy/choppy conditions, it also contained a lot *Pandorina* which can cause a 'fishy smell'.

Lower Bann chlorophyll is very low and lots of pseudo anabaena, signs that there could be a bloom quite soon.

██████ – TEO recommendation is that TCG operational meetings should involve other agencies. Need to revisit TOR of both TCG and Inter-Agency Protocol Group and have a discussion around how all the different monitoring sits together. ██████ did a piece for DAERA News & Views on the Inter-Agency working which was very well received.

██████ – Phase 2 of the SBRI should be awarded by 21st July. Looking at remote sensing to train data models being used as part of the SBRI work.

██████ – need more information on what species are the most dominant at present.

██████ – biggest impact for NI Water is when the blooms start to decay and rapidly cause a major problem.

AFBI

■ - Chlorophyll sampling has shown an increase up to 31mg/L from 10mg/L in recent weeks. Out on the Lough the water is choppy, they are seeing some green flecks but no signs of blooms at present. AFBI data buoy will hopefully be redeployed next week.

CSAO

■ – Lough Neagh Platform still needs some redacting of data which he is working through with ■. Reluctant to launch the platform prior to the Data buoy being redeployed given the large amount of information being relayed from it. Still working in conjunction with Marine to agree lines to take for potential queries once the platform is launched.

Press Office

■ – Still only one ongoing query in respect of Castlewellan Lake. ■ – there have been several queries around Castlewellan but still no confirmed reports of BGA. Thinks much of it is on the back of the triathlon event being cancelled. Query around any potential issues with the Bloomin Algae App, ■ – says that UKCH own the app and that FMA only verify the reports.

AOB

Next meeting is set for 10th July in advance of the Open. Everyone acutely aware that the conditions are currently favourable for a Blue/ green bloom that could potentially also affect the North Coast and Designated bathing waters.

ACTION POINTS/OFFICIAL RESPONSIBLE/TARGET DATE:

- **Action Point 1** – All to review Terms of Reference of the TCG after TEO Meeting – Carried Forward

Minutes written by:

■

Date:

26th June 2025

EMFG-NIEA Blue Green Algae Tactical Co-ordination Group (TCG)

Review – December 2025

TERMS OF REFERENCE

1. PURPOSE AND ROLE

EMFG and the NIEA have agreed to set up a group to deal with the ongoing blue green algae issues. The main focus will be to prioritise work; to co-ordinate activities; to agree external and internal LTTs to inform the public and staff; and to ensure appropriate resourcing is in place. Meetings will cover the impact of blue green algae for inland and coastal areas.

The first season of consistent blue green algal blooms across the whole of Lough Neagh was in 2023 and during that year, NIEA and EMFG held Operational Task Team meetings throughout the incident, from early July through to October. During the 2024 season, NIEA and EMFG continued this work during the season through a Tactical Co-ordination Group with AFBI. In June 2025, TEO hosted a workshop to look at the risks posed from persistent harmful algae blooms, and as a result of this workshop and risk assessment, TEO recommended that the TCG be broadened to incorporate other organisations. This TOR reflects those recommended changes.

The TOR will be reviewed on an annual basis.

2. MEMBERSHIP

The EMFG-NIEA Blue Green Algae Operational Group will comprise of the following officers:

Director RED NIEA	[REDACTED] (Co-
chair)	
Head of WMU RED NIEA	[REDACTED]
Freshwater Monitoring and Assessment	[REDACTED]
River Basin District RED NIEA	[REDACTED]
Freshwater Data Insights	[REDACTED]
RBD Catchments Team NIEA	[REDACTED]
Drinking Water Inspectorate	[REDACTED]
[REDACTED]	
Director MFD NIEA	[REDACTED] (Co-chair)
Deputy Director MFD	[REDACTED]
Marine Strategy & Catchments Team MFD	[REDACTED]
Marine Monitoring and Assessment Team MFD	[REDACTED]
Marine Monitoring and Assessment Team MFD	[REDACTED]
DAERA Contingencies	[REDACTED]
AFBI	[REDACTED]
AFBI	[REDACTED]

CSAO
Press Office



Secretariat – RBD Catchment Team



Public Health Agency
Public Health Agency
Food Standards Agency
NI Water



Tourism NI
Civil contingencies links



****Note – Bathing Water Operators will be contacted separately during an incident**

N.B. G6s to adjust attendance as required.

3. MEETINGS

Meetings will be held every two weeks (max. 30mins) to maintain an overview of the situation relating to blue-green algae in Lough Neagh and at other locations across Northern Ireland to ensure EMFG and NIEA are joined-up and have consistent messaging. The frequency and duration of the meetings will be kept under review.

During a serious incident, meeting will be held more frequently as needed.

4. AGENDA

The outline agenda is:

- Welcome
- Minutes and actions of previous meeting
- Pre-populated SITREP – updated by each organisation – EMFG, AFBI, NI Water, FSA, PHA
- Issues arising
- Communications – LTTs
- AOB

5. RECORD OF MEETING

A short update briefing will be completed in advance of each meeting using the template provided by the secretariat. The secretariat will issue notes and actions of the meetings by the end of the next working day to the membership and other attendees.

A copy of the weekly briefing note will be shared with members of the Blue-Green Algae Monitoring Group when agreed and finalised.

6. REPORTING

A weekly update on numbers of BGA reports will be prepared in advance of the weekly meeting and circulated as a SITREP before the Group meets. DAERA will also issue this as part of the WBR/BI update each Friday morning.

Director RED NIEA and Director MFD EMFG will update CE NIEA and Deputy Secretary EMFG. Representatives from other organisations will brief up the line accordingly.

7. RESPONSIBILITIES

Director RED NIEA and Director MFD EMFG will co-chair the meeting. G6s NIEA and EMFG will deputise, as required. Key areas of responsibility:

Freshwater protection and regulation	WMU RED NIEA
Blue green algae	WMU RED NIEA
Bathing waters management	MFD EMFG
Bathing waters monitoring & analysis	MFD EMFG

For completion by other agencies

8. INFORMATION REQUIREMENTS

Documentation will be retained on Content Manager (AE2-24-66099) to ensure an adequate audit trail. The secretariat will set-up a Content Manager container for the Group with access for RED NIEA and MFD EMFG.

9. COMMS

10. Lines to Take

Blue Green Algae Tactical Co-ordination Group – Impact on Open Championship / North Coast Beaches

SITUATIONAL REPORT Number: 01

All new information should be noted in RED

Information correct as of 15:00 hrs on 10.07.2025

This Situational Report (Sit-Rep) will focus on the strategic issues of the incident. It is understood that blue-green algae is a recurring issue since 2023 with varying impacts across Northern Ireland.

This specific incident is to consider the key risks to the Golf Open in Portrush as a result of the blue green algae in Lough Neagh and the Lower River Bann moving down the river to the North Coast beaches.

The extended Tactical Co-ordination Group (TCG) will consider operational and tactical issues reported by each partner, but the strategic issues will not be obscured by operational detail.

The Annex to the main body of the Sit-Rep will detail the operational monitoring and technical information that will be used to make decisions on the risk.

The Sit-rep will be kept up to date with updates provided at key points over the weekend as agreed and a further meeting held on Monday 14 July at 09:30hrs.

Overall DOC Assessment			
Overall Delivery Confidence	R	Blue Green Algae has the potential to have a significant negative impact on the north coast beaches during the Open Championship 13-20 July 2025	
Key Issues – Please detail your key issues or imminent risks only, that may require escalation.			
New	Description	BRAG	
1.	Significant bloom identified off Rea’s Wood, Antrim on 10.07.25 impacting bathing water site and potential to travel down Lower Bann to coast	R	
2.	Potential risk to public health from bathing and pets from contact with BGA	A	
3.	Potential for reputational damage for NI on a global media stage if BGA travels down Lower Bann and impacts on north coast beaches	R	
Items for Escalation –			
	Description	CCG	
		For info	For action
1	TCG group stood up at 3.00pm on 10.07.2025 and membership extended to wider stakeholder group	X	
2	LTT to be drafted, agreed and circulated		X
DOC Status Update		BRAG	
Contact details shared and WhatsApp group to be set up for on call across all agencies including press teams over the weekend		G	
41 cases of BGA in 2025 reported to date across NI from 27 unique locations		G	

Forward Look for next 1-2 days.

1. Agreed LTT to be circulated
2. Continue to monitor reports of locations over the weekend
3. WhatsApp Group – contact for those on call this weekend
4. Biovolumes results for Reas' Wood available tomorrow. This will determine if Amber or Red status as defined in Protocol
5. Winds / weather to be monitored and fed into group – higher temps, calm weather forecast with light S/SE winds; light rainfall potentially
6. Contact DfI re Rivers Agency to check if Lough gates can be kept closed
7. Full sweep of beaches to be completed by MFD team on Saturday

Forward Look for this/next week.

1. Teams meeting Monday 14th 9.30am to review situation and identify any required actions
2. To be kept under review – TCG to be held Thursday 17 July @ 2.00pm

Forward Look >2 weeks.

1. Open runs from 13-20 July so situation will be kept under review >2weeks

Expected Media Attention – Please confirm if the DOC has any items that will have expected media releases

1. To be kept under review, potential to escalate given location of world media in Portrush
2. Press teams to liaise with each other – DAERA / Tourism NI

KEY RISK 1	SIGNIFICANT BLOOM IDENTIFIED OFF REA'S WOOD, ANTRIM ON 10.07.25.	BRAG Status	R
Detailed description: 1. Identified bathing water site so 'advice against bathing' notification to ANBC issued 10.07.25 and signage being put in place			
What are the specific impacts, including metrics? Impacts to bathers and other water users. Risk to pets entering the water or coming in contact with the BGA			
What is being done about it? (Tolerate, Treat, Transfer): Tolerate: Advice against bathing notification issued to ANBC by DAERA Samples collected and confirmed as Microcystis and other blue green algae Biovolume count results will be available 11.07.25			
KEY RISK 2	POTENTIAL RISK TO PUBLIC HEALTH FROM BATHING AND PETS FROM CONTACT WITH BGA	BRAG Status	A
Detailed description: 2. Potential public health impacts to water users and animals			
What are the specific impacts, including metrics? Contact with BGA can cause skin irritation and illness if ingested Highly toxic to pets with significant risk of death			
What is being done about it? (Tolerate, Treat, Transfer): Tolerate: No ability to remove at present. Notification provided against bathing and signage to be erected by ANBC as agreed under the Interagency Monitoring Protocol			

KEY RISK 3	POTENTIAL FOR REPUTATIONAL DAMAGE FOR NI ON A GLOBAL MEDIA STAGE IF BGA TRAVELS DOWN LOWER BANN AND IMPACTS ON NORTH COAST BEACHES	BRAG Status	R
Detailed description: 3. The outflow from Lough Neagh via the fish passage cannot be stopped and therefore the BGA will travel down the Lower Bann to the north coast. If the BGA results in the closures of north coast bathing waters, or significant visual presence at north coast, during the duration of the Open Championship in Portrush, there is a significant risk of reputational damage for Northern Ireland in relation to tourism and economic impact and impact on local beaches during the peak season.			
What are the specific impacts, including metrics? Reputational – world media in Northern Ireland covering the Open Economic – Impacts on tourism and local businesses Public health – potential impacts on water users			
What is being done about it? (Tolerate, Treat, Transfer): Treat: The Interagency Monitoring Protocol is in operation Reports being closely monitored and movement of BGA reports mapped LTT to be drafted and agreed Press teams to liaise with each other on comms			

Current Position:

Science, evidence and observations to date – (NIEA, MFD, AFBI, and others as required)

NI Water update:

- Sampling for Algae counts, Microcystin-LR and the taste & odour related compounds Geosmin & MIB in place and ongoing – weekly sampling.
- Nothing of concern to note with regards to algae counts to date in the raw water samples across all L.Neagh related WTWs
- No concerns to date with Microcystin-LR results to date (results available up to 10.06.2025 - all <LOQ)
- No concerns to date with Geosmin & MIB results to date – results typical for the period YTD (results available up to 10.06.2025)
- No concerns with regards to customer complaints for T&O – Earthy/Must descriptor – contacts at BAU levels
- No T&O failures recorded
- Moyola WTW - Work completed at Moyola WTW to replace the GAC media in all 4 GAC filters
- Castor Bay WTW - 3 No GAC filters have had new GAC media installed – work underway to replace media in a 4th filter. (3 of 9 filters completed in 2025 to date)
- Dunore Point WTW – 1 no GAC filter media replaced in May 2025 – work underway to replace media in 1 further GAC filter (5 of 8 filters completed in 2024 & 2025 to date)
- Ballinrees WTW – new GAC filters constructed Dec 2024 and in operation

Causeway Coast and Glens BC:

Advisory signs up and social media posts planned

Concerns re impact on north coast and negative social media posts

Query on current drinking water position given T&O impacts in previous years

Antrim and Newtownabbey BC:

Signs up in Toome following reports

Following notification today of Rea's Wood identification, actions in hand to erect posters and issue social media messages

Mid and East Antrim BC:

Signage displayed following notification of BGA at Bracknamuckley Forest

Mid Ulster DC:

Precautionary signage up in Ballyronan and will be updated if confirm sightings. No notifications received to date.

Armagh, Banbridge & Craigavon BC:

Query on any actions council needs to take. Immediate impact on upcoming Open not impacting in ABC area

Tourism NI:

Require agreed Lines to Take that will not scare public or raise concern

Request for contact to be made available for senior management to discuss further

Local Government Civil Contingencies Group

Working Group of multiagency partners comms in place that could support comms across all agencies as required

PHA

Two considerations of ill health, passive or proactive engagement with health practitioners. Not considered to need proactive engagement at present so will consider if passive reports increase

DAERA / NIEA / AFBI

Attached as Annex

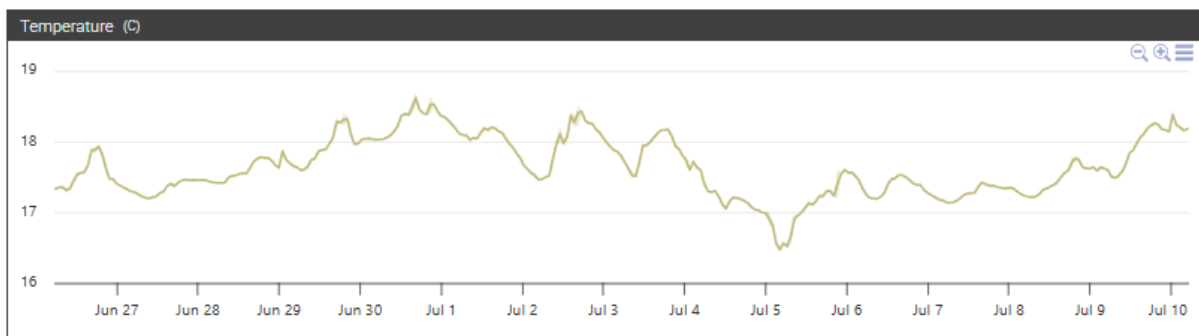
OFFICIAL DAERA BRIEFING PAPER

BRIEFING	TCG Blue-green update
DIVISION/BRANCH REFERENCE	TCG BG update #26
DATE	10 th JULY 2025, 15.00 – 16.00

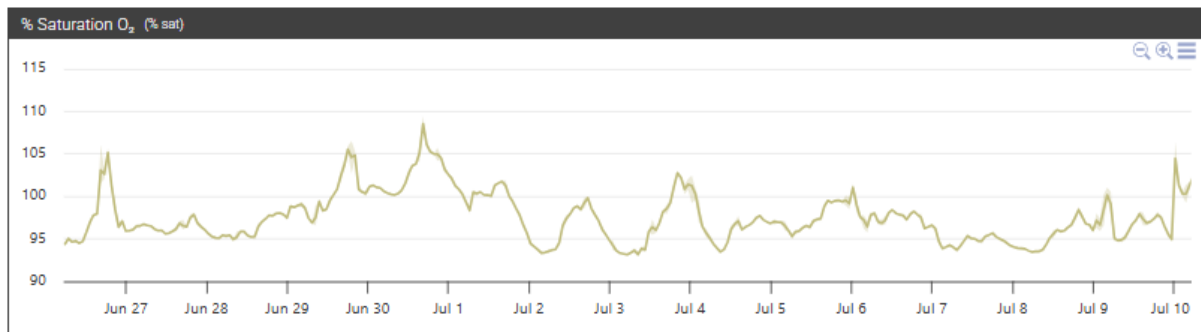
NIEA update

FMA Freshwater Investigations:

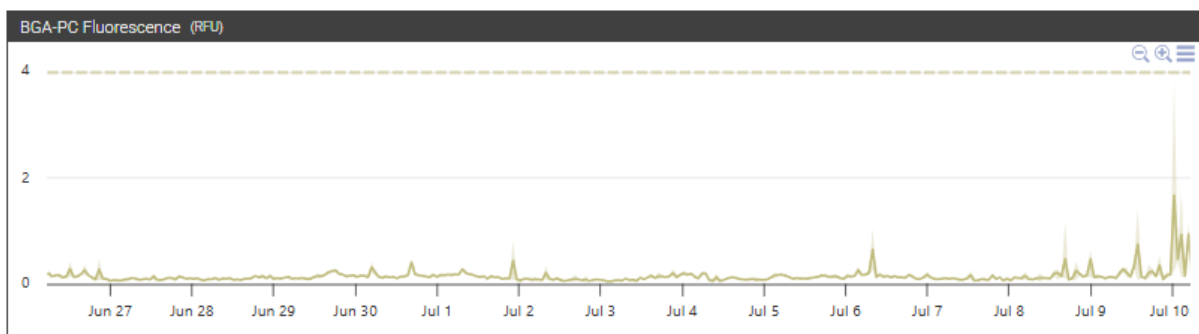
Telemetered data from the multiparameter sonde deployed offshore (sub-surface) at Rea's Wood, Antrim is displayed in the graphs below. The data represents the last 14 days of monitoring.



Temperature is typical for the time of year. Surface temperature may increase in the coming days in line with the forecasted warm dry sunny spell of weather.



DO Levels are as expected. Over the last fortnight there have been no periods of suppressed DO or periods of hyperoxygenation.



Blue Green levels remain present but low. Small increases have been observed in the last 48hrs. There is potential for larger increases in blue green concentration

over the coming days as weather forecasts predict a period of warm dry settled weather.

FMA Lake Monitoring & Evidence:

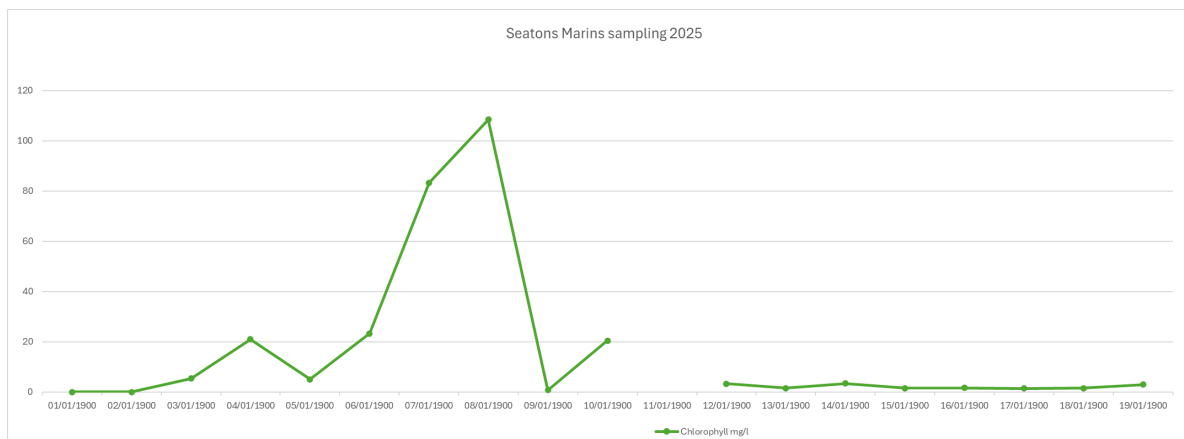
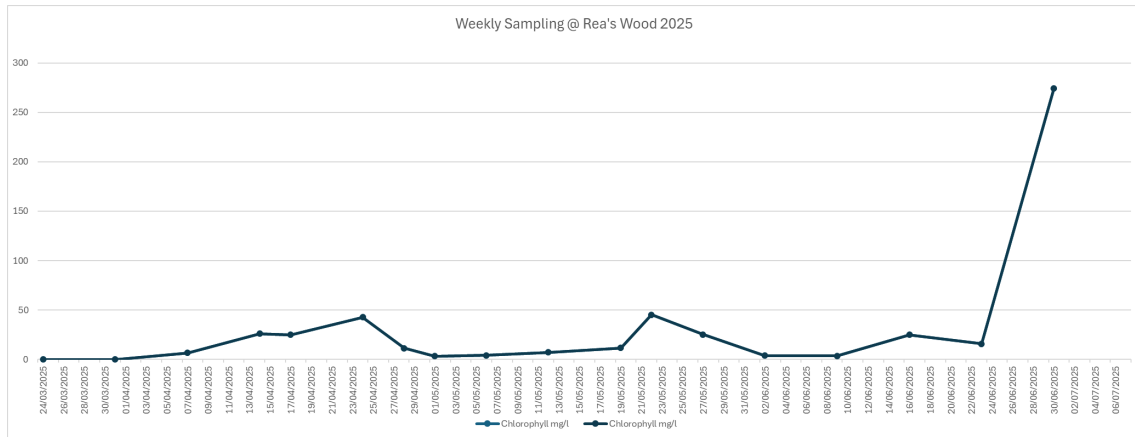
So far in 2025, 41 confirmed reports of blue green algae from 27 unique locations (up to and including 10/07/2025). Three new confirmed locations this week at Lough Neagh - Rea's Wood, Copeland Reservoir and Lower Bann - Bracknamuckley Forest.

Confirmed blue green algae locations 2025	Latest confirmed report
Lough Neagh - Rea's Wood	10/07/2025
Copeland Reservoir	09/07/2025
Lower Bann - Bracknamuckley Forest	09/07/2025
Craigavon Lakes	02/07/2025
Lower Bann - The Cutts, Coleraine	30/06/2025
Lower Bann - Moneygran Wood	29/06/2025
Portna Canal	29/06/2025
Lower Bann – Portglenone	28/06/2025
Hillsborough Forest Park	28/06/2025
Toome Canal	27/06/2025
Closet River – Craigavon	20/06/2025
Lower Lough Erne - Muckcross Bay	19/06/2025
Lower Lough Erne - Castle Archdale	13/06/2025
Upper Lough Macnean	10/06/2025
Black Glen Lake - Castlerock	02/06/2025
Lower Lough Erne - Castle Caldwell	01/06/2025
Lough Neagh - Scaddy Island	23/05/2025
Lower Lough Erne - Ross Harbour	22/05/2025
Lower Lough Erne - Tully Castle	13/05/2025
Portmore Lough	07/05/2025
Lower Bann - Seatons Marina	28/04/2025
Lough Aghery	17/04/2025
Lough Neagh - Curran's Quay (Kinturk)	11/04/2025
Lough Neagh - White Horse Flats	11/04/2025
Ballysaggart Lough	09/04/2025
Lough Neagh - Traad point	09/04/2025
Martray Lough	02/04/2025

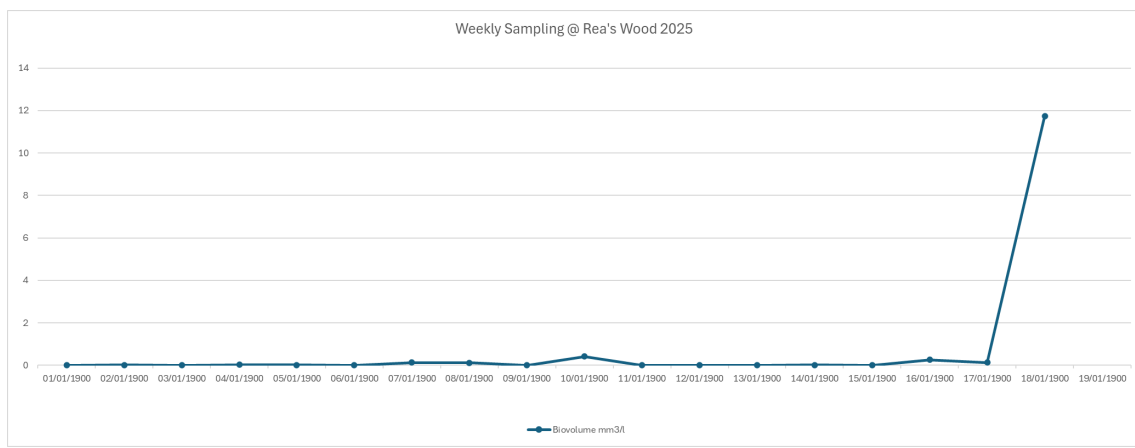
DWI Update

Unable to attend meeting. No current issues to report for drinking water.

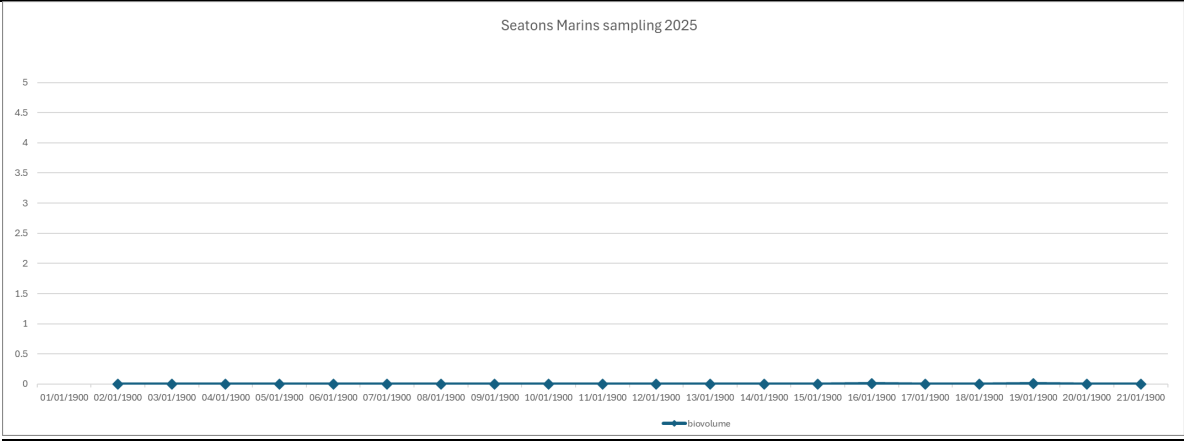
EMFG update



Seatons marina remains low for chlorophyll



Reas Wood Biovolume at 11.74 mm3/l, above the 4mm3/l limit.



Seatons Marina biovolume below threshold

Species found in Reas Wood Microcystis, Anabaena and Snowella.

All samples negative for toxins.

AFBI update

Verbal input provided at meeting.

**Updates completed by:
NIEA/ DWI/ EMFG/ AFBI**

**Date:
10/07/2025**

Blue Green Algae Tactical Co-ordination Group – Impact on Open Championship / North Coast Beaches

SITUATIONAL REPORT Number: 02

All new information should be noted in RED

Information correct as of 09:30 hrs on 14.07.2025

This Situational Report (Sit-Rep) will focus on the strategic issues of the incident. It is understood that blue-green algae is a recurring issue since 2023 with varying impacts across Northern Ireland.

This specific incident is to consider the key risks to the Golf Open in Portrush as a result of the blue green algae in Lough Neagh and the Lower River Bann moving down the river to the North Coast beaches.

The extended Tactical Co-ordination Group (TCG) will consider operational and tactical issues reported by each partner, but the strategic issues will not be obscured by operational detail.

The Annex to the main body of the Sit-Rep will detail the operational monitoring and technical information that will be used to make decisions on the risk.

The Sit-rep will be kept up to date with updates provided at key points over the weekend as agreed and a further meeting held on Monday 14 July at 09:30hrs.

Overall DOC Assessment			
Overall Delivery Confidence	R	Blue Green Algae has the potential to have a significant negative impact on the north coast beaches during the Open Championship 13-20 July 2025	
Key Issues – Please detail your key issues or imminent risks only, that may require escalation.			
New	Description	BRAG	
1.	Significant bloom identified off Rea’s Wood, Antrim on 10.07.25 impacting bathing water site and potential to travel down Lower Bann to coast	R	
2.	Potential risk to public health from bathing and pets from contact with BGA	A	
3.	Potential for reputational damage for NI on a global media stage if BGA travels down Lower Bann and impacts on north coast beaches	R	
Items for Escalation –			
	Description	CCG	
		For info	For action
1	TCG group stood up at 3.00pm on 10.07.2025 and membership extended to wider stakeholder group	X	
2	LTT to be drafted, agreed and circulated		X
DOC Status Update		BRAG	
Contact details shared and WhatsApp group to be set up for on call across all agencies including press teams over the weekend		G	
41 cases of BGA in 2025 reported to date across NI from 27 unique locations		G	

Forward Look for next 1-2 days.

11.07.25

1. Agreed LTT to be circulated - Complete circulated 11.07.25
2. Continue to monitor reports of locations over the weekend - Complete
3. WhatsApp Group – contact for those on call this weekend - Complete
4. Biovolumes results for Reas' Wood available tomorrow. This will determine if Amber or Red status as defined in Protocol – Complete
5. Winds / weather to be monitored and fed into group – higher temps, calm weather forecast with light S/SE winds; -Complete
6. Contact DfI re Rivers Agency to check if Lough gates can be kept closed - Complete
7. Full sweep of beaches to be completed by MFD team on Saturday - Complete

14.07.25 - next 48-72 hours

1. Risk to be kept at Red due to remaining major reputational risk - will be reviewed at next meeting
2. Weather – sunny spells and showers, some heavy, winds to be predominantly SE with some N/NW mid week
3. Sampling of beaches planned for Wed (16th)
4. AFBI plan to have boat on Lough mid-week and will lift samples for DAERA - MFD analysis
5. National Trust to be added to the TCG as bathing water operator
6. Next meeting Thursday 17th July at 14:00hrs

Forward Look for this/next week.

1. Teams meeting Monday 14th 9.30am to review situation and identify any required actions
2. To be kept under review – TCG to be held Thursday 17 July @ 2.00pm

Forward Look >2 weeks.

1. Open runs from 13-20 July so situation will be kept under review >2weeks

Expected Media Attention – Please confirm if the DOC has any items that will have expected media releases

1. To be kept under review, potential to escalate given location of world media in Portrush
2. Press teams to liaise with each other – DAERA / Tourism NI

14.07.25

1. No media attention or queries over the weekend

KEY RISK 1	SIGNIFICANT BLOOM IDENTIFIED OFF REA'S WOOD, ANTRIM ON 10.07.25.	BRAG Status	R
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Detailed description:

1. Identified bathing water site so 'advice against bathing' notification to ANBC issued 10.07.25 and signage being put in place

What are the specific impacts, including metrics?

Impacts to bathers and other water users. Risk to pets entering the water or coming in contact with the BGA

What is being done about it? (Tolerate, Treat, Transfer):

Tolerate:

Advice against bathing notification issued to ANBC by DAERA

Samples collected and confirmed as Microcystis and other blue green algae

Biovolume count results will be available 11.07.25

KEY RISK 2	POTENTIAL RISK TO PUBLIC HEALTH FROM BATHING AND PETS FROM CONTACT WITH BGA	BRAG Status	A
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Detailed description:

2. Potential public health impacts to water users and animals

What are the specific impacts, including metrics?

Contact with BGA can cause skin irritation and illness if ingested

Highly toxic to pets with significant risk of death

What is being done about it? (Tolerate, Treat, Transfer):

Tolerate:

No ability to remove at present. Notification provided against bathing and signage to be erected by ANBC as agreed under the Interagency Monitoring Protocol

KEY RISK 3	POTENTIAL FOR REPUTATIONAL DAMAGE FOR NI ON A GLOBAL MEDIA STAGE IF BGA TRAVELS DOWN LOWER BANN AND IMPACTS ON NORTH COAST BEACHES	BRAG Status	R
Detailed description: 3. The outflow from Lough Neagh via the fish passage cannot be stopped and therefore the BGA will travel down the Lower Bann to the north coast. If the BGA results in the closures of north coast bathing waters, or significant visual presence at north coast, during the duration of the Open Championship in Portrush, there is a significant risk of reputational damage for Northern Ireland in relation to tourism and economic impact and impact on local beaches during the peak season.			
What are the specific impacts, including metrics? Reputational – world media in Northern Ireland covering the Open Economic – Impacts on tourism and local businesses Public health – potential impacts on water users			
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Current Position:

Science, evidence and observations to date – (NIEA, MFD, AFBI, and others as required)

NI Water update:

- Sampling for Algae counts, Microcystin-LR and the taste & odour related compounds Geosmin & MIB in place and ongoing – weekly sampling.
- Nothing of concern to note with regards to algae counts to date in the raw water samples across all L.Neagh related WTWs
- No concerns to date with Microcystin-LR results to date (results available up to 10.06.2025 - all <LOQ)
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Concerns re impact on north coast and negative social media posts

Query on current drinking water position given T&O impacts in previous years

Antrim and Newtownabbey BC:

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Local Government Civil Contingencies Group

Working Group of multiagency partners comms in place that could support comms across all agencies as required

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Two considerations of ill health, passive or proactive engagement with health practitioners. Not considered to need proactive engagement at present so will consider if passive reports increase

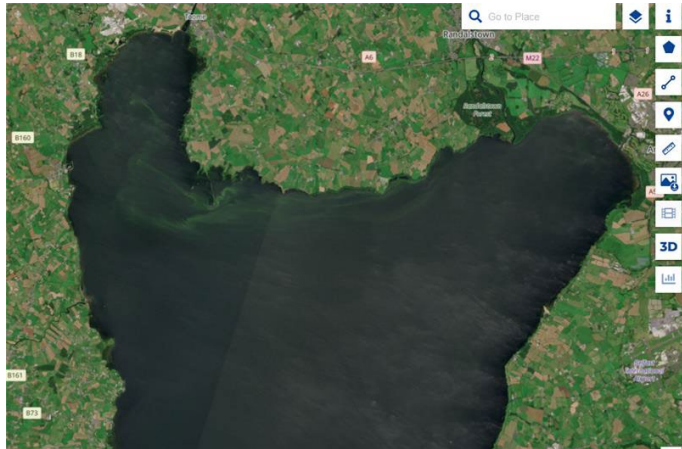
DAERA / NIEA / AFBI

Attached as Annex

Monday 14.07.25

1. Movement of bloom with prevailing winds over the weekend towards NW corner of Lough and Toome Monitoring of locations at Rea's Wood, Toome and Newferry on Saturday (12th) & Sunday (13th) – presence in water column. Newferry to be verified today.
2. Moved offshore slightly from Rea's Wood with prevailing wind towards Toome, but no change to advice due to potential movement of bloom (would be Amber at present).
3. Weather currently less sunny with scattered showers, may be heavy at times.
4. No change to Lough levels from Friday so no change to flood gates (11.07.25 – 12.499OD – 101mm below high statutory limit).
5. Notification received re Glenshesk River, Ballycastle but not yet on beach, biovolume results to be done today, non-toxic at present
6. No notifications of illness reported to PHA

7. No change needed to Comms at this time



Satellite Image 13.07.25

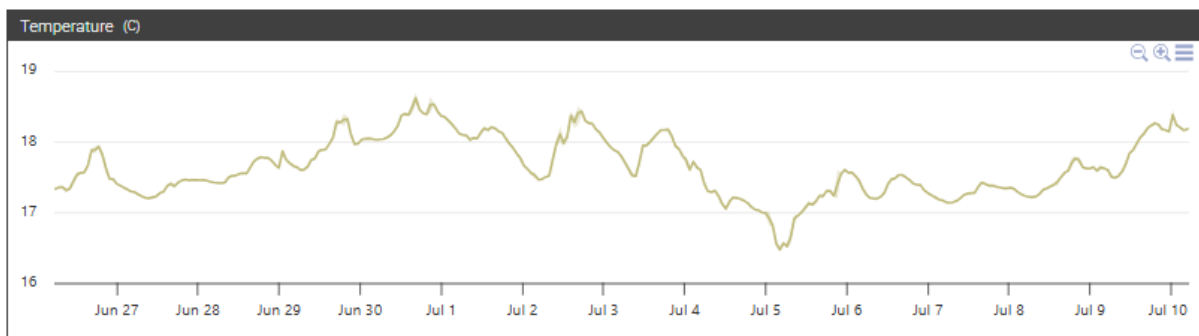
OFFICIAL DAERA BRIEFING PAPER

BRIEFING	TCG Blue-green update
DIVISION/BRANCH REFERENCE	TCG BG update #26
DATE	10th JULY 2025, 15.00 – 16.00

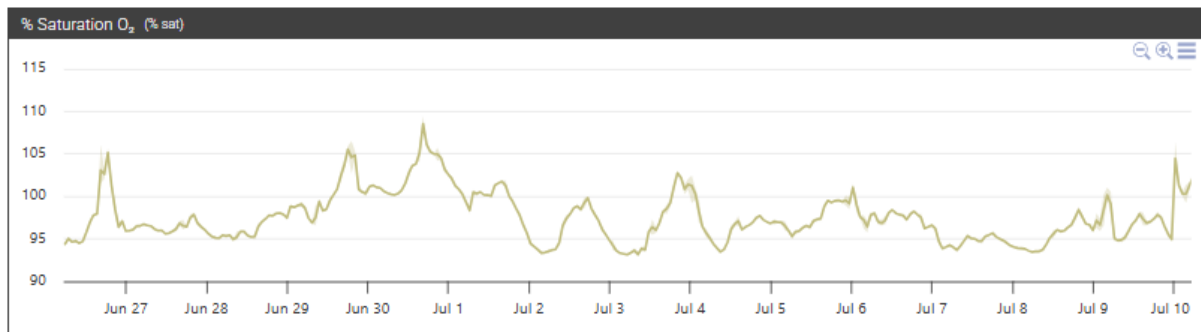
NIEA update

FMA Freshwater Investigations:

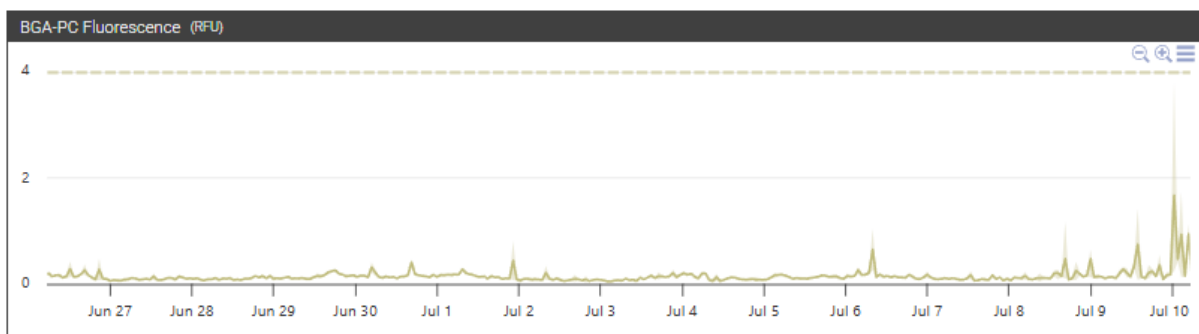
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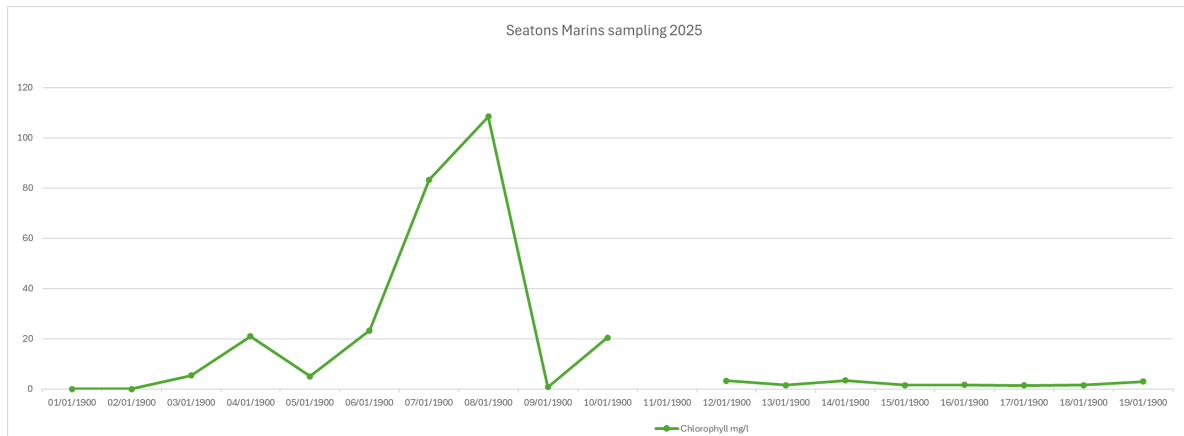
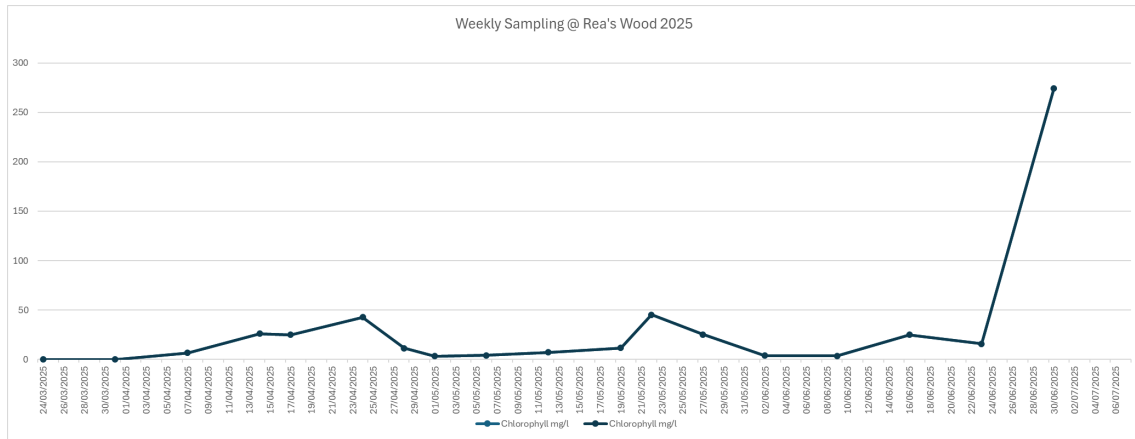
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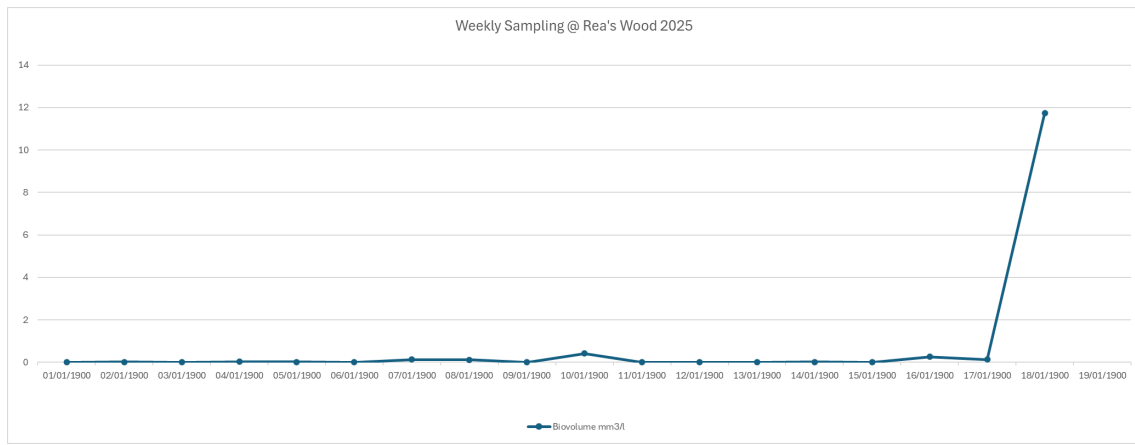
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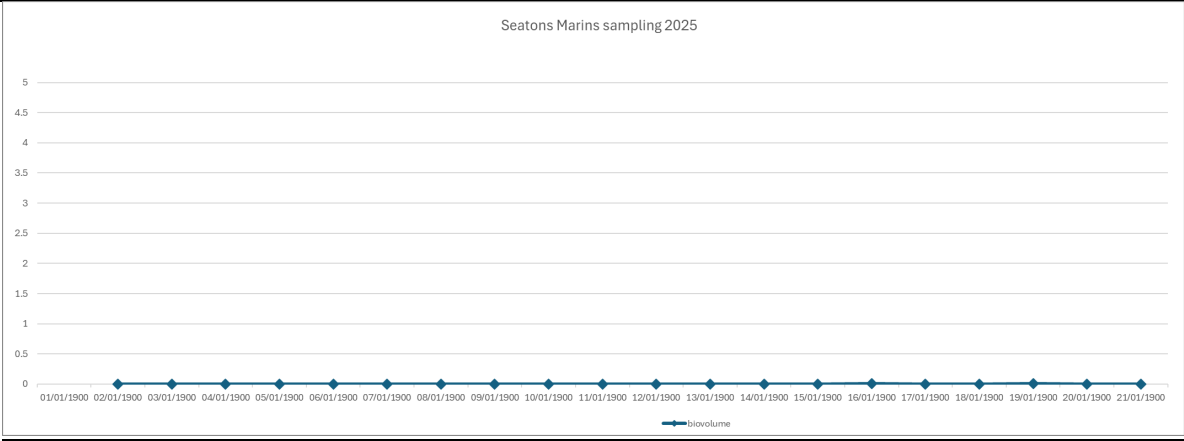
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Seatons marina remains low for chlorophyll



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Seatons Marina biovolume below threshold

Species found in Reas Wood Microcystis, Anabaena and Snowella.

All samples negative for toxins.

AFBI update

Verbal input provided at meeting.

**Updates completed by:
NIEA/ DWI/ EMFG/ AFBI**

**Date:
10/07/2025**

Blue Green Algae Tactical Co-ordination Group – Impact on Open Championship / North Coast Beaches

SITUATIONAL REPORT Number: 03

All new information should be noted in RED

Information correct as of 14:00 hrs on 17.07.2025

This Situational Report (Sit-Rep) will focus on the strategic issues of the incident. It is understood that blue-green algae is a recurring issue since 2023 with varying impacts across Northern Ireland.

This specific incident is to consider the key risks to the Golf Open in Portrush as a result of the blue green algae in Lough Neagh and the Lower River Bann moving down the river to the North Coast beaches.

The extended Tactical Co-ordination Group (TCG) will consider operational and tactical issues reported by each partner, but the strategic issues will not be obscured by operational detail.

The Annex to the main body of the Sit-Rep will detail the operational monitoring and technical information that will be used to make decisions on the risk.

The Sit-rep will be kept up to date with updates provided at key points over the weekend as agreed and a further meeting held on Monday 14 July at 09:30hrs.

Overall DOC Assessment			
Overall Delivery Confidence	R	Blue Green Algae has the potential to have a significant negative impact on the north coast beaches during the Open Championship 13-20 July 2025	
Key Issues – Please detail your key issues or imminent risks only, that may require escalation.			
New	Description	BRAG	
1.	Significant bloom identified off Rea’s Wood, Antrim on 10.07.25 impacting bathing water site and potential to travel down Lower Bann to coast	R	
2.	Potential risk to public health from bathing and pets from contact with BGA	A	
3.	Potential for reputational damage for NI on a global media stage if BGA travels down Lower Bann and impacts on north coast beaches	R	
Items for Escalation –			
	Description	CCG	
		For info	For action
1	TCG group stood up at 3.00pm on 10.07.2025 and membership extended to wider stakeholder group	X	
2	LTT to be drafted, agreed and circulated		X
DOC Status Update		BRAG	
Contact details shared and WhatsApp group to be set up for on call across all agencies including press teams over the weekend		G	
50 cases of BGA in 2025 reported to date across NI from 31 unique locations		G	

Forward Look for next 1-2 days.

11.07.25

1. Agreed LTT to be circulated - Complete circulated 11.07.25
2. Continue to monitor reports of locations over the weekend - Complete
3. WhatsApp Group – contact for those on call this weekend - Complete
4. Biovolumes results for Reas' Wood available tomorrow. This will determine if Amber or Red status as defined in Protocol – Complete
5. Winds / weather to be monitored and fed into group – higher temps, calm weather forecast with light S/SE winds; -Complete
6. Contact DfI re Rivers Agency to check if Lough gates can be kept closed - Complete
7. Full sweep of beaches to be completed by MFD team on Saturday - Complete

14.07.25 - next 48-72 hours

1. Risk to be kept at Red due to remaining major reputational risk - will be reviewed at next meeting
2. Weather – sunny spells and showers, some heavy, winds to be predominantly SE with some N/NW mid week
3. Sampling of beaches planned for Wed (16th)
4. AFBI plan to have boat on Lough mid-week and will lift samples for DAERA - MFD analysis
5. National Trust to be added to the TCG as bathing water operator
6. **Next meeting Thursday 17th July at 14:00hrs**

17.07.2025

1. Lough Neagh currently 2 inches about minimum and no expected requirement to open gates prior to 20th
2. NIEA & Bathing water & TCG group to be notified of any plans to open the gates.

Forward Look for this/next week.

1. Teams meeting Monday 14th 9.30am to review situation and identify any required actions
2. To be kept under review – TCG to be held Thursday 17 July @ 2.00pm

Forward Look >2 weeks.

1. Open runs from 13-20 July so situation will be kept under review >2weeks

Expected Media Attention – Please confirm if the DOC has any items that will have expected media releases

1. To be kept under review, potential to escalate given location of world media in Portrush
2. Press teams to liaise with each other – DAERA / Tourism NI

14.07.25

1. No media attention or queries over the weekend

16/07/2025

Department's public health notification media to be extended to Michelle from NI tourism

KEY RISK 1	SIGNIFICANT BLOOM IDENTIFIED OFF REA'S WOOD, ANTRIM ON 10.07.25.	BRAG Status	R
Detailed description:			
1. Identified bathing water site so 'advice against bathing' notification to ANBC issued 10.07.25 and signage being put in place			
What are the specific impacts, including metrics?			
Impacts to bathers and other water users. Risk to pets entering the water or coming in contact with the BGA			
What is being done about it? (Tolerate, Treat, Transfer):			
Tolerate: Advice against bathing notification issued to ANBC by DAERA Samples collected and confirmed as Microcystis and other blue green algae Biovolume count results will be available 11.07.25			
KEY RISK 2	POTENTIAL RISK TO PUBLIC HEALTH FROM BATHING AND PETS FROM CONTACT WITH BGA	BRAG Status	A

Detailed description: 2. Potential public health impacts to water users and animals
What are the specific impacts, including metrics? Contact with BGA can cause skin irritation and illness if ingested Highly toxic to pets with significant risk of death
What is being done about it? (Tolerate, Treat, Transfer): Tolerate: No ability to remove at present. Notification provided against bathing and signage to be erected by ANBC as agreed under the Interagency Monitoring Protocol

KEY RISK 3	POTENTIAL FOR REPUTATIONAL DAMAGE FOR NI ON A GLOBAL MEDIA STAGE IF BGA TRAVELS DOWN LOWER BANN AND IMPACTS ON NORTH COAST BEACHES	BRAG Status	R
Detailed description: 3. The outflow from Lough Neagh via the fish passage cannot be stopped and therefore the BGA will travel down the Lower Bann to the north coast. If the BGA results in the closures of north coast bathing waters, or significant visual presence at north coast, during the duration of the Open Championship in Portrush, there is a significant risk of reputational damage for Northern Ireland in relation to tourism and economic impact and impact on local beaches during the peak season.			
What are the specific impacts, including metrics? Reputational – world media in Northern Ireland covering the Open Economic – Impacts on tourism and local businesses Public health – potential impacts on water users			
What is being done about it? (Tolerate, Treat, Transfer): Treat: The Interagency Monitoring Protocol is in operation			

Reports being closely monitored and movement of BGA reports mapped
LTT to be drafted and agreed
Press teams to liaise with each other on comms

Current Position:

Science, evidence and observations to date – (NIEA, MFD, AFBI, and others as required)

NI Water update:

- Sampling for Algae counts, Microcystin-LR and the taste & odour related compounds Geosmin & MIB in place and ongoing – weekly sampling.
- Nothing of concern to note with regards to algae counts to date in the raw water samples across all L.Neagh related WTWs
- No concerns to date with Microcystin-LR results to date (results available up to 10.06.2025 - all <LOQ)
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- No T&O failures recorded
- Moyola WTW - Work completed at Moyola WTW to replace the GAC media in all 4 GAC filters
- Castor Bay WTW - 3 No GAC filters have had new GAC media installed – work underway to replace media in a 4th filter. (3 of 9 filters completed in 2025 to date)
- Dunore Point WTW – 1 no GAC filter media replaced in May 2025 – work underway to replace media in 1 further GAC filter (5 of 8 filters completed in 2024 & 2025 to date)
- Ballinrees WTW – new GAC filters constructed Dec 2024 and in operation

Causeway Coast and Glens BC:

Advisory signs up and social media posts planned

Concerns re impact on north coast and negative social media posts

Query on current drinking water position given T&O impacts in previous years

Antrim and Newtownabbey BC:

Signs up in Toome following reports

Following notification today of Rea's Wood identification, actions in hand to erect posters and issue social media messages

Mid and East Antrim BC:

Signage displayed following notification of BGA at Bracknamuckley Forest

Mid Ulster DC:

Precautionary signage up in Ballyronan and will be updated if confirm sightings. No notifications received to date.

Armagh, Banbridge & Craigavon BC:

Query on any actions council needs to take. Immediate impact on upcoming Open not impacting in ABC area

Tourism NI:

Require agreed Lines to Take that will not scare public or raise concern

Request for contact to be made available for senior management to discuss further

Local Government Civil Contingencies Group

Working Group of multiagency partners comms in place that could support comms across all agencies as required

PHA

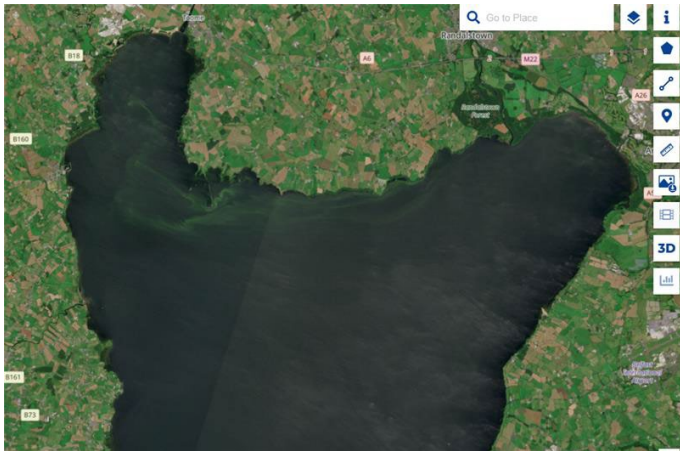
Two considerations of ill health, passive or proactive engagement with health practitioners. Not considered to need proactive engagement at present so will consider if passive reports increase

DAERA / NIEA / AFBI

Attached as Annex

Monday 14.07.25

1. Movement of bloom with prevailing winds over the weekend towards NW corner of Lough and Toome Monitoring of locations at Rea's Wood, Toome and Newferry on Saturday (12th) & Sunday (13th) – presence in water column. Newferry to be verified today.
2. Moved offshore slightly from Rea's Wood with prevailing wind towards Toome, but no change to advice due to potential movement of bloom (would be Amber at present).
3. Weather currently less sunny with scattered showers, may be heavy at times.
4. No change to Lough levels from Friday so no change to flood gates (11.07.25 – 12.499OD – 101mm below high statutory limit).
5. Notification received re Glenshesk River, Ballycastle but not yet on beach, biovolume results to be done today, non-toxic at present
6. No notifications of illness reported to PHA
7. No change needed to Comms at this time



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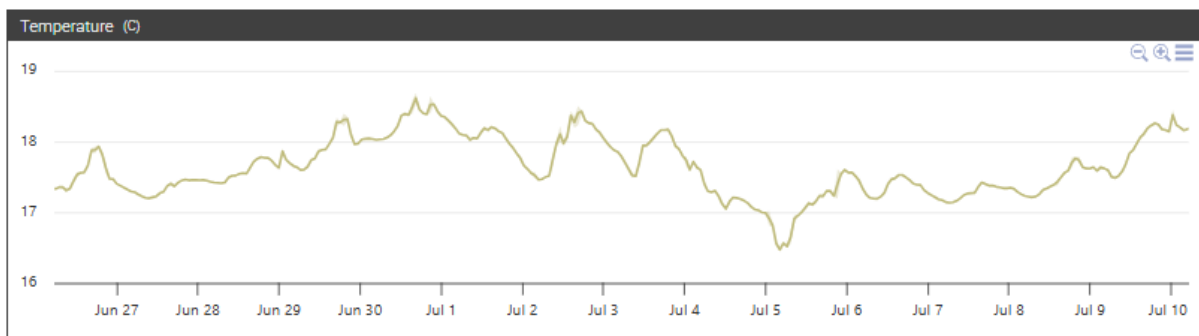
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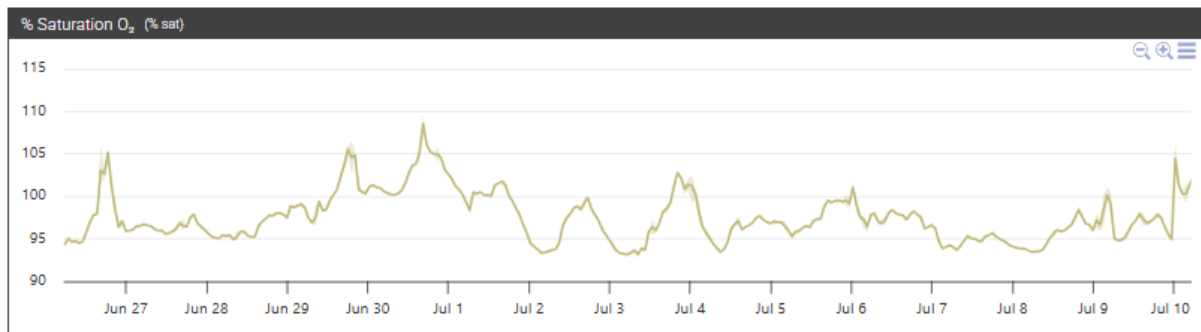
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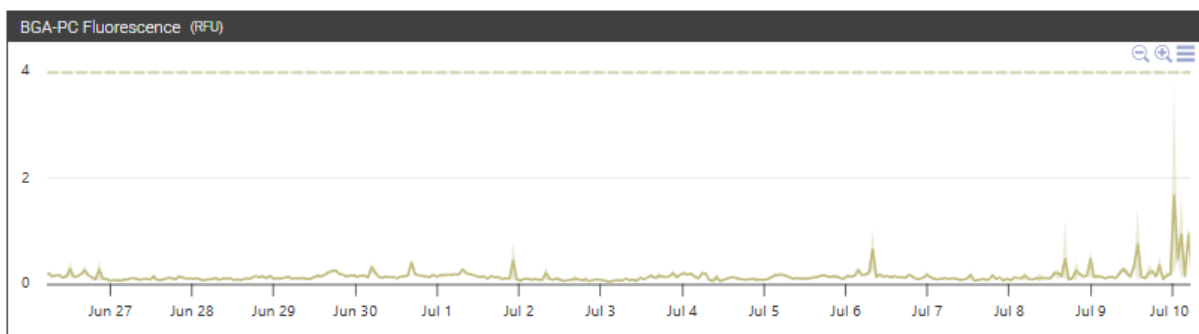
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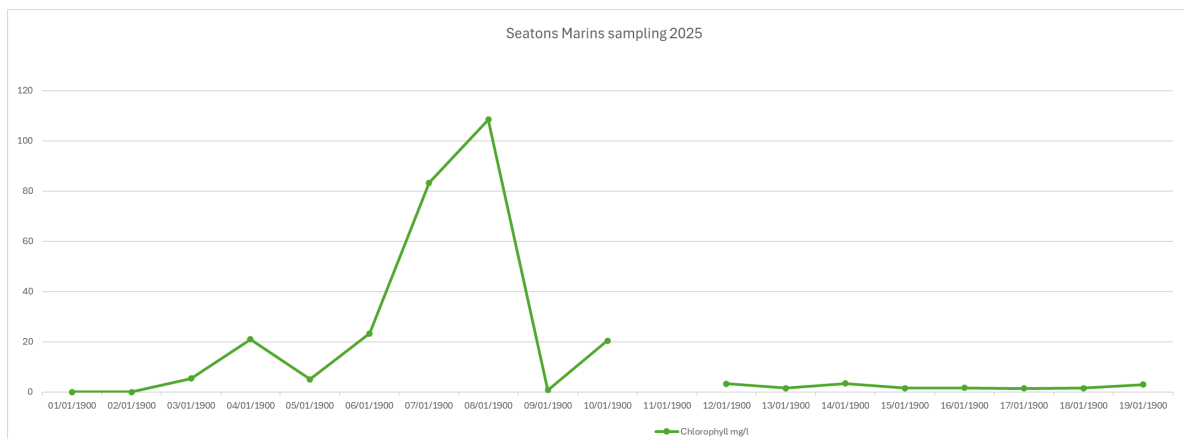
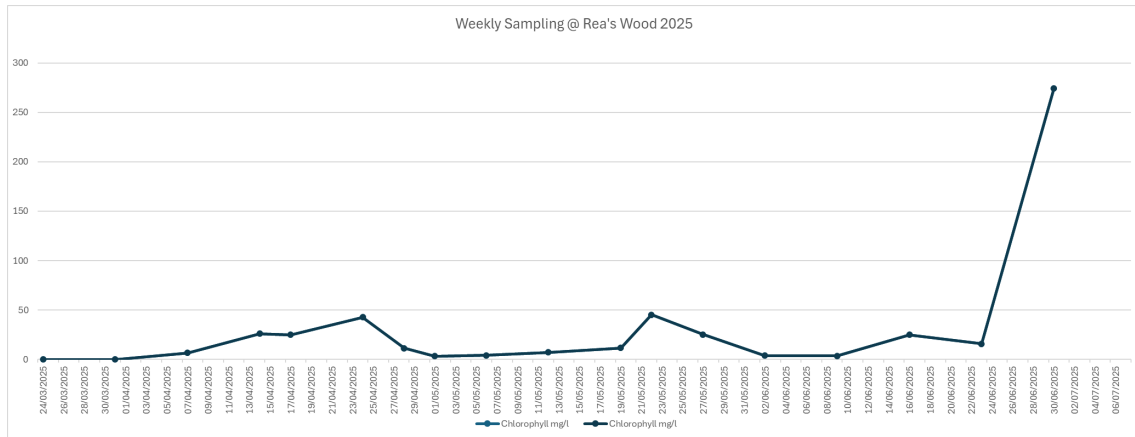
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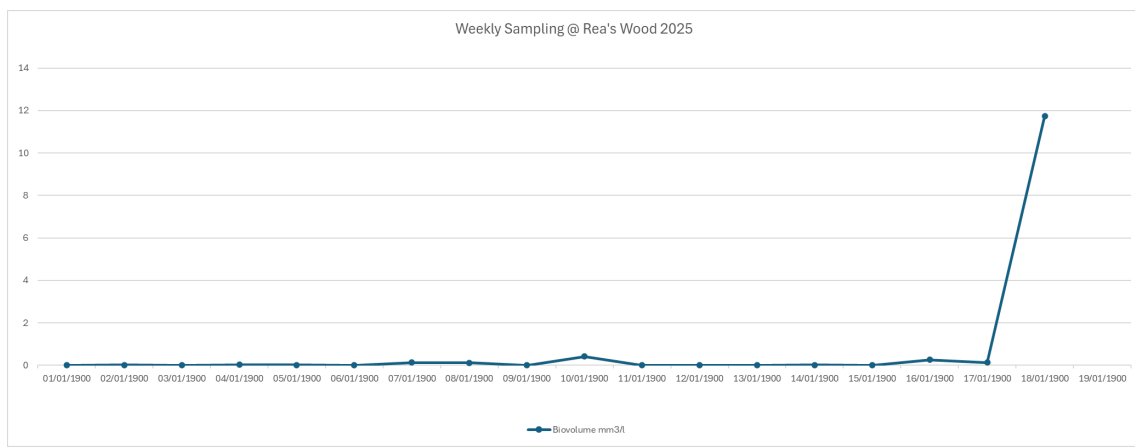
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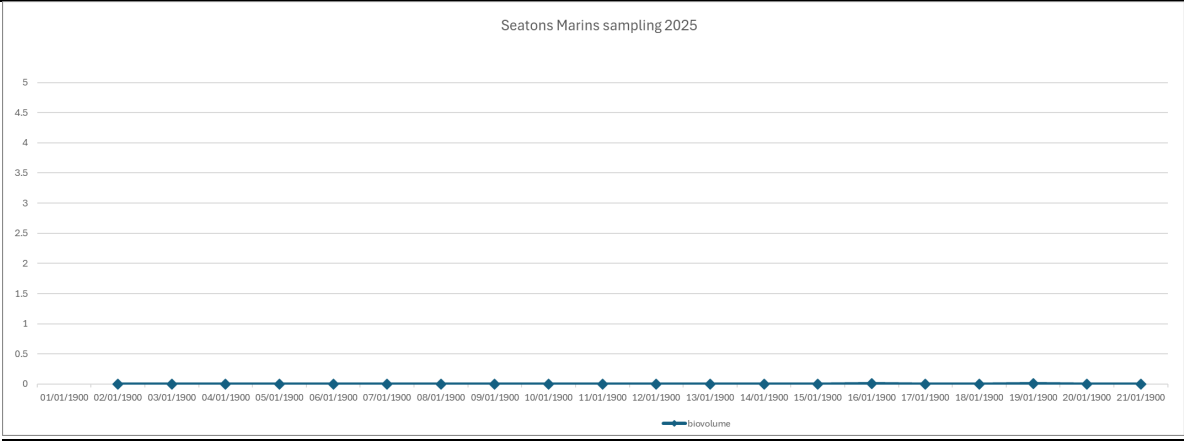
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Seatons marina remains low for chlorophyll



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Seatons Marina biovolume below threshold

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Verbal input provided at meeting.

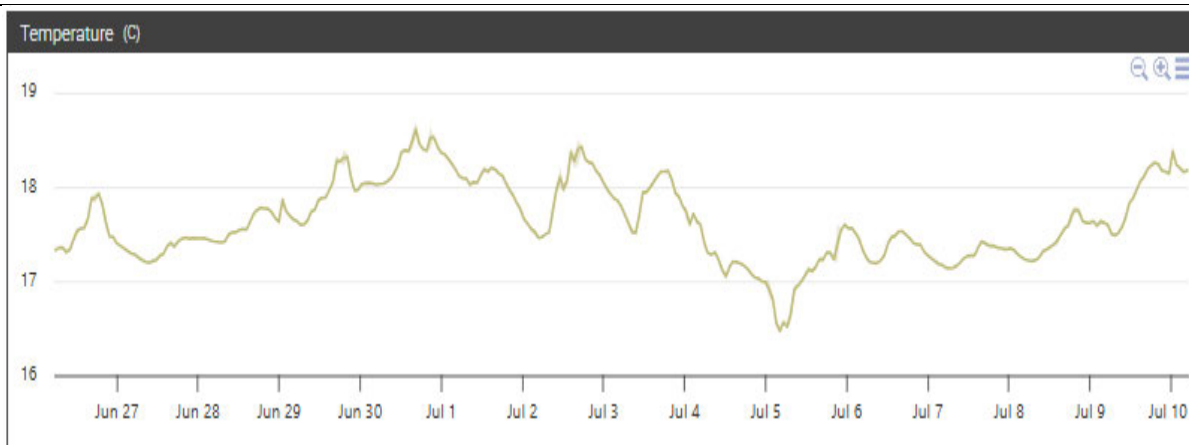
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NIEA/ DWI/ EMFG/ AFBI**

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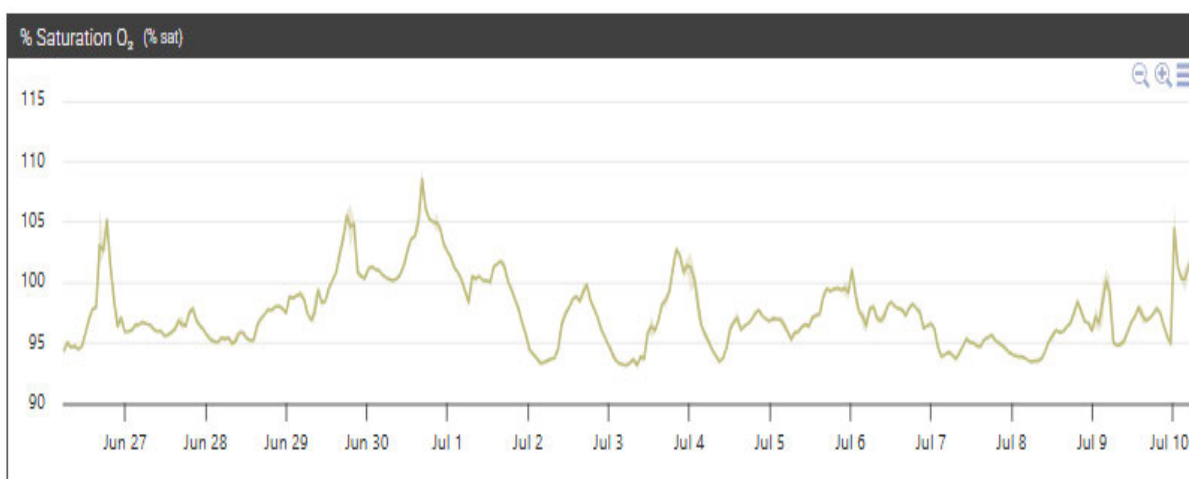


OFFICIAL DAERA MINUTES

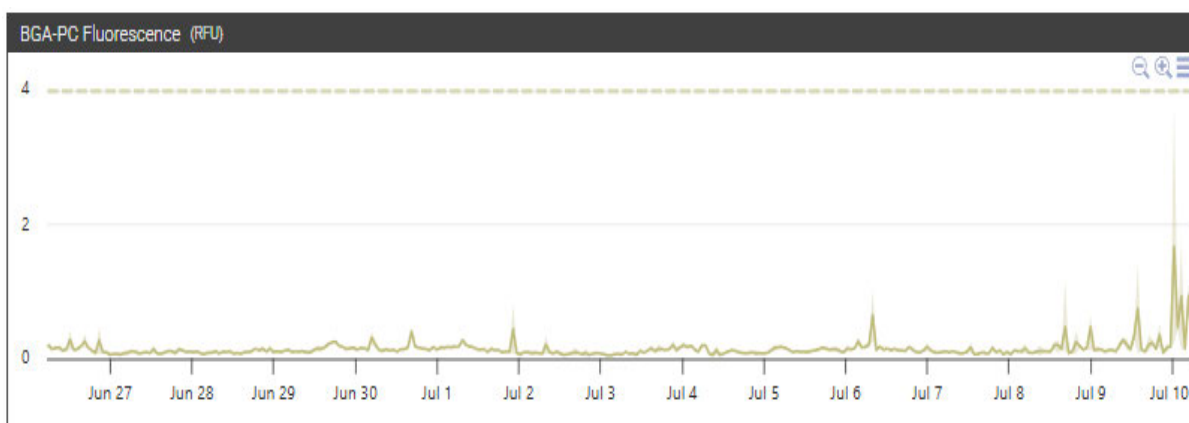
MEETING TITLE	TCG Blue-green Meeting
DIVISION/BRANCH REFERENCE	TCG BG Meeting #26
VENUE	MS Teams
DATE/TIME	10 th July 2025, 15.00 – 16.00
LIST OF ATTENDEES	(EMFG), (NIEA), (NIEA), (NIEA), (NIEA), (NIEA), (EMFG), (EMFG), (EMFG), (EMFG), (EMFG), (CSAO), (AFBI), (NIEA), (EPGNI), (EPGNI), (CCBGC), (ABCC), (ANBC), (ANBC), (MUDC), (LCC), (MEABC), (MEABC), (MEABC), (PHA), (TNI)
APOLOGIES	(NIEA), (NIEA), (NIEA), NIEA, (DWI), (EMFG), (EMFG), (NIEA), (AFBI), (AFBI), (NIEA), (NIEA), (DAERA), (DAERA), (DAERA), (NIW), (PHA)
KEY POINTS DISCUSSED	<u>Minutes and actions of previous meeting</u> • Action Point 1 – All to review Terms of Reference of the TCG after TEO Meeting – Complete. <u>NIEA Update</u> FMA Freshwater Investigations: Telemetered data from the multiparameter sonde deployed offshore (sub-surface) at Rea’s Wood, Antrim is displayed in the graphs below. The data represents the last 14 days of monitoring.



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One of the actions from the meeting was for DAERA staff to engage with DfI Rivers in relation to the Lough gates at Toome which, if opened would increase the flow of water and carry the algae within the lough to the Lower Bann and north coast much more quickly.

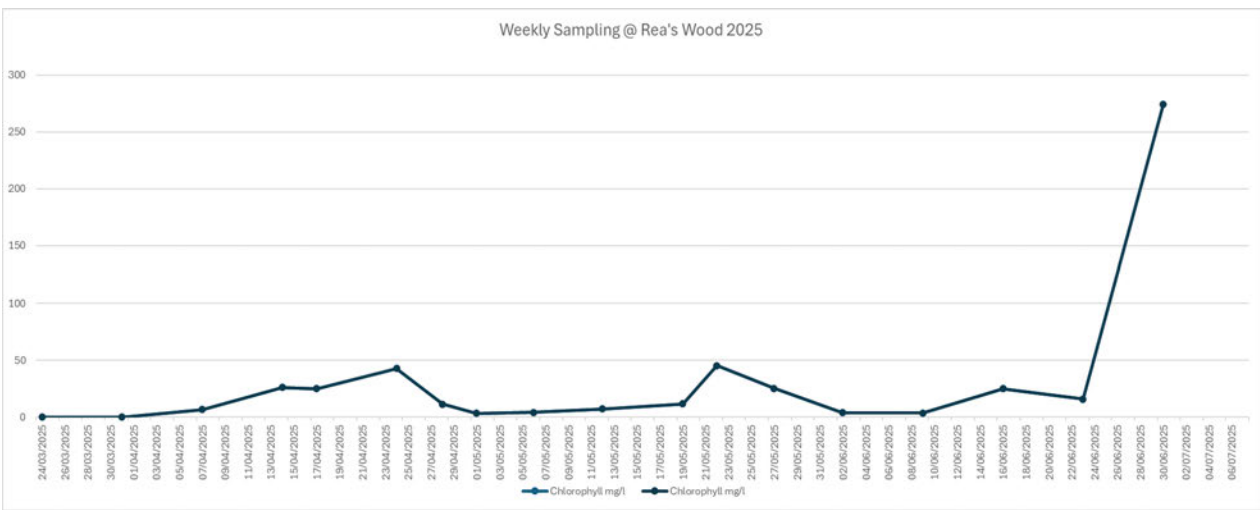
Contact was made with DfI Rivers on the morning of 11 July 2025 and the response received is as follows:

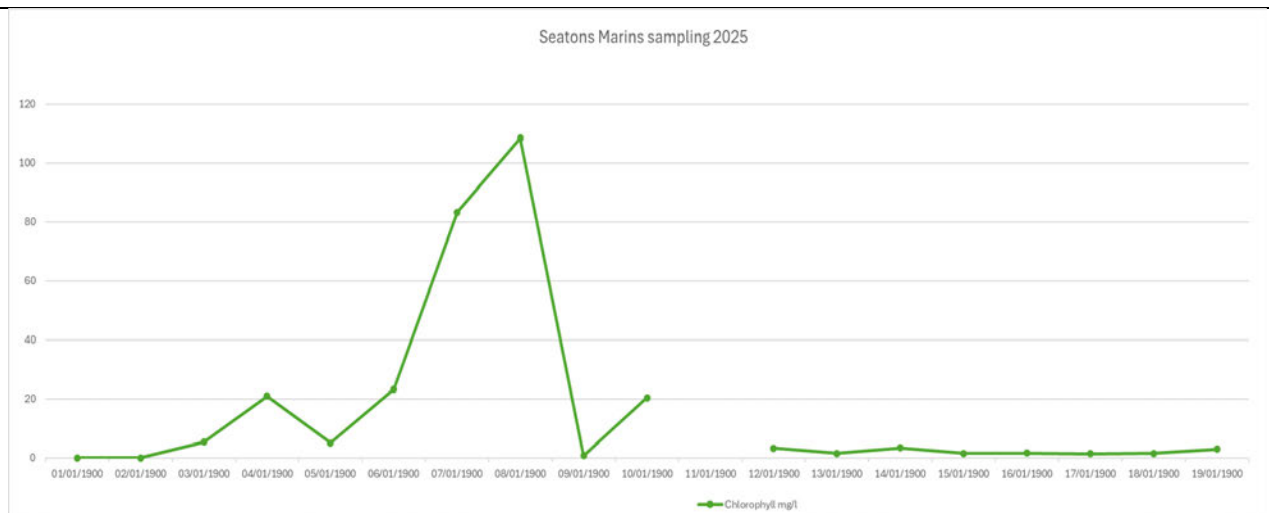
‘The current water level in Lough Neagh is 12.499m OD. This is currently 101mm below the high statutory limit of 12.60m OD. Given the current forecast for Northern Ireland, it is unlikely that the gates at Toome will be opened before the 20 July 2025. However, I must point out that the Department is duty bound under the Lough Neagh Levels Scheme (1955) to open the flood gates at Toome if the water level breaches the upper statutory limit of 12.60m OD.’

DWI Update

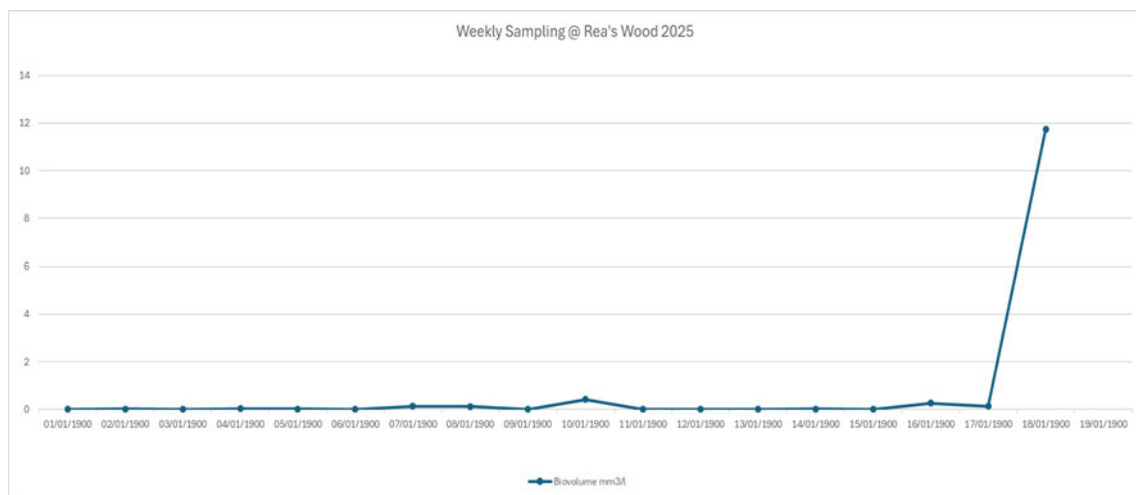
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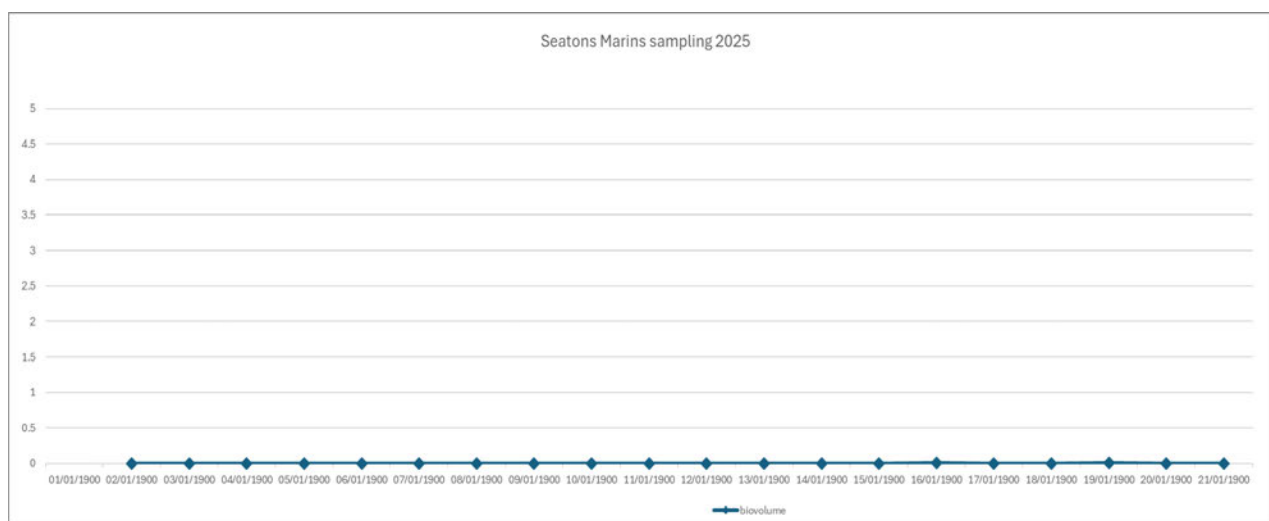




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- All samples negative for toxins.

■ – gave some background on the establishment of the Inter Agency Monitoring Protocol to manage blue/green algal blooms going forward. The Executive Office sought advice from the Civil Contingencies Group and recommended that the TCG Membership be expanded to include other key stakeholders to manage the risks.

■ – commented that the Protocol for calm, credible and scientific advice to inform decisions to protect public health and maintain public confidence.

■ – added that we were now into our 3rd year of managing the protocol and therefore there will be a considered joint approach without any need for scaremongering.

AFBI

■ - keen to point out that much of the modelling shows that one of the key variables for influencing algal blooms is the prevailing wind conditions which can result in large accumulations in the Toome area. Approx 80% of the risk can be predicted by the wind direction the preceding day. The fish pass will be flowing continually but is more likely to be helping to manage the blooms as the constant flow is more likely preventing the build-up of larger plugs or mats which could cause more acute problems if released all in one go.

NI Water

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Local Government Civil Contingencies Group

Working Group of multiagency partners comms in place that could support comms across all agencies as required

PHA

Two considerations of ill health, passive or proactive engagement with health practitioners. Not considered to need proactive engagement at present so will consider if passive reports increase.

ACTION POINTS/OFFICIAL RESPONSIBLE/TARGET DATE:

- **Action Point 1** – [REDACTED] to progress Lines to Take, and to be agreed by all relevant Agencies.

Minutes written by:

[REDACTED]

Date:

10th July 2025

Blue Green Algae Tactical Co-ordination Group – Significant bloom in Lough Neagh impacting raw drinking water sources, bathing water and recreational locations around the Lough and Lower Bann to coast

SITUATIONAL REPORT Number: 04

All new information should be noted RED

Information correct as of 10:30 hrs on 22.08.2025

This Situational Report (Sit-Rep) will focus on the strategic issues of the incident. It is understood that blue-green algae is a recurring issue since 2023 with varying impacts across Northern Ireland.

This specific incident has moved from risk to Open Golf championship and is to consider the key risks from harmful algal blooms (HAB) in Lough Neagh and the Lower River Bann moving down the river to the North Coast beaches affecting drinking water sources, impacting on human, animal and ecological health and impacting individual's livelihood and denying recreational access.

The extended Tactical Co-ordination Group (TCG) will consider operational and tactical issues reported by each partner, but the strategic issues will not be obscured by operational detail.

The Annex to the main body of the Sit-Rep will detail the operational monitoring and technical information that will be used to make decisions on the risk.

The Sit-rep will be kept up to date with updates provided at key points as agreed and a further meeting held on **28 August @ 3pm**

Overall DOC Assessment		
Overall Delivery Confidence	R	Significant bloom in Lough Neagh impacting raw drinking water sources, bathing water, and recreational locations around the Lough and Lower Bann to coast
Key Issues – Please detail your key issues or imminent risks only, that may require escalation.		
New	Description	BRAG
1.	Significant bloom present in Lough Neagh and impacting bathing water site at Rea's Wood and recreational locations around the Lough and Lower Bann to coast	R
2.	Potential risk to public health from bathing and pets from contact with BGA	A
3.	Potential for reputational damage for NI on a global media stage if BGA travels down Lower Bann and impacts on north coast beaches	R
4.	Potential risk of impact on drinking water quality through taste and odour issues	A

Items for Escalation –			
	Description	CCG	
		For info	For action
1	TCG group stood up at 10.30am on 10.07.2025 and membership extended to wider stakeholder group	X	
2	LTT to be drafted, agreed and circulated		x
3	LTT and briefing to be prepared for DAERA Minister		x
DOC Status Update		BRAG	
Contact details shared and WhatsApp group to be set up for on call across all agencies including press teams over the weekend		G	
139 cases of BGA in 2025 reported to date across NI from 66 unique locations Reports since the last TCG meeting on 17/7/25 have been steady but w/c 17/8/25 significant increase in reports with 14 new locations reported over a 7 day period.		G	

Whatsapp group to be updated to include wider membership of the multiagency group

G

Forward Look for next 1-2 days.

11.07.25

1. Agreed LTT to be circulated - Complete circulated 11.07.25
2. Continue to monitor reports of locations over the weekend - Complete
3. WhatsApp Group – contact for those on call this weekend - Complete
4. Biovolumes results for Reas' Wood available tomorrow. This will determine if Amber or Red status as defined in Protocol – Complete
5. Winds / weather to be monitored and fed into group – higher temps, calm weather forecast with light S/SE winds; -Complete
6. Contact DfI re Rivers Agency to check if Lough gates can be kept closed - Complete
7. Full sweep of beaches to be completed by MFD team on Saturday - Complete

14.07.25 - next 48-72 hours

1. Risk to be kept at Red due to remaining major reputational risk - will be reviewed at next meeting
2. Weather – sunny spells and showers, some heavy, winds to be predominantly SE with some N/NW mid week
3. Sampling of beaches planned for Wed (16th)
4. AFBi plan to have boat on Lough mid-week and will lift samples for DAERA - MFD analysis
5. National Trust to be added to the TCG as bathing water operator
6. **Next meeting Thursday 17th July at 14:00hrs**

17.07.2025

1. Lough Neagh currently 2 inches about minimum and no expected requirement to open gates prior to 20th
2. NIEA & Bathing water & TCG group to be notified of any plans to open the gates.

22.08.25

North coast beaches will be monitored by staff over BH weekend.
NIEA Emergency pollution hotline is available 24/365
Situation at Moyola WTW will be monitored over BH weekend

Forward Look for this/next week.

1. Teams meeting Monday 14th 9.30am to review situation and identify any required actions
2. To be kept under review – TCG to be held Thursday 17 July @ 2.00pm

22.08.2025

1. Continue to monitor situation
2. Next TCG meeting 28.08.25

Forward Look >2 weeks.

22.08.2025

1. Continue to monitor situation as potential for odour and taste issue to emerge and drinking water quality to be impacted

Expected Media Attention – Please confirm if the DOC has any items that will have expected media releases

1. To be kept under review, potential to escalate given location of world media in Portrush
2. Press teams to liaise with each other – DAERA / Tourism NI

14.07.25

1. No media attention or queries over the weekend

16/07/2025

Department's public health notification media to be extended to Michelle from NI tourism

22.08.25

Media requests received in relation to BG present at Benone beach. Lines for DAERA Minister are being prepared.
Comms between DAERA and CCGBC to be co-ordinated

KEY RISK 1	Significant bloom present in Lough Neagh impacting bathing water sites and recreational locations around the Lough and Lower Bann to coast	BRAG Status	R
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Detailed description:

1. Report of blue green present on Benone beach 21.08.25.
2. DAERA has issued to 'advice against bathing' notification to CCGC for Benone Beach on 22.08.25
3. Seaton's Marina and Rea's Wood still above the threshold levels
4. Other North coast beaches are not impacted

What are the specific impacts, including metrics?

Impacts to bathers and other water users. Risk to pets entering the water or coming in contact with the BGA

What is being done about it? (Tolerate, Treat, Transfer):

Tolerate:

Advice against bathing notification issued to CCGC by DAERA
Toxin levels will be available late 22.08.25

KEY RISK 2	POTENTIAL RISK TO PUBLIC HEALTH FROM BATHING AND PETS FROM CONTACT WITH BGA	BRAG Status	A
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Detailed description:

1. Potential public health impacts to water users and animals

What are the specific impacts, including metrics?

Contact with BGA can cause skin irritation and illness if ingested
Highly toxic to pets with significant risk of death

What is being done about it? (Tolerate, Treat, Transfer):

Tolerate:

No ability to remove at present. Notification provided against bathing and signage to be erected by ANBC as agreed under the Interagency Monitoring Protocol

KEY RISK 3	POTENTIAL FOR REPUTATIONAL DAMAGE FOR NI ON A GLOBAL MEDIA STAGE IF BGA TRAVELS DOWN LOWER BANN AND IMPACTS ON NORTH COAST BEACHES	BRAG Status	R
Detailed description: 3. The outflow from Lough Neagh via the fish passage cannot be stopped and therefore the BGA will travel down the Lower Bann to the north coast. If the BGA results in the closures of north coast bathing waters, or significant visual presence at north coast, there is a significant risk of reputational damage for Northern Ireland in relation to tourism and economic impact and impact on local beaches during the peak season.			
What are the specific impacts, including metrics? Reputational – media in Northern Ireland Economic – Impacts on tourism and local businesses Public health – potential impacts on water users			
What is being done about it? (Tolerate, Treat, Transfer): Treat: The Interagency Monitoring Protocol is in operation Reports being closely monitored and movement of BGA reports mapped LTT to be drafted and agreed Press teams to liaise with each other on comms			

KEY RISK 4	Potential risk of impact on drinking water quality through taste and odour issues	BRAG Status	A
Detailed description: 1. Moyola WTW: experiencing very high algal levels entering the works due to wind direction and low water levels.			
What are the specific impacts, including metrics? Reputational – media in Northern Ireland Economic – impact on households and businesses Public health – potential impact on supplies of drinking water			
What is being done about it? (Tolerate, Treat, Transfer): Treat: The Interagency Monitoring Protocol is in operation Monitoring ongoing for algal counts, Geosmin, MIB, and Microcystin-LR. In-house Microcystin-LR Testing: Commenced this week for WTW sourcing from Lough Neagh and Lower Bann.			

Current Position:

Science, evidence and observations to date – (NIEA, MFD, AFBI, and others as required)

NI Water update:

- Sampling for Algae counts, Microcystin-LR and the taste & odour related compounds Geosmin & MIB in place and ongoing – weekly sampling.
- Nothing of concern to note with regards to algae counts to date in the raw water samples across all L.Neagh related WTWs
- No concerns to date with Microcystin-LR results to date (results available up to 10.06.2025 - all <LOQ)
- No concerns to date with Geosmin & MIB results to date – results typical for the period YTD (results available up to 10.06.2025)
- No concerns with regards to customer complaints for T&O – Earthy/Must descriptor – contacts at BAU levels
- No T&O failures recorded
- Moyola WTW - Work completed at Moyola WTW to replace the GAC media in all 4 GAC filters
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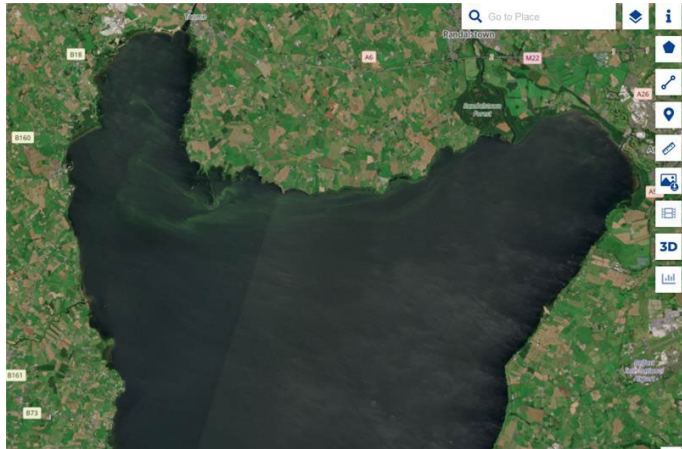
DAERA / NIEA / AFBI

Attached as Annex

Monday 14.07.25

1. Movement of bloom with prevailing winds over the weekend towards NW corner of Lough and Toome Monitoring of locations at Rea's Wood, Toome and Newferry on Saturday (12th) & Sunday (13th) – presence in water column. Newferry to be verified today.
2. Moved offshore slightly from Rea's Wood with prevailing wind towards Toome, but no change to advice due to potential movement of bloom (would be Amber at present).
3. Weather currently less sunny with scattered showers, may be heavy at times.
4. No change to Lough levels from Friday so no change to flood gates (11.07.25 – 12.499OD – 101mm below high statutory limit).
5. Notification received re Glenshesk River, Ballycastle but not yet on beach, biovolume results to be done today, non-toxic at present
6. No notifications of illness reported to PHA

7. No change needed to Comms at this time



Satellite Image 13.07.25

Friday 22.08.2025 Update

DAERA/NIEA/AFBI

Attached as Annex

Armagh, Banbridge & Craigavon BC

Signs are up in confirmed locations within council area.

Antrim and Newtownabbey BC:

Signs have remained up throughout summer regarding no bathing. Plan to reshare socials

Mid and East Antrim BC:

No recent complaints have been received. Outdoor recreational signs have remained in place

Mid Ulster DC:

Signage has remained in place

Lisburn and Castlereagh BC

No further update to report

Causeway Coast and Glens BC:

Comms issued 21.08.25 regarding Benone beach. DAERA press team and CCGBC to liaise regarding comms around Benone

Tourism NI:

Require agreed Lines to Take that will not scare public or raise concern

Request for contact to be made available for senior management to discuss further

DFI Rivers

Lough gates are near minimum level. No plans to open and release water at present. Water is flowing through fish passage.

FSA

24/25 fish sample results received, internal risk assessment for edible fish completed and comms being made ready for news story to be released w/c 8 September

Briefing paper for DoH Minister is being prepared for issue 26.08.25. with OGD meeting scheduled for 27.08.25. Other stakeholders to be updated prior to news story release.

25/26 Sampling commenced and initial results expected end Sept/Oct.

Tourism NI

Has requested contacts within DAERA regarding "Blueways" project

PHA

No queries received to date from public

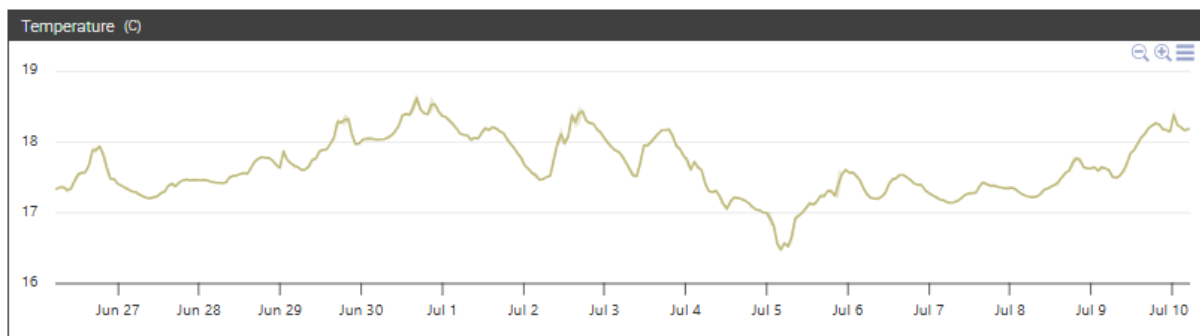
OFFICIAL DAERA BRIEFING PAPER 10/7/2025

BRIEFING	TCG Blue-green update
DIVISION/BRANCH REFERENCE	TCG BG update #26
DATE	10 th JULY 2025, 15.00 – 16.00

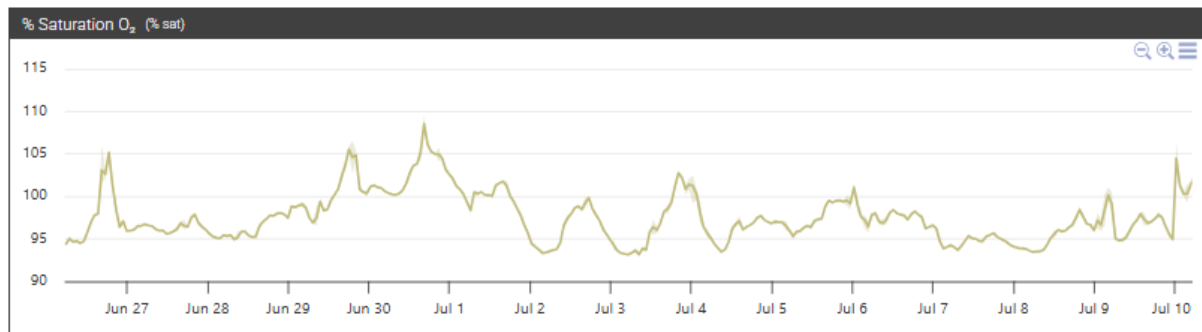
NIEA update

FMA Freshwater Investigations:

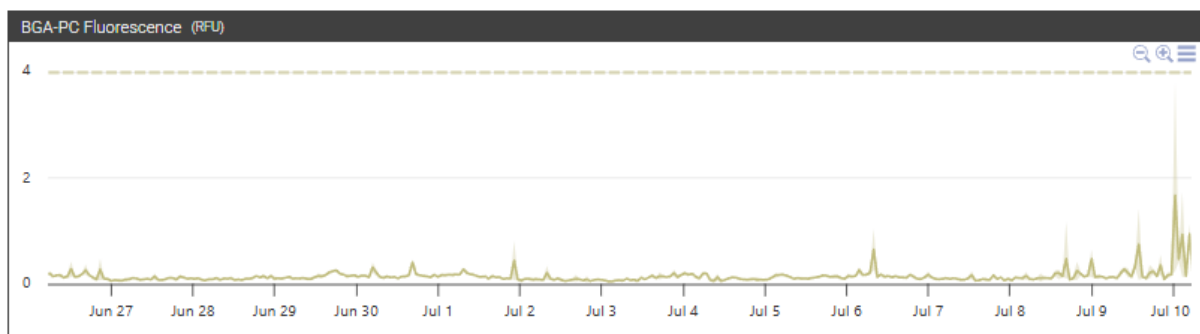
Telemetered data from the multiparameter sonde deployed offshore (sub-surface) at Rea's Wood, Antrim is displayed in the graphs below. The data represents the last 14 days of monitoring.



Temperature is typical for the time of year. Surface temperature may increase in the coming days in line with the forecasted warm dry sunny spell of weather.



DO Levels are as expected. Over the last fortnight there have been no periods of suppressed DO or periods of hyperoxygenation.



Blue Green levels remain present but low. Small increases have been observed in the last 48hrs. There is potential for larger increases in blue green concentration

over the coming days as weather forecasts predict a period of warm dry settled weather.

FMA Lake Monitoring & Evidence:

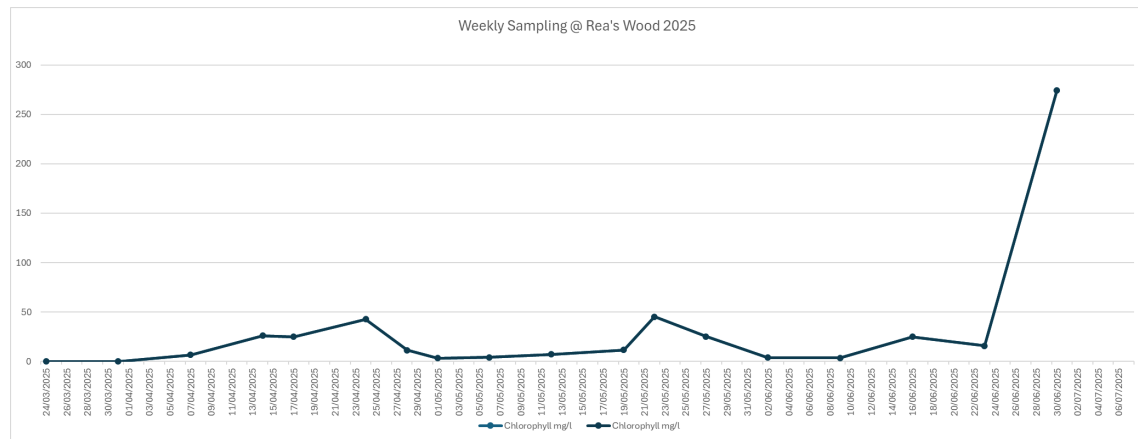
So far in 2025, 41 confirmed reports of blue green algae from 27 unique locations (up to and including 10/07/2025). Three new confirmed locations this week at Lough Neagh - Rea's Wood, Copeland Reservoir and Lower Bann - Bracknamuckley Forest.

Confirmed blue green algae locations 2025	Latest confirmed report
Lough Neagh - Rea's Wood	10/07/2025
Copeland Reservoir	09/07/2025
Lower Bann - Bracknamuckley Forest	09/07/2025
Craigavon Lakes	02/07/2025
Lower Bann - The Cutts, Coleraine	30/06/2025
Lower Bann - Moneygran Wood	29/06/2025
Portna Canal	29/06/2025
Lower Bann – Portglenone	28/06/2025
Hillsborough Forest Park	28/06/2025
Toome Canal	27/06/2025
Closet River – Craigavon	20/06/2025
Lower Lough Erne - Muckcross Bay	19/06/2025
Lower Lough Erne - Castle Archdale	13/06/2025
Upper Lough Macnean	10/06/2025
Black Glen Lake - Castlerock	02/06/2025
Lower Lough Erne - Castle Caldwell	01/06/2025
Lough Neagh - Scaddy Island	23/05/2025
Lower Lough Erne - Ross Harbour	22/05/2025
Lower Lough Erne - Tully Castle	13/05/2025
Portmore Lough	07/05/2025
Lower Bann - Seatons Marina	28/04/2025
Lough Aghery	17/04/2025
Lough Neagh - Curran's Quay (Kinturk)	11/04/2025
Lough Neagh - White Horse Flats	11/04/2025
Ballysaggart Lough	09/04/2025
Lough Neagh - Traad point	09/04/2025
Martray Lough	02/04/2025

DWI Update

Unable to attend meeting. No current issues to report for drinking water.

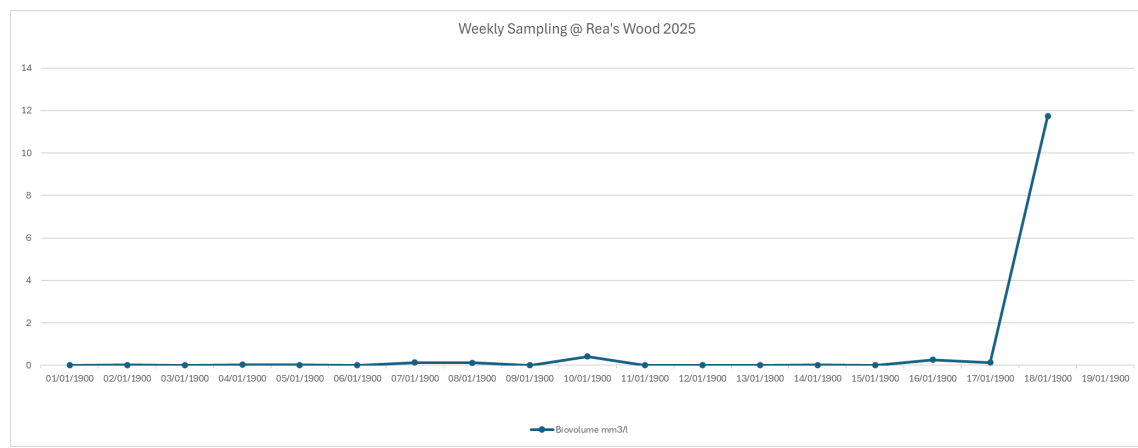
EMFG update



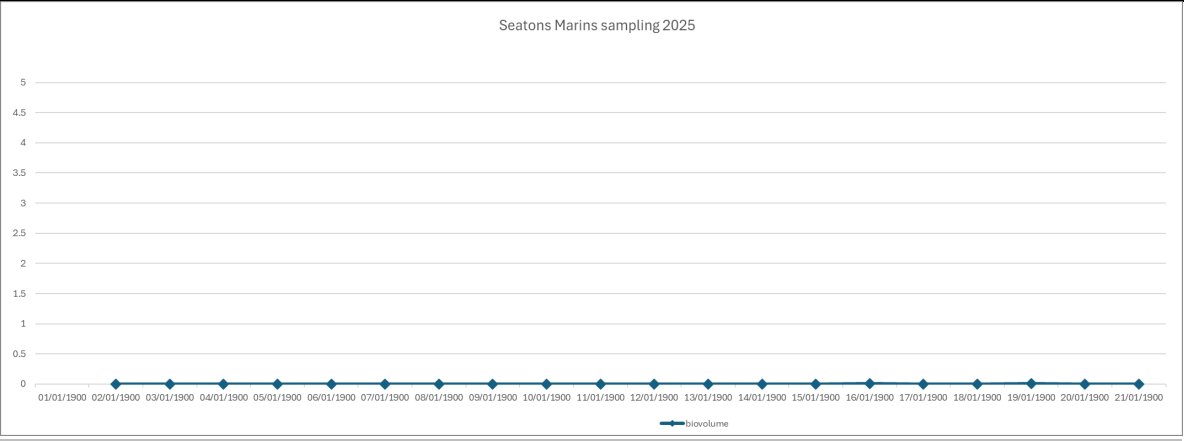
Chlorophyll levels increased from 16ug/l to 274 ug/l



Seatons marina remains low for chlorophyll!



Reas Wood Biovolume at 11.74 mm3/l, above the 4mm3/l limit.



Seatons Marina biovolume below threshold

Species found in Reas Wood Microcystis, Anabaena and Snowella.

All samples negative for toxins.

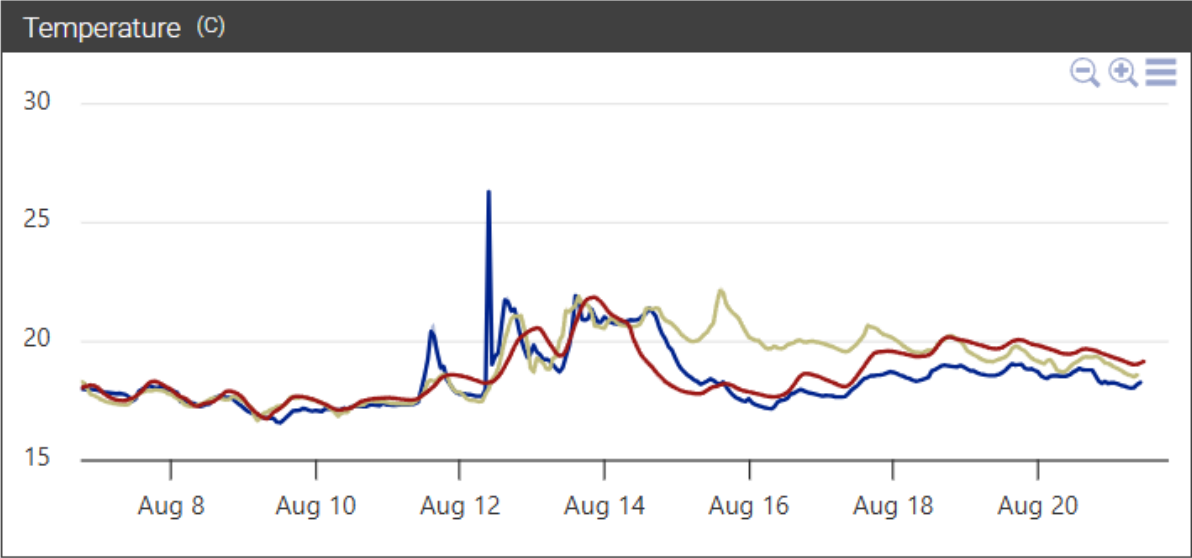
AFBI update

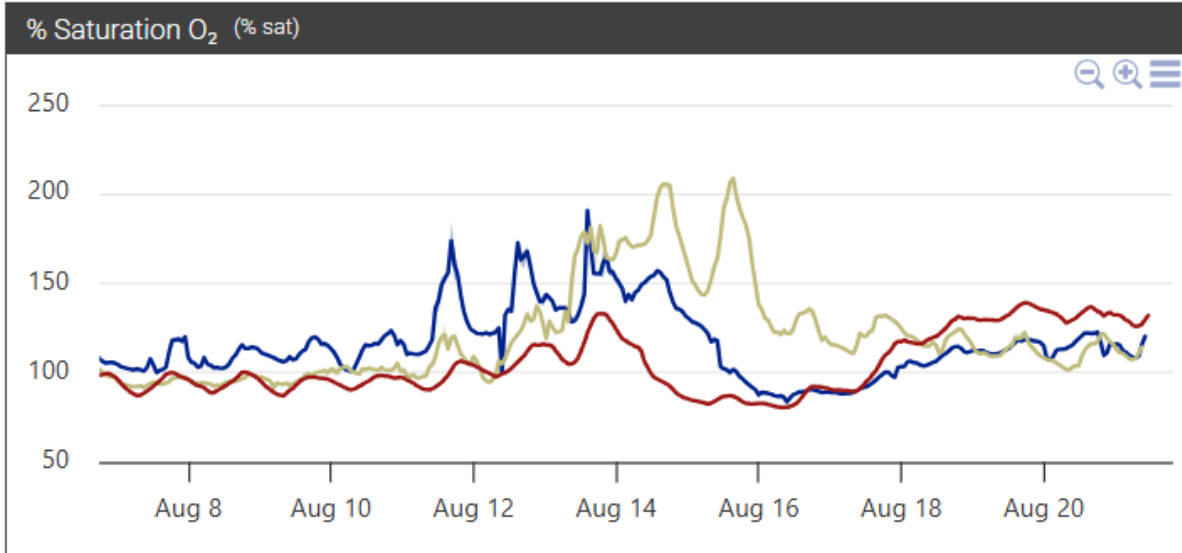
Verbal input provided at meeting.

**Updates completed by:
NIEA/ DWI/ EMFG/ AFBI**

**Date:
10/07/2025**

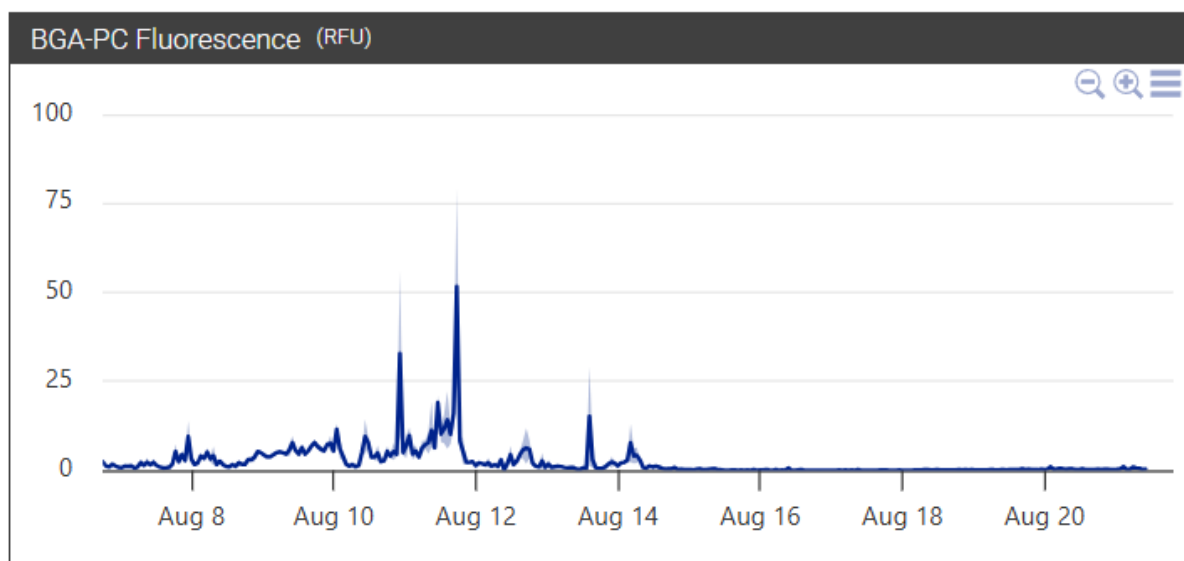
OFFICIAL DAERA BRIEFING PAPER 22/08/2025

BRIEFING	BG TCG Update
DIVISION/BRANCH REFERENCE	
DATE	22 August 2025
<u>NIEA update</u> Freshwater Investigations team: The data represented below is from the 14th to the 21st August 2025. The data is collected in real time at 30 min intervals from three locations across lough Neagh: Rea’s Wood: Blue line Toom Bridge: Red Line Washing Bay: Gold Line Temperature (°C)  Monitoring Buoy Temperature (°C) – Rea’s wood (Blue), Toome Outlet (Red), Washing Bay (Gold) Surface temperatures remain elevated across the three monitoring locations in line with the recent warm, calm atmospheric conditions which followed the cooler windy conditions observed on the 8th/9th August. The sharp elevation in surface temperature, recorded at the Rea’s wood buoy on the 12th was a result of removal for maintenance and calibration and should be disregarded.	



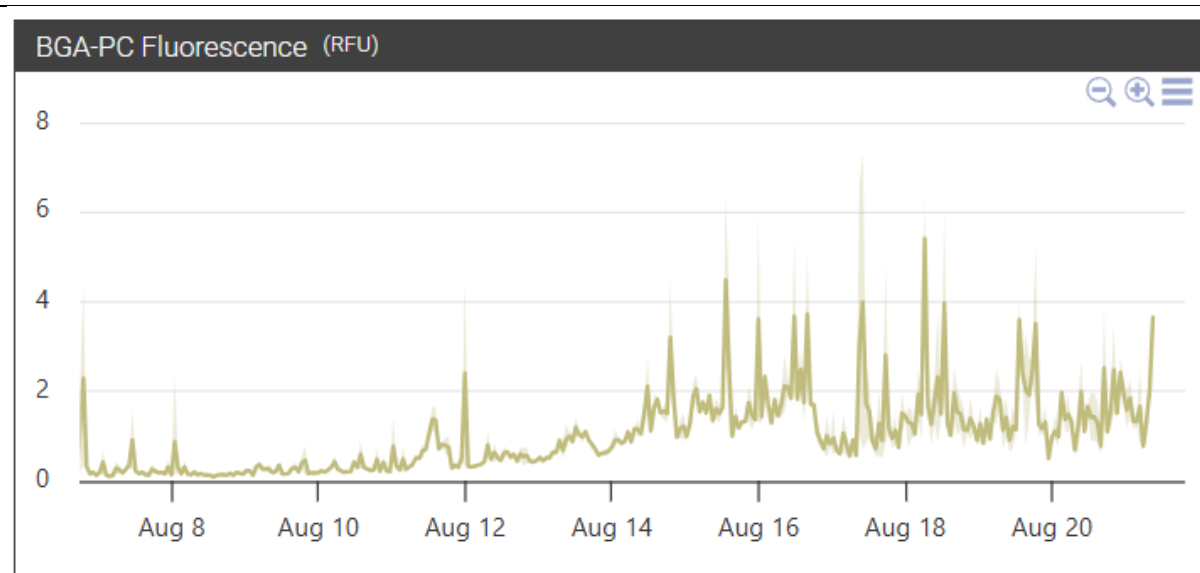
Monitoring Buoy Dissolved Oxygen (%Sat) – Rea's wood (Blue), Toome Outlet (Red), Washing Bay (Gold)

Periods of hyperoxygenation have been recorded at Rea's wood and Washing Bay because of the atmospheric conditions. Warm temperatures settled conditions, and increased sunlight can lead to excessive macrophyte growth and algal blooms, particularly cyanobacteria, which produce oxygen through photosynthesis during the day. When conditions become more unsettled, mixing occurs, bringing surface DO levels back to more normal and expected levels.



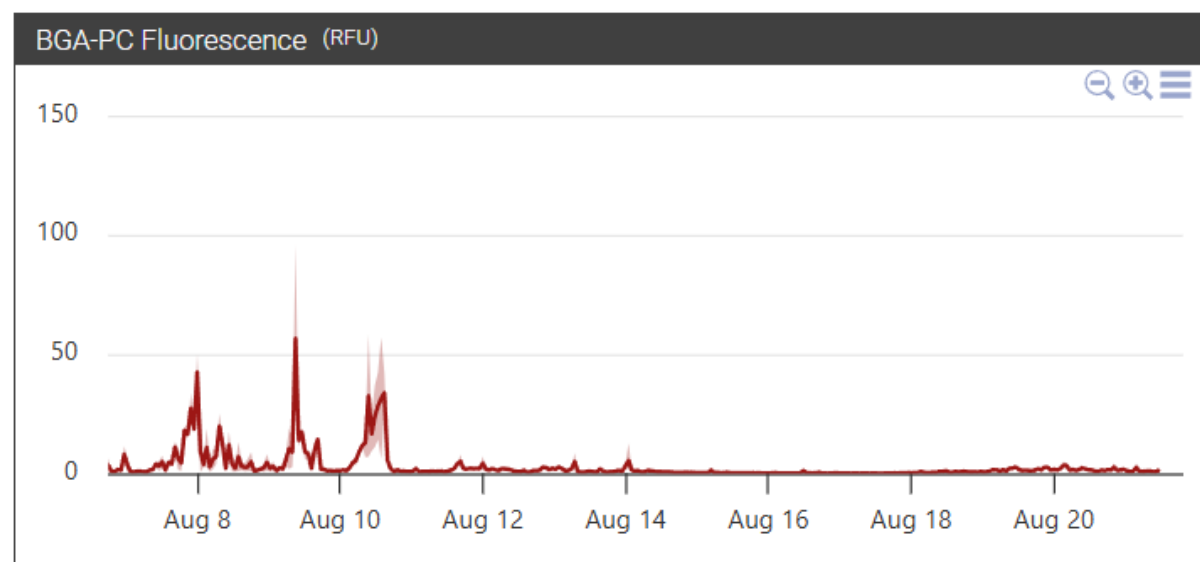
Rea's Wood Buoy -BGA-PC RFU

Notable blooms in Blue green algae have been recorded at Rea's wood over the past two weeks. The data suggest that these levels have decreased in recent days. Eyewitness reports are contrary to this. An explanation for this may be the algae's positioning in the water column. Often the algae floats to the surface for photosynthesis or when it is decomposing and may be concentrated above the depth of the BG sensor on the buoy. Decomposing algae may give the impression that subsurface levels are decreasing while they may appear more concentrated on the surface.



Washing Bay Buoy – BGA-PC RFU

Blue Green algae levels remain present but low at washing bay.



Toome Bridge Outlet Buoy – BGA-PC RFU

A passing bloom of Blue green algae was recorded at the Toome Outlet on the 8-11th of august. Levels have remained low here since. Again, this may be due to the concentration of decomposing algae on the surface with lower levels being recorded subsurface.

FMA Lake Monitoring & Evidence:

Stats up to and including 21/08/2025

139 reports at 66 unique locations

New locations this week	Date
Lough Mourne	21/08/2025

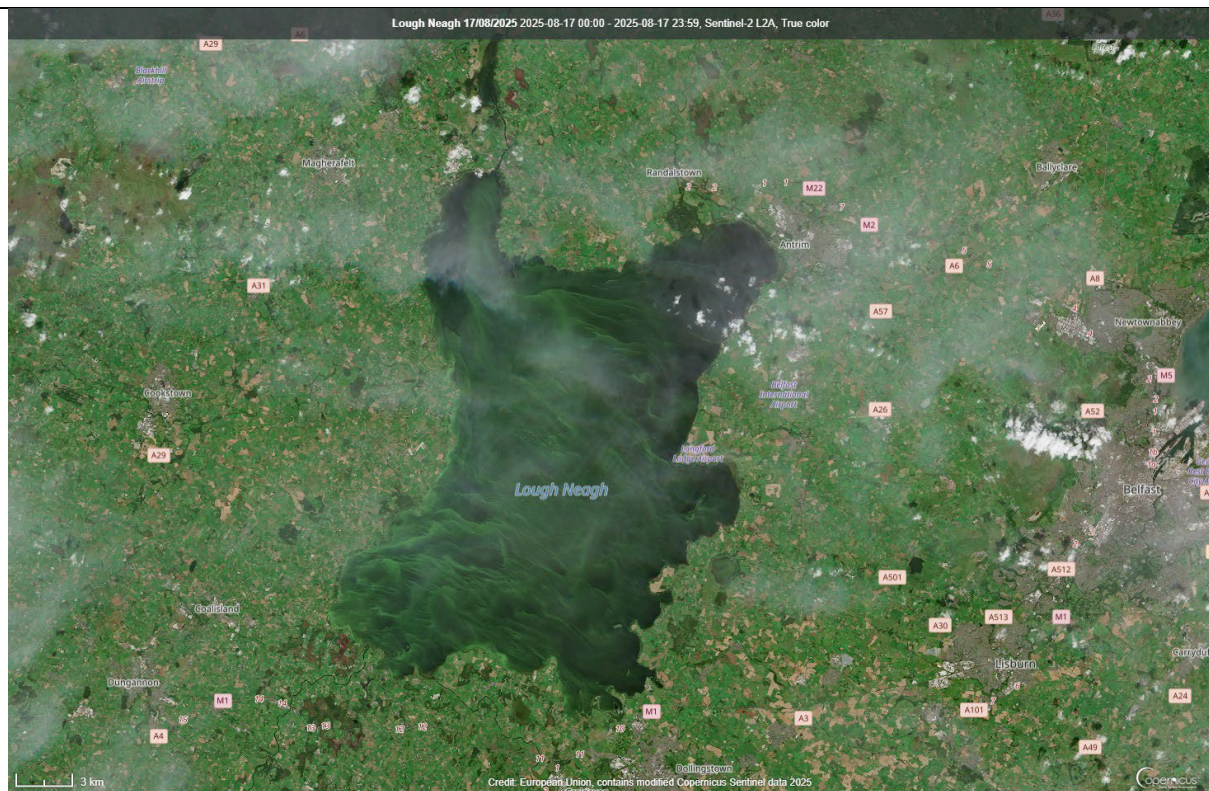
Lough Neagh - Pollan Bay	20/08/2025
Lough Neagh - Shanes Castle	20/08/2025
Lough Neagh - Moore's Point	20/08/2025
River Blackwater - The Argory	18/08/2025
Lough Neagh - Battery Harbour	18/08/2025
Lough Neagh - Washing Bay	18/08/2025
Lower Bann - Mountsandel Wood	18/08/2025
Lough Neagh - Ballyronan	17/08/2025
Lough Neagh - Oxford Island	17/08/2025
Lough Neagh - Kinnego Marina	17/08/2025
Lower Lough Erne - Lusty Beg Island Marina	16/08/2025
Lower Bann - Hutchinson's Quay	15/08/2025
Lough Neagh - Sandybay Point	15/08/2025

Recent Satellite Imagery

12/08/25



17/08/25



DWI Update:

Very high algal levels are being experienced at the intake to Moyola WTW. This is as a result of the wind direction and the low level in Lough Neagh. Monitoring of the raw and treated water for algal counts, Geosmin, MIB and Microcystin-LR by NI Water is ongoing at all WTW at risk of algae in the source water. DWI is continuing to review the results of this monitoring. There has been no increase in taste & odour consumer contacts relating to algae in the source water this year to date, again DWI is continuing to monitor this situation. In-house testing of Microcystin-LR by NI Water has commenced this week focusing on WTW abstracting from Lough Neagh and the Lower Bann

EMFG update

EMFG update

North coast will be sampled on 23/8/25.

Site	Date	Biovolume Mm3/l	Toxins ug/l
Seatons Marina	18/8/25	21.9	9.078ug/l
Reas Wood	18/8/25	220	0.345ug/l
Benone	18/8/25	0.004	Negative
Portstewart	18/8/25	Nothing seen	Negative
Downhill	18/8/25	Nothing seen	Negative
Castlerock	18/8/25	Nothing seen	Negative
Portrush1	18/8/25	Nothing seen	Negative
Portrush 2	18/8/25	Nothing seen	Negative

Seatons Marina	21/8/25	17.3	Below limit of Detection
Reas Wood	21/8/25	133	0.891
Benone	21/8/25	6.105	Below limit of Detection
Portstewart	21/8/25	1small colony	n/a
Downhill	21/8/25	0.005	n/a
Castlerock	21/8/25	Nothing seen	n/a
Portrush1	21/8/25	Nothing seen	n/a
Portrush 2	21/8/25	0.004	n/a

CSAO update

The Lough Neagh Platform viewer development continues. The viewer has re-entered user testing. Issue resolution will commence Monday 25th Aug. Focus remains on having a releasable product for the 10th September. A release to stakeholders is required before release to the general public. This planning for the stakeholder even is underway.

DAERA have entered an OFWAT challenge fund partnership led by Southwest Water limited, an English water company. DAERA has agreed to provide data to the project and assist “in-kind”. DAERA will neither give or receive funding from this project nor will DAERA be undertaking any developmental work. DAERA will hold a position on the technical advisory group guiding the research.

The data that DAERA will supply is readily available to the public. Some of it is available through the DAERA website, other aspects through FOI, and additional details will also be viewable on a public facing data platform that will be launched in August 2025. The sharing of data meets the NI Data strategy and Open Government Licensing approaches and DAERA has no concerns regarding this.

DAERA/NI Water data sharing agreement is planned to be in place by 4th Sept. CSAO will be in contact next week seeking input and comments

AFBI update

Long-term time-series monitoring in lough Neagh has continued, observing abundant *Microcystis* in open water the previous week, and noticeable quantities in Lough Erne this week.

Phytoplankton biomass (as chlorophyll-a) at the surface is the highest value of the year so far.

AFBI Buoy has been unable to telemeter data but is still operating remotely. It has been worked on extensively, including a change of position to help determine network connectivity issues, but lack of support for outdated modems means a change of hardware is required. Likely to use *In-situ* for the short to medium term which means meteorology will be absent.

Preparation work to secure the acoustic survey vessel ahead of the SHIELD project has begun.

Monthly shoreline survey with Fluoroprobe has been undertaken.

Salar Engine Failure and hydraulics modifications have been addressed.

Media requests have been served by Dr Yvonne McElarney.

AFBI and MCCIP CoCo (Coastal Communities WG) proposal is moving towards delivering public facing information focusing on the downstream (Estuarine and Coastal) impacts of the algal blooms. Requires cross-agency coordination for messaging.

Updates completed by:
NIEA/ DWI/ EMFG/ AFBI

Date:
22/08/2025

Blue Green Algae Tactical Co-ordination Group – Significant bloom in Lough Neagh impacting raw drinking water sources, bathing water and recreational locations around the Lough and Lower Bann to coast

SITUATIONAL REPORT Number: 05

All new information should be noted RED

Information correct as of 15:00 hrs on 28.08.2025

This Situational Report (Sit-Rep) will focus on the strategic issues of the incident. It is understood that blue-green algae is a recurring issue since 2023 with varying impacts across Northern Ireland.

This specific incident has moved from risk to Open Golf championship and is to consider the key risks from harmful algal blooms (HAB) in Lough Neagh and the Lower River Bann moving down the river to the North Coast beaches affecting drinking water sources, impacting on human, animal and ecological health and impacting individual's livelihood and denying recreational access.

The extended Tactical Co-ordination Group (TCG) will consider operational and tactical issues reported by each partner, but the strategic issues will not be obscured by operational detail.

The Annex to the main body of the Sit-Rep will detail the operational monitoring and technical information that will be used to make decisions on the risk.

The Sit-rep will be kept up to date with updates provided at key points as agreed and a further meeting held on **Friday 5 Sept @ 10:30hrs**

Overall DOC Assessment			
Overall Delivery Confidence	R	Significant bloom in Lough Neagh impacting raw drinking water sources, bathing water, and recreational locations around the Lough and Lower Bann to coast	
Key Issues – Please detail your key issues or imminent risks only, that may require escalation.			
New	Description	BRAG	
1.	Significant bloom present in Lough Neagh and impacting bathing water site at Rea’s Wood and recreational locations around the Lough and Lower Bann to coast	R	
2.	Potential risk to public health from bathing and pets from contact with BGA - Onshore risks - Emersion in water	A	
3.	Potential for reputational damage for NI on a global media stage if BGA travels down Lower Bann and impacts on north coast beaches	R	
4.	Potential risk of impact on drinking water quality through taste and odour issues	A	
Items for Escalation –			
	Description	CCG	
		For info	For action
1	TCG group stood up at 10.30am on 10.07.2025 and membership extended to wider stakeholder group	X	
2	LTT to be drafted, agreed and circulated		x
3	LTT and briefing to be prepared for DAERA Minister		x
DOC Status Update		BRAG	
Contact details shared and WhatsApp group to be set up for on call across all agencies including press teams over the weekend		G	
158 cases of BGA in 2025 reported to date across NI from 78 unique locations 12 new locations reported since last meeting.- See annex for more detail		G	

Whatsapp group to be updated to include wider membership of the multiagency group

G

Forward Look for next 1-2 days.

22.08.25

North coast beaches will be monitored by staff over BH weekend.

NIEA Emergency pollution hotline is available 24/365

Situation at Moyola WTW will be monitored over BH weekend

28/8/2025

Bathing waters will continue to be monitored

Emergency pollution hotline available 24/365

Lough levels at Toome to be monitored but do not anticipate gates being opened

Drinking water quality and consumer contacts will continue to be monitored

Forward Look for this/next week.

22.08.2025

1. Continue to monitor situation
2. Next TCG meeting 28.08.25

28.08.2025

Winds offshore until Thurs when changes forecast onshore

Watch on rainfall and levels of gates at Toome. Heavy rainfall forecast over weekend and next week.

Continue to monitor algae / toxin levels

Next TCG meeting 5.09.25

Forward Look >2 weeks.

22.08.2025

1. Continue to monitor situation as potential for odour and taste issue to emerge and drinking water quality to be impacted

28.08.25

As above however more focus on recreational use of waterways and drinking water quality as potential for increase in toxins as bloom decays

Expected Media Attention – Please confirm if the DOC has any items that will have expected media releases

22.08.25

Media requests received in relation to BG present at Benone beach. Lines for DAERA Minister are being prepared.
Comms between DAERA and CCGBC to be co-ordinated

28.08.25

Media requests received in relation to drinking water and phosphate dosing (plumbosolvency). This issue is accounted for already in nutrient budgeting.

No expected media releases in coming days but w/c 8 Sept FSA media story will be issued.

KEY RISK 1	Significant bloom present in Lough Neagh impacting bathing water sites and recreational locations around the Lough and Lower Bann to coast	BRAG Status	R
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Detailed description:

1. DAERA issued to 'advice against bathing' notification to CCGC for Benone Beach on 22.08.25 However after sampling on Sat and Tues results are at reduced level and 'advice against bathing' was removed on 27.08.25.
2. Seaton's Marina and Rea's Wood still above the threshold levels
3. Although biovolumes have reduced in samples there is still cause for concern over phycocyanin toxins with the bloom in background.

What are the specific impacts, including metrics? Impacts to bathers and other water users. Risk to pets entering the water or coming in contact with the BGA Toxin levels have potential to increase as algae decays			
What is being done about it? (Tolerate, Treat, Transfer): Tolerate: Advice against bathing notification issued to CCGC by DAERA Signage remains in place			
KEY RISK 2	POTENTIAL RISK TO PUBLIC HEALTH FROM BATHING AND PETS FROM CONTACT WITH BGA	BRAG Status	A
Detailed description: 1. Potential public health impacts to water users and animals Knowledge gap for operators on guidance to be followed for both - Onshore risks - Emersion in water			
What are the specific impacts, including metrics? Contact with BGA can cause skin irritation and illness if ingested Highly toxic to pets with significant risk of death			
What is being done about it? (Tolerate, Treat, Transfer): Tolerate: No ability to remove at present. Notification provided against bathing and signage to be erected as agreed under the Interagency Monitoring Protocol			

KEY RISK 3	POTENTIAL FOR REPUTATIONAL DAMAGE FOR NI ON A GLOBAL MEDIA STAGE IF BGA TRAVELS DOWN LOWER BANN AND IMPACTS ON NORTH COAST BEACHES	BRAG Status	R
Detailed description: 3. The outflow from Lough Neagh via the fish pass cannot be stopped and therefore the BGA will travel down the Lower Bann to the north coast. If the BGA results in the closures of north coast bathing waters, or significant visual presence at north coast, there is a significant risk of reputational damage for Northern Ireland in relation to tourism and economic impact and impact on local beaches during the peak season.			
What are the specific impacts, including metrics? Reputational – media in Northern Ireland Economic – Impacts on tourism and local businesses Public health – potential impacts on water users			
What is being done about it? (Tolerate, Treat, Transfer): Treat: The Interagency Monitoring Protocol is in operation Reports being closely monitored and movement of BGA reports mapped Press teams to liaise with each other on comms so cohesive approach is taken			

KEY RISK 4	Potential risk of impact on drinking water quality through taste and odour issues	BRAG Status	A
Detailed description: 1. Moyola WTW: algal levels remain elevated but down from end of last week.			
What are the specific impacts, including metrics?			

Reputational – media in Northern Ireland
Economic – impact on households and businesses
Public health – potential impact on supplies of drinking water
Toxin levels have potential to increase as algae decays

What is being done about it? (Tolerate, Treat, Transfer):

Treat:

The Interagency Monitoring Protocol is in operation

Monitoring ongoing for algal counts, Geosmin, MIB, and Microcystin-LR.

In-house Microcystin-LR Testing by NI Water for WTW sourcing from Lough Neagh and Lower Bann.

Current Position:

Science, evidence and observations to date – (NIEA, MFD, AFBI, and others as required)

Friday 22.08.2025 Update

DAERA/NIEA/AFBI

Attached as Annex

Armagh, Banbridge & Craigavon BC

Signs are up in confirmed locations within council area.

Antrim and Newtownabbey BC:

Signs have remained up throughout summer regarding no bathing. Plan to reshare socials

Mid and East Antrim BC:

No recent complaints have been received. Outdoor recreational signs have remained in place

Mid Ulster DC:

Signage has remained in place

Lisburn and Castlereagh BC

No further update to report

Causeway Coast and Glens BC:

Comms issued 21.08.25 regarding Benone beach. DAERA press team and CCGBC to liaise regarding comms around Benone

Tourism NI:

Require agreed Lines to Take that will not scare public or raise concern

Request for contact to be made available for senior management to discuss further

DFI Rivers

Lough gates are near minimum level. No plans to open and release water at present. Water is flowing through fish passage.

FSA

24/25 fish sample results received, internal risk assessment for edible fish completed and comms being made ready for news story to be released w/c 8 September

Briefing paper for DoH Minister is being prepared for issue 26.08.25. with OGD meeting scheduled for 27.08.25. Other stakeholders to be updated prior to news story release.

25/26 Sampling commenced and initial results expected end Sept/Oct.

Tourism NI

Has requested contacts within DAERA regarding "Blueways" project

PHA

No queries received to date from public

28.08.2025 Update

DAERA/NIEA/AFBI

Attached as Annex dated 28 August 2025

DFI Rivers

Lough levels just above statutory minimum. No plans to open gates and release water at present.

FSA

24/25 fish sample results received, internal risk assessment for edible fish completed and comms being made ready for news story to be released w/c 8 September

DoH and DAERA Ministers briefed and meeting with OGD held 27.08.25. Other stakeholders to be updated prior to news story release.

Antrim and Newtownabbey BC:

Signs have remained up throughout summer regarding no bathing. Plan to reshare socials

Armagh, Banbridge & Craigavon BC

Queries raised in relation to advice from FSA on fish. FSA advised currently advice is active and on website.

Query on rotting aquatic weeds raised and NIEA to follow up with query.

Causeway Coast and Glens BC:

Query raised on advice for operators on an event being held on 7 Sept. MFD and CCGBC to review in line with IA protocol. MFD advises that the event planned at Coleraine is relocated immediately, as situation for the Lower Bann is unlikely to improve in the coming week.

Mid and East Antrim BC:

Signage remains across access points on Lower Bann. Cross communication however with Waterways Ireland who are using as navigation channel.

MUDC

Query raised to FSA regarding upcoming story and request for advance notice on story. FSA advised that stakeholders will be informed before media story release.

FODC

No update to report

Tourism NI

Meeting scheduled with MFD around “Blueways” project and water quality on 29.08.2025