

# Swellnews

OFFICIAL NEWSLETTER OF THE  
SHARED WATERS ENHANCEMENT & LOUGHS LEGACY

WINTER 2022

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This project has been supported by the European Union's INTERREG VA Programme, managed by the Special EU Programmes Body (SEUPB).

## Hello and welcome to our Winter 2022 Ezine for the Shared Waters Enhancement & Loughs Legacy (SWELL) project.



In this newsletter we bring you news on the commissioning of the Uisce Éireann (new name for Irish Water) SWELL projects in Donegal and introduce you to their new SWELL Project Manager.

As you will see in the featured Uisce Éireann update, the three treatment plant sites in Donegal have been transformed with modern new wastewater equipment to provide a higher quality final effluent to the adjacent waterways.

The commissioning of these three new Uisce Éireann treatment plants, combined with the SWELL wastewater upgrades carried out by NI Water at Donemana and Strabane will have a significant positive effect on the overall water quality in Lough Foyle.

In this edition we also portray in more detail, what's involved in the sampling and modelling work carried out by AFBI and supported by Loughs Agency and get an insight into the extensive work undertaken in a typical week by the water sampling team.

Our partner profile in this edition focuses on the work of Loughs Agency as we hear from Dr Sarah McLean about their important role in the SWELL project.

Finally we are delighted to report that NI Water is in the final stages of its commissioning work on a second phase of improvements (in addition to those made under SWELL) at Warrenpoint Wastewater Treatment Works. A brief update is on our back page.

While we move into the final stages of SWELL and work to close out the four-year programme of work, NI Water, Uisce Éireann and East Border Region (EBR) are also focused on the Peace PLUS programme and are developing plans to deliver further water quality improvements in the Donegal and Fermanagh regions.

As we mark another year of extensive construction progress and modelling work and on behalf of all our partners, we hope you enjoy catching up on all the latest news on the SWELL project in this latest ezine. We look forward to bringing you further news of our outcomes and results in 2023.

**Eoin Gilmore**  
SWELL Programme Lead  
NI Water



# UISCE ÉIREANN NEARS COMPLETION OF SWELL UPGRADES

Uisce Éireann is playing an integral part in the delivery of the €35m EU-funded SWELL project with extensive wastewater upgrades nearing completion in Counties Donegal and Louth.

Three projects are located in County Donegal, in the areas of Lifford, Carrigans and Killea. Uisce Éireann's fourth SWELL upgrade is in the Carlingford Lough catchment and involves a wastewater network improvement project in Omeath, County Louth.

**WE ARE DELIGHTED TO REPORT CONTINUING PROGRESS ON ALL OF THE SITES:**

## Killea Wastewater Treatment Plant (WwTP) Estimated Completion: End of 2022

Killea lies directly on the border between the Republic of Ireland and Northern Ireland and is approximately 3 km from the River Foyle. The Killea WwTP agglomeration is centred around the R237 Letterkenny to Derry Road and treats wastewater from housing in the surrounding area. Killea WwTP was overloaded and the upgrade works were needed to increase the treatment capacity of the plant to allow for future economic development and improved water quality in the town and surrounding areas, as well as to protect the environment. The works carried out under the SWELL project will ensure that wastewater is treated and discharged in compliance with the Urban Wastewater Treatment Regulations.

Construction began at Killea WwTP in June 2021. The construction of the new plant provides

secondary treatment using Rotating Biological Contactor (RBC) technology, with a design capacity of 800 population equivalent (PE).

The primary settlement tanks, RBC treatment units and final settlement tanks are now installed. The storm tank and new control building have also been completed with other ancillary works at the site continuing. The new plant on the site was put into operation in March 2022 and the old plant was decommissioned and demolished.

**Flow and performance testing is currently under way which involves 30 consecutive days of testing. All site works are planned to be completed by the end of 2022.**



## Lifford Wastewater Treatment Plant (WwTP) Estimated Completion: End of 2022

Lifford is the county town of Donegal and is located in the east of the county along the border with Northern Ireland. The town is in the Finn Valley where the Mourne River and River Finn meet to form the River Foyle. In 2016, the town was recorded as having a population of 1,626. Wastewater from the Lifford agglomeration, which includes the town itself plus developments along the N15 and N14, is treated at Lifford WwTP. The WwTP is located on the banks of the River Foyle and the town of Strabane is directly across the river. This stretch of the river is designated as a Special Area of Conservation.

Construction began on Lifford WwTP in May 2021. The new WwTP constructed in Lifford is the most significant of the Uisce Éireann SWELL upgrades. The previous Lifford wastewater treatment plant was constructed in 1967, providing only primary treatment and was operating over capacity. Primary treatment is similar in nature to a domestic septic tank, providing only very basic

wastewater treatment. The site for the Lifford WwTP was compact at 2000m<sup>2</sup>, presenting a challenging location to build the sizable new wastewater treatment plant.

Major excavation works were required to reduce site levels down to allow for construction of the wastewater treatment plant, with 4000m<sup>3</sup> of earth excavated (equivalent to 450 lorry loads of material). The Lifford site also posed a challenge for Uisce Éireann with the presence of the invasive species, Giant Hogweed.

All primary settlement tanks, RBC treatment units and final settlement tanks are now installed. The inlet works, storm tank and control building have also been completed.

**Siteworks are ongoing for kerbs, paths and landscaped areas to finalise the project, with a plan to complete the project around the end of 2022.**





## Carrigans Wastewater Treatment Plant (WwTP)

Estimated Completion: End of 2022

Carrigans in Co. Donegal is located a short distance from the River Foyle on the R236, approximately 1.5 km west of the border between the Republic of Ireland and Northern Ireland. The Carrigans WwTP is located to the south of Carrigans village and adjacent to the Carrigans River. The 2016 Census recorded the population for Carrigans as approximately 330.

Works started on the Carrigans Wastewater Treatment Plant in July 2021. Upgrade works at Carrigans involved the abandonment of the existing primary treatment system and the discharge to the adjacent Carrigans River. The old septic tank was decommissioned and refurbished as storm storage and a new pumping station has been constructed at the Carrigans site. A new

pipeline has been constructed using trenchless technology over a distance of 3,400m to transfer the Carrigans load to Uisce Éireann's existing St. Johnston WwTP. Carrigans Pumping Station is now operational with a design capacity of 550 PE.

The new plant was brought into operation in May 2022. In this time, a variety of works have been completed including civil and landscaping works such as ducting, plinths, fencing, kerbing, paths and landscaping.

**The works are now substantially complete and the site is currently in the commissioning phase. All site works are planned to be completed by the end of 2022.**



## OMEATH WASTEWATER UPGRADES

Uisce Éireann has also completed network improvements in Omeath, County Louth as part of the overall portfolio of SWELL upgrades to enhance water quality in Carlingford Lough.

**The Omeath network upgrade was undertaken in advance of Uisce Éireann embarking on a significant project to construct a new state-of-the-art wastewater treatment plant in the village. These Uisce Éireann upgrades, combined with NI Water's extensive wastewater upgrades at Warrenpoint and Newpoint (Newry) will have a positive impact on the water quality in Carlingford Lough.**

**Here, Uisce Éireann gives a brief overview of what's been happening in Omeath.**

Located on the northern side of the Cooley peninsula on Carlingford Lough, Omeath is an established centre for tourism with a significant change in population in high seasons as a result. The shoreline along Carlingford Lough at Omeath is designated as a Special Area of Conservation. Carlingford Lough is a designated shellfish water, as well as a National Heritage Area and Area of Outstanding Natural Beauty.

The existing wastewater collection system in Omeath was first constructed in the 1960s. Since then, the network has been extended to serve several new housing developments. The overall length of the current sewer network is approximately 7.8km - the original scheme was just 2.8km long. The entire collection system flows by gravity and there are no pumping stations on the network. Wastewater is currently discharged untreated to Carlingford Lough from Omeath.

A new wastewater treatment plant is currently being constructed in Omeath by Uisce Éireann, separate to the SWELL project. This new wastewater treatment plant will ensure improved water quality in the receiving waters in compliance with national and EU regulations relating to the treatment of wastewater.

The SWELL project focused on the need to upgrade the sewer network at Omeath to improve how we transport the wastewater to the plant so it can be treated. In order to overcome the current deficiencies, the following works were delivered in Omeath under the SWELL project:

- » Close Circuit TV surveys of 1,400m of the sewer network and internal survey of 60 manholes to determine the extent of the works required.
- » Repair of 1,024m of sewers using ultraviolet cured-in-place pipe (CIPP) relining and repairs to 60 manholes.

### Sewer Relining using CIPP - What is CIPP Relining?

A cured-in-place pipe (CIPP) is a trenchless rehabilitation method used to repair existing system. CIPP is a jointless, seamless, pipe-within-a-pipe with the capability to rehabilitate pipes ranging in diameter from 0.1 to 2.8 m (4-110 inches). As one of the most widely used rehabilitation methods, CIPP has application in water, sewer, gas, and chemical pipelines. This method has led to amazing, cost-effective results with minimum excavations needed.





## INTRODUCING JUDITH MATHER, NEW PM FOR UISCE ÉIREANN SWELL SITES

There is a new face in the Uisce Éireann SWELL team. Judith Mather has recently taken over from colleague Conor Gilleran as the SWELL Project Management Office Specialist within the Asset Management Department.

Judith joins Patrick Carty, the SWELL Infrastructure Specialist, as the second full time role on SWELL for Uisce Éireann.

Here Judith gives us a brief insight into her career to date and what she's looking forward to on the SWELL project.

"Originally from Sunderland, my first visit to the Republic of Ireland was back in 2011 where I worked on the Tellus Border project, this was also an INTERREG-funded project managed by the SEUPB. This regional mapping project, collecting geo-environmental data on soils, water and rocks, saw me get very well acquainted with the six border counties and find a love for the Irish landscape and culture.

Fast-forward to the last seven years where I have been working for Geological Survey Ireland on their national geochemical baseline mapping programme Tellus (a Rof funded follow-on from the initial cross-border Tellus Border project). It is a bit of a change going from geochemical mapping of soil and drainage catchments on a national scale, to a project focused on improving transitional waters at the

border scale – but I am delighted once again to be back in the border region and working with such an established team of experts across all Partners on this exciting and unique project.

Although many of my colleagues have been involved in SWELL for many years now and are fast approaching the final hurdle of completion, I feel very lucky to join the team at this ever-busy time. As an outsider I can see how hard the Uisce Éireann team and all Partners have worked to get this ambitious project over the line, especially with additional challenges like COVID-19 – which no-one could have foreseen in any project plan!

Though the project is starting to wrap up from an infrastructure completion perspective, momentum on the project management and communications side of things only grows. SWELL as a project has forged strong project partnerships, has a wealth of tangible outputs and a huge future legacy ahead of it. Being a part of realising these outputs and communicating these benefits to our Stakeholders is an exciting time to be involved with the project."



Judith Mather, Uisce Éireann,  
SWELL PMO Specialist

UISCE  
ÉIREANN : IRISH  
WATER

### NEW NAME FOR IRISH WATER

On 31 December 2022, the name of the company, Irish Water will change and it will be known in the future, only as Uisce Éireann.

Uisce Éireann becomes the standalone national authority for water services and it is separated from its parent, Ervia.

UISCE  
ÉIREANN : IRISH  
WATER

### LOOKING AHEAD

Uisce Éireann is looking forward to the completion of its SWELL project sites at Killea, Carrigans and Lifford, and being part of the project's legacy in improving water quality in the shared waters of Carlingford Lough and Lough Foyle.

## A WEEK IN THE LIFE OF A SAMPLER

Over the past three years of the SWELL project AFBI has been monitoring the state of the rivers and loughs in the two cross-border catchments of Lough Foyle and Carlingford Lough.

For much of this time AFBI's routine has revolved around alternate weeks of sampling each of the two catchments, sampling Carlingford one week followed by Foyle the next and so on. Here Dr. Hywel Lloyd gives a brief outline of AFBI's Foyle sampling routine.

Preparations for a Foyle week begin mid-way through the week before with weather checks and contact with Loughs Agency staff. The Loughs Agency assist us with sampling, especially in the Foyle catchment. They employ a full-time member of staff on SWELL (Kieran Byrne) who helps with all of our sampling and lab work. In the Foyle catchment the Loughs Agency also provide a team to sample the rivers around Omagh as well as a boat and skipper for the marine work.

Monday will be the Foyle freshwater sampling run. This catchment is huge and we sample 46 different sites, at rivers from Limavady over to beyond Ballybofey, and from Culdaff to South of Omagh, so the only way to cover it all is to split up. Since the COVID lockdowns prevented car sharing for most of us, we now work solo to cover each of four sections of the catchment: the North run from the River Roe near Limavady to Culdaff; the Central run takes in the lower Foyle and its tributaries between Victoria Bridge and Carrigans; the West run samples the Finn and Derg valleys; and the South includes the Drumragh, Camowen and Strule rivers and tributaries around Omagh.

Friday is preparation day.

- » Sample bottles are washed;
- » sterile bottles for micro samples are packed into coolboxes;
- » ice-packs frozen;
- » probes, cameras and GPS are charged and, if necessary, calibrated;
- » sample sheets printed and all organised for the different teams.
- » Kieran will normally take his kit home ready to start directly, but the rest of us leave from the AFBI labs in Newforge.

### DAY 1: FRESHWATER SAMPLING

At 7am on Monday AFBI staff meet at our head office at Newforge (Belfast) to pack the vehicles and then set off. On the West run, the first appointment is in Omagh at 9.15 to meet the local team from the Loughs Agency. They do the South run for us so we meet to hand over the bottles, cool boxes, sensors and sample sheet for the day.

After that it's off to the first sample site: F19, the River Derg about 4 miles East of Castledearg. Here we sample off the bridge and it's an awkward one too. But it's a nice quiet spot so I normally spend a little time here to set up for the day. By now we each have our own small routine but they mostly go along the following lines:

At the first site I will label all of my bottles and get everything organised in the van so it's easily within reach. I'll also record my metadata: additional details such as notes on the weather, probe serial number, and so on.





Then the sample routine:

- » Turn on GPS to start finding signal,
- » Collect water samples. At this site it involves lowering a clean bucket on a rope off the bridge. At the next site I collect it directly from the riverbank.
- » The first litre goes into a sterile micro bottle.
- » The second into the measuring cup for the probe to measure dissolved oxygen, conductivity, temperature and pH. This needs some time to settle so I set it aside and come back to it at the end.
- » In the meantime, the third portion from the bucket fills a 2L bottle for analyses back in the lab.
- » Finally, I take down the readings from the probe, a GPS waypoint and sample photo (these ensure sample traceability for quality assurance), how the sample was collected, and even from which side of the bridge.
- » Samples go in the coolbox, kit stowed, and then I drive to the next site.

The West run continues from here through to the far side of Castlederg and then over to the Finn valley where it winds up through Castlefinn, Ballybofey and out to the two sites furthest west near Cloghan and Commeen. It's beautiful out there so I normally pause for a break.

The West run samples at 10 sites. Once all of these are done, I head back to Omagh to collect the samples and kit from the Loughs Agency team and then the drive back to the lab, covering about 220 miles in all for the day. At the same time, two more AFBI or LA staff employed on the SWELL project will be collecting samples on the North and Central runs..

Unfortunately, that's not the end of the day. We still need to do a little lab work as soon as we arrive back before we can finish.

The first job is to take two matching sub-samples of 200ml of water from each site into clean bottles. One is filtered and the other remains unfiltered. These are for the chemical analyses carried out by the Water Quality Lab (WQL) the next day. Filtering can take a while, especially if it's been raining and the rivers are high. But once this is done, all samples for analysis in Newforge get put in the fridge until the next day.

Finally, usually sometime around 12 hours after starting, the vans are unpacked, sample sheets are scanned, equipment put away or back on to charge and the micro samples taken over to AFBI's Veterinary Services Department (VSD) in Stormont. I will often do this on my way home or Declan will take them early the next morning.

## DAY 2: LAB WORK AND MARINE SAMPLING PREPARATIONS.



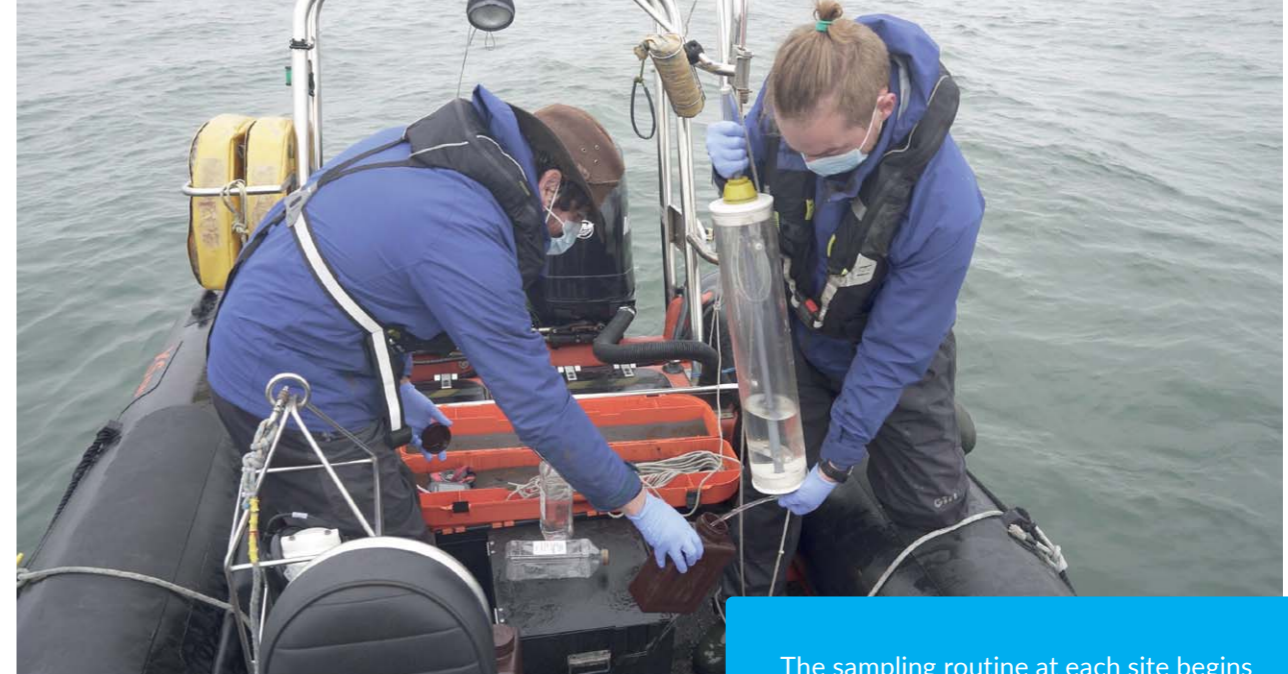
Tuesday's lab work starts with more filtering. We filter sub-samples to extract the constituents we're interested in: chlorophyll content or suspended solids.

Once filtered the chlorophyll analyses can take place straight away or be saved for another day. A full Foyle run will take someone most of a day to complete so we normally freeze the filter papers and keep them for a quieter time.

The suspended solid analysis takes a few days to complete. It starts with weighing ashed filter papers before filtering through the sample. Then once the papers have desiccated in the oven they are re-weighed to get the dry weight and re-weighed once again after all organic matter is burnt off in a furnace.

In the meantime the WQL will use the two 200ml subsamples prepared the day before to analyse the freshwater samples for the level of various nutrients (Nitrogen compounds, Phosphorus compounds, etc).

After that it is back to preparing kit for the next day's marine sampling. Again, we need clean sample bottles, sterile micro bottles, coolboxes and sample sheets. This time we also need our Sea-Bird water profiler, a Kemmerer water sampler and life jackets.



## DAY 3: MARINE SAMPLING

The marine sampling day is another long one, starting at 06:30 or 08:00 in Newforge depending on the tides. Only two samplers are needed and since Kieran joined us from the Loughs Agency he and another (usually Declan) from AFBI carry out the sampling while the others get on with lab and data work.

We have two sites that need sampling from the shore in the tidal transitional waters between Lifford / Strabane and Derry/Londonderry, plus another twelve sites between the Craigavon Bridge and the mouth at Magilligan / Greencastle that we must access by boat. These days, as long as the tides are suitable, Kieran will collect the shore sites while we are driving over from Belfast – it must be an ebb tide for the shore sites so that our samples contain the output from Lifford/Strabane. If not, we'll collect them later, on the way back.

The Loughs Agency have supported the marine sampling on Lough Foyle with a boat and skipper (Tom Sheerin) to collect the offshore sites. We'll usually meet Tom at the Foyle marina at 10:00 to load the boat, kit up and set off by 11:00.

This time we use a CTD profiler (the Sea-Bird) to record the conductivity, salinity and temperature continuously from the surface to the sea- or river-bed, creating a profile of how these abiotic\* conditions change with depth at sea site. At the same time we collect 2L water samples for lab analysis and 1L micro samples just as we did for the freshwater sites. But in the marine sampling we collect two samples per site – top and bottom – from 1m below the surface and 1m above the seabed.

Once all sites are sampled, we head back to the marina to unpack the kit and samples into the van. Then it's time for a break before driving back to the lab.

\* Abiotic refers to the chemical/physical parameters, as opposed to biological ones. They change with depth for many reasons such as river/marine water mixing, light and plankton effects. This is key information for the models.

The sampling routine at each site begins with noting the coordinates and water depth and labelling bottles. Then the tasks naturally divide between the two samplers something a bit like this:

- » Sampler 1 will deploy the Sea-Bird which involves lowering the instrument on a rope steadily down to the seabed. The data is stored internally to download later.
- » Sampler 2 deploys the water sampler. This is essentially a big bottle on a rope with caps at both ends that are held open until closed by the "messenger" – a weight sent down the line by hand when the water sampler reaches the chosen depth (1m above the seabed or 1m below the surface). This seals the bottle and the sample is retrieved.
- » By this time Sampler 1 will have finished collecting the CTD profile and helps fill the bottles.
- » After collecting the CTD profile and filling all bottles we take a sample photograph, pack the samples into coolboxes and record a GPS waypoint. Then we're off to the next site to repeat.

Back at the lab there are a few jobs to do before we can finish, just like with after the freshwater sampling. The first task is to filter and freeze a 20ml sub-sample from each site for nutrient analysis later. The remainder goes into the fridge while the micro samples go to VSD. We have 24 hours to process our samples for some analyses, so we'll usually get them done early the next day if possible (otherwise they get done the same evening). Then we can unpack the kit and finish for the day.





#### DAY 4: LAB WORK #2.

This morning three portions of each marine sample are filtered to measure chlorophyll content, total Carbon and Nitrogen (CNs), and Suspended Particulate Matter (SPMs). This takes a while so it needs to be an early start after the previous long day in the field.

The chlorophyll analysis is a two-day process so the filter papers are often frozen until there is more time in the following Carlingford week. The SPM analysis follows the same pattern as for the freshwater samples, so this will be started now and go on into the following week as well. The CNs are filtered and the papers frozen. Staff in the marine chemistry lab will carry out the CN and nutrient analyses for us.

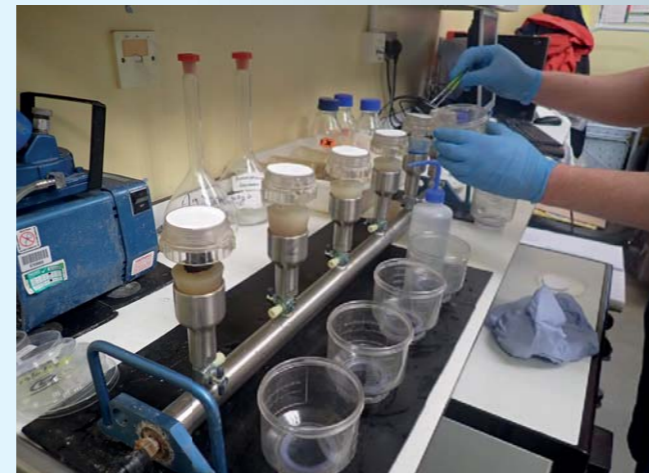
The remainder of this day is normally finishing up a few extra tasks:

- » The previous week's Carlingford samples will be waiting to complete the Suspended Solids analysis.
- » The CTD profile data needs to be downloaded from the Sea-Bird. The salinity data is needed before nutrient analysis can be completed.
- » Field data needs entering into the database for the marine and freshwater samples.
- » Kit and bottles need cleaning and sorting in preparation for the next sample trips.

#### DAY 5: SAMPLE KIT PREPARATION.

Friday is normally kit preparation day again for next week's Carlingford catchment sampling.

Monday will normally be the freshwater sampling (24 sites split between two samplers) and Tuesday for marine sampling (12 sites / 24 samples). This leaves the remainder of the week clear to complete lab processing and tidy up analyses left over from the Foyle week: freshwater and marine chlorophylls, freshwater suspended solids and marine SPMs.



**Thanks to the following staff from AFBI and Loughs Agency (LA) for their work to date on the extensive SWELL sampling programme:**

- » Declan Doyle, Ross Purvis and Sophie Gregson (AFBI)
- » Tom Sheerin (LA skipper for Lough Foyle marine sampling)
- » Eugene O'Kane (AFBI skipper) & David Clarke (LA skipper for Carlingford Lough marine sampling)
- » Kieran Byrne (LA field sampler)
- » Seamus Cullinan & the Loughs Agency Omagh team who collectively helped with the Foyle freshwater and reactive sampling.
- » Hannah Cromie, Mark Whyte, Kirsty Whitehead & John Anderson (AFBI support)

**Our thanks also to all the boat operators and contractors who have been instrumental in carrying out the SWELL sampling programme**

## REAL-TIME WATER QUALITY MONITORING IN THE FOYLE ESTUARY

AFBI has deployed a new water-quality monitoring buoy near St. Johnstown in the upper Foyle estuary to continually monitor the state of these "transitional" waters: the tidal section of the river where fresh and salt waters converge.

As part of the EU-INTERREG funded SWELL project, the Agri-Food and Biosciences Institute (AFBI), with assistance from the Loughs Agency, has recently installed a new water quality monitoring buoy in the upper reaches of the tidal River Foyle. The buoy is equipped to record key water quality indicators, such as dissolved oxygen, chlorophyll content, conductivity and turbidity, as well as mobile networking to transmit the data continuously.

These elements of water quality can indicate aspects of the river's health. For example, low dissolved oxygen is harmful to fish and other aquatic animals; chlorophyll levels can help monitor plankton growth and identify algal blooms; and many pollution events give rise to increased conductivity. In the long term, the data provided by this new buoy will provide insight into the normal daily, tidal and seasonal patterns that affect this dynamic part of the river environment, and hopefully also help us to understand how the river and lough environment may respond to climate change.

Prior to installing the buoy, new riverbed mapping was required to identify a suitable location because this area is prone to shifting sandbanks. Suitable sites should also have expected water conditions representative of this section of river as a whole. Once a location was identified, a mooring setup was designed to (hopefully!) withstand the strong local tidal flows and potential flood conditions, as well as the possibility of being snagged by fallen trees and other objects. Finally, because of the shallow waters found in this part of the river, everything was installed by hand one section at a time from small boats. This water-quality monitoring system is the second buoy to be installed as part of the SWELL project and will be left in place as part of the project's legacy.

Data from the instruments is already being monitored as we move into the cooler and wetter months, when conditions in Northern Ireland tend to be dominated more by freshwater flowing off the land than marine waters brought in with the tide.





# PARTNER PROFILE: LOUGHS AGENCY



## The SWELL project benefits from myriad scientific expertise – not least from our AFBI and Loughs Agency partners.

Here Dr Sarah McLean, Head of Science at Loughs Agency gives us a brief overview of the Agency and its role in the SWELL project.

“Loughs Agency is an agency of the Foyle, Carlingford and Irish Lights Commission (FCILC), established as one of the North South Implementation Bodies under the Good Friday/ Belfast Agreement, constituted under the North South Cooperation (Implementation Bodies) (Northern Ireland) Order 1999 and the British Irish Agreement Acts 1999 and 2002.

Loughs Agency aims to provide sustainable social, economic and environmental benefits through the effective conservation, management, promotion and development of the fisheries and marine resources of the Foyle and Carlingford areas. Loughs Agency’s statutory functions are as follows:

- » Promotion of development of Lough Foyle and Carlingford Lough for commercial and recreational purposes in respect of marine, fishery and aquaculture matters;
- » Management, conservation, protection, improvement and development of the inland fisheries of the Foyle and Carlingford areas;
- » Development and licensing of aquaculture and shellfisheries; and
- » Development of marine tourism.



Dr Sarah McLean, Head of Science, Loughs Agency



Loughs Agency is supporting the Agri-Food and Biosciences Institute (AFBI) in the Shared Waters Enhancement & Loughs Legacy (SWELL) Project and is primarily involved in the delivery of “Catchment Investigation and Modelling”. The Agency is assisting in the delivery of this work by providing field support for surveys in the form of staff, vehicles and vessels to undertake sampling in Marine and Freshwater systems in the Foyle and Carlingford catchments. In addition, Loughs Agency also assists AFBI with laboratory work and sample analysis.

Loughs Agency is delighted to play a part in the SWELL Project and to be able to further support the conservation and protection of the diverse, complex ecosystems of the Foyle and Carlingford catchments which are of international ecological importance.”





# NI WATER MOVES TO COMMISSION PHASE TWO WORKS AT WARRENPOINT

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As previously documented, the biggest portfolio of work carried out under the SWELL project was the NI Water upgrade at Warrenpoint Wastewater Treatment Works which was completed in December 2020.

These extensive SWELL improvements saw the construction of a new inlet works, activated sludge process, attenuation tank and aeration tanks to improve inlet flow management and provide effective use of storm storage facilities during periods of heavy or prolonged rainfall.

Building on the work undertaken through SWELL, NI Water seamlessly commenced a further multi-million-pound programme of work at Warrenpoint to replace the remaining ageing assets on site and provide a third

level of treatment, which incorporates a state-of-the-art UV treatment facility, to ensure the latest NIEA standards could be met.

Testing and commissioning of the second phase of new wastewater assets at Warrenpoint was on programme to be completed at the end of 2022.

Together, the SWELL and NI Water improvements at Warrenpoint WwTW will ensure an enhanced quality of effluent is discharged to Carlingford Lough.



Aerial photo taken April 2019 before SWELL upgrade



Eoin Gilmore, SWELL Programme Lead was delighted to show Sinead McCrory, SEUPB Programme Officer around Warrenpoint WwTW in summer 2022



Aerial photo taken at Warrenpoint WwTW (Nov 2022) shows the phase 1 SWELL upgrade in the foreground along with the new tanks and UV treatment building constructed as part of the subsequent NI Water investment

## MATCH FUNDERS



An Roinn Tíbhíochta,  
Rialtas Aiféil agus Oidhreacht  
Department of Housing,  
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## SWELL PARTNERS

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