

PII

DAERA NIEA - V

NAME REDACTED
ADDRESS REDACTED

DATE OF INCIDENT 23/08/2022

I have read the attached documentation submitted in respect of the above mentioned incident and a summary is file below.

PREVIOUS HISTORY? None

IS THERE CONSENT? N/a

HAS A POLLUTION PREVENTION VISIT BEEN CARRIED OUT AT THIS SITE N/a

This incident is recommended for **PROSECUTION** because of the impact on the waterway.

I can confirm that this recommendation is consistent with the written procedures for field staff.

PID

PID

04/09/2023

Content to pass to APPS. PII

STRUCTURED OUTLINE OF CASE**NOTE: THIS DOCUMENT MAY BE PROVIDED TO DEFENCE**

The purpose of this document is to assist the PPS and the defence by summarising the prosecution case and by listing the evidence which is **currently available**.

Department Reference	PR12/22 WR 4/22/0710
Postcode-Location of Inspection	LOCATION REDACTED

1. DEFENDANT

If multiple defendants, list in terms of role each played in committing the offence eg principal, aider and abettor, assisting offender

Name	Address	DoB	Reported	Previous Offending History (indicate whether or not the defendant has discretions, PND, domestic criminal record, international criminal record)	Particular needs/ vulnerabilities
REDACTED	ADDRESS REDACTED	REDACTED	The Water (NI) Order 1999	None	N/A

2. CASE OUTLINE

This provides the prosecutor with a resume of the case which can be read out in court. Use the names of the witnesses and the defendants throughout. The resume should tell the story of events in chronological order eg

- Date, Time and location of offence
- Background to the offence
- How was the offence committed?
- Injury or loss
- Identification and apprehension of the offender
- Supporting evidence
- State the value of damage property and estimate of repair
- State whether stolen goods were recovered and were fit for re-sale
- Indicate whether this type of offence is prevalent in the specific area or if the offender is prolific as regards this type of offending
- Physical conditions of scene
- Disposition of victim and offender
- Other relevant information including motivation for crime

- ❖ Date: between 23/24 August 2022
- ❖ Charges: Article 7(1)(a) of The Water (NI) Order 1999
- ❖ Impact: Medium Severity Pollution Incident impacting more than 1.5 km of River Lagan
- ❖ Source: Contamination was caused by urea fertiliser entering waterway via storm drainage system
- ❖ Previous: Nothing Previous

On 23 August 2022 a Water Quality Inspector (WQI) acting on behalf of the Northern Ireland Environment Agency (NIEA) examined the River Lagan at Thornyford Bridge, immediately upstream from the bridge, dead trout were observed. In accordance with Fish Kill protocol, fish kill samples were collected by a Higher Scientific Officer employed by the Department.

On 24 August 2022 a Senior Water Quality Inspector (SWQI) inspected the River Lagan at Thornyford Bridge, dead fish were observed in the waterway and further upstream dead fish were lying on the riverbed.

The SWQI located a black plastic pipe discharging brown coloured effluent to the River Lagan (see P4-2). The SWQI was joined by a WQI colleague. The Inspectors found a ditch at the other side of the Lurgan Road which contained a brown coloured liquid with a strong odour which was ponding.

The Inspectors spoke to a gentleman who advised his father owned the lands. At a nearby farm, REDACTED confirmed he owned the land.

REDACTED showed the Inspectors a small waterway which flowed around the edge of the field and entered the ditch where the ponding had been observed earlier. The flow in the waterway did not appear to be clean, REDACTED showed the Inspectors the location where the flow exited the pipe near the dwelling house (see P4-3). The Inspector detected a strong smell of Ammonia from the liquid flowing from the blue pipe. The dwelling house septic tank was examined, a strong ammonia smell was detected from it.

A statutory sample was collected at 16:10 on 24 August 2022 and labelled "Taken from Discharge pipe at REDACTED."

A statutory sample was collected from the black plastic pipe discharging to the River Lagan at 16:55 on 24 August 2022 and labelled "Taken from Discharge pipe to River Lagan upstream of Blackskull Road, Dromore."

An investigatory sample was collected from the ponded ditch approximately 100m below the entrance to the dwelling house.

	Time taken 16:10	Time taken 16:55	Time taken 17:25
pH	9.5	8.8	8.9
BOD	190	339	404
Ammonia	4813	1411	1686
Electrical Conductivity	14300	8200	9530

The material represented by the Samples contained poisonous, noxious or polluting matter which would have been potentially harmful to aquatic life in a receiving waterway.

The numbers of dead fish counted by the Fisheries Officers were passed onto the Deputy Chief Fisheries Officer to calculate the cost for replacement of the fish killed. These calculations are based on the 2021/22 price list for Brown Trout at Movanagher Fish Farm.

Length of Fish	Brown Trout Cost/Age	Actual Count	Count extrapolated for 24 hours post fish kill	Sub total x2 (to account for wild survival rates)
13cm/5 inches	£415 (1+) per 1000	35	35	£29.04
19cm/8 inches	£732 (2+) per 1000	8	8	£11.70
25cm/10 inches	£1,303 (3+) per 1000	329	353	£459.95
				TOTAL £960.64

The total cost for the replacement of the fish killed is £960.64

In view of the seriousness of this incident it is recommended that prosecution proceedings are considered in respect of Article 7(1)(a) of the Water (Northern Ireland) Order 1999 incorporating amendments made by the Water and Sewerage Services (Northern Ireland) Order 2006 for the polluting discharges that were discovered on 23 August 2022 and sampled by Inspectors on 24 August 2022.

3. SUSPECT INTERVIEW - SYNOPSIS

A Synopsis is a brief account of what was said by the defendant in an interview. It should summarise the questions covering the main elements of the offence(s) and the responses given, including 'No Comment' interview.

A Synopsis must include the following:

- Date and Time of interview and Suspect's name
- Admissions, which cover the 'Points to Prove' of the offence, written in direct speech.
- The defendant's version of events. Where this is disputed, specific denials and any explanation for committing the offence(s).
- Anything said by the defendant in relation to aggravating factors: premeditation, admission of prior knowledge of vulnerability of the victim, lack of remorse shown.
- Use the names of the suspects and witnesses throughout (ie do not refer to suspect 1, suspect 2 etc).
- Include suspect's explanations as to how offence occurred, mitigation and remorse.
- Has an alibi been presented? If so, confirm whether verified and whether alibi statements are available.
- Record response to special warning(s).
- Record response to exhibits shown during interview.
- Summarise any pre-pared statement provided by the suspect. Anything said by the defendant in relation to aggravating factors: premeditation, admission of prior knowledge of vulnerability of the victim, lack of remorse shown.
- Use the names of the suspects and witnesses throughout (ie do not refer to suspect 1, suspect 2 etc).
- Include suspect's explanations as to how offence occurred, mitigation and remorse.
- Has an alibi been presented? If so, confirm whether verified and whether alibi statements are available.
- Record response to special warning(s).
- Record response to exhibits shown during interview.
- Summarise any pre-pared statement provided by the suspect.

On 24 October 2022 the Senior Water Quality Inspector wrote to **REDACTED** giving him the opportunity to answer questions under caution.

A reply was received from **REDACTED** dated 24 November 2022 (received in Lisburn on 10 February 2023).

The incident was due to the washing of a tractor mounted field sprayer machine which had been used to spray liquid synthetic urea based fertiliser. On 19 August 2022 instead of the washings being spread onto the grass paddock area, the washings from the machine were sprayed onto a stoned area to the front of the cattle sheds.

NIEA comments - The urea fertiliser entered the waterway via the storm drainage system where it impacted more than 1.5km of the River Lagan, a tributary of Belfast Lough.

This liquid fertiliser had been applied during April, May and June. REDACTED advised that 700 acres are farmed 50% for grazing and 50% for silage.

REDACTED has responsibility for milking 400 cows on his farm.

When notified of the incident, REDACTED organised for the water in the open drain at the bottom of the fields to be sucked out by vacuum tanker and a digger to prevent any further loss to the nearby waterway.

REDACTED has advised that the sprayer will be washed on an area where there is an unroofed slatted tank with the surrounding concrete sloping towards the tank to provide complete containment.

4. WITNESSES

List witness names and a summary of the role/evidence each provides using the following headings and in this order:

- Victim/Injured Party
- Witness
- Police Officer at scene
- Injury/Medical evidence
- Expert evidence – CSI, Forensic, Fingerprint, VIPER, Cell Site, TLU
- Mapping/photography/CCTV officers
- Continuity – exhibits, log keepers, charging officers
- Interviews

Witness Name	Role/Evidence provided
P2	Water Quality Inspector – Lead Investigating Officer
P1	Higher Scientific Officer
P3	Water Quality Inspector
P4	Senior Water Quality Inspector
P6	Laboratory Analyst
P5	Laboratory Analyst
P7	Fisheries Protection Officer
P8	Fisheries Protection Officer
P9	Deputy Chief Fisheries Protection Officer

5. DIGITAL MEDIA – IF N/A TICK HERE ✓

(PHOTOGRAPH / CCTV / VIDEO / MAPPING / 999 CALLS)

- Ensure that one copy of each relevant exhibit is provided to PPS at point of initial share if the evidence is key and confirm that each exhibit can be properly viewed/played.
- List all physical evidence by witness ID mark and ensure that these appear on the NICHE(PSNI Only) case file property tab.

Item Mark	Exhibiting Witness	Description
P2 1	P2	Location Map indicating extent of River Lagan Fish Kill observed on 23/08/2023
P3 1	P3	Map of Area
P3 2	P3	River Lagan at Thornyford Bridge
P3 3	P3	Where Investigative Sample was taken
P3 4	P3	Effluent from Discharge Pipe
P3 5	P3	Discharge Pipe on Farm (Blue in Colour)
P4 1	P4	Dead fish seen below discharge pipe to river Lagan on 24 August 2022
P4 2	P4	Discharge pipe to river Lagan with brown discolouration below it as seen on 24 August 2022
P4 3	P4	Discharge pipe near dwelling house at REDACTED on 24 August 2022. Strong Ammonia odour noted at this location
P4 4	P4	Statutory sample portions left at dwelling house at REDACTED 24 August 2022 in accordance with REDACTED request
P4 5	P4	Postal Caution sent to REDACTED from P4 – NIEA dated 24 October 2022
P4 6	P4	Response to Postal Caution sent to P4 – NIEA from REDACTED
P9 1	P9	An assessment of carcass counting surveys with increasing time lapse following a simulated fish kill on a small upland stream (Kennedy et al, 2017)

6. OFFICERS CERTIFICATION

I certify that to the best of my knowledge and belief I have provided all relevant information, including all information that I believe could assist the defence in the early preparation of their case, including making a bail application.

Name of Investigator:	PIO	Date	04/09/2023
Contact No.:	PIO		
Email Address	PIO		

7. SUPERVISORS CERTIFICATION

I certify this case file has been built to the required standard and contains an accurate summary of the investigation.

Name of Supervisor:	PII		
Contact No.:	PII		
Email Address	PII		

SENIOR OFFICER'S RECOMMENDATION:

I have read the recommendation of the Investigating Officer, above and I agree/ I disagree.

Observations:

Name:

Grade:

Telephone No.:

Mobile No.:

Email:

Fax No.:

Dated

NORTHERN IRELAND ENVIRONMENT AGENCY

Investigation Summary Sheet

Investigating Officer: P4

Grade:SWQI

Incident Ref:WR 4/22/0710

Alleged breach of:Water (Northern Ireland) Order 1999
Water (Northern Ireland) Order 1999

By: REDACTED

DoB / Company No.: REDACTED

Address: REDACTED

Date of first investigation: 23 /August /2022

Time:20.45

Number of alleged offences:1

Date(s) relevant for charges to be brought:24th August 2022

Sample Point E/N(12):315911 354486

Discharge point E/N(12):315911 354486

Waterway affected:River Lagan

Tributary of:Belfast Lough

Nature of contamination:Urea fertiliser entered waterway

Weather conditions at time of investigation:Dry

Entered waterway/underground strata via:Storm drainage system

Incident severity level: Medium
1.5 km +

Observed length of impact on waterway:

Condition of waterway upstream of discharge point:Clean

Sample collected by: P4

Date/Time of sampling: 24 /August /2022

16.10

Date/Time to Laboratory: 24 /August /2022

18.00

Delivered by: P4

Received by: Placed in fridge

Sample served on (Name/Company):REDACTED

Date/Time of serving: 17.35

Date of Caution: 24/ October /2022

Date of Interview: 24/ November /2022

Interviewee: REDACTED

Position: Farm Owner

Signed:
SWQI

P4

Date:05 July 2023

Grade:



Part II: INDEX TO WITNESSES Page 1 of 1
 (form PPS 8 (Departmental))

NIEA Ref: PR12/22

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Statement of Witness

STATEMENT OF: P1

AGE OF WITNESS (IF OVER 21 ENTER "OVER 21"): Over 21

OCCUPATION OF WITNESS: Higher Scientific Officer

ADDRESS: 17 Antrim Road, Lisburn, BT28 3AL

To be completed when the statement has been written

I declare that this statement consisting of 2 page(s), each signed by me is true to the best of my knowledge and belief and I make it knowing that, if it is tendered in evidence at a preliminary enquiry or at the trial of any person, I shall be liable to prosecution if I have wilfully stated in it anything which I know to be false or do not believe to be true

Dated this the 01/08/23

P1

.....
SIGNATURE OF MEMBER by whom
statement was recorded or received

SIGNATURE OF WITNESS

I am P1 a Higher Scientific Officer of the Northern Ireland Environment Agency (NIEA), which is an executive agency of the Department of Agriculture Environment and Rural Affairs. I am a warranted officer under the Water (Northern Ireland) Order 1999. My warrant card number is EMFG 021. For the purposes of this visit I was assisting P2

On the 23rd August 2022 I received a call at 19:27 from the Incident Communication Service of the Environment Agency reporting dead fish in the river Lagan. This was assigned the reference number WR4/22/0710 by me. I phoned the original caller for more details. He reported approximately 200 dead fish in a 50-yard section of the River at Thorneyford Bridge, Lurgan Road, Dromore.

I contacted P2 a Water Quality Inspector to initiate an investigation.

At 19:58 I left home and went to the Northern Ireland Environment Agency (hereafter NIEA) Water Management Unit site 17, Antrim Road, Lisburn BT28 3AL to obtain the fish kill box that was in the on-call officer response vehicle. I confirmed the Fishkill box had two glass stoppered bottles, two "lemonade" bottles and 2 plastic one litre sample bottles before I left for the site of the incident.

STATEMENT CONTINUATION PAGE

STATEMENT OF:

CONTINUATION PAGE NO: 2

I arrived at the site at 20:50. I met with p2 who told me he had been downstream and found no evidence of pollution. The water was very clear. There was no smell and no obvious pollutant. All of the dead fish were lying on the riverbed, which suggested they had been dead for more than 24 hours.

I went to my vehicle to collect the Fishkill box along with my copy of the sampling procedures and proceeded to fill the bottles in accordance with the sampling procedure. All the samples were labelled with the number WR4/21/0710 "Bridge near junction of Blackskull Road and Lurgan Road, Dromore, BT25 1JL." I phoned the on-call duty scientist at 21:04 to notify them that samples would be brought to NIEA Lisburn for analysis.

Then I put all of the samples into the cool box in my vehicle and notified NIEA security staff at the Lisburn site to give them an estimated time of arrival. I left the site at 21:15 and brought the samples directly to NIEA Water Management Unit site 17, Antrim Road, Lisburn BT28 3AL. Sample details were entered into the sample log book and transferred immediately into the sample fridge.

I then left NIEA Water Management Unit site 17, Antrim Road, Lisburn BT28 3AL to go home.

STATEMENT OF WITNESS

STATEMENT OF: P2

AGE OF WITNESS (if over 21 enter "over 21"): **Over 21**

OCCUPATION OF WITNESS: **Water Quality Inspector**

ADDRESS: **Lisburn and Castlereagh City Council, Civic Headquarters, Lagan Valley Island, Lisburn, Co. Antrim, BT27 4RL**

I declare that this statement of 1 page signed by me is true to the best of my knowledge and belief and I make it knowing that, if it is tendered in evidence at a preliminary enquiry or at the trial of any person, I shall be liable to prosecution if I have wilfully stated in it anything which I know to be false or do not believe to be true.

Dated this 18th day of January 2023

SIGNATURE OF WITNESS (BY WHOM
STATEMENT WAS RECORDED OR RECEIVED)

P2

SIGNATURE OF WITNESS

My name is P2. I am an employee of Lisburn and Castlereagh City Council and I carry out duties on behalf of the Water Management Unit of the Northern Ireland Environment Agency, for whom I hold a current valid warrant card – number EMFG 097 issued under the Water (NI) Order 1999. I am an accredited sampler having been trained and audited for sampling procedures by the Department of Agriculture, Environment and Rural Affairs.

At 20:30 on the 23rd August 2022 I inspected the River Lagan at the junction of Dublin Hill Road and Lurgan Road, Dromore (See Exhibit 1 – Location Map).

At 20:45 I observed dead trout in the river immediately upstream of Thornyford Bridge on the Blackskull Road. I walked upstream from the bridge and observed one dead trout approximately 100m upstream of the bridge. I did not observe any dead fish upstream of this point.

I returned to Thornyford Bridge where I observed my colleague P1 lift a set of Fish Kill samples. We rechecked the river upstream at Dublin Hill Road; no dead fish were observed.

P2

SIGNATURE OF WITNESS

STATEMENT OF WITNESS

STATEMENT OF: P3

AGE OF WITNESS (if over 21 enter "over 21"): over 21

OCCUPATION OF WITNESS: WATER QUALITY INSPECTOR

ADDRESS: WATER MANAGEMENT UNIT, 17 ANTRIM ROAD, LISBURN BT28 3AL

TO BE COMPLETED WHEN THE STATEMENT HAS BEEN WRITTEN

I declare that this statement consisting of 2 pages, signed by me, is true to the best of my knowledge and belief and I make it knowing that, if it is tendered in evidence at a preliminary enquiry or at the trial of any person, I shall be liable to prosecution if I have wilfully stated in it anything which I know to be false or do not believe to be true.

Dated this 25th day of January 2023

SIGNATURE OF MEMBER by whom statement was recorded or received

P3 SIGNATURE OF WITNESS

My name is P3. I am an employee of Eastern Group Environmental Health Committee and I have been carrying out duties on behalf of the Water Management Unit of the Northern Ireland Environment Agency since April 1991, for whom I hold a current valid warrant card - number EMFG 102 issued under the Water (NI) Order 1999. I am an accredited sampler having been trained and audited for sampling procedures by the Department of the Environment.

On Wednesday 24th August at approx. 9.10 I inspected the River Lagan at Thornyford Bridge, Blackscull Road Dromore Co. Down The water looked clean but two dead fish were observed in the river at the bridge. See Map Exhibit P3 1. See Photograph Exhibit P3 2. Two dead fish were observed for approximately 100m upstream of the bridge in the River Lagan - no dead fish were observed above this point. I walked and inspected several points upstream, but no dead fish were noted.

I then rang P4 (Senior Water Quality Inspector) he said he would continue the investigation and we arranged to meet up later.

I met up with P4 at approx.14.30. At this time P4 had found a pipe that was discharging pollution into the River Lagan approximately 100m upstream of Thornyford Bridge.

We continued our investigation across the Lurgan Rd and approximately 100m from the entrance to REDACTED we inspected a sheugh/small waterway and observed it to be reddish in colour. See Photograph Exhibit P3 3. The waterway was coming from the direction of REDACTED. This is a farm owned by REDACTED His son arrived and we explained the reason for our visit. We then went up to the farm and met REDACTED and we explained the reason for our visit. After inspecting the ditch/sheugh with REDACTED we observed a pipe on the farm discharging the same type of effluent that was in the ditch/sheugh/waterway. See Photograph Exhibit P3 and 5.

Signature of Witness:

P3

Witness Statement Page 2

At this stage we told **P3** : that we would be taking a statutory sample of the discharge on his farm and the point where the discharge was going into the River Lagan. We give him the opportunity to witness the taking of the samples but he was happy for us to take them without him being there. I witnessed **P4** take a statutory sample of the discharge from the pipe on the farm at 16.10. It was sealed and labelled. I then witnessed **P4** take a statutory sample from the pipe that was discharging into the River Lagan at 16.55. It was sealed and labelled. I then witnessed **P4** take an investigative sample from the ditch/waterway approximately 100m below the entrance to **REDACTED** at 17.25. In the process of our investigation **REDACTED** said that he thought the pipe that the effluent was coming out of was from the septic tank. We looked in the septic tank and it looked similar in colour. The colour would not be the normal colour coming from a septic tank.

Signature of Witness:

P3

STATEMENT OF WITNESS

STATEMENT OF: P4

AGE OF WITNESS (if over 21 enter "over 21"): over 21

OCCUPATION OF WITNESS: SENIOR WATER QUALITY INSPECTOR

ADDRESS: WATER MANAGEMENT UNIT, 17 ANTRIM ROAD, LISBURN BT28 3AL

TO BE COMPLETED WHEN THE STATEMENT HAS BEEN WRITTEN

I declare that this statement consisting of 3 pages, each signed by me, is true to the best of my knowledge and belief and I make it knowing that, if it is tendered in evidence at a preliminary enquiry or at the trial of any person, I shall be liable to prosecution if I have wilfully stated in it anything which I know to be false or do not believe to be true.

Dated this 14TH day of April 2023

SIGNATURE OF MEMBER by whom statement was recorded or received

P4 SIGNATURE OF WITNESS

My name is P4. I am an employee of Lisburn & Castlereagh City Council and I carry out duties on behalf of the Water Management Unit of the Northern Ireland Environment Agency (NIEA), for whom I hold a current valid warrant card. I am an accredited sampler having been trained and audited for sampling procedures by the Department of Agriculture, Environment and Rural Affairs.

On 24th August 2022, I inspected the River Lagan at Thornyford Bridge, Dromore as part of an investigation into a fish kill on the river.

I observed dead fish in the river at this location and proceeded to walk the river upstream of the bridge. As I walked upstream, I continued to see dead fish on the river bed.

Having walked upstream approximately a hundred metres, I observed a live fish in the river ahead of me. I could not see any dead fish on the river bed in this area so I retraced my steps until I saw a dead fish. I closely examined the river banks immediately above this dead fish and was able to located a black plastic pipe discharging a brown effluent on the left hand side of the river looking upstream.

I took photographs of the dead fish in the area below this discharge and the discharge pipe itself which I refer to as Exhibits P4 1 and P4 2 respectively.

I contacted my colleague P3 who joined me on site shortly after this. We identified a ditch on the other side of the Lurgan Road. This ditch was ponded before it passed under the Lurgan Road and contained a brown liquid with a strong odour. This is shown in P3 photograph Exhibit P3 3.

As we were examining this ditch, we were approached by a man who confirmed that the field the ditch ran round was owned by his father and identified premises nearby where we could find him. The course of this ditch and the location of the discharge point to the River Lagan are identified on the map Exhibit P3 1.

SIGNATURE OF WITNESS: P4

We drove up the entrance road to the premises and stopped to speak to a man who I confirmed was the owner of the lands, REDACTED. I explained the situation to him and it was agreed that we would inspect the waterway with him.

We disinfected our boots and REDACTED showed us the small waterway which ran around the edge of his field and ended up at the ponded ditch we had seen earlier. The flow in this small waterway still did not appear clean and REDACTED took us to the point where the flow emerged from a pipe not far from the farm dwelling house. On examination of this pipe, a strong and distinct Ammonia smell was noted. The pipe is shown in photograph Exhibit P4'3.

There were no inspection chambers on this pipe above the outlet point but the dwelling house septic tank was inspected and a similar strong Ammonia smell was noted at the outlet point from it – This odour would not be typical of domestic sewage effluent.

I informed REDACTED, that we would need to take a statutory sample of the discharge to the small waterway and would also be taking a sample from the outlet to the River Lagan. I explained that the results of the analysis of this sample could be admissible as evidence in a court, that he could witness the sample being taken and that he would be able to choose a portion of each statutory sample which he could then have analysed.

He was content that we proceed to collect the samples and requested that we leave a portion of the statutory samples at the rear of the dwelling house as he would be off site for some time.

I then proceeded to collect a statutory sample from the pipe discharging to the small waterway at the location marked as "discharge pipe from farm" on Exhibit P3 1. This was divided into three one litre bottles, each being sealed and labelled as follows: "Taken from Discharge pipe at REDACTED at 16.10 on 24th August 2022 by P4 and witnessed by P3". The sample was noted to be a dark brown colour as can be seen in the photograph taken by P3 Exhibit P3 4.

A second statutory sample was taken from the black plastic pipe discharging to the River Lagan. This was divided into three one litre plastic bottles, each being sealed and labelled as follows: "Taken from Discharge pipe to River Lagan upstream of Blackskull Road, Dromore at 16.55 on 24th August 2022 by P4 and witnessed by P3".

A further investigatory sample was taken in a single plastic bottle from the ponded ditch on the other side of the Lurgan Road and labelled as follows: "Taken from Ditch at side of Lurgan Road near entrance to REDACTED at 17.25 on 24th August 2022 by P4 and witnessed by P3".

I then returned to REDACTED and left a portion of each statutory sample at the rear of the dwelling house as requested by REDACTED as shown in photograph Exhibit P44.

I then delivered the remaining portions of the two statutory samples and the investigatory sample to the NIEA Lisburn Laboratory for analysis and storage, placing them in the designated sample reception fridge at 18.00.

On 25th August, I spoke to REDACTED on the phone to enquire if he had been able to determine the cause of the strong smelling effluent. He said that the fields had been spread with a fertiliser that would explain the Ammonia odour. I advised him to tanker out the brown liquid in the ponded ditch beside the Lurgan Road to reduce any further discharge to the river which he agreed to do.

On 24th October 2022, I wrote to REDACTED formally offering him the opportunity to make a statement regarding the matter. I refer to this letter as Exhibit P45. This letter was sent by recorded mail, tracking number ' REDACTED '.

I subsequently received a response to this letter from REDACTED, which I refer to as Exhibit P46.

SIGNATURE OF WITNESS: _____

P4

STATEMENT OF WITNESS

TI 2200174

STATEMENT OF:

P6

AGE OF WITNESS (if over 21 enter "over 21"):

OVER 21

OCCUPATION OF WITNESS:

SENIOR SCIENTIFIC OFFICER,
INORGANIC CHEMISTRY

ADDRESS:

NORTHERN IRELAND ENVIRONMENT AGENCY,
17 ANTRIM ROAD, TONAGH, LISBURN, BT28 3AL

TO BE COMPLETED
WHEN THE
STATEMENT HAS
BEEN WRITTEN

I declare that this statement consisting of 2 pages, each signed by me is true to the best of my knowledge and belief and I make it knowing that, if it is tendered in evidence at a preliminary enquiry or at the trial of any person, I shall be liable to prosecution if I have wilfully stated in it anything which I know to be false or do not believe to be true.

Dated this 19th day of July 2023

P6

SIGNATURE OF MEMBER by whom
statement was recorded or received.

SIGNATURE OF WITNESS

I am P6. I am a Senior Scientific Officer for Inorganic Chemistry and Trace Metals at the Northern Ireland Environment Agency, where I have worked for 30 years.

On 23/08/2022, P1, on behalf of NIEA, delivered one sample to the laboratory. The sample was labelled as follows:

Sample Id:	WR4/22/0710
Taken from:	Bridge near junction of Blackskull Road and Lurgan Road, Dromore, BT25 1JL.
Taken by:	<u>P1</u>
Date & Time taken:	23/08/2022 at 21:03
Witness:	<u>P2</u>
Visible Oil or Grease:	Nil
Delivered to lab by:	<u>P1</u>

A member of scientific support staff recorded the details onto the Laboratory Information Management System. The system allocated the sample identification number TI 2200174.

STATEMENT CONTINUATION PAGE

TI 2200174

STATEMENT OF:

P6CONTINUATION PAGE NO: 2**EXAMINATION OF SAMPLES**

My examination was conducted with the assistance of scientific support staff. A full record of the work undertaken is contained within the laboratory records made at the time of the examination and those are available for inspection.

Sample storage and analysis were carried out by NIEA staff in compliance with the following methods:

Sampling	In-house method M0106
pH	In-house method M0387
Conductivity	In-house method M0387
Suspended Solids	In-house method M0152
Biochemical Oxygen Demand	In-house method M0145
Chemical Oxygen Demand	In-house method M0411
Total Ammonia	In-house method M0171
Chloride	In-house method M0171

RESULTS

The results of the analysis were as follows:

Test	Sample ID WR4/22/0710	Date of Test
pH	7.3	24/08/2022
Conductivity	387	24/08/2022
Biochemical Oxygen Demand (ATU) 5 Days at 20 °C as O ₂	21	24/08/2022
Total Ammonia as N	0.11	24/08/2022
Chloride as Cl	31	25/08/2022
Suspended Solids	5	24/08/2022
Chemical Oxygen Demand	69	14/09/2022

*Results, except pH and conductivity are expressed in milligrams per litre.
The conductivity is expressed in $\mu\text{S}/\text{cm}$.*

CONCLUSIONS

The results of the analysis indicate that the sample taken from the bridge had a high Biochemical Oxygen Demand at the time of sampling. The material represented by the sample contained poisonous matter which would have been potentially harmful to aquatic life in a receiving waterway.

STATEMENT CONTINUATION PAGE

TI 2200176

STATEMENT OF:

P5

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Sample C Id: WR4/22/0710 (unsealed)
Taken from: Ditch at side of Lurgan Road near entrance to No. 170
Taken by: P4
Witness: P3
Date & Time taken: 24/08/22 at 17:25
Visible Oil/Grease: No

Upon receipt in the laboratory the samples were given the identification number TI 2200176.

EXAMINATION OF SAMPLE

My examination was conducted with the assistance of scientific support staff. A full record of the work undertaken is contained within the laboratory records made at the time of the examination and those are available for inspection.

The analysis was carried out by NIEA staff using the following test methods:-

pH	In-house method M0387
Biochemical Oxygen Demand	In-house method M0145
Suspended Solids	In-house method M0152
Total Ammonia	In-house method M0171
Total Chloride	In-house method M0171
Electrical Conductivity	In-house method M0387
Chemical Oxygen Demand	In-house method M0411

RESULTS

The results of the analysis were as follows:

Test	Sample A Result	Sample B Result	Sample C Result	Test Date
pH	9.2	8.8	8.9	25/08/2022
Biochemical Oxygen Demand (ATU) 5 days at 20°C as O ₂	190	339	404	25/08/2022
Suspended Solids	40	180	201	25/08/2022
Total Ammonia as N	4813	1411	1686	30/08/2022
Chloride as Cl	41	50	41	01/09/2022
Electrical Conductivity (µS/cm)	14300	8200	9530	25/08/2022
Chemical Oxygen Demand	638*	820	958	05/09/2022 20/09/2022*

Results, except pH & Electrical Conductivity, are reported as milligrams per litre.

TI 2200176

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PS

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CONCLUSIONS

The results of the analysis show that Sample A had a high Biochemical and Chemical Oxygen Demand with very high Total Ammonia and elevated Suspended Solids contents. The sample also had an alkaline pH and high Electrical Conductivity.

The results of the analysis show that Sample B had a high Biochemical and Chemical Oxygen Demand with very high Total Ammonia and high Suspended Solids contents. The sample also had an alkaline pH and high Electrical Conductivity.

The results of the analysis show that Sample C had a high Biochemical and Chemical Oxygen Demand with very high Total Ammonia and high Suspended Solids contents. The sample also had an alkaline pH and high Electrical Conductivity.

The material represented by the Samples A, B and C contained poisonous, noxious and polluting matter which would have been potentially harmful to aquatic life in a receiving waterway.



Department of
**Agriculture, Environment
and Rural Affairs**

Statement of Witness

URN:

Statement of:

P7

Occupation: Fisheries Officer

Age of

Over 18

(if over 18 insert 'over 18')

Witness:

I declare that this statement consisting of 1 page, each signed by me is true to the best of my knowledge and belief and I make it knowing that, if it is tendered in evidence at a preliminary enquiry or at the trial of any person, I shall be liable to prosecution if I have wilfully stated in it anything which I know to be false or do not believe to be true.

Signature:

P7

Date: 25th August 2022

I am a Fisheries Officer currently employed by the Department of Agriculture, Environment and Rural Affairs (DAERA) Inland Fisheries. I am warranted under the Fisheries Act (Northern Ireland) 1966 as amended.

On **Wednesday 24th August 2022**, I was tasked to assist in the counting of dead fish, following a suspected pollution incident on the River Lagan, Dromore.

I was accompanied by Fisheries Officer (FO) P8 (FO) P8 counted the fish mortalities in the river and communicated this to me.

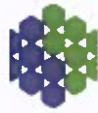
(FO) P8 and I entered River Lagan at position (Google maps) **54.42068N, 6.2700W Bannogue Bridge** and conducted an assessment upstream to position (Google maps) **54.42166N, 6.20976W at Thornyford Bridge**. The water clarity on this section of river was good. We seen dead trout at Bannogue Bridge, the total mortalities recorded at this point are as follows **Brown Trout (2+)-6, Brown Trout (3+)-3** and **460 Stone Loaches**. We then seen live fish 200 yards from this point the whole way up until we got to Thornyford Bridge where we then came across the following mortalities, **Brown Trout (1+)-25, Brown Trout (2+)-8, Brown Trout (3+)-32** and **820 Stone Loaches**. We continued upstream and after 300 yards we could see live fish again in the river.

All information recorded was pass onto P13 and P1 NIEA.

Signature of witness:

P7

Date: 25th August 2022



Department of
**Agriculture, Environment
and Rural Affairs**

Statement of Witness

URN:

Statement of: PS Occupation: **Fisheries Protection Officer**

Age of Witness: Over 18 *(if over 18 insert 'over 18')*

I declare that this statement consisting of 1 page/s, each signed by me is true to the best of my knowledge and belief and I make it knowing that, if it is tendered in evidence at a preliminary enquiry or at the trial of any person, I shall be liable to prosecution if I have wilfully stated in it anything which I know to be false or do not believe to be true.

Signature: PS Date: 25th August 2022

My name is PS and I am employed as a Fisheries Officer for the Department of Agriculture, Environment and Rural Affairs and I hold a valid warrant card issued under the 1966 Fisheries Act (NI) as amended.

On 24th August 2022 I was tasked to the counting of dead fish, following a suspected pollution incident on the River Lagan, Dromore. I was accompanied by Fisheries Officer (FO)

P1

I entered River Lagan at position (Google maps) 54.42068N, 6.2700W Bannogue Bridge and conducted an assessment upstream to position (Google maps) 54.42166N, 6.20976W at Thornyford Bridge. Total total mortalities recorded at this point are as follows:

Brown Trout (1+) = 25.

Brown Trout (2+) = 14.

Brown Trout (3+) = 35.

Stone loache = 1280.

Signature of witness:

PS

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pa

2+ Brown trout were priced using the mean cost for fish between 17cm and 19cm growing stage.

3+ Brown trout were priced using the using the mean cost for fish between 21cm and 25cm stages.

In order to account for the wild survival rates of any fish restocked this figure has then been multiplied by a factor of two.

TROUT PRICE LIST PRICE PER 1,000 FISH (£)

Approx Age Class	Length of Fish	Brown Trout	Approx weight	Mean Cost
0+	Eyed Ova	23.00	N/A	<u>Excluded</u>
0 +Fry	Unfed fry	39.00	0.25g	<u>Excluded</u>
0+ Fry	6 week fed fry	58.00	0.5g	<u>Excluded</u>
0+ Fingerlings	5cm/2 inches	127.00	15g	<u>Excluded</u>
0+ Fingerlings	9cm/3.5 inches	252.00	25g	<u>Excluded</u>
0+ Fingerlings	13cm/5 inches	415.00	40g	<u>415.00</u>
1+ Growers	17cm/7 inches	641.00	80g	
1+ Growers	19cm/8 inches	823.00	100g	<u>732.00</u>
1+ Growers	21cm/8 inches	1003.00	120g	
1+ Takeable	25cm/10 inches	1603.00	250g	<u>1303.00</u>
2+ Takeable	Larger Fish Per Kg	3390.00	500g	<u>Excluded</u>

Extrapolated fish kill count and cost calculation

Age Class	Dead Fish Carcass Count	Dead Fish Carcass Count (Extrapolated for 4hrs post fish kill)	% Carcass Recover y *(after Kenned y et all, 2017)	Costing	Sub Total £	Total
Trout						
1+	25	35	71	415/1000	14.52	X 2 in order to account for wild
2+	8	8	93	732/1000	5.85	
3+	329	353	93	1303/1000	459.95	

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						survival rates
					480.32	£960.64

The extrapolated fish kill count is based on the peer reviewed paper "An assessment of carcass counting surveys with increasing time lapse following a simulated fish kill on a small upland stream" (Kennedy et al, 2017). I have exhibited a copy of this paper as **exhibit AJN1**.

Total cost for the replacement of the fish killed as documented above is nine hundred and sixty pounds and sixty four pence only £960.64.

Restocking costs form the basis for the above calculation of costs. Contemporary scientific evidence highlights potential significant negative genetic effects from the introduction of hatchery reared trout. By application of a precautionary approach and to follow scientific advice, fisheries conservation and protection is best maintained through the preservation of local genetic strains specific to individual river reaches.

River improvements can be conducted through other means including direct fisheries habitat improvement, ensuring no negative genetic impacts occur to local fish stocks.

The above costs represent a minimum estimate of costs when compared with potential costs associated with directly improving fisheries habitats. It is proposed that any compensation is spent on direct replacement stocking or habitat improvement measures.

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