

ENVIRONMENT AGENCY

WATERCOURSE TESTING

ARNOLD'S FIELD, RAINHAM

REPORT + RESULTS

Covering Report

Results – Downstream – October 2024

Results – Upstream – March 2025

Results – Downstream – March 2025

Measurements

ENVIRONMENT AGENCY – WATER SAMPLE TESTING

COMMON WATERCOURSE (ARNOLD'S FIELD)

RODING/INGREBOURNE CATCHMENT AREA

As we are of course all aware, Arnold Field in Launder's Lane has been subject to a number of different activities historically and sits within close proximity to the River Roding.

In order to get a representative sample of the area, in March 2025 upstream and downstream readings were taken of the watercourse by my colleague and I along with samples to be lab tested. This was also compared to downstream samples we had taken in October 2024.

You are already in possession of all sets of results that came back for all samples that have been taken but understandably wanted them interpreted.

Results

- Lab results confirmed that the watercourse (upstream and downstream) is not showing any signs of impact or pollution beyond the expected levels for a watercourse in a highly populated area (London).
- Oxygen readings are over 90%, meaning all expected wildlife is able to be sustained.
- Ammonia levels both NH₃ and NH₄ are all within expected ranges, at the lower end of the spectrum.
- Ph levels are at normal levels, as is salinity.
- There were no specific pollutants identified in any of the samples taken.

Although heavy metals were not tested for in these samples, should they be above normal parameters we would expect to see increased PH levels and a decrease in oxygen levels if contamination was occurring at high levels.

So, from these readings we can determine that there is no evidence of any contamination or leaching coming from the waste deposits at this location at the time and point of the samples being taken.

However, this does not stop contamination or leaching becoming an issue at a later date but taking into consideration the amount of time the waste has been deposited at the site, we would have expected an impact to have already been identified in water quality readings if this was going to occur.

Senior Environment Officer | Environment Management | EPR Waste
Hertfordshire and North London

Environment Agency | Alchemy, Bessemer Road, Welwyn Garden City, AL7 1HE

2 April 2025

MIDAS: Sample Failures Report

Sampling Point Details

Point Code: PRGR9999 RODING / INGREBOURNE CATCHMENT RIVER N.C.R.S
Type: PE POLLUTION/INVESTIGATION POINTS - ENVIRONMENT
Area: J THAMES - HERTS AND NORTH LONDON
Sub Area: O L&W HERTS & NORTH LONDON
Country: England
Political Codes:

Sample Details

Validity: Valid
Status: Arrived
Source: 2 STARCROSS LABORATORY (NLS)
Reference: 729601
Taken: 29-Oct-2024 09:00
Material: 2AZZ RIVER / RUNNING SURFACE WATER
Purpose: UI UNPLANNED REACTIVE MONITORING (POLLUTION INCIDENTS)
Mechanism: S SPOT
Sampler: AC69 [REDACTED]
Received at Lab: 31-Oct-2024 06:37 **Last Updated:** 23-Nov-2024 01:10:07
Analysis Complete: 22-Nov-2024 11:35 **Transfer to Archive:**
Sample Held?
Reason For Change:

Pre-Sampling Details

System Id: 06 **Run Id:** **Project Code:**
Officer: **Run Date:** **Run No:**
PRN: 90287285
ARG Codes:

Comments

Sampler's Comments:
 INVESTIGATION DOWNSTREAM FROM OLD LANDFILL IN ARNOLDS FIELD
Analyst's Comments:
Confirmation Comments:
Sample Address:

Failure Codes:
 MRWL Result Outside Real World Limits.

Ref: 729601

Point Code: PRGR9999

Taken: 29-Oct-2024 09:00

Material: 2AZZ

Measurements

Valid	Status	Det. Code	Det. Name	Meth. Code	Result---Unit	Acr	Failure Codes
F	E	0061	pH	26	17.75PHUNITS	N	MRWL
V	E	0076	Temperature of Water	26	12.3CEL	N	
V	E	0077	Conductivity at 25 C	26	1297uS/cm	N	
V	E	0085	BOD : 5 Day ATU	21	<4mg/l	D	
V	E	0111	Ammoniacal Nitrogen as N	21	0.09mg/l	Y	
V	E	0116	Nitrogen, Total Oxidised as N	21	4.5mg/l	Y	
V	E	0119	Ammonia un-ionised as N	25	N mg/l	N	
V	E	0172	Chloride	21	130mg/l	Y	
V	E	0180	Orthophosphate, reactive as P	21	0.19mg/l	Y	
V	E	0664	Visible oil or grease, significant trace: Present/Not found (1/0)	26	Not found	N	
V	E	3106	GCMS Screen : Semi-Volatile Screen: Semi Quantitative	21	1UNITLESS	Y	

"All results are an approximate concentration. Where accreditation is claimed this is only for the identification of the substance and not the quantified amount." "The following compounds were identified using the NLS Screening database in combination with the National Institute of Standards and Technology Library (NIST) and have a Spectral Fit of >80%" Caprolactam 0.500ug/l Metaldehyde 0.511ug/l Cyclohexanone 0.110ug/l 1,2-Dimethoxyethane 0.174ug/l Tri-(2-chloroethyl) phosphate 0.130ug/l 1,4-Dioxane 0.658ug/l Butabarbital 0.416ug/l Tributyl phosphate 0.040ug/l 2,4,7,9-Tetramethyl-5-decyne-4,7-diol 0.439ug/l Pyrene 0.020ug/l N,N-Diethyl-m-toluamide 0.314ug/l Benzenesulfonamide, N-butyl 1.8ug/l Caffeine 0.103ug/l Bromoform 0.011ug/l Pentobarbital 1.7ug/l Trichloroethylene 0.192ug/l Triphenylphosphine oxide 0.083ug/l Bisphenol A 0.162ug/l Diflufenican 0.024ug/l Pentachlorophenol 0.449ug/l Terbutryne 0.018ug/l 2(3H)-Benzothiazolone 0.600ug/l Isopropylbenzene 0.005ug/l "The following compounds were identified using the NLS Screening database in combination with the National Institute of Standards and Technology Library (NIST) and have a Spectral Fit of <80%" Pentanamide 0.284ug/l Benzenesulfonamide, 4-methyl- 1.2ug/l 9,10-Anthraquinone 0.003ug/l "The following compounds were identified using the National Institute of Standards and Technology Library (NIST) and have a Spectral Fit of >80%" Benzaldehyde 0.017ug/l 5-Heptenal, 2,6-dimethyl- 0.033ug/l 1,3,5-Trioxane 0.019ug/l 2-Propanol, 1-(2-methoxypropoxy)- 0.047ug/l 2-Propanol, 1-chloro-, phosphate (3:1) 2.0ug/l Bis(1-chloro-2-propyl)(3-chloro-1-propyl)phosphate 0.421ug/l .beta.-Ocimene 0.029ug/l Pentanoic acid, 5-hydroxy-, 2,4-di-t-butylphenyl esters 0.124ug/l 1,3,5,7-Tetroxane 0.132ug/l N-Cyclohexyl-N'-methylurea, N'-methyl 0.501ug/l Cyclohexane, isocyanato- 0.041ug/l Cyclopropane, 1,1,2-trimethyl- 0.032ug/l Benzoic acid, 2,4,6-trimethyl- 0.021ug/l Triisopropylphosphate 1.5ug/l 1-Propanol, 2-(2-methoxy-1-methylethoxy)- 0.072ug/l Octadecanoic acid 0.410ug/l Amobarbital 0.293ug/l 2,2,4-Trimethyl-1,3-pentanediol diisobutyrate 0.043ug/l Secobarbital 0.111ug/l Butethal 0.140ug/l Triethyl phosphate 0.156ug/l Benzenesulfonamide, 2-methyl- 0.050ug/l "The following compounds were identified using the National Institute of Standards and Technology Library (NIST) and have a Spectral Fit of <80%" 3H-pyrazol-3-one, 5-(4-aminophenyl)-2,4-dihydro-2-phenyl- 0.255ug/l Diisobutyl cellosolve 0.064ug/l Butanoic acid 0.035ug/l Benzenesulfonamide, N-ethyl-2-methyl- 0.021ug/l Pentanoic acid 0.021ug/l Benzaldehyde, 4-(diethylamino)- 0.044ug/l Bis(3-chloro-1-propyl)(1-chloro-2-propyl)phosphate 0.029ug/l 1H-Pyrazolo[3,4-d]pyrimidin-4-amine 0.024ug/l 1,3-Dicyclohexylurea 0.027ug/l Iodobenzene diacetate 0.071ug/l 2,5-Dimethoxy-4-methylbenzonnitrile 0.044ug/l Tripropyl phosphate 0.028ug/l Octan-2-yl palmitate 0.032ug/l 3-Hexanol, 4-methyl- 0.090ug/l Acetamide, N-2-propenyl- 0.139ug/l Propanoic acid, 2-methyl-, 2-ethyl-3-hydroxyhexyl ester 0.017ug/l

V	E	6396	Turbidity	21	6.8NTU	Y	
V	E	7434	National Grid Reference : Whole : Field report TQ5392181890	26	1UNITLESS	N	
V	E	7608	Salinity : In Situ	26	0.65ppt	N	
V	E	9901	Oxygen, Dissolved, % Saturation	26	62.6%	N	

Failure Codes

MRWL Result Outside Real World Limits.

MIDAS: Sample Details Report

Sampling Point Details

Point Code: PRGR9999 RODING / INGREBOURNE CATCHMENT RIVER N.C.R.S
Type: PE POLLUTION/INVESTIGATION POINTS - ENVIRONMENT
Area: J THAMES - HERTS AND NORTH LONDON
Sub Area: O L&W HERTS & NORTH LONDON
Country: England
Political Codes:

Sample Details

Status: Arrived
Source: 2 STARCROSS LABORATORY (NLS)
Reference: 909102
Taken: 07-Mar-2025 14:09
Material: 2AZZ RIVER / RUNNING SURFACE WATER
Purpose: UI UNPLANNED REACTIVE MONITORING (POLLUTION INCIDENTS)
Mechanism: S SPOT
Sampler: AC69 [REDACTED]
Received at Lab: 11-Mar-2025 07:26 **Last Updated:** 12-Mar-2025 01:10:06
Analysis Complete: **Transfer to Archive:**
Sample Held? No
Reason For Change:

Pre-Sampling Details

System Id: 06 **Run Id:** **Project Code:**
Officer: **Run Date:** **Run No:**
PRN: 90287339
ARG Codes:

Comments

Sampler's Comments:
INVESTIGATION UPSTREAM FROM OLD LANDFILL IN ARNOLDS FIELD
Analyst's Comments:
Confirmation Comments:
Sample Address:

Ref: 909102 **Smpt Code:** PRGR9999 **Taken:** 07-Mar-2025 14:09 **Material:** 2AZZ

Measurements

Status	Det. Code	Det. Name	Meth. Code	---Result---	Unit	Acr	Perm	PoI	Stats	Usr	IDV
E	0061	pH	26	8.04	PHUNITS	N	U	U	U	U	U
E	0076	Temperature of Water	26	8.4	CEL	N	U	U	U	U	U
E	0077	Conductivity at 25 C	26	1419	uS/cm	N	U	U	U	U	U
A	0085	BOD : 5 Day ATU	21		mg/l	D					
E	0111	Ammoniacal Nitrogen as N	21	0.068	mg/l	D	U	U	U	U	U
E	0116	Nitrogen, Total Oxidised as N	21	7.5	mg/l	D	U	U	U	U	U
E	0119	Ammonia un-ionised as N	25	0.0011	mg/l	N	U	U	U	U	U
E	0172	Chloride	21	160	mg/l	D	U	U	U	U	U
E	0180	Orthophosphate, reactive as P	21	0.034	mg/l	D	U	U	U	U	U
E	0664	Visible oil or grease, significant trace: Present/Not found (1/0)	26	Not found		N	U	U	U	U	U
A	3106	GCMS Screen : Semi-Volatile Screen: Semi Quantitative	21		UNITLESS	Y					
A	6396	Turbidity	21		NTU	Y					
E	7434	National Grid Reference : Whole : Field report TQ5452382315	26	1	UNITLESS	N	U	U	U	U	U
E	7608	Salinity : In Situ	26	0.71	ppt	N	U	U	U	U	U
E	9901	Oxygen, Dissolved, % Saturation	26	93.5	%	N	U	U	U	U	U

MIDAS: Sample Details Report

Sampling Point Details

Point Code: PRGR9999 RODING / INGREBOURNE CATCHMENT RIVER N.C.R.S
Type: PE POLLUTION/INVESTIGATION POINTS - ENVIRONMENT
Area: J THAMES - HERTS AND NORTH LONDON
Sub Area: O L&W HERTS & NORTH LONDON
Country: England
Political Codes:

Sample Details

Status: Arrived
Source: 2 STARCROSS LABORATORY (NLS)
Reference: 909101
Taken: 07-Mar-2025 13:50
Material: 2AZZ RIVER / RUNNING SURFACE WATER
Purpose: UI UNPLANNED REACTIVE MONITORING (POLLUTION INCIDENTS)
Mechanism: S SPOT
Sampler: AC69 [REDACTED]
Received at Lab: 11-Mar-2025 07:26 **Last Updated:** 12-Mar-2025 01:10:06
Analysis Complete: **Transfer to Archive:**
Sample Held? No
Reason For Change:

Pre-Sampling Details

System Id: 06 **Run Id:** **Project Code:**
Officer: **Run Date:** **Run No:**
PRN: 90287337
ARG Codes:

Comments

Sampler's Comments:
INVESTIGATION DOWNSTREAM FROM OLD LANDFILL IN ARNOLDS FIELD
Analyst's Comments:
Confirmation Comments:
Sample Address:

Ref: **909101** Smpt Code: PRGR9999 Taken: 07-Mar-2025 13:50 Material: 2AZZ

Measurements

Status	Det. Code	Det. Name	Meth. Code	---Result---	Unit	Acr	Perm	Pol	Stats	Usr	IDV
E	0061	pH	26	7.79	PHUNITS	N	U	U	U	U	U
E	0076	Temperature of Water	26	8.05	CEL	N	U	U	U	U	U
E	0077	Conductivity at 25 C	26	1354	uS/cm	N	U	U	U	U	U
A	0085	BOD : 5 Day ATU	21		mg/l	D					
E	0111	Ammoniacal Nitrogen as N	21	0.049	mg/l	D	U	U	U	U	U
E	0116	Nitrogen, Total Oxidised as N	21	7.6	mg/l	D	U	U	U	U	U
E	0119	Ammonia un-ionised as N	25	0.00048	mg/l	N	U	U	U	U	U
E	0172	Chloride	21	140	mg/l	D	U	U	U	U	U
E	0180	Orthophosphate, reactive as P	21	0.058	mg/l	D	U	U	U	U	U
E	0664	Visible oil or grease, significant trace: Present/Not found (1/0)	26	Not found		N	U	U	U	U	U
A	3106	GCMS Screen : Semi-Volatile Screen: Semi Quantitative	21		UNITLESS	Y					
A	6396	Turbidity	21		NTU	Y					
E	7434	National Grid Reference : Whole : Field report TQ5392181893	26	1	UNITLESS	N	U	U	U	U	U
E	7608	Salinity : In Situ	26	0.68	ppt	N	U	U	U	U	U
E	9901	Oxygen, Dissolved, % Saturation	26	96.8	%	N	U	U	U	U	U

Measurement Text Result:

"All results are an approximate concentration. Where accreditation is claimed this is only for the identification of the substance and not the quantified amount."

"The following compounds were identified using the NLS Screening database in combination with the National Institute of Standards and Technology Library (NIST) and have a Spectral Fit of >80%"

Caprolactam 0.500ug/l
Metaldehyde 0.511ug/l
Cyclohexanone 0.110ug/l
1,2-Dimethoxyethane 0.174ug/l
Tri-(2-chloroethyl) phosphate 0.130ug/l
1,4-Dioxane 0.658ug/l
Butabarbital 0.416ug/l
Tributyl phosphate 0.040ug/l
2,4,7,9-Tetramethyl-5-decyne-4,7-diol 0.439ug/l
Pyrene 0.020ug/l
N,N-Diethyl-m-toluamide 0.314ug/l
Benzenesulfonamide, N-butyl 1.8ug/l
Caffeine 0.103ug/l
Bromoform 0.011ug/l
Pentobarbital 1.7ug/l
Trichloroethylene 0.192ug/l
Triphenylphosphine oxide 0.083ug/l
Bisphenol A 0.162ug/l
Diflufenican 0.024ug/l
Pentachlorophenol 0.449ug/l
Terbutryne 0.018ug/l

Measurement Text Result:

2(3H)-Benzothiazolone 0.600ug/l
Isopropylbenzene 0.005ug/l

"The following compounds were identified using the NLS Screening database in combination with the National Institute of Standards and Technology Library (NIST) and have a Spectral Fit of <80%"

Pentanamide 0.284ug/l
Benzenesulfonamide, 4-methyl- 1.2ug/l
9,10-Anthraquinone 0.003ug/l

"The following compounds were identified using the National Institute of Standards and Technology Library (NIST) and have a Spectral Fit of >80%"

Benzaldehyde 0.017ug/l
5-Heptenal, 2,6-dimethyl- 0.033ug/l
1,3,5-Trioxane 0.019ug/l
2-Propanol, 1-(2-methoxypropoxy)- 0.047ug/l
2-Propanol, 1-chloro-, phosphate (3:1) 2.0ug/l
Bis(1-chloro-2-propyl)(3-chloro-1-propyl)phosphate 0.421ug/l
.beta.-Ocimene 0.029ug/l
Pentanoic acid, 5-hydroxy-, 2,4-di-*i*-butylphenyl esters 0.124ug/l
1,3,5,7-Tetroxane 0.132ug/l
N-Cyclohexyl-N'-methylurea, N'-methyl 0.501ug/l
Cyclohexane, isocyanato- 0.041ug/l
Cyclopropane, 1,1,2-trimethyl- 0.032ug/l
Benzoic acid, 2,4,6-trimethyl- 0.021ug/l
Triisopropylphosphate 1.5ug/l

Measurement Text Result:

1-Propanol, 2-(2-methoxy-1-methylethoxy)- 0.072ug/l
Octadecanoic acid 0.410ug/l
Amobarbital 0.293ug/l
2,2,4-Trimethyl-1,3-pentanediol diisobutyrate 0.043ug/l
Secobarbital 0.111ug/l
Butethal 0.140ug/l
Triethyl phosphate 0.156ug/l
Benzenesulfonamide, 2-methyl- 0.050ug/l

"The following compounds were identified using the National Institute of Standards and Technology Library (NIST) and have a Spectral Fit of <80%"

3H-pyrazol-3-one, 5-(4-aminophenyl)-2,4-dihydro-2-phenyl- 0.255ug/l
Diisobutyl cellosolve 0.064ug/l
Butanoic acid 0.035ug/l
Benzenesulfonamide, N-ethyl-2-methyl- 0.021ug/l
Pentanoic acid 0.021ug/l
Benzaldehyde, 4-(diethylamino)- 0.044ug/l
Bis(3-chloro-1-propyl)(1-chloro-2-propyl)phosphate 0.029ug/l
1H-Pyrazolo[3,4-d]pyrimidin-4-amine 0.024ug/l
1,3-Dicyclohexylurea 0.027ug/l
Iodobenzene diacetate 0.071ug/l
2,5-Dimethoxy-4-methylbenzonitrile 0.044ug/l
Tripropyl phosphate 0.028ug/l
Octan-2-yl palmitate 0.032ug/l
3-Hexanol, 4-methyl- 0.090ug/l

Acetamide, N-2-propenyl- 0.139ug/l
Propanoic acid, 2-methyl-, 2-ethyl-3-hydroxyhexyl ester 0.017ug/l