Wensum Catchment Partnership

The Wensum Catchment Partnership formed in 2019 aims to improve the health of the Wensum catchment through monitoring water quality, availability and ecological data to provide evidence to decide how and where to prioritize catchment-scale restoration and other interventions.

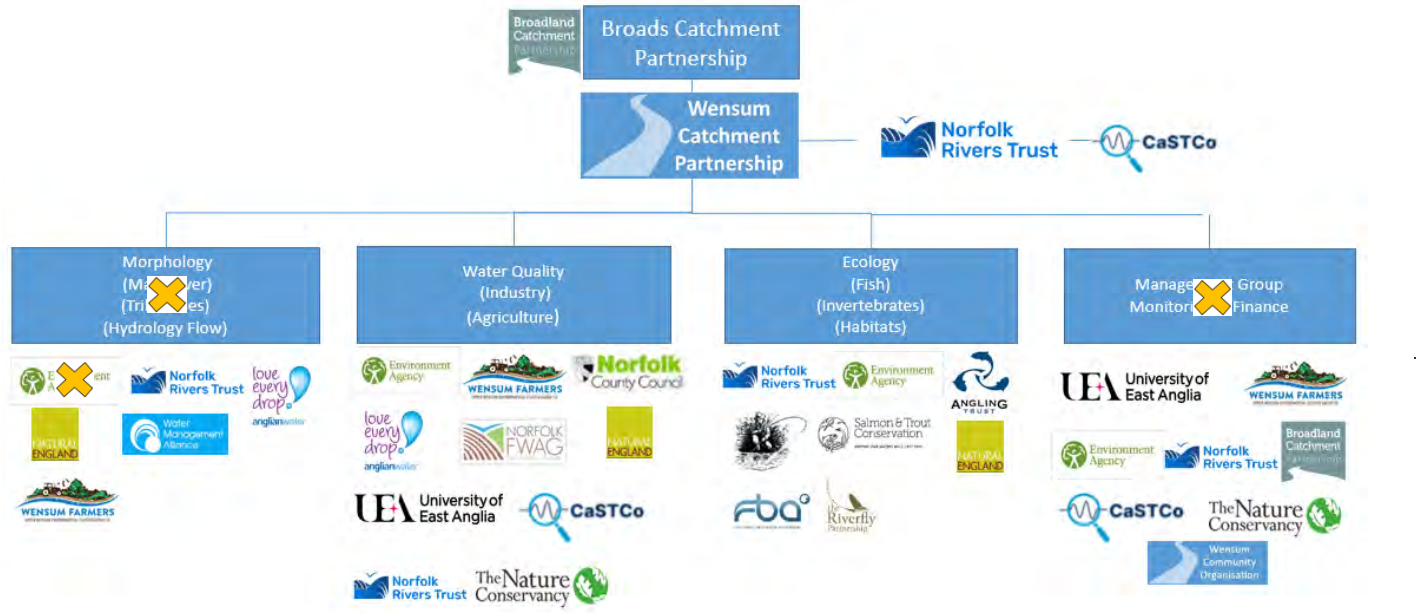
This past year has seen some challenges in resources, with the loss of Sarah Gelpke our project officer and on budget constraints within the Environment Agency, limiting their support for the Wensum.
We have also recently been informed that our Natural England officer is moving on, but a replacement has been secured. Our Chairman has also had his own health challenges, so things haven't progressed in establishing a more joined up and coordinated approach, with organisations working in partnership.
Our current structure and membership can be seen below, with the current challenges highlighted by ✖
We are keen for new members and groups to get in contact if interested in taking part in this worthwhile work. Headlines in this edition:

ECOLOGY
Defining its Status
Macrophyte Revisited
Fishery Recovery Plan
What's in our River
What's that Plant?
Riverfly

WATER QUALITY
Defining its sources
Volunteer Outcomes
Nutrient Neutrality
AWS on the Wensum
Nutrient Apportionment

MORPHOLOGY
River, Flow & Restoration
Winter flows of 2023/24

ORGANISATION
Making it Happen
Strategic Management
Our Structure & People
Keeping You Informed



Working in partnership across the catchment

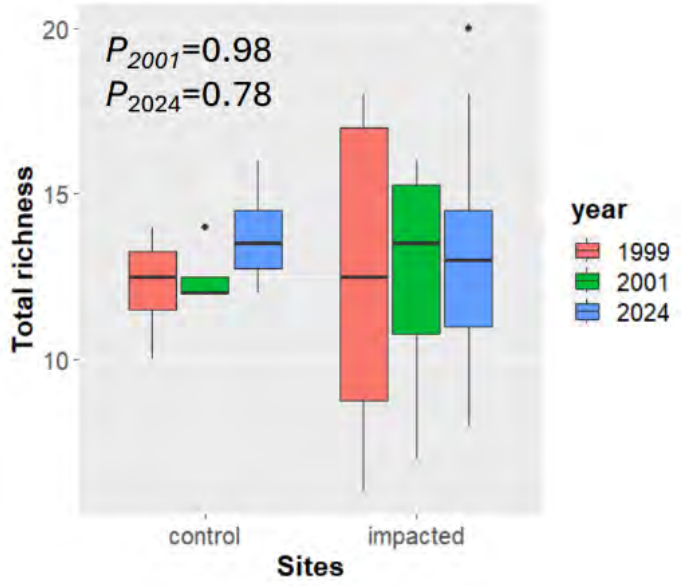
WENSUM MACROPHYTE SURVEY REVISTED

Benoît O.L. Demars & David Harper look again at aquatic life in the Wensum

Benoît did a PhD on the Wensum macrophytes in 1999, supervised by Prof David Harper from the University of Leicester, to try to quantify the effect of removing phosphate from the sewage treatment works (STWs) at Dereham and Fakenham. He came back this July to measure the change after 25 years. As the role of N and P on aquatic plant communities was not known and needed to test how plant communities respond to N or P at catchment scale and term effects of P stripping. He came back this July to measure the change after 25 years, kindly funded by the Broads Catchment Partnership

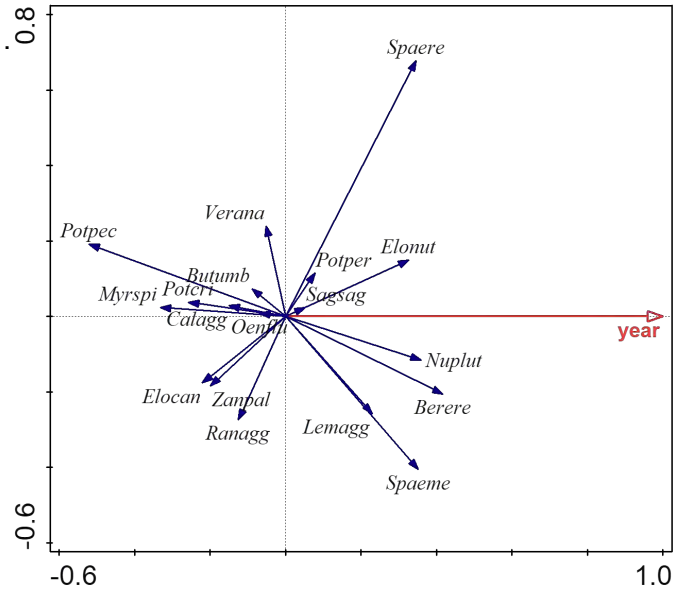
PhD - Method: Survey sites before (1999) and after (2001) P stripping at STWs in the Wensum catchment. Choosing sites upstream and downstream of STWs and undertaking plant surveys within short reaches of (50-100 m) using snorkeling gear. Submerged plants hydrophyte and helophyte would be recorded using the standard MTR (LEAFPACS) techniques.

This process was duly repeated in July 2024 at 17 locations within the Wensum.
Image left: Dr Benoît Demars about to undertake a survey in 2024. Below is a summary plot of the analysis between 1999 - 2001 & 2024



In 2021, hydrophyte and helophyte plant richness were higher (P=0.03) and lower (P=0.04) than 1999, respectively. In 2024, helophyte richness was higher (P=0.01) than in 1999 – possibly due to very high-water level. However, some detectable changes in species composition is seen over the years. Using RDA Redundancy Analysis, based on 16 sites surveyed in 1999, 2001 and 2024. There are at least 18 species present in three samples.

Redundancy analysis Plot (RDA) Effect of year: P<0.001



Species not recorded 25 years after initial survey

Alisma plantago-aquatica (common water-plantain) Caltha palustris* (marsh marigold) Ceratophyllum demersum (Rigid hornwort) Glyceria fluitans (floating sweet grass) Groenlandia densa (opposite-leaved pondweed) Potamogeton pusillus (lesser pondweed) Ranunculus circinatus (Fan-leaved water-crowfoot) Ranunculus repens* (creeping buttercup) Veronica beccabunga/catenata* (Brooklime/Pink Water-speedwell

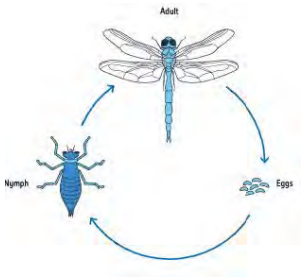
However, 9 new species including some non-native taxa have replaced these, creating some detectable changes in species composition over the years.

The loss of some native species and increased numbers of non-native species is of concern.

WHAT'S THAT IN OUR RIVER

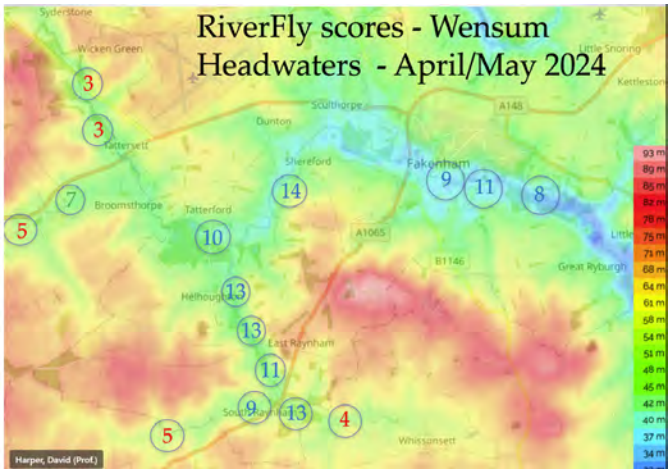
Using Invertebrates to inform on river health - River fly

Most UK rivers now have some form of invertebrate assessment through a sampling, method called Riverfly. Riverfly uses a scoring metric to rank the health of a river in terms of invertebrates. This is known as the Anglers Riverfly Monitoring Initiative (ARMI) and all results are uploaded into its database.



We have now established a total of 21 sites to undertake kick sampling and produce an ARMI score. This year we have completed 72 samples, which doubled last years effort.

The lowest ARMI scores all appear in the upper headwaters, which remain impacted by low flows, abstraction and poor riparian habitat.



If you are interested to explore this interesting aspect of nature, please contact Chis Bone or Dennis Willis.

chrisbone360@hotmail.com
den207willis@dsl.pipex.com

WENSUM FISHERY RECOVERYPLAN

Taking informed actions to sustain healthy roach densities

The Ecology group has long discussed issues relating to roach stocks in the Wensum. We have agreed a plan (below) that has several milestones to ensure any future stocks can sustain themselves. The current density for roach following the EA electro fishing survey last Sept showed an average of 1.4 roach per 100m2. Well below the national average, with one of the lowest reaches been between Swanton Morley falls and North Elmham.

- ✓ Define the area of focus
- ✓ Define current fish density
- ✓ Understand the current fish health concerns
- ✓ Review EA Labs findings
- ✓ PhD Analysis of chemical impacts
- ✓ Statutory bodies policy on stocking
- o Scope future Scientific Studies
- o WACA Roach Spawning report from 2023
- o Define the cause of these concerns
- o Understand pathology variances
- o What needs to be done to enable this?
- o Define and improve the habitat
- o Reach agreement with Landowners
- o Define monitoring plan
- o Reach agreement on stocking protocol

EA completed 21 Electro Fishing Surveys undertaken last summer 2024. The mean density for roach showed an average of 1.4 roach per 100m2, which is well below the national average. One of the lowest density reaches was found between Swanton Morley Falls and North Elmham. The best results were found downstream of Porters Bridge Lenwade on 14th August as shown below

Species	Run 1	Run 2	Run 3	Total	Area m^2	Mean Density Per $100m^2$
Chub	87	39	18	144	800	18
Minnow	31	18	11	60	800	7.5
Roach	27	8	8	43	800	5.375
Dace	25	9	6	40	800	5
Gudgeon	17	6	1	24	800	3
Perch	9	3	2	14	800	1.75
Bullhead	5	1	0	6	800	0.75
Pike	2	1	1	4	800	0.5
Bream	1	4	3	8	800	1
Tench	1	0	0	1	800	0.125
Eel	1	0	0	1	800	0.125
Barbel	1	0	0	1	800	0.125
Total	207	89	50	346	800	43.25

WHAT'S THAT PLANT?

Managing Himalayan Balsam in the Wensum

The Project

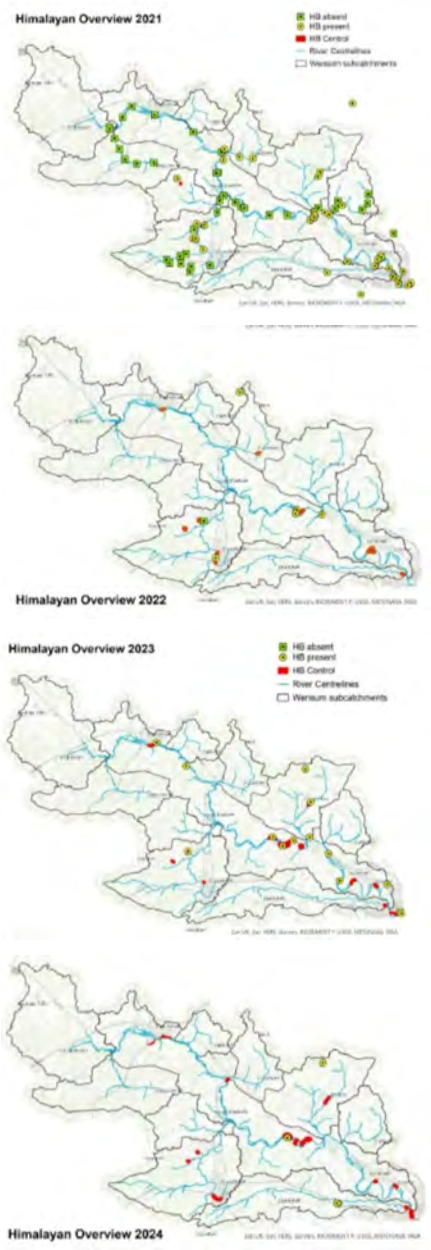
Since 2020 Norfolk Non-Native Species Initiative and Norfolk Rivers Trust have been working on a project to control Himalayan Balsam in the River Wensum catchment. This was initially a 5 year project, funded by Anglian water and relying heavily on the input of volunteers.

The Results

Over the course of the project a total of 514 volunteers helped to record and remove Himalayan balsam and contributed a whopping 3,768 hours to doing so. 62 balsam control sessions were carried out over the 5 years, where balsam was tackled over 71,374 m². To help decide where to carry out control of balsam, a free and easy to use app was developed to allow members of the public to submit their balsam sightings. With this data, we targeted the most upstream locations for Himalayan balsam in each of the rivers upstream tributaries, whilst also visiting some areas downstream where Himalayan balsam was rife, and where new volunteers could hopefully be recruited and become involved in the project

As Himalayan balsam seeds can survive in the soil for 3 years (and potentially longer than that), balsam control sessions need to be repeated at each site for multiple years. We are now seeing early signs of success at some of the sites where we have visited for 3 consecutive years, such as around Fakenham where in 2022 3 days of balsam control was needed along a short stretch of the riverbank, whilst in 2024 only 1 plant was found in the balsam removal area.

Above a typical image above of this vigorous plant. The maps top right shows the progress over the past 4 years.



The Future

The Himalayan project is likely to be extended for a further 5 years where the previous control work can be extended. As sites become clear of the plant, our dedicated volunteers are going to move gradually downstream as we work towards eradicating this plant from the Wensum catchment. We are always looking for extra help, whether that is recording the plants, promoting the project or helping out on the ground. As with all invasive species control, this project is ambitious but we are moving in the right direction and the battle against the balsam isn't over yet.

For more information please contact Liam Smith on liam.smith2@norfolk.gov.uk

WATER QUALITY VOLUNTEERS

Citizen Scientists actively monitoring the Wensum

We have been working hard on delivering a visual form of data visualisation tools that meets the needs of all.

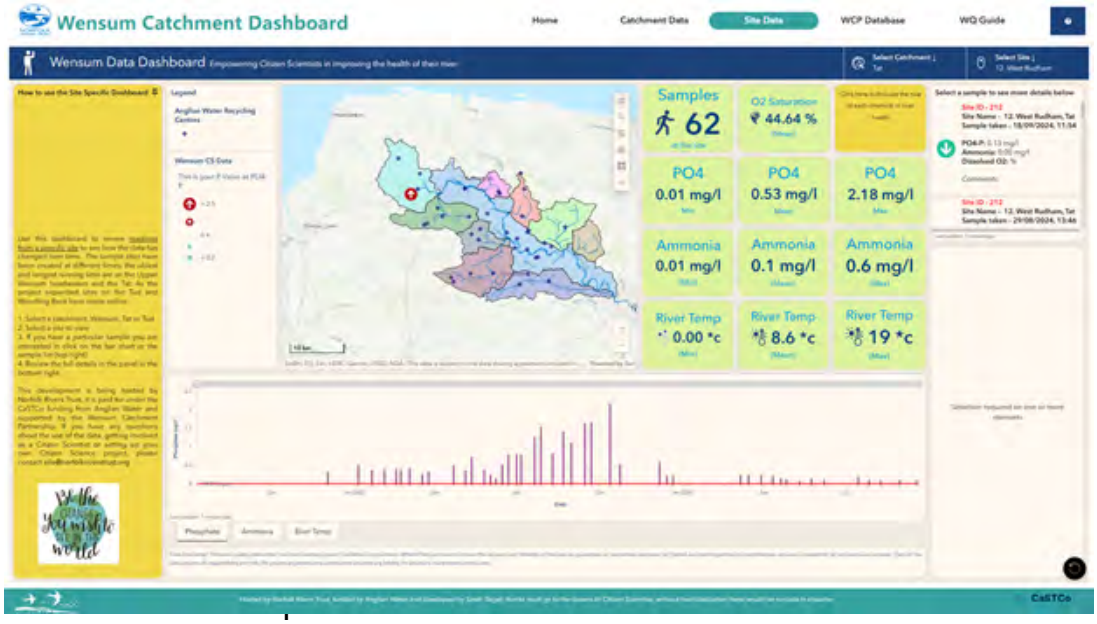
A prototype of the Wensum dashboard designed by Norfolk Rivers Trust to visualise the data collected by Citizen Scientists has been running for three months and feedback from the catchment partnership has been overwhelmingly positive. The prototype dashboard has two views, one which captures the trends on a site basis and another which allows direct comparison both between sites at a sub catchment scale and against national datasets such as EA Monitoring Points and SAGIS. Citizen Scientists have also had the opportunity to view the dashboard at the CaSTCo Winter gathering and over the course of several online sessions planned for the New Year will be able to contribute feedback on the functionality of the platform.
After the Citizen Scientists have had this opportunity the dashboard will then undergo a redevelopment phase. Greater integration with catchment scale datasets is needed and other contextual information and resources will be written for WCP stakeholders and CaSTCo WQ volunteers.
The new public facing dashboard is planned for release before March 2025.

So, what else have we delivered to date?

Several defined pollution breaches have been reported as incidents to the EA using our Pollution Reporting framework, with some resultant resolutions found and rectified. As a result, the EA have been able to follow up with actions that have demonstrably improved the health of the river.

This is a ground breaking achievement at a time when the EA nationally stated it could no longer attend low priority pollution events, recorded as Priority Category 3-4. We are now seeking to extend this successful approach and are engaging with Anglian Water catchment partners, so they can respond to low levels of pollution coming from their assets and better assess and respond to confirmed signs of pollution that are identified by our citizen scientists.

Citizen Scientists go walking by the river.



Get in Touch:
Project Delivery – Steve Lane:
Steve.Lane@theriverstrust.org

Volunteer Coordinator - Elle Claiborn:
elle@norfolkriverstrust.org

NUTRIENT NEUTRAILITY

Nutrient Neutrality - Dealing with Your Waste

We have highlighted previously the developments surrounding nutrient neutrality. The combined councils took the decision that adopting a purely commercial approach was needed to progress forward with nutrient credits and enabling the building of new homes. This to date has traded circa 100kg of P (Phosphate) enabling planning consent for about 1100 homes.

Homeowners across the Wensum catchment have been contacted offering a "free" Septic Tank upgrade, under this scheme managed through the Norfolk Rivers Consortium Ltd.

Many landowners and ourselves believe that given the current monetary value and scale of the nutrient credits, homeowners should, like in agriculture, receive some form of compensation and support giving for environmental improvements rather than companies seeking commercial gain.

A further 49kg (£2m) was again contracted to Norfolk Rivers Consortium Ltd this autumn without any formal tendering process for the Bure Catchment.

In this next round of tendering for 2025 a further 100kg and 450kg of P (Phosphate), with a combined estimated value of £22m, a new partnership approach named "Our Rivers" has tendered offering both homeowners and the environment a share of the benefit of the smaller 100kg contract.

The scale of the nutrient derived from Septic Solutions is significant and has recently been formally assessed by ourselves, as below in the number of properties off mains sewage:

Breckland	1218
Broadland	1099
North Norfolk	555
KLWN	227
South Norfolk	24

This equates to a total potential of 2865 properties, once exclusions are applied, within the defined Wensum Nutrient Boundaries.

In reality less than 10% of these would be impacted and our approach is to balance commercial gain against the best environmental benefit.

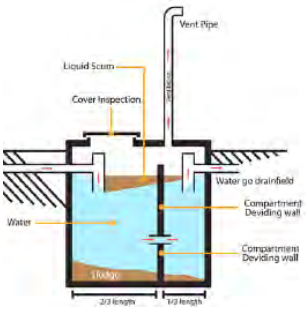
But what are the benefits for homeowners?

First and foremost, nutrient neutrality investment could offer an opportunity to upgrade an inefficient septic tank at little cost and, given the scale of offsets produced, there should be scope to help in funding ongoing maintenance for a number of years. This would put home owners in a good position to comply with government 'General Binding Rules" for septic tanks and small sewage discharges. Refer to 'https://www.gov.uk/guidance/general-binding-rules- small-sewage-discharge-to-the-ground'.
We would like to return to the Homeowner part of the benefit in addition to that above, so like landowners they are compensated for implementing the scheme on their landholding.

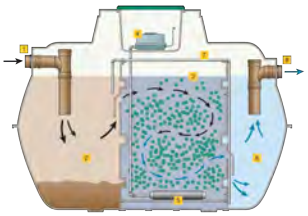
The actual details are yet to be defined, until the terms are agreed, but this is the basis of the offering, that WCP are actively partnering in.

So - look out for our campaign to reach out to home owners and engage in a free upgrade to their Septic Tanks and to become part of the "Our Rivers" solution.

Standard Septic Tank
P output circa 1kg/yr



Biological Package Treatment Plant P output circa 0.15 kg/yr



Some technical facts

A septic tank uses natural settlement to remove solids and nutrient. A typical system produces circa output P of 1kg/yr

A modern Package Treatment Plant (PTP) uses forced biological treatment on top of natural settlement and produces an overall P output of circa 0.15kg/yr.
A net saving 0.9kg/yr to a Septic Tank,

ANGLIAN WATER ON THE WENSUM

Making choices on investment in our River

Anglian Water has announced that in line with the government's guidance on nutrient neutrality, they have proposed an £138m of investment in their business plan for 2025-30 to reduce nutrient levels at 19 water recycling sites across Norfolk.

These investments will protect wildlife and ecological quality in Norfolk's precious Broads and the River Wensum and mean developers need to find fewer credits to build much-needed housing.

Wastewater works on the Wensum are at Dereham, Fakenham, Reepham, Bylaugh, Foulsham, Swanton Morley, Sculthorpe, Stibbard and Mattishal.

While other Broads works include Aylsham, Coltishall, Belaugh, Hindolveston and Wymondham are among those in line for improvement work.

These investments will take the maximum mean permitted Phosphate output from 1mg/l to 0.25 mg/l

Current plans are to have the 3 largest works completed by 2027, these are Dereham, Fakenham and Whittlingham.

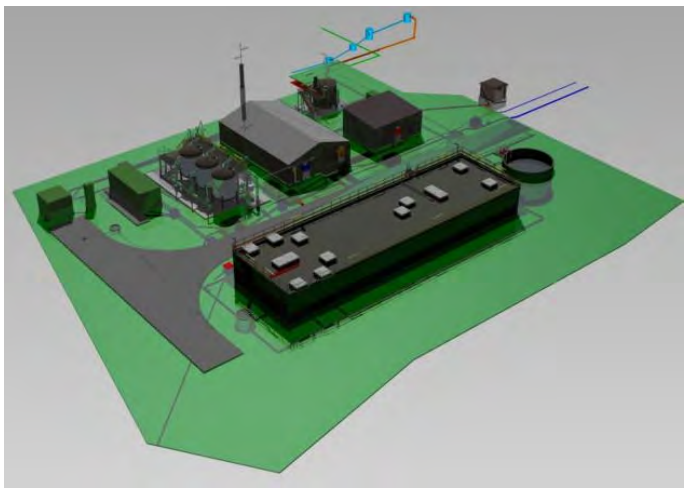
The removal of excess Phosphate is an expensive process and requires significant investment by water companies. Its process is explained in the March 2023 newsletter (https://wensum.org/wcp-mar-23-newsletter) from last year. It is managed as part of the rolling 5-year Water Industry National Environment Program (WINEP).

These investments are about the mean continuous levels of nutrient output and not the excess in time of flooding.

This shouldn't be confused with the extreme events we see in the press every day in terms of combined sewer overflows, which are also subject of significant investment from 2025-30.

Most works within the Wensum have existing permits limiting the mean Phosphate to less than 1mg/l.
However, Mattishall STW still has a permit of 8 mg/l and this can be clearly seen by our citizen scientists measuring water quality on the River Tud.

This estimated £4.5m investment is long overdue. Below is an artist's impression of the new Mattishall works, which is designed to support 4500 homes.



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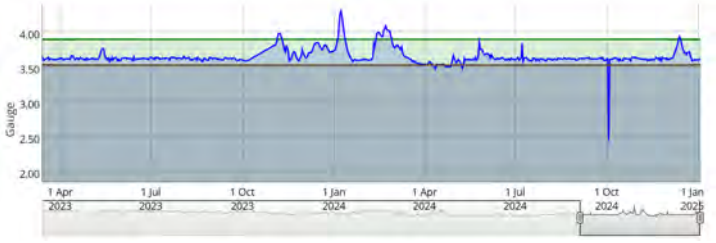
WATER FLOWS OF WINTER 2023/24

A look back at the impact of prolonged rainfall of the Winter.

Records have shown that the Wensum at Lyng received 1060mm of rainfall in 2023 and 226mm during Jan - Feb-24 alone. This is double the average for Norfolk. More recent rainfall in Dec-24 of 62mm again brought about flooding at Swanton Morley and Worthing.

Below is an updated chart from the downstream EA gauging station at Hellesdon Mill, over the past 18 months, showing the significance of this event.



The gauging station at Swanton Morley shown in the image top right, was again swamped by flooding in the week 9th Dec 2024 and as such recordings were impacted. Indeed, this gauge has now been excluded from recordings.

The two images right show the level of flooding on the 9th Dec 2024 at Swanton Morley. As a result of these excess volumes, the Wensum continued to breach its banks in two places above Swanton Morley. We must now question whether the flow is restricted by unmanaged trees and scrub restricting flow in the main channel. This means that the total flow volumes are still being recorded but the split of flow between the two gauges is now different and as such now not reported.

We cannot continue adopting a policy of not managing this river, as left alone breaches like those seen at Swanton Morley will occur more frequently along with upstream flooding in places like Worthing.

The current policy adopted by the EA is that this is natural and they won't undertake any repair, but the SSSI and SAC designations apply to this engineered main river channel.

In summary this needs careful consideration and must become part of the wider strategic approach to future river and land management.

We look at this further in page 10.

NUTRIENT APPORTIONMENT

A look back at the latest DEFRA findings.

DEFRA published the Indicative Catchment Statistics for Nutrient Pollution on Protected areas with diffuse water pollution plans or nutrient neutrality advice in September 2024. See document link below:

https://assets.publishing.service.gov.uk/media/66fc00cb3b919067bb482a32/Indicative-Catchment-Statistics-for-Nutrient-Pollution.pdf

Table 43: Indicative input load source apportionment for the River Wensum based on catchment endpoint (recent scenario, PR24 calibration models). But this is still based on actual data from between 2014 - 2020.

	Point Sources	Rural Land Use	Urban	Septic Tanks	Other
Phosphate	18%	68%	13%	1%	0%

Table 44: Indicative phosphate catchment average statistics and sector reductions for the River Wensum.

	Diffuse	Point	Total
Baseline (2009) Sector Share of the Target	48%	52%	
Sector Share of Mean Target (mg/l)	0.01	0.01	0.02
Modelled Recent Sector Mean Concentration (mg/l)	0.04	0.017	
Sector Reduction Required	76%	39%	
High Regulatory Compliance Reduction in losses (Farmscoper V5, Scenario 3)	9%		
Full Regulatory Compliance Reduction in losses (Farmscoper V5, Scenario 4)	12%		
Optimistic Uptake of Measures (Farmscoper V5, Scenario 8).	21%	n/a	
Theoretical Maximum Reduction in Losses (Farmscoper V5, Scenario 10).	37%	n/a	
Residual % Diffuse Sector Reduction	39-67%	n/a	

We are working to understand how this modelling is producing results which don't appear to reflect the findings our citizen scientists have found and tracked back to their actual sources.

To only state that 1% of P04 (Phosphate) is apportioned to Septic Tanks, when the evidence suggests much higher values needs challenge.

Why would the combined Norfolk Councils want to spend circa £40m upgrading Septic Tanks when the official government document says they only contribute 1% of the nutrient load.

Top right is our own estimations on the apportionment, based on the EA's own STW load figures from 2020 and the total volume of Septic Tank's from our own verified research.

River Catchment	Wensum	WCP Estimate
Determinand P04	P04	P04
STW (kg/d)	6.668	14.95
Intermittents (kg/d)	0.157	0.157
Industrial (kg/d)	1.362	1.362
Rural Land Use (kg/d)	30.085	15
Highways (kg/d)	0.031	0.031
Urban (kg/d)	5.561	5.561
Atmospheric Deposition (kg/d)		
Septic Tanks (kg/d)	0.588	8.56
Background (arising from cress/ fish farms abstractions) (kg/d)		
	44.45	45.62
Point (%)	18%	36%
Rural Land Use (%)	68%	33%
Urban (%)	13%	12%
Septic Tanks (%)	1%	19%
Other (%)	0%	0%
	100%	100%

Our estimate calculation on the P04 actual load at Costessey Mill set against Mean and Q05 (High) flows of 4 m3/s mean and 9 m3/s Q05 and a P04 measured mean of 0.06 mg/l and 0.1mg/l Q05, produces a total load of between14 - 57 kg/day, but clearly nutrients further upstream drop out over the rivers 75km length. It's clearly complex to model ....

Agriculture Diffused Pollution

Sewage Treatment Works Point Source Pollution

Industrial Works Point Source Pollution

The agriculture community have been concerned for a number of years that this apportionment is not correct and based on generic model assumptions. We will be formally responding to DEFRA on this matter shortly, evidenced from our own verified research.

STRATEGIC RIVER MANAGEMENT

The long-term vision for the River Restoration

Natural England and the Environment Agency first published the Wensum Restoration Strategy in 2009. For the initial decade this led to some 25kms of river restoration improvements, funded through DEFRA grant in aid. However, the egress of silt wasn't effectively stopped and as such much of the river bed has again become silted and in some places, habitat lost. Once you add in the pressures of abstraction and climate change, the need to protect what we have can only grow.

As I compile this, we await the results of summer 2024 SSSI condition assessments from Natural England. These may well show things degrading and evidence the need for action. Indeed, as seen the recent independent macrophyte survey, Ranunculus, a listed Wensum species providing key spawning habitat for fish, is now almost lost in the river.

The Environment Agency announced in September that they couldn't resource the Wensum Restoration Strategy and haven't taken an active role in the Partnership since that announcement. This led to exploring how other rivers with similar protected status are managed. One such catchment is the River Mease in Leicestershire, managed through and led by Trent Rivers Trust and the Mease Partnership following CaBA principles.

So, we need to develop a new approach and structure on our approach, if we want to see improvements to the Wensum.

How we secure funding to enable this must be key, but also is reviewing the current defined Wensum restoration strategy, now some 15 years old.

I believe there is much to be learnt from the Mease and how landowners have adopted the approach in a positive manner.

Image of Elsing Mill

So how do we progress this forward?

We have initiated discussions with both NRT (Norfolk Rivers Trust) and the WMA (Water Management Alliance) an approved supplier to take on the role vacated by the Agency.

Significant Flood Defence funding could potentially be sourced and delivered through the WMA.

NRT are working on securing a 4-year funding grant, for a full time Wensum officer. Whilst we continue to explore how Nutrient Neutrality Credits can provide some form of environment bonus.

We can't leave the river to find its own course, in what has become a managed catchment.

Clearly there is a balance to be made, but many landowners have become scared of doing anything to manage their riparian assets.

So, we have ended up in an impossible position, we must put this right and enable riparian owners to become actual river keepers, like in other much-loved chalk streams and rivers.

This is how the Mease and others are managed. With great success and balanced outcomes.

OUR STRUCTURE & PEOPLE

Our governance, structure and people

Partnership Chair	Kelvin Allen
Morphology Group Chair	Vacant
Water Quality Group Chair	Richard Cooper
Ecology Group Chair	Kelvin Allen
Management Group Chair	Donna Dean

Management Team

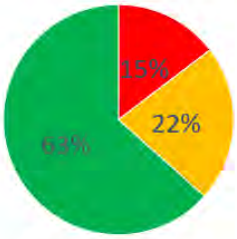
Donna Dean	NRT
Kelvin Allen	WCP
Jonah Tosney	NRT
Steve Lane	CaSTCo
Elle Claiborn	CaSTCo
John Findlay	EA
Richard Cooper	UEA

KEEPING YOU INFORMED

Monitoring and Management

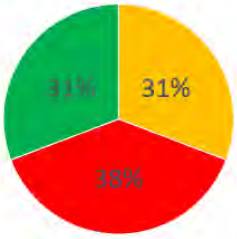
Wensum Catchment Partnership Working Group Action Tracking

Water Quality Working Group



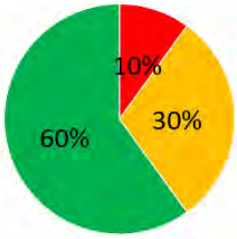
Total Actions 41

Morphology Working Group



Total Actions 13

Ecology Working Group



Total Actions 10

Back in 2019 another vision was to have a dashboard of measures that replicated the status across the catchment ecology. We have come a long way since then and today have almost all the metrics defined and measured at a reasonable compartment scale and dashboard.

Compartment	SSSI Unit Number	Reach Number	Section	Length	River Restoration	Fishing Rights	Target Fishery	Invasive Plant Species	Fish Roach Density	Fish Dace Density	Fish Chub Density	Fish Pike Density	Fish Trout Density	Inverts Score	Chem P	Chem A	Chem N	Chem Solids	Flow	Fish Habitat s	Fish Passage	Geomorphology Restoration	Macrophytes	NNIS	SAC Desg White Crayfish	SAC Desg Desmoulin s snail	SAC Desg Brook lamprey	SAC Desg Bullhead
			Measure Definition					%	100m2	100m2	100m2	100m2	100m2	Riverfly Score	mg/l	mg/l	mg/l	mg/l	% HOF	Metres	Pass	Percentage	RN_A_TAXA	?				
1	N/A	N/A	Yare - New Mills	4.39																								
2	N/A	N/A	New Mills - Hellesdon Mill	4.23		4.23	Coarse	100	2.4	0.52	2.07	0.17	0.02		0.06	0.04	5.92	5.73	47		50%	0%	14				0.00	0.09
3	54	RWRS 01	Hellesdon Mill - Mount Farm	1.65			Coarse	100	2.4	0.52	2.07	0.17	0.02		0.06	0.04	5.92	5.73	47		75%	0%	14		100%	100%	0.00	0.09
3	54	RWRS 02	Mount Farm - Costessey Mill	3.16	0.72	1.4	Coarse	100	2.4	0.52	2.07	0.17	0.02		0.06	0.04	5.92	5.73	47		50%	23%	14		100%	100%	0.00	0.09
4	54	RWRS 03	Costessey Mill - Taverham Mill	3.91	1.5	1.03	Coarse	100	2.12	2.58	5.98	0.39	0.00		0.06	0.04	5.92	5.73	47		50%	38%	14		100%	100%	0.00	0.09
5	53	RWRS 04	Taverham Mill - Northfields	1.49		0.8		25	2.12	2.58	5.98	0.39	0.00		0.06	0.04	5.92	5.73	47		50%	0%	14		100%	100%	0.07	0.19
5	53	RWRS 05	Northfields - Downstream Ringland	2.56				25	2.12	2.58	5.98	0.39	0.00		0.06	0.04	5.92	5.73	47		50%	0%	14		100%	100%	0.07	0.19
5	53	RWRS 06	Downstream Ringland -Ringland Road	0.23	0.23			25	2.12	2.58	5.98	0.39	0.00	9	0.06	0.04	5.92	5.73	47		100%	100%	14		100%	0%	0.07	0.19
5	53	RWRS 07	Ringland Road - Attlebridge Hall	3.62	0.41			25	2.12	2.58	5.98	0.39	0.00	9	0.06	0.04	5.92	5.73	47		100%	11%	14		100%	0%	0.07	0.19
6	53	RWRS 08	Attlebridge Hall - Morton Bridge	1.25	1.25			100	2.12	2.58	5.98	0.39	0.00		0.06	0.04	5.92	5.73	47	100	100%	100%	14		100%	0%	0.07	0.19
6	53	RWRS 09	Morton Bridge - Slade Plantation	1.11	0.34			100	2.12	2.58	5.98	0.39	0.00		0.06	0.04	5.92	5.73	47		100%	31%			100%	0%	0.07	0.19
6	53	RWRS 10	Slade Plantation - Lenwade Mill	2.94		2.358		100	2.12	2.58	5.98	0.39	0.00	10	0.06	0.04	5.92	5.73	47		100%	0%			100%	0%	0.07	0.19
7	52	RWRS 11	Lenwade Mill - Walsis Hill	2.43		1.458	Coarse	0	0.7	1.97	3.7	0.42	0.03	10	0.06	0.04	6.14	5.65	47		0%	0%			100%	0%	0.42	0.24
7	52	RWRS 12	Walsis Hill - Lyng Mill	2.15	2.15	2.15	Coarse	0	0.7	1.97	3.7	0.42	0.03	9	0.06	0.04	6.14	5.65	47	1800	0%	100%			100%	0%	0.42	0.24
8	52	RWRS 13	Lyng Mill - Elsing Mil	3.74		4.13	Coarse	0	1.91	3.21	2.01	1.49	0	9	0.06	0.04	6.67	5.17	47		0%	0%			100%	0%	0.00	0.00
9	51	RWRS 14	Elsing Mill - Swanton Morley Mill	4.71	0.88	2.08	Coarse	0	1.91	3.21	2.01	1.49	0	13	0.06	0.04	6.67	5.17	47	2200	0%	19%			0%	0%	0.00	0.00
10	51	RWRS 15	Swanton Morley Mill - Riverside Farm	2.52		2.212	Coarse	0	1.02	0.20	0.08	0.59	0.05	13	0.05	0.03	9.09	6.00	99		25%	0%			0%	0%	0.05	0.05
10	51	RWRS 16	Riverside Farm - North Elmham Mill	1.17		0.867	Coarse	0	1.02	0.20	0.08	0.59	0.05	13	0.05	0.03	9.09	6.00	99	500	0%	0%			0%	0%	0.05	0.05
11	50	RWRS 17	North Elmham Mill - Bintree Woods	2.6				0	0.42	0.00	0.00	0.43	0.43	12	0.05	0.03	9.09	6.00	99		0%	0%			100%	0%	1.83	1.75
11	50	RWRS 18	Bintree Woods - Dell View Farm	0.86				0	0.42	0.00	0.00	0.43	0.43	12	0.05	0.03	9.09	6.00	99		100%	0%			100%	0%	1.83	1.75
12	50	RWRS 19	Dell View Farm - Bintry Mill	2.67	2.67	0.405	Coarse	0	0.42	0.00	0.00	0.43	0.43	12	0.05	0.03	9.09	6.00	99		100%	100%			100%	0%	0.00	1.00
13	49	RWRS 20	Bintry Mill - Guist Common	2.01		0.93	Game	100	0.42	0.00	0.00	0.43	0.43	12	0.05	0.03	9.09	6.00	99		100%	0%			100%	100%	1.83	1.75
13	49	RWRS 21	Guist Common - Great Ryburgh Mill	3.31	1.32			100	0.42	0.00	0.00	0.43	0.43	12	0.05	0.03	9.09	6.00	99		25%	40%			100%	100%	1.83	1.75
14	48	RWRS 22	Great Ryburgh Mill - Pensthorpe Wildfowl Park	2.38		0.362	Mixed	25	0.42	0.00	0.00	0.43	0.43	9	0.05	0.03	9.09	6.00	99		25%	0%			100%	100%	1.83	1.75
14	48	RWRS 23	Pensthorpe Wildfowl Park - Great Ryburgh Common	1.98	1.98		Mixed	25	0.42	0.00	0.00	0.43	0.43	9	0.05	0.03	9.09	6.00	99		100%	100%			100%	100%	1.83	1.75
14	48	RWRS 24	Great Ryburgh Common	0.18	0.175		Mixed	0	0.42	0.00	0.00	0.43	0.43	9	0.05	0.03	9.09	6.00	99		100%	97%			100%	100%	1.83	1.75
14	48	RWRS 25	Great Ryburgh Common - Fakenham Mill	1.96		1.914	Mixed	25	0.42	0.00	0.00	0.43	0.43	9	0.05	0.03	9.09	6.00	99		25%	0%			100%	100%	1.83	1.75
15	47	RWRS 26	Fakenham Mill - Hempton	0.46		0.46		100						12	0.05	0.03	9.09	6.00	74		25%	0%	9		100%	100%	0.00	0.00
15	47	RWRS 27	Hempton - Sculthorpe Moor	1.72	1.72	1.72	Mixed	0						12	0.05	0.03	9.09	6.00	74		0%	100%	9		100%	100%	0.00	0.00
15	47	RWRS 28	Sculthorpe Moor - Sculthorpe Mill	1.25	0.405		Mixed	0						11	0.05	0.03	9.44	4.8	74		50%	32%	9		100%	100%	0.00	0.00
16	47	RWRS 29	Sculthorpe Mill - South Mill Farm	2.63	0.85		Mixed	0						11	0.05	0.04	7.8	4.84	74		50%	32%			100%	100%	0.00	0.00
17	47	RWRS 30	South Mill Farm - River Tat confluence	0.67	0.65			0						13	0.05	0.04	7.8	4.84	74		100%	97%	5		100%	100%	0.00	5.00
17	46	RWRS 31	Tat confluence	0.48				0						13	0.05	0.04	7.8	4.84	74		100%	0%	5		100%	0%	0.00	5.00
17	46	RWRS 33	Tatterford Common - Helhoughton Common	0.72				0						12	0.05	0.04	5.00	5.29	74		100%	0%	5		100%	0%	0.00	8.00
17	45	RWRS 34	Helhoughton Common - Brickkiln Plantation	1.57	1.57			0						13	0.05	0.04	5.00	5.29	74		100%	100%	5		0%	0%	0.00	8.00
18	45	RWRS 35	Brickkiln Plantation - West Raynham	0.71	0.71			0						15	0.05	0.03	5.00	5.29	74		100%	100%	5		0%	0%	0.00	8.00
18	45	RWRS 36	West Raynham - South Raynham Bridge	1.41	1.41			0						11	0.05	0.03	5.00	5.29	74		100%	100%	5		0%	0%	0.00	8.00
18	45	RWRS 37	South Raynham Bridge - Normans Burrow Wood	0.72	0.72			0						4	0.05	0.03	5.00	5.29	74		100%	100%			0%	0%	0.00	8.00
18	45	RWRS 38	Normans Burrow Wood - Pear Tree Corner	0.85	0.85			100						12	0.14	0.46	40.00	5.29	74		100%	100%			0%	0%	0.00	8.00
19	46	RWRS 32	Tat Tatterford Common	3.28	2.19			0	0.00	0.00	0	0.00	3.28	9	0.12	0.11	5.00	4.84	74		100%	67%			100%	0%	0.00	5.00
20		RWRS Tat	River Tat Coxford - Sculthrope	3.25				0	0.00	0.00	0	0.00	5.33	2	0.11	0.11	5.00	3			100%	0%					0.00	5.00
20A		RWRS Tat	River Tat East Rudham	3.53				0						7	0.34	0.02	20.00	3			100%	0%						
21		RWRS	Langor Drain	1.98				0							0.08	0.09	5.00	5			100%	0%						
22		RWRS	Guist Drain	2.01				0							0.2	0.05	6.00	4.8			100%	0%						
23		RWRS	Foulsham Drain	12.4	3			25							0.2	0.05	6.00	4.8			100%	24%						
24		RWRS	Blackwater Drain	10.8				25							0.3	0.085	5.00	8.00			100%	0%						
25		RWRS	Blackwater Drain Trib	5.93				25							0.2	0.085	5.00	8.00			100%	0%						
26		RWRS	Kerdiston Drain	5.06				25							0.2	0.085	5.00	8.00			100%	0%						
27		RWRS	Swannington Drain	5				25							0.04	0.03	5.00	6.00			100%	0%						
28		RWRS	Wendling Beck - Dillington - Worthing	6.90				0						12	0.03	0.04	5.00	9.00			100%	0%						
29		RWRS	Wendling Beck - Grt Farnsham - Dillington	10.00				100							0.11	0.11	8.50	9.00			100%	0%						
30		RWRS	River Tud - Source - Hockering	13.5				25	0.75	2.10	1	0.00	8		0.55	0.16	8.00	8.00			100%	0%						
31		RWRS	River Tud - Hockering - New Costessey	10.7				25	0.75	2.10	1	0.00	8	10	0.2	0.08	6.00	8.00			100%	0%						

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