

Protecting natural waters through catchment management

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Catchments Manager

Local Authority Waters Programme

Teagasc ConnectED

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Water Quality in Ireland 2013-2018

Main findings

52.8%

of surface waters
are in good or better
ecological health

364 water bodies
improved in quality

481 water bodies
declined in quality

4.4%
net decline

Rivers

53%

in good or better
ecological health

5.5%
net decline
since 2007-09

26%
increasing nutrient
concentrations

91

fewer higher status
river water bodies
since 2007-09

110

more poor status
river water bodies
since 2007-09

40 fish kills
in 2018

Lakes

50.5%

in good or better
ecological health

28.8%
increasing total
phosphorus
concentrations

Estuaries

38%

in good or better
ecological health

Inputs of phosphorus and
nitrogen from rivers
increasing since 2012-2014

16%

increase in
loads of
nitrogen

31%

increase in
loads of
phosphorus

Canals

87%

in good or better
ecological potential

Coastal

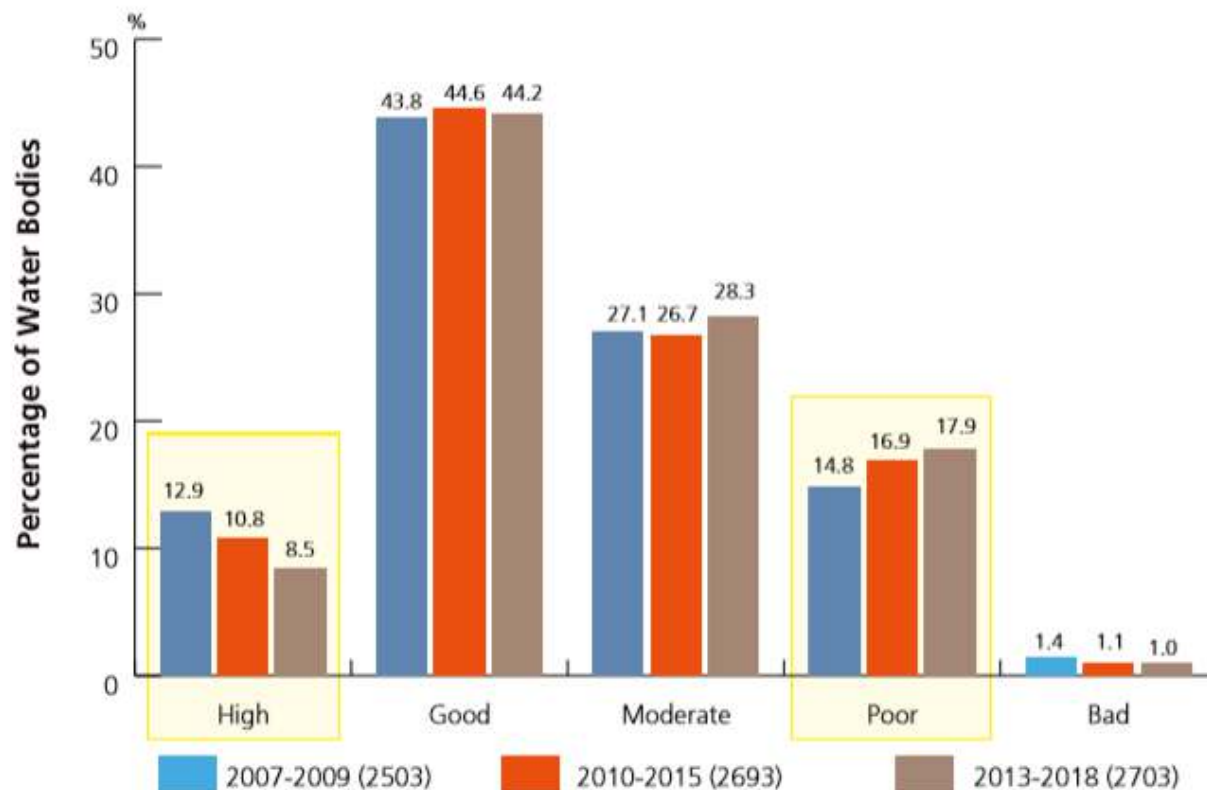
80%

in good or better
ecological health

92%

of groundwater bodies are in good chemical and quantitative status

Water quality trends



Change in the percentage of each of the five WFD status classes over three assessment periods for all surface waters – key trends highlighted.

EPA: Water Quality in Ireland 2013-2018

RBMP 2018-2021

Expected Outcomes

255 Urban waste-water treatment projects progressed

€73m Invested to reduce water leakage by 61million m³ per annum. Reduce leakage from 45% - 38%

30 Sustainability advisors in place to deliver the Agricultural Sustainability Support and Advisory Programme

43 Technical personnel deployed to regionally-based Local Authorities Water Support and Advisory Teams

23,000 Farmers will receive sustainability advice under the Dairy Sustainability Initiative and the Agricultural Sustainability Support and Advisory Programme

4,000 Inspections under the National Inspection Plan for Domestic Waste Water Treatment Systems

3,000+ Water abstractions registered and an authorisation system implemented

Guidance for planning authorities on physical planning and the Water Framework Directive

726 Water bodies to achieve general water quality improvements

152 Water bodies to experience improved water quality status

Local Authority
Waters
Programme

vibrant communities | catchment assessment | healthy waters

Teagasc Agricultural Sustainability Support and Advisory Programme (ASSAP)

AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY

Farming For Water Quality



Measures to Protect and Improve in RBMP 2018-2021

Domestic wastewater treatment

Agriculture diffuse and point source pollution

Urban wastewater

Forestry

Harvesting of peatlands

Physical conditions of waters

Invasive alien species

Abstraction pressures

Others (land use planning, climate change, flood risk, hazardous chemicals etc)

Local Authority Waters Programme





We work with...



An Roinn Talmhaíochta,
Bia agus Mara
Department of Agriculture,
Food and the Marine



Iascach Iníre Éireann
Inland Fisheries Ireland



Comhairle Contae Loch Garman
Wexford County Council



CARLOW
COUNTY COUNCIL



National Parks & Wildlife Service



An Roinn Tithíochta,
Pleanála agus Rialtais Áitiúil
Department of Housing,
Planning and Local Government



Environmental Protection Agency

Ní neart go cur le chéile

FISHERIES
SECTION
PRIORITY



Kildare County Council
Comhairle Contae Chill Dara



An Roinn Talmhaíochta,
Bia agus Mara
Department of Agriculture,
Food and the Marine

Forest Service



KILKENNY
COUNTY COUNCIL



OPW
Oifig na nOibreacha Poiblí
Office of Public Works



Laois County Council
Áras an Chontae, Portlaoise, Co. Laois



Communities
 Team



Catchment
 Assessment Team



Communities Team



Department of Rural and
Community Development

An Roinn Forbartha
Tuaithe agus Pobail

Waters and Communities Award – Prize Fund €7,000

*Sponsored by Inland Fisheries Ireland, Waterways Ireland and the Local Authority
Waters and Communities Office.*



STORIES FROM THE WATERSIDE

WRITING COMPETITION

"If the waters could talk"

GREAT PRIZES TO BE WON!
CATEGORIES FOR U18S AND OVER 18S
FOR DETAILS VISIT WWW.LAWATERS.IE



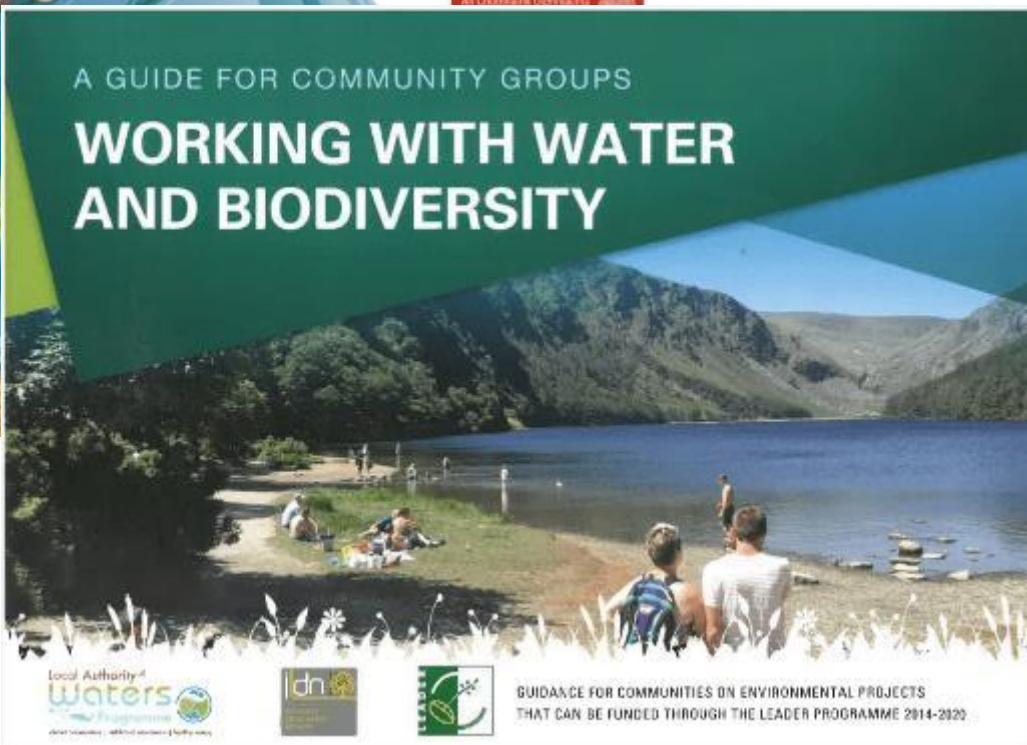
T&CS APPLY CLOSING DATE 31ST MAY



An tArdánach Eilísíne

A GUIDE FOR COMMUNITY GROUPS

WORKING WITH WATER AND BIODIVERSITY



GUIDANCE FOR COMMUNITIES ON ENVIRONMENTAL PROJECTS
THAT CAN BE FUNDED THROUGH THE LEADER PROGRAMME 2014-2020

Community Water Development Fund

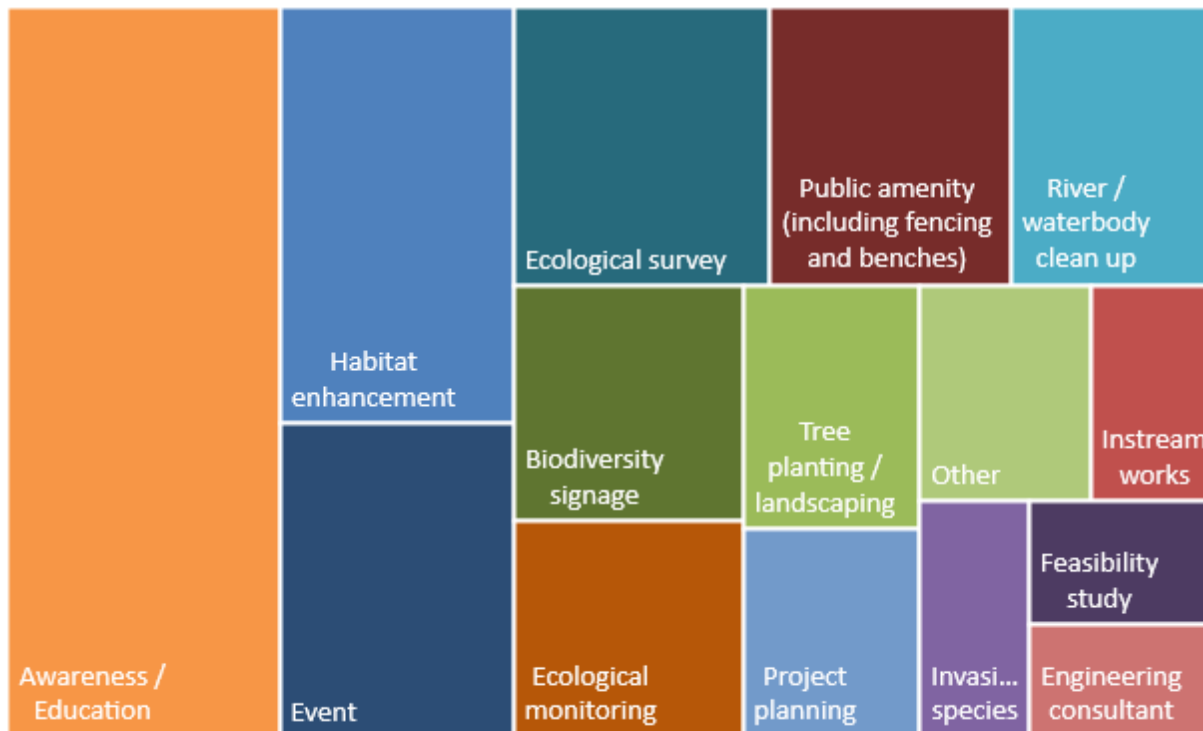
Objectives:

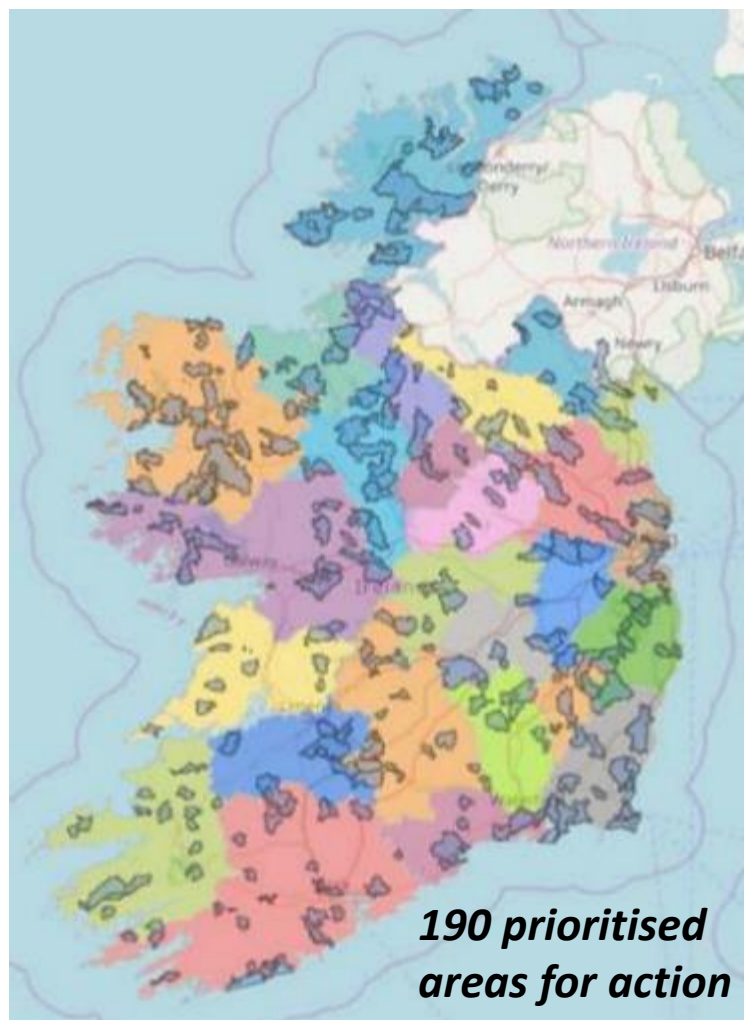
- To support communities in progressing water related projects and initiatives
- To help meet the objectives of RBMP and the WFD
- 2018: 104 applications
- 2019: 151 applications
- 2020: 145 applications

What kind of local actions are communities looking to undertake?

Community Water Development Fund 2020

Applications Received by Project Type – Open Call





Catchment
Assessment Team

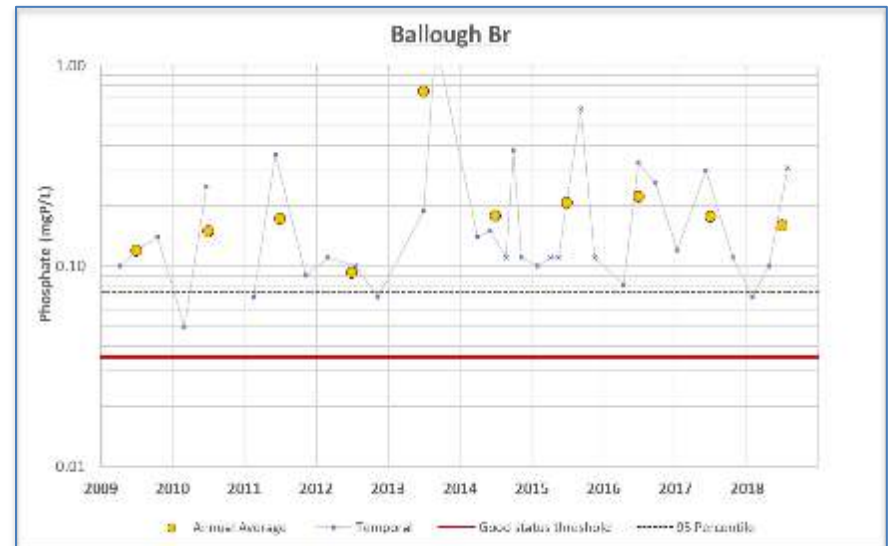


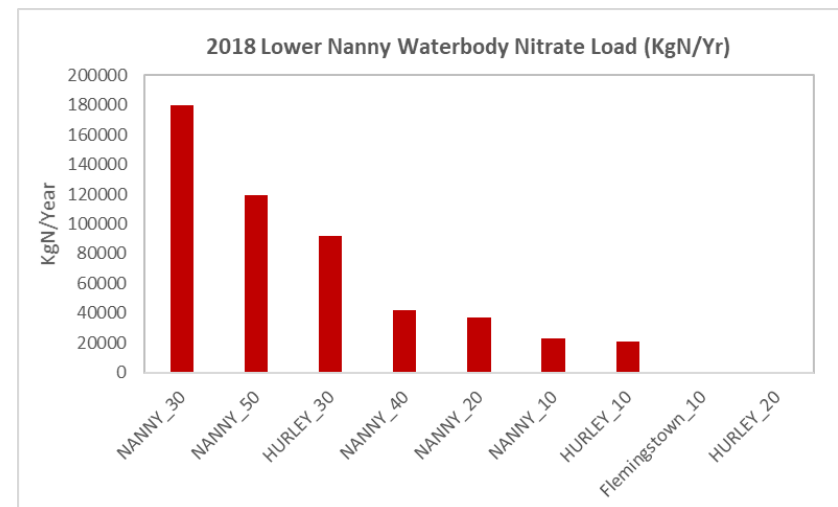
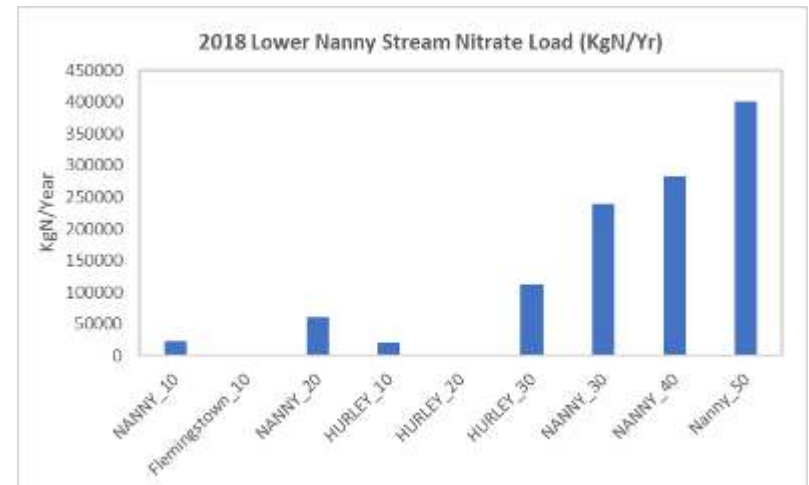


What do our assessments look like?

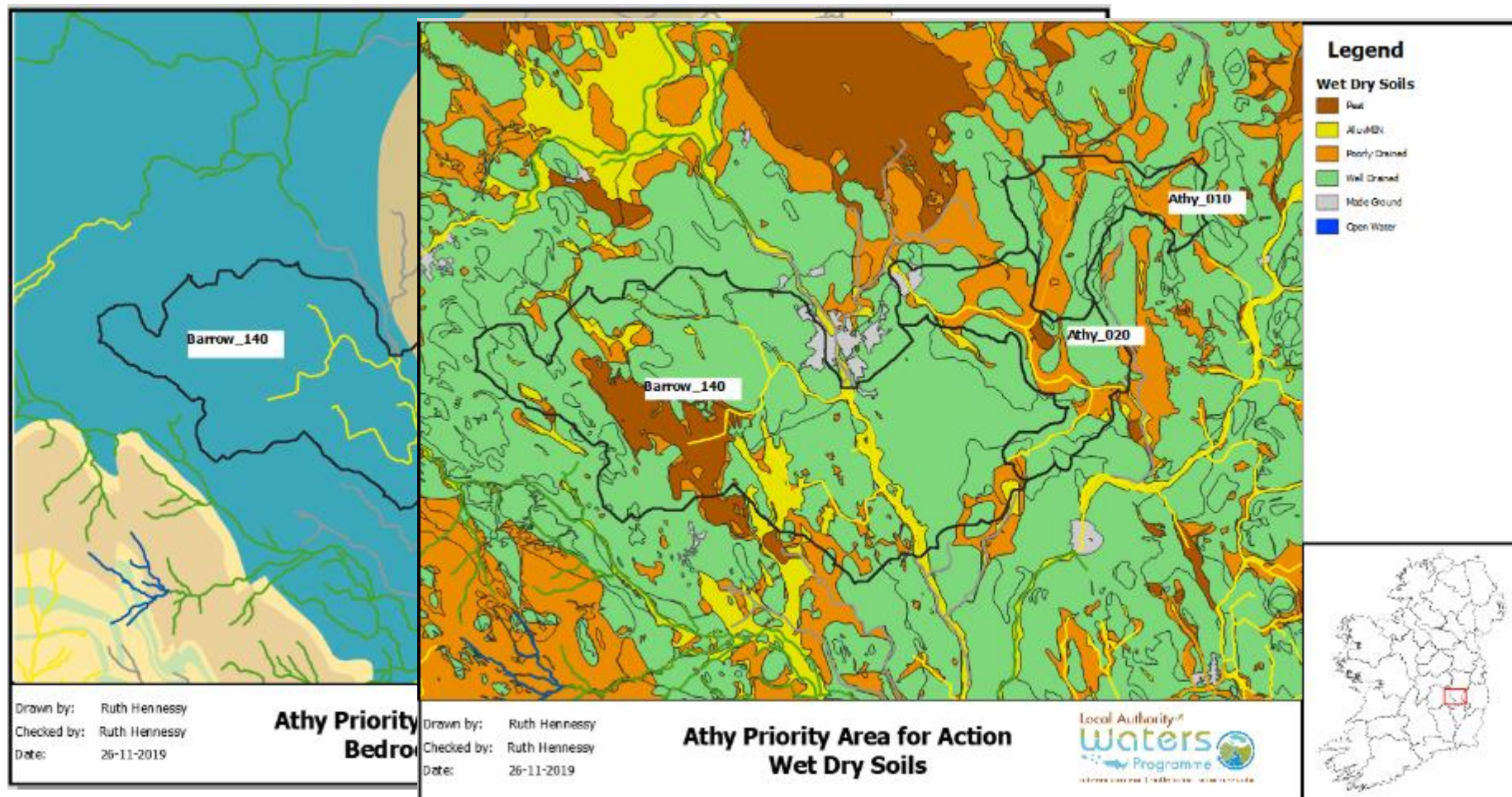
Desk Study Receptor Information

Factor	Figure/ Table	Comment/Description
Risk Category		<i>At Risk</i>
Biological Status		
Monitoring Station(s) with Q-Values	Fig. 2	Br SW of Xxxxx
2009-2015 Status	Fig. 3	3.5 (Moderate)
Trends in Q value since 2009		Decreased from Good (2011) to Moderate (2014)
2016-2018 Q value data	Fig. 3	2017: 3.5 (Moderate)
Hydrochemistry Data		
Monitoring Station(s) with data Existing (up to 2015)	Fig. 2	Br SW of Xxxxx
New (post-2015)		PO ₄ , NH ₃ , TON, BOD BOD: 2016-2019. PO ₄ , NH ₃ & TON: 2016-2018
Summary & Trends in PO₄, NH₃ and NO₃		
Breaches in Annual Average Thresholds	Fig. 5	PO₄ (0.035 mg/l): 0.043 mg/l (2017), 0.046 mg/l (2016), 0.036 mg/l (2013), 0.044 mg/l (2011), 0.052 mg/l (2010) NH₃ (0.065 mg/l): None TON (3.5 mg/l): None
Other water quality data		PO ₄ : 0.039 mg/l NH ₃ : 0.024 mg/l TON: 1.95 mg/l
2016-2018 Baseline Concentration (mg/l)		
Other relevant values		
Supporting Conditions		
Chemical Conditions		Pass
Oxygenation Conditions		Pass
Acidification Conditions		Pass
Hydromorphology		
RHAT Score		N/A
Evidence of arterial drainage		N/A
Ecological Status (2010-2015)		
Trends 2010-2015		Moderate Deteriorated from Good (in 2012)
Protected Areas	Fig. 7	Yes
WFD Objective		Good
EPA biologist notes (if any)		2017: Only one station was surveyed on the Xxxxx in 2017 due to the subsequent outbreak of crayfish plague. Low numbers of pollution sensitive macroinvertebrate species were present at the surveyed station (0200) where oxygen levels were low (71% dissolved oxygen saturation) on the survey day.
Significant issue		Phosphate

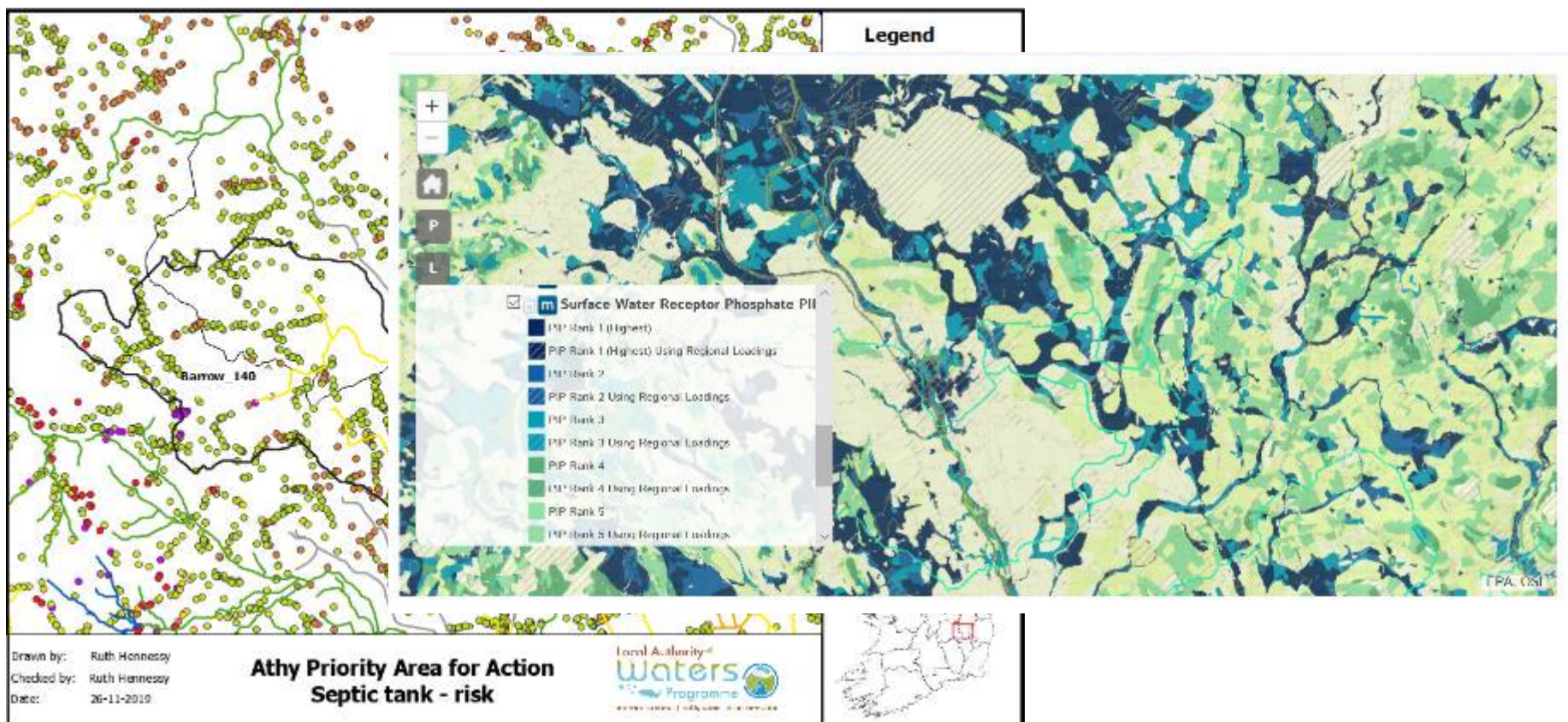




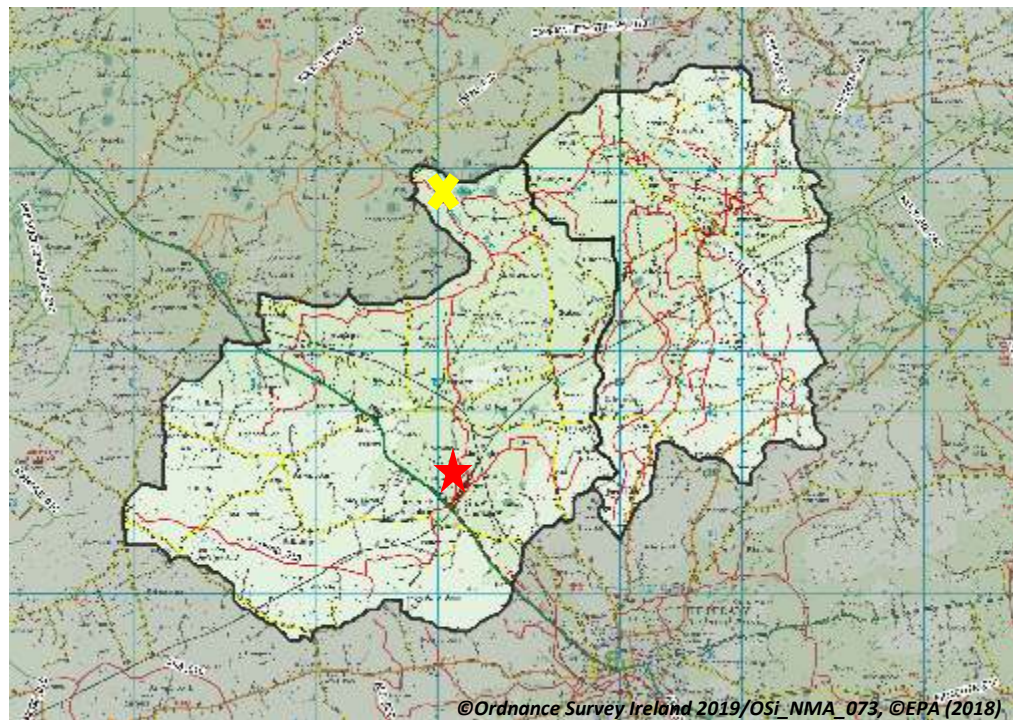
Conceptual modelling – understanding water flow



Risk Models & Pressures



Examining the Pressures



	Ortho-Phosphate Pope's Bridge
Load	2,669 kg/yr
Load Reduction	1,668 kg/yr
WWTP	240 kg/yr

Community Information

Local Authority Waters Programme

Waters & communities
Healthy Waters supporting Vibrant Communities

Waters
catchment assessment
Working together for healthy waters

Public meeting on the Athy Stream


This public meeting follows on from the local consultations on the draft River Basin Management Plan in 2017 and water quality issues identified in the Athy stream. Information will be provided on the Local Authority Waters Programme, its work to assess and understand what is happening to water quality in the Athy stream and how we can all play a part in protecting this natural resource.

This is a new approach to water quality management in Ireland and you can be part of it!

Where: Glanard Court Hotel, Athy

When: 24th of October 7.30pm - 8.30pm – refreshments afterwards.

Further info on www.watersandcommunities.ie




Area of interest: Athy RAA

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South East Region
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Athy Stream Priority Area for Action



The **Athy Stream** catchment is one of the 43 catchments in the South East region that have been selected as a Priority Area for Action (PAA) in the River Basin Management Plan 2018-2021.

Staff from the Local Authority Waters Programme will be working in the Athy Stream assessing rivers, streams, and lakes to identify causes of water quality deterioration and identify areas where actions can be taken to improve water quality.

Any action taken to improve water quality will be in collaboration with public authorities, land owners and interested groups.

The Athy Stream was prioritised for the following reasons:

- Athy_C30 declined between the 2011 and 2014 monitoring periods, it recovered slightly in 2017 but it is still below good status.
- Twickenham is the significant issue in the Athy_B10.
- High nitrate concentrations are the significant issue in the Athy_C30.
- Phosphate and nitrate concentrations are also high in the Ramon_140.

Useful Links:

- www.watersandcommunities.ie/news-for-action/
- www.watersandcommunities.ie
- <https://www.housing.gov.ie/water/water-quality/river-basin-management-plans/river-basin-management-plan-2018-2021>

Local Authority Waters Programme
catchment assessment | healthy waters

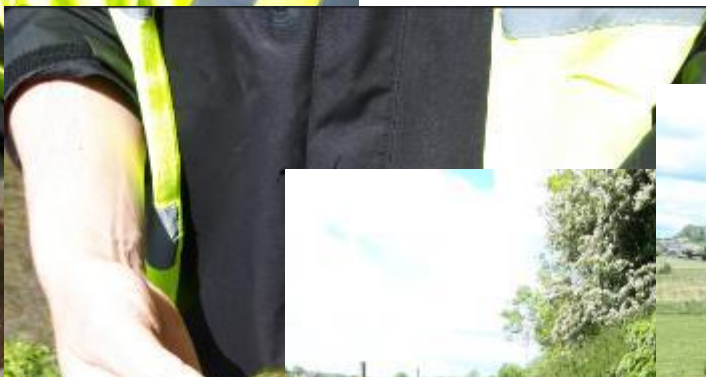


ASSAP Farmer Meetings

- **Farmers only** meetings (following-on from public meetings)
- **Presentation** from Teagasc Advisors and Catchment Assessment Team
- **Explanation of surveys & overall programme** including equipment & mapping on display



Fieldwork



Assessment location	Location description	SSIS result	Probe readings		Comments
Site T1	See Map	Score: 5.6 - Probably impacted	D.O: %	95.8	Algae cover was Abundant (>50% to <75%) across the site, dominated by Vaucheria. The Abundant (>50% to <75%) algae cover indicates nutrient pollution of the site (See photos sheet). Significant sedimentation was noted at the site, particularly under the cover of macroalgae, which traps sediment within its filaments.
ITM: 556034, 721571		Invertebrate community: Ephemeroptera (Mayfly) Rhithrogena + Ephemerellidae (Index Score 4)	pH:	8.2	
		Plecoptera (Stonefly) absent with exception of two individuals of Isoperla (index score 4).	Temp: °C	12.2	
		Trichoptera (Caddisflies) 3 Limnephilidae and 3 Philopotamidae (index score 2).	Conductivity: µS	673	
		G.O.L.D taxa, Simuliidae (>100 individuals) and Chironomidae (index score 0).			
	Location description	SSIS result	Probe readings		Comments
Site T2	See Map	Score: 5.6 - Probably impacted	D.O: %	95.8	Algae cover was Abundant (>50% to <75%) across the site, dominated by Vaucheria. The Abundant (>50% to <75%) algae cover indicates nutrient pollution of the site (See photos sheet). Significant sedimentation was noted at the site, particularly under the cover of macroalgae, which traps sediment within its filaments.
ITM: 558455, 721571		Invertebrate community: Ephemeroptera (Mayfly) Rhithrogena + Ephemerellidae (Index Score 4)	pH:	8.2	
		Plecoptera (Stonefly) absent with exception of two individuals of Isoperla (index score 4).	Temp: °C	12.2	
		Trichoptera (Caddisflies) 3 Limnephilidae and 3 Philopotamidae (index score 2).	Conductivity: µS	673	
		G.O.L.D taxa, Simuliidae (>100 individuals) and Chironomidae (index score 0).			
	Location description	Rapid assesment			Comments
Site T3	See Map				Hymo impacted by culverting for N65 and straightened
ITM: 559967, 723077		Could not carry out a kick sample due to sedimentation and impact from works at the N65			

Table 1: Assessment results



1 Wednesday 10 October 2018 11:56



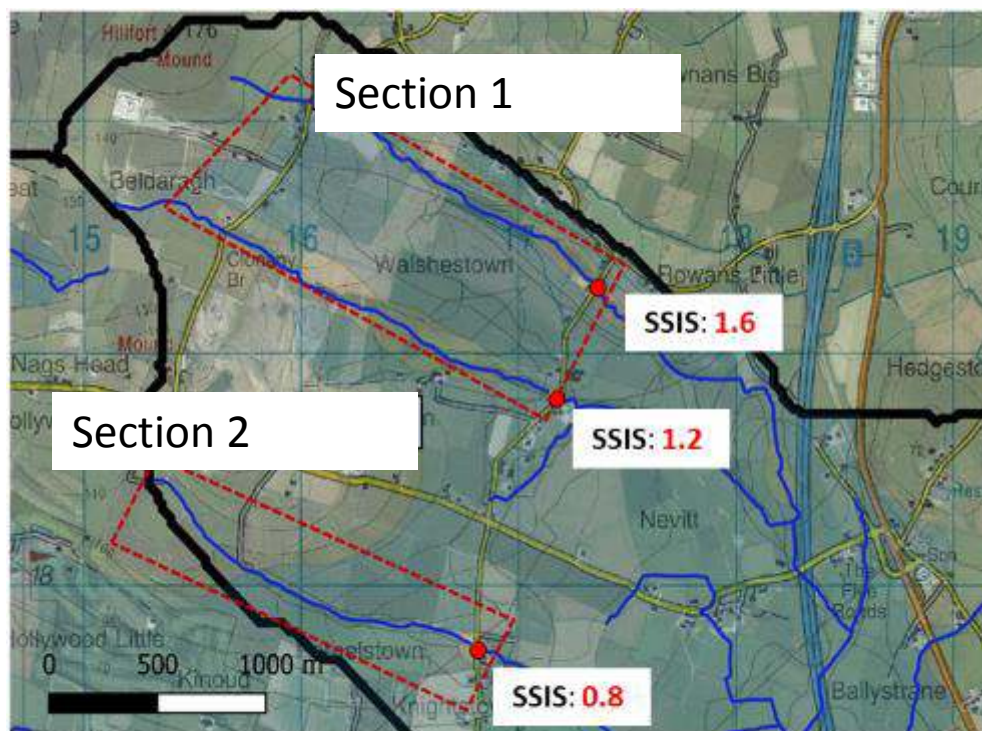
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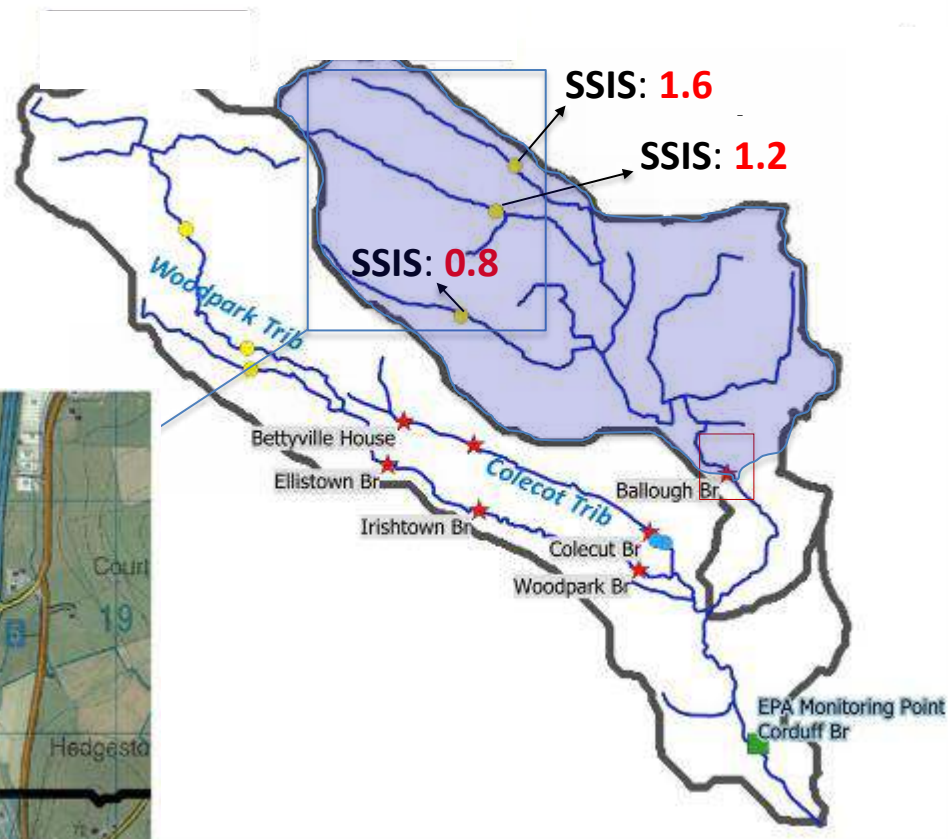
3 Friday 18 October 2019 10:01

Fieldwork – gather the evidence

- Carried out SSIS in Summer
- Confirmed headwaters impacted
- 90% sediment cover & higher P in rainfall



Low Subsoil permeability: High slope: Tillage Enterprise





Proportion
of the field
draining to CSA 4
(Pic 13)

Deep track along
the base of the field
parallel to the
stream leading to
CSA 1 (Photos 3 &
4)


Track marks leading
to CSA 3: Significant
Flow (Photos 8 & 9)

Palmerstown Bridge

SSIS: 0.8

Referrals to Implementing Bodies = Action Plans

Referral Ref	Athy_010_RFL01	Referral Date:	
Catchment Significant Pressures Description:			


Water Framework Directive

Ruth Hennessy
Local Authority Waters Programme (LAWPRO)

Notify/Manage
EPA Services
EDEN Modules

Home / Programme of Measures

Name: WFD Cycle 2
Status: Open

Programme of Measures | **Area for Action** | Referral & Action

Area for Action

Start Year: Select Year
Progress: ☒ All ☐ Open ☐ Completed

Show 10 entries

Actions	Code	Name	Start Year	Progress
	AFA0010	Athy Stream	2018	Open - Initial Public Engagement

Showing 1 to 1 of 1 entries (filtered from 189 total entries)

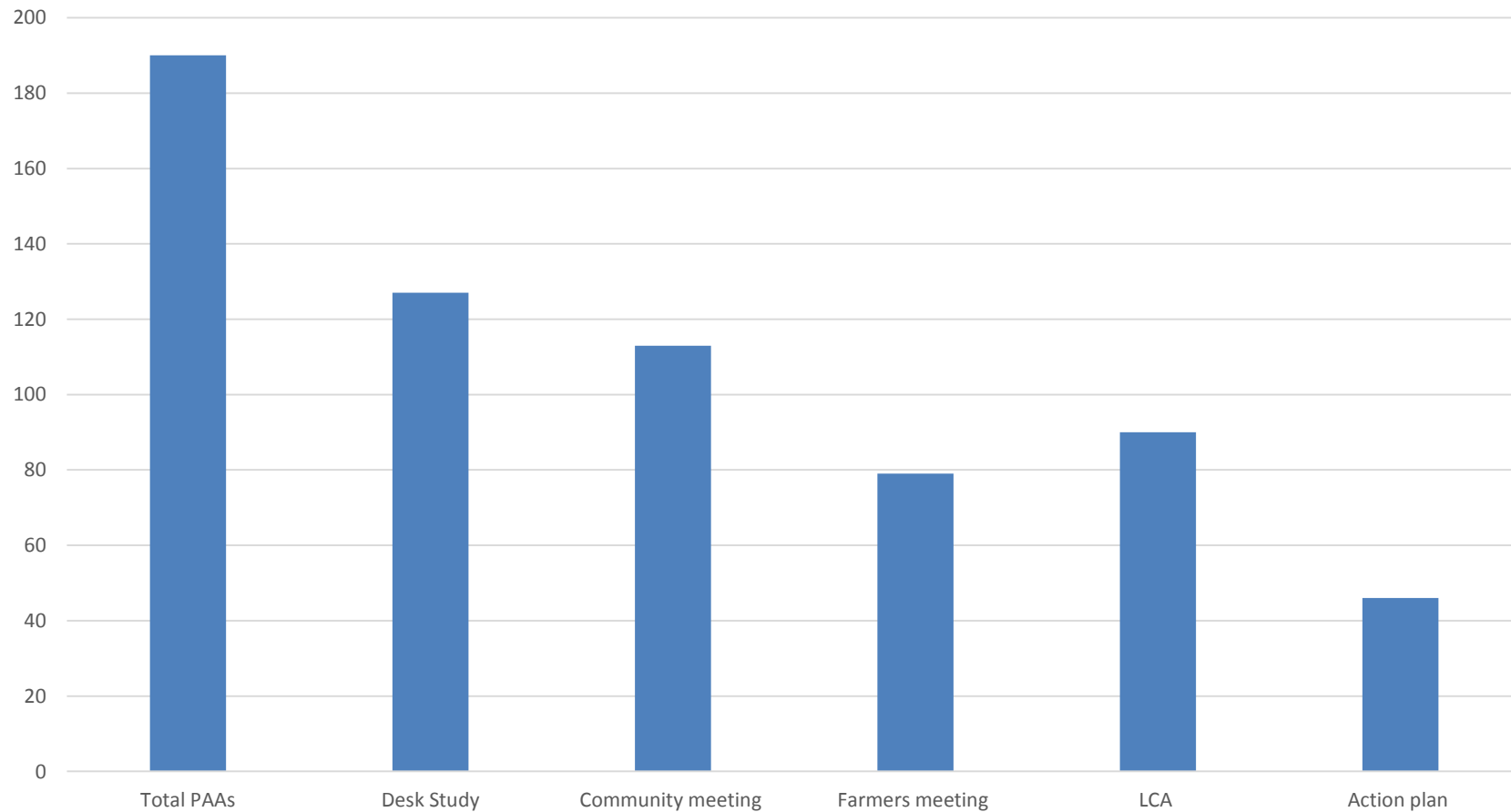
Previous 1 Next

To view Area for Action Plan please click on a row in the table.

significant issue in this catchment. Measures should focus on changes to channel maintenance practices along main river channel and tributaries throughout catchment to reduce sediment losses to the river
 ASSAP discuss with landowner need to cease current channel maintenance practices and emphasise need to abide by best practice during any future maintenance (see guidance by OPW)
 Reprofile banks to allow for a more gentle slope
 Riparian vegetation should be planted/allowed to grow naturally

Progress so far

Progress in Priority Areas for Action



Concluding remarks

- Great start
- Early signs are positive
 - Water quality improvements in PAA's
 - Engagement & participation
- Opportunities & challenges



I'd like to acknowledge and
thank my LAWPRO
colleagues 😊

