



Farming for Water Quality



# Combining Catchment Science & Agricultural Advice to Improve Local Water Quality

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



An Roinn Tithíochta,  
Rialtais Áitiúil agus Oidhreacht  
Department of Housing,  
Local Government and Heritage

# Collaboration & Funding



Agricultural Sustainability  
Support and Advisory  
Programme (ASSAP)

## Farming For Water Quality



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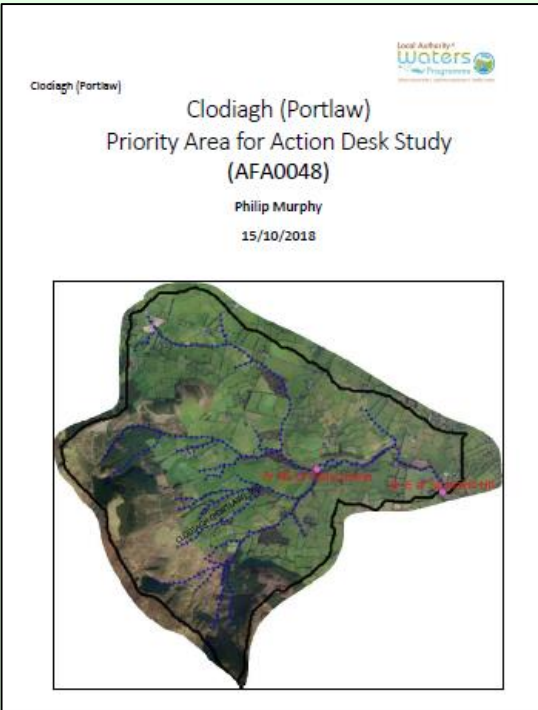
An Roinn Tithíochta,  
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Department of Housing,  
Local Government and Heritage



The Irish Agriculture and Food Development Authority



# Collaboration with Philip (LAWPRO)



Clodiagh  
PAA

| WB Name               | Risk    | Status obj. | Ecological Status |           |           |           | Monitoring station                 | Pressure Category                            | Initial Characterisation                 |
|-----------------------|---------|-------------|-------------------|-----------|-----------|-----------|------------------------------------|--|--|
|                       |         |             | 2007-2009         | 2010-2012 | 2013-2015 | 2013-2018 |                                    |  |  |
| Clodiagh (Portlaw)_10 | At Risk | Good        | Moderate          | Good      | Moderate  | High      | Br E of Shanakill Ho (RS16C030100) | Agriculture (Pasture)<br>Forestry (Forestry) | Nutrient pollution<br>Nutrient pollution |





# Farmers Meeting

## Local water quality



- Learn from each other
- Support and engagement
- Farmers are very interested in meeting the lad that hangs around bridges





# Science, Advice and the Farmer

Cathal Somers, Teagasc (086 3614691)



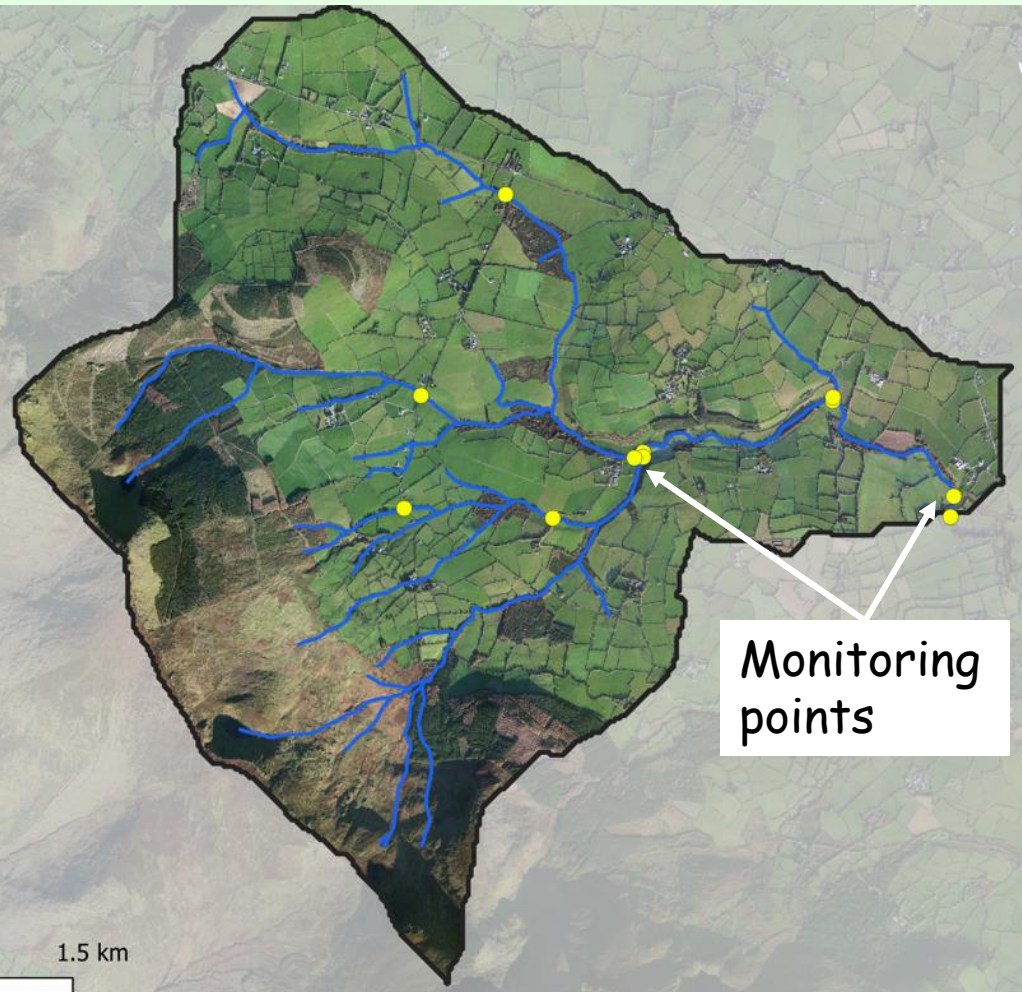
Andrew Geraghty, Glanbia (086 0364499)



- Trust & build relationship
- Feedback loop (LAWPRO)
- Targeted approach
- Box clever - limited resources



# Referrals from LAWPRO



| Observations   | Recommended actions   |
|--|---|
| Slightly elevated DO in summer sample<br>– indicating presence of macroalgae growth upstream | Referral for this location is connected to Site 002 and 003   |
| Presence of macroalgal growth and low DO observed in winter season                           | Referral to ASSAP to look for evidence of nutrient pollution nearby, farmyards or cattle access   |
| Presence of macroalgal growth and considerable low DO observed in winter season              | Referral to ASSAP, cattle access and drinking points were observed here and are possible sources of nutrient pollution which may have led to the algal growth. Investigate if these pressures can be addressed. |
| Considerably low DO, and some macroalgal growth upstream                                     | Referral to ASSAP, predominantly agricultural land use in surrounding area, investigate if there is a nutrient pollutant source upstream of this tributary  |
| -  | -   |
| Road drains and sediment run off from farm roadway   | Referral to ASSAP, investigate farm roadway for sediment runoff   |
| Sediment   | Referral to ASSAP, rule out sediment from farms along this tributary  |
| -  | -   |
| -  | -   |
| Fish Barrier   | Submit information for IFI about fish barrier and risk to FPM   |
| -  | -   |



# Farmers addressing issues in referral areas





# Farmers Finding Solutions



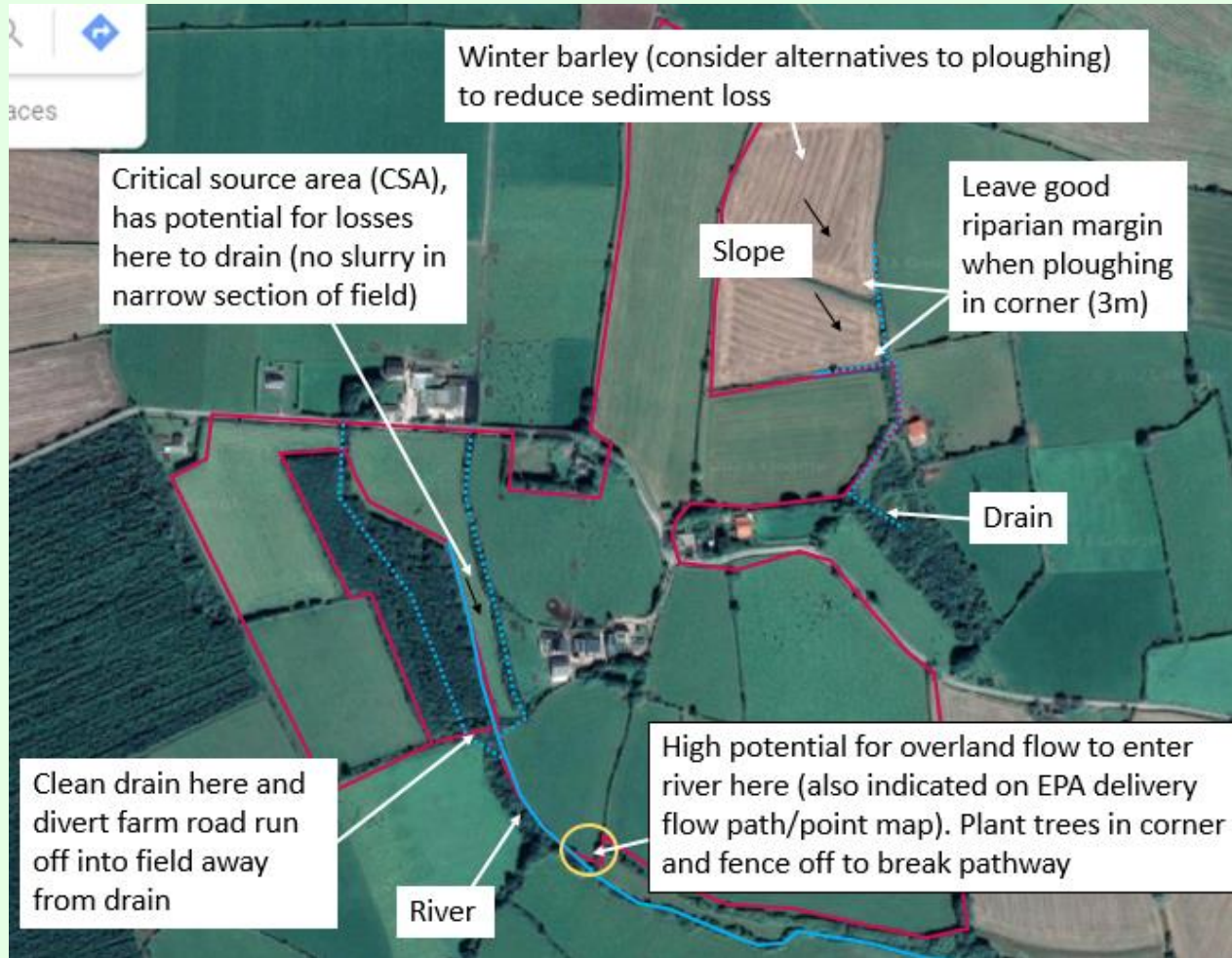


# Break the Pathway





# Plan for Each Farmer



Please note this is an example (not in Clodiagh PAA)



# The advice & implementation

- Up to 45 farm assessments carried out in the Clodiagh PAA
- Each farmer has advice and a plan
- All issues found relating to referrals addressed
- 93% engagement
- Total number of risks identified - 330

| <i>Issues Assessment</i> |                                      | <i>Average number of Issues per farm</i> |            |  | <i>8.25</i> |
|--------------------------|--------------------------------------|--|------------|--|-------------|
|                          | <i>Total No of Issues identified</i> | <i>330</i>                               |            |  |             |
|                          | <i>Risk Category 1 (High)</i>        | <i>227</i>                               | <i>69%</i> |  |             |
|                          | <i>Risk Category 2 (Moderate)</i>    | <i>44</i>                                | <i>13%</i> |  |             |
|                          | <i>Risk Category 3 (Low)</i>         | <i>59</i>                                | <i>18%</i> |  |             |
|                          | <i>Action Agreed</i>                 | <i>300</i>                               | <i>91%</i> |  |             |
|                          | <i>Action Not Agreed</i>             | <i>32</i>                                | <i>10%</i> |  |             |
|                          | <i>Unassigned</i>                    | <i>-2</i>                                | <i>-1%</i> |  |             |



# Good work in the Area

**ASSAP** Farming for Water Quality June 2021 Edited by Cathal Somers

### The Clodiagh Catchment Newsletter

The Agricultural Sustainability Support and Advisory Programme (ASSAP) is a national initiative to help and support farmers to improve water quality in 190 catchments across the country. The Clodiagh Catchment is one of the areas identified as being at risk of not meeting its water quality targets. A programme of sampling and assessing by the Local Authority Waters Programme (LAWRP) began in this area in 2019 to assist in identifying potential problems.

This newsletter will provide you with up to date information on monitoring and farm assessments carried out in the area since 2019.

The Clodiagh (Portlaoise), D16 rising from the Comeragh mountains and surrounding lower area flows east towards Rathgrainick village and towards the catchment just south of the village towards Clonra Point. The Clodiagh has two EPA monitoring points within the catchment. Monitoring points on waterbodies help to identify where measures are needed to protect water quality. The upstream monitoring point showed **moderate** water quality status in 2019, but recovered to **good status** in 2020. Whereas the downstream monitoring point has stayed at good water quality status for both of these years.

#### What issues were found?

As part of the monitoring carried out by LAWRP catchment scientists, a number of areas in the river were found to have macro algae growth present and low levels of dissolved oxygen in both winter and summer. This is an indication of nutrient pollution and the main risks identified following scientific surveys and advice from ASSAP scientists were:

- Nitrate leech due to free draining soils
- Phosphorus & sediment loss from overland flow, cattle access points and farm roadways
- Tiling, isolation & mulch of organic manure spreading positions
- Small point source issues from yards

To support and help farmers in the area, Teague and Gianbia have carried out free and confidential farm visits providing advice to farmers in the Clodiagh catchment with the aim of implementing practical solutions designed to improve water quality in the local area.

#### What Actions are Recommended in the Area?

- Soil test every 3-4 years, based on results apply lime, phosphorus (P) and potassium (K). Aim for index 3 for P & K to improve nitrogen efficiency, however on lower stocked farms index 2 is sufficient
- Adequate buffer margins to be maintained along all surface water drains when spreading organic manure (5m minimum increased to 10m if spreading in January or October). Grassed buffer margins are even more effective and will also improve biodiversity on the farm
- Ensure farmyard issues are collected and do not enter open drains or river
- Avoid spreading at high risk areas and times – poor grass growth, soil temperatures below 5.5 degrees, heavy rain forecast or wet waterlogged ground
- Use of clover can contribute up to 100kg nitrogen/ha, resulting in reduced chemical nitrogen application
- Prevent access by livestock into drains/streams and provide alternative drinking water source for

#### The Clodiagh\_010 Catchment



All farmers inside the Clodiagh\_010 catchment boundary (red line) can avail of the free and confidential ASSAP service. The blue line represents the river Clodiagh and the blue markers are the EPA monitoring points in the catchment. The EPA monitoring point in the water of the catchment was at moderate water quality status in 2019, however in the most recent update from the SPA has returned to the required good status. By following the mitigation advice above, you will be playing your part in maintaining the **Good** current good status.

Cathal Somers, Teague (085 3814821) Andrew Gianbia, Gianbia (085 0364499)



River Suir project to investigate threatened species – call for Citizen Scientists



- Friends of Clodiagh (Ann Phelan, Community Water Officer)
- Paul Carroll - local Pearl Mussel project (Waterford CoCo)



# Thankyou



**Working together  
towards a common goal**

**The scientist, the advisor &  
most importantly the Farmer**