



Referral Report

Agricultural Sustainability Support and Advisory Programme (ASSAP)

Advisors working with [ASSAP](#) offer a free and confidential advisory service to farmers. Where farmers agreed to take part in the programme the advisor carried out a farm assessment and recommended mitigation actions targeted to address the water issues identified by the Local Authority Waters Programme ([LAWPRO](#)).

Mitigation Actions Recommended

During a farm visit the advisor identifies issues that need mitigation measures implemented to reduce the risk to water quality. These are categorised as Risk 1, 2 or 3. Risk 1 issues are those that are most likely to impact on water quality and relate directly to the water quality issues identified by LAWPRO. Risk 2 and 3 are other issues on the farm that may require management or improvement which would indirectly lead to improvement in water quality.

Reporting

Waterbody scale reports are a summary of the issues impacting water quality and the mitigation actions implemented by farmers. They are a synthesis and interpretation of individual referral reports. They are prepared by ASSAP advisors following review with the catchment scientist.

Accompanying this report are summary details of the mitigation actions recommended and implemented in this waterbody. This report and the accompanying tables will be uploaded to the WFD App.

Summary

PAA	Upper Deel (Newcastle West)
No. of waterbodies	6
Water body name	Deel (Newcastle West)_010
Number of referrals	5
Referral codes	RA0000509, RA0000510, RA0000511, RA0000512, RA0000513
Advisor	Eimear Connery & Terry O'Mahony
Scientist	DJ Lane
Date	8 th February 2023 (Progress Report)

1 Referral 1:

1.1 Background information

Table 1: Information relating to PAA and waterbody name, draft and referral code, and referral date.

PAA	Waterbody	Draft referral code (LAWPRO excel code)	WFD App Referral code	Referral date
Upper Deel (Newcastle West)	Deel (Newcastle West)_010		RA0000512	15/07/2019
			RA0000513	15/07/2019
			RA0000511	12/02/2020

1.2 Referral evidence and significant issue

From LAWPRO referral

Deel (Newcastlewest)_010 was unassigned and at Review, however, work by Cork County Council has shown this waterbody was At Risk. Deel (Newcastlewest)_010 is now at moderate status (expert judgement). Nutrient and organic pollution were identified from multiple discharges from farmyards. Chemistry samples indicated ortho-P and ammonia concentrations above EQS. Field chemistry identified low dissolved oxygen, high conductivity. As well as anoxic bacteria/algae, sewage fungus in sections of the river. This waterbody is characterised by poorly draining mineral soils – consisting of two types: fine loamy drift with siliceous stones and clayey drift with limestones. There are areas of fine alluvial soil at the outlet of Deel (Newcastlewest)_010 and along the main channel. There is a small area of peat in Deel (Newcastlewest)_010 (the red bog). Phosphate, ammonia and hydromorphology (sediment, channelisation) are significant issues in Deel (Newcastlewest)_010. This was evident from the ecological assessments and chemistry sampling. Field assessments in the Deel (Newcastlewest)_010 identified a few drains discharging pollutants to river from farmyards. On one particular tributary, river samples were analysed on two occasions (21/10/2019 and 29/01/2020) for physical-chemistry, NH₄-N, MRP and TON for sites 1, 2 and 3. All orthophosphate results exceeded the mean Good status EQS in 29th of January 2020 and one result (0.077mg/l, Site 3) exceeded the 95%ile limit. All ammonium results exceeded the mean Good status EQS on that day and one result (0.149mg/l, Site 3) exceeded the 95%ile. TON was also elevated on occasions at the three sites.

1.3 Measures implemented following advice

Information relating to the final mitigation measures agreed and implemented – at referral scale.

Use data from Farm Assessment records to detail measures implemented.

Issues found on farmyards included dairy washings & silage effluent leaks. Where possible these have been rectified.

1.4 PAA Communications

Description of farmer meetings, discussion groups, KT events, media engagements, newsletters, training courses etc undertaken by ASSAP advisors in water body. Dairy co-op advisors to detail their engagements separately.

The initial farmer meeting was held on 16th April 2019. A letter was sent out to all farmers after this to offer a free farm visit in May 2019. A newsletter was sent out in January 2021 detailing work progress in the PAA. ASSAP advisors were invited to a discussion group in July 2022 to discuss local water quality issues.

1.5 Barriers to implementation of measures

Information relating to the barriers that prevented the implementation of mitigation measures recommend by ASSAP – at referral scale.

List of potential barriers:

Time (e.g., measure not implemented because farmer must wait until next growing season),

Cost (e.g., farmer can't afford to implement a measure),

No. of farms that have not engaged

Behaviour (e.g., reasons for no or lack of engagement or participation)

Social (e.g., age, health)

Policy (e.g., existing policy prevents the farmer from implementing a measure),

Non-ag issue (e.g., LAWPRO confirmed the issue is due to a pressure other than agriculture, such as WWTP),

Time lag (e.g., waiting for nutrient levels to decline after nitrate mitigation measures are implemented),

Unknown issue (e.g., where ASSAP and LAWPRO agree the pressure or issue has not been identified)

Some resistance to building of additional slurry/effluent storage due to the financial investment required. Time, money and resources were identified as a potential barrier.

1.6 Referral 1 Conclusion

Conclusion relating to the process from measures recommended to barriers to implementation – at referral scale.

All farmers engaged with the ASSAP service and agreed to most recommended measures except for when they saw it as not being feasible based on financial expense or lack of resources. More repeat visits may be necessary to ensure continued uptake.

2 Referral 2:

2.1 Background information

Table 2: Information relating to PAA and waterbody name, draft and referral code, and referral date.

PAA	Waterbody	Draft referral code (LAWPRO excel code)	WFD App Referral code	Referral date
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Upper Deel (Newcastle West)	<i>Deel (Newcastle West)_010</i>		RA0000509 RA0000510	12/02/2020
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2.2 Referral evidence and significant issue

From LAWPRO referral

Deel (Newcastlewest)_010 was unassigned and at Review, however, work by Cork County Council has shown this waterbody was At Risk. Deel (Newcastlewest)_010 is now at moderate status (expert judgement). Chemistry sampling indicated widespread elevated concentrations for phosphate (MRP), ammonia and total oxidised nitrogen. Invertebrate kick samples indicated nutrient and/or organic pollution. This waterbody is characterised by poorly draining mineral soils – consisting of two types: fine loamy drift with siliceous stones and clayey drift with limestones. There are areas of fine alluvial soil at the outlet of Deel (Newcastlewest)_010 and along the main channel. There is a small area of peat in Deel (Newcastlewest)_010 (the red bog). Phosphate, ammonia and hydromorphology (sediment, channelisation) are significant issues in Deel (Newcastlewest)_010. This was evident from the ecological assessments and chemistry sampling. River samples were analysed on three occasions (10/09/2019, 21/10/2019 and 29/01/2020) for physical-chemistry, NH₄-N, MRP and TON for sites 8, 10 and 11. All orthophosphate results exceeded the mean Good status EQS and seven results exceeded the 95%ile limit. All sites exceeded the mean Good status EQS on occasions for NH₄-N. Very elevated ammonium results were observed at sites 10 and 11 (exceeded the 95%ile EQS). TON was also elevated on occasions at these sites. In summary, results indicate that diffuse pollution is a significant issue in this waterbody in these two tributaries for this waterbody. The presence of elevated ammonium at two locations indicates that point sources may also exist.

2.3 Measures implemented following advice

Information relating to the final mitigation measures agreed and implemented – at referral scale.

Use data from Farm Assessment records to detail measures implemented.

The main issues identified in the referral area were P loss through overland flow, cattle access to streams and organic manure management with some issues identified within farmyards. Farmers were asked to improve their use of organic manures by observing the correct buffer zones, avoiding application at high risk locations at high risk times of the year. Management of CSA's and prevention of livestock access to WC were also key measures recommended.

2.4 PAA Communications

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2.5 Barriers to implementation of measures

Information relating to the barriers that prevented the implementation of mitigation measures recommend by ASSAP – at referral scale.

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Social (e.g., age, health)

Policy (e.g., existing policy prevents the farmer from implementing a measure),

Non-ag issue (e.g., LAWPRO confirmed the issue is due to a pressure other than agriculture, such as WWTP),

Time lag (e.g., waiting for nutrient levels to decline after nitrate mitigation measures are implemented),

Unknown issue (e.g., where ASSAP and LAWPRO agree the pressure or issue has not been identified)

Some resistance to building of additional slurry/effluent storage due to the financial investment required. Time, money and resources were identified as a potential barrier.

2.6 Referral 2 Conclusion

Conclusion relating to the process from measures recommended to barriers to implementation – at referral scale.

All farmers engaged with the ASSAP service and agreed to most recommended measures except for when they saw it as not being feasible based on financial expense or lack of resources. More repeat visits may be necessary to ensure continued uptake.

Waterbody conclusion for WFD App (optional)

Based on Measures Implemented (to be copied to "Progress Description" in EPA App)

The Deel PAA will require ongoing work and further engagement with the agricultural community and all relevant stakeholders to see improvements in water quality. Financial resources to help address some of the issues found on farm would be a huge benefit to this PAA.