

FH WETLAND SYSTEMS Ltd.

Knocknaskeagh, Lahinch, Co. Clare, V95 W6N4. Tel: 065 7075631
www.wetlandsystems.ie e-mail: reeds@wetlandsystems.ie

28 October 2025

Helen Conneely,
Ballinahown Community Development Company Ltd.,
Ballinahown,
Co. Westmeath.

Re. Water Management Plan Implementation Update, Oct 2025

Dear Helen,

Following is an update on the progress this year on the Water Management Plan at Ballinahown.

Stormwater Constructed Wetland

The stormwater wetland has been a central part of the Water Management Plan from the start; as a way to reduce potential overflows into the river and to improve the water quality there. The most recent step in the process has been liaison with the local community and in particular with the church, who are the owners of the land most suitable for construction of a stormwater wetland.

Over the past year the land has been surveyed for levels and discussions with the church have taken place. An area of land has been agreed as a potential location, so the next phase is finalise permissions and to proceed with design and construction.

The wetland here is expected to take in an estimated 50-60% of the stormwater from the village. Other pipes also flow beneath the older buildings within the village; and also to a point downstream of the Athlone road, as well as from the road itself. It is recommended that a drain survey be carried out to ascertain the source of the pipes entering both up-gradient and down-gradient of the Athlone Road so that these can be improved where needed as part of the Water Management Plan process.

Water Quality Assessment Report

Due to a combination of factors, the Q-value analysis of the River Worm proposed as part of the main Water Management Plan was postponed until this year. This is an assessment of the macroinvertebrates (insects and other similar species that live in the water) in the waterway. It gives a very clear reading of the long term quality of the water and helps to steer the decisions on how best to progress with water filtration measures going forward – although any waterway that is less than High Status (Q5) requires remedial input.

The report was carried out by ecologist Matthew O'Neill from Co. Clare and echoes the EPA Map assessment of Moderate Status (Q3), but does provide additional detail. Notably that while the downstream sampling point (below the village) is classed as Q3, the upstream point (above the stormwater/sewage ingress point) is classed as Q3/Q4, which is Moderate to Good. Thus this shows us that the impact of the village, be that from the stormwater pipe or other ingress points as outlined in the Water Management Plan, are having a detrimental impact on the water quality in the River Worm. Thus the measures in the plan are well worth

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implementation in full to help reverse this trend and for the village to have a net beneficial impact on the river. Potentially we could bring the downstream sampling location to Q4 or Good Status over time, even without reference to upstream improvements which may take place in parallel.

The recommendations in Matthew's report are as follows, with notes in italics as they relate the Water Management Plan and its implementation at present:

- Identify and mitigate pollutant source(s) within the town.
Already outlined in the Water Management Plan.
- Enhanced monitoring: SQ1 to be maintained as an impact monitoring site, SQ2 as a control site.
Note that improved access has been provided to facilitate meeting this recommendation.
- Catchment Survey: Carry out detailed longitudinal chemical/biological monitoring through the town reach to pinpoint pollutant entry.
Baseline Biological /Chemical analysis was carried out as part of the Water Management Plan and further assessment would be helpful in determining the pollution potential of remaining input points. Note that a drain survey, outlined in this letter, would also help to assess this.
- Habitat Assessment: Evaluate channel morphology and substrate to rule out physical barriers to full recovery.
Covered in general terms in the Water Management Plan, but yet to be completed.

Sampling Access Steps

As part of the macroinvertebrate sampling process, access to the river was improved to make it safer to get in and out of the lower sampling location. This is at a location downstream of the pond in the park. This work involved dropping the level of the ground between the footpath and the river, and creating level steps for access.

The work specifically remained above the water level in the stream to avoid interfering with the watercourse. The sides were covered in willow brash to minimise any erosion potential. The fence was moved slightly to remain in place between the park footpath and the river, for safety.

This area will only be accessed for water sampling, either chemical analysis or further macroinvertebrate sampling.



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Pond Assessment and Maintenance

The pond at Ballinahown was built c. 3 years ago. Plants are beginning to thicken up around the perimeter. Recent work included some clearing of the deeper areas of the pond to limit ingress somewhat. This is not essential from a habitat perspective, insofar as the current cover is only beneficial to insect and bird life.

However over time, it is likely that further plant ingress may reduce the habitat value for water fowl. It is proposed that c. 10% of the plants be removed per annum from the deepest areas of the pond. The removed material is to be used as a mulch around the apple trees, thus moving biomass and nutrients from the pond to the orchard over time.



The plants were removed by CE Scheme workers with initial guidance from FH Wetland Systems. The process had twin aims, to both clear the pond area and also generate plants for rain garden planting elsewhere.

School Playground Rain Garden

The lower corner of the concrete yard area at the school playground used to flood over a relatively extensive area in the past. To help remedy this the lawn adjacent to the concrete was dropped and covered in gravel to form a long low swale.



This was recently planted with yellow flag Iris to provide habitat and beauty along the edge of the playground. Wetland plants planted in October are moving towards dormancy, so they will not be at their best until next June 2026 or thereabouts. Planting was carried out by FH Wetland Systems.

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Recycling Area Rain Garden

Further planting was carried out in the low rain garden area at the recycling area. As with the school playground, this area has been designed to contain stormwater flows and minimise flooding elsewhere on pavements etc., while also providing stormwater storage to minimise overflow to storm sewers and also habitat and aesthetics. Planting was carried out by CE Scheme workers with guidance from FH Wetland Systems.

Community Consultation Process – online meeting

A community consultation process is planned for the coming weeks to provide an update to the current Water Management Plan process and to discuss any aspects that may be of particular relevance to those present.

This meeting is part of a wider consultation process which has been an ongoing part of the measures being carried out; both by FH Wetland Systems for any time on site where an opportunity to discuss the plan arises, or by the Community Development Company as part of their ongoing process within the village.

Zoom Consultation with Westmeath County Council

As part of the ongoing process of addressing stormwater and sewage inputs from the village, a zoom consultation is planned between FH Wetland Systems, the Community Development Company and Westmeath County Council. This is to help further assess the current state of maintenance on the existing stormwater infrastructure and Council-managed septic tank from the housing estate in the village.

Stormwater Filtration at Athlone Road

The stormwater from the Athlone Road currently flows into the river on the up-gradient side via a gully (circled red below). It is proposed that rather than having a direct flow from the street level to the river, that the stormwater pipe be intercepted and raised; and that the ground level be dropped (taking care to avoid undermining the garden wall) such that stormwater can be routed through a small stormwater wetland in this location. While this area is very limited, any improvements here will help to both filter and attenuate inflows from the road, reducing both pollution and downstream flooding potential.

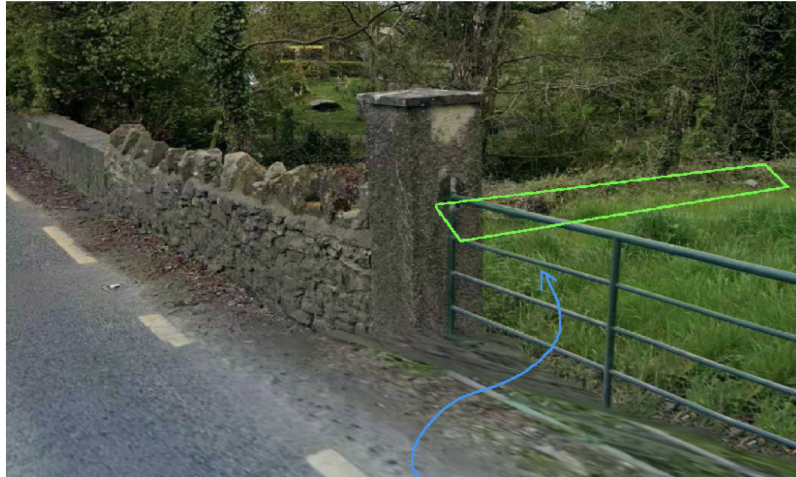


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On the down-stream side of the bridge, stormwater from the Athlone side may be intercepted directly at the gate (note that this is one of two gates, and this one is the lesser used of the two). Water can be routed through an open shallow swale into a stormwater wetland, indicated as shown in the green rectangle of ground near the river edge.

Note that this location is indicative only, and that no discussions have taken place with the land owner.



All in all it has been a very productive year for the Water Management Plan at the village, helping to move effectively through a number of items on the overall proposal list from the Plan and steadily progressing towards better water quality for the Worm and wetland habitats for local aquatic wildlife.

Do not hesitate to call or email with any questions you may have in regard to any of the points raised above.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'F. Harty'.

Féidhlim Harty