

## 5. Leading the way with reed bed technology for full treatment of wastewater



### Situation

While NI Water has many examples of using reed beds at the end of a conventional (mechanical) wastewater treatment system to 'polish' or 'purify' the water, Clabby is the first site in Northern Ireland to use reed bed technology for the full treatment of wastewater.

### Action

Known as Phragmifiltre®, this innovative system is the first reed bed technology in the UK that provides complete treatment of wastewater in one wetland system, with no pre-settlement and using little to no power. This signifies a major change in thinking towards a natural and sustainable alternative for wastewater treatment in the UK where reed beds have been traditionally used as a secondary treatment after settlement and as tertiary treatment to purify effluent prior to discharge.

Because of the unique way the Phragmifiltre® process stores and composts sludge on site, there is no need for tankers to visit the site to desludge - a major difference to the previous treatment works. This natural system also provides wildlife habitats - another important element that a conventional treatment works doesn't have.

### Results

The reed bed system at Clabby is an example of how NI Water and its project partners are working to promote 'greener' engineering solutions that have a smaller carbon footprint, require less power and ultimately have reduced impact on the environment. This has been recognised internationally, having been awarded a prestigious Green Apple Award to be presented in London in November 2021.



Clabby WwTW: February 2019 - Courtesy of BSG Civil Engineering Ltd



Clabby WwTW: September 2020 - Courtesy of BSG Civil Engineering Ltd