

# Iron / Manganese Removal

Iron and Manganese are commonly found in Irish groundwater. Next to hardness, the presence of iron is probably the most common water problem faced by consumers in Ireland. Clothing washed in water containing excessive iron may become stained a brownish colour. The taste of beverages, such as tea and coffee, may also be affected by iron. Manganese produces a brownish colour in laundered clothing, leaves black particles on fixtures and as with iron, affects the taste of beverages, including coffee and tea.

## Option A – Ecomix using vortech filtration technology



ECOMIX is a unique filtration media which solves 5 typical problems of well water in one step and in one system. It effectively removes all forms of Iron and Manganese, major part of organic matter, softens the water and provides odour control. ECOMIX is a homogeneous mixture of five high quality natural and synthetic ion-exchange and adsorption materials with catalytic properties. The regeneration is performed by a salt solution and does not require a large flow and volume of water that positively distinguishes it from standard technologies.

## Option B – Crystal Right



Crystal Right works by an ion exchange process, which removes iron, manganese and hardness. The minimum pH requirement is 6.0 and Crystal Right will raise the pH in these acidic waters. Crystal Right works at its best on clear water, i.e. when the iron/manganese are in a dissolved form. Crystal Right will also remove hardness with no extra treatment. The media bed can be sanitised with chlorine from time to time. The regeneration process is exactly the same as that used in a water softener and requires regeneration with salt.

## Option C – Oxidation



Filox & Birm Sand are relatively inexpensive materials which can be used for iron and manganese removal by oxidation. Both media act as a catalyst to promote the reaction between the oxygen and iron dissolved in the water. No chemical regeneration and therefore need never be replaced. Since the Filox/Birm media are so dense and heavy, higher & more regular backwash rates are required to clean the media. Filox may be used within the 5.0 - 9.0 pH range where as to use Birm a pH of 6.8 is required.