

Depth to bedrock is variable and is reported to reach up to 30 metres, however elsewhere bedrock outcrops locally or is within 1m of the surface. No outcrops were evident on the site.

GSI Quaternary maps record Devonian Sandstone dominated Till (boulder clay) at the site location. The thickness of the subsoil deposits in the area can reach up to 30m in places while elsewhere the subsoil is absent (at outcrop) or less than a metre.

The GSI has classified the shale and sandstone bedrock underlying the site as a locally important aquifer which is moderately productive only in local zones. Such rocks generally have a low permeability with groundwater concentrated in fractures. They are capable of yielding enough water to supply a well for a house or small farm (0.2-0.5 l/s) and may yield more in good fracture zones. Groundwater vulnerability for the area according to the GSI Vulnerability Map would be variable ranging from moderate to low (in areas where there are substantial subsoil deposits of low permeability) to high and extreme where overburden is thin or absent.

Regular monitoring and control measures at the facility during construction and operation will ensure the protection of groundwater.

The following control measures are proposed:

The processing of the mixed municipal waste produces an effluent. The effluent is stored in the holding tank and transported to Killarney WWTP for treatment. The new processing building will have a similar effluent collection system.

A stormwater treatment system is proposed on site. An interceptor for oil and solids separation is currently in operation on site and it is proposed to direct stormwater runoff from the interceptor to a lagoon and then to a reed bed which will discharge the treated stormwater to a percolation area. The solids from the interceptor will be cleaned out when required and the sludge sent to a licenced treatment facility.

A septic tank is being used for sewage treatment. It is proposed to install a Puraflo System to increase the treatment efficiency.

6.5 SURFACE WATER

The KWD Ltd. site is located on a drain which flows to one of the headwater tributaries of the Glanooragh River c. 0.5km downstream of the facility. The drain, though moderately or slightly polluted c.200m upstream of the facility, is seriously polluted at the point where it enters the site. At the time of this assessment, the drain was receiving effluent as it flowed through the site and remained seriously polluted at the downstream end of the site. The drain has no significant aquatic habitat value in the immediate vicinity of the site. However, the lowest c.450 m of the drain has some potential value as salmonid nursery habitat. At the point where it joins the Glanooragh River the drain is moderately polluted; no fish were recorded at this location.

The Glanooragh River was assessed for c.4km downstream of the drain confluence. The river is moderately polluted at all sites assessed. The biological assessment contains no evidence of an impact on the river from the Aghacureen Drain. Moderately polluted conditions and good populations of juvenile brown trout were recorded immediately upstream and downstream of the confluence with the drain. Juvenile salmon at very low densities were recorded 1km and 4km downstream of the drain confluence. Salmonid habitat is generally of a modest quality due to the low diversity of flow and the generally heavily silted substrate. None of the channel assessed was classified as good or better as adult or spawning habitat. Good salmonid nursery habitat comprised 26% of the channel assessed. The most significant habitat consisted of c.900m of