Pollardstown fen, comprising 222 ha is the largest remaining spring-fed fen in Ireland. It occurs in a north west facing valley on the northern margin of the Curragh approximately 3 km W.N.W. of Newbridge.

The vegetation of the area consists of semi-natural fen vegetation, damp grassland, woodland and reclaimed grassland which has recently been reflooded.

The semi-natural fen vegetation is herbaceous, dominated by Saw-sedge Cladium mariscus, Common Reed Phragmites communis, Blunt-flowered Rush Juncus subnodulosus and a variety of sedges Carex spp.

Damp, species-rich grassland occurs on wet mineral soils and partly drained shallow peat soils on the fen margin. The woodland area consists of a small patch of wet ash-dominated forest on the fen margin and a 51 ha area of Scots Pine/Norway Spruce plantation on cutover fen peat. Since the closing of a culvert the reclaimed grassland area has reverted to fen swamp and open water, although as yet it remains relatively species poor.

Pollardstown fen was one of the last known sites for the bittern in Ireland. There are some grounds for hope that the species will re-establish in Ireland at Pollardstown, now that the fen is reflooded. At present the central feature of the faunal interest at Pollardstown fen is the diversity of fenland invertebrate species found there that are associated with the herb layer stratum of vegetation.

Pollardstown fen has been in continuous existence since the last Ice Age and contains a complete palaeoecological record of the post glacial period.