

Freshwater Pearl Mussel Sensitive Areas

Version 10, June 2020

Explanatory text

Áine O Connor, updated June 2020

The Freshwater Pearl Mussel (FPM) Sensitive Areas data are available as:

1. A pdf map ('Freshwater Pearl Mussel sensitive areas June 2020 v10.pdf')
2. A GIS shapefile ('Freshwater_Pearl_Mussel_sensitive_areas_June_2020_v10.shp')

(<https://www.npws.ie/maps-and-data/habitat-and-species-data>)

The Freshwater Pearl Mussel Sensitive Areas show the **catchments** of the known extant populations of the Freshwater Pearl Mussel, *Margaritifera margaritifera*, in the Republic of Ireland.

Three categories of catchments are mapped:

1. Catchments of SAC populations listed in S.I. 296 of 2009
2. Catchments of other extant populations
3. Catchments with previous records: current status of the species unknown

These three categories have implications in relation to ecological assessment of plans and potentially damaging developments and activities, as follows:

1. **Catchments of SAC populations listed in S.I. 296 of 2009.** These 27 Freshwater Pearl Mussel populations are within Special Areas of Conservation (SAC) designated for the protection of the species. Site-specific conservation objectives for the restoration of these populations and their habitats have been published by the NPWS (see <https://www.npws.ie/protected-sites>). Under S.I. 296 of 2009, 27 draft Sub-basin Management Plans were developed to provide the programmes of measures necessary to achieve these objectives (see http://www.wfdireland.ie/docs/5_FreshwaterPearlMusselPlans/). Any plans or potentially damaging developments and activities in or overlapping with the catchments must be screened for Appropriate Assessment (Article 6 (3), Habitats Directive). The NPWS holds very detailed information on the distribution and abundance of the Freshwater Pearl Mussel in many of these catchments, and this is available on request to bona fide applicants (see: <https://www.npws.ie/maps-and-data/sensitive-data-access>).
2. **Catchments of other extant populations.** These mussel populations may lie (in part) within SAC, other nature conservation sites or in the wider countryside. Those populations within SAC were not considered of sufficient quality to warrant designation for the species and detailed restoration objectives, targets, plans or measures are unlikely to be developed. However, the potential effects of any plans, developments or activities on the populations, including the potential to cause 'environmental damage' as per the Environmental Liability Directive and Regulations, must be determined through SEA, EIA or other ecological assessment. The NPWS holds some detailed information on the distribution and abundance of the Freshwater Pearl Mussel in some of these catchments.
3. **Catchments with previous records: current status of the species unknown.** While there are no recent records of the Freshwater Pearl Mussel from these catchments, in most cases there has been little, if any, survey for the species since 1970. NPWS holds little information on such populations. If any plans, or potentially damaging developments and activities are proposed for these catchments, the Freshwater Pearl Mussel should be considered as a constraint and dedicated survey is recommended. For a very small number, e.g. the Larah River, Erne, dedicated survey has indicated the species is likely to be extinct in the sub-catchment.

In general, the scale and scope of Freshwater Pearl Mussel survey necessary to inform an ecological or environmental impact assessment will depend on the data available, as well as the potential for impacts to occur. The Freshwater Pearl Mussel is a globally threatened, long-lived and extremely sensitive species that can be severely impacted hydrological and morphological changes and by many forms of pollution, particularly sediment and nutrient pollution, all of which may arise from developments, activities or changes in any part of the catchment. Accordingly, conservation and protection of the species must occur at the catchment level. Owing to the likelihood that the development or activity may occur some distance from the impact, it is the scientific assessment and quantification of risk that requires the greatest attention during the ecological or environmental impact assessment.

Survey and Licensing

Any survey for the Freshwater Pearl Mussel is considered a potential disturbance to the species and, consequently, requires a licence under the Wildlife Acts, 1976 and 2000. The licence application form (“Application for licence to capture and/or humanely kill a protected wild animal for scientific or other purposes” under Sections 23 and 34 of the Wildlife Acts) is available at: <https://www.npws.ie/licences/education-and-science/capture-kill-for-scientific-purposes> (applications to survey should specify “survey only, none to be captured or killed”). Applicants are required to have demonstrable experience in Freshwater Pearl Mussel survey and the NPWS standard methods. Licences to handle or move¹ mussels are granted only in exceptional circumstances.

Standard NPWS survey methods are available in Irish Wildlife Manual No. 12 at <https://www.npws.ie/publications/irish-wildlife-manuals>. The Irish Wildlife Manual No. 122 of Freshwater Pearl Mussel monitoring methods includes important methods for surveying and assessing the condition of Freshwater Pearl Mussel habitat. It also includes some guidance on the interpretation of survey data against the attributes and targets in site-specific conservation objectives. See: <https://www.npws.ie/sites/default/files/publications/pdf/IWM122.pdf>

Further information on the Freshwater Pearl Mussel can be found at:

<https://www.npws.ie/research-projects/animal-species/invertebrates/freshwater-pearl-mussel>

¹ temporary or permanent translocation