



Plate 3.10. Japanese Knotweed adjacent to the R315

Continuing eastward the proposed channel crosses the R315 in the townland of Mullenmore North and turns south-east traversing a local access road (BL3), and fields of Improved agricultural grassland (GA1) and semi-improved Wet grassland (GS4). The proposed channel ends at this location, but a small dry drain, connects this location into a large spring that is described below

Washlands

The washlands comprise a complex of habitats incorporating wet woodland, springs and the associated Mullenmore Stream, Wet Grassland and Marsh habitats. No physical works are proposed in this area but water will be diverted from the bypass channel over these lands to Lough Conn during flood events. Much of the washland area is already flooded regularly by Lough Conn for long periods.

Spring fed ponds (FP1), as evident from upwelling water, provide the sources of the river and are surrounded by wet woodlands. Aquatic vegetation recorded within the springs included duckweed (*Lemna* sp.), broad-leaved pondweed (*Potamogeton natans*), yellow iris (*Iris pseudacorus*) and branched bur-reed (*Sparganium erectum*), horsetails (*Equisetum* spp.), bog bean (*Menyanthes trifoliata*) marsh marigold (*Caltha*

palustris), water mint (*Mentha aquatica*) and sedges (*Carex* spp.) were recorded from the emergent vegetation (Plate 3.11). No tufa formations were observed at these springs.

The upper branches of the river are partially eroding for short sections (Plate 3.12) but they quickly merge to form a watercourse that has been classified as a Lowland depositing river (FW2) with flat gradient, sluggish flow and silty substrate. This channel spends much of its time submerged under flood waters from Lough Conn.

The short eroding sections of the river were devoid of aquatic plants and emergent vegetation with only the aquatic moss *Fontanilis* sp. recorded. The following species were recorded from the lower depositing section of the river: yellow iris, branched bur-reed, horsetails, bog bean, marsh marigold, water mint. Floating bur-reed (*Sparganium emersum*) was recorded in-stream (Plate 3.13).



Plate 3.11. Lower Mullenmore Spring surrounded by emergent vegetation and woodlands



Plate 3.12. Short Section of Eroding River close to Mullenmore Springs



Plate 3.13 Lower Reaches of the Mullenmore Stream

The woodland within the washlands was classified as Wet willow-alder-ash (WN6). The woodland was dominated by grey willow, alder, ash with occasional sycamore. Ground vegetation included meadowsweet (*Filipendula ulmaria*), nettle (*Urtica dioica*) and yellow iris. These areas of wet woodland were found to correspond to the Annex I Priority Habitat Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*)* [91E0] (Plate 3.14).

The Wet grassland (GS4) located to the east of the R315 is heavily grazed by sheep. Wet grassland recorded to the east of this point and located to the south of the river are dominated by dense swards of soft rush (*Juncus effusus*). To the north of the river, fields are improved and subject agricultural activity.

To the north of the river on the approach to the shores of Lough Conn, an area of Marsh (GM1) (was recorded (Plate 3.15). A detailed botanical assessment of this habitat was carried out in July 2019 and is provided in Appendix VI. A drain forms western boundary of the marsh habitat and common reed (*Phragmites australis*) is dominant in this area. Species recorded from the marsh included water mint (*Mentha aquatica*), bog bean (*Menyanthes trifoliata*), marsh pennywort (*Hydrocotyle vulgaris*), lesser spearwort (*Ranunculus flammula*), marsh marigold (*Caltha palustris*), bird's-foot-trefoil (*Lotus corniculatus*), (*Lychnis flos-cuculi*), silverweed (*Potentilla anserina*), common spike-rush (*Eleocharis palustris*) and marsh ragwort (*Senecio aquaticus*), self-heal (*Prunella vulgaris*), marsh cinquefoil (*Comarum palustre*), lesser spearwort (*Ranunculus flammula*) and water horsetail (*Equisetum fluviatile*). Sedges and grasses including common cottongrass (*Eriophorum angustifolium*), common sedge (*Carex nigra*), bottle sedge (*Carex rostrata*), star sedge (*Carex echinata*), common yellow sedge (*Carex viridula* ssp. *oedocarpa*), tufted sedge (*Carex elata*) were present but did not dominate the habitat. This habitat lacked a well-developed, diverse bryophyte layer and *Calliergonella cuspidata* was the dominant bryophyte species *Calliergonella cuspidata*, with occasional *Climacium dendroides*, *Plagiomnium* spp. also present.

Moving to the north, the marsh grades into a relatively species rich Wet grassland (GS4). Lough Conn is classified as a Limestone Marl Lake (FL3) and is located at the eastern end of the washlands. The Mullenmore Stream discharges into this lake.



Plate 3.14. Annex I Alluvial Woodland adjacent to the Mullenmore Stream and Lough Conn



Plate 3.15. Marsh (GM1) grading into wet grassland (GS4) adjacent to Lough Conn

In addition to the above, the entire River Deel channel between Crossmolina and Lough Conn was the focus for an ecological walkover survey. This section of the river, whilst not directly affected by the proposed works, forms part of the benefitting lands and areas that previously flooded could potentially now no longer flood in a 1%AEP event. The main aim of the study was to identify areas of woodland along the river and to identify if these conformed to Annex I Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*) [91E0]. These surveys were undertaken in advance of some scheduled maintenance works by the OPW on the channel. This work is currently ongoing and has been assessed cumulatively with this flood relief scheme. The woodlands that were identified during the walkover surveys were further assessed in a dedicated woodland survey that is provided in Appendix V. A map of the habitats located between the Jack Garrett Bridge in Crossmolina and Lough Conn (as per OPW datasets) is provided in Figures 3.2a and 3.2b. The Wet Willow Alder Ash Woodland (WN6) that was recorded in this section of the River was classified as Annex 1 Alluvial Forests. The location of this habitat is provided in Figure 3.3 showing the extent of the River Moy SAC and Washlands.

