Survey of an area of the EU Habitats Directive Annex I Habitat 6430 Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels at Rathcoole Woods, Co. Dublin

Report for Four Districts Woodlands Group, prepared by Rory Hodd, Nimbosa Ecology

September 2023

A number of areas of wetland vegetation potentially corresponding to the EU Habitats Directive Annex I habitat 6430 Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels were identified within Rathcoole Woods by Wilson and Denyer (2021) and their significance was discussed and highlighted by Denyer and Hodd (2022). A survey of Rathcoole Woods and associated habitats by Hodd (2021) also notes the occurrence of tall herb vegetation, but did not survey these areas in detail, as the focus was on the overall matrix of habitats present. One of these areas, on the northwestern boundary of the site (O02412653), is in the path of a proposed access road in the latest SDCC Land Use Concept May 2023. Therefore, a detailed survey was required of this area of Hydrophilous tall herb vegetation in order to confirm its affinities to the Annex I habitat and to investigate its quality and condition. This area of habitat was visited on the 1st of August 2023 and notes were taken on its species composition and its physical attributes. The extent of the area of the habitat present was recorded using a handheld Garmin GPS. The condition of the habitat at two random locations was assessed with a 2x2m assessment plot, using the guidelines of O'Neill et al. (2013) and the, as yet unpublished, guidelines of Hodd et al. (in press).

Figure 1: Map showing the location of the area of tall herb vegetation surveyed, mapped in orange and indicated by arrow, at Rathcoole, Co. Dublin.

At this location (Figure 1), A rough open area occurs between the edge of recently developed alluvial woodland (which corresponds to Annex I habitat) and the back wall of the adjacent housing estates, of ca. 180m^2 in area. This area has some wetland characteristics, although a dyke with open running water, which previously ran alongside the wall was culverted in the past 20 years, which has likely led to much drying out of this area. 60% of this area, covering ca. 100m^2, was considered to be tall herb vegetation, corresponding to the Annex habitat Hydrophilous tall herb fringe communities, with the remaining area covered by rank False Oat Grass (*Arrhenatherum elatius*) grassland and rough and species-poor weedy vegetation, dominated by Creeping Thistle (*Cirsium arvense*) and scrub. The area of tall herb vegetation is of varying quality, with scattered stands and patches, the richest and most well-developed area occurring as a band along the edge of the woodland of 3x5m in area at O0241726531. Seven indicator species of Hydrophilous tall herb fringe communities are present in this area: Yellow Iris (*Iris pseudacorus*), Meadowsweet (*Filipendula ulmaria*), Great Willowherb (*Epilobium hirsutum*), Hedge Bindweed (*Calystegia sepium*), Meadow Vetchling (*Lathyrus pratensis*), Bush Vetch (*Vicia sepium*) and Amphibious bistort (*Persicaria amphibia*). Other species growing in association with the tall herb vegetation include Creeping Thistle (*Cirsium arvense*), Stinging Nettle (*Urtica dioica*), Meadow Buttercup (*Ranunculus acris*), Creeping Buttercup (*Ranunculus repens*), Cleavers (*Galium aparine*), Timothy Grass (*Phleum pratense*), False Oat Grass (*Arrhenatherum elatius*), Reed Canary Grass (*Phalaris arundinacea*) and Hairy Sedge (*Carex hirta*). In places Bramble (*Rubus fruticosus* agg.) is encroaching into the tall herb vegetation, but only in small quantities. Within the areas that correspond to Annex I Hydrophilous tall herb communities, the cover of positive indicator species varies from 60% to 90%, and the vegetation height averages ca. 1.5m.

The two conservation assessments both passed on all assessment parameters using both the assessment criteria of O'Neill et al. (2013) and the stricter criteria of Hodd et al. (in press). The results of the assessments using the criteria of O'Neill et al. (2013) are presented in Table 1, but as the methodologies of Hodd et al. (in press) are not yet published, the results of those assessments cannot be included here. The plots contained four and five positive indicator species, respectively, covering a total of 60% and 70% of each plot. The threshold to pass the assessment on these criteria are three positive indicator species and 40% cover of indicator species within the plot, so both plots pass on these criteria. The average vegetation height in each plot is also well above the required threshold, at 120cm and 130cm, respectively, with the required high to pass the assessment set at 50cm. There were no signs of significant disturbance within the plots, or in their vicinity, and no non-native species were recorded. Cover of negative indicator species, namely Reed Canary Grass (*Phalaris arundinacea*), was low in both plots, far below the threshold.

The outcomes of this survey show that the stand of tall herb vegetation at this location corresponds to the Annex I habitat 6430 Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels and is in good condition overall. Although it is relatively small and fragmentary and hydrologically on the drier end of the spectrum for this habitat, it can still be considered to be of conservation importance, particularly at a local level and within (South) County Dublin overall. This habitat typically occurs as small and fragmentary stands, with only a small overall area present across Ireland, so even the smallest fragment is of conservation importance. Furthermore, it is an important part of the overall matrix of habitats present at this site and the overall biodiversity value of the site would be diminished by its loss, in addition to negatively impacting the adjacent Annex alluvial wet woodland. This wetland habitat is also highly sensitive to any alterations in underlying water conditions

and groundwater hydrology. Therefore, this area should be preserved and its status recognised as an area of Annex I habitat, with appropriate management put in place. This will have implications for development within and adjacent to this area of wetland habitat and any future development plans should take full account of this, minimising disturbance to this habitat and the overall matrix of wetland habitats present.

Table 1: Results of two plots assessing the condition of the tall herb vegetation at this location, following the guidelines of O'Neill et al. (2013).

Plot	1	2
Grid reference	O0241226517	O0241826521
Vegetation composition	**Result**	**Result**
Total number of positive indicator species present ≥ 3	4	5
Cover of non-native species ≤ 1%	0	0
Cover of the following negative indicator species: *Glyceria maxima, Phalaris arundinacea, Phragmites australis*, collective cover ≤ 33%	1	3
Cover of scrub, bracken and heath (woody species) ≤ 5%	0	0
Vegetation structure		
Indicator species cover ≥ 40%	60	70
Mode herb height ≥ 50cm	120	130
Physical structure		
Cover of disturbed bare soil ≤ 10%	0	0
Area of the habitat showing signs of serious grazing or disturbance < 20m^2 in local vicinity	0	0
Positive indicator species present	*Filipendula ulmaria* *Iris pseudacorus* *Epilobium hirsutum* *Calystegia sepium*	*Filipendula ulmaria* *Iris pseudacorus* *Epilobium hirsutum* *Calystegia sepium* *Persicaria amphibia*

References

Denyer, J. and Hodd, R.L. (2022) Tall-herb swamp habitat at Rathcoole Woods. Unpublished report to Four District Woodlands Group, Rathcoole.

Hodd, R.L. (2021) A survey to assess the woodlands and associated semi-natural habitats at Rathcoole, Co. Dublin. Unpublished report to Four District Woodlands Group, Rathcoole.

Hodd, R.L., Perrin, P.M. & Daly, O.H. (in press) The status of four uncommon grassland types in Ireland. Irish Wildlife Manuals, No. 1xx. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage, Ireland.

O'Neill, F.H., Martin, J.R., Devaney, F.M. & Perrin, P.M. (2013) The Irish Semi-natural Grasslands Survey 2007-2012. Irish Wildlife Manuals, No. 78. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin.

Wilson, F. and Denyer, J. (2021). Ecological Assessment Of lands at Rathcoole, Co. Dublin. Report for South Dublin County Council.

Photographs

Photograph 1: General view of area of Hydrophilous tall herb vegetation fringing the edge of wet woodland at Rathcoole.

Photograph 2: View of Hydrophilous tall herb vegetation, showing species composition.

Photograph 3: View of assessment plot 1.

Photograph 4: View of assessment plot 2.