



Cush Wind Farm

# Environmental Impact Assessment Report

## Annex 5.8: Marsh Fritillary Survey Report

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# Cush Windfarm, Co. Offaly - Marsh Fritillary Survey

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Report on assessment of potential Marsh Fritillary habitat on site of proposed  
Cush Windfarm, north of Birr, Co. Offaly, 13-14<sup>th</sup> June 2022

## Methodology

The area was checked for the presence and abundance of *Succisa pratensis* (Devil's-bit Scabious), the Irish foodplant of the Marsh Fritillary (*Euphydryas aurinia*), as well as the butterfly itself. The general composition and structure of the flora was noted. Favourable and unfavourable sites and areas were noted, with specific locations being recorded using Irish Grid reference obtained from a hand-held Garmin. As the habitat and foodplant were very erratically distributed, the path followed open areas with mixed height of vegetation. The weather was overcast on the first survey day and was partly cloudy on the second; this meant that it was also necessary to close inspect flowerheads for roosting butterflies.

## Results

### 1. Cush, Galros East and Galros West townlands.

The Survey started close to the eastern extremity of the area considered potentially suitable for Devil's-bit Scabious, along the lane approaching from the east. A check of Garmin readings here with the aerial photography indicated that a correction of Easting -39m and Northing +31m had to be applied to produce an accurate Irish Grid reading, and this correction has been applied to all the grid points in this report. The eastern limit of Devil's-bit Scabious was found to be at IGR N0892410371 [Irish grid 100km "N"=67, all-numeric equivalent is 608924 710371]. From here to the E and NW along the margins of large drainage ditches the foodplant was only sporadically distributed. Further west, on the raised slopes adjacent to the N62, the vegetation contained none of the foodplant. The minor road leading west and the margin of two bog sections leading to the north were also checked (see fig. 1) but here again neither foodplant nor butterfly was observed. On the return eastwards, the area north of the large drainage ditches was inspected, and here conditions favourable for Marsh Fritillary were found eastwards of the point marked "C" and centred around point "B". The area extending approximately 100m in all directions from point B is considered potential Marsh Fritillary even though no butterflies were observed during this visit, at a time when the butterflies would normally be expected to be seen on the wing, or roosting.



**Fig 1.** Cush and adjacent townlands: Track of survey indicated by broken blue line. A: Eastern extremity of Devil's-bit Scabious; B: centre of area considered most favourable for occurrence of Marsh Fritillary; C: western extremity of area of Devil's bit Scabious. Red lines enclose the two areas of Devil's –bit Scabious observed.

## 2. Boolinarrig Big townland

The fields indicated in fig. 2 were inspected on the morning of June 14<sup>th</sup> in conditions of broken cloud, light winds and an ambient temperature of about 18C. The path followed is shown in blue. All these fields are essentially improved, or semi-improved grassland. Certain areas within them are more diverse; towards the SW southern margin of the most south-easterly field there are patches of gorse and ragwort (*Senecio jacobaea*), and a very small amount of Common Sorrel (*Rumex acetosa*), while in the western and central parts of the westernmost field there are areas of Meadowsweet (*Filipendula ulmaria*) and rush (*Juncus sp(p).*) Devil-s-bit Scabious was not observed anywhere in this area, and it is therefore considered totally unsuitable as Marsh Fritillary habitat. The adjacent areas consist entirely of coniferous forest with a small amount of marginal hardwood, or semi-improved grassland, or river margin, and are likewise not Marsh Fritillary habitat, although a small colony of the species known to occur less than a kilometre to the north, outside the study area.



**Fig. 2.** Boolinarrig Big survey area. The track followed during the survey is indicated by the broken blue line

### **Suitability of each surveyed area for adult and larval Marsh Fritillary**

#### Cush (Eglish) Townland

Only small amounts of *Succisa pratensis* occur in a restricted area here. Although the Marsh Fritillary may occur here on a temporary basis, the quantity of the foodplant present seems unlikely to support a permanent population of the species. There is also a limited supply of flowering plants in the flight season to provide a source of nectar for the adult butterflies

#### Galros East

The most favourable potential area for Marsh Fritillary occurs in this townland, in the areas marked "B" and "C" in figure1. *Succisa pratensis* is present here in densities approaching 20% ground cover locally in a mixed-height sward. This is considered a potential site for Marsh Fritillary, and though the species was not observed here during the survey. Although conditions were predominantly cloudy, flowerheads upon which the butterfly would normally nectar or roost were widespread, but no butterflies were present on them (Marsh Fritillary was indeed found on similar flowerheads on a site closer to Banagher on June 14<sup>th</sup> in mainly cloudy conditions).

### Galros West

No *Succisa pratensis* was found in the area west of the N62 Birr to Athlone road. This includes parts of both Galros West and Galros East townlands. Much of this area consists of bare peat without plant cover. This area is also lacking nectar sources for adult butterflies

### Boolinarrig Big

None of this area surveyed contained suitable habitat for Marsh Fritillary. If Marsh Fritillary has been observed here in the last few years, the species must have flown in from an adjacent area. Judging from the *Geohive* aerial imagery, the most likely suitable nearby area site is the field directly west of the westernmost surveyed field. This field is outside the study area, but a brief visual inspection of the area adjacent to field 1 suggests that the vegetation here is more undisturbed than in the inspected fields, and could possibly contain Devil's-bit Scabious.

## Summary

A small part of the Cush/Galros site appears to contain habitat suitable for the Marsh Fritillary, and although the butterfly was not observed on this occasion, its presence here is considered possible. Colonies of the butterfly may occur nearby on other bog-margin sites and may sporadically breed in the study area. The site at Boolinarrig Big was found to contain no Devil's-bit Scabious and is therefore considered unsuitable for Marsh Fritillary.