

Revised Carmarthenshire Local Development Plan 2018 – 2033

Caeau Mynydd Mawr Special Area of Conservation
Revised Supplementary Planning Guidance

EVIDENCE PAPER

HABITAT MANAGEMENT SPECIFICATIONS AND
MONITORING SUCCESS

DECEMBER 2019



Carmarthenshire County Council

Revised Local Development Plan 2018-2033

Caeau Mynydd Mawr Special Area of Conservation Revised Supplementary Planning Guidance

HABITAT MANAGEMENT SPECIFICATIONS AND MONITORING SUCCESS DECEMBER 2019

1.0 Introduction

1.1 This report sets out the aims of the Caeau Mynydd Mawr Special Area of Conservation (SAC) project and how it will manage land acquired within the Revised Caeau Mynydd Mawr Supplementary Planning Guidance (rSPG) area.

1.2 This report:

- States the aims of the Caeau Mynydd Mawr SAC project;
- Sets out how land is acquired by the project and its long term management;
- Defines the baseline condition survey of habitat used to identify suitable sites;
- Specifies the habitat management options;
- Sets out monitoring methods.

2.0 Project aims

2.1 To be in accordance with Natural Resources Wales (NRW) *Core Management Plan for Caeau Mynydd Mawr Special Area of Conservation* (Natural Resources Wales, 2016) the project aims to ensure that at least 100 hectares of suitable habitat in the rSPG area is managed in a way that will support the Marsh fritillary butterfly population. The project has over five years of experience in the managing marshy grassland habitat within the current SPG area. The aim of management is to maintain, enhance or restore sites which have the capacity to support the Marsh fritillary butterfly, in a way which is sustainable and cost effective.

2.2 Suitable habitat for the Marsh fritillary is usually tussocky marshy grassland with a varied sward height. It will contain Devil's bit scabious, an abundance of Purple moor grass, and a range of plants which flower during May and June, providing nectar sources for adult butterflies. Hedges and areas of scrub are important as they provide shelter.

2.3 Land may be acquired by the project, through purchase or in kind contribution. Alternatively it may be via means of voluntary five year management agreement with landowners wishing to manage their land for the benefit of the Marsh fritillary butterfly, for which they receive an annual payment per hectare, together with assistance in improving the habitat. This may include mowing of rank vegetation, scrub management, fencing, and re-introduction of grazing.

2.4 After installation of infrastructure and habitat restoration, the project aims to manage each site with grazing animals - horses, ponies or cattle, which are suited to the particular ground conditions and forage type. If this is not possible, it is unlikely that the site will be a realistic mitigation option. Occasionally small sites may be managed in other ways.

2.5 “...the success of the marsh fritillary population cannot be controlled per se but the amount of habitat under appropriate management can, and therefore the level of conservation effort is best focussed in this area”. The Two Moors Threatened Butterfly Project – (Plackett, J. and Bourn, N., 2012)

3.0 Assessing the baseline condition of land to be managed

3.1 A baseline survey of habitat suitability in the core landscape area was carried out in 2009 (Smith, R. and Gander, L., 2009), followed by a further study in 2018 (Carmarthenshire County Council, 2019). Both surveys used the methodology set out in *Habitat Quality Mapping for Marsh Fritillary Populations* (Fowles, 2005). These surveys identify the potential of sites to provide the habitat required by the Marsh fritillary. Sites containing areas of suitable habitat will be given priority for management. A pro-forma is completed for all sites prior to the offer of purchase or a management agreement with the following details:

Site grid reference
Site name and address
Owner name and address
Size of site (ha)
Area of suitable habitat- baseline survey (ha)
Distance to nearest Marsh fritillary record (m)
Site condition (see categories below)

3.2 The decision as to whether or not to proceed with purchase and/or management agreement on a day to day basis rests with a dedicated project officer. Where appropriate, the officer has access to professional advice, notably in the form of the Council’s finance, legal and corporate property divisions. Due regard is also given to the project partners (including Natural Resources Wales). Reference should be given to section 6.0 ‘Quantifying success’ - notably governance arrangements.

4.0 Habitat Management Specifications

4.1 Specifications are based on experience gained from managing sites for the project since 2013. Summer grazing with 0.3 - 0.4 livestock units per hectare is the suggested stocking density for grazing Marsh fritillary sites, and is a useful starting point. However experience has shown that the required level of grazing varies greatly depending on ground and vegetation conditions so no suggestion is given in the management guidelines. Very low levels of winter grazing with animals that are less likely to cause poaching, such as small native ponies, have also proved to be effective on sites with drier ground conditions (Greengrove; winter grazed, 7 larval webs found 2018) and can also help to control soft rush.

4.2 The following descriptions cover the different habitat types that the project may consider managing, and in each case describes the management required. Inevitably sites often contain a mix of different habitat types, and their successful management requires the balancing of these different needs. It is stressed that sites are dynamic and their habitat characteristics change over time, they are not static.

a) Site Condition: Rush infested

- * Contains suitable habitat
- ✓ Recent Marsh fritillary records within 1km
- * Suitable grazing
- ✓ Stock proof fence
- ✓ Water supply
- * Good access for stock
- ✓ Correct sward height
- ✓ Scrub at acceptable level

If a site is dominated by Soft rush it is unlikely to improve without substantial drainage work, and ongoing mowing and weed wiping. The site will tend to need heavier grazing than is ideal and will be unlikely to produce suitable habitat in the long term. Sites that are dominated by Soft rush will not usually be considered for management by the project, but this type of habitat may be present alongside more suitable areas.

b) Site Condition: Overgrazed

- ✓ Contains suitable habitat
- ✓ Recent Marsh fritillary records within 1km
- * Suitable grazing
- ✓ Stock proof fence
- ✓ Water supply
- * Good access for stock
- * Correct sward height
- ✓ Scrub at acceptable level

It is assumed that there is adequate fencing in place, although some maintenance may be needed. A stock handling area or improvements to access may help to make removal of stock at appropriate times easier. Reduce grazing levels by removing stock over winter, or reducing numbers by finding grazing elsewhere. It may be necessary to divide the site with fences to allow better grazing management and reduce grazing on the areas of better habitat. Including an area of less suitable habitat in the management agreement may be necessary to give 'lay back' land. Scrub encroachment tends not to be a problem if a site is overgrazed, but some mowing of bramble or rush areas may be needed initially and then occasionally in future years, as the correct level of grazing is rarely sufficient to completely control scrub.

c) Site Condition: Suitable

- ✓ Contains suitable habitat
- ✓ Recent Marsh fritillary records within 1km
- ✓ Suitable grazing
- ✓ Stock proof fence
- ✓ Water supply

- ✓ Good access for stock
- ✓ Correct sward height
- ✓ Scrub at acceptable level

If habitat is in generally suitable condition at the outset, and grazing is in place then very little initial or ongoing management may be needed. Some fence maintenance may be needed and mowing of areas of scrub may help further improve the habitat as the correct level of grazing is never sufficient to completely control scrub. Monitoring of grazing levels is necessary to ensure that the habitat remains in good condition.

d) Site Condition: Tussocky grassland habitat lacking Devil's bit scabious

- * Contains suitable habitat
- ✓ Recent Marsh fritillary records within 1km
- ✓ Suitable grazing
- ✓ Stock proof fence
- ✓ Water supply
- ✓ Good access for stock
- ✓ Correct sward height
- ✓ Scrub at acceptable level

If the grassland is of suitable structure (tussocky Purple moor grass dominated) but with little Devil's bit scabious present (this could be due to past sheep grazing or abandonment where a thatch of Purple moor grass has built up) then seeding or plug planting could be used to increase its abundance. The ground would need to be prepared by mowing and removing the cuttings. Some areas where the surface of the soil is scraped bare are also useful. The site could also be grazed to remove further vegetation and create some poaching and open soil. Seed would then be scattered at the end of the grazing season (September/ October) when the plant would naturally drop seed. Plug plants could also be planted at this time, or later in the winter. The site would then be left ungrazed or very lightly grazed the following year. If there was no Devil's bit scabious present in the immediate vicinity, seeding could be attempted but purchase or formal management agreement would not be offered until it was known if the site would become suitable.

e) Site Condition: Under-grazed Scrub Encroached

- ✓ Contains suitable habitat
- ✓ Recent Marsh fritillary records within 1km
- * Suitable grazing
- * Stock proof fence
- * Water supply
- ✓ Good access for stock
- * Correct sward height
- * Scrub at acceptable level

There may be fencing but this may be insufficient to contain the correct number of grazing stock, so improvement or replacement of fences may be necessary. Internal fencing may be needed to divide grazing units to close stock in to under-grazed areas. It may be necessary to install water troughs or construct access to natural water sources in the under-grazed areas (these tend to be furthest from drinking points). Under-grazed sites tend to suffer from some scrub encroachment. Areas of bramble and small willow or alder scrub may need to be removed with a mulcher or cut with a

chainsaw and removed from grassland areas. These fields would then need heavier grazing than usually recommended (as long as there are no recent records of marsh fritillaries in the field) to restore the grassland. Grazing levels would then be reduced after 2-3 years and monitored. An ongoing program of mowing may then be needed to control any regrowth of scrub.

f) Site Condition: Under-grazed Rank

- ✓ Contains suitable habitat
- ✓ Recent Marsh fritillary records within 1km
- * Suitable grazing
- * Stock proof fence
- * Water supply
- * Good access for stock
- * Correct sward height
- ✓ Scrub at acceptable level

Under-grazed sites often contain extensive areas of rank Purple moor grass where a 'thatch' has built up over a number of years due to absence of grazing. These sites then become unattractive to stock and may benefit from a series of controlled burns to remove the dead vegetation and allow fresh growth, followed by grazing. If this is not possible, mowing tracks into the grassland to encourage stock to graze these areas is recommended. Evidence has shown that a carefully executed controlled burn does not harm any marsh fritillary larvae present (e.g. Caeau Ffos Fach SAC 2018). A stock proof fence, access works and a water supply may be needed to facilitate grazing. If appropriate grazing stock are not available on site, a grazier may need to be found elsewhere.

g) Site Condition: Under-grazed Wet

- ✓ Contains suitable habitat
- ✓ Recent Marsh fritillary records within 1km
- * Suitable grazing
- * Stock proof fence
- ✓ Water supply
- * Good access for stock
- * Correct sward height
- ✓ Scrub at acceptable level

A site may become under-grazed due to lack of ditch maintenance as the ground conditions make it less accessible and attractive to grazing stock. These areas may even have been fenced off by the landowner or stock owner to prevent stock from entering due to concerns for their safety or loss of animals in the past. Restoration of drainage ditches and fencing to control stock may be needed, and it may only be possible to graze the site in dry weather. Installation of culverts may be needed to improve access to the fields- problems with wet ground tend to be worse around entrances. If appropriate grazing stock are not available on site, a grazier may need to be found elsewhere.

h) Site Condition: Severely Scrub Encroached

- ✓ Contains suitable habitat
- ✓ Recent Marsh fritillary records within 1km
- * Suitable grazing
- * Stock proof fence
- * Water supply

- ✘ Good access for stock
- ✘ Correct sward height
- ✘ Scrub at acceptable level

A site which has some suitable areas of habitat but has been abandoned or unmanaged may need a programme of scrub management over a number of years. There may be dense bramble and stands of scrub trees which will need to be removed with a mulcher or by hand with a brush cutter or chainsaw and the brush removed from grassland areas. Where possible, stumps should be treated with Glyphosate to minimise regrowth. The reason for abandonment is often a lack of fencing, so a new fence would need to be installed around the perimeter of the site and a stock handling area or improvements to the site access. If appropriate grazing stock are not available on site, a grazier may need to be found elsewhere. The fields may need heavier grazing than usually recommended (as long as there are no recent records of Marsh fritillaries) to restore the grassland. Grazing levels would then be reduced after 2-3 years and monitored. An ongoing program of mowing may then be needed to control any regrowth of scrub. Installation of a water trough or access to a natural water source may be needed.

5.0 Monitoring Requirements

5.1 With the baseline survey having been completed and suitable habitat having been identified, each site brought into the Caeau Mynydd Mawr project will then be monitored on a three year rolling basis to record its habitat condition in terms of continuing suitability for the Marsh fritillary butterfly, and to inform ongoing management decisions. Monitoring will make use of a variety of methods and will be based on criteria set out in *Common Standards Monitoring of Lowland Purple Moor Grass and Rush Pasture* (Joint Nature Conservation Committee, 2004), which are used by NRW to monitor the condition of the Caeau Mynydd Mawr SAC (Natural Resources Wales, 2016). Monitoring will record the following attributes and will be supported by management recommendations:

- Presence of adult Marsh fritillary butterflies and their larval webs
- Presence of Devil's bit scabious
- Presence of Purple moor grass
- Range of sward height across the field and grass litter cover
- Extent of Soft rush
- Extent of scrub cover
- Record and assessment of grazing levels
- Presence of invasive non-native species
- Management note; condition of boundaries, overgrazed areas, under-grazed areas, poaching, hedgerows, woodlands and mature trees, shelter

6.0 Quantifying Success

6.1 a) The Project: Baseline surveys, following the methodology set out in *Habitat Quality Mapping for Marsh Fritillary Populations* (Fowles, 2005) will determine the area of suitable habitat a site contains, while ongoing management is monitored against the attributes set out above (section 4.0) to ensure the habitat requirements of the butterfly are met.

6.2 b) The revised LDP: The rLDP will be monitored as part of the revised Annual Monitoring Report (AMR). The below sets out a broad framework for monitoring. This will be confirmed as part of the adoption of the rLDP. It should be noted that Carmarthenshire County Council's Performance Improvement Management Systems (PIMS) provides a mechanism for undertaking this reporting

6.3 c) Project Governance: The project steering group meets as required, at least once a year. It contributes knowledge and experience, with representatives from Carmarthenshire County Council Planning Department, Butterfly Conservation, Natural Resources Wales, The Wildlife Trust of South and West Wales and Menter Cwm Gwendraeth Elli.

6.4 Partnership working has been integral to the success of the project to date. As well as working with members of the steering group, the project works with other departments of Carmarthenshire County Council, PONT (Pori Natur and Threftadaeth), Mid and West Wales Fire and Rescue Service, Bumblebee Conservation, the National Botanic Garden of Wales and Aberystwyth University. The project works closely with local landowners and graziers, who supply livestock to graze sites where there is no appropriate stock available.

7.0 References

Fowles, A. P. (2005). *Habitat Quality Mapping for Marsh Fritillary Populations*. Staff Science Report No. 05/5/1.

Joint Nature Conservation Committee. (2004). *Common Standards Monitoring Guidance for Lowland Grassland Habitats*. ISSN 1743-8160 (online) <http://jncc.defra.gov.uk/page-2233>.

Natural Resources Wales. (2016). *Core Management Plan Including Conservation Objectives for Caeau Mynydd Mawr Special Area of Conservation (SAC)*. Version 4.

Plackett, J. and Bourn, N. (2012). *The Two Moors Threatened Butterfly Project Progress Report April 2011- March 2012*. Butterfly Conservation Report Number S12-03.