

June 2016

# Scoring Burren Lowland Grasslands

## General Instructions & Guidelines

These instructions and guidelines are subject to regular review and revision.

### Burren Programme

Old School House, Carron, Co. Clare.  
[Info@burrenlife.com](mailto:Info@burrenlife.com)  
[www.burrenprogramme.com](http://www.burrenprogramme.com)



### Health Assessment for Burren Lowland Grasslands (meadows and pastures).

This 'health assessment' looks at the 'conservation value' of Burren lowland grasslands (BLG), primarily in terms of their flora, as well as their current management and any threats/problems that might be present. Each eligible field or area is assessed by answering a series of questions which, along with the conservation value, is used to calculate a health rating (a score) for the field on a scale of 1 (poor) to 10 (excellent). The higher field scores attract higher payments under the Burren Agri-environmental Programme.

The approach was adopted in preference to paying only for a measure of species diversity as is done in some AES on the continent because it can be used to encourage farmers to proactively manage their grasslands to the benefit of biodiversity, management to an end being more tangible to farmers than 'flowers' alone. Management is a key factor in determining whether the conservation value of an area improves or disimproves over time so, by including a measure of the management, threats and problems, it is hoped to avoid the slow declines that may occur where they are not considered, declines which are unlikely to be detected until there is a drop in score band (e.g. where payments are made on banded numbers of flowering species).

This assessment should be used for flower-rich, semi-improved or reverting fields which have deeper soils that are more typical of the lowland hay meadows and grasslands than Burren winterages. Burren winterages and turloughs/alkaline fen, should be scored using their respective health assessments.

#### Characteristics of Burren Lowland Grasslands:

- Semi-natural grasslands, predominantly neutral although local geology means that many will have a strong calcareous element whilst others will have an acidic element due to leaching by high rainfall.
- Deeper soils (compared to typical winterage), usually averaging more than 10cm in depth. Typically with a thin soil horizon overlying glacial till.
- History of cultivation, but predominantly used for summer grazing or fodder production.
- Low fertiliser input (current).
- May have been reseeded in past but management has become less intensive during intervening years leading to reversion to lower productivity but increased/increasing botanical diversity.
- Flower-rich, wet or dry grassland.

#### Eligibility Criteria:

Eligible as BLG if:

- Conservation value (flora) is class C2 or higher. Field may have been improved in the past but is either reverting, or retains sufficient botanical diversity to reach minimum qualification.
- Minimum area of 0.2 ha (areas between 0.1 – 0.2 ha will be considered if the conservation value (flora) is class A, B1 or B2).
- Can be a flower-rich subplot of improved agricultural grassland (IAG).
- Can be sub-plot of BLG-type grassland within a winterage field if it has, or had, machine access that would, or did, facilitate more intensive management in the past, or is traditionally summer-grazed.
- Can consist of veins of BLG grassland running through limestone pavement (as is typical in parts of the East Burren).

Not-eligible as BLG if:

- Field is heathland rather than grassland (i.e. cover of dwarf shrubs e.g. *Calluna*, *Erica*, *Dryas* exceeds 25%).
- Field is thin soiled, winterage grassland where *Sesleria* (Blue moor-grass) is common.
- Areas of turlough and wet alkaline fen are ineligible as BLG unless they are a minor component of the assessment area and are grazed. However, associated BLG area within the same field can be sub-plotted and scored as BLG

Where the situation is unclear, contact the Burren Team who will look at the field/area and decide whether it is eligible as BLG or not.

## GENERAL INSTRUCTIONS

### Optimum Time for Carrying out BLG Assessments

- Scoring of management, threats and problems (section A and B) should be carried out between June and September.
- Assessment of the conservation value based on the flora should be carried out between mid-May and late-August by a person with good botanical field skills as per the instructions in section C1. Contact the Burren Team to arrange for the assessment to be carried out if you are unable to do so yourself.
- Assessment of any additional conservation value (section C2) should be done at the time of the two assessments above.
- **N.B. Fields that are to be mown should be scored immediately prior to mowing. If, for any reason, you are unlikely to be able to do this, contact the Burren Team ASAP to arrange for one of them to carry out the assessment.**

### Completing the BLG Score Sheet

- Use a separate score sheet for each field.
- Fill out the required farm & survey details.
- Record the current grazing practice and feeding management in the boxes provided.
- Refer to the scoring guidelines in this document and circle the appropriate value for each of the assessment criteria relating to management, problems and threats (A1-4, B1-4). Enter the conservation values on the sheet when known (C1 and C2).
- If carrying out the botanical assessment yourself, complete the conservation assessment (flora) by recording the species on the reverse of the form or, if using a field computer, in the 'cons val' sheet.
- You are advised to make notes in the comments box for each of the criteria as needed (N.B. you may think you don't need to make notes as you will remember, but your memory is likely to be less accurate when you're scoring a lot of fields (all start to blend into one) or after time has elapsed).
- Note in the box provided (C3), whether any habitats or archaeology have been damaged during the past year or if it appears recent but was not seen previously. Circle any of those that are relevant and if 'other' is selected, note the issue.
- A comments box is provided at the bottom of the sheet to record:
  - A brief description of the field and any additional conservation value not covered under the box at C2.
  - Actions required to improve scores (if any).
  - Issues relating to any work carried out under I-2 e.g. non-completion, poor quality work, failure to comply with conditions in plan or permission from NPWS or NMS, or failure to gather brash post scrub cutting.
  - Littering / dumping by farmer/contractors e.g. discarded herbicide cans, plastic bottles, feed bags.
- Consider taking photographs that are representative of the field or specific issues e.g. impact on feed sites or springs, examples of poor work, and note those taken on the score sheet as a reminder.

### Completing and submitting the BLG Calculator

- Complete the BLG Excel workbook. N.B. You can only select or enter data in the relevant places as the workbook sheets are locked to prevent unintentional changes. Please contact the BP team if you have any problems with this. Ensure that each sheet is labelled with the field number.
- Fill out the required farm & survey details on each Field Score sheet and, where relevant, the Field conservation value sheet (both are in the BLG workbook).
- Where relevant, enter the species occurrence in the conservation value sheet to calculate the conservation value for the field/area.

- Enter the scores for the individual assessment criteria into the BLG Calculator using the drop down menus. Make sure you enter the scores in the correct column. Also enter any comments from the scores sheet into the boxes provided; these can be amended annually as needed.
- The field scores are calculated automatically and appear in red beneath the relevant column.
- Add additional worksheets as required (right click on sheet tab, select 'Move or copy...' tick 'Create copy' box).
- Make sure you save the file using the farmer's name, I-1, year of assessment and initials of advisor e.g. Gallagher, Michael I-1 BLG 2010 SP. Do not just send in without amending otherwise we receive many files with the same name.
- Enter the field scores into the farm plan.
- Email the completed BLG Calculator to [info@burrenprogramme.com](mailto:info@burrenprogramme.com).

## SCORING GUIDELINES

These guidelines should be followed as closely as possible but judgement and discretion can, and should be, used where necessary e.g. figures such as ‘half’ and percentages are indicative rather than definitive. Photographs illustrating various aspects of the scoring criteria are provided in a companion document and on the Burren Programme Website ([www.burrenprogramme.com](http://www.burrenprogramme.com)).

### Section A. Relating to Current Pasture & Stock Management.

#### A1. Sward management (grazing & mowing).

***Aim:** to evaluate how well the current grazing or mowing regimes equate to those needed to maintain, or improve, plant diversity and consequently benefit a range of invertebrates. It is important to allow as many plants as possible to flower whilst preventing the grass from becoming so strong that it smothers the smaller flowers.*

#### Scoring Notes:

- Sward management is best assessed in summer when the extent of flowering/seeding plants can be seen.
- Sward heights & cover, where given, are only a guide. It is impossible to cover every management eventuality so discretion will be needed for individual sites. If in doubt contact a member of the Burren Team.
- Above optimum (i.e. too intense) management is probably more common than below optimum, although the latter arises on more productive BLGs that are grazed in winter only.

Description	Score
<p><b>Management too intense</b> (grazed too hard, significantly above optimum):</p> <p><u>Grazing:</u></p> <ul style="list-style-type: none"> <li>• Whole field tightly grazed during main flowering season particularly by sheep and/or horses.</li> <li>• Flowering of grasses &amp; herbs suppressed as heads grazed off. Few plants setting seed.</li> <li>• Sward lacks structure - short and tightly grazed with &gt;75% of sward &lt;5cm tall. Clumps and tussocks rare, even around dung.</li> <li>• Thin patchy litter layer largely absent.</li> <li>• Most ant hills (if present) damaged by stock.</li> </ul> <p><u>Mowing:</u></p> <ul style="list-style-type: none"> <li>• Mown in May or earlier.</li> <li>• Whole field topped every year or multiple times in a year.</li> </ul>	<p><b>-10</b></p>
<p><b>Management above optimum:</b> (grazed slightly too hard)</p> <p><u>Grazing:</u></p> <ul style="list-style-type: none"> <li>• Too heavily grazed particularly in spring/early summer (May &amp; June) so flowering of grasses &amp; herbs reduced but present. A proportion of plants setting seed.</li> <li>• Sward height may be somewhat varied but generally too short with <b>50-75%</b> of sward &lt;5cm tall.</li> <li>• Scattered tussocks &amp;/or litter covering only <b>2-10%</b> of the field.</li> </ul> <p><i>If field is only slightly overgrazed &amp; this is unlikely to be an annual occurrence e.g. due to adverse spring weather/grass growth use B, otherwise use A.</i></p> <p><u>Mowing/topping:</u></p> <ul style="list-style-type: none"> <li>• Mown around early June (A) or mid-June to mid-July (B) or.</li> <li>• If whole field topped once as opposed to only those areas with e.g. bracken or thistles, then score as for mowing times above.</li> </ul>	<p><b>A = -1</b></p> <p><b>B = 4</b></p>

<p><b>Optimum management:</b></p> <p><u>Grazing:</u></p> <ul style="list-style-type: none"> <li>Sward has a varied structure with ‘roughs and lawns’ i.e. variation in height of vegetation <b>At least 75%</b> of sward <b>5-15cm</b> tall (may be higher if field closed up for hay/haylage).</li> <li>A good proportion of plants across the field able to flower and set seed so field always looks flowery from May to August.</li> <li>Scattered tussocks and litter layer present but patchy and scattered across the field (<b>cover 11-25%</b>).</li> <li>Majority of ant hills (if present) intact.</li> </ul> <p><u>Mowing/topping:</u></p> <ul style="list-style-type: none"> <li>Mown around mid-July or later.</li> <li>Topping restricted to areas where needed e.g. to control bracken or thistles.</li> </ul>	<p><b>10</b></p>
<p><b>Management below optimum:</b> (too little grazing)</p> <ul style="list-style-type: none"> <li>Litter layer forming a mat (obscuring soil below) and/or tussocks of taller vegetation covering <b>26-50%</b> of the field.</li> <li>Sward may have been grazed in winter but not grazed during the summer leading to build up of rank vegetation during the year.</li> <li>Smaller herbs less common due to sward height.</li> </ul> <p><i>If field is only slightly below optimum use C but if well below optimum but better than negligible use D.</i></p>	<p><b>C = 5</b></p> <p><b>D = 0</b></p>
<p><b>Negligible - Little or no management evident:</b></p> <ul style="list-style-type: none"> <li>Signs of recent appropriate grazing during the past year absent or rare so most of the sward appears tall and unmanaged.</li> <li>Litter layer forming a dense mat (obscuring soil below) and/or tussocks of rank vegetation from previous year covering <b>&gt;50%</b> of the field.</li> <li>Smaller herbs smothered out by long grass - those present tend to be climbers or large species.</li> </ul>	<p><b>-5</b></p>

**A2. Impact of Supplementary Feeding.**

*Aim: to evaluate whether feed sites are located and managed in such a way as to minimise any negative impact on the flora, fauna, habitats, soil and ground water.*

**Scoring Notes:**

- Feed sites tend not to be a feature of BLGs unless used for winter or early spring grazing and the nature of the soil and growth means that they rapidly ‘heal’ unless feeding quite heavily or on wet ground.
- Any feed sites present should be situated on deep soil, not thin-soiled, rocky areas, well away from natural water bodies (ponds, lakes, rivers or springs).

Description	Score
<p><b>Negligible – no, or minor, visual signs:</b></p> <ul style="list-style-type: none"> <li>Minor cutting up of vegetation immediately around feed trough(s) which rapidly ‘heals’ over during the summer with vegetation typical of the rest of the field.</li> </ul>	<p><b>10</b></p>
<p><b>Between Low &amp; Medium:</b></p>	<p><b>5</b></p>
<p><b>Medium</b> – visible signs fairly obvious but restricted in area:</p> <ul style="list-style-type: none"> <li>Several feed troughs with noticeable but limited impact e.g. bare earth slow to grass over in summer or colonised by weed species. • Or, remains of hay or silage fed loose, forming small patches that cover less than 2% of the field. • Or, single round feeder with minor use.</li> </ul>	<p><b>0</b></p>

<b>Between Medium &amp; High:</b>	<b>-5</b>
<p><b>High</b> - obvious impact visible:</p> <ul style="list-style-type: none"> <li>Multiple feed sites (troughs, round feeders or trailers) resulting in considerable cutting up of the soil and bare areas that recolonise slowly (or with weeds) during the summer and affects a significant area of the field e.g. &gt;0.25ha (50x50m). • Or, round feeders with significant build-up of dung around them. • Or, Feed sites poorly located e.g. too close to an archaeological feature or natural water source, so having a negative impact.</li> </ul>	<b>-10</b>

**A3. Impact on Natural Water Sources.**

*Aim: to evaluate the impact of the farm stock on natural sources including springs, drinking ponds and other water bodies such as lakes or rivers.*

**Scoring Notes:**

- Natural water sources are not present in most BLGs. Types vary widely and include ponds, streams, springs, rivers, turloughs and lake margins so it is impossible to cover all situations. The following guidelines should be used (along with common sense) to determine individual levels of damage.

Description	Score
<p><b>No impact:</b></p> <ul style="list-style-type: none"> <li>Stock do not normally enter natural water source although they may be able to drink directly from it.</li> <li>No contamination of water with dung.</li> <li>Wetland vegetation present may be pocked with hoof prints but should be largely intact.</li> </ul>	<b>0</b>
<p><b>Low:</b></p> <ul style="list-style-type: none"> <li>Very small amount of dung present at the drinking point.</li> <li>Temporary water body that they can enter but dispersed impact with very little dunging on margins e.g. turloughs or temporary pools.</li> </ul>	<b>-7</b>
<p><b>Medium:</b></p> <ul style="list-style-type: none"> <li>Minor water contamination at drinking point.</li> <li>Wetland vegetation cut-up and discontinuous due to stock access but good areas still exist.</li> <li>Water should not show signs of nutrient enrichment e.g. algal blooms deriving from management in the field.</li> </ul>	<b>-15</b>
<p><b>High:</b></p> <ul style="list-style-type: none"> <li>Contamination of water body relatively high.</li> <li>Stock regularly enter water body or wet margins resulting in significant damage to wetland vegetation.</li> </ul>	<b>-20</b>

**A4. Bare Soil.**

*Aim: to evaluate the impact of grazing and management practices on the surface soil structure.*

**Scoring Notes:**

- Focus on bare soil in areas other than around regularly used areas e.g. gateways, by drinking troughs or on regular walking routes but include these if the amount of bare earth exceeds normal expectations.
- Ignore bare ground created by wildlife e.g. rabbits
- Small patches of bare soil, in the form of hoof prints, are desirable in a BLG as they act as a seed bed and are particularly important for the survival of annual plants. However, excessive bare soil tends to be colonised by weed species rather than the desired meadow flowers and grasses.

Description	Score
<p><b>Insufficient:</b></p> <ul style="list-style-type: none"> <li>Little or no bare ground visible across field either as hoof prints or when sward parted, due to presence of thatch or moss layer.</li> </ul>	<b>-3</b>
<p><b>Optimum:</b></p> <ul style="list-style-type: none"> <li>Small, scattered patches of bare soil in the form of distinct hoof prints averaging 15cm or less in diameter, distributed relatively evenly throughout the field or visible when sward parted.</li> <li>Bare soil around water troughs within normal limits i.e. no more than 2-3m band around trough.</li> </ul>	<b>5</b>
<p><b>Slightly above optimum:</b></p> <ul style="list-style-type: none"> <li>Greater density of hoof-prints with some amalgamating to form bare patches of soil &gt;15cm in diameter but overall cover of bare ground is less than 10% of field. • Or, field very rough due to excess ‘pocking’ by stock in wet weather.</li> <li>Bare soil around water troughs extending beyond 3m or exacerbated by water leakage.</li> </ul>	<b>-2.5</b>
<p><b>Too high:</b></p> <ul style="list-style-type: none"> <li>In summer, more than 10% of field with larger patches of bare soil due to stock or tractor/vehicle ruts.</li> </ul>	<b>-10</b>

## B. Relating to Undesirable and/or Invasive Species

### B1. Immature/Removable Scrub.

*Aim:* to assess the impact of, and threat posed by, the spread of native woody species, as well as those for non-native woody species (e.g. *Cotoneaster*).

#### Scoring Notes:

- Only immature scrub that the farmer would be encouraged to remove should be recorded (referred to as ‘removable’ scrub below). Any pockets of established trees or bushy scrub species (e.g. whitethorn) within the main body of the field on the field margins should be discounted.
- Percentages are given as a guide. It is important that you consider the level of threat posed by the scrub when interpreting the figures.

Description	Score
<ul style="list-style-type: none"> <li>No removable scrub within the body of the field. • There may be mature trees/bushes in the body of the field or a band of established scrub along the boundaries but it should not be actively spreading into the body of the field.</li> </ul>	<b>5</b>
<ul style="list-style-type: none"> <li>Removable scrub very infrequent usually &lt;2% of the main <b>body of the field</b>. • Scrub along the boundaries starting to spread slowly into the body of the field (especially briars).</li> </ul>	<b>-2.5</b>
<ul style="list-style-type: none"> <li>Removable scrub covering <b>2-5%</b> of the main <b>body of the field</b> – may be scattered or extending in from the field margins. • Scrub, particularly briars beginning to expand more rapidly.</li> </ul>	<b>-10</b>
<ul style="list-style-type: none"> <li>Removable scrub covering <b>6–10%</b> of the main <b>body of the field</b> – may be scattered or extending in from the field margins.</li> </ul>	<b>-15</b>
<ul style="list-style-type: none"> <li>Removable scrub covering <b>&gt;10%</b> of the main <b>body of the field</b>.</li> </ul>	<b>-20</b>



**B2. Bracken (local name = ‘ferns’).**

**Aim:** to assess the impact of, and threat posed by, bracken (‘ferns’) on Burren lowland grasslands.

Where bracken becomes dense it shades the meadow plants below, leading to the development of grass dominated vegetation and an increase in species that are better adapted to shady environments such as Primrose (*Primula vulgaris*), Dog violets (*Viola riviniana*) and woodland plants like Bluebells (*Hyacinthoides non-scripta*). Dense stands of bracken eventually modify the soil and lead to the meadow flora being replaced by one more akin to that of woodland. In general terms, bracken is a far greater problem or threat on the deeper soils of Burren lowland grasslands than on the thin soils of the winterages.

**Scoring Notes:**

- The assessment only covers bracken (*Pteridium aquilinum*); it does not include any other species of fern such as those most commonly associated with scrub or woodland that may grow on shady margins or rocky outcrops.
- The timing of the field assessment may affect your perception of bracken on a site. The extent and density of bracken may be underestimated when visiting sites in May or June as the fronds (bracken leaves) will not have fully unfurled, but you can get a good idea of its distribution.
- You must walk over a representative area of the field to estimate the cover otherwise you may overestimate it if you stand in one place and just look across the field.
- Bracken growing amongst scrub will undergo a ‘growth spurt’ in the years immediately after scrub cutting. This should be excluded from the assessment for the two years post cutting particularly where control measures are being implemented.
- Bracken litter should be recorded under A2: litter.

Description	Score
<b>Negligible:</b> • Bracken either absent from body of field or present with negligible cover i.e. a few scattered fronds only. • It may be present in the narrow band of field margins that is neither mown nor grazed under optimum management but must not extend beyond this area.	<b>5</b>
<b>Low:</b> • Bracken fronds in body of field more obvious but scattered, somewhat stunted (average height less than 2ft/60cm tall) and not forming a closed canopy for the most part. • Denser stands should cover no more than 5% of the body of the field. • Flora beneath bracken typical of rest of field.	<b>0</b>
<b>Medium:</b> • Bracken in the body of the field forming denser stands that cover 6-20% of the area. • Bracken in dense stands often averaging more than 2ft/60cm tall. • Flora beneath dense bracken reduced in terms of number of species and density compared to rest of field.	<b>-5</b>
<b>High:</b> • Bracken forming dense stands that cover more than 20% of the field. • Obvious difference shift in the flora beneath the bracken from typical meadow plants to those of shady areas.	<b>-15</b>

**B3. Purple Moor-grass (also known locally as ‘White Grass’).**

**Aim:** to assess the impact of, and threat posed by, Purple moor-grass (*Molinia caerulea*) on Burren lowland grasslands and the adequacy of the grazing regime in managing it.

Purple-moor grass (PMG) is a natural component of certain Burren habitats including wetland vegetation around flushes and springs, grasslands on heavier, clay soils, and certain types of heath found mainly in the north western and western parts of the Burren. It does not occur in most BLGs but is a feature of some of those with heavy clay soils that may have their origins in lowland heaths which were limed and fertilised in the past to improve their productivity. PMG is most palatable to grazing stock from late spring to late summer, after which time stock tend not to graze it. If not grazed at the right time, the dead leaves build up to form a thick litter layer which eventually smothers out other grasses and flowers, thus reducing the floral diversity and the carrying capacity of predominantly winter-grazed meadows. Known locations are mainly in the east of the Burren (Gort lowlands area) but they may occur elsewhere.

**Scoring Notes:**

- You need to familiarise yourself with PMG so that you can identify it in the field. It is easily identified when in flower but as it does not flower until late summer (July/August) you need to be able to recognise it when in the vegetative state.
- Lack of adequate grazing in summer leads to a build-up of PMG litter which is obvious as dead, white grass and is the origin of the local name 'White Grass'.
- To check the impact of the PMG litter, pull back the dead leaves in small test patches (approx. 30-50cm<sup>2</sup>) and compare the cover of other grasses and flowers relative to areas with little or no PMG litter.

Description	Score
<b>Negligible:</b> • Light summer grazing preventing PMG from forming dense stands with a thick litter. • Never forming extensive, dense patches whose associated litter is suppressing other grasses and flowers.	0
<b>Low:</b> • Thick layer of dead PMG leaves (which is suppressing the growth of other grasses and flowers) not exceeding 10% of the assessment area.	-5
<b>Medium:</b> • Thick layer of dead PMG leaves (which is suppressing the growth of other grasses and flowers) not exceeding 20% of the assessment area.	-10
<b>High:</b> • Lack of summer grazing leading to build-up of PMG litter so that a thick layer of dead PMG leaves is suppressing the growth of other plants on more than 20% of the assessment area.	-20

**B4. Weeds.**

**Aim:** to estimate the frequency and distribution of plants that are not a normal part of the plant communities of well managed Burren lowland grasslands and whose presence is usually associated with past or present management e.g. heavy feeding, overgrazing or agricultural improvement.

**Scoring Notes:**

- The broad definition of a weed is 'a plant growing somewhere it's not wanted, be that a garden, an arable crop or even, a species-rich grassland'. For the purpose of this assessment, 'weeds' include plants associated with soil disturbance as well as some plants that are commonly found in more intensively managed land where the grazing levels or soil nutrients are higher.
- The most common weeds are: Creeping thistle (*Cirsium arvense*), Spear thistle (*Cirsium vulgare*), Cleavers (*Galium aparine*), Greater plantain (*Plantago major*), Curled dock (*Rumex crispus*), Broad-leaved dock (*Rumex obtusifolius*), Ragwort (*Senecio jacobaea*), Nettle (*Urtica dioica*).
- Silverweed (*Potentilla anserine*) may indicate past feed site damage or excessive bare soil in which case it is treated as a weed. However, it is a natural component of turloughs and some wet grasslands which experience periodic flooding & is occasionally seen where there is subsoil flushing, hence it should not be included as a weed in such cases.
- Plants that indicate past reseeding or agricultural improvement such as Perennial rye-grass (*Lolium perenne*) and high levels of White clover (*Trifolium repens*), can be considered weeds but are generally excluded from this assessment as their frequency is usually inversely correlated with the fields Conservation value (see C1) and hence covered by proxy.

Description	Score
<b>Negligible:</b> • Weeds absent or rare	5
<b>&lt;2% cover:</b> • Weeds generally restricted to disturbed areas around gateways, feeders or water troughs. • Weeds may be sparsely scattered through fields or a few, very small, clumps	0
<b>2-5% cover:</b> • Either weeds occurring as occasional individuals throughout the sward or restricted to, but obvious, in smaller sections of the field. • May be a few, larger clumps	-5
<b>6-10% cover:</b> • Weeds obvious throughout sward or at higher density in parts of the field. • May be a few significant patches.	-10

**>10% cover:** Weeds species frequent or common throughout sward.

**-15**

### **C. Conservation Value and Ecological Integrity.**

#### **C1. Conservation Value – Flora.**

As the conservation value is slow to change under normal circumstances, it need only be calculated every 3-5 years unless there is reason to suspect an increase or decrease in the conservation value which would impact on the field score and hence payment.

To calculate the conservation value in terms of plant diversity, the field should be surveyed as follows:

- Between 4 & 10 recording stops should be made in the field depending on its size. The stops should be representative of the vegetation of the body of the field i.e. avoid other habitats that might be present such as small flushes, and stay at least 5m in from the field margins. The recording stops should be carried out at random (e.g. walk a pre-determined number of steps between stops so that there is no subliminal influence on stop location) when walking a zig zag route through the field.
- At each stop, record any of the listed species in groups 1-5 (Appendix 1) seen in an area of approximately 2m radiating from the centre of the stop (i.e. circle with diameter of approx. 4m) on the score sheet (paper or digital). Additional species of interest not on the sheet should also be recorded (contact the Burren Team as to which of the 5 species groups they belong to). The assessment is designed to be relatively quick, need not be exhaustive and should take a maximum of 15 minutes per stop (although it may take slightly longer depending on the condition of the sward). Where fields are obviously very species-rich, recording can be focused on species in groups 3 - 5 only.
- Enter the species data into the 'Cons val' sheet of the BLG calculator and it will calculate the conservation value (flora) automatically based on the frequency of occurrence of the recorded species. The frequency definitions are as follows:
  - Rare - found at 25% or fewer stops
  - Occasional – found at 26 to 50% of stops
  - Frequent – found at 51 – 75% of stops
  - Common – found at 76 – 100% of stops

Class	Description	Calculation	Points
<b>Class A</b>	<p style="text-align: center;"><b><u>Very high conservation value</u></b></p> <ul style="list-style-type: none"> <li>• High floral diversity, many plant species characteristic of the local conditions (e.g. wet or dry meadow) present</li> <li>• High number of Grp 3, 4 &amp; 5 'Quality' species that are occasional to common</li> <li>• High ratio of herbs to grass – usually in excess of 50:50</li> </ul>	<p><b>Total score for Grp 5 species only &gt; 30</b></p> <p><u>Calculated by:</u></p> <ul style="list-style-type: none"> <li>• 5 pts for each Grp 5 sp. that is frequent or common</li> <li>• 3 pts for each Grp 5 sp. that is occasional</li> </ul>	<b>60</b>
<b>Class B1</b>	<p style="text-align: center;"><b><u>High conservation value</u></b></p> <ul style="list-style-type: none"> <li>• Similar to above but fewer Grp 5 species occasional to common.</li> <li>• High ratio of herbs to grass – often in excess of 50:50</li> </ul>	<p><b>Total Score for Grps 4 &amp; 5 sp. &gt; 30</b></p> <p><u>Calculated by:</u></p> <ul style="list-style-type: none"> <li>• 4 pts for each Grp 4 sp. that is frequent or common</li> </ul>	<b>50</b>

		<ul style="list-style-type: none"> <li>• 2 pts for each Grp 4 sp. that is occasional</li> <li>• Plus score for Grp 5 sp. calculated as for Class A</li> </ul>	
<b>Class B2</b>	<p style="text-align: center;"><b><u>Good conservation value</u></b></p> <ul style="list-style-type: none"> <li>• Fewer Grp 4&amp; 5 species occasional to common</li> <li>• Ration of herbs to grass should be in excess of 30:70</li> </ul>	<p><b>Total Score for Grps 3, 4 &amp; 5 sp. &gt; 30</b></p> <p><u>Calculated by:</u></p> <ul style="list-style-type: none"> <li>• 3 pts for each Grp 3 sp. that is frequent or common</li> <li>• 1 pt for each Grp 3 sp. that is occasional</li> <li>• Plus score for Grps 4 &amp; 5 sp. calculated as for Class B1</li> </ul>	<b>40</b>
<b>Class C1</b>	<p style="text-align: center;"><b><u>Lower conservation value but has potential</u></b></p> <ul style="list-style-type: none"> <li>• Potential to increase conservation value with tweaking of management.</li> <li>• Grp 4 &amp; 5 species if present tend to be restricted to field margins.</li> </ul>	<p><b>Total Score for Grps 2,3,4 &amp; 5 sp. &gt; 30</b></p> <p><u>Calculated by:</u></p> <ul style="list-style-type: none"> <li>• 2 pts for each Grp 2 sp. that is frequent or common</li> <li>• 0 pt for each Grp 2 sp. that is occasional</li> <li>• Plus score for Grps 3,4 &amp; 5 sp. calculated as for Class B2</li> </ul>	<b>25</b>
<b>Class C2</b>	<p style="text-align: center;"><b><u>Lower conservation value but has potential</u></b></p> <ul style="list-style-type: none"> <li>• Similar to above but with few or no Grp 4 or 5 sp.</li> </ul>	<p><b>Total Score for Grps 2,3,4 &amp; 5 sp. from 20 to 30.</b></p> <ul style="list-style-type: none"> <li>• Calculated as for Class C1</li> </ul>	<b>15</b>
-	<b>Ineligible</b>	<b>Total Score for Grps 2,3,4 &amp; 5 sp. &lt;20</b>	-

### **C2. Additional Conservation Value.**

Whilst botanical diversity is a good proxy, it does underestimate the true biodiversity value of some less flower-rich fields. In order to recognise this and to reward instances of positive management above and beyond that required, all fields, other than those with highest conservation value as determined botanically (i.e. Class A), can receive an additional 10 points which will increase the field score by 1. The following are examples of additional conservation management or biodiversity indicators that may qualify for the 10 point bonus:

- Leaving agreed flower-rich areas uncut at the time of mowing.
- Nectar sources that are important for pollinators, butterflies and moths relatively common in the field.  
For example:
  - Clovers (red, white, pink and small yellow).
  - Dandelions (after May will be mainly seen as leaves rather than flowers) and other yellow dandelion-type flowers.
  - Thistle-type flowers (although classed as weeds, thistles have a high biodiversity value as a nectar source for pollinators, butterflies and moths, and their seeds form an important part of the diet of some birds (e.g. Goldfinch) later in the year).
  - White umbellifers including hogweed
- Frequent ant hills
- Higher botanical diversity on field margins e.g. more group 4 and 5
- Presence of adjacent habitat (e.g. lake, wetland, woodland) whose invertebrates are supported by floral diversity of meadow.

Contact the Burren Team if you think that there are other examples of additional conservation value present.

**C3. Other negative activities.**

Description	Score
<p>Any activity which leads to destruction or damage to all or part of the habitat and not covered elsewhere in the scoring system (e.g. indiscriminate herbicide use, ploughing, reseeding, dumping of spoil or rubbish) should be recorded here so that it can be taken into account when calculating the field score.</p> <p>The adjustment to the score will depend on the impact of the activity and will be agreed by the farm advisor and the Burren Team.</p>	<p><b>0 to -40</b></p>

## Appendix 1

<u>Group 1 Species.</u>	<u>Group 2 Species.</u>	<u>Group 3 Species.</u>
<i>Cirsium arvense/vulgare</i>	<i>Achillea millefolium</i>	<i>Cardamine pratensis</i>
<i>Heracleum sphondylium</i>	<i>Cirsium palustre</i>	<i>Hypochaeris radicata</i>
<i>Senecio jacobaea</i>	<i>Crepis/Leontodon* sp.</i>	<i>Iris psuedacorus</i>
<i>Taraxacum officinale</i>	<i>Medicago lupulina</i>	<i>Leucanthemum vulgare</i>
<i>Trifolium repens</i>	<i>Odontites verna</i>	<i>Luzula campestris</i>
	<i>Plantago lanceolata</i>	<i>Myosotis arvensis/dicolour</i>
	<i>Ranunculus acris</i>	<i>Prunella vulgaris</i>
	<i>Ranunculus ficaria</i>	<i>Ranunculus bulbosus</i>
	<i>Rumex acetosa</i>	<i>Trifolium dubium</i>
	<i>Veronica chamaedrys</i>	<i>Trifolium pratense</i>
	*excluding <i>L. hispidus</i> (in grp 5)	<i>Viola sp.</i>

  

<u>Group 4 Species.</u>	<u>Group 5 Species.</u>	
<i>Agrimonia sp.</i>	<i>Achillea ptarmica</i>	<i>Lathyrus linifolius</i>
<i>Angelica sylvestris</i>	<i>Ajuga reptans</i>	<i>Leontodon hispidus</i>
<i>Carex sp.</i>	<i>Alchemilla sp.</i>	<i>Linum catharticum</i>
<i>Centaurea nigra</i>	<i>Anemone nemorosa</i>	<i>Lotus corniculatus</i>
<i>Conopodium majus</i>	<i>Anthylis vulneraria</i>	<i>Lychnis flos-cuculi</i>
<i>Daucus carota</i>	<i>Blackstonia perfoliata</i>	<i>Ophioglossum vulgare</i>
<i>Filipendula ulmaria</i>	<i>Botrychium lunaria</i>	Orchid <sup>1</sup>
<i>Lathyrus pratensis</i>	<i>Briza media</i>	<i>Parnasia palustris</i>
<i>Potentilla erecta</i>	<i>Caltha palustris</i>	<i>Pedicularis sylvatica</i>
<i>Rhinanthus minor</i>	<i>Campanula rotundifolia</i>	<i>Pilosella officinarum</i>
<i>Stellaria graminea</i>	<i>Centaureum erythraea</i>	<i>Pimpinella saxifraga</i>
<i>Trisetum flavescens</i>	<i>Cantaurea Scabiosa</i>	<i>Plantago maritima</i>
<i>Vicia cracca/sepium</i>	<i>Euphrasia sp.</i>	<i>Polygala vulgaris</i>
	<i>Filipendula vulgaris</i>	<i>Primula veris</i>
	<i>Galium verum</i>	<i>Primula vulgaris</i>
	<i>Gentiana verna</i>	<i>Sanguinium minus</i>
	<i>Geranium sanguineum</i>	<i>Sesleria caerulea</i>
	<i>Geum rivale</i>	<i>Succisa pratensis</i>
	<i>Helictotrichon pubescens</i>	<sup>1</sup> Note species at bottom of sheet if identified
	<i>Hyacinthoides non-scripta</i>	
	<i>Hypericum sp.</i>	
	<i>Knautia arvensis</i>	
	<i>Koeleria maculata</i>	