

#### How to use the Hen Harrier Programme Species Rich Grassland Scorecard

The Species-rich grassland is very similar to the Wet Grassland scorecard. The weightings of the different sections are different and the value of these rare habitats is greater. Where they occur, their value should be recognised.

#### What grasslands are eligible for scoring using the Species Rich Grasslands Scorecard?

Any grassland that is designated as Special Protection Area (SPA) is eligible to be scored for the Hen Harrier Programme. Fields with fourteen or more positive indicator species described in A.1 of the Species Rich Grassland Scorecard are eligible for scoring as Species-rich Grassland.

#### When should scoring be carried out?

Fields should be scored between May 15<sup>th</sup> and July 31<sup>st</sup> in any given year. If a field is cut for silage, scoring should be undertaken prior to mowing.

\*Note that scores must be submitted to the Hen Harrier Project team on or before July 31<sup>st</sup> to be eligible for payment.

#### Walking the field

These fields have been identified from aerial photographs and so any differences on the ground (merging/dividing fields, incorrect habitat assigned etc.) must be noted and submitted to the HHP Project Officer. Species-rich grasslands cannot be identified from an aerial photograph and so there will be no indication on the HHP farm plans that a field is species-rich. A field and a management unit is not necessarily interchangeable at this stage. The SPAs often have large parcels with many fields that are not stock-proof and could be considered a single management unit. The Programme is designed to encourage stock-proofing and more sensitive management of these larger units.

The area eligible for payment is that determined to be in active agricultural management, including areas grazed by livestock and/or mown as meadow. The size and extent of the actively managed area should be determined by walking the full field.

To score the unit, walk a 'W' through the field or fields and along the field margins, including the boundaries. Features such as internal earth banks and grassy slopes that are grazed and accessible by stock can be included in the assessment.

If discrete areas within a management unit look likely to differ by one or more score, mark these areas on the map. The overall score should be calculated for the entire field, if necessary taking into account the proportion of higher/lower scoring areas within the unit.

#### Time Allocation

Make sure you allow sufficient time for carrying out the assessments. It will probably take longer than you think the first time you assess a field but will become faster as you become more familiar with the assessment criteria and the individual farms.





# Comments/recommendations

Note any comments or management actions in the box provided on the sheet which may be useful to the farmer as management advice to improve score, should they wish to do so. Management actions may include increase or decrease in stocking rate, scrub removal, weed control or removal or change in location of supplementary feeding areas.

# Calculating the HHP Species Rich Grassland score

Add up all marks awarded for Section A (A.1 to A.3) and Section B (B.1 to B.6) to get the score for the management unit. If a score total is 5.5, then the field should receive a score of 6.

# Section A. Ecological Integrity Assessment

Section A assesses the current situation in the field in relation to the ecological integrity of the site.

# A.1 What is the number of positive indicators present in the field?

Positive indicators have been selected as they indicate better managed semi-natural grasslands which have received limited fertiliser, herbicide or other agricultural improvement.

#### Guidance for scoring A.1

During the walk of the field, count the total number of species/group – presence is considered to be a positive indicator which occur in the field.

On the score card, tick off how many positive indicators are present in the field.

#### Note: A minimum of 14 indicator species are required for a field to be scored as species-rich grassland.

# A.2 What is the combined cover of positive indicators throughout the field?

Higher cover of positive indicators can be associated with better quality grasslands, unless one or a few dominate, which can indicate sub-optimal quality.

#### Guidance for scoring A.2

The amount or proportion of the ground covered by a plant(s) in a field is the cover. Cover of a plant is based on the visible above ground parts, i.e. leaves, flowers and stems.

It is important to assess the overall cover of all positive indicators throughout the entire grassland sward.

Bear in mind that positive indicators may not be evenly distributed throughout the field – each species has different distribution patterns and densities, some occur a few everywhere, others are naturally found in clumps throughout, while others may occur with sparse distribution (e.g. orchids). Some patches may have a higher cover than others.





A.2 - Threshold	Description
Poor: <5%	Positive indicators occurring in small patches or very scattered over the field, not highly visible when looking down on the sward (you have to search to find them) and missing from the majority of the field. The majority of the sward looks 'grassy'.
Low: 6-15%	Positive indicators occurring scattered or in patches over the entire field, occasional occurrence when looking down or across the sward. Much of the sward looks 'grassy'.
Med-High 16 – 30%	Good cover of a number of positive indicators when looking down on sward, but positive indicators will be missing from large patches of the field. Parts of the sward may appear 'grassy'.
Medium: 30%+	Positive indicators very visible over more than half of the sward and provide high amount of ground cover. Good diversity of leaf shapes and flowers (look for different shapes and colours) apparent in the sward when looking down onto it. Only small patches of the field may appear 'grassy'.

# A.3 What is the cover (total) of negative indicators / agriculturally favoured weeds?

Negative indicators include such as Perennial Rye-grass and Nettles indicate intensification/improvement. White Clover (*Trifolium repens*) may be a negative indicator, but also occurs naturally in grassland swards – use discretion if this species is considered to be problematic within the field. Agriculturally favoured weeds are those listed in the Noxious Weeds Act 1936 – Ragwort (*Senecio jacobea*), Creeping & Spear Thistle (*Cirsium arvense, C. vulgaris*) and Broad and Curled Dock (*Rumex obtusifolius, R. crispus*).

# Guidance for scoring A.3

Look for overall cover of negative indicators weeds throughout the field, including at entrance gates and along boundaries. Negative indicators other than the species listed in A.3 may be problematic within a field, e.g. rank grasses such as Cock's-foot, False-oat Grass and Purple-moor Grass. List and score cover of any other species which may be considered a negative indicator; make note in the comments as to why the species is considered problematic.

If invasive species such as Japanese knotweed or Giant Hogweed are present within or adjacent to the field, this should be noted in the comments and brought to the attention of the farmer. Invasive alien species such as Giant Hogweed, Himalayan Balsam and Japanese Knotweed can have a serious impact on ecosystems. Removal strategies depend on the species involved and the extent of the problem. In serious cases and in all cases involving Japanese Knotweed or in close to watercourses specialist advice should be sought.

A.3 - Threshold	Description
High: >30%	Occurring in dense patches or abundant throughout the field. Very visible in the
	sward.
Med: 6-30%	Occurring in medium to large patches in the field and not limited to previous feeding sites, trackways, field boundaries, water troughs and gateways. Readily visible in the sward.
Low: 1-5%	Scattered or small clumps of weeds / negative indicators. Where present at gateways, water troughs, field boundaries and along well-used trackways, this cover should be less than 5% and the weeds should not extend into the main body of the field.
Negligible: <1%	Absent, or scattered individuals or very small patches in the field







# A.4. Field boundary quality

High quality field boundaries are important for Hen Harrier. They provide habitats for plant species, refuges for habitats that don't occur elsewhere in the farm and vital habitats for insects, small mammals and birds. Small mammals and birds are prey species for Hen Harrier and other raptors. Hedgerows and well-vegetated earth banks are the most important field boundaries for the Hen Harrier Programme.

# Guidance for scoring A.4

Note the quality of the field boundaries as you walk the field margins. The overall condition will be decided on based on the condition of ALL of the field boundaries. If one of the field boundaries is poor or moderate then you cannot assign all the field boundaries a good score. See images in Appendix for examples of good and poor field boundaries. Treelines on their own are rarely stock proof but they are often present with an earth bank or a drainage ditch.

A. 4	Description
Threshold	
Poor	<ul> <li>No natural field boundaries present. Wire fences only.</li> <li>Hedgerows narrow (~1m wide) and low (&lt;1.5m). Gappy, not stockproof. 1 or fewer native woody species per 30m length of hedgerow.</li> <li>Conifer trees present.</li> <li>Earth banks poorly vegetated and/or evidence of herbicide use. Earth banks not continuous, bare soil visible.</li> <li>Drainage ditches extensively damaged by livestock and or vehicle use. Ditches poorly vegetated, have few aquatic plants or with extensive algal growth and/or evidence of herbicide use. Bare soil visible</li> <li>Invasive alien species present, e.g. Himalayan Balsam or Japanese Knotweed present.</li> <li>Stone walls in need of maintenance, no lichen or moss cover.</li> <li>Treelines of conifer species only.</li> </ul>
Moderate	<ul> <li>Some natural field boundaries present</li> <li>Hedgerows up to 2m wide and at least 1.5m tall. Gaps present but only occasional along the base. 'A' shape absent, Hawthorn/ Whitethorn often top heavy. 2-3 native woody species per 30m length.</li> <li>No more than one conifer tree per 30 m.</li> <li>Earth bank field boundaries well-vegetated, normally grassy. Evidence of herbicide use or excessive cutting of the vegetation.</li> <li>Drainage ditch well-vegetated, normally grassy. Some limited damage to drainage ditches at fording or drinking points.</li> <li>No invasive alien species, e.g. Himalayan Balsam or Japanese Knotweed present.</li> <li>Stone walls in good repair but lichen and moss cover poor. T</li> <li>Treelines including some native species</li> </ul>
Good	<ul> <li>All field boundaries natural</li> <li>Continuous hedgerows 2-4m wide and at least 1.5m tall. No gaps along the base. Varied structure with 'A' shape throughout. Suitable for nesting birds. 4 or more native woody species per 30m length.</li> </ul>





-	No conifer trees.
-	Earth banks with many flowering plants. Acid grassland or heath vegetation
	typical. Bilberry and Heather common. Thick vegetation that could be used by nesting birds.
-	Drainage ditches containing typical aquatic flora e.g. Pondweed and Water Parsnip. No damage to drainage ditches at fording or drinking points.
-	No invasive alien species, e.g. Himalayan Balsam or Japanese Knotweed present.
-	Stone walls in good repair with good lichen and moss cover.
-	Treelines of mature native trees only

Management advice

- 1. Infilling of hedgerows will reduce gappiness. Infilling with species that will grow tall may improve the height eventually.
- 2. When advising on what species to use as infill, have a look around the local area. Willow grows very well in many of these areas and won't spread too much if managed properly. Other species such as Blackthorn, Whitethorn, small amounts of Gorse etc should all grow well depending on drainage and topography of sites.
- 3. Some field boundaries may benefit from cutting. Cutting in an 'A' shape, i.e. narrower at the top and wider at the base is best.
- 4. Well-vegetated earth-banks should be left as they are. Do not recommend planting a hedgerow on these sites. Herbicide use and cutting should be reduced if possible.
- 5. Drainage ditches should have typical aquatic vegetation in them, receive no herbicides and be wellvegetated unless they were cleaned out that year. When they are cleaned out, it should be done carefully to remove excess vegetation only, not deepen them and expose soil.

# A.5. Scrub diversity and structure

\*Note: Consider whether large blocks of scrub more than 0.2ha in size should be assessed separately.

Patches of established scrub provide habitat for small birds and mammals. Scrub that is thick at the base and is not dominated by a single species is more beneficial. Scrub with ground vegetation is preferable to scrub where dense shade inhibits ground level vegetation.

Established scrub patches or scrub expanding from big thick field boundaries are a positive feature in a Hen Harrier landscape. Leggy and gappy bases provide little additional nesting habitat or shelter. Single-species scrub that is well-vegetated at the base can provide nesting habitat and shelter for small birds. In some cases it can also provide nesting sites for Hen Harrier. This type of scrub is often quite homogenous and so is not optimal for this Programme. Established scrub with a well-vegetated base and a diversity of species provides a structurally diverse addition to a field and can boost prey numbers.





What is the scrub diversity and structure?

A. 5 Threshold	Description	Structure
Poor	No scrub or only isolated leggy gorse bushes, larger patches are dominated by Gorse and of uniform height. No herb layer, ground covered in dead Gorse leaves.	
Moderate	Single-species scrub (often Gorse) with diverse height and irregular edge. One or two other wood plant species may be present, though rarely. Base sparsely vegetated. Suitable nesting area for small birds present. Emergent trees may be present.	
Good	Scrub with a mix of several woody plant species of varied heights throughout. Highly structurally diverse with some compact inaccessible areas. Emergent trees rare.	

# A.6. Vegetation structure

# A.6a Grazed fields

Sward structure is an important contributor to both prey numbers and prey accessibility. Rush tussocks create foraging and nesting opportunities for small rodents along with Meadow Pipits and other ground nesting birds. Sward structure responds well to management and significant progress can be made in a single growing season. Sward structure does not refer to rush only and includes the structure of all the vegetation in the field. A high quality site will have a mix of vegetation heights throughout. This is usually delivered through a diverse sward including rushes but also low-growing grasses, sedges and herbs, medium height vegetation such as Wood Rush, Devil's Bit Scabious, Sharp-flowered Rush and Buttercups and tall vegetation such as Soft Rush, Yellow Flags, Meadow Sweet and Purple-loosestrife. Well grazed fields that receive regular chemical fertiliser are more likely to score lower, as are fields that are dominated by so much soft rush that it can't be walked through, let alone grazed.

# Guidance for scoring A.6a

Make note as you walk through the field the height of the vegetation and the cover of the vegetation. The key thing to note is whether all the vegetation is one uniform height and if it is, what height is it? If it is all really short then you should select <30% tall vegetation. If the vegetation is really tall and rank (difficult for you to walk through and very difficult for an animal to walk through) it should be considered to have >70% rush cover unless it was a roost site. The Project Officer will let you know if it is a roost site.

Fields dominated by well-grazed grass but with some (<30%) tussocky tall vegetation would be considered sub-optimal. If there is tall vegetation throughout consider whether or not you should be using section A6b.





Fields with tall or medium height vegetation throughout (>30%) and short grass and sedge would be considered to have two heights of vegetation throughout. Once rush cover is >70% the score is at risk if a good structure is not maintained (usually through regular low intensity grazing).

Optimally the field will have a mix of short, medium AND tall vegetation throughout. Again, once this is dominated by rushes (>70%) the score will fall if management does not maintain good structural diversity.

A.6a Structure	Vegetation Structure
Poor ->70% thick standing rush	
Suboptimal -Tall vegetation cover is patchy. No areas with distinct tussocks. Grassy areas dominate field.	
-Uniform vegetation height throughout the field. *Ensure this is not a silage field if this is the case.	
Good -Tall/medium and short vegetation throughout. -May contain frequent tall tussocks or frequent sharp-flowered or jointed rush. -Some grass/sedge dominated areas also occur.	





Very good -Tall and medium and short vegetation throughout, e.g. tall dense soft rush, some areas of shorter sharp- flowered rush and some grass/sedge dominated areas. -Some areas with tall tussocks.		
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#### A.6a Silage fields

Fields that are cut for silage can still provide many important environmental public goods though they are less likely to provide the best structure for Hen Harrier prey and so the maximum score for a silage field is 80 as opposed to 100. The wider the field margins and the more after grazing that takes place the better these fields will perform.

#### Guidance for scoring A.6b

In silage fields pay particular to the field margins. If they field has not been cut when you survey it would be best to visit it after it has been cut to assess the margin width. This could be done when surveying another farm in the area for example.

#### Management advice

- 1) Consider the impact of any obligations the farmer has under the GLAS scheme. This is particularly relevant to participants in GLAS 1.
- 2) In very heavy rank vegetation consider the use of a mulcher or a heavy duty flail rather than a conventional mower. Physical control methods must be followed up by grazing
- Encourage field margins for silage fields. Leaving wide field margins that have no herbicides or insecticides applied and wide headlands will yield full points for silage fields. The field margins can be grazed.





#### Section B. Threats and Future Prospects Assessment

Section B assesses threats to the ecological integrity of the field. It also takes into account things that will result in a further degradation of the ecological integrity if they persist.

# Section B.1 What is the cover of dense, dead plant litter?

Plant litter is the dead plant material from previous years' growth. It builds up over time where there is insufficient management (no grazing or mowing or burning) to remove it – this build of litter is called thatch. Fields that are not adequately grazed for a couple of years consecutively develop a build-up of plant litter. This impacts on the species-richness of the field and also the accessibility of prey for Hen Harrier. Plant litter can be beneficial for rodents, particularly Bank Voles (mainly Munster), for this reason the tolerance on the score card is reasonably high.

#### Guidance for scoring B.1

Within a field, unpalatable areas can exist and may not be grazed, or grazed more lightly than the surrounding sward. This may result in a patchy distribution of litter. It is the overall cover of plant litter within the field that is being assessed.

B.1 - Thresholds	Description	
Very High: >50%	Over 50% of field has dense plant litter which forms a continuous thatch of dead material throughout. When looking down at the sward, the dead litter is thick and green plants appear to be sparsely pushing through the litter; much of the field is likely to have a light brown/white colour due to the density of leaf litter.	
High: 26-50%	Dense or patch plant litter present up to 50% of the field, and not just confined to unpalatable areas or areas where livestock may have difficulty accessing. Where the litter is very dense, green plants may be sparse and parts of the field may seem light brown/white colour due to the density of leaf litter.	
Moderate: 10-25%	Small to medium areas of thatch. These may be located in less palatable areas or in localised areas which are difficult to access. The grassland sward should be quite visible throughout the field.	
Low: <10%	Less than 10% of the field has either sparse litter throughout, or small areas where litter forms a slightly thicker thatch. Litter may be confined to small parts of the field where livestock may have difficulty in accessing, e.g. an area that is too steep or too wet, and the sward in these areas may appear under-grazed with denser thatch of plant litter than the surrounding area. The grassland sward should be very visible throughout the field.	

Bear in mind that standing plant litter can occur when weather is very dry; do not include this litter in the scoring.





#### Management advice

Plant litter build-up is easily addressed by increasing grazing levels, either more animals for a shorter time or the current level of stock but for longer.

# B.2 What is the level of encroaching scrub?

Areas of semi-mature/ mature scrub can provide shelter and food for small birds, insects and other wildlife. However, where scrub is encroaching onto the main grassland area, it may indicate abandonment or less than optimal levels of grazing and lead to eventual decline in extent of grassland and loss of plant species diversity.

#### Guidance for scoring B.2

The term scrub includes woody shrubs such as Hawthorn/Whitethorn, Willow, Blackthorn, Bog Myrtle, Gorse/Furze, Briars/Bramble; tree seedlings are also included. Encroaching scrub is that which is under 1.5m in height and with a stem diameter of <10cm, including seedlings.

Any scrub that the farmer would not be permitted to remove without felling licence from the forest service e.g. mature scrub or areas of scrub with a woodland flora beneath should not be included when assessing scrub cover. Note the main species present in the comment box. Assess encroaching scrub/bracken for the entirety of the field, including where spreading from field boundaries.

B.2 - Thresholds	Description
High: >50%	Cover of encroaching scrub patches or individual scrub is over half of the field and
	likely to include well-established saplings and dense patches of establishing scrub.
	Scrub along the field boundaries highly likely to have spread onto the field. Access
	by livestock to denser patches of scrub may be impeded. Field is likely to have few to no signs of management.
Med-High: 26-50%	Between one quarter to half of the field has scrub cover, some well-established
	saplings may be present. Scrub along field boundaries may be encroaching onto
	the field. Field is likely to show few signs of management, such as recent grazing,
	or signs of livestock.
Med-Low: 11-25%	Cover of encroaching scrub in patches or individuals with overall cover of between
	11-25%. Some spread of scrub from the field boundaries may be evident,
	particularly Briars/Bramble.
Low: <10%	Small patches of scrub or individual seedlings of encroaching scrub with overall
	cover of less than 20%. Grass growth easily seen underneath the scrub.

#### B.3 Are there any damaging activities to vegetation, soil or water?

Damaging activities are those which have potential, either currently or in the future, to reduce the ability of the grassland to support a diversity of plant species.





# Guidance for scoring B.3

Damaging activities, if any, should be assessed over the entire field, including the field boundaries and main grassland area. Where there is more than one damaging activity, of the same or varying degrees of impact, the most damaging activity may be scored or alternatively score the sum of damaging activity, whichever is considered to be the greater in impact. Where damaging activity is noted in or adjacent to the field, consider whether this may impact either in the short or medium term on the field being scored, e.g. drainage, please note in the comments.

NB: any damage due to	supplementary	/ feeding is assessed	separately by indicator B.4.
The any dumage due to	supplementary	recard is assessed	Separately by maleator D.H.

B.3 - Thresholds	Description	
Very High:	<ul> <li>Obvious and extensive damage to the field.</li> <li>Application of herbicide/ pesticide over the field (other than where agreed with farm advisor for control purposes);</li> <li>Application of slurry</li> <li>Ploughing;</li> <li>Reseeding</li> <li>Extensive damage from poaching or burning</li> <li>Ground very 'churned up'</li> <li>Extensive dumping in the field</li> <li>Any other activity or cumulative damaging activities resulting in High degree of damage.</li> </ul>	
High:	<ul> <li>Between 5-25% of the field affected.</li> <li>Bare ground noticeable in up 25% of the field</li> <li>Ground appears 'churned up'</li> <li>Soil disturbance around water sources (if any) extends for &gt;3m</li> <li>Extensive areas of bare ground noticeable extending from well-used routes</li> <li>Evidence of burning</li> <li>Any other activity or cumulative damaging activities resulting in Med-High degree of damage.</li> </ul>	
Medium:	<ul> <li>Less than 5% of the field affected.</li> <li>Poaching noticeable in wetter soils, and not just along trackways and gates – poached areas may not be well-vegetated in summer</li> <li>Small patches of bare ground not limited to trackways/gates</li> <li>Soil disturbance around water features (if any) extending for between 1-3m</li> <li>Any other activity or cumulative damaging activities resulting in medium degree of damage.</li> </ul>	
Very low/None:	<ul> <li>Limited impacts on the field.</li> <li>Limited poaching on wet soils, usually along trackways/gates, or where present in the field, poached areas are generally well-vegetated in summer</li> <li>Small patches of bare ground possibly along well-used trackways/gates or in areas where there is thin soil layer</li> <li>Limited soil disturbance/dunging around wet feature</li> <li>Other actions in the field resulting in very low to no damage to the grassland.</li> </ul>	







# B.4 Is there damage due to supplementary feeding?

Supplementary feeding is providing round bales of silage, haylage or hay to livestock, provision of concentrates and mineral licks. Supplementary feeding can result in livestock not fully grazing off a sward, the accumulation of litter, poaching and sward destruction and can lead to soil and water eutrophication of the grassland and the watercourses.

# Guidance for scoring B.4

Look for current feeding sites within the field, and assess the impact of the full area of any obvious damage around these feed site(s). Where bare ground in a field is likely to be attributable to supplementary feeding, assess under this indicator. Older feeding sites may be identifiable by patches of agriculturally favoured weeds. Weedy growth around existing feeders should be assessed under this indicator. Feeding sites should not be located within 10m of a watercourse as this can lead to run-off and impact on water quality.

Where supplementary feeding is being provided for a short-term temporary period to assist in grassland conservation (e.g. overwintering cattle to halt spread of bracken), this should be taken into account in the scoring – lean towards lower thresholds. Inappropriate location of feeders in the grassland should be noted in comments and brought to the attention of the farmer, e.g. where round feeders are located adjacent to water features, feeders located in very wet areas of the field or on soils which might be vulnerable to soil erosion.

B.4 - Thresholds	Description
High	Supplementary feeding in a field at a single or multiple locations, resulting in very obvious areas of bare, churned up ground (>25% of field), which is still largely unvegetated or with pioneer weed species only during the summer months; Extensive areas of weeds/negative indicators, spreading > 3m outwards from feeding site(s); Additionally, there may be extensive areas of churned up ground along trackways leading to the feeding site(s); Feeding sites within 10m of a watercourse (stream, brook, river, wet drain, lake).
Medium	Multiple feeding site(s) or a single feed site with extensive areas of bare ground noticeable in up 25% of the field; Soil disturbance around concentrate feeders or water sources extends for >3m, ground appears 'churned up'; Patches of weeds/negative indicators extending up to 3m from feeders, patches may be dense in parts; Some bare ground may be evident along trackways leading to the feeding site(s); Feeding site(s) greater than 10m from watercourse – but due to siting, aspect and setting, could result in enrichment of the watercourse (needs to be judged on an individual field basis).
Low	Feeder(s) not located within 10m of watercourse, in very wet or on very thin soils; Limited areas of poaching noticeable around feeding site(s) around in wetter soils, and then mostly vegetated with little (<10%) bare soil visible; Scattered or small patches of weeds/negative indicators extending no more than 2m

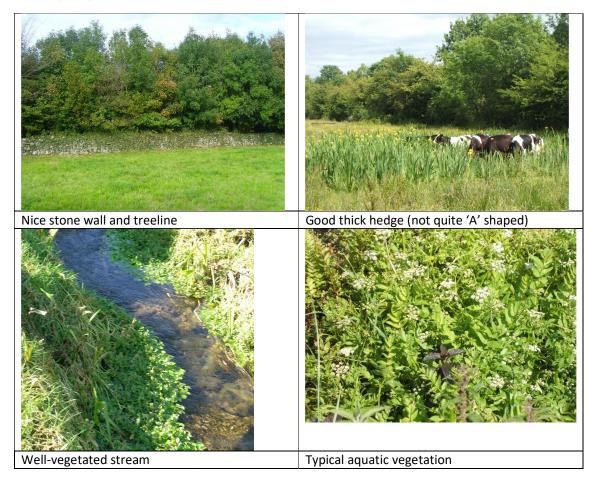




from feeding site(s);
Limited bare ground along trackways leading to feeding site(s);
Where multiple feeding sites, these are rotated through the grassland and the overall
impact of the feeding sites meets the first four criteria in the low threshold.

# Appendix.1

Good quality field boundaries









Poor quality field boundaries









