



Carr House Green Common Management Plan

Aim: To provide an assessment of Carr House Green Common to assist Inskip Parish Council make some decisions about its future management

Parish Council of Inskip-with-Sowerby

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I Purpose of Management Plan

The parish Council of Inskip-with-Sowerby, from here on in referred to as Inskip Parish Council, is considering seeking Higher Level Stewardship (HLS) funding to manage Carr House Green Common, Inskip-with-Sowerby. The site supports a rich assemblage of vegetation, invertebrates and bird life, but a lack of grazing has led to a gradual deterioration of the habitats.

The aim of this management plan is to provide an assessment of the site that will assist Inskip Parish Council consider its future management. One option is to continue with its discussions with Natural England about a potential 10 year HLS agreement. This plan will include details of management prescriptions and capital works to be applied and undertaken if the land were to be entered into a HLS agreement.

The management plan will be more than an information-gathering exercise. The plan will enable Inskip Parish Council to manage the Common in a way that enhances the habitat value and provides a community resource for education and low-impact recreation.

A management plan was produced in 1998 by Lancashire Wildlife Trust Conservation Officer, Kim Wisdom, and a great deal of the information contained in the 'existing' management plan is relevant today. Therefore, this management plan will make use of a large part of the information contained in the existing plan as well as reviewing it and making further recommendations where necessary.

2 Site Details

Carr House Green Common is 24.443 ha (60.37 acres) and lies on the Fylde plain at SD427 372 (National Grid Reference – centre) just to the southeast of the village of Inskip.

The freehold owner is the Parish Council of Inskip-with-Sowerby and the Common is a registered common (Unit CL21 on the Register of Common Land held by Lancashire County Council).

The site is a Biological Heritage Site (Ref. 43NE01) listed under criteria set by Lancashire County Council for its biological importance.

3 Land Use

3.1 Current Use

A site meeting was held at Carr House Green Common on 11th February 2011 with Inskip Parish Council members Phil James (Chairman), Alan Lingard and Geoff Hogarth, Tarja Wilson (Lancashire County Council) and Greg Robinson (Wyre Borough Council). We were joined later by William Thompson who is a farmer with existing grazing rights on the Common. The purpose of the meeting was to discuss Inskip Parish Council's priorities regarding the Common and to get an idea of the current use of the site.

The following series of statements/questions summarise the Parish Council's priorities for the Common:

- The Common needs to be managed
- What is the biodiversity potential of the Common and how do we unlock it?
- What are the options for management?
- Costings
- Timescale

The Common is currently used by local people for quiet recreational access. Most people tend to walk along one side of the main drainage ditch (known locally as the 'tank trap') that crosses the Common to the north of the Inskip - Woodplumpton road, which runs in a southwest-northeast direction, and then return on the other side of the ditch.

The section of Common to the south of the Inskip – Woodplumpton road is used on a more infrequent basis as there is no method of crossing the drainage ditch to undertake a circular walk.

The level of access is very low and it is mainly a handful of 'regulars' that use the Common to 'stretch their legs' and exercise their dogs as well as riding horses.

Dog and recreational walking on the Common has led to car parking around the boundary of the Common. The most frequently used areas for parking are opposite Porters Farm and the cottages on the B5269, the access track to Carr House and several 'created' lay-bys before and after the 'tank trap' on Woods Lane.

In the past the Common has certainly attracted the attention of local amateur naturalists and much of the detailed information in this and the existing plan has come from them. However, it is hard to gauge how much usage there is of the site today by local naturalists. When Paul Ellis, secretary of Fylde Bird Club, was contacted for some bird records for the Common he couldn't bring to mind anybody that he knew who bird watched on the Common in recent years on a regular basis.

3.1.1 Commoners Rights

The existing management plan lists ten properties to which Rights are attached and these can be found in the table below. From Wisdom 1998.

Registered Commoner	Address	Rights	Property to which Rights attached
Mr & Mrs Pam Illingworth (J A Hawkins)	Brook House Farm, Lewth lane, Woodplumpton, Preston, PR4 0TE	Graze 80 cattle on part of land, lying north of Preston – Inskip Road	Brook House and land at Inskip
Miss Mary E Beetham (R M Beetham)	Green Lane Farm, Catforth, Preston, PR4 0HT	Graze 8 cattle	Green Lane Farm
Mr & Mrs J Eccleston	Woodsfold Farm, Lewth Lane, Woodplumpton, PR4 0TE	Graze 16 cows	New Woodsfold Farm
T S Thompson & W A J Thompson	Pointer House, Inskip	Graze 12 cows	Carr House Farm, Catforth
Derek A Snalam (A Smithson)	Fell View, Carrs Green, Inskip	Graze 2 head of cattle and 2 geese	Fell View
John Parker (J R R Parker and E Parker)	Lyndale Fields, Cinder Lane, Lewth, Woodplumpton, PR4 0TH	Graze 10 head of cattle	Lyndale Fields
Jim Smith (R H Smith)	Beesley's Farm, Catforth Road, Catforth	Graze 10 head of cattle	Beesley's Farm
Bernard Smith (J Smith)	Lewth Lodge, Cinder Lane, Lewth, Woodplumpton, PR4 0TH	Graze 6 head of cattle	Land at Lewth, Woodplumpton
Jim Hall (J Hall, Porters Farm, Inskip)	Fairway, Carrs Green, Inskip, Preston	Graze 20 head of cattle and 6 geese	Porters Farm, Inskip

Names in brackets refer to the individual named on the current Register of Common Land held by Lancashire County Council.

For the purpose of this management plan no attempt was made to contact the graziers other than William Thompson of Carr House who was the last person to graze any animals on the Common. See under 'Constraints'.

3.2 Constraints

It is generally perceived that a lack of grazing has led to a gradual deterioration of the habitats on Carr House Common. In terms of sward structure the vegetation is even aged and there is no mosaic or heterogeneity within the vegetation. An answer to this is to re-introduce grazing on the Common and there are a number of issues, positives and constraints regarding this.

When the existing management plan was drawn up in 1998 the Common was still grazed by the Thompson brothers, registered Commoners of Pointer House/Carr House, and at the time they were the only Commoners willing to put stock on the Common in view of the traffic risk/lack of fencing (Wisdom 1998).

3.2.1 Hazards to/from Grazing

One of the main issues surrounding the re-introduction of grazing is to ensure that the cattle remain on the Common. Although obvious, this is a highly important issue, as the livestock could be potentially hazardous to road users and vice versa. In the past this was achieved by employing a herdsman to watch over the cattle to ensure that they didn't wander off the Common. To do this today it would be time consuming and cost prohibitive. There are four potential options if considering re-introducing cattle grazing to Carr House Green Common:

- fencing the perimeter of the Common
- installing four cattle grids
- a combination of two cattle grids plus fencing
- look at alternative options such as cutting

Each of the above options is dealt with in turn below.

3.2.2 *Fencing the Perimeter of the Common*

The first option if re-introducing grazing would be to fence the whole perimeter of the common. This would entail fencing the length of Woods Lane that borders the Common to the east, the whole perimeter of the northern section, both sides of the Inskip-Woodplumpton road and the perimeter of the southern section. In total this would be approximately 2,950 metres. A typical cost for fencing, with sheep netting, including costs for erection is £4 - £4.30/metre. If only livestock were grazed then all that would be required is three strands of barbed wire and the cost would be less. If a HLS application was successful then Natural England would pay £2.50/metre towards the cost of fencing, whether it was sheep netting or post and wire.

In addition to the fencing, several gates would be required to allow people access on and off the Common. Also, to ease movement of the cattle around the site a couple of 'crossings' might need to be installed so the cattle can cross the 'tank trap'.

There are some constraints/issues regarding this option that need thinking through carefully. There is the issue of the 'tank trap' that divides both the northern and southern sections of the Common. On the northern section of the ditch people tend to walk along one side, cross over at one of the road bridges, and return along the other side. If cattle were grazing the Common it might be necessary to fence the ditch 'off' from the cattle to prevent any bankside erosion. If you did this how far from the ditch would you fence and would this spoil people's enjoyment of the Common. During a recent conversation with William Thompson he said that the ditch wouldn't need fencing and in the past the cattle have grazed the bank sides. If this was to happen then it would need to be carefully monitored to assess any erosion issues.

The other issue is the perception of the Common being fenced and how the villagers would feel about this. To lessen the impact of the fencing the fence could be moved a certain distance away from the road, perhaps 6 – 10 metres, so that it blends in with the vegetation. Obviously the fencing may be more visible at certain times of the year when the vegetation cover is less.

Inskip Parish Council has said that if grazing is felt to be the best option then they would consult the parishioners to get their views on this.

3.2.3 Installing Cattle Grids

An alternative to fencing the Common, and the one that William Thompson favours, would be the installation of four cattle grids, or a combination of fencing with just two cattle grids. This has already been discussed with Inskip Parish Council and it has been dismissed on the grounds of cost. In addition to this Section 38 consent is generally needed for works on a highway, where that highway is registered as common land.

3.2.4 Loading and Unloading Cattle and access to drinking water

If cattle are used to manage the Common then some facilities to facilitate loading and unloading would be required, unless there was access at Carr House Farm for loading and unloading. The facilities required would be some pens so that cattle could be loaded/unloaded easily. Provision of drinking water would be essential.

3.2.5 Availability of Graziers with Commoners Rights

Contact was made recently with William Thompson to see if he was still interested in putting some cattle on the Common. William is currently reviewing his farm business and in the near future wouldn't be interested in grazing the Common. However, he did point out that he might re-consider this in the future.

He felt quite strongly that the only practical way to re-introduce grazing on the Common was through the installation of cattle grids. He wasn't opposed to fencing as a way of re-introducing grazing to the Common but was concerned over the cost and maintenance of the fencing.

If livestock were to be brought in from a grazier without Rights then securing agreement by ALL the commoners would be necessary. Also, the formal consent of all commoners is required for a Higher Level Stewardship agreement to be implemented.

3.2.6 Alternatives to Grazing

There are two alternatives to grazing; leaving the Common unmanaged or cutting sections of the Common to reintroduce some structure to the vegetation.

The Common has been un-grazed for perhaps ten years and the structure and type of vegetation has changed substantially in parts, particularly that of

the northern section which has become dominated by Reed Canary-grass *Phalaris arundinacea*. This has affected the diversity of flora and fauna found in this area and trying to 'open up' this area again would be desirable.

Without management the vegetation type and structure of the Common would continue to change with the eventual succession of the Common by scrub. Under-grazing (management) can actually cause irreparable damage as certain plant species can disappear and won't return even if grazing (management) is re-introduced. In fact some observers believe that under-grazing is more damaging because of this than over grazing, as vegetation generally recovers when grazing is reduced or ceased.

An alternative to this is to cut areas of the Common. Annual summer mowing can be a very useful management technique but it is also a potentially dangerous one. The dominant plant species can be changed quite easily, and invertebrate assemblages can be radically altered. This isn't as good as grazing for several reasons. The first one being the drastic nature of cutting and this can be particularly damaging to invertebrates. Grazing creates a more varied structure over a longer period of time and is therefore less damaging. The question is always when to cut and to what height do you set the mower. Birds and invertebrates are very sensitive to vegetation structure and cutting can reduce the height of the vegetation to nothing and remove any structural variation. However, if there is nobody to graze the Common this may be the only alternative.

The other question is how much to cut. If cutting is to be considered then it would be best to cut the Common in blocks on rotation so at least there is some attempt to create areas with different growth periods so some structure is created. Cutting patches only every 3 years with some not cut at all where small areas of scrub are allowed to develop, helps to benefit species intolerant of regular mowing, such as some specialised invertebrates.

Mowing is generally more appropriate where the site has been traditionally managed in this way, or where falling water tables make it necessary to stop the area being invaded by scrub. Also, if the site has become dominated by species such as Reed Canary-grass, as in the Common, a mowing regime can be adjusted to bring it back under controlled management. An early summer cut (however, be aware of ground nesting birds) can reduce their dominance, as they have a high proportion of their stored nutrients above ground. A three year mowing programme should bring the Reed Canary-

grass under effective control and once it is to the required proportions then mowing can take place later in the year.

It might be possible to cut some areas for hay from mid-July onwards with other areas subject to a more varied regime, with longer rotations. If cattle can't be used to graze the aftermath then the area might require topping before winter.

Sutherland and Hill (1998) state that reciprocating cutters are the best machines for cutting large areas of fen.



These machines are commonly operated by contractors who carry out hedge and roadside verge cutting.

Cut material must be removed and unfortunately it is unlikely that the mowing's will have any commercial value. Although it is possible that they could be baled and used for livestock bedding. The material can be stacked off any sensitive areas or burnt. Cut material should be burnt on sheets of corrugated iron and the ashes removed from the site. Removing the ashes prevents them from increasing the nutrient status of the area. It is important to remember, particularly if mowing an area for the first time, that dealing with the cut material will take approximately 10 times more time and labour than cutting.

3.2.7 Availability of Volunteers

A great deal of the ecological information provided for this management plan has been provided by amateur naturalists. To ensure that the most appropriate management of the Common is carried out in the future, particularly through a HLS agreement, the availability of volunteers to monitor the site will be crucial. Monitoring will inform future management of the site by ensuring that particular management options are achieving the desired objectives.

It might be possible to set up a 'low key' friends group for the Common made up of local interested residents and amateur naturalists alike. In the 1990s a 'Carr House Green Common Ecological Group' was set up to try and produce some baseline ecological data for the Common to contribute towards the production of a management plan for the site. The group consisted of amateur and professional naturalists alike. Maintaining interest and enthusing such a group would be the major issue.

3.2.8 Neighbouring Dwellings

A number of dwellings border the Common and it is important that any management introduced on the Common doesn't impact upon them. One of the major issues raised by Inskip Parish Council is that of septic tank outfalls and whether any proposed raised water levels on the Common would impact on the efficient operation of these systems.

One of the considerations for management on the Common is to get the Common wetter than it is at present so that it benefits a range of bird species, aquatic invertebrates and amphibians. Works to raise the water table to create wet areas are likely to have the greatest negative impacts on the operation of the septic tanks. With this in mind the most effective way to get the Common wetter would possibly be through the creation of ponds.

3.2.9 Drainage Ditch

The drainage ditch that runs through the centre of the Common is maintained by the Environment Agency (EA) on an annual basis. Cutting of the bankside and emergent vegetation is undertaken regularly to maintain the flow of the ditch to prevent flooding.

If it was decided to try and make the Common wetter (see above) by raising the water table one of the methods of doing this would be to install a sluice. In addition to the negative impact this would have on the operation of the septic tanks in the dwellings surrounding Porters Farm, permission to carry out this type of work is unlikely on one of the main drainage ditches maintained by the EA.

3.3 Access

There are several public footpaths on or along the edge of the Common. Public Footpath Inskip-w-Sowerby No 15 crosses the larger section of Common to the north of the B5269 and runs in a southeasterly-northwesterly direction. From the B5269 it is accessed near the corner of

Woods Lane and currently the start of the path is inaccessible due to a large amount of vegetation; mainly Bramble. It then crosses the main drainage ditch via a footbridge and joins footpaths 14 and 16 that run along the embankment directly to the north of the ditch that forms the northern boundary of the site. Here too it is difficult to access the path due to fallen Willows blocking the path.

To the south of the B5269 Inskip-w-Sowerby public footpaths 17 and 18. No 18 starts opposite Woods Lane and runs along the southeastern boundary of the Common, and No 17 follows the old farm track to Carr House Farm off the B5269 and joins the first section of Footpath 17 mentioned above.

As mentioned under '3.1' local people currently walk along one side of the drainage ditch and then either cross it on Woods Lane or the B5269 (depending in which direction they have walked) and return along the other side. This is probably the most used desire line on the site.

On the southern section of the Common there is a regularly used path along the western length of the drainage ditch that then heads west away from the ditch and curves round to rejoin this path close to the start.

There are no real issues concerning these desire lines other than that they would need to be considered if grazing was to be re-introduced to the site. A decision would need to be made whether access furniture would need to be installed to continue to facilitate the use of the paths.

4 Environmental Audit

4.1 Review of Available Material

There is a great deal of environmental material held about the Common, but unfortunately none of this is very recent and this is something that would be good to address in the future if possible, by trying to ensure that there is some continued ecological survey work carried out.

4.1.1 Biological Heritage Site

Carr House Green Common is designated as a Biological Heritage Site (BHS) by Lancashire County Council. Local authorities are required to identify and provide for the protection and the enhancement of the natural

heritage within their areas. As part of the planning function, they have a responsibility to take account of sites of significant nature conservation value.

The wildlife sites in the County that Natural England considers to be the most important are likely to have been designated (Site of Special Scientific Interest). However, on their own, such sites cannot conserve our natural heritage and biodiversity. Biological Heritage Sites (BHS) is the name given to the most important non-statutory wildlife sites in Lancashire.

Each BHS has been systematically assessed against detailed site selection guidelines drawn up for the purpose. Designation as a BHS offers limited protection based upon:

- Identification of the site as one of significant interest
- Raising awareness of the site with relevant parties
- Good will of the owner to protect the site through voluntary action or agreement; often supported by agri-environment schemes such as Higher Level Stewardship
- Protection from damaging development through the planning system

Carr House Green Common has been listed as a BHS mainly for its vegetation in terms of habitat mosaics, lichens, flowering plants and ferns. The BHS listing can be found in Appendix 1.

4.1.2 Phase 1 Habitat Survey

A Phase 1 Habitat Survey was completed in September 1993 when the Common was listed as a BHS (see Appendix 2).

4.1.3 Bird Surveys

One of the most closely studied faunal groups on Carr House Green Common is that of the birds. In 1993-94 a breeding bird survey was carried out by a group of local amateur naturalists under the direction of Wyre Borough Council's Tourism and Countryside Unit. A sub-group was established to gather ecological information and assist with the formation of a management plan for the site.

The objectives of the survey were to estimate the number of breeding pairs of each bird species and plot the location of individual territories to establish the importance of the Common as a breeding site, provide specific information to assist in the development of any future management plan and

provide a basis for future comparisons. See appendix 3 for the results of the 1993/94 breeding bird survey.

The breeding bird survey carried out in 1993/94 found 29 bird species breeding on Carr House Green Common. Seven of these (24%) are Red Listed on the 'Birds of Conservation Concern' and five are Amber Listed (17%). In total this means that at that time 41% of the breeding bird species on Carr House Common were declining nationally and this highlights the importance of the site.

Unfortunately, this survey hasn't been repeated and there are only casual records of birds on the Common since then and these are listed in Appendix 5. Based on the author's experience of bird populations in the area and how the habitat has changed since then (the Common was still being grazed at that time) it is very likely that some of the 'threatened' species will no longer nest on the Common and some will still breed but in reduced numbers. Grey Partridge *Perdix perdix*, Snipe *Gallinago gallinago*, Cuckoo *Cuculus canorus* and Skylark *Alauda arvensis* have probably completely disappeared due to the habitat not being suitable anymore and Kestrel *Falco tinnunculus*, Dunnock *Prunella modularis*, Song Thrush *Turdus philomelos*, Grasshopper Warbler *Locustella naevia*, Willow Warbler *Phylloscopus trochilus*, Linnet *Carduelis cannabina* and Reed Bunting *Emberiza schoeniculus* probably still breed but in reduced numbers.

It would be useful to complete a survey every year on the Common following the British Trust for Ornithology's (BTO) Breeding Bird Survey (BBS) guidelines, particularly if the recommendations of this management plan are implemented. This will provide valuable data to assess whether the plan is working and will also help to inform any potential changes in future management.

4.1.4 Existing Management Plan

A management plan was produced by Kim Wisdom, Conservation Officer with Lancashire Wildlife Trust, in April 1998. It was a five year plan covering the period 1998 – 2002.

At the time of this management plan the Common was being grazed by the existing grazier William Thompson, although Kim states that the grazing regime does not appear to be formalised in any way (stock type, numbers, timing etc).

One of the aspects outside the scope of this management plan, but covered by the existing management plan, is some public consultation. Kim consulted some of the local residents on the existing use of the Common. Little seems to have changed in the intervening 13 years with issues surrounding fly tipping still on-going in the north-east corner of the Common.

Issues surrounding the footpaths that cross the Common are similar today as they were in 1998. Public footpath No 15 from the footbridge to the stile in the northwest corner of the Common was difficult to access due to standing water in that area and that is still the case today.

4.2 Vegetation and Habitats

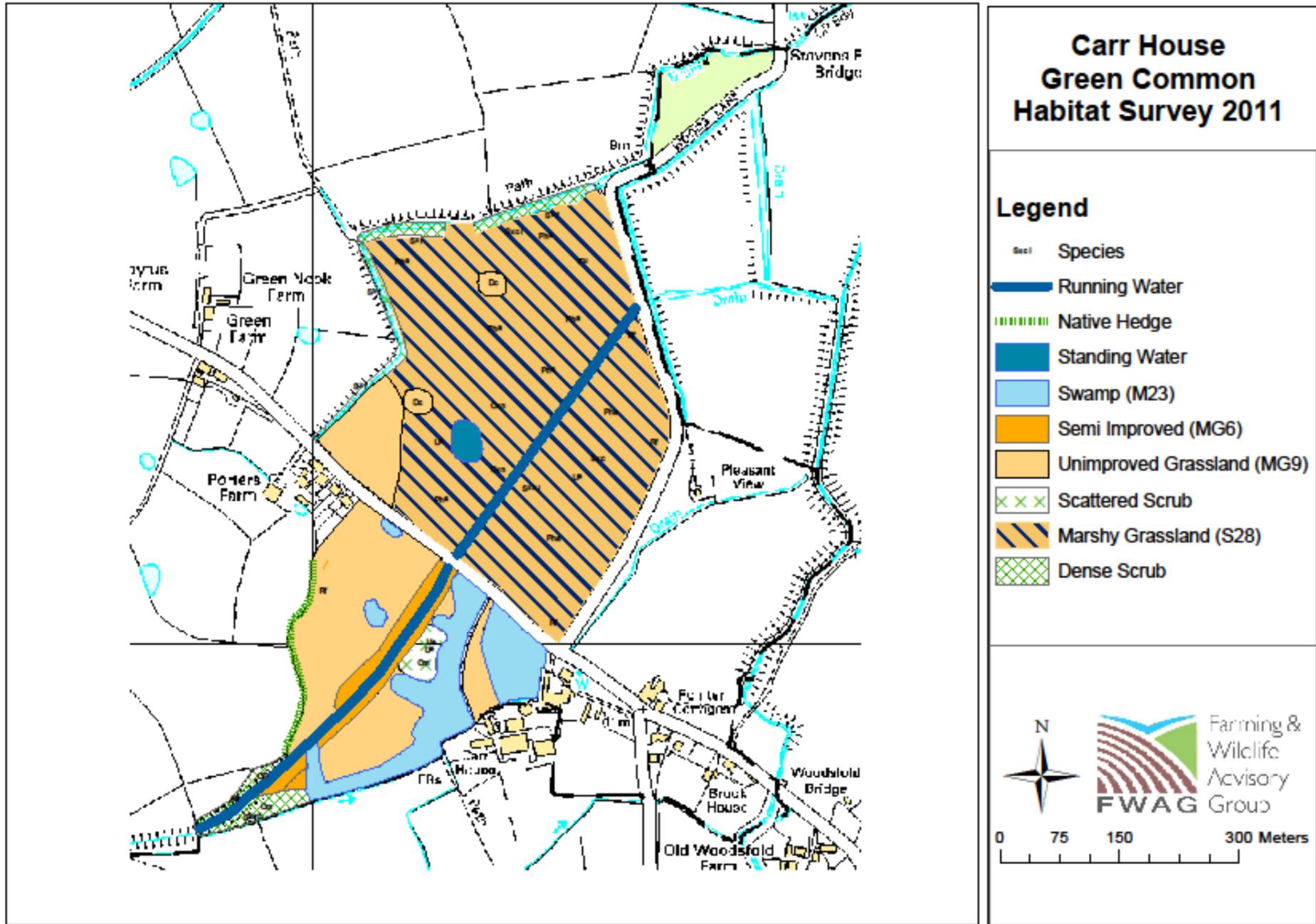
Wisdom (1998) states that the 1994 Habitat Survey commissioned by Lancashire County Council provides the most detailed information on plant species and habitat types present on the Common. Wisdom amalgamated this information to produce broad National Vegetation Classification (NVC) types based on the 1994 survey.

To facilitate comparison between the 1994 survey and the survey carried out in June 2011 for this report a similar process was adopted. The broad vegetation types were mapped using an amalgamation of Phase 1 habitat types to produce NVC types with target notes of dominant species. See Carr House Green Common Habitat Survey 2011 overleaf.

Dense/continuous scrub – dominated by Crack Willow *Salix fragilis* and Grey Willow *Salix cinerea* in the scrub at the northern end of the Common and in the southwestern corner Hawthorn *Crataegus monogyna*, Alder *Alnus glutinosa* and Crack Willow.

Scattered scrub – dominated by Crack Willow along the ditch to the west and Common Gorse *Ulex europaeus* and Hawthorn to the south of the B5269.

Marshy grassland – S28 *Phalaris arundinacea* tall-herb fen. This occurs predominantly over the northern half (north of B5269) of the Common and is dominated by Reed Canary-grass *Phalaris arundinacea* with smaller areas of Meadowsweet *Filipendula ulmaria*, Tufted Hair-grass *Deschampsia cespitosa*, Common Sedge *Carex nigra*, Common Reedmace *Typha latifolia*



and in drier areas Common Gorse, Goat Willow *Salix caprea*, Grey Willow and Bramble *Rubus fruticosus* agg. along the eastern edge of this area.

Unimproved neutral grassland – MG9 *Holcus lanatus*-*Deschampsia cespitosa* grassland. This occurs just north of the B5269 at the western end and west of the tank trap and south of the B5269.

Swamp – M23 *Juncuseffusus/acutiflorus*-*Galium palustre* rush-pasture. This is the main NVC type to the east of the tank trap and south of the B5269.

4.3 Flora and Fauna

4.3.1 Flowering Plants

230 species of flowering plants have been recorded on the Common. This is only an increase of 13 species from Wisdom (1998). Most notable are Tubular Water-Dropwort *Oenanthe fistulosa* and Bladder-Sedge *Carex vesicaria* as both species are listed as endangered in Lancashire. Other notable species include Common Cudweed *Filago vulgaris*, Ivy-leaved Crowfoot *Ranunculus hederaceus*, Midland Hawthorn *Crataegus laevigata* and Tasteless Water-Pepper *persicaria laxiflora*, all of which are on the Lancashire Biodiversity Action Plan (BAP) Long List.

4.3.2 Lichens, Liverworts and Mosses

The most important area on the Common for this group of primitive plants is the dense/continuous scrub found at the northern end of the Common. Some of the records received from the Lancashire Environmental Records Network (LERN) will include species recorded in Willow Wood which forms part of the BHS, but is not in Inskip Parish, and unfortunately it is impossible to separate these out.

As Wisdom (1998) stated that to conserve the lichens, liverworts and mosses fauna the dense/continuous scrub should remain undisturbed and the water table kept high to retain the high humidity required.

4.3.3 Fungi

Exactly 28 species of fungi have been recorded.

4.3.4 Butterflies

17 species have been recorded on the Common, with Brimstone *Gonepteryx rhamni*, Small Heath *Coenonympha pamphilus* and Wall *Lasiommata megera* being the most notable. Small Heath and Wall are Biodiversity Action Plan (BAP) species and Brimstone is on the Lancashire Biodiversity Action Plan (LBAP) long list.

The author of this report would be happy to monitor the butterfly species in the future by carrying out surveys as part of Butterfly Conservation's 'Wider Countryside Butterfly Survey'.

4.3.5 Moths

122 moth species have been recorded on the Common, with notable species including:

UK BAP

Buff Ermine *Spilosoma luteum*, Cinnabar *Tyria jacobaeae*, Dark-barred twin-spot Carpet *Xanthorhoe ferrugata*, Dot Moth *Melanchra persicariae*, Dusky Brocade *Apamea remissa*, Grey Dagger *Acronicta psi*, Knotgrass *Acronicta rumicis*, Mottled Rustic *Caradrina Morpheus*, Mouse Moth *Amphipyra tragopoginis*, Rosy Minor *Mesoligia literosa*, Rosy Rustic *Hydraecia micacea*, Sallow *Xanthia icteritia*, September Thorn *Ennomos erosaria*, Shaded Broad-bar *Scotopteryx chenopodiata*, Small Square-spot *Diarsia rubi* and White Ermine *Spilosoma lubricipeda*.

Lancashire BAP Long List

Double Dart *Graphiphora augur*, Figure of Eight *Diloba caeruleocephala*, Garden Tiger *Arctia caja* and Silver Hook *Deltote uncula*.

Although a number of locally uncommon and interesting species have been recorded on the Common, indicating that it is of considerable importance locally, it is felt that with more 'light trapping' more moths could be recorded.

It would seem that nobody has undertaken any moth recording on the Common recently, perhaps not since Malcolm Evans in the early 1990s. One of the difficulties is an electric supply for a light trap, which means that a generator would need to be used to supply power to the trap.

4.3.6 Dragonflies and Damselflies

Wisdom (1998) states that only three species have been recorded and these are Brown Hawker *Aeshna grandis*, Azure Damselfly *Coenagrion puella* and Blue-tailed Damselfly *Ischnura elegans*. There have been no additional records since then as LERN only records Brown Hawker for the Common.

This group of invertebrates is surely under-recorded on the Common and a few site visits at the correct time of year in the right weather conditions would probably add a few more species.

The other issue is that the Common probably isn't as suitable as it was in the past for dragonflies as the amount of standing water has greatly reduced. Dragonflies require permanent ponds for their larvae to develop under water for 2-3 years. Some pond creation on the Common would improve the habitat for this faunal group.

4.3.7 Invertebrates – General

13 species of beetles, 7 species of bee, 2 species of grasshopper, a species of Scorpion Fly, 15 species of spider, 8 species of true bugs and 62 species of true flies have been recorded on the Common. Wisdom (1998) states that it is felt that the list could be considerably extended by further visits, especially by experts in groups other than *Diptera*, also by recording in different months, visiting other parts of the site and by adopting other recording and collecting techniques.

4.3.8 Birds

103 bird species have been recorded, of which 30 have been confirmed as breeding on the Common. The breeding bird data is from a Breeding Bird Survey carried out during 1993-94. Of the 30 species recorded breeding in 1993-94 17% are on the Amber List, 20% are on the Red List, 37% are on the LBAP Long List and 20% are on the UK BAP List.

Only casual records have been collected since this breeding survey and some updated information on the breeding bird assemblage today would be useful. The author of this report has devised a transect route across the Common and would be happy to carry out two Breeding Bird Survey visits per year to provide some modern data.

Out of the 103 species recorded 39% are Amber Listed, 14% Red Listed, 38% on the LBAP Long List and 19% on the UK BAP List. A large number

of the bird species recorded at the Common will include 'flyovers' that aren't actually utilising the Common itself. Nevertheless, the diverse range of species recorded is due to the mosaic of different habitats found on the Common.

4.3.9 Mammals

Only seven species of mammal have been recorded at the Common. The most notable absence is that of bats and small mammals. Further study would doubtless increase the list as the habitat type on the Common would almost certainly support populations of these two groups of mammals.

4.3.10 Amphibians

Only Common Frog *Rana temporaria* and Common Toad *Bufo bufo* have been recorded on the Common.

4.4 Site Survey - Environmental

As stated previously in the report, Wisdom (1998) used the 1994 Habitat Survey commissioned by Lancashire County Council to detail information on plant species and habitat types present on the Common. There is also a Phase I habitat survey in existence completed in September 1993.

The existing survey material was ground-truthed by carrying out a series of site visits in February and June 2011. The purpose of visiting in February was to try and assess the physical, rather than vegetational, aspects of the Common e.g. wet areas, ditches, ponds etc.

The visit in June was used to map the vegetation and habitat types; however surveying was difficult due to the height and impenetrable nature of the Reed Canary-grass covering the northern half of the Common. To quote Eric Greenwood, of the Botanical Society of the British Isles (BSBI) who visited the site in June; "I decided to pay another visit to Carr House Green Common this week largely to verify in my own mind that I had not made a silly identification error. I was able to confirm this was not the case but it also gave me the opportunity to review the conservation interest of the site. Unfortunately the vegetation at nearly 5ft tall is close to my physical capacity of exploration!"

During the site visit in February 2011 an area of Japanese Knotweed *fallopian japonica* was found at the northeastern corner of the Common. This needs to be controlled, to prevent further spread on the Common.

At the northern end of the Common is a 10 m strip of Willow Carr that provides excellent linear habitat for birds and invertebrates. This area is also particularly wet and will provide good habitat for aquatic invertebrates as well. It is important that the Willow Carr doesn't encroach any further onto the Common and this will need to be controlled either through grazing or cutting.

The area of Marshy Grassland (NVC: S28) is dominated by Reed Canary-grass and a heavy thatch has built up. Grazing animals would help to break this thatch up by the action of their feet and this would create some light poaching to allow seeds to germinate. If grazing isn't an option on the Common then it will be very important to remove the arisings from any cutting of the fen habitat.

Within the marshy grassland towards the western edge of the Common are two wet areas that are slowly being succeeded by vegetation. Rather than restoring these through excavation and removal of plant material it would be better to create some new ponds.

There is an area of Gorse *Ulex europaeus* of about 800 m² towards the southern end of the marshy grassland. As it stands at the present this is adding to the habitat diversity and structure of the Common. It also provides nest sites for the red listed and UK BAP bird Linnet *Carduelis flammea*. However, any further encroachment should be prevented and the most efficient tool to achieve this is that of grazing.

On the southern half of the Common there is an area of scrub to the east of the 'tank trap' that is dominated by Gorse and Hawthorn *Crataegus monogyna*. The same principles apply to this area as those mentioned above.

4.4.1 Comparison of Vegetation and Habitats between 1994 and 2011

Since the Lancashire County Council commissioned habitat survey of 1994 there has been some substantial changes in the vegetation and habitats of the Common. The main cause of this is likely to be the cessation of grazing that occurred about ten years ago.

The area of scrub has remained relatively unchanged although with the benefit of fixed point photography it is highly likely that the area of scrub on the site will have increased.

The area of marshy grassland (NVC – S28) has increased tremendously in area. In 1994 this habitat type was restricted just to the wetter areas of the site along the northern section of the Common abutting the area of Willow Carr. With the dominance of the Reed Canary-grass, and a lack of grazing, this is now the dominant vegetation type over the whole of the Common north of the B5269.

Conversely, and for the same reasons, the area of unimproved neutral grassland (NVC – MG9) has reduced in area considerably. This used to be the major vegetation type across the Common to the north of the B5269 and to the south of this road, west of the 'tank trap'. This type of vegetation is now limited to a small area in the southwest corner north of the B5269 and it is more or less intact over the whole area south of the B5269 and west of the 'tank trap'.

The area of swamp (NVC – M23) is now restricted to an area south of the B5269 and east of the tank trap. In 1994 this vegetation type could be found in quite large areas to the north of the B5269.

Again, through the cessation of grazing, the amount of semi-improved neutral grassland (NVC – MG6) has reduced and it is now predominantly in a strip both sides of the 'tank trap' to the south of the B5269.

4.4.2 Changes In Assemblage of Species Over Time

This is very difficult to assess as there is very little current ecological data for the Common. As a point of interest the most recent dates for ecological records for the major flora and faunal groups, based on LERN data, on the Common are as follows;

- Amphibians – 1975
- Beetles – 1994
- Birds – 2010 (the most up to date records; though only casual)
- Butterflies – 1995
- Dragonflies – 1994
- Flowering plants – 1994
- Fungi – 1992
- Lichens, liverworts & mosses – 1992
- Moths – 1995
- Spiders – 1994
- Other invertebrates – 1994

Local naturalists who provided records for the existing (1998) management plan all confirmed that they hadn't visited the site for a long time. The only recent records are for birds, but these have only been collected on a casual basis, and no systematic surveys have been carried out since the 1993/94 breeding bird survey of the Common.

This highlights the need for some current data to be collected for the Common and as mentioned earlier perhaps a low key 'friends' group or another 'Carr House Green Common Ecological Group' should be considered.

Another source for future records and surveys would perhaps be through Myerscough College. The college offers a number of countryside courses including a Foundation Degree in Ecology and Conservation Management and it would perhaps be worth contacting lecturers Jeff Simpkin or Dr Jaime Martin to see if there could be the possibility of students carrying out ecological survey work on the Common.

This leads to the conclusion that any changes in species assemblage can only be guessed at. A great deal of this information was collected just prior to the existing management plan at a time when the Common was still grazed. It can be assumed that some species will have been lost through the cessation of grazing, and of course others will have been gained. However, it is generally felt that there is less diversity on the Common now in terms of habitats and vegetation structure, and this in turn will probably have resulted in less species diversity.

4.4.3 Higher Level Stewardship

As part of a Higher Level Stewardship (HLS) application a Farm Environment Plan (FEP) needs to be undertaken. The primary purpose of a FEP is to gather good quality information about the current environmental value and interest of the land to be entered into HLS and its potential to deliver additional environmental benefits. The FEP is designed to capture this information in a way that both the land owner (Inskip Parish Council) and Natural England can use to help build an HLS agreement.

The FEP survey identifies all the habitats and environmental features on the holding and then assesses the condition and recommends management. If possible, any habitat needs to be assigned to a BAP habitat based on set criteria. For HLS purposes the habitats found on the Common can be

summarised as those of Purple Moor-grass and Rush pastures BAP habitat and Fens BAP habitat.

A condition assessment is then made of the habitat based on set criteria in the FEP Handbook and this determines whether the habitat needs to go under a maintenance or restoration option.

4.5 Priority Habitats and Species

4.5.1 Lancashire Biodiversity Action Plan

The Lancashire Biodiversity Action Plan (LBAP) is made up of many individual species and habitat action plans and is supported through the Lancashire Biodiversity Partnership. The Lancashire BAP was produced in 2001 and sets out the conservation priorities and action needed to protect the biodiversity of the county. It also outlines who is responsible for delivering species actions.

The LBAP is divided into Habitat Action Plans (HAPs), Species Action Plans (SAPs) and the BAP Long List. Within the HAPs are a list of habitats with particular importance in Lancashire and the HAP relevant to the Common is that of Species-rich Neutral Grassland. The details of this HAP can be found in Appendix 10.

At the time of the 1994 Lancashire County Council Habitat Survey perhaps two thirds of the Common could be described as fitting the criteria for this HAP. However, in 2011 perhaps only 20% of the Common would fit with the criteria of this HAP. The main reason for this is the lack of grazing and the spread of the Marshy grassland – S28 *Phalaris arundinacea* tall-herb fen. This in itself is a UK BAP habitat.

The SAPs are divided into plans for birds, mammals, amphibians, insects, other invertebrates and plants.

4.5.1.1 Birds

There are a number of LBAP bird species that have been recorded on the Common, see Appendix 8. Some of these have been recorded rarely or have been 'fly-over' records only. It is the LBAP species that nest, or formerly nested, or use the Common regularly for foraging that are important.

Within the farmland bird SAP (see Appendix 11 for a summary of the Farmland Bird SAP) are a number of species that nest, or formerly nested, on the Common including Skylark, Tree Sparrow *Passer montanus*, Linnet and Reed Bunting.

4.5.1.2 Mammals

The only mammal with a SAP that occurs on the Common is that of the Brown Hare *Lepus europaeus* (see appendix 12 for a summary of this SAP).

4.5.1.3 Lancashire Long List of BAP Species

These lists contain those species that occur in Lancashire and are of significance according to the criteria below.

Lancashire BAP Species Selection Criteria

1. UK PRIORITY

- Species which are identified as a UK BAP Priority Species (in the 2007 review) and occur in Lancashire.
- Species which are identified for inclusion in the IUCN threatened groups (critically endangered, endangered, vulnerable, near threatened) and occur in Lancashire.

2. LANCASHIRE BAP SPECIES

- Species which were identified in the 2001 Lancs BAP, and in later additions, for which SAP's already exist.

3. NATIONALLY SCARCE SPECIES

- Species recorded from Lancashire which are known or estimated to occur in fewer than 100 hectares nationally

4. LOCAL DECLINE

- A declining equal to or greater than 25 % in species numbers or range in BAP area over previous 25 years.

5. LOCAL RARITY OR SCARCITY

- Species currently occurring in equal to or less than 35 (4.0%) tetrads in the BAP area.

- Species currently occurring in equal to or less than 6 (0.6%) tetrads in the BAP area (*Birds only*)

6. LOCAL EXTINCTION

- Species recorded from Lancashire in the past 50 years but not found recently.

7. INTERNATIONAL IMPORTANCE

- Species deemed to have internationally important numbers in the BAP area.

Currently long lists have been developed for mammals, amphibians, reptiles, fish, moths, butterflies, spiders and birds. The long list for plants is under development.

Amphibians recorded on the Common that appear on the long list are Common Toad *Bufo bufo* and Common Frog *Rana temporaria*.

Mammal species recorded on the Common that appear on the long list are Hedgehog *Erinaceus europaeus*.

Butterfly species recorded on the Common that appear on the long list are Wall *Lasiommata megera* and Small Heath *Coenonympha pamphilus*.

Moth species recorded on the Common that appear on the long list are Garden Tiger *Arctia caja*.

There are 36 species of bird from the long list (see Appendix 8) that have been recorded on the Common. Several of these species have just been 'fly-overs' or have passed through the Common on migration. Below are listed the long list bird species that utilise the habitat on the Common for nesting or as an important winter foraging area, with the reason why the Common is important for them in brackets.

Curlew *Numenius arquata* (potential breeding site with habitat improvements)

Dunnock *Prunella modularis* (breeding and wintering area; particularly scrub areas)

Grasshopper Warbler *Locustella naevia* (important breeding site)

Linnet *Carduelis cannabina* (important breeding site)

Meadow Pipit *Anthus pratensis* (potential breeding site)

Reed Bunting *Emberiza schoeniculus* (important breeding site; particularly in wetter areas)
Short-eared Owl *Asio flammeus* (winter foraging area)
Skylark *Alauda arvensis* (former breeding site? With correct management breeding could occur again)
Snipe *Gallinago gallinago* (former breeding site? With correct management could breed again)
Song Thrush *Turdus philomelos* (breeding site and winter foraging area)
Tree Sparrow *Passer montanus* (potential breeding site with provision of nest boxes)
Willow Warbler *Phylloscopus trochilus* (breeding site; particularly willow *salix* sp. scrub)

4.5.2 Higher Level Stewardship Theme Statement

The Higher Level Stewardship (HLS) theme statement sets out a number of specific themes to help determine whether an applicant qualifies for HLS. Each theme relates to particular HLS features at risk in particular need of HLS management.

An application from Carr House Green Common could contribute to the following theme:

- Theme 1: Improving the resilience of Nationally Important (UK Biodiversity Action Plan) habitats to climate change: Natural England will consider applications offering to maintain and/or restore/link/buffer 'significant' areas of the following habitats:
 - Unimproved grassland habitats – particularly...lowland meadows, purple moor grass and rush pastures...
 - Wetland habitats – fens...

In terms of HLS based on the Northwest theme statement the priority habitats found on the Common are the Purple Moor-grass and Rush BAP habitat and Fens BAP habitat.

4.5.3 Birds of Conservation Concern Red and Amber Species

The UK's leading bird conservation organisations have worked together on the third quantitative review of the status of the birds that occur regularly in the UK, updating the last review in 2002. A total of 246 species have been assessed against a set of objective criteria to place each on one of three lists – green, amber and red – indicating an increasing level of conservation

concern. There are 52 species on the red list, 126 on the amber list and 68 on the green list. The red list has increased by 12 since 2002, with 18 species added but six moved from red to amber.

Red listing criteria:

IUCN Global Conservation Status. Species listed by BirdLife International as being Globally Threatened using IUCN criteria.

Historical Decline. A severe decline in the UK between 1800 and 1995, without substantial recent recovery.

Breeding Population Decline. Severe decline in the UK breeding population size, of more than 50%, over 25 years or the entire period used for assessments since the first BoCC review, starting in 1969 (“longer-term”).

Non-breeding Population Decline. Severe decline in the UK non-breeding population size, of more than 50%, over 25 years or the longer-term.

Breeding Range Decline. Severe decline in the UK range, of more than 50%, as measured by number of 10 km squares occupied by breeding birds, over 25 years or the longer-term.

Amber listing criteria:

SPEC European Conservation status. Categorised as a Species of European Conservation Concern (SPEC 1, 2 or 3).

Historical Decline – Recovery. Red listed for Historical Decline in a previous review but with substantial recent recovery (more than doubled in the last 25 years).

Breeding Population Decline. As for red list criteria, but with moderate decline (by more than 25% but less than 50%).

Non-breeding Population Decline. As for red list criteria, but with moderate decline (by more than 25% but less than 50%).

Breeding Range Decline. As for red list criteria, but with moderate decline (by more than 25% but less than 50%).

Rarity. UK breeding population of less than 300 pairs, or non-breeding population of less than 900 individuals.

Localisation. At least 50% of the UK breeding or non-breeding population found in 10 or fewer sites.

International Importance. At least 20% of the European breeding or non-breeding population found in the UK.

There have been 40 amber listed species and 14 red listed species recorded on the Common. The comments made under 'long list' are relevant to the amber and red lists and the species that the Common is important for are the same.

4.5.4 Appropriate Management to Safeguard and/or Enhance Important Habitats and Species

The difficulty when managing a site for a range of flora and fauna is getting the management right so that the range of species and habitats are catered for. Ensuring that there is as much variety in the vegetation structure, or heterogeneity, is vitally important. Different species will occupy different niches and be affected by micro-climates that care needs to be taken that management of one species doesn't adversely affect another.

Wisdom (1998) stated that the Common has an exceptionally high diversity in terms of the range of habitats present, the structure of the grassland and the variety of plant and animal species recorded. Some of this diversity has been lost through a lack of grazing, allowing other habitats to become more dominant. The aim should be to try and get some of this diversity back on to the Common. The most efficient, natural and least damaging way of doing this is through grazing. However, as mentioned earlier this is looking unlikely at the moment with the existing grazier. However, it might still be possible to facilitate this by contacting other 'conservation' graziers to see if they would be interested in grazing their stock on the Common. Agreement would be needed from all existing graziers before this could be done.

This could be achieved through an outside grazier renting the grazing rights of an inactive rights holder. Every rights holder listed on the 'Register of Common Land' would need to be written to so that their agreement for this to happen would be secured.

If grazing isn't an option then cutting would be the only way forward to try and create some diversity within the vegetation structure. See '3.2.6 Alternative to Grazing' for details on how this could be achieved.

5 Historic Landscape

5.1 Review of Existing Information

Most of the historical information has been gleaned by talking to Mrs Sue Pilkington who has researched the history of the Common quite extensively and from the historical details contained in the management plan produced in 1998 by Kim Wisdom.

The surrounding areas to the Common were drained and enclosed in the late 19th Century, but surprisingly the Common escaped this. One of the reasons put forward for this is a difference in the sphere of control by the owner of the Common at the time, Lord Derby, and the residents who had the grazing rights over the Common. The residents who had grazing rights over the Common were from the parish of Catforth and Lord Derby had no control over this parish. Therefore he had no overall control of the land and wasn't in a position to issue instructions to have the Common drained and enclosed.

Wisdom (1998) lists a 'timeline' of historical events that occurred in the 20th Century but none of these have any particular relevance to the management of the Common and how it looks today. The most important factor in shaping the common is the fact that it was never enclosed or drained.

One 20th Century historical event that would need to be considered should any management works be carried out in this area is the site of an aeroplane crash. In 1943 a Fairy Swordfish from HMS Inskip crashed on the south side of the B5269 between the tank trap and the footpath and the three airmen in the aircraft were killed. Sue Pilkington stated that this is registered as a military archaeological site and of course should remain undisturbed.

See appendix 13 showing the 1st edition ordnance survey map of the Common.

5.2 Recommendations

After talking to Sue Pilkington about the history of the site it would seem that the best way to preserve the historical aspect of the Common is to maintain the *status quo*. The unique nature of the site has remained historically intact because it was never drained or enclosed. Sue had no objection to the grazing of the site or indeed any management that would enhance the ecological value of the site as long as it didn't compromise its historical value.

6 Summary of Recommendations

6.1 Recommendations for Management

6.1.1 Key priorities for Management

The key priorities for management are as follows:

- To restore and enhance the existing Purple Moor-grass and Rush-pasture habitat type and associated habitats, focusing on structural variety that has been lost through lack of grazing.
- Enhance the wetness of the site through pond creation.
- Restore the habitat mosaic on the Common.
- Maintain and enhance the existing breeding and wintering bird populations, with particular reference to nationally (UK BAP, Red & Amber lists etc) and locally (LBAP long list) important species.
- Re-create the right conditions for some of the important breeding bird species that no longer occur on the Common.
- Maintain and enhance the existing invertebrate population (butterflies, moths, flies, spiders, dragonflies, beetles and damselflies), with particular reference to nationally and locally important species.
- Maintain and enhance the existing plant population with particular reference to nationally and locally important species.
- Re-introduce grazing or cutting to the Common to improve the habitat structure to benefit the above flora and faunal groups.
- Contact local naturalists to try and re-introduce ecological surveying and monitoring on the Common to provide data to inform the implementation of the management plan, with a particular reference to under-recorded groups e.g. moths, dragonflies & damselflies, small mammals and bats.
- Ensure there is continued monitoring of the more commonly recorded groups to monitor the impact of the management plan and the change in habitat structure that will ensue e.g. butterflies and birds
- Raise awareness of the ecological and historical value of the site with local residents

The existing management plan talked about increasing people's understanding and enjoyment of the site's wildlife value through appropriate interpretation, events and other measures (Wisdom 1998).

Having spoken to the Parish Council they are keen for anything like this to be 'low key' and to be more of benefit and use by local residents. It might be an idea to have two or three days a year where local residents are invited to have a walk on the Common with local amateur naturalists and have the Common's wildlife interest shown to them. This would hopefully engender some 'ownership' by local residents and lead to a greater appreciation of the site.

6.1.2 Management Methods

The key methods to manage the Common to improve the site for the habitats and species discussed is to improve the structural diversity of the habitat through, preferably, grazing or cutting, and to increase the wetness of the site through pond creation.

As stated above, and elsewhere in this report, grazing would be the preferred method to improve the structural diversity of the habitat on the Common. The main issue with this is due to a lack of any of the Commoners prepared to exercise their rights. William Thompson is the most recent Commoner who has exercised his rights, but in the near future he is restructuring his farm business and isn't at present prepared to put any livestock on the Common.

As Wisdom (1998) states the Parish Council is also entitled to put stock on the Common, subject to leaving sufficient grazing land for other Commoners, but this is unlikely to happen for a variety of practical reasons. However, it might be worth contacting the Grazing Advice Partnership (GAP) to see if there is anyone willing to consider grazing their stock on the Common on behalf of the Parish Council.

On the GAP website, <http://www.grazinganimalsproject.org.uk/> , it is possible to register on the site as a landowner with spare grazing to see if there is anybody close by who has stock and would be prepared to graze their stock on the Common.

This then raises the issue of ensuring the Common is stock-proof and the easiest way of doing this is through fencing. Fencing could be funded through HLS at £2.50/metre, but the major issue if the Common is fenced is who is responsible for maintaining the fence. If the grazier was to receive a payment through HLS for grazing the Common then the responsibility could lie with them, otherwise it would lie with the Parish Council.

The second option to enable management of the grazing to be reinstated is installation of cattle grids on the two public highways that cross the common with associated perimeter fencing.

Note: erection of new fencing and/or installation of cattle grids would need approval through the appropriate statutory process and approval is not guaranteed.

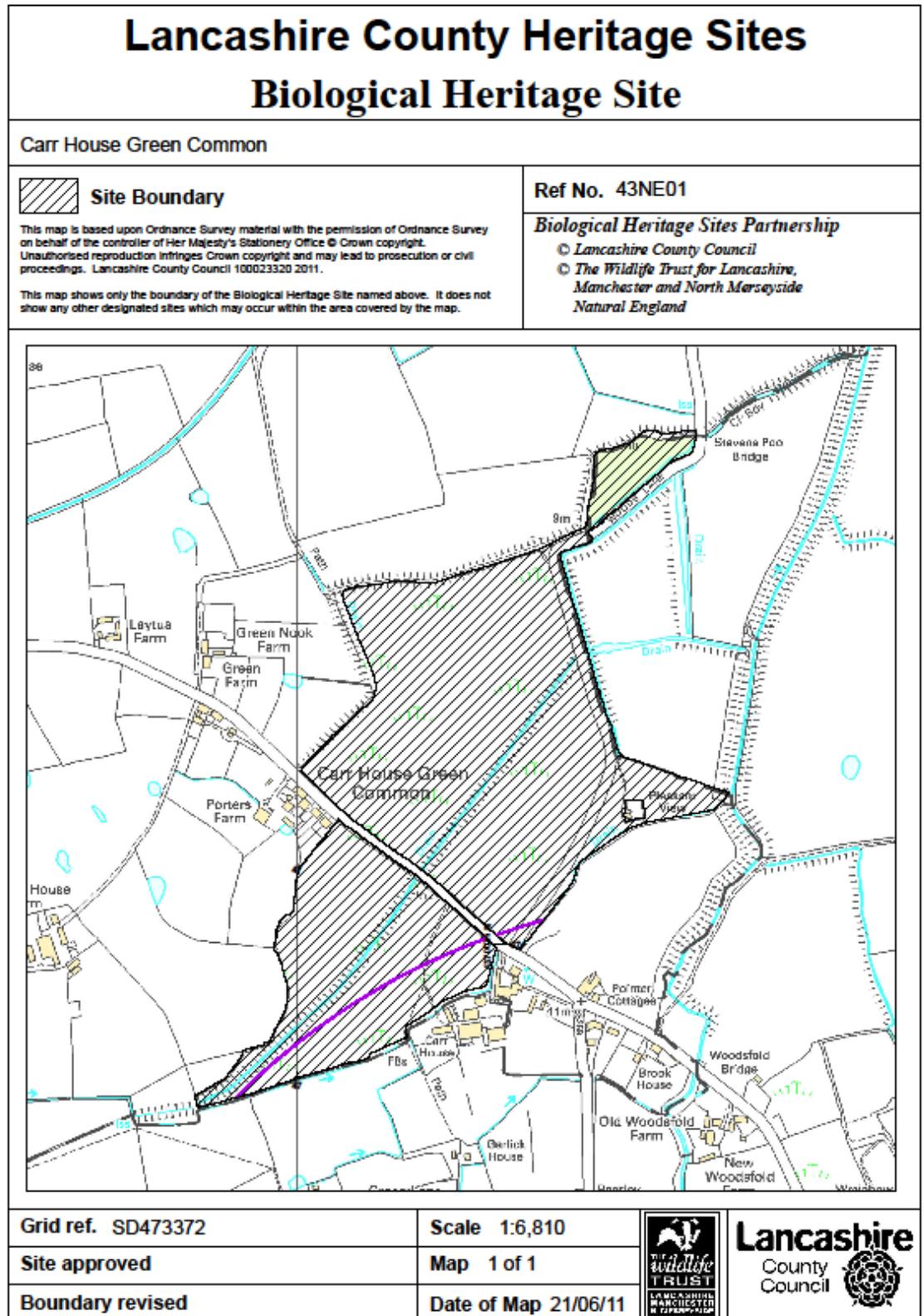
If it was decided that grazing was not possible then cutting would be the second choice to try and re-introduce some structure to the vegetation. Section '3.2.6 Alternatives to Grazing' touches on the issues surrounding cutting. The first thing to do would be to contact a couple of contractors and have a site meeting to talk through what was required and to ask them to quote for the cost of the work.

A plan would then need to be drawn up of compartments on the Common that required cutting and on what type of frequency i.e. 3, 4 or 5 years etc. Areas to remain uncut would also need to be identified.

All of the cut material would need to be removed from site, as to flail it and leave it on site would increase the fertility of the site and the nature of the habitat would change. It might be possible to bail the cut material and use it for animal bedding. Another possibility would be using the bails to make peat free compost, perhaps worthy of further investigation.

7 Appendix

7.1 Appendix I – Carr House Green Common BHS Details





Lancashire County Heritage Sites

Biological Heritage Site

**Biological Heritage Sites
Partnership:**
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Natural England

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Site Name: Carr House Green Common

Site Ref: 43NE01

Approved: 01 September 1993

Area (ha): 27.32

Date written/last updated: 01 October 2001

Grid Ref: SD472372

Owner/Occupier: Public
Private

Districts:

Preston
Wyre

Parishes:

Woodplumpton
Inskip-with-Sowerby

Description:

The site comprises a large area of semi-natural vegetation occupying level, peaty ground to the south-east of Inskip. The site is dissected by the B5289 (north-west to south-east) and a canalised ditch (south-west to north-east). The surrounding area is intensively farmed. A variety of vegetation types are present, including swamp, marshy grassland, neutral grassland, willow carr, ditches and standing water.

Areas of swamp and very wet marshy grassland are dominated by soft-rush, sharp-flowered rush and reed canary-grass. Other species include marsh-marigold, meadowsweet, lesser spearwort, tufted hair-grass, narrow buckler-fern, wild angelica, bog stitchwort, marsh bedstraw and marsh ragwort. Standing water supports water-pepper, common duckweed, common water-starwort, gipsywort, hemlock water-dropwort, marsh cinquefoil and small sweet-grass. Two species included in the *Provisional Lancashire Red Data List of Vascular Plants*, namely bladder-sedge and tubular water-dropwort, are also present.

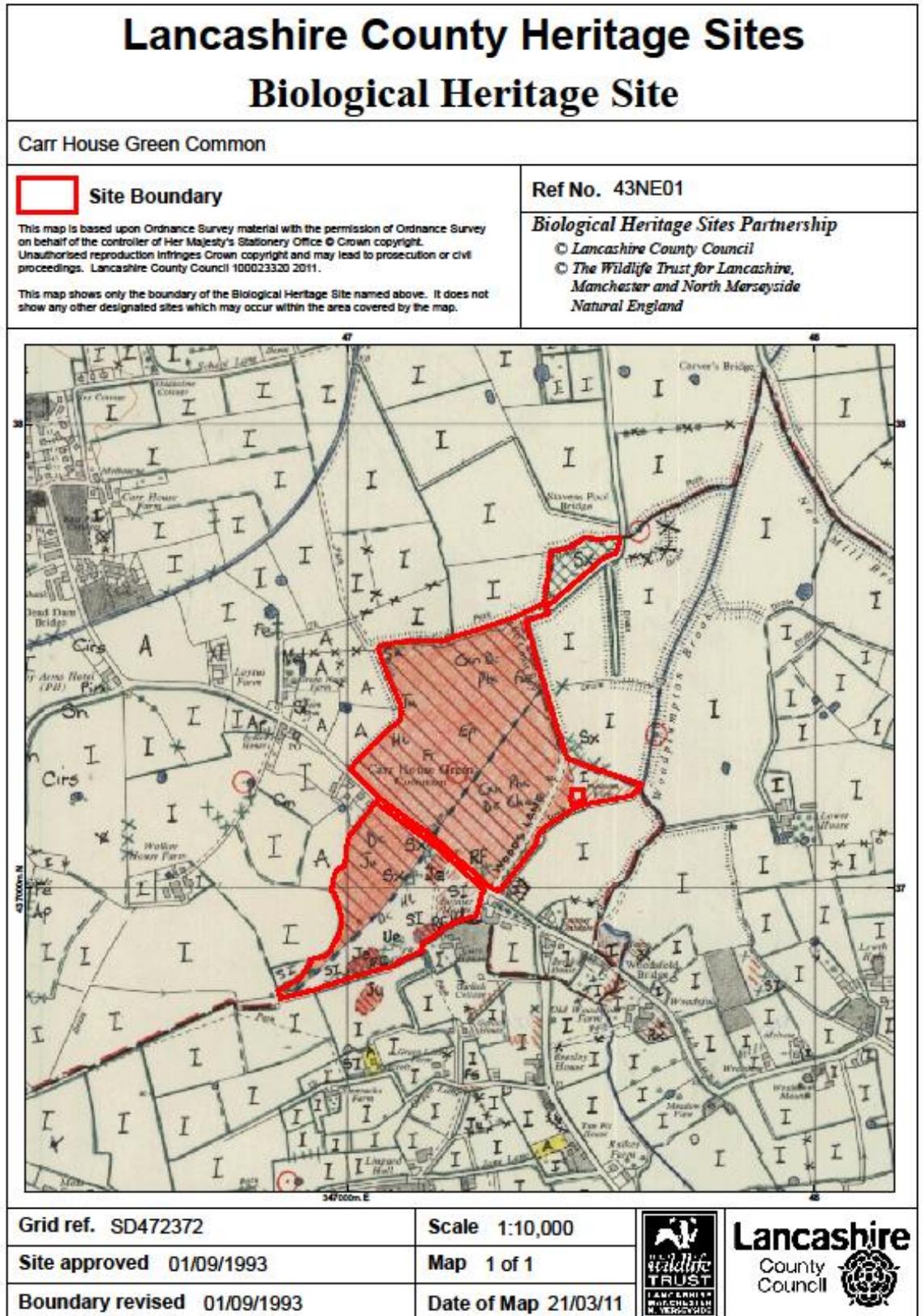
Elsewhere damp neutral grassland is typically dominated by tufted hair-grass, Yorkshire-fog, reed canary-grass and rushes. Other species include greater bird's-foot-trefoil, sneezewort, meadowsweet, creeping buttercup and ragged-robin. Drier ground supports plants such as common knapweed, selfheal, crested dog's-tail and cock's-foot. More acidic swards feature sheep's-fescue, heath bedstraw and common sorrel.

The steep banks of the drainage ditch are dominated by reed canary-grass and common nettle, accompanied by species such as meadowsweet, creeping buttercup, tufted hair-grass, common knapweed, wild angelica and crosswort.

A number of small pools are present. Here marginal and aquatic plants include soft-rush, floating sweet-grass, reedmace, reed canary-grass, lesser spearwort, common water-crowfoot and water horsetail.

An area of crack willow carr is present in the north of the site. This is an uncommon habitat in this part of Lancashire. The carr provides an important habitat for lichens and bryophytes. As well as supporting species typical of this habitat type, there are several species with a restricted distribution in Lancashire. A number of the lichens and bryophytes are species that are sensitive to pollution.

7.2 Appendix 2 – Phase I Habitat Survey



7.3 Appendix 3 – Flowering Plant Species Recorded at Carr House Common

<i>Alnus glutinosa</i>	Alder
<i>Trifolium hybridum</i>	Alsike Clover
<i>Persicaria amphibia</i>	Amphibious Bistort
<i>Poa annua</i>	Annual Meadow-Grass
<i>Fraxinus excelsior</i>	Ash
<i>Leontodon autumnalis</i>	Autumn Hawkbit
<i>Fagus sylvatica</i>	Beech
<i>Stachys officinalis</i>	Betony
<i>Solanum dulcamara</i>	Bittersweet
<i>Prunus spinosa</i>	Blackthorn
<i>Carex vesicaria</i>	Bladder-Sedge
<i>Hyacinthoides non-scripta</i>	Bluebell
<i>Stellaria uliginosa</i>	Bog Stitchwort
<i>Carex rostrata</i>	Bottle Sedge
<i>Rubus armeniacus</i>	Bramble
<i>Sparganium erectum</i>	Branched Bur-Reed
<i>Isolepis setacea</i>	Bristle Club-Rush
<i>Rumex obtusifolius</i>	Broad-Leaved Dock
<i>Potamogeton natans</i>	Broad-Leaved Pondweed
<i>Veronica beccabunga</i>	Brooklime
<i>Carex disticha</i>	Brown Sedge
<i>Ajuga reptans</i>	Bugle
<i>Anchusa arvensis</i>	Bugloss
<i>Juncus bulbosus</i>	Bulbous Rush
<i>Typha latifolia</i>	Bulrush
<i>Vicia sepium</i>	Bush Vetch
<i>Petasites hybridus</i>	Butterbur
<i>Elodea canadensis</i>	Canadian Waterweed
<i>Carex panicea</i>	Carnation Sedge
<i>Ranunculus sceleratus</i>	Celery-Leaved Buttercup
<i>Myosotis discolor</i>	Changing Forget-Me-Not
<i>Galium aparine</i>	Cleavers
<i>Rumex conglomeratus</i>	Clustered Dock
<i>Dactylis glomerata</i>	Cock's-Foot
<i>Tussilago farfara</i>	Colt's-Foot
<i>Agrostis capillaris</i>	Common Bent
	Common Bird's-Foot-
<i>Lotus corniculatus</i>	Trefoil
<i>Persicaria bistorta</i>	Common Bistort

<i>Stellaria media</i>	Common Chickweed
<i>Elytrigia repens</i>	Common Couch
<i>Filago vulgaris</i>	Common Cudweed
<i>Lemna minor</i>	Common Duckweed
<i>Pulicaria dysenterica</i>	Common Fleabane
<i>Fumaria officinalis</i>	Common Fumitory
<i>Galeopsis tetrahit</i>	Common Hemp-Nettle
<i>Centaurea nigra</i>	Common Knapweed
<i>Malva sylvestris</i>	Common Mallow
<i>Cerastium fontanum</i>	Common Mouse-Ear
<i>Urtica dioica</i>	Common Nettle
<i>Carex nigra</i>	Common Sedge
<i>Rumex acetosa</i>	Common Sorrel
<i>Rumex acetosa</i>	Common Sorrel
<i>Eleocharis palustris</i>	Common Spike-Rush
<i>Valeriana officinalis</i>	Common Valerian
	Common Water- Starwort
<i>Callitriche stagnalis</i>	
<i>Carex viridula</i> subsp. <i>oedocarpa</i>	Common Yellow-sedge
<i>Juncus conglomeratus</i>	Compact Rush
<i>Anthriscus sylvestris</i>	Cow Parsley
<i>Salix fragilis</i>	Crack Willow
<i>Agrostis stolonifera</i>	Creeping Bent
<i>Ranunculus repens</i>	Creeping Buttercup
<i>Potentilla reptans</i>	Creeping Cinquefoil
<i>Holcus mollis</i>	Creeping Soft-Grass
<i>Cirsium arvense</i>	Creeping Thistle
<i>Rorippa sylvestris</i>	Creeping Yellow-Cress
<i>Cynosurus cristatus</i>	Crested Dog's-Tail
<i>Cruciata laevipes</i>	Crosswort
<i>Cardamine pratensis</i>	Cuckooflower
<i>Rumex crispus</i>	Curled Dock
<i>Geranium dissectum</i>	Cut-Leaved Crane's-Bill
<i>Carex pseudocyperus</i>	Cyperus Sedge
<i>Bellis perennis</i>	Daisy
<i>Taraxacum officinale</i> agg.	Dandelion
<i>Succisa pratensis</i>	Devil's-Bit Scabious
<i>Rumex</i>	Dock
<i>Rosa canina</i> agg.	Dog Rose
<i>Solidago gigantea</i>	Early Goldenrod

<i>Sambucus nigra</i>	Elder
<i>Arrhenatherum elatius</i>	False Oat-Grass
<i>Myosotis arvensis</i>	Field Forget-Me-Not
<i>Viola arvensis</i>	Field Pansy
<i>Luzula campestris</i>	Field Wood-Rush
<i>Rosa arvensis</i>	Field-rose
<i>Glyceria fluitans</i>	Floating Sweet-Grass
<i>Apium nodiflorum</i>	Fool's-water-cress
<i>Myosotis</i>	Forget-Me-Not
<i>Digitalis purpurea</i>	Foxglove
<i>Alliaria petiolata</i>	Garlic Mustard
<i>Lycopus europaeus</i>	Gipsywort
<i>Carex flacca</i>	Glaucous Sedge
<i>Salix caprea</i>	Goat Willow
<i>Ulex europaeus</i>	Gorse
<i>Epilobium hirsutum</i>	Great Willowherb
<i>Epilobium hirsutum</i>	Great Willowherb
<i>Lotus pedunculatus</i>	Greater Bird's-foot-trefoil
<i>Plantago major</i>	Greater Plantain
<i>Aegopodium podagraria</i>	Ground-Elder
<i>Glechoma hederacea</i>	Ground-Ivy
<i>Senecio vulgaris</i>	Groundsel
<i>Viburnum opulus</i>	Guelder-Rose
<i>Carex hirta</i>	Hairy Sedge
<i>Juncus inflexus</i>	Hard Rush
<i>Crataegus monogyna</i>	Hawthorn
<i>Galium saxatile</i>	Heath Bedstraw
<i>Luzula multiflora</i>	Heath Wood-Rush
<i>Calystegia sepium</i>	Hedge Bindweed
	Hemlock Water-
<i>Oenanthe crocata</i>	Dropwort
<i>Geum urbanum</i>	Herb Bennet
<i>Epilobium parviflorum</i>	Hoary Willowherb
<i>Heracleum sphondylium</i>	Hogweed
<i>Humulus lupulus</i>	Hop
<i>Stachys x ambigua</i>	Hybrid Woundwort
<i>Hedera helix</i>	Ivy
<i>Ranunculus hederaceus</i>	Ivy-Leaved Crowfoot
<i>Fallopia japonica</i>	Japanese Knotweed
<i>Juncus articulatus</i>	Jointed Rush
<i>Polygonum aviculare</i>	Knotgrass

<i>Alchemilla vulgaris</i> agg.	Lady's-Mantle
<i>Calystegia silvatica</i>	Large Bindweed
<i>Arctium minus</i>	Lesser Burdock
<i>Ranunculus ficaria</i>	Lesser Celandine
<i>Apium inundatum</i>	Lesser Marshwort
<i>Carex acutiformis</i>	Lesser Pond-Sedge
<i>Ranunculus flammula</i>	Lesser Spearwort
<i>Stellaria graminea</i>	Lesser Stitchwort
<i>Trifolium dubium</i>	Lesser Trefoil
<i>Triglochin palustre</i>	Marsh Arrowgrass
<i>Potentilla palustris</i>	Marsh Cinquefoil
<i>Hydrocotyle vulgaris</i>	Marsh Pennywort
<i>Senecio aquaticus</i>	Marsh Ragwort
<i>Cirsium palustre</i>	Marsh Thistle
<i>Cirsium palustre</i>	Marsh Thistle
<i>Viola palustris</i>	Marsh Violet
<i>Epilobium palustre</i>	Marsh Willowherb
<i>Stachys palustris</i>	Marsh Woundwort
<i>Galium palustre</i>	Marsh-bedstraw
<i>Caltha palustris</i>	Marsh-marigold
<i>Nardus stricta</i>	Mat-Grass
<i>Ranunculus acris</i>	Meadow Buttercup
<i>Lathyrus pratensis</i>	Meadow Vetchling
<i>Filipendula ulmaria</i>	Meadowsweet
<i>Crataegus laevigata</i>	Midland Hawthorn
<i>Mentha</i>	Mint
<i>Artemisia vulgaris</i>	Mugwort
<i>Lapsana communis</i>	Nipplewort
<i>Salix viminalis</i>	Osier
<i>Carex ovalis</i>	Oval Sedge
<i>Quercus robur</i>	Pedunculate Oak
<i>Lolium perenne</i>	Perennial Rye-Grass
<i>Matricaria discoidea</i>	Pineappleweed
<i>Potamogeton</i>	Pondweed
<i>Molinia caerulea</i>	Purple Moor-Grass
<i>Lythrum salicaria</i>	Purple-Loosestrife
<i>Lychnis flos-cuculi</i>	Ragged-Robin
<i>Silene dioica</i>	Red Campion
<i>Trifolium pratense</i>	Red Clover
<i>Festuca rubra</i>	Red Fescue
<i>Persicaria maculosa</i>	Redshank

<i>Phalaris arundinacea</i>	Reed Canary-Grass
<i>Carex remota</i>	Remote Sedge
<i>Plantago lanceolata</i>	Ribwort Plantain
<i>Rosa</i>	Rose
<i>Chamerion angustifolium</i>	Rosebay Willowherb
<i>Ranunculus omiophyllus</i>	Round-Leaved Crowfoot
<i>Sorbus aucuparia</i>	Rowan
<i>Symphytum x uplandicum</i>	Russian Comfrey
<i>Salix cinerea</i> subsp. <i>oleifolia</i>	Rusty Willow
<i>Salix</i>	Sallow
<i>Matricaria recutita</i>	Scented Mayweed
<i>Sagina procumbens</i>	Sea Pearlwort
<i>Carex</i>	Sedge
<i>Prunella vulgaris</i>	Selfheal
<i>Juncus acutiflorus</i>	Sharp-Flowered Rush
<i>Festuca ovina</i>	Sheep's Fescue
<i>Rumex acetosella</i>	Sheep's Sorrel
<i>Salix x smithiana</i>	Silky-Leaved Osier
<i>Potentilla anserina</i>	Silverweed
<i>Scutellaria galericulata</i>	Skullcap
<i>Glyceria declinata</i>	Small Sweet-Grass
<i>Poa pratensis</i>	Smooth Meadow-Grass
<i>Sonchus oleraceus</i>	Smooth Sow-Thistle
<i>Achillea ptarmica</i>	Sneezewort
<i>Symphoricarpos albus</i>	Snowberry
<i>Galanthus nivalis</i>	Snowdrop
<i>Juncus effusus</i>	Soft-rush
<i>Cirsium vulgare</i>	Spear Thistle
	Square-Stalked St. John's-
<i>Hypericum tetrapterum</i>	Wort
<i>Senecio viscosus</i>	Sticky Groundsel
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass
<i>Glyceria</i>	Sweet-Grass
<i>Acer pseudoplatanus</i>	Sycamore
<i>Tanacetum vulgare</i>	Tansy
<i>Persicaria laxiflora</i>	Tasteless Water-Pepper
	Thyme-Leaved
<i>Veronica serpyllifolia</i>	Speedwell
<i>Phleum pratense</i>	Timothy
<i>Juncus bufonius</i>	Toad Rush
<i>Potentilla erecta</i>	Tormentil

<i>Bidens tripartita</i>	Trifid Bur-Marigold
<i>Oenanthe fistulosa</i>	Tubular Water-Dropwort
<i>Myosotis laxa</i>	Tufted Forget-Me-Not
<i>Deschampsia caespitosa</i>	Tufted Hair-Grass
<i>Deschampsia caespitosa</i>	Tufted Hair-Grass
<i>Vicia cracca</i>	Tufted Vetch
<i>Sparganium emersum</i>	Unbranched Bur-Reed
<i>Torilis japonica</i>	Upright Hedge-Parsley
<i>Agrostis canina</i>	Velvet Bent
<i>Rorippa nasturtium-aquaticum</i> agg.	Water Cress
<i>Ranunculus aquatilis</i>	Water Crowfoot
<i>Myosotis scorpioides</i>	Water Forget-Me-Not
<i>Mentha aquatica</i>	Water Mint
<i>Persicaria hydropiper</i>	Water-Pepper
<i>Alisma plantago-aquatica</i>	Water-Plantain
<i>Lythrum portula</i>	Water-purslane
<i>Callitriche</i>	Water-Starwort
<i>Elodea</i>	Waterweed
<i>Cardamine flexuosa</i>	Wavy Bitter-Cress
<i>Trifolium repens</i>	White Clover
<i>Lamium album</i>	White Dead-Nettle
<i>Salix alba</i>	White Willow
<i>Angelica sylvestris</i>	Wild Angelica
<i>Prunus domestica</i>	Wild Plum
<i>Epilobium</i>	Willowherb
<i>Barbarea vulgaris</i>	Winter-Cress
<i>Arctium minus</i> subsp. <i>nemorosum</i>	Wood Burdock
<i>Poa nemoralis</i>	Wood Meadow-Grass
<i>Luzula</i>	Wood-Rush
<i>Achillea millefolium</i>	Yarrow
<i>Iris pseudacorus</i>	Yellow Iris
<i>Lysimachia vulgaris</i>	Yellow Loosestrife
<i>Holcus lanatus</i>	Yorkshire-Fog

7.4 Appendix 4 – Lichens, Liverworts and Mosses Recorded at Carr House

Green Common

Cladonia fimbriata

Cliostomum griffithii

Dimerella pineti

Evernia prunastri

Gyalideopsis anastomosans

Hypogymnia physodes

Lecanora chlarotera

Lecanora conizaeoides

Lecidella elaeochroma

Lepraria

Lepraria incana

Parmelia caperata

Parmelia glabratula subsp. *glabratula*

Parmelia revoluta

Parmelia saxatilis

Parmelia subaurifera

Parmelia subrudecta

Parmotrema chinense

Physcia tenella

Ramalina farinacea

Usnea subfloridana

Xanthoria candelaria

Xanthoria parietina

Xanthoria polycarpa

Frullania dilatata

Lophocolea bidentata

Metzgeria fruticulosa

7.5 Appendix 5 – Fungi Species Recorded at Carr House Green Common

<i>Ganoderma applanatum</i>	Artist's Bracket
<i>Xylaria hypoxylon</i>	Candle-Snuff Fungus
<i>Cheilymenia fimicola</i>	<i>Cheilymenia fimicola</i>
<i>Coleosporium tussilaginis</i>	<i>Coleosporium tussilaginis</i>
<i>Conocybe rickeniana</i>	<i>Conocybe rickeniana</i>
<i>Coprobria granulata</i>	<i>Coprobria granulata</i>
<i>Daedaleopsis confragosa</i>	<i>Daedaleopsis confragosa</i>
<i>Erysiphe artemisiae</i>	<i>Erysiphe artemisiae</i>
<i>Erysiphe heraclei</i>	<i>Erysiphe heraclei</i>
<i>Coprinus disseminatus</i>	Fairies' Bonnets
<i>Armillaria mellea</i>	Honey Fungus
<i>Hygrocybe virginea</i>	<i>Hygrocybe virginea</i>
<i>Kuehneromyces mutabilis</i>	<i>Kuehneromyces mutabilis</i>
<i>Leptosphaeria acuta</i>	<i>Leptosphaeria acuta</i>
<i>Melampsora ribesii-viminalis</i>	<i>Melampsora ribesii-viminalis</i>
<i>Phragmidium mucronatum</i>	<i>Phragmidium mucronatum</i>
<i>Phragmidium violaceum</i>	<i>Phragmidium violaceum</i>
<i>Phyllachora dactylidis</i>	<i>Phyllachora dactylidis</i>
<i>Pilobolus crystallinus</i>	<i>Pilobolus crystallinus</i>
<i>Puccinia menthae</i>	<i>Puccinia menthae</i>
<i>Puccinia pulverulenta</i>	<i>Puccinia pulverulenta</i>
<i>Puccinia sessilis</i>	<i>Puccinia sessilis</i>
<i>Pucciniastrum epilobii</i>	<i>Pucciniastrum epilobii</i>
<i>Ganoderma australe</i>	Southern Bracket
<i>Pholiota gummosa</i>	Sticky Scalycap
<i>Hypholoma fasciculare</i>	Sulphur Tuft
<i>Rhytisma acerinum</i>	Tar-Spot Fungus
<i>Trametes versicolor</i>	<i>Trametes versicolor</i>

7.6 Appendix 5 – Butterfly Species Recorded at Carr House Green Common

<i>Gonepteryx rhamni</i>	Brimstone
<i>Colias croceus</i>	Clouded Yellow
<i>Polyommatus icarus</i>	Common Blue
<i>Pyronia tithonus</i>	Gatekeeper
	Green-Veined
<i>Pieris napi</i>	White
<i>Ochlodes venata</i>	Large Skipper
<i>Pieris brassicae</i>	Large White
<i>Maniola jurtina</i>	Meadow Brown
<i>Anthocharis</i>	
<i>cardamines</i>	Orange Tip
<i>Cynthia cardui</i>	Painted Lady
<i>Inachis io</i>	Peacock
<i>Vanessa atalanta</i>	Red Admiral
<i>Lycaena phlaeas</i>	Small Copper
<i>Coenonympha</i>	
<i>pamphilus</i>	Small Heath
	Small
<i>Aglais urticae</i>	Tortoiseshell
<i>Pieris rapae</i>	Small White
<i>Lasiommata megera</i>	Wall

7.7 Appendix 6 – Moth Species Recorded at Carr House Green Common

<i>Agapeta hamana</i>	<i>Agapeta hamana</i>
<i>Phlogophora meticulosa</i>	Angle Shades
<i>Eulithis pyraliata</i>	Barred Straw
<i>Cidaria fulvata</i>	Barred Yellow
<i>Autographa pulchrina</i>	Beautiful Golden Y
<i>Plemyria rubiginata</i>	Blue-Bordered Carpet
<i>Epione repandaria</i>	Bordered Beauty
<i>Epiblema uddmanniana</i>	Bramble Shoot Moth
<i>Lacanobia oleracea</i>	Bright-Line Brown-Eye
<i>Spilosoma luteum</i>	Buff Ermine
<i>Phalera bucephala</i>	Buff-Tip
<i>Diachrysia chrysis</i>	Burnished Brass
<i>Ennomos alniaria</i>	Canary-Shouldered Thorn
<i>Celypha striana</i>	<i>Celypha striana</i>
<i>Cilix glaucata</i>	Chinese Character
<i>Tyria jacobaeae</i>	Cinnabar
<i>Mesoligia furuncula</i>	Cloaked Minor
<i>Lomaspilis marginata</i>	Clouded Border
<i>Orthosia incerta</i>	Clouded Drab
<i>Epirrhoe alternata</i>	Common Carpet
<i>Hemithea aestivaria</i>	Common Emerald
<i>Chloroclysta truncata</i>	Common Marbled Carpet
<i>Eupithecia vulgata</i> subsp. <i>vulgata</i>	Common Pug
<i>Orthosia cerasi</i>	Common Quaker
<i>Mesapamea secalis</i>	Common Rustic
<i>Hepialus lupulinus</i>	Common Swift
<i>Mythimna pallens</i>	Common Wainscot
<i>Cabera exanthemata</i>	Common Wave
<i>Cabera pusaria</i>	Common White Wave
<i>Ptilodon capucina</i>	Coxcomb Prominent
<i>Apamea monoglypha</i>	Dark Arches
<i>Acronicta tridens</i>	Dark Dagger
<i>Abrostola trigemina</i>	Dark Spectacle
<i>Xanthorhoe ferrugata</i>	Dark-Barred Twin-Spot Carpet
<i>Melanchra persicariae</i>	Dot Moth
<i>Graphiphora augur</i>	Double Dart
<i>Apamea ophiogramma</i>	Double Lobed
<i>Euthrix potatoria</i>	Drinker
<i>Cosmia trapezina</i>	Dun-Bar
<i>Apamea remissa</i>	Dusky Brocade

<i>Selenia dentaria</i>	Early Thorn
<i>Deilephila elpenor</i>	Elephant Hawk-Moth
<i>Epiblema foenella</i>	<i>Epiblema foenella</i>
<i>Diloba caeruleocephala</i>	Figure of Eight
<i>Axylia putris</i>	Flame
<i>Xanthorhoe designata</i>	Flame Carpet
<i>Ochropleura plecta</i>	Flame Shoulder
<i>Luperina testacea</i>	Flounced Rustic
<i>Eupithecia pulchellata</i> subsp. <i>pulchellata</i>	Foxglove Pug
<i>Gortyna flavago</i>	Frosted Orange
<i>Xanthorhoe fluctuata</i>	Garden Carpet
<i>Arctia caja</i>	Garden Tiger
<i>Hepialus humuli</i> subsp. <i>humuli</i>	Ghost Moth
<i>Naenia typica</i>	Gothic
<i>Pseudoterpna pruinata</i> subsp. <i>atropunctaria</i>	Grass Emerald
<i>Acronicta psi</i>	Grey Dagger
<i>Agrotis exclamationis</i>	Heart and Dart
<i>Orthosia gothica</i>	Hebrew Character
<i>Scoliopteryx libatrix</i>	Herald
<i>Diarsia mendica</i> subsp. <i>mendica</i>	Ingrailed Clay
<i>Hydriomena furcata</i>	July Highflyer
<i>Acronicta rumicis</i>	Knotgrass
<i>Archips podana</i>	Large Fruit-Tree Tortrix
<i>Noctua pronuba</i>	Large Yellow Underwing
<i>Semiothisa clathrata</i> subsp. <i>clathrata</i>	Latticed Heath
<i>Noctua interjecta</i> subsp. <i>caliginosa</i>	Least Yellow Underwing
<i>Noctua janthe</i>	Lesser Broad Bordered Yellow
<i>Noctua comes</i>	Underwing
<i>Apamea lithoxylea</i>	Lesser Yellow Underwing
<i>Campaea margaritata</i>	Light Arches
<i>Hadena bicruris</i>	Light Emerald
<i>Abraxas grossulariata</i>	Lychnis
<i>Oligia strigilis</i>	Magpie Moth
<i>Hydriomena impluviata</i>	Marbled Minor
<i>Oligia fasciuncula</i>	May Highflyer
<i>Pleuroptya ruralis</i>	Middle-Barred Minor
<i>Alcis repandata</i> subsp. <i>repandata</i>	Mother of Pearl
<i>Caradrina morpheus</i>	Mottled Beauty
	Mottled Rustic

Amphipyra tragopoginis	Mouse Moth
Diaphora mendica	Muslin Moth
	Narrow-Bordered Five-Spot
Zygaena lonicerae	Burnet
Hepialus sylvina	Orange Swift
Lacanobia thalassina	Pale-Shouldered Brocade
Xanthia togata	Pink-Barred Sallow
Laothoe populi	Poplar Hawk-Moth
Idaea aversata	Riband Wave
Perizoma affinitata	Rivulet
Mesoligia literosa	Rosy Minor
Hydraecia micacea	Rosy Rustic
Phragmatobia fuliginosa subsp. fuliginosa	Ruby Tiger
Xanthia icteritia	Sallow
Perizoma flavofasciata	Sandy Carpet
Crocallis elinguaris	Scalloped Oak
Ennomos erosaria	September Thorn
Scotopteryx chenopodiata	Shaded Broad-Bar
Nola cucullatella	Short-Cloaked Moth
Deltote uncula	Silver Hook
Autographa gamma	Silver Y
Xanthorhoe montanata subsp. montanata	Silver-Ground Carpet
Idaea dimidiata	Single-Dotted Wave
Zygaena filipendulae subsp. stephensi	Six-Spot Burnet
Xestia sexstrigata	Six-Striped Rustic
Apamea unanymis	Small Clouded Brindle
Photedes minima	Small Dotted Buff
Idaea biselata	Small Fan-Footed Wave
Eurrhynx hortulata	Small Magpie
Perizoma alchemillata	Small Rivulet
Diarsia rubi	Small Square-Spot
Photedes pygmaea	Small Wainscot
Panemeria tenebrata	Small Yellow Underwing
Mythimna impura subsp. impura	Smoky Wainscot
Hypena proboscidalis	Snout
Xestia xanthographa	Square-Spot Rustic
Anticlea derivata	Streamer
Ourapteryx sambucaria	Swallow-Tailed Moth
Perizoma didymata	Twin-spot Carpet

Udea lutealis
Lampropteryx suffumata
Spilosoma lubricipeda
Operophtera brumata
Eupithecia absinthiata
Euproctis similis

Udea lutealis
Water Carpet
White Ermine
Winter Moth
Wormwood Pug
Yellow-Tail

7.8 Appendix 7 – Results of Breeding Bird Survey 1993-1994

Species	No. of Pairs	Conservation Status
Mallard	2	
Kestrel	1	Amber List LBAP long list
Grey Partridge	1 – 2	Red List UK Bap LBAP long list
Pheasant	1	
Moorhen	2	
Snipe	1	Amber List LBAP long list
Woodpigeon	1 – 3	
Collared Dove	1	
Cuckoo	1	Red List UK BAP LBAP long list
Skylark	4 – 7	Red List UK BAP LBAP long list
Wren	7 – 10	
Dunnock	2 – 3	Amber List LBAP long list
Robin	2 – 6	
Blackbird	3 – 5	
Song Thrush	2 – 3	Red List UK BAP LBAP long list
Grasshopper Warbler	0 – 5	Red List LBAP long list
Sedge Warbler	9 - 21	
Lesser Whitethroat	1	
Whitethroat	4 – 8	
Willow Warbler	8 – 12	Amber List LBAP long list
Long-tailed Tit	1 - 2	
Blue Tit	4 - 6	
Great Tit	1 - 2	
Magpie	1	

Carrion Crow	2 - 3	
Chaffinch	3 - 6	
Goldfinch	1	
Linnet	1	Red List UK BAP LBAP long list
Reed Bunting	11 – 19	Amber List UK BAP LBAP long list

Red List = decline in population of over 50% in previous 25 years

Amber List = decline in population between 25 – 50% in previous 25 years

7.9 Appendix 8 – Bird Species Recorded at Carr Green House Common

English

Barn Owl
 Bean Goose
 Bewick's Swan U, L
 Blackbird
 Blackcap
 Black-headed Gull L
 Blue Tit
 Brambling
 Buzzard
 Carrion Crow
 Chaffinch
 Chiffchaff
 Collared Dove
 Common Gull
 Common Sandpiper
 Cormorant
 Coot
 Cuckoo U, L
 Curlew U, L
 Dunnock U, L
 Fieldfare
 Garden Warbler

Latin

Tyto alba
Anser fabalis
Cygnus columbianus
Turdus merula
Sylvia atricapilla
Chroicocephalus ridibundus
Cyanistes caeruleus
Fringilla montifringilla
Buteo buteo
Corvus corone
Fringilla coelebs
Phylloscopus collybita
Streptopelia decaocto
Larus canus
Actitis hypoleucos
Phalacrocorax carbo
Fulica atra
Cuculus canorus
Numenius arquata
Prunella modularis
Turdus pilaris
Sylvia borin

Goldcrest	<i>Regulus regulus</i>
Golden Plover	<i>Pluvialis apricaria</i>
Goldfinch	<i>Carduelis carduelis</i>
Goosander	<i>mergus merganser</i>
Grasshopper Warbler U, L	<i>Locustella naevia</i>
Great Spotted Woodpecker	<i>Dendrocopus major</i>
Great Tit	<i>Parus major</i>
Greenfinch	<i>Carduelis chloris</i>
Green Sandpiper	<i>Tringa ochropus</i>
Grey Heron L	<i>Ardea cinerea</i>
Grey Partridge U, L	<i>Perdix perdix</i>
Grey Wagtail	<i>Motacilla cinerea</i>
Hen Harrier L	<i>Circus cyaneus</i>
House Martin	<i>Delichon urbica</i>
House Sparrow U, L	<i>Passer domesticus</i>
Jackdaw	<i>Corvus monedula</i>
Jack Snipe	<i>Lymnocyptes minimus</i>
Jay	<i>garrulous glandarius</i>
Kestrel L	<i>Falco tinnunculus</i>
Lapwing U, L	<i>Vanellus vanellus</i>
Lesser Black-backed Gull L	<i>Larus fuscus</i>
Lesser Redpoll U, L	<i>Carduelis flammea</i>
Lesser Whitethroat	<i>Sylvia curruca</i>
Linnet U, L	<i>Carduelis cannabina</i>
Little Owl	<i>Athene noctua</i>
Little Ringed Plover L	<i>Charadrius dubous</i>
Long-tailed Tit	<i>Aegithalos caudatus</i>
Magpie	<i>Pica pica</i>
Mallard	<i>Anas platyrhynchos</i>
Meadow Pipit L	<i>Anthus pratensis</i>
Mistle Thrush	<i>Turdus viscivorus</i>
Moorhen	<i>Gallinula chloropus</i>
Nuthatch	<i>Sitta europaea</i>
Oystercatcher L	<i>Haematopus ostralegus</i>
Peregrine L	<i>Falco peregrinus</i>
Pheasant	<i>Phasianus colchicus</i>
Pied Flycatcher	<i>Ficedula hypoleuca</i>
Pied Wagtail	<i>Motacilla alba</i>
Pink-footed Goose L	<i>Anser brachyrhynchus</i>
Red-legged Partridge	<i>Alectoris rufa</i>
Redstart	<i>Phoenicurus phoenicurus</i>

Reed Bunting U, L	<i>Emberiza schoeniculus</i>
Redwing	<i>Turdus iliacus</i>
Robin	<i>Erithacus rubecula</i>
Rook	<i>Corvus frugilegus</i>
Sand Martin	<i>Riparia riparia</i>
Sedge Warbler	<i>Acrocephalus schoenobaenus</i>
Shelduck L	<i>Tadorna tadorna</i>
Short-eared Owl L	<i>Asio flammeus</i>
Shoveler L	<i>Anas clypeata</i>
Siskin	<i>Carduelis spinus</i>
Skylark U, L	<i>Aluada arvensis</i>
Snipe L	<i>Gallinago gallinago</i>
Song Thrush U, L	<i>Turdus philomelos</i>
Sparrowhawk	<i>Accipiter nisus</i>
Spotted Flycatcher U, L	<i>Muscicapa striata</i>
Starling U, L	<i>Sturnus vulgaris</i>
Stock Dove	<i>Columba oenas</i>
Stonechat	<i>Saxicola torquata</i>
Swallow	<i>Hirundo rustica</i>
Swift L	<i>Apus apus</i>
Tawny Owl	<i>Strix aluco</i>
Teal L	<i>Anas crecca</i>
Treecreeper	<i>Certhia familiaris</i>
Tree Sparrow U, L	<i>Passer montanus</i>
Twite U, L	<i>Carduelis flavisrostris</i>
Water Rail L	<i>Rallus aquaticus</i>
Wheatear	<i>Oenanthe oenanthe</i>
Whimbrel L	<i>Numenius phaeopus</i>
Whinchat L	<i>Saxicola rubetra</i>
Whitethroat	<i>Sylvia communis</i>
Whooper Swan L	<i>Cygnus cygnus</i>
Wigeon L	<i>Anas Penelope</i>
Willow Warbler L	<i>Phylloscopus trochilus</i>
Woodcock	<i>Scolopax rusticola</i>
Woodpigeon	<i>Columba palumbas</i>
Wood Warbler U, L	<i>Phylloscopus sibilatrix</i>
Wren	<i>Troglodytes troglodytes</i>
Wryneck U	<i>Jynx torquilla</i>
Yellowhammer U, L	<i>Emberiza citronella</i>

Red type – Red Listed; decline in population of over 50% in previous 25 years

Amber type – Amber Listed; decline in population between 25 – 50% in previous 25 years

U – UK BAP species

L – LBAP Long List species

7.10 Appendix 9 – Mammal Species Recorded at Carr House Green Common

Lepus europaeus	Brown Hare
Vulpes vulpes	Fox
Erinaceus europaeus	Hedgehog
Talpa europaea	Mole
Oryctolagus cuniculus	Rabbit
Capreolus capreolus	Roe Deer
Mustela nivalis	Weasel

7.11 Appendix 10 – Species-rich Neutral Grassland HAP

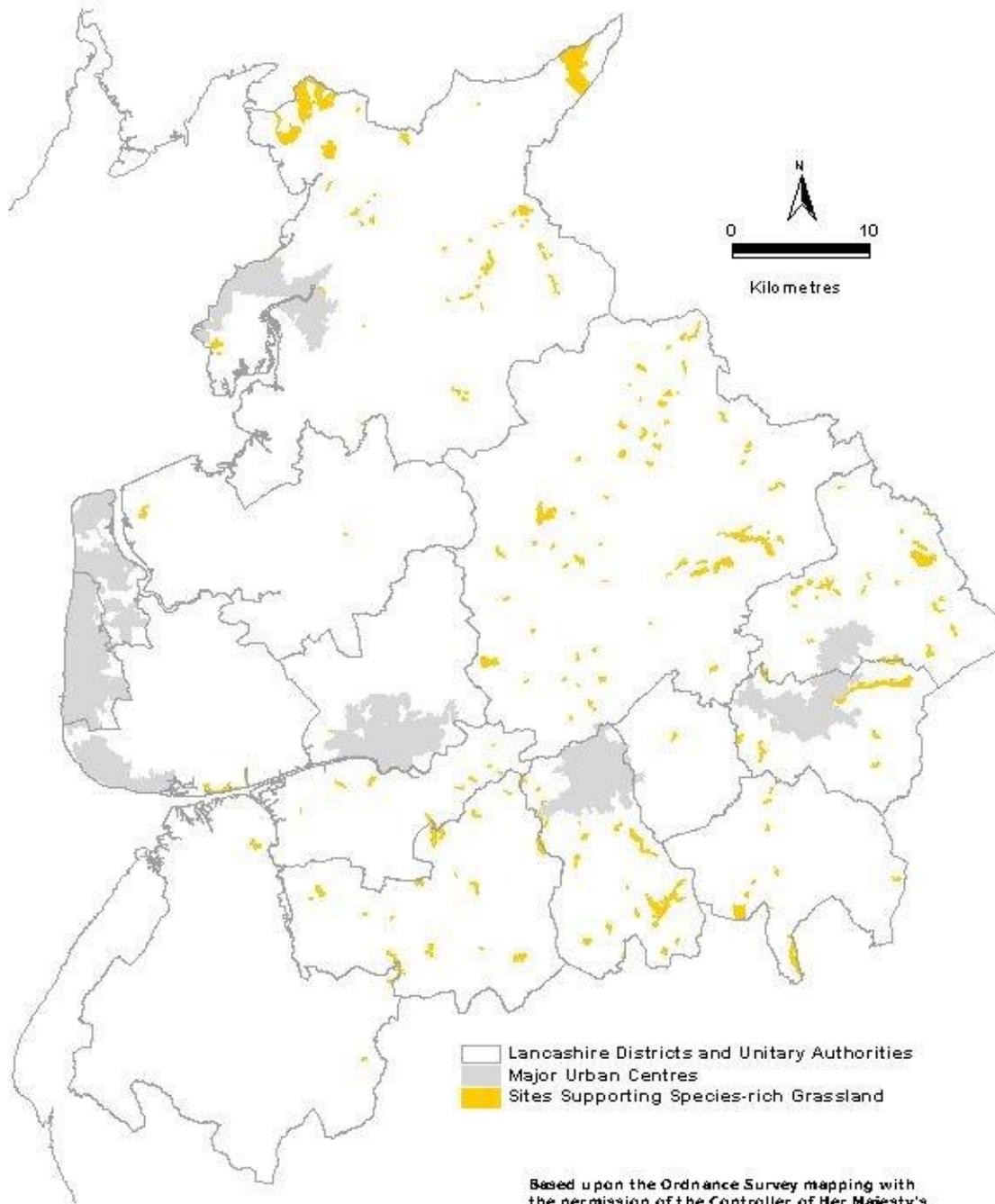
Species-rich Neutral Grassland



An example of species-rich neutral grassland

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Remaining Species-rich Grassland in Lancashire



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Lancashire County Council 100023 320 2007

Habitat Description

This plan encompasses two UK BAP 'priority habitats' ⁽¹⁾. These are:

- lowland meadows;
- upland hay meadows.

Both grassland types occur on neutral soils with low-intensity farming practices. Species-rich examples of both lowland and upland meadow habitats can be found also on roadside and trackside verges, in churchyards, on reservoir embankments and on railway cuttings.

Lowland meadows on farms are not restricted to grasslands cut for hay but also include unimproved neutral pastures where livestock grazing is the main land use. These 'lowland' pastures can extend well into the upland fringes and may be found in close proximity to or replace 'upland hay meadows'.

'Species-rich grasslands' include not only those meadows and pastures with a diversity of flowering herbs, grasses and sedges but also those rich in fungi. Species-rich grasslands contain a remarkable diversity of plant-life and can support important numbers of breeding wading birds (e.g. curlew, redshank and snipe). They are of immense nature conservation importance, enhance landscapes and are of high amenity/intrinsic value. Many of the species associated with this habitat type are in serious decline at a national level.

Species-rich neutral grassland underwent a remarkable decline in the 20th Century, almost entirely due to changing agricultural practices. Long-established meadows and pastures were converted either to arable production or to silage fields and intensive grazing. It is estimated that by 1984 in lowland England and Wales such grasslands had declined by 97% over the previous 50 years. Lancashire did not escape changes on this scale.

National status

There are approximately 11,000 ha of herb-rich neutral grassland surviving in England, of which less than 1,000 ha are upland hay meadow.

Losses continue at up to 10% per year in some parts of England.

Regional status

Unimproved neutral lowland pasture is extremely uncommon in the north west of England. According to the North West Biodiversity Audit it is restricted to the Lancashire plains and valleys, to the fringes of the Forest of Bowland and the southern Pennines and to a few isolated areas in Cumbria and Cheshire.

Upland hay meadows are proposed by English Nature as Regional Biodiversity Indicators for the North West⁹. The North West Audit⁶ identifies nationally important hay meadow localities as being the northern Pennines, the Cumbrian and Lancashire fringes of the Yorkshire Dales and the Orton/Tebay area of Cumbria. The Forest of Bowland is recognised also to be of international importance for hay meadow habitats by virtue of three sites in Bowland being now included within the North Pennine Dales Meadows cSAC. A regionally important locality for hay meadows is the southern Pennines.

Species-rich neutral grassland is a rare and vulnerable habitat. In most instances, good examples in any locality comprise at most two or three fields together.

Local status

Up-to-date, accurate figures for the extent of species-rich neutral grassland in Lancashire are not readily available. The total area of SSSI notified for this habitat type in the county is 66 ha, of which approximately 50 ha is located in upland and upland fringe locations. The Lancashire Phase I Habitat Survey 1988-1992 recorded 383 ha of herb-rich neutral grassland ⁽⁵⁾. This

represents just 0.1% of the county by area. Recent estimates by English Nature, however, put the figure at about 860 ha.

Although there appears to be little historical data available, it is reasonable to assume that this habitat type has suffered immense losses in Lancashire given that trends in modern agriculture in the county have mirrored those elsewhere in Britain.

Important Sites (4)

The North West Biodiversity Audit (6) records the presence of upland hay meadows in the boroughs of Blackburn, Burnley, Lancaster, Pendle and Ribble Valley. Lowland pasture is recorded in all districts except for Blackpool and Preston.

In upland and upland fringe areas, species-rich grassland sites are scattered through the West Pennine Moors, eastern Lancashire and in the Forest of Bowland. The latter area is particularly important for upland hay meadows. A cluster of upland/upland fringe meadows and pastures survives in the parishes of Slaidburn and Over Wyresdale. Three Bowland sites are included within the North Pennine Dales Meadows cSAC.

Fifteen SSSIs are notified for their neutral grassland habitat in Lancashire. Examples include: Bell Sykes Meadows; Clear Beck Meadow; Lower Red Lees Pasture; Myttons Meadows; Standridge Farm Pasture; Tarnbrook Meadows; and Wrightington Bar Pasture.

One site is managed as a nature reserve. This is Freeman's or Charnock Richard Pasture (a SSSI managed by the Wildlife Trust).

Over 100 Biological Heritage Sites (BHSs) contain species-rich examples of grassland within the county (BHS Guidelines GR1 and GR3). Most of these are neutral grassland types. Although SSSIs generally contain the best quality examples, the greatest area of these habitat types occur in the county's BHS series.

Current factors affecting the Habitat

A high proportion of species-rich neutral grasslands (especially hay meadows) occur on generally flat topography over deep soils. Consequently, they are readily 'improved' in agricultural terms into productive fields offering increased output and greater farm income. The nature conservation value of these fields is lost during this process. Species-rich neutral grasslands are considered, therefore, to be particularly vulnerable to loss through agricultural intensification.

Losses in the lowlands of Lancashire have occurred largely through intensification of dairy farming and livestock rearing practices. In the upland fringes, losses have been due mainly to mixed farming being replaced by sheep. The loss is less apparent than for other semi-natural habitats such as mossland or moorland as landscapes remain predominantly pastoral despite the reduction in biodiversity. Surviving species-rich neutral grassland sites in Lancashire have become generally small, isolated and scattered. Lowland species-rich neutral grasslands in Lancashire appear to have suffered the greatest historical losses becoming particularly rare.

The application of artificial fertilisers and slurry raises soil nutrients to artificial levels, favouring the growth of a few vigorous grass species that out-compete and smother the flowering herbs. Sedges, orchids and some fungi are poisoned by artificial fertilisers.

Unlike hay, silage is cut two or three times per year. Consequently, flowering herbs are unable to flower and set seed, so that eventually they are lost from the grasslands. The value of these habitats for ground-nesting birds (e.g. curlew, skylark) is also diminished since earlier, more frequent cuts increase the loss of broods. Silage production is usually associated with high levels of fertiliser application.

Continuously high levels of grazing can also prevent flowering herbs from setting seed.

Land drainage destroys wet or flushed areas such that the flowering herbs of wet meadows and pastures are lost along with sites for feeding and nesting by redshank, curlew and lapwing.

In both upland and lowland situations, species-rich grasslands have been ploughed up to be re-seeded with rye-grass mixtures. In the lowlands, some remnant species-rich grasslands have also been ploughed to grow arable crops. In either case, the important grassland habitat is catastrophically lost in a single event.

Although not currently known to occur in Lancashire, the harvesting of wildflower seed from herb-rich grasslands offers landowners an opportunity to attain a higher income without the need for agricultural intensification. It could also provide a native and local seed source for re-creation of the habitat. However, sustainable methods of seed harvesting must be employed if the donor site is not to be damaged.

Current Action / Mechanisms

The land-use planning system allows a level of protection from damaging development for SSSIs and BHSs. In addition, SSSIs are subject to a system that regulates land management (under the Wildlife & Countryside Act 1981 as amended). English Nature (EN) promotes the conservation of species-rich neutral grassland through Natural Area profiles ^(7, 8) and other mechanisms.

Payment for appropriate land management on species-rich neutral grassland may be obtained from MAFF’s Countryside Stewardship Scheme and EN’s Wildlife Enhancement Scheme (SSSIs only).

The BHS Project prioritises conservation advice to owners and managers of BHS grassland. The project promotes the up-take of agri-environment schemes by the owners of such sites where the landowner deems this appropriate and desirable. EN provides similar advice to SSSI land managers. The Farming & Wildlife Advisory Group (FWAG) offers advice to farmers on land irrespective of designations.

A comprehensive monitoring scheme for this habitat does not exist in Lancashire. EN (and other) surveys provide data on a few sites. Only SSSIs are subject to regular monitoring and condition assessment.

EN has produced leaflets to promote conservation of all key habitats within the Forest of Bowland and the Lancashire Plains & Valleys Natural Areas. The key habitats include hay meadows and pastures.

Indicators of Habitat Quality

For conservation purposes neutral grassland is developing towards favourable condition when:

- **More than one or two grass species dominate the sward;**
- **There is an abundance of flowering herbs amongst fine-leaved grasses;**
- **A number of the indicative species listed in Tables 2a-c are present (or, in the case of the animals, make use of the site);**
- **There is a lack of agricultural improvement (particularly the absence of use of artificial fertilisers).**

Table 1: NVC Communities associated with unimproved and semi-improved neutral grassland in Lancashire²

Code	Community	Code	

MG1	Arrhenatherum elatius grassland	MG5*	Cynosurus cristatus - Centaurea nigra grassland
MG3*	Anthoxanthum odoratum - Geranium sylvaticum grassland	MG8*	Cynosurus cristatus - Caltha palustris grassland
MG4*	Alopecurus pratensis - Sanguisorba officinalis grassland	U4c*	Festuca ovina - Agrostis capillaris - Galium saxatile grassland, Lathyrus montanus - Stachys betonica sub-community

Table 2a: Animals associated with unimproved and semi-improved neutral grassland in Lancashire⁽⁶⁾

Common name	Scientific name	Status
Birds		
Skylark	Alauda arvensis	UK & L SAP
Lapwing	Vanellus vanellus	L SAP
Twite	Carduelis flavirostris	L SAP
Yellow wagtail	Motacilla flava	
Curlew	Numenius arquata	
Snipe	Gallinago gallinago	
Redshank	Tringa totanus	

Golden plover	<i>Pluvialis apricaria</i>	
Dunlin	<i>Calidris alpina</i>	
Mammals		
Brown hare	<i>Lepus europaeus</i>	UK & L SAP
Invertebrates		
Large skipper	<i>Ochlodes venata</i>	
Common blue	<i>Polyommatus icarus</i>	
Small copper	<i>Lycaena phlaeas</i>	
Meadow brown	<i>Maniola jurtina</i>	

Table 2b: Fungi associated with unimproved and semi-improved neutral grassland in Lancashire⁽⁶⁾

Common name	Scientific name	Status
Ballerina waxcap	<i>Hygrocybe calyptriformis</i>	UK SAP, Fu1

Table 2c: Grasses and sedges associated with unimproved and semi-improved neutral grassland in Lancashire⁽⁶⁾

Common name	<i>Scientific name</i>	Status
Common bent	<i>Agrostis capillaris</i>	
Red fescue	<i>Festuca rubra</i>	
Sheep's fescue	<i>Festuca ovina</i>	
Crested dogstail	<i>Cynosurus cristatus</i>	
Sweet vernal grass	<i>Anthoxanthum odoratum</i>	
Cocksfoot	<i>Dactylis glomerata</i>	
Quaking grass	<i>Briza media</i>	
Heath grass	<i>Danthonia decumbens</i>	
Yellow oat-grass	<i>Trisetum flavescens</i>	
Spring sedge	<i>Carex caryophyllea</i>	
Glaucous sedge	<i>Carex flacca</i>	
Carnation sedge	<i>Carex panicea</i>	

Table 2d: Vascular plants other than grasses associated with unimproved and semi-improved neutral grassland in Lancashire⁽⁶⁾

Common name	<i>Scientific name</i>	Status
Field wood-rush	Luzula campestris	
Common knapweed	Centaurea nigra	
Common bird's-foot trefoil	Lotus corniculatus	
Greater bird's-foot trefoil	Lotus pedunculatus	
Betony	Stachys betonica	
Dyer's greenweed	Genista tinctoria	
Devil's-bit scabious	Succisa pratensis	
Meadow vetchling	Lathyrus pratensis	
Common cat's-ear	Hypochoeris radicata	
Common spotted-orchid	Dactylorhiza fuchsii	
Heath spotted-orchid	Dactylorhiza maculata	
Great burnet	Sanguisorba officinalis	
Pignut	Conopodium majus	

Yellow rattle	<i>Rhinanthus minor</i>	
Autumn hawkbit	<i>Leontodon autumnalis</i>	
Burnet saxifrage	<i>Pimpinella saxifraga</i>	
Marsh marigold	<i>Caltha palustris</i>	
Meadowsweet	<i>Filipendula ulmaria</i>	
Ragged robin	<i>Lychnis flos-cuculi</i>	
Cuckooflower (or mayflower)	<i>Cardamine pratensis</i>	
Lady's-mantles	<i>Alchemilla</i> spp.	
A lady's-mantle	<i>Alchemilla acutiloba</i>	NR, Ff1
An eyebright	<i>Euphrasia rostkoviana</i> ssp. <i>rostkoviana</i>	NS, Ff2
Bird's-eye primrose	<i>Primula farinosa</i>	NS, Ff2
Greater butterfly orchid	<i>Platanthera chlorantha</i>	Ff3
Pepper saxifrage	<i>Silaum silaus</i>	Ff3
Wood crane's-bill	<i>Geranium sylvaticum</i>	Ff4a

An eyebright	<i>Euphrasia arctica</i> ssp. <i>borealis</i>	Ff4a
Melancholy thistle	<i>Cirsium heterophyllum</i>	Ff4b
Grass-of-Parnassus	<i>Parnassia palustris</i>	Ff4a
Saw-wort	<i>Serratula tinctoria</i>	Ff4b
Globeflower	<i>Trollius europaeus</i>	Ff4b
Ferns:		
Moonwort	<i>Botrychium lunaria</i>	Ff4a
Adderstongue	<i>Ophioglossum vulgatum</i>	

Objectives, targets and proposed actions for species-rich neutral grassland in Lancashire

Broad Objective:	A. Halt the loss of existing species-rich neutral grassland (current area estimated at c.860 ha)			
Operational Objective	Action Required (Priority)	Partners	Time-scale	Type
1. Confirm current extent of habitat & location of sites and keep under review.	1. Establish a definitive database of all sites over 0.5 ha with species-rich grassland to include estimates of total area of resource on each site (High)	LCC, WT EN	S	RM
	2. Annually review BHS series and add/delete sites on database as appropriate (High)	LCC, WT, EN	O	RM
	3. Continue SSSI monitoring and amend database as appropriate. (High)	EN	O	RM
	4. By 2005 re-survey all BHS grassland sites to identify the scale of any losses within the county since 1984. (High)	BHS P/ship, WT, EN, LCC	L	RM
	5. By 2005 liaise with all grassland BHS landowners and land managers to promote the importance of species-rich grassland. (High)	BHSP, FWAG, MAFF, EN	O	A, LM

	6. Lobby for reform of CAP and for more competitive rates on agri-environment schemes. (High)	WT, RSPB, EN, NFU, CLA, FWAG	O	PR
3. Prevent loss of species-rich grassland through inappropriate development.	1. Ensure that all relevant planning authorities are aware of important sites and have development policies that take account of these (Medium)	LCC, LAs, EN, BHS Partners	O	SS

Broad Objective:	B. Achieve favourable conservation status on all neutral grassland SSSIs by 2010 and all BHS-qualifying sites by 2015.			
Operational Objective	Action Required (Priority)	Partners	Time-scale	Type
1. Ensure that management of grassland SSSIs is contributing towards achieving favourable status on all sites by 2010.	1. Assess the condition of all grassland SSSIs by 2002. (High)	EN	M	RM
	2. Promote the uptake of Countryside Stewardship by SSSI landowners / managers (High)	EN, Land-owners, managers	O	A,PR
	3. Seek management agreements through WES on all remaining SSSIs in unfavourable condition to establish positive management by 2005. (High)	EN, MAFF	L	LM

2. Achieve sympathetic management of at least 30% of species-rich grassland BHSs by 2005 and 100% by 2015.	1. Continue to offer management advice to BHS owners and managers in order to promote grazing, land-drainage and hay-cutting practices that benefit nature conservation. (High)	BHSP, FWAG, MAFF, EN, HA	O	A, LM
	2. Continue to offer management advice to BHS owners and managers in order to promote land management practices that benefit nature conservation. (High)	BHSP, FWAG, MAFF, EN	O	A, LM
	3. Promote the uptake of Countryside Stewardship by landowners / managers (Medium)	BHSP, FWAG, MAFF, LCC	O	A, PR
	4. Lobby for reform of CAP and for more competitive rates on agri-environment schemes. (Medium)	WT, RSPB, EN, NFU, CLA	O	PR
	5. Use planning obligations through the statutory planning process to require appropriate management of sites associated with development proposals. (Medium)	LCC, LAs, WT,	O	A, LM

Broad Objective:	C. Re-establish or restore 10.5 ha of new species-rich lowland meadow and 7.5 ha of species-rich upland meadow by 2010**. (Total UK target for neutral grassland is 550 ha)			
Operational Objective	Action Required (Priority)	Partners	Time-scale	Type
1. Initiate re-establishment/restoration schemes.	1. Identify potential sites and select candidates for habitat schemes (High)	EN, LCC, WT, HA	S/M	LM
	2. Draw up a plan and implement. (High)	EN, LCC, WT, FWAG, MAFF, HA	M	LM

** - Concentrating on sites/localities which (a) have been lost from the Grassland Inventory for Lancashire (post-1980 survey data); or (b) would extend or link existing sites. Habitat re-creation should be achieved through establishing restoration management, possibly supplemented in some cases by re-introduction of native/local seed. Sites re-seeded with commercial 'wildflower' mixes will not be recognised as restoration projects for the purposes of this HAP.

The targets for restoration should be apportioned between the various Natural Areas in Lancashire in the following way:

NATURAL AREA	HABITAT TYPE	AREA (ha)
Lancashire Plain & Valleys	Lowland meadow	4
Forest of Bowland	Lowland meadow	2
	Upland meadow	5
South Pennines	Lowland meadow	2.5
	Upland meadow	2.5

Morecambe Bay Limestones	Lowland meadow	2
TOTAL		18

Objectives, targets and proposed actions for species-rich neutral grassland in Lancashire

Broad Objective:	D. Promote the importance of the habitat and its conservation to the general public			
Operational Objective	Action Required (Priority)	Partners	Time-scale	Type
1. Promote the species-rich grassland as a 'flagship' habitat to highlight the decline in certain key habitat types.	1. Work with community-based groups to raise awareness of grassland conservation issues amongst the general public and landowners. (Medium)	WT, EN,	O	PR
	2. Encourage public participation in monitoring certain sites. (Medium)	WT, EN	O	PR, RM
	3. Include information about species-rich grassland in press releases, newsletters and leaflets. (Low)	EN, WT	O	PR, RM

Other Action Plans:

- Calcareous Grassland
- Lapwing SAP
- Skylark SAP
- Twite SAP
- Brown hare SAP

References & additional reading:

1. UK BAP Steering Group (1998) UK Biodiversity Group Tranche 2 Action Plans: Volume II - terrestrial & freshwater habitats. Pp 39 - 49; Lowland meadows and Upland hay meadows. English Nature, Peterborough.
2. Rodwell, J.S. (ed) (1992) British Plant Communities: Volume 3 - Grasslands & montane communities. Cambridge University Press.
3. Morries, G., Jepson, P. & Bruce, N. (1998) Biological Heritage Sites: Guidelines for site Selection. Lancashire County Council/Lancashire Wildlife Trust/English Nature.
4. English Nature (1994) Grassland Inventory: Lancashire. English Nature.
5. P G Kelly & T R Harwood (1993) Wildlife Habitats in Lancashire: report of the Phase 1 Habitat Survey of Lancashire 1988 - 1992. Lancashire County Council/English Nature.
6. Regional Biodiversity Steering Group for North West England (1999) A Biodiversity Audit of North West England.
7. English Nature (1998) Forest of Bowland - Natural Area Profile. English Nature, Peterborough.
8. English Nature (1998) Lancashire Plain and Valleys - Natural Area Profile. English Nature, Peterborough.
9. English Nature (1999) Sustainable Development & Regional Biodiversity. Indicators for the North West. English Nature, Peterborough.
10. Cooch, S. & Rodwell, J. (1996) Preliminary Study of Key Issues in Relation to Northern Hay meadows. WWF UK.
11. Taylor, I. (1986) A botanical survey of mesotrophic grassland in Lancashire. Nature Conservancy Council (NW), Wigan.
12. Stewart, A. (1993) Neutral grassland in Lancashire. English Nature, Wigan.
13. Dayton, N. (1997) Lancashire neutral grassland survey. English Nature, Wigan.
14. Jerram, R. (1999) Lancashire and Greater Manchester neutral grassland survey. English Nature, Wigan.
15. English Nature (2000) Forest of Bowland Natural Area leaflet. English Nature, Wigan.
16. English Nature (2001) Lancashire Plains & Valleys Natural Area leaflet. English Nature, Wigan.

Date: April 2001

7.12 Appendix 11 – Farmland Bird SAP

The farmland bird SAP was produced to provide an action plan to assist with the recovery of farmland bird populations with Lancashire. The full action plan can be found at http://www.lancspartners.org/lbap/species_plans.asp

A number of farmland birds have undergone significant declines since the 1970s and the species covered in this action plan are Grey Partridge, Skylark, Yellow Wagtail, Tree Sparrow, Linnet, Reed Bunting, Yellowhammer and Corn Bunting. For some of these species such as Linnet and Reed Bunting the Common is an important site for them. With the correct habitat management the site might also become suitable for Skylark, Tree Sparrow and perhaps Yellow Wagtail.

These species typically have three basic requirements that can be summarised as follows:

- Winter seed food
- Spring and summer insect food
- Nesting sites

The Common could be instrumental in providing spring and summer insect food as well as nesting sites.

All of these species are UK BAP Priority Species and all Red Listed due to the rapid decline of their UK breeding population. Declining populations between 1970 and 2005:

- Linnet	-53%
- Reed Bunting	-34%
- Skylark	-53%
- Tree Sparrow	-93%
- Yellow Wagtail	-65%

One of the main factors affecting these species that has caused population declines is that of changing farming practices: switching from spring to autumn sown cereals (reduction in winter seed food and nest sites for lapwing & Grey Partridge), increased use of pesticides (less invertebrates as summer insect chick food), loss of uncropped field corners/margins, intensive grass management for silage, loss of mixed farming systems (arable and grass on the same farm), loss of wet areas (particularly affecting Yellow Wagtail) and increased food hygiene requirements e.g. grain stores inaccessible.

The main mechanism to facilitate a reversal in the decline in farmland bird populations is increasing habitat on farmland through providing good habitat management advice to farmers/landowners and encouraging the creation of habitat through agri-environment schemes such as ELS and HLS.

7.13 Appendix 12 – Brown Hare SAP

The Brown Hare species action plan (SAP) was produced to provide actions and targets to halt and reverse the decline in Brown Hare populations in Lancashire. The full action plan can be found at http://www.lancspartners.org/lbap/species_plans.asp

The main habitats for Brown Hare include farmland, hedgerows and woodland. A national survey conducted in 1991/2 concluded that the fall in numbers was more pronounced in the more pastoral western regions. From a local perspective good information exists on hare distribution, but a lack of systematically collected data make assessment of the population size difficult.

As in farmland birds one of the main factors affecting Brown Hares is the intensification of farming, particularly the decreased diversity of crop type/land use. If cutting or grazing was re-introduced to the Common then the site could become important for a small number of Brown Hares. All of the factors detailed under the 'farmland bird SAP' are applicable to Brown Hares.

The main mechanism to facilitate a reversal in the decline of Brown Hare populations is increasing habitat on farmland through providing good habitat management advice to farmers/landowners and encouraging the creation of habitat through agri-environment schemes such as ELS and HLS.

7.14 Appendix 13 – First Edition Ordnance Survey Map of Carr House Green
Common