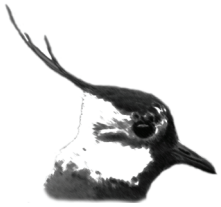


Student Resource Sheet Carrs Farm Hay Meadows

Hay meadows

- Hay is a mixture of flowering plants and grasses and is grown to provide winter animal feed.
- Hay meadows are one of the rarest habitats in the UK.
- A single hay meadow may have 100 different kinds of plant in it and every square metre up to 30 species. Hay meadows support many birds, insects and mammals.
- Hay meadows are fewer now as modern farming has ploughed, re-seeded and fertilised them.
- Hay making meant that early communities could survive throughout the winter. Important battles were even delayed to let haymaking take place.
- Before mechanised farming haymaking was a big job and often farmers helped each other to get the hay in.

The hay farming year at Carrs Farm

November – March – The meadows are left clear of livestock.
Early March – The meadows are spread with muck, harrowed and rolled. Farmyard manure is the only fertiliser used on the best hay meadows. Rolling ensures there are no stones sticking up when it comes to cut the hay and harrowing helps to spread the manure. This takes place early in the North Pennines so as not to disturb the ground nesting-birds.
Mid May – The meadows are cleared of livestock at least 7 weeks before the hay is cut. A Carrs Farm no livestock are put into the hay meadows until after the hay has been cut.
July – August – The hay is cut and baled. Cattle are brought into the meadows for a few weeks after cutting to graze the 'aftermath' or 'fog'. This allows them to trample - 'poach' or 'plodge' - the meadows, breaking up the surface and creating places for seeds to germinate.

Restoration of hay meadows

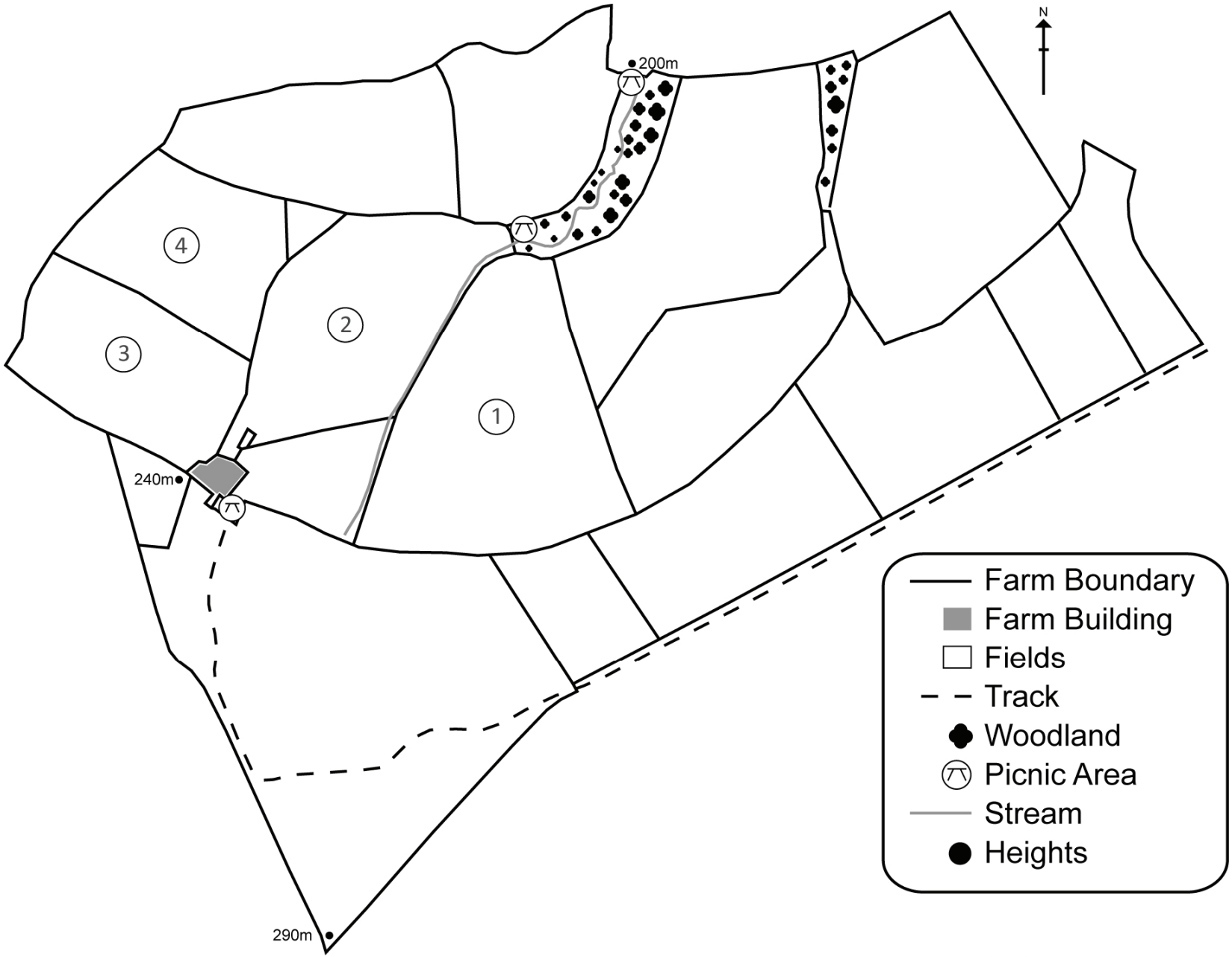
As many hay meadows have been lost due to modern farming methods, the North Pennines AONB Partnership have been restoring species-rich upland hay meadows through their Hay Time Project. This restoration is being achieved by harvesting seed from existing species-rich sites and spreading this seed on sites being restored as part of an environmental stewardship scheme.

There are generally two stages in restoring meadows. The first is to introduce (if not already present) a range of fairly common species, which help to change the soil conditions to make it more suitable for other species to become established. The species that help at this stage include yellow rattle, sweet vernal grass, meadow buttercup, red clover and other legumes. These species generally need to be present for about five years before proceeding to stage two and introducing seed from a more species-rich meadow.

At Carrs Farm, the fields marked 3 and 4 on the inset map are donor fields for seed and seed is harvested from here to be spread on less-species rich fields. The field marked 2 on the inset map, is in the process of being enhanced and has been spread with seed harvested from other fields on the farm. After 5 years it will receive seed from the fields marked 3 and 4, which are the most species-rich hay meadows at Carrs Farm.

Aims of the fieldwork

The aim of the fieldwork is to compare the diversity of plants and animals found in different fields at Carrs Farm. The fields to be compared are a pasture (field 1 on the inset map), a pasture that is being enhanced to a more species-rich grassland or hay meadow (field 2 on the inset map) and a species–rich hay meadow (field 3 and 4 on the inset map).


N
200m
240m
290m
1
2
3
4
Farm Boundary
Farm Building
Fields
Track
Woodland
Picnic Area
Stream
Heights
Not to scale

Plant recording sheet for Site 1 - Pasture											
Plant species	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**Total (max 100)**
Creeping bent grass											
Timothy											
Yorkshire Fog											
Rough meadow grass											
Crested Dog's Tail											
White clover											
Common sorrel											
Ribwort plantain											
Meadow vetchling											
Creeping buttercup											
Perennial rye grass											
Lesser trefoil											
Other:											

Animals recorded at Site 1 - Pasture

Plant recording sheet for Site 2 - Enhanced hay meadow											
Plant species	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**Total (max 100)**
Creeping bent grass											
Timothy											
Yorkshire Fog											
Rough meadow grass											
Crested Dog's Tail											
White clover											
Common sorrel											
Ribwort plantain											
Meadow vetchling											
Creeping buttercup											
Perennial rye grass											
Lesser trefoil											
Other:											

Animals recorded at Site 2 - Enhanced hay meadow

Plant recording sheet for Site 3 - Species-rich hay meadow											
Plant species	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**Total (max 100)**
Sweet vernal grass											
Great burnet											
Yellow rattle											
Creeping bent grass											
Crested Dog's Tail											
Eyebright											
Meadow buttercup											
Betony											
Common knapweed											
Ribwort plantain											
Self heal											
Red clover											
Other:											

Animals recorded at Site 3 - Species-rich hay meadow