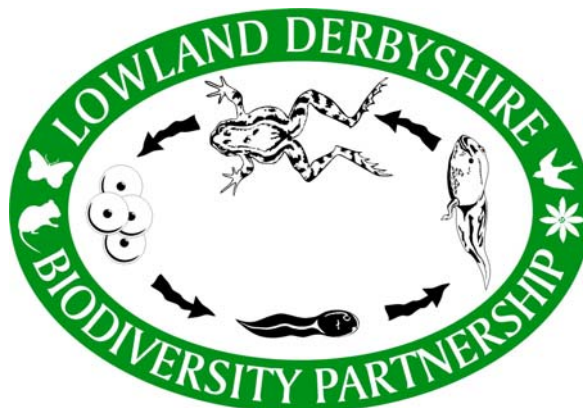


Rother and Doe Lea Valleys Area Action Plan



Wetland habitat creation at Carr Vale. Credit: Derbyshire Wildlife Trust

Prepared by the Lowland Derbyshire Biodiversity Partnership



This document is part of the Lowland Biodiversity Action Plan 2011-2020

Rother and Doe Lea Valleys Area

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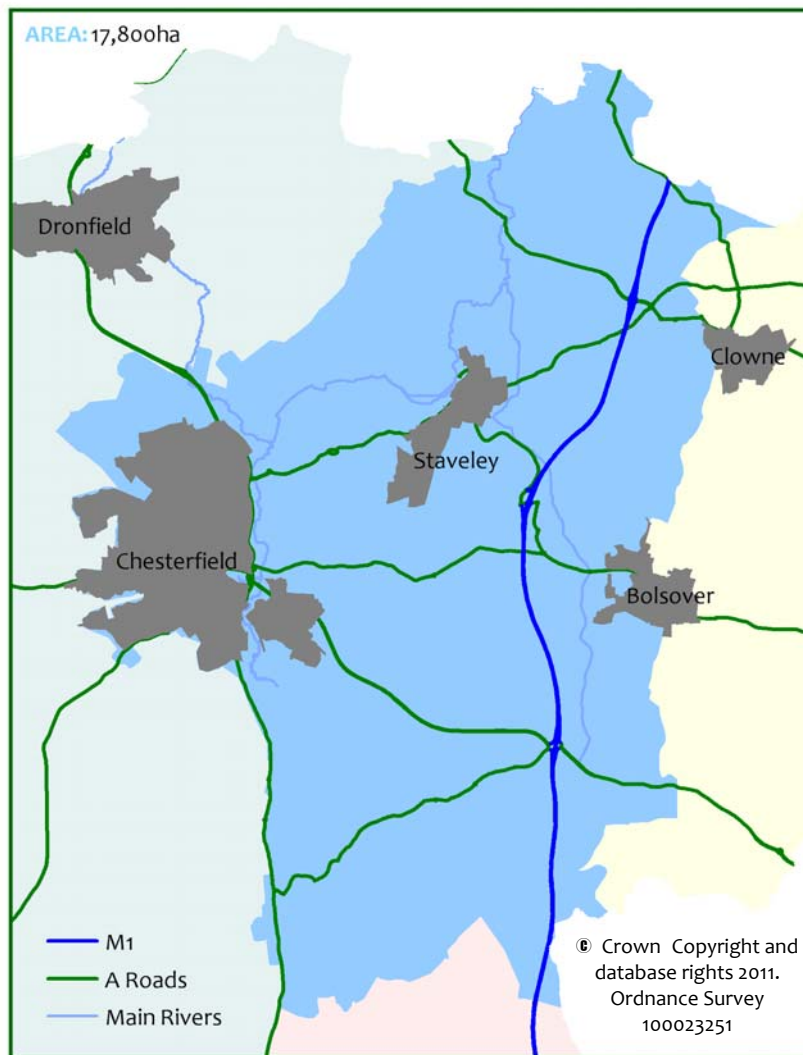
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2. Rother and Doe Lea Valleys Area - ACTION PLAN -



Map of Rother and Doe Lea valleys Action Area

For further detail see Maps section

2.1 Area Description:

The Rother and Doe Lea Valleys and catchments form the northern part of the broader Derbyshire coalfield having a diversity of habitat types associated with the underlying geology and human influences. The area is predominantly characterised by mixed farming with remnant habitats associated with river valleys, meadows, heath and woodlands. To the north in areas around Renishaw small broadleaf woodlands can be found, including remnants of ancient woodland. The presence of other trees is variable with occasional scattered mature hedgerow trees. River valleys support important wetland habitats including reedbeds, fen and marsh.

The area includes three Sites of Special Scientific Interest, two of which are notified for their geological interest, three Local Nature Reserves, five RIGS, 118 LWS and more than 20 potential Local Wildlife Sites.

The Rother and Doe Lea Valleys area comprises five Derbyshire Landscape Character Types:

- Wooded Farmlands
- Riverside Meadows
- Estate Farmlands
- Limestone Farmlands
- Riverside Meadows

Use the Derbyshire County Council online mapping system to view Landscape Character Types within this Lowland Derbyshire LBAP area. www.derbyshire.gov.uk/maps

This Action Area includes the settlements of Killamarsh, Eckington, Barlborough, Staveley, Chesterfield, North Wingfield, Holmewood, Clay Cross, Pilsley and part of Bolsover.

2.2 Vision

Connected wetland habitats along the river and canal corridors and managed woodlands and semi-natural grassland habitats connected by hedgerows.

2.3 The Challenges and Opportunities

This area has a legacy associated with the coal mining industry, and restoration schemes have resulted in a number of large country parks and nature reserves. Restoration and large scale development is still continuing and, through the ten-year period of this plan, habitat creation schemes are likely to occur at Grassmoor, the former Avenue coking works, former Staveley works, Markham Vale and the former Biwaters site near Clay Cross. The development at Chesterfield Waterside presents a significant opportunity for sustainable projects, including the provision of green roofs.

The area's history has resulted in a landscape which has one of the lowest amounts of priority grassland and ancient woodland in the LBAP area. Much of the priority habitat is fragmented, with the remaining largely associated with the river corridors. The area does include a significant amount of recently planted woodland and seeded grassland which is now beginning to mature and add to the landscape.

Farmland is present on the fringes of the area, predominately on formerly restored fields. Hedgerow networks in these areas are poor, where present they are mostly gappy, over-managed, largely single-species and are lacking hedgerow trees. Coverage by Entry Level Schemes in the area is reasonable, but there are some

significant gaps where take-up of the scheme is poor. Uptake of England Woodland Grant Schemes is good, with many of the large landowning bodies having their own estate-wide scheme.

Much of the area is urban, including some areas of social deprivation, associated with the mining legacy. There are a number of local community groups which are carrying out work for biodiversity, but there is still considerable scope to increase voluntary involvement across the area.

Of the 118 Local Wildlife Sites in the area, only 48 (40%) are in 'favourable' or 'recovering' condition. There are a variety of reasons why sites are considered 'unfavourable', including neglect and lack of appropriate management. See section 2.3.3 for a list of key sites in the Rother and Doe Lea Valleys.

2.3.1 Existing initiatives and projects

The eastern side of the area is included within the **Doe Lea Catchment Project**, a three year scheme, started in 2009, to alleviate flooding in the catchment, retain soil resource on the land and carry out small scale habitat creation work.

This area lies within one of **Derbyshire Wildlife Trusts Living Landscapes Schemes**. These are landscapes where the Trust has identified areas for key habitats and species action. It will develop projects and use opportunities to strengthen and, where possible, expand the biodiversity resource.

The Bolsover, Chesterfield and North East Derbyshire **Greenprint** documents cover parts of this area. Greenprints are mini biodiversity action plans setting actions and targets for each local authority area.

2.3.2 Main landowning bodies

Landownership within the area is dominated by a handful of owners, mainly Chatsworth and Sitwell estates, where much of the land is tenanted. Derbyshire County Council and Chesterfield Borough Council also manage large areas of land including that associated with the Markham Vale development. The former Arkwright colliery is owned by UK Coal and is being managed according to an agreed restoration plan.

2.3.3 Key Sites

The key sites in the Rother and Doe Lea Valleys Action Area are:

- **SSSIs:** Crabtree Wood SSSI, Duckmanton SSSI.
- **LNRs:** Brearley Wetland LNR, Doe Lea LNR, Norbriggs Flash LNR.
- **Others:** Arkwright, Avenue Washlands, Carr Vale Flash, Chesterfield Canal, Grassmoor Country Park, Holmebrook Country Park, Peter Fidler, Poolsbrook Country Park, West Wood.

2.4 KEY ACTIONS for the Rother and Doe Lea Valleys area.

1. The **primary habitat objective** within the Rother and Doe Lea Valleys area is the maintenance, restoration and expansion of lowland meadow, woodland and wetlands to achieve targets in Table 2.1 below
2. The **secondary objective** in the area is to increase connectivity of semi-natural habitats to create larger habitat complexes using priority habitats wherever possible.
3. Investigate and develop two ark sites for white-clawed crayfish.
4. Continue to monitor water vole populations at key sites along the Rother and Doe Lea. Carry out mink control where necessary to protect water vole populations.
5. Work with landowners to reduce the cause, risk and effects of flooding along the Doe Lea, creating priority habitats where appropriate.
6. Promote volunteering for the environment, especially within areas of social deprivation, to increase capacity and to empower 'Friends of' groups to manage key sites.

Full targets for all Priority Habitats and Species are listed in Tables 2.1 and 2.2
All actions listed in the separate **Generic Action Plan** also apply to this area.

2.5 KEY TARGETS for the Rother and Doe Lea Valleys area.

2.5.1 Targets for UK BAP PRIORITY HABITATS

Table 2.1 below lists the specific habitat targets for the Rother and Doe Lea Valleys area. The requirements of UK BAP reporting mean that our own LBAP targets need to be presented as cumulative figures. The meaning of each column is explained below the table. See Maps section for the distribution of primary habitat features within this Action Area.

| UK BAP Priority Habitat | (1) Current Extent at 2011 (i.e. Maintenance* Target to 2020) | Targets for 2011-2020 | | |
|----------------------------------|--|-----------------------|-----------------|--|
| | | (2) Manage* | (3) Restore* | (4) Expand* |
| Primary feature: | | | | |
| Lowland mixed deciduous woodland | 1,109 ha | 820 ha | - | 100 ha |
| Lowland meadow | 19 ha | 19 ha | 150 ha | 15 ha |
| Lakes and Canals | 6 lakes 1 canal | 6 lakes 1 canal | n/a | Expand wetlands area within existing canal |
| Ponds | >200 ponds | 60 ponds | 25 ponds | 25 ponds |
| Hedgerows | unknown | Additional 15 km | n/a | 5km |
| Wet woodland | 11 ha | 8 ha | n/a | 3 ha |
| Floodplain Grazing marsh | unknown | n/a | n/a | 10 ha |
| Secondary feature: | | | | |
| Reedbed | 19 ha | 15 ha | n/a | 5 ha |
| Field Margins | unknown | 60 ha [#] | | |
| Localised feature: | | | | |
| Lowland calcareous grassland | 5 ha | 5 ha | 57 ha | n/a |

| | | | | |
|----------------------------|----------------------|---------|---------|----------|
| Traditional orchard | 37 sites | n/a | n/a | 5 sites |
| Heathland | 0 ha | n/a | 0.75 ha | 1 ha |
| Wood-pasture and Parkland | 7 sites | 3 sites | n/a | n/a |
| Lowland dry acid grassland | 3 ha | 3 ha | 20 ha | 1 ha |
| Mire and Fen | 3 ha | 3 ha | n/a | n/a |
| Swamp | 7 ha | 7 ha | n/a | n/a |
| Open Mosaics | Unknown [∞] | | | |
| Green roofs [@] | | | | 20 roofs |

Table 2.1 Targets for the Rother and Doe Lea Valleys Action Area 2011-2020.

*Table explanation:

Terminology and measurements are the same as those used in the UK Biodiversity Action Plan (UK BAP). These are:

- (1) **'Maintenance'**—this is the current 2011 resource of each Priority Habitat, irrespective of condition and management that we must, *at the very least*, keep and carry forward into the next plan period after 2020. (i.e. no net loss.)
- (2) **'Manage'** – The amount of Priority Habitat in (1) that we want to be under appropriate management to maintain in 'favourable' condition. This is a cumulative target, continuing on from the previous plan period.
- (3) **'Restore'** – Habitat which is not in a 'favourable' condition, but which is under restorative management to bring it up to that condition. This is a cumulative target, continuing on from the previous plan period.
- (4) **'Expand'** – New habitat created from scratch. This could be on a new site or an extension to an existing one. The target is for this Plan Period, though some habitats, such as woodland, take far longer to fully develop.

Notes to accompany Table 2.1

Wetland habitat creation should be targeted along river corridors, especially where they link existing wetland sites.

Grassland, woodland and **hedgerow** creation should also be targeted where the underlying ground conditions are suitable and especially where it links existing habitats.

Pond creation is suitable anywhere in the area, but is especially important where new ponds will add to existing networks, and can support great crested newt populations. Restoration should be targeted on sub-priority habitat, especially where it links to priority habitats.

Field Margins It is not possible to set separate targets for management, restoration or expansion. A single overall target for simply increasing this resource is provided. Figures can only be based on Entry Level Stewardship monitoring. Further habitat may also be provided through Living Bird Table initiatives.

∞ **Open mosaic habitats** the distribution of this habitat is not well understood at the start of this Plan Period (see Generic Action Plan). Its presence is, however, important in this area. It should be maintained in situ wherever possible, especially where it contributes to a wider network linking key habitats

@ **Green roofs** Although not a UK Priority Habitat, the installation of green roofs on new developments and also on some existing urban structures can make a considerable contribution to biodiversity in towns and cities. For this reason they have been included in targets within the Rother and Doe Lea Valley area.



Hedgerow.
Credit: Debbie Alston

2.5.2 Targets for UK BAP PRIORITY SPECIES

There are 83 UK BAP Priority Species recorded within the Rother and Doe Lea Valleys Action Area since 2000. The distribution and status of many of these species is not currently well known, and consequently it is not possible to set meaningful targets for them. However, there are other species about which we do know enough to be able to set targets, monitor and assess their success. These are shown below in Table 2.2

The full list of BAP Species for the Rother and Doe Lea Valleys area is given in Table 2.3 (see Section 2.6.2)

| UK BAP Priority Species | Range targets to 2020 (1km ²) | Range expansion targets 2011-2020 (1km ²) | Method of expansion |
|-------------------------|---|---|--|
| Dingy skipper | 19 | n/a | n/a |
| Great-crested newt | 24 | 1 | Expansion of existing pond network |
| Otter | n/a | 2 | Surveying and habitat enhancements. |
| Water vole | 47 | 2 | Canal restoration and creation of suitable wetland habitat |
| White-clawed crayfish | 3 | 2 | Creation of 2 ark sites |

Table 2.2 Targets for UK BAP Species within the Rother and Doe Lea Valleys area.

This area is one of the local strongholds for **Dingy skippers**, which have been recorded in 19 grid squares (19 x 1 km²) grid squares since 2000. They are present on many former extraction sites where relatively open habitats still exist. **Target:** Maintain range.

Great-crested newts have been recorded in 24 grid squares (24 x 1 km²) since 1990. They are largely restricted to individual sites as, rather than the wider landscape and some of the records are old and populations may have disappeared.

Target: Increase range by one 1 km² by expanding pond networks.

The presence of **Otters** in the area is yet to be confirmed, but is expected in the near future as they have been recorded in the centre of Sheffield in the Don catchment to the north of the area. **Target:** Increase range by two 1 km²

Water voles have been recorded in 47 grid squares since 2000. The Rother valley contains the strongest remaining population of water voles in the LBAP area. The tributaries of the Rother including the Doe Lea, the Pools Brook, Barlow Brook and Stockley Brook, are particularly important as is the Chesterfield Canal. **Target:** Increase range by two 1 km² by canal restoration and wetland habitat creation.

White-clawed crayfish have been recorded in three grid squares (3 x 1 km²) since 2000. Until recently white-clawed crayfish have been recorded on the Hipper, the River Whitting and the lower part of the Barlow Brook. However, recent survey work has only confirmed their presence on the upper part of the Barlow Brook, just upstream of the section within this area. An ark site was set up at Holmebrook Country Park in 2008 and another healthy population exists on an isolated lake in Wingerworth. **Target:** Increase range by two 1 km² by pursuing opportunities for ark site creation.



White-clawed crayfish.
Credit: Environment Agency

2.6 Current Biodiversity Resources

This list of resources within the Rother and Doe Lea Valleys area has been divided into three parts:

- 2.6.1. UK BAP Priority Habitat Resources
- 2.6.2 UK BAP Priority Species Resources
- 2.6.3 Organisational and Manpower Resources

2.6.1 UK BAP Priority Habitat Resources

The figures below show the total amount of each Priority Habitat known to exist in the Rother and Doe Lea valleys area at the start of this Plan Period in 2011.

Figures for sub-priority and newly created habitats are given if known.

Brief notes on their distribution within the area then follow.



| | |
|---|------------------|
| Total area of the Rother and Doe Lea Valleys region = | 17,824 ha |
| Total area of priority biodiversity resource at start of Plan Period= | 1,215 ha |
| Percentage of Action Area containing this biodiversity resource = | 6.8 % |

Mixed Deciduous Woodland:

| | |
|--|--------|
| Ancient Semi-Natural Woodland = | 217 ha |
| Plantation on Ancient Woodland Sites = | 68 ha |
| Secondary = | 269 ha |
| Plantation (planted since 1980) = | 548 ha |

Wet Woodland:

11 ha

Traditional Orchard: (37 sites)

11 ha

Lowland Meadow:

19 ha

(Plus 186 ha of sub-priority and 20 ha newly created)

Lowland Calcareous Grassland:

5 ha

(Plus 57 ha of sub-priority and 11 ha newly created)

Lowland Acid Grassland:

3 ha

(Plus 21 ha of sub-priority and 4 ha newly created)

Heathland:

0.75 ha of sub-priority heathland

Wetland:

| | |
|------------------------------------|-------|
| Lakes 6 sites | 30 ha |
| Ponds 136 sites | |
| Reedbed | 18 ha |
| Canal | 7 ha |
| Swamp (incl. 1.1 ha newly planted) | 6 ha |
| Fen | 3 ha |

Location of Priority Habitats in the Landscape:

Primary features:

Rivers and streams: River Rother is the main river with a number of tributaries, including Hipper, Westbrook and Doe Lea.

Floodplain grazing marsh: Associated largely with River Rother.

Standing open water and ponds: Widespread across the area.

Lowland meadow: Scattered and generally associated with former mineral sites.

Hedgerows: Widespread, often fragmented, across the area.

Veteran trees: Sporadically across the area.

Lowland mixed deciduous woodland: Widespread across the area, newer plantations associated with former mineral sites.

Wet woodland: associated with the River Rother corridor.

Secondary features:

Reedbed: Associated with the River Rother and Doe Lea, especially in areas of mining subsidence.

Field margins: Widespread across the area.

Open Mosaic Occurs in area of brownfield land, especially in and around the urban areas of Chesterfield and the former coal extraction sites such as at Grassmoor, Markham Vale and the former Avenue Coking site.

Localised features:

Lowland calcareous grassland: confined to the scarp slope below the limestone plateau.

Note: The terms Primary, Secondary or Localised feature used above are synonymous with 'Primary Habitat' etc. used in the Landscape Character of Derbyshire (2003) see www.derbyshire.gov.uk/landscape. These describe how noticeable and distinctive each habitat is within the landscape itself. Only Primary Features are shown in the detailed map of each Action Area in the Maps section.



New pond at Netherthorpe.
Credit: Debbie Alston

2.6.2 UK BAP Priority Species Resources

| Group | English Name |
|-----------|---------------------------|
| Amphibian | Great crested newt |
| Amphibian | Common toad |
| Reptile | Common lizard |
| Reptile | Grass snake |
| Reptile | Slow worm |
| Fish | Eel |
| Bird | Bullfinch |
| Bird | Corn bunting |
| Bird | Cuckoo |
| Bird | Curlew |
| Bird | Dunnock |
| Bird | Grasshopper warbler |
| Bird | Grey partridge |
| Bird | Hawfinch |
| Bird | Herring gull |
| Bird | House sparrow |
| Bird | Lapwing |
| Bird | Lesser gedpoll |
| Bird | Lesser spotted woodpecker |
| Bird | Linnet |
| Bird | Marsh tit |
| Bird | Reed bunting |
| Bird | Skylark |
| Bird | Song thrush |
| Bird | Starling |
| Bird | Spotted flycatcher |
| Bird | Tree pipit |
| Bird | Tree sparrow |
| Bird | Turtle dove |
| Bird | Willow tit |
| Bird | Wood warbler |
| Bird | Yellowhammer |
| Bird | Yellow wagtail |
| Mammal | Brown hare |
| Mammal | Brown long-eared bat |
| Mammal | Harvest mouse |
| Mammal | Hedgehog |
| Mammal | Noctule |
| Mammal | Polecat (unconfirmed) |
| Mammal | Soprano pipistrelle |
| Mammal | Water vole |
| Butterfly | Dingy skipper |

| Group | English Name |
|------------|---------------------------|
| Butterfly | Small heath |
| Butterfly | Wall |
| Butterfly | White letter hairstreak |
| Crustacean | White-clawed crayfish |
| Moth | August thorn |
| Moth | Autumnal rustic |
| Moth | Beaded chestnut |
| Moth | Blood-vein |
| Moth | Brindled beauty |
| Moth | Broom moth |
| Moth | Brown-spot pinion |
| Moth | Buff ermine |
| Moth | Centre-barred sawfly |
| Moth | Dot moth |
| Moth | Dusky brocade |
| Moth | Dusky thorn |
| Moth | Dusky-lemon sawfly |
| Moth | Feathered gothic |
| Moth | Figure of eight |
| Moth | Flounced chestnut |
| Moth | Garden dart |
| Moth | Garden tiger |
| Moth | Ghost moth |
| Moth | Green-brindled crescent |
| Moth | Heath rustic |
| Moth | Knot grass |
| Moth | Latticed heath |
| Moth | Minor shoulder-knot |
| Moth | Mottled rustic |
| Moth | Mouse moth |
| Moth | Oak hook-tip |
| Moth | Powdered quaker |
| Moth | Rosy minor |
| Moth | Rosy rustic |
| Moth | Shaded broad-bar |
| Moth | Shoulder-striped wainscot |
| Moth | Small phoenix |
| Moth | Small square-spot |
| Moth | The cinnabar |
| Moth | The sawfly |
| Moth | White ermine |

Table 2.3 UK BAP Priority Species known to be present within the Rother and Doe Lea Valleys area (83 species)

2.6.3 Organisational and Human Resources

Below is a list of organisations that are key to delivering the actions and targets in the Magnesian Limestone area. Reference should also be made to the table in the Generic Action Plan.

| | |
|---|---|
| Statutory Agencies Environment Agency * Forestry Commission * Natural England * | Local Authorities (including Town and Parish Councils) Derbyshire County Council * Bolsover District Council * Chesterfield Borough Council * North East Derbyshire District Council * Ault Hucknall Parish Council Barlborough Parish Council * Barlow Parish Council Brampton Parish Council Brimington Parish Council Calow Parish Council Clay Cross Parish Council Clowne Parish Council Eckington Parish Council Glapwell Parish Council Grassmoor, Hasland and Winsick Parish Council Holymoorside and Walton Parish Council Killamarsh Parish Council * Morton Parish Council North Wingfield Parish Council * Old Bolsover Town Council Pilsley Parish Council Staveley Town Council * Stretton Parish Council Sutton cum Duckmanton Parish Council Temple Normanton and Corbriggs Parish Council Tibshelf Parish Council Tupton Parish Council Unstone Parish Whitwell Parish Wingerworth Parish |
| Voluntary organisations Bolsover Countryside Partnership* BTCV * Chesterfield Canal Partnership Derbyshire Wildlife Trust * FWAG* Groundwork Creswell, Ashfield and Mansfield* | |
| Local and Community Groups Chesterfield RSPB * Dronfield and District Natural History Society * Friends of Holmewood Country Park* Friends of Poolsbrook Country Park* | |
| Other Landowning bodies Chatsworth Estate East Midlands Development Agency (Avenue site) National Trust* Private landowners and farmers Sitwell Estate UK Coal Homeowners (for UK BAP species in gardens) | |

* indicates Lowland Derbyshire Biodiversity Partnership member.
If your group or organisation would like to join the Partnership, go to www.derbyshirebiodiversity.org.uk

2.7 Achievements to Date in Rother and Doe Lea Valleys area

Figures are based on Nov 2011 data and rounded to nearest hectare

Woodland



615 ha (75% of the target) of lowland Mixed Deciduous Woodland is considered to be under management (in an agri-environmental scheme or assessed as favourable or recovering condition)

Wet Woodland



4 ha (50 % of the target) of priority Wet Woodland was considered to be under management (in an agri-environmental scheme or assessed as favourable or recovering condition)

Lowland Meadow



16 ha (84 % of the target) of priority Lowland Meadow was considered to be under management (in an agri-environmental scheme or assessed as favourable or recovering condition)



125 ha (83% of the target) of sub-priority Lowland Meadow was considered to be under restoration (in an agri-environmental scheme or assessed as 'favourable' or 'recovering' condition), looking to bring the habitat condition up to priority status.

Lowland Calcareous Grassland



2.5 ha (50% of the target) of priority lowland Calcareous Grassland was considered to be under management (in an agri-environmental scheme or assessed as favourable or recovering condition)



55 ha (96 % of the target) of sub-priority lowland Calcareous Grassland was considered to be under restoration (in an agri-environmental scheme or assessed as 'favourable' or 'recovering' condition), looking to bring the habitat condition up to priority status.

Lowland Dry Acid Grassland



3 ha (100 % of the target) of priority Dry Acid Grassland was considered to be under management (in an agri-environmental scheme or assessed as favourable or recovering condition)



11 ha (55 % of the target) of sub-priority Dry Acid Grassland was considered to be under restoration (in an agri-environmental scheme or assessed as 'favourable' or 'recovering' condition), looking to bring the habitat condition up to priority status.

Heathland



0.75 ha (100 % of the target) of sub-priority Heathland was considered to be under restoration (in an agri-environmental scheme or assessed as 'favourable' or 'recovering' condition), looking to bring the habitat condition up to priority status.

Wetland



58 ponds (97% of the target) are currently under management



1 ponds (4% of the target) are currently under restoration management.



4 lakes or canal sites (57% of the target) are currently under management



8 ha of reedbed (53% of the target) are currently under management or restoration



0.85 ha of swamp (12 % of the target) are currently under management is under management



3 ha of mire and fen (100% of the target) are currently under management

Current Agri-environment Schemes:

2 Higher Level Stewardship schemes
2 Countryside Stewardship Schemes

Rother and Doe Lea Valleys Action Area - Priority Habitats Map



- Lowland meadow
- Woodland
- Wet Woodland
- Standing Open Water, Main Rivers and Ponds
- Floodplain Grazing Marsh

Only those Priority Habitats which are seen as primary landscape features are shown here. See Area Action Plan for details.

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Lowland Derbyshire LBAP

