

## ***Local Biodiversity Action Plan***

### **Eutrophic Standing Water: Field Ponds, Lakes, Canals and Reservoirs Action plan objectives**

- **No further loss of notable aquatic plant communities**
- **Restoration of field ponds**
- **Creation of new ponds and lakes**
- **Compile and maintain register of sites of local BAP and UKBAP quality**



### **Introduction**

Eutrophic standing water is nutrient rich and is found in field ponds, lakes, canals, gravel pits and reservoirs. In Leicestershire and Rutland reservoirs such as Rutland Water, Eyebrook and Swithland reservoirs have national or international ecological importance. Many of these sites have statutory designations that afford some degree of protection.

However similar designations have failed to protect the notable plant and invertebrate communities associated with the counties' canals. Increasing boat traffic and associated restoration work is threatening the long-term survival of many species in canals.

Field ponds were once a familiar feature of the Leicestershire and Rutland countryside, having been dug wherever a natural water supply for stock to drink from was not available. Although many are small, collectively they represent a significant ecological resource. With the conversion of much grazing land to arable farming, field ponds frequently no longer served a purpose, and so many were filled in. Despite this they are still numerous where pasture land is prevalent, although they are probably declining in quality through agricultural improvement of pastures.

New wetlands have been created in former gravel and clay pits, by accident or design. Where these occur alongside wildlife corridors such as the Rivers Soar, Wreake and Trent, they are of regional significance for waterfowl, as at Watermead to the north of Leicester, Frisby on the Wreake and at Lockington and Hemington along the Trent.

Smaller waterbodies associated with mining subsidence (known as 'flashes') and with the coal industry are frequent in north-west Leicestershire, and these are often excellent amphibian habitats, including the protected Great Crested Newt, which is declining outside these relatively new habitats.

More recently, new wetlands are being created in development sites and along highways schemes as part of 'SUDS' or Sustainable Urban Drainage Systems, and many of these are developing into good small wetland habitats.

## **Current extent**

A provisional inventory of larger open water sites in Leicester, Leicestershire and Rutland is attached, including sites/groups of water bodies over 0.3ha in size. The Inventory includes reservoirs formerly described as mesotrophic, but now considered to be eutrophic. It includes quarry lakes and pools, some of which probably have low nutrient status, especially in hard-rock quarries.

The total area is c.2500 hectares, nearly half of which is Rutland Water and associated water bodies. Outside Rutland Water, large lakes of over 10ha are estimated at covering less than 650ha.

There is c. 125km of canal in Leicestershire and Rutland. Parts of the Ashby Canal, Grand Union Canal and Grantham Canal are designated as SSSIs. The Grantham and Oakham Canals are disused, (the Oakham is mostly infilled) but all the other are still active, even though part of the Ashby Canal is not currently connected to the rest of the network.

It would be difficult to estimate the numbers of field ponds left, as they are subject to rapid change, and there is no register of new SUDS ponds being created.

## **Some characteristic species**

Reservoirs attract large flocks of wildfowl including, at Rutland Water, internationally significant numbers of Gadwall (*Anas strepera*) and Shoveler (*Anas clypeata*). The Grand Union and Ashby Canals are particularly important for aquatic plants such as the nationally scarce Grass-wrack Pondweed (*Potamogeton compressus*) and the rare Flat-stalked Pondweed (*Potamogeton friesii*). The Grantham Canal is notable as being the best site for Odonata (Dragonflies and Damselflies) in the area. 17 species have been recorded and it is the only local site for the rare Variable Damselfly (*Coenagrion pulchellum*). 41 species notable in Leicestershire and Rutland including Great Crested Newt *Triturus cristatus*, other amphibian species, and many invertebrates are associated with field ponds (Lott 1997).

## **Local Wildlife Site criteria**

Most large eutrophic water bodies and canals meet the LWS criteria for Wetlands (Large Rivers and Canals, and Standing Water bodies) as these are mainly based on presence of aquatic vegetation.

## **Most important factors affecting the habitat**

- Eutrophication from fertiliser application to surrounding land.
- Increased recreational use, including boating and fishing, with associated dredging and management.
- Ponds: excessive scrub development around margins and silting up.
- Filling in.

## **Opportunities**

Creation of new wetlands as a result of development and highways 'SUDS', flood prevention schemes and minerals restoration.

## Provisional Inventory of larger water bodies

**Source: OS Mastermap layer 2015, supplemented by additional mapping**

- Includes water bodies over 0.3ha.
- Smaller waterbodies area only included where they are part of a larger cluster of water bodies.
- Not all the water bodies in list may still be present.
- List also includes borrow pits, temporary quarry pools and commercial fishing lakes that have minimal current biodiversity value, but which may have potential.
- Note that sites may include several water bodies which have been amalgamated into one site.

| Site name                         | Designation                  | WS ref | District/LPA      | Grid ref | Origin/use                             | Area (ha) |
|-----------------------------------|------------------------------|--------|-------------------|----------|--|-----------|
| Fortway Farm, Sapcote             | None                         |        | Blaby             | SP500939 | former granite quarry                  | 6.47      |
| Stoney Cove                       | None                         |        | Blaby             | SP493940 | Granite Quarry (disused)/Diving Centre | 5.78      |
| Glen Parva Lodge                  | None                         |        | Blaby             | SP554984 | Brickpit (disused)                     | 2.99      |
| Fosse Park lake                   | None                         |        | Blaby             | SP551998 | Parkland/Flood prevention?             | 1.79      |
| M69, J2 , Aston Firs Borrow Pit   | LWS                          | 56422  | Blaby             | SP460934 | Borrow Pit                             | 1.44      |
| Narborough Wood Park              | None                         |        | Blaby             | SK521009 |  | 1.29      |
| Sapcote Quarry                    | None                         |        | Blaby             | SP497934 | Granite quarry (disused)               | 0.98      |
| Granitethorpe Quarry              | None                         |        | Blaby             | SP494937 | Granite Quarry (disused)               | 0.66      |
| Grand Union Canal, S of Leicester | part SSSI/part LWS/part none |        | Blaby/ Harborough |          | Canal                                  | 33.20     |
| Swithland Reservoir               | SSSI                         |        | Charnwood         | SK116270 | Reservoir                              | 68.15     |
| Cropston Reservoir                | SSSI                         |        | Charnwood         | SK454109 | Sand & Gravel (disused)                | 51.06     |
| Watermead North                   | LWS                          | 55070  | Charnwood         | SK6010   | Sand & Gravel/ Country Park            | 41.65     |
| Syston lakes (R Soar)             | None                         |        | Charnwood         | SK6010   | Sand & Gravel pits                     | 18.58     |
| Willows Farm, R Soar              | None                         |        | Charnwood         | SK6012   | Sand & Gravel (active)                 | 12.84     |
| Cossington Mill                   | None                         |        | Charnwood         | SK6012   |  | 11.87     |
| Quorn Fields Farm                 | None                         |        | Charnwood         | SK555181 |  | 11.28     |
| Beedles Lake                      | None                         |        | Charnwood         | SK630133 |  | 10.56     |
| Cossington                        | LWS/LRWT                     | 48517  | Charnwood         | SK5914   | Nature Reserve                         | 10.28     |
| Syston Fosse Way lake (Wreake)    | None                         |        | Charnwood         | SK622123 | Sand & Gravel pits                     | 8.31      |
| Charnwood (Newhurst) Quarry       | SSSI                         |        | Charnwood         | SK4817   | Granite Quarry (disused)               | 7.92      |
| Barrow Gravel pits                | SSSI                         |        | Charnwood         | SK569166 | Sand & Gravel (disused)                | 7.87      |
| Charnwood Water                   | LWS                          | 25323  | Charnwood         | SK546184 |  | 5.31      |
| Pillings Lock Marina              | None                         |        | Charnwood         | SK563184 | Marina                                 | 4.68      |
| Dishley Pool, Loughborough        | LWS                          | 21554  | Charnwood         | SK520215 |  | 3.98      |
| Nanpantan Reservoir               | LWS                          | 57975  | Charnwood         | SK507170 | Reservoir                              | 3.23      |
| Lakeside Lodge, Eller's gorse     | None                         |        | Charnwood         | SK633236 |  | 2.88      |
| Grand Union Canal, Loughborough   | None                         |        | Charnwood         |          | Canal                                  | 2.75      |

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|---------------------------------------|---------------------------------|-------------------|---------------------|-----------------|------------------------------------|----------------------|
| Ulverscroft Priory & fishponds        | part SSSI                       |                   | Charnwood           | SK499128        | Fishponds                          | 2.63                 |
| Glebe Way Lakes, Syston               | LWS                             | 55071             | Charnwood           | SK612118        | Sand & Gravel                      | 2.22                 |
| Wanlip Meadows                        | LWS                             | 46786             | Charnwood           | SK603106        | Sand & Gravel<br>(disused)         | 1.50                 |
| Raynsway Marina, Syston               | None                            |                   | Charnwood           | SK602089        | Marina                             | 1.48                 |
| The Hermitage lake                    | LWS                             | 49423             | Charnwood           | SK499199        | Parkland                           | 1.39                 |
| Cossington Grange                     | None                            |                   | Charnwood           | SK604129        |                                    | 1.25                 |
| Farnham Bridge Farm (R Soar), Rothley | None                            |                   | Charnwood           | SK594139        |                                    | 1.23                 |
| Gaddesby Brook lake, Rearsby          | None                            |                   | Charnwood           | SK656132        | Parkland                           | 1.03                 |
| Grand Union Canal, Syston             | None                            |                   | Charnwood           |                 | Canal                              | 0.92                 |
| Hilltop                               | None                            |                   | Charnwood           | SK647167        |                                    | 0.84                 |
| Farnham Bridge (R Soar), Rothley      | None                            |                   | Charnwood           | SK594132        |                                    | 0.84                 |
| Mountsorrel (Hawcliff) disused quarry | None                            |                   | Charnwood           | SK572151        | Granite Quarry<br>(disused)        | 0.83                 |
| Hill Farm, Wymeswold                  | None                            |                   | Charnwood           | SK630230        |                                    | 0.81                 |
| Cossington                            | None                            |                   | Charnwood           | SK602134        |                                    | 0.81                 |
| Rearsby                               | None                            |                   | Charnwood           | SK659147        |                                    | 0.58                 |
| Blackbrook Reservoir                  | SSSI                            |                   | Charnwood/<br>NWL   | SK465171        | Reservoir                          | 32.04                |
| Grand Union Canal, Leicester          | None                            |                   | City                |                 | Canal                              | 1.66                 |
| Braunstone Park lakes                 | None                            |                   | City                | SK557028        | Parkland/POS                       | 1.55                 |
| Hamilton lake                         | None                            |                   | City                | SK626072        | Parkland/flood<br>amelioration     | 1.26                 |
| Watermead South                       | LWS                             | 26160             | City/<br>Charnwood  | SK6008          | Sand & Gravel<br>pits/Country Park | 17.01                |
| Ashby Canal, Hinckley - Snarestone    | partSSSI/part<br>cLWS/part none |                   | H&B                 |                 | Canal                              | 32.32                |
| Thornton Reservoir                    | LWS                             | 25882             | H&B                 | SK472076        | Reservoir                          | 29.16                |
| Cadeby Quarry                         | None                            |                   | H&B                 | SK4402          | Sand & Gravel<br>(active)          | 17.64                |
| Grobby Pool                           | SSSI                            |                   | H&B                 | SK521082        |                                    | 12.12                |
| Grobby Quarries                       | None                            |                   | H&B                 | SK5208          | Granite quarry                     | 10.12                |
| Bosworth Water Trust                  | None                            |                   | H&B                 | SK384032        |                                    | 7.68                 |
| Peckleton Common lakes                | None                            |                   | H&B                 | SK478010        |                                    | 6.71                 |
| Mallory Park lakes                    | None                            |                   | H&B                 | SK448000        |                                    | 6.41                 |
| Bradgate quarries                     | None                            |                   | H&B                 | SK5109          | Granite Quarry                     | 3.56                 |
| Bosworth Park                         | None                            |                   | H&B                 | SK411014        | Parkland                           | 3.38                 |
| Watling St Lodge                      | None                            |                   | H&B                 | SP391939        |                                    | 3.20                 |
| Gopsall Park                          | part cLWS                       | 90333             | H&B                 | SK359064        | Parkland                           | 2.47                 |
| Sheepy Magna fishpond                 | None                            |                   | H&B                 | SK328013        |                                    | 2.37                 |
| Wykin                                 | None                            |                   | H&B                 | SP403949        |                                    | 2.19                 |
| Burbage House                         | None                            |                   | H&B                 | SP447906        |                                    | 2.13                 |
| Sketchley, adj Brook                  | None                            |                   | H&B                 | SK422928        |                                    | 1.90                 |
| Bagworth lakes                        | cLWS                            | 90370             | H&B                 | SK4506          | Coal -subsidence/<br>Country Park  | 1.87                 |
| Market Bosworth Marina                | None                            |                   | H&B                 | SK390033        | Marina                             | 1.86                 |
| Friezeland Farm                       | None                            |                   | H&B                 | SK3803          | Angling                            | 1.76                 |
| Foundation Lake, Kirkby Mallory       | None                            |                   | H&B                 | SK448007        | Parkland                           | 1.70                 |
| Clare's Barn Farm, Twycross           | None                            |                   | H&B                 | SK327077        |                                    | 1.51                 |
| Odstone Hill Quarry, Heather          | cLWS                            | 90346             | H&B                 | SK389094        | Brickpit (disused)                 | 1.41                 |
| Sibson, Grange Farm                   | None                            |                   | H&B                 | SK360013        |                                    | 1.38                 |

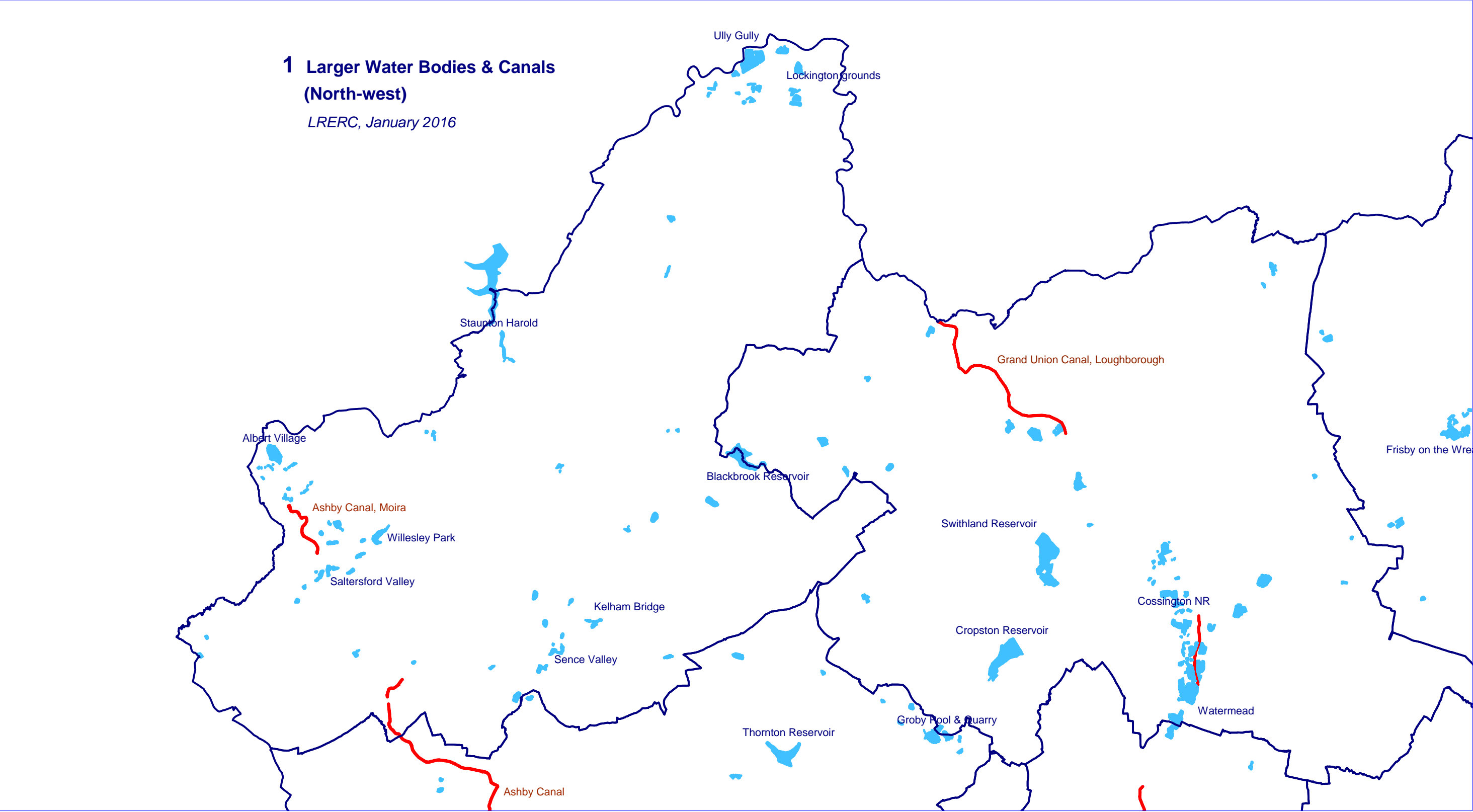
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| Sketchley, adj Canal                           | None               |                   | H&B                      | SP411930        |                                 | 1.38                 |
| Big Pit, Hinckley                              | None               |                   | H&B                      | SP431949        | Brickpit (disused)              | 1.31                 |
| Hinckley Marina                                | None               |                   | H&B                      | SP407935        | Marina                          | 1.31                 |
| The Mallory                                    | None               |                   | H&B                      | SK452016        |                                 | 1.27                 |
| Ratcliffe House Farm,<br>Ratcliffe Culey       | None               |                   | H&B                      | SP336987        |                                 | 1.24                 |
| Twycross, Harris Bridge                        | None               |                   | H&B                      | SK346033        |                                 | 0.91                 |
| Hill Hole Quarry                               | None               |                   | H&B                      | SK485103        | Granite Quarry<br>(disused)     | 0.91                 |
| Osbaston Hall fishponds                        | None               |                   | H&B                      | SK424046        |                                 | 0.88                 |
| Ratcliffe Pool, Ratcliffe<br>Culey             | None               |                   | H&B                      | SP322989        |                                 | 0.83                 |
| Bosworth Grange                                | None               |                   | H&B                      | SK350106        |                                 | 0.74                 |
| Little Pit, Hinckley                           | None               |                   | H&B                      | SP432952        | Brickpit (disused)              | 0.74                 |
| Rolleston Hall lake                            | None               |                   | Harborough               | SK734001        | Parkland                        | 1.79                 |
| Withcote Hall lake                             | None               |                   | Harborough               | SK797056        | Parkland                        | 1.29                 |
| Stanford Reservoir                             | None               |                   | Harborough/<br>Northants | SK3723          | Reservoir                       | 59.64                |
| Eye Brook Reservoir                            | SSSI               |                   | Harb/Rutland             | SP851946        | Reservoir                       | 158.92               |
| Saddington Reservoir                           | SSSI               |                   | Harborough               | SP663911        | Reservoir                       | 14.42                |
| Shawell Quarry                                 | None               |                   | Harborough               | SP5380          | Sand and Gravel<br>(active)     | 6.97                 |
| Slip Inn Quarry, Dunton<br>Bassett             | None               |                   | Harborough               | SP5388          | Sand & Gravel<br>(disused)      | 4.53                 |
| Peatling Lodge Farm lakes                      | None               |                   | Harborough               | SP590892        |                                 | 4.21                 |
| Husbands Bosworth Quarry                       | None               |                   | Harborough               | SP6482          | Sand & Gravel (part<br>disused) | 3.87                 |
| Bruntingthorpe/Mill House<br>farm, Gawney Lane | None               |                   | Harborough               | SP580885        |                                 | 3.07                 |
| Magna Park                                     | None               |                   | Harborough               | SP510858        | Flood alleviation               | 2.91                 |
| Frolesworth, pond West of<br>village           | None               |                   | Harborough               | SP496906        |                                 | 2.91                 |
| Kilworth Sticks farm                           | None               |                   | Harborough               | SP606842        | Angling                         | 2.91                 |
| Nevill Holt Quarry                             | LWS                | 51900             | Harborough               | SP815933        | Sand & Gravel<br>(disused)      | 2.81                 |
| Dunton Bassett Quarry                          | LWS                | 25952             | Harborough               | SP533896        | Sand & Gravel<br>(disused)      | 2.25                 |
| Arkwright Hill Farm,<br>Dunton Bassett         | None               |                   | Harborough               | SP548922        |                                 | 2.15                 |
| Boat house pond, Thorpe<br>Langton             | None               |                   | Harborough               | SP756912        | Parkland                        | 2.08                 |
| Misterton Hall lake                            | None               |                   | Harborough               | SP558838        | Parkland                        | 1.85                 |
| Newton Harcourt, pond<br>west of village       | None               |                   | Harborough               | SP632971        |                                 | 1.69                 |
| Astley Grange Farm, East<br>Langton            | None               |                   | Harborough               | SP729921        |                                 | 1.37                 |
| Gumley Wood Pool                               | None               |                   | Harborough               | SP681902        | Parkland                        | 1.34                 |
| Frolesworth, pond East of<br>village           | None               |                   | Harborough               | SP512904        |                                 | 1.28                 |
| Grange Farm, East Langton                      | None               |                   | Harborough               | SP723922        |                                 | 1.23                 |
| Great Glen, Burton Brook<br>fishpond           | None               |                   | Harborough               | SP659974        | Fishpond                        | 1.09                 |
| Tugby, lake west of village                    | None               |                   | Harborough               | SK759011        |                                 | 0.73                 |
| Peatling Pools                                 | None               |                   | Harborough               | SP590894        |                                 | 0.64                 |
| Walcote pond, adj R Swift                      | None               |                   | Harborough               | SP567841        |                                 | 0.51                 |
| Peatling Parva ponds                           | None               |                   | Harborough               | SP587892        |                                 | 0.35                 |
| Frisby/Kirby Lakes                             | None               |                   | Melton                   | SK6918          | Sand & Gravel<br>(disused)      | 25.65                |
| Knipton Reservoir                              | pLWS               | 90483             | Melton                   | SK814301        | Reservoir                       | 17.97                |

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|--|--------------------|-------------------|---------------------|-----------------|------------------------------------|----------------------|
| Priory Water (and adj lakes)                       | None               |                   | Melton              | SK7118          | Sand & Gravel (disused)            | 17.26                |
| Grantham Canal                                     | SSSI/cLWS          |                   | Melton              |                 | Canal                              | 11.69                |
| Belvoir Castle lakes                               | None               |                   | Melton              | SK8332          |                                    | 11.51                |
| Melton Country Park                                | LWS                | 80080             | Melton              | SK758205        | Parkland/POS                       | 5.53                 |
| Brooksby Quarry                                    | None               |                   | Melton              | SK6715          | Sand & Gravel (active)             | 5.27                 |
| Six Hills golf-course                              | None               |                   | Melton              | SK649214        | Golf-course                        | 4.83                 |
| Eye Kettleby lakes                                 | None               |                   | Melton              | SK7317          | Angling                            | 4.65                 |
| Asfordby   | cLWS               | 90718             | Melton              | SK7121          | Coal mining: reclaimed             | 4.59                 |
| Stapleford Park lake                               | None               |                   | Melton              | SK816181        | Parkland                           | 4.54                 |
| Lakeview farm Landyke Lane                         | None               |                   | Melton              | SK7425          | Angling                            | 4.03                 |
| Goadby Marwood Park                                | None               |                   | Melton              | SK774266        | Parkland                           | 3.45                 |
| Buckminster Park lake                              | None               |                   | Melton              | SK878238        | Parkland                           | 2.82                 |
| Lake House Farm, Goadby                            | None               |                   | Melton              | SP754998        |                                    | 2.47                 |
| Croxton Park lakes                                 | SSSI               |                   | Melton              | SK822276        | Parkland                           | 2.24                 |
| Saltby   | None               |                   | Melton              | SK832263        |                                    | 2.05                 |
| Twinlakes Amusement Park                           | None               |                   | Melton              | SK771210        | Angling                            | 1.35                 |
| Frog hollow, Granby Wood (Belvoir estate)          | None               |                   | Melton              | SK817322        |                                    | 1.21                 |
| Gaddesby Brook lake                                | None               |                   | Melton              | SK682127        |                                    | 1.19                 |
| Wartnaby fishpond                                  | None               |                   | Melton              | SK708220        | Parkland                           | 1.17                 |
| Leesthorpe Hall lake                               | None               |                   | Melton              | SK791133        | Parkland                           | 0.62                 |
| Ully Gulley (Trent Valley)                         | LWS/cLWS           | 58183 /68         | NWL                 | SK4630          | Sand and Gravel (disused)          | 30.29                |
| Albert Village lake                                | cLWS               | 65116             | NWL                 | SK305175        | Coal mining, reclaimed             | 17.72                |
| Lockington Grounds Pits                            | part cLWS          | 71936             | NWL                 | SK4729          | Sand and Gravel                    | 15.46                |
| Willesley Park lake                                | None               |                   | NWL                 | SK338147        | Parkland                           | 9.22                 |
| Salterford Brook flashes                           | cLWS               | 61784 /5/7, 90000 | NWL                 | SK3113          | Coal mining (subsidence)           | 8.30                 |
| Whitwick Quarry                                    | cLWS               | 90910             | NWL                 | SK448159        | Granite Quarry (mothballed)        | 6.38                 |
| Sence Valley Forest Park                           | cLWS               | 62514             | NWL                 | SK3911          | Coal mining, reclaimed/            | 6.36                 |
| Staunton Harold Hall lakes                         | part LWS           | 80070             | NWL                 | SK3721          | Parkland                           | 6.36                 |
| Sawley Marina                                      | None               |                   | NWL                 | SK472307        | Marina                             | 5.81                 |
| Hick's Lodge                                       | None               |                   | NWL                 | SK325151        | Coal - Reclamation                 | 4.66                 |
| Tucker's Holt, Heather                             | None               |                   | NWL                 | SK383094        | Angling lake/former brickpit?      | 4.44                 |
| Cliffe hill quarry                                 | None               |                   | NWL                 | SK457108        | Granite quarry (active)            | 4.41                 |
| Netherfield Lane, Hemington                        | cLWS               | 71010             | NWL                 | SK462295        | Sand and Gravel (disused)          | 4.14                 |
| Hermitage Lake, Whitwick                           | None               |                   | NWL                 | SK572151        |                                    | 4.06                 |
| Kelham Bridge                                      | LWS/LRWT           | 40411             | NWL                 | SK410119        | Former sewage works/nature reserve | 3.71                 |
| Heather brickworks                                 | None               |                   | NWL                 | SK392104        | Brickpit (disused)                 | 3.64                 |
| Bramborough Farm (adj Hicks Lodge)                 | part cLWS          | 62604             | NWL                 | SK3214          |                                    | 3.57                 |
| Queen Elizabeth II Diamond Jubilee Plantation lake | None               |                   | NWL                 | SK390128        | National Forest plantation/OS      | 3.23                 |
| Ashby Canal, Moira                                 | cLWS               | 61192             | NWL                 |                 | Canal                              | 3.11                 |
| Brooklet Farm, Isley cum Langley                   | None               |                   | NWL                 | SK435252        |                                    | 2.73                 |

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|---|--------------------|---------------|---------------------|-----------------|---------------------------|------------------|
| Cavendish Farm                                    | part cLWS          | 71909         | NWL                 | SK448295        | Sand and Gravel (disused) | 2.58             |
| Thorntree Farm, Ravenstone                        | None               |               | NWL                 | SK394119        | Coal mining, reclaimed    | 2.49             |
| Willesley Wood lake                               | None               |               | NWL                 | SK332141        | Coal mining (subsidence)  | 2.29             |
| Conkers   | None               |               | NWL                 | SK3016          |                           | 2.19             |
| Rycroft Rd Hemington                              | part cLWS          | 71747         | NWL                 | SK461292        | Sand and Gravel (disused) | 2.12             |
| Donington Island Albert Village                   | part cLWS          | 65015 /6484 4 | NWL                 | SK3017          | Coal mining, reclaimed    | 2.05             |
| Measham Brickpits                                 | None               |               | NWL                 | SK331109        | Claypit (active)          | 1.83             |
| Merriman's Farm, Moira                            | None               |               | NWL                 | SK330136        |                           | 1.81             |
| Cliftonthorpe, Ashby de la Zouch                  | part cLWS          | 61204         | NWL                 | SK355182        |                           | 1.79             |
| Ellistown claypit                                 | None               |               | NWL                 | SK434108        | Former brickworks         | 1.74             |
| Chilcote, Manor Farm                              | None               |               | NWL                 | SK280108        |                           | 1.48             |
| Langley Priory Lakes                              | None               |               | NWL                 | SK434235        | Parkland                  | 1.46             |
| Maybury Wood, Moira                               | cLWS               | 61100         | NWL                 | SK3116          |                           | 1.45             |
| Coleorton   | None               |               | NWL                 | SK399171        |                           | 1.45             |
| Saltersford Bridge                                | None               |               | NWL                 | SK312126        |                           | 1.34             |
| Nature Alive, Coalville                           | LWS/cLWS           | 72575         | NWL                 | SK421150        | Coal mining, reclaimed    | 1.26             |
| Thorntree lake 2                                  | None               |               | NWL                 | SK402126        | former coal               | 1.18             |
| Willesley Lane pond                               | None               |               | NWL                 | SK334146        |                           | 1.15             |
| Donington Quarry, adj Feanedock Covert            | cLWS               | 65042         | NWL                 | SK3117          | Coal mining, reclaimed    | 1.12             |
| Ludlam's Wood pond, Sweptstone                    | cLWS               | 91240         | NWL                 | SK376104        |                           | 0.96             |
| Grace Dieu Priory/Manor Farm                      | LWS                | 65308         | NWL                 | SK4318          |                           | 0.90             |
| Chilcote, Hurst Court                             | None               |               | NWL                 | SK282114        |                           | 0.75             |
| A50 flood pond, Hemington                         | cLWS               | 71748         | NWL                 | SK457293        |                           | 0.71             |
| Staunton Harold Reservoir                         | None               |               | NWL/Derbs           | SK3823          | Parkland/ Reservoir       | 85.78            |
| Clifton's Bridge (adj Grand Union Canal, Wigston) | SSSI               |               | O&W                 | SP615968        |                           | 1.23             |
| Navvy's Pit, Kilby Bridge                         | LWS                | 80029         | O&W                 | SP601976        | Brickpit (disused)        | 0.94             |
| Wash Brook  | None               |               | O&W                 | SK641000        | Flood prevention          | 0.68             |
| Southmeads  | LWS                | 26188         | O&W                 | SK622013        | Parkland                  | 0.31             |
| Rutland Water                                     | SPA/SSSI           |               | Rutland             | SK9007          | Reservoir                 | 1220.54          |
| Fort Henry lakes                                  | None               |               | Rutland             | SK949120        | Parkland                  | 7.26             |
| Leigh Lodge fishponds, Leighfield                 | None               |               | Rutland             | SK829038        | Parkland                  | 4.24             |
| Chapel Farm, Burley                               | None               |               | Rutland             | SK900159        |                           | 2.87             |
| Oakham Canal                                      | None               |               | Rutland             |                 | Canal                     | 2.15             |
| Whissendine Lodge ponds                           | None               |               | Rutland             | SK807142        | Parkland                  | 1.86             |
| Grange Top Quarry, Ketton                         | None               |               | Rutland             | SK980071        | Limestone Quarry (active) | 1.77             |
| Pond by Priory wood, Leighfield                   | None               |               | Rutland             | SK826054        |                           | 1.67             |
| Stretton Lakes                                    | None               |               | Rutland             | SK959166        | angling                   | 1.39             |

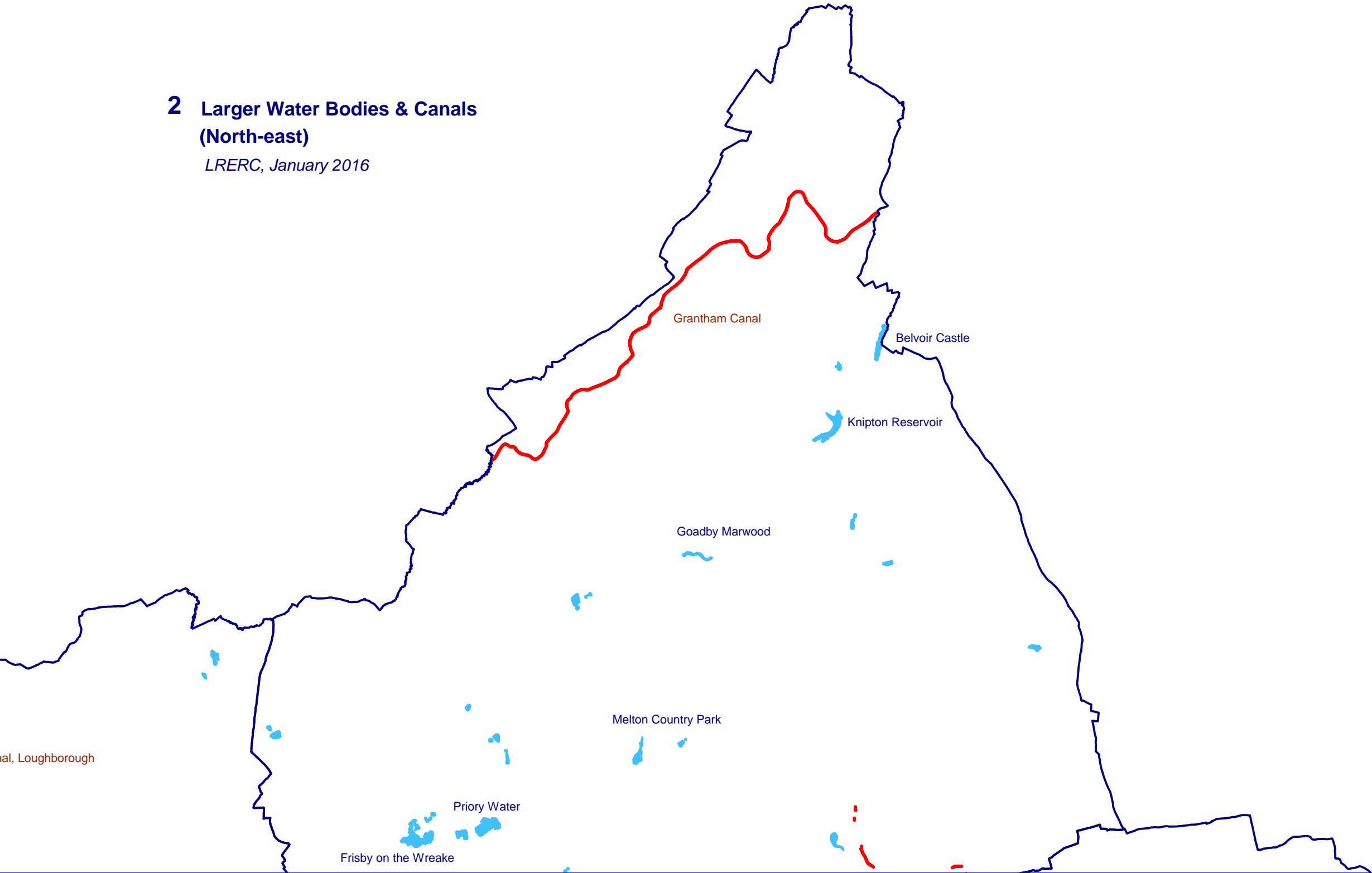
Compiled by LRERC, February 2016

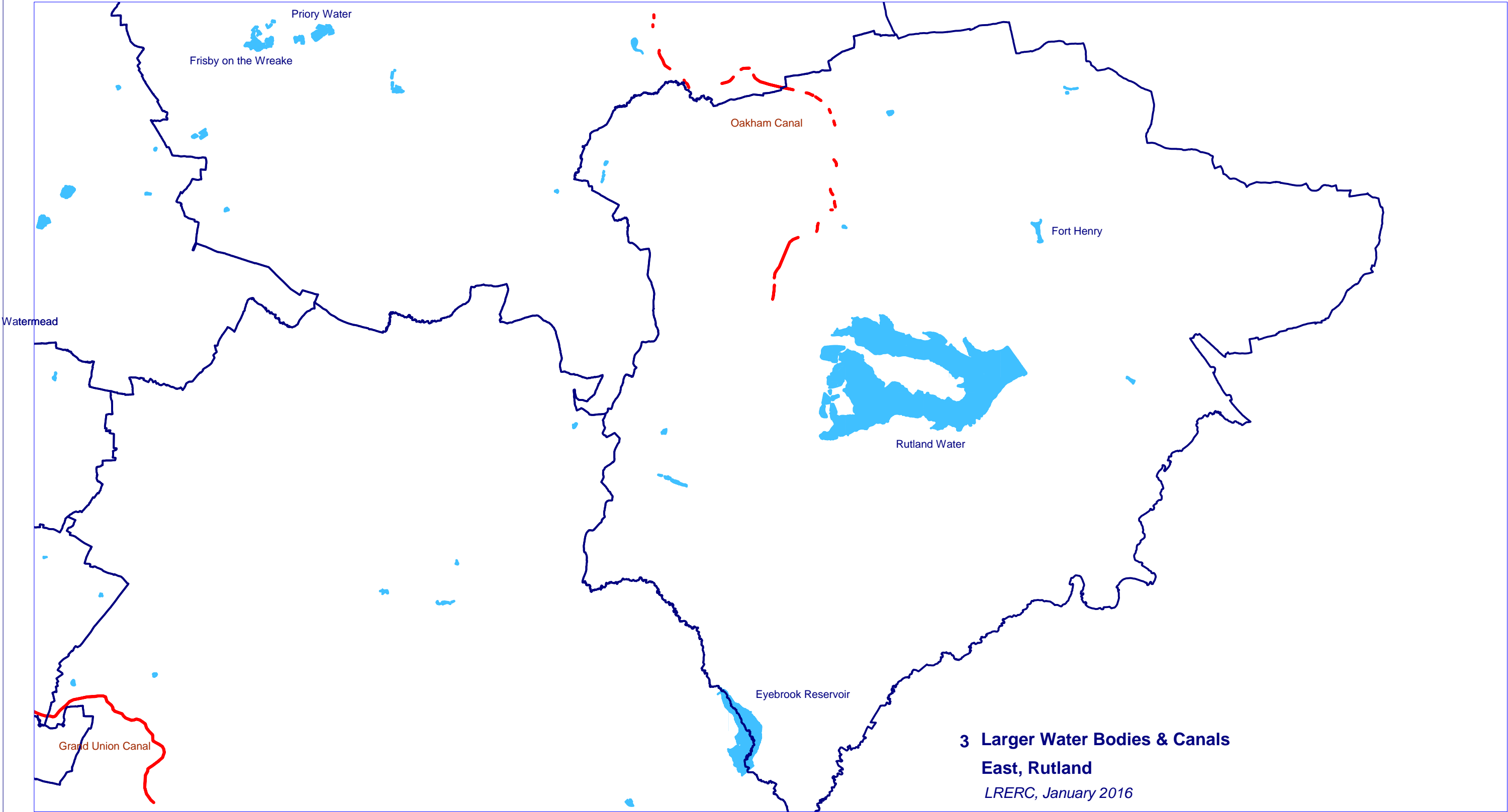


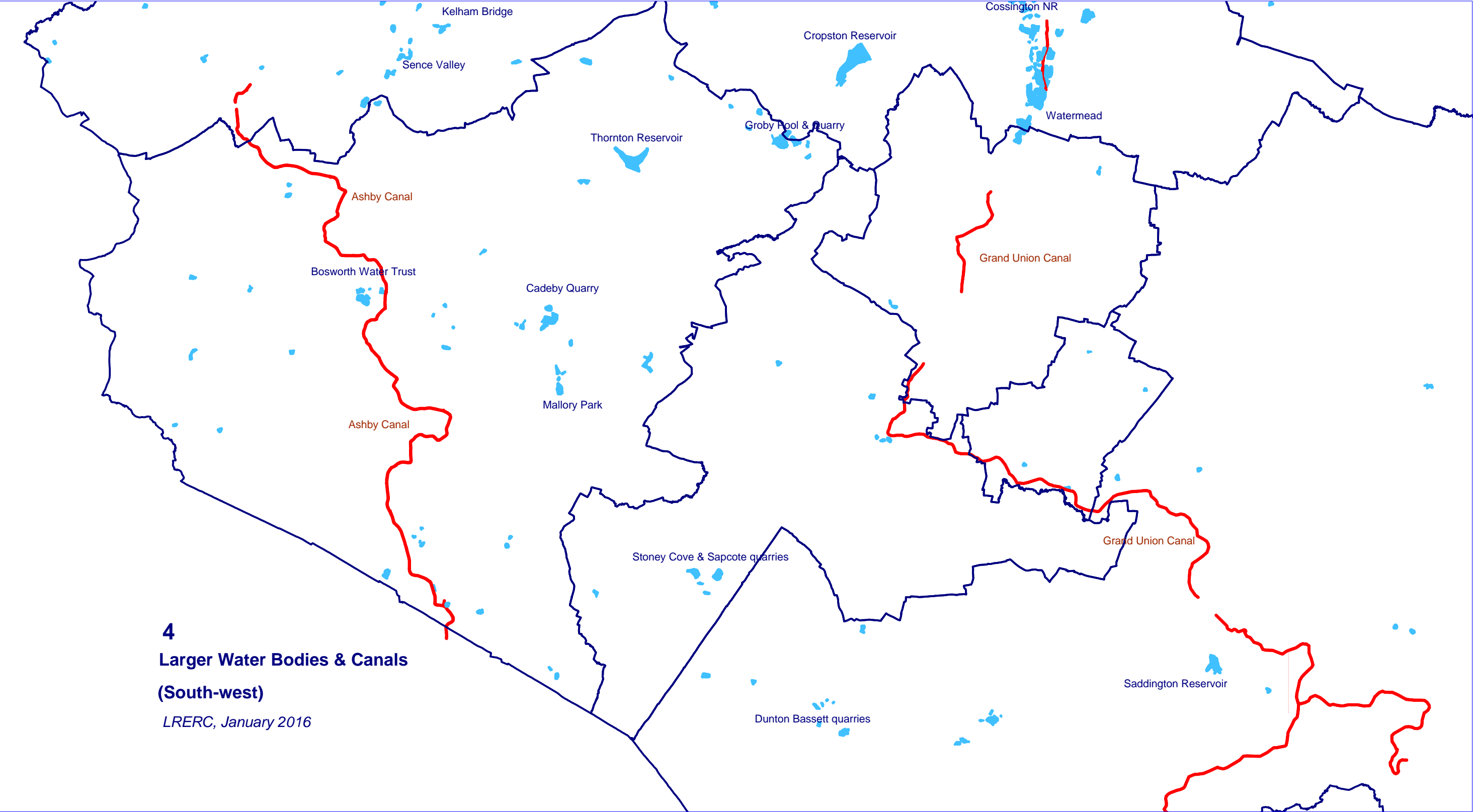


2 Larger Water Bodies & Canals  
(North-east)

LRERC, January 2016

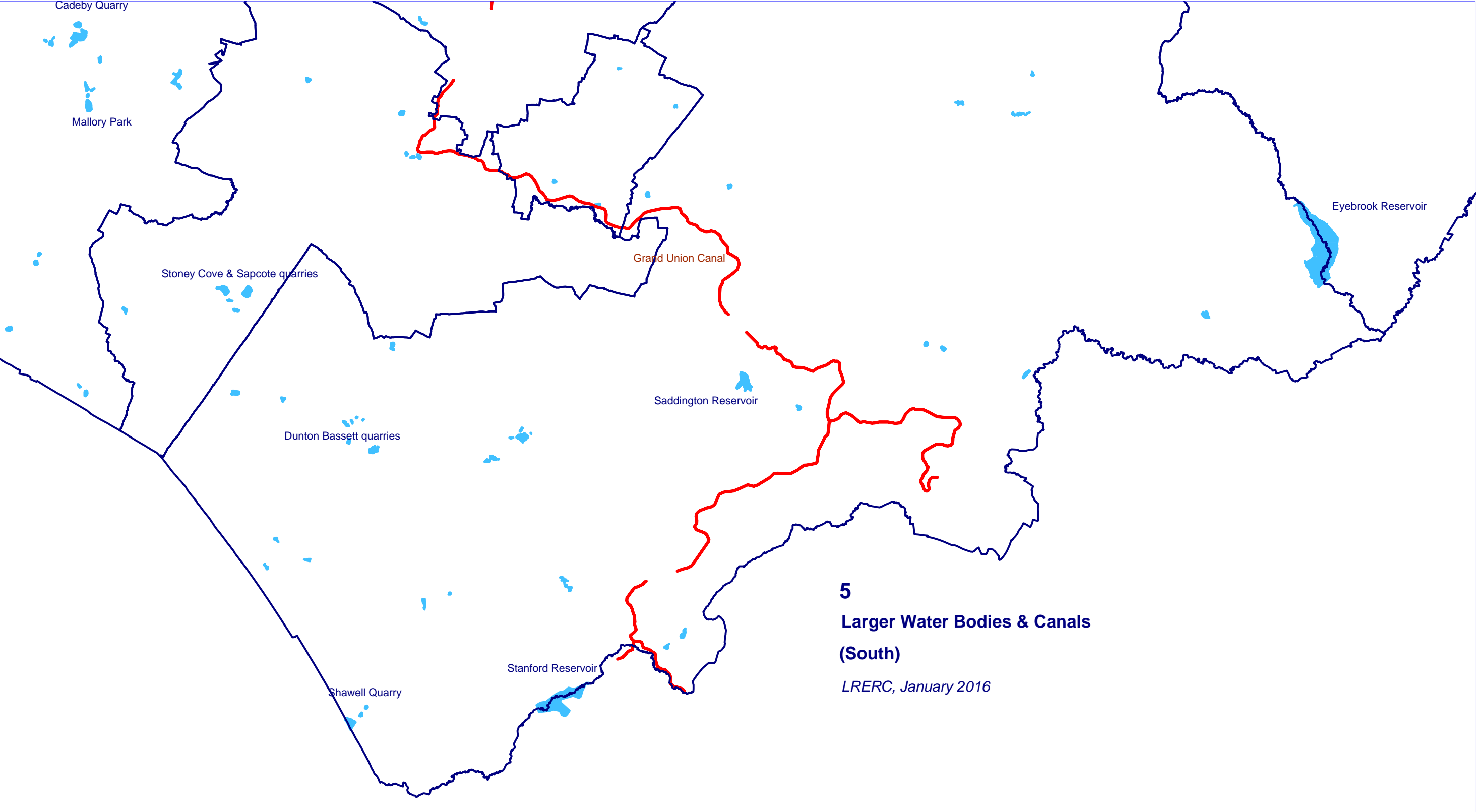






**4**  
**Larger Water Bodies & Canals**  
**(South-west)**

*LRERC, January 2016*



## ***Local Biodiversity Action Plan***

### **Mesotrophic lakes**

#### **Action plan objectives**

- **No further loss of characteristic aquatic and marginal species**



### **Introduction**

This habitat is rare in the UK and largely confined to the margins of upland areas in the north and west. The lakes are characterised by having a narrow range of nutrients, the important ones being inorganic nitrogen (N) and total phosphorus (P). In Leicestershire three large sites historically fell within this definition of mesotrophic standing water; Cropston Reservoir, Blackbrook Reservoir and Thornton Reservoir. All have been affected by nutrient enrichment and are no longer mesotrophic.

These sites are within or adjacent to the Charnwood Forest which is the only 'upland-like' area in Leicestershire. Locally several nationally scarce species are associated with this habitat. Restoration of mesotrophic lakes in Leicestershire is not a realistic option and conservation efforts need to concentrate on maintaining as many of the remaining populations of locally scarce aquatic and marginal plant species as is possible under the changed environmental circumstances.

### **Current extent**

Together, the three lakes cover 170 hectares.

## Some characteristic species

The characteristic species associated with mesotrophic lakes in Leicestershire are aquatic and marginal plants such as Shoreweed (*Littorella uniflora*), Thread Rush (*Juncus filiformis*), Floating Clubrush (*Eleogiton fluitans*) and Small Water-pepper (*Persicaria minor*). Large areas of open water are also important breeding and over wintering sites for many species of duck, including Shoveler (*Anas clypeata*), Teal (*Anas crecca*) and Gadwall (*Anas strepera*).

## Local Wildlife Site criteria

There are no LWS criteria specifically for mesotrophic lakes, but the general Standing Water Bodies criteria could be applied. However, this is academic, as all three lakes are designated as SSSIs.

## Most important factors affecting the habitat

- Nutrient enrichment due to fertiliser run off from agricultural land into streams feeding into the lakes, input of treated sewage into streams feeding the lakes, and pumping of nutrient rich water into Cropston Reservoir from Swithland Reservoir.
- Increased sediment from soil erosion as a result of ploughing and drainage of arable land.
- Insufficient or inappropriate water level management.

## Opportunities

- SSSI Management agreements and advice from Natural England: there is a Countryside Stewardship option available for restoration of large water bodies.

## **Local Biodiversity Action Plan**

### **Floodplain wetland**

#### **Action plan objectives**

- Create new floodplain wetland in the Soar, Wreake, Welland and Trent valleys
- To maintain all existing floodplain wetland sites
- Compile and maintain register of sites of local BAP quality



#### **Introduction**

River floodplains are important for wildlife. They encompass a range of wetland habitats including old sections of river, cut-off from the main channel and often surrounded by trees, especially willows *Salix spp.*, marshy ground caused by the water table being at or near the surface, flooded gravel pits, wet woodland, drainage ditches along field margins, field ponds, the river channel and reedbeds. The river channel, wet woodland, reedbed and field pond habitats are covered by separate action plans.

The largest areas of floodplain wetland habitat in Leicestershire and Rutland are associated with the Soar, Trent and Wreake valleys and to a lesser extent are also found along the Welland and other, smaller, rivers and brooks.

#### **Current extent**

A desktop Inventory was compiled in 2005 for Leicestershire County Council by Derek Lott, identifying 259 sites (see attached map). Data was collated from 3 sources: SINC [*now called LWS*] schedules; the Wildlife Trust's Phase 1 survey data; and wetland beetle records held by the County



Recorder (at the time, this was Derek Lott at the time). There is also reference to a survey of the Welland from the Northamptonshire Wildlife Trust. The sites cover 107 hectares.

Derek concludes that the habitat is under-represented in the Inventory, due to the lack of recent survey information along watercourses. The Trent is identified as being particularly under-surveyed, and the Welland as having a scarcity of good quality habitat.

### **Some characteristic species**

A wide range of wildlife can be found in floodplain wetlands including Otter (*Lutra lutra*), Water Vole (*Arvicola terrestris*), (both covered by species action plans), and birds such as Snipe (*Galinago galinago*), Redshank (*Tringa totanus*) and Sand Martin (*Riparia riparia*). Wetlands are also an important habitat for a wide range of invertebrate species. In particular the Soar and Wreake valleys contain known sites for a number of nationally rare beetles. The habitat is associated with few locally scarce plants. However, many watercourses are fringed by tall reed-like plants including Common Club-rush (*Schoenoplectus lacustris*), Grey Club-rush (*Schoenoplectus tabernaemontanii*), Bulrush (*Typha latifolia*) and Bur-reed (*Sparganium erectum*).

### **Local Wildlife Site criteria**

‘Floodplain wetland’ is broad category, covering open water, ponds, marsh, fen, wet woodland, wet grassland, reedbed, ditches and the river channel. These habitats are covered by individual sets of LWS criteria within Woodlands, Wetlands and Grasslands.

### **Most important factors affecting the habitat**

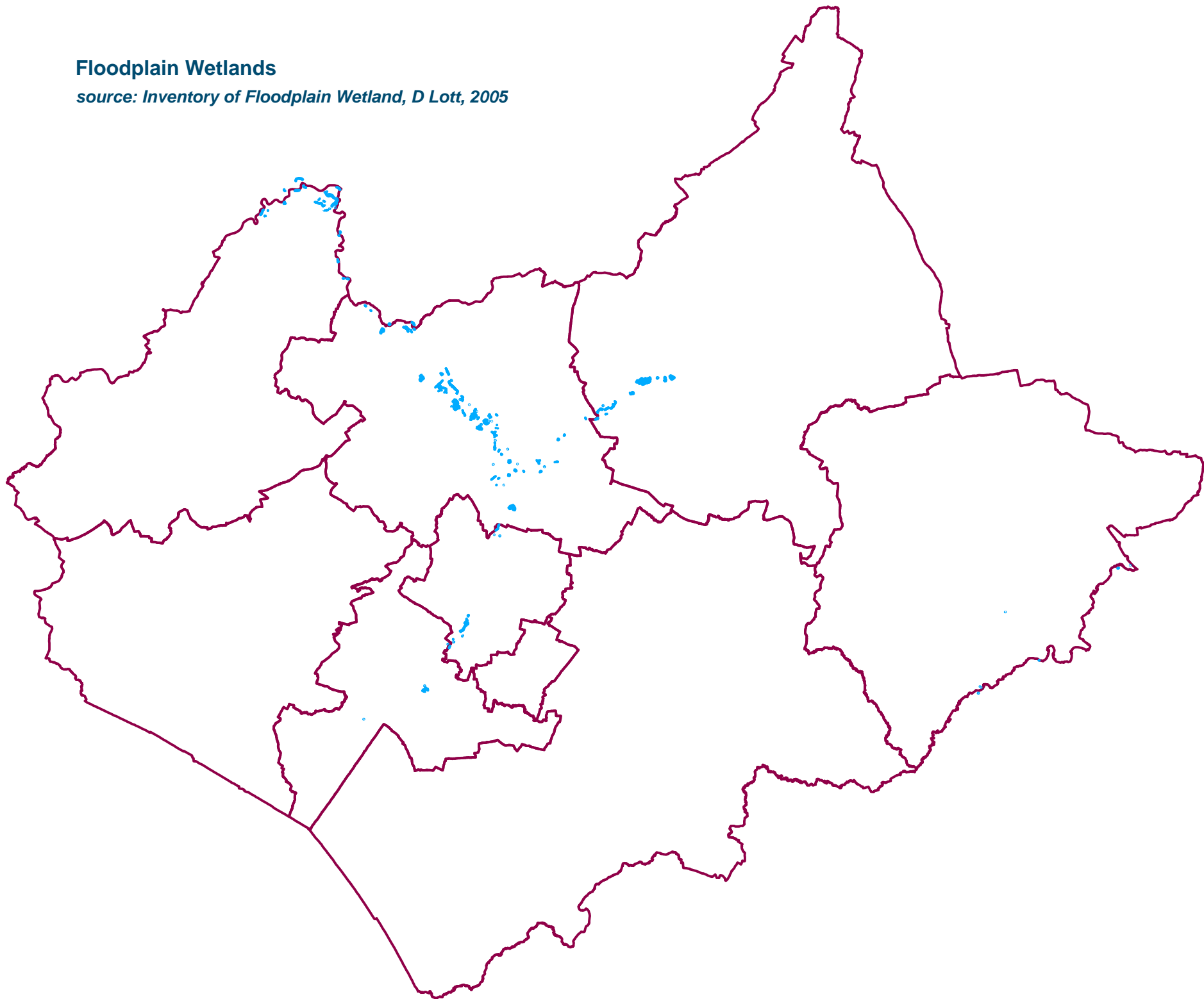
- Land drainage schemes.
- Infilling.
- River engineering schemes.
- Siltation as a result of agricultural cultivation.
- Road building and other developments which increase run-off and alter the catchment characteristics.
- Recreational pressures.
- Eutrophication caused by fertiliser application.

### **Opportunities**

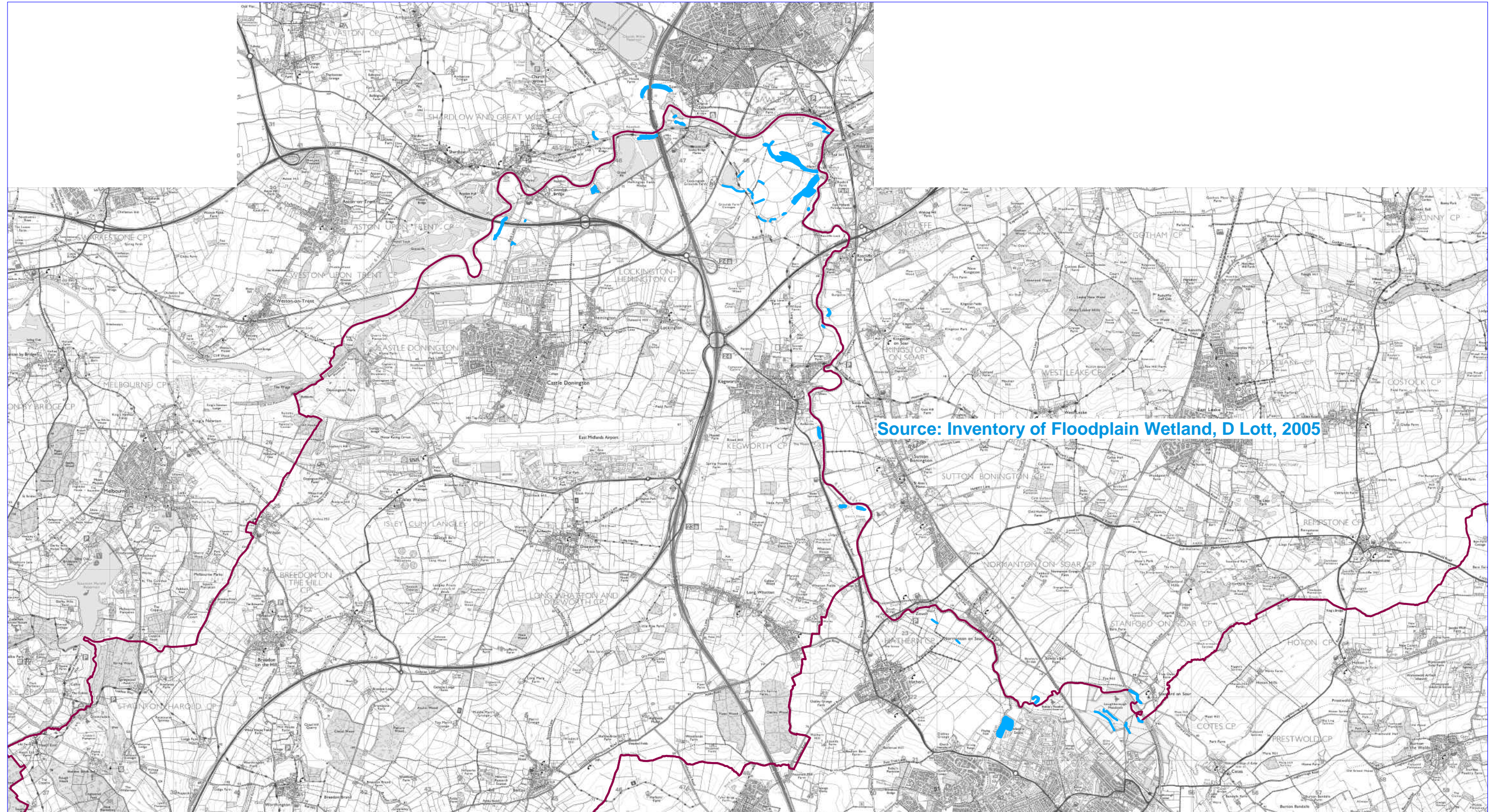
- Flood prevention and catchment management plans

Leicester, Leicestershire and Rutland BAP 2016

Floodplain Wetlands  
source: *Inventory of Floodplain Wetland, D Lott, 2005*









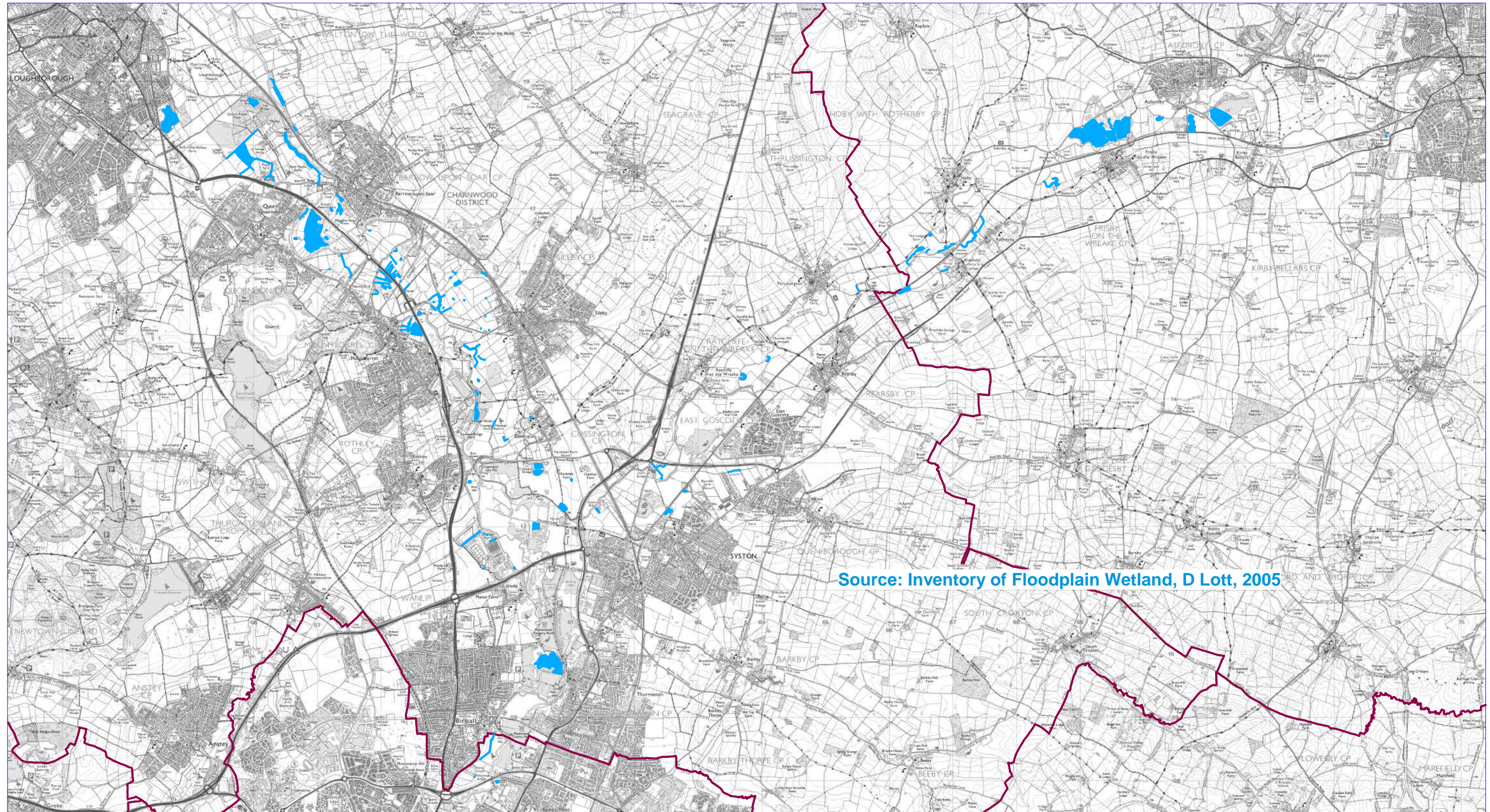
# Leicestershire & Rutland Environmental Records Centre

## Leicestershire County Council

### Map 8.3: Soar Valley Leicester to Loughborough Wreake Valley W of Melton Mowbray

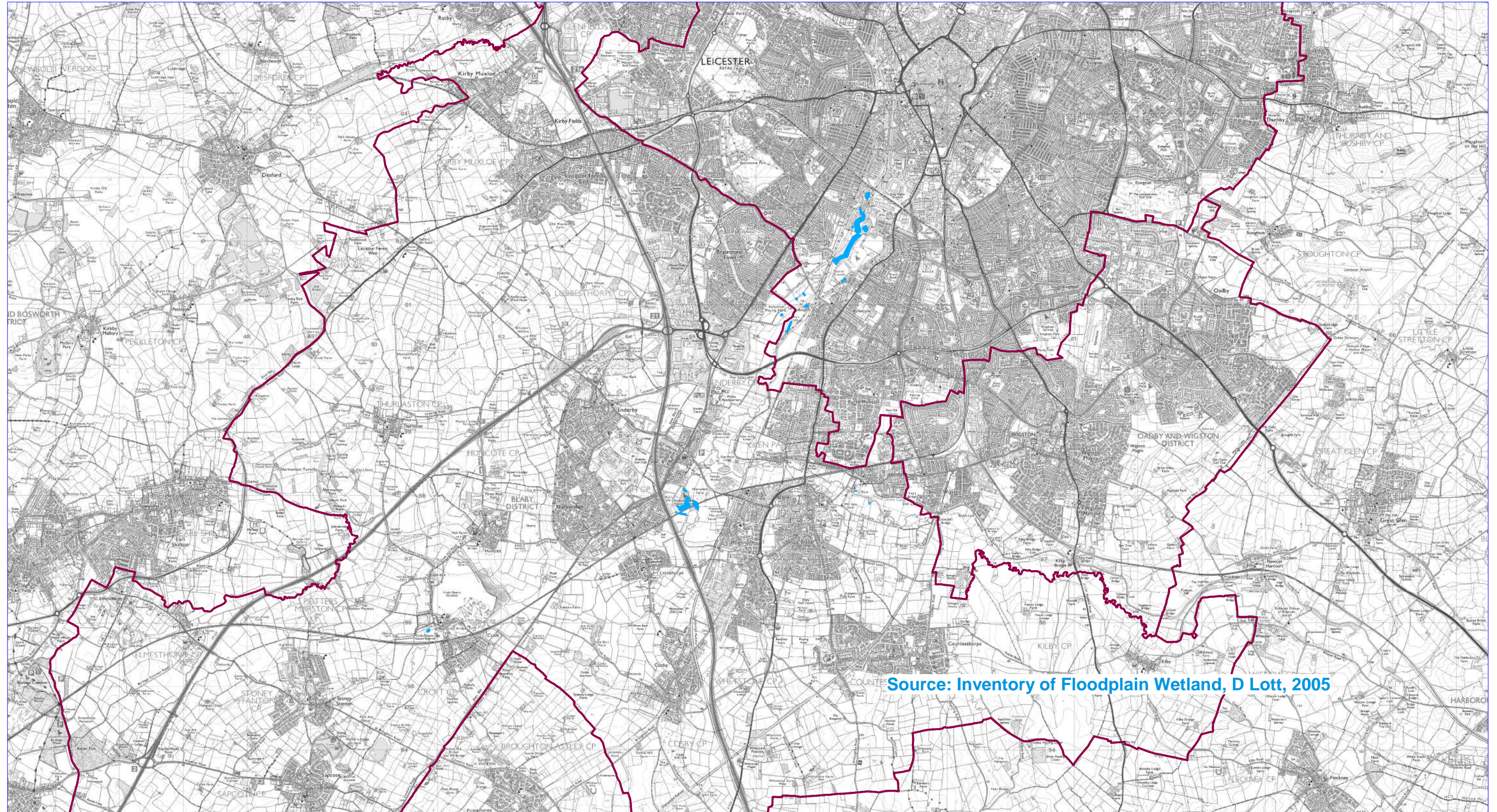
## Leicester, Leicestershire and Rutland BAP 2016: Floodplain Wetland

Scale 1: 60,000



Source: Inventory of Floodplain Wetland, D Lott, 2005







## Local Biodiversity Action Plan

### Reedbed

#### Action plan objectives

- Create new reedbeds, prioritising site adjacent to existing reedbeds and wetlands
- Compile and maintain register of sites



### Introduction

Reedbeds are wetlands dominated by, but not necessarily composed purely of, stands of the Common Reed *Phragmites australis*. Historically, Leicestershire and Rutland has never had extensive areas of reedbed. The largest remaining areas are associated with man-made habitats, including Groby Pool, Cave's Inn Pits and the Grantham Canal, all of which are SSSIs, at least in part. More recently, large reedbeds have been created at Rutland Water and Cossington Meadows Nature Reserve.

A large part of Narborough Bog SSSI was formerly reedbed but this is now drying out, as a result of works carried out on the adjacent River Soar.

### Current extent

A draft Inventory was compiled in 2006, by Leicestershire County Council, but was never finalised. This has been revisited, and a draft list of sites and a map is appended. Sources are

- Wildlife Site Register
- SSSI citations

- Notes provided by LRWT for the 2006 Inventory
- Habitat Surveys of the Soar Valley in Watermead and Lockington, by Geoffrey Hall and Uta Hamzaoui for the LRWT.

Note that although these sites contain reeds, the extent of reed bed is not always clear, but the documents referred to all indicate at size approaching that required to meet LWS criteria.

There will be other reed-beds that have not been identified; for example, within former minerals workings.

New reedbeds are usually created by planting small clumps of reeds, which then expand and coalesce to form a single larger unit. They can develop quite rapidly in certain conditions, and it is hard to pin down their actual size while they are at this early stage of development.

Given these uncertainties, the estimate of c. 30ha is extremely tentative, and deliberately conservative; the actual extent is likely to be significantly more.

## Some characteristic species

In the UK four species of birds are highly dependent on reedbeds for their survival: Reed Warbler (*Acrocephalus scirpaceus*), Bearded Tit (*Panurus biarmicus*), Marsh Harrier (*Circus aeruginosus*) and Bittern (*Botaurus stellaris*).

Reedbeds also provide roosting and feeding sites for migratory species: Swallow (*Hirundo rustica*); Sand Martin (*Riparia riparia*); Yellowhammer (*Emberiza citrinella*) and Corn Bunting (*Miliaria calandra*) and roost sites for several raptor species in winter such as Hen Harrier (*Circus cyaneus*). Locally, five Red Data Book invertebrates are closely associated with reedbeds including the Twin-spotted Wainscot moth (*Archanara geminipuncta*).

## Local Wildlife Site criteria

*Phragmites* reedbeds are included in the *Standing water bodies, swamps, fens and ditches* set of criteria, with a size threshold of 500m<sup>2</sup> to meet LWS criteria.

## Most important factors affecting the habitat

- The small total area and fragmented distribution of the habitat.
- Lack of or inappropriate management of existing reedbeds leading to drying out.
- Drainage works on surrounding land causing a lowering of the water table.
- Unsympathetic restoration of gravel pits.
- Pollution by toxic chemicals causing loss of fish and amphibian prey for key species and accumulation of poisons in the food chain.

## Opportunities

- Flood prevention and catchment management plans.
- Sand, gravel and claypit restoration and regeneration.

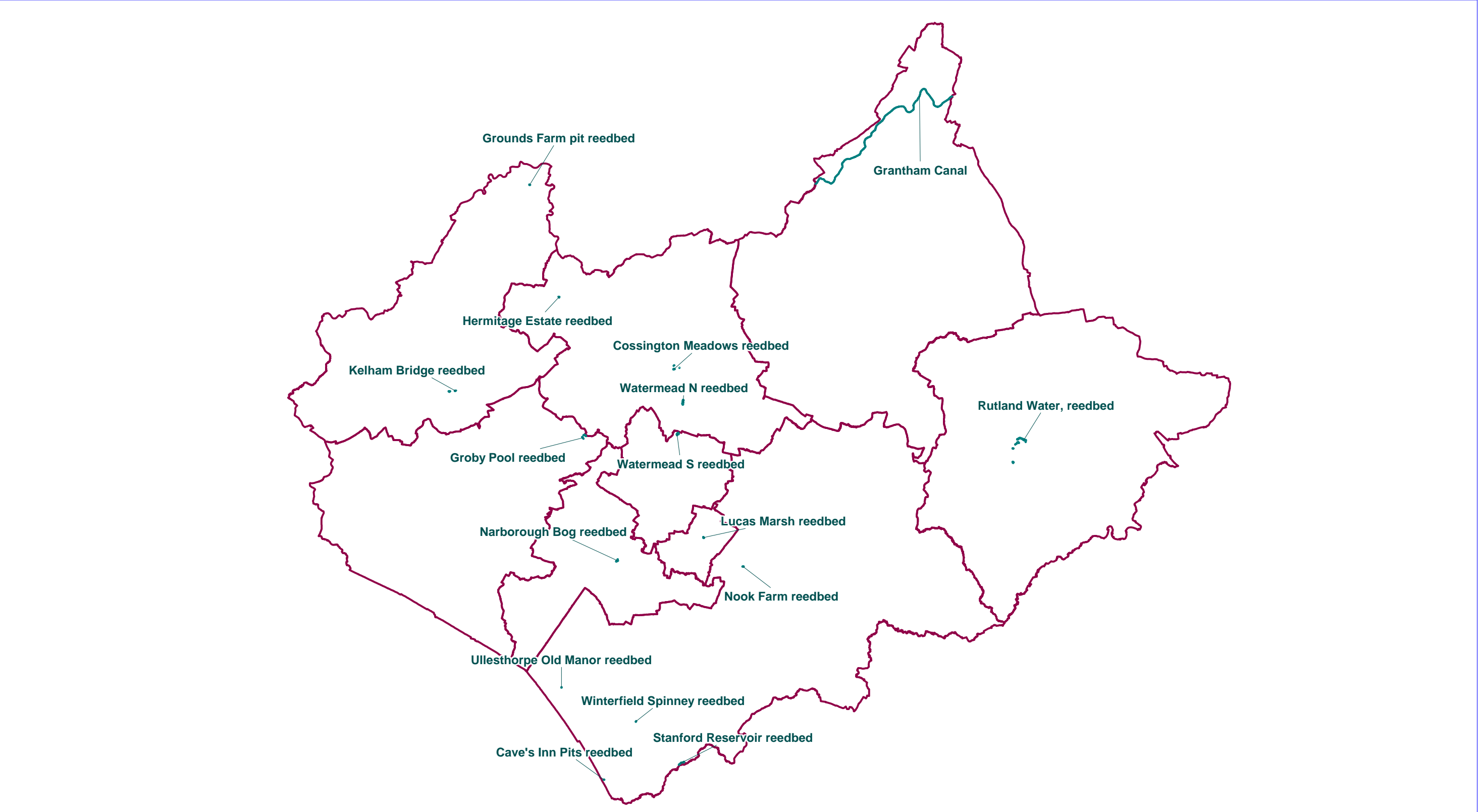
## Reedbeds in Leicestershire and Rutland

| Site                           | Source                            | Date on source | Designation                           | Area (hectares)   |
|--------------------------------|-----------------------------------|----------------|---------------------------------------|---|
| Narborough Bog reedbed         | LRWT                              | 2005           | SSSI/LRWT Reserve                     | 1.35  |
| Lucas Marsh reedbed            | LRWT                              | 2005           | LRWT Reserve                          | 0.54  |
| Kelham Bridge reedbed          | LRWT                              | 2005           | LRWT Reserve, LWS                     | 0.76  |
| Watermead S reedbed            | LWS (City)                        | 2005           | LWS                                   | 1.26  |
| Cossington Meadows reedbed     | LRWT                              | 2005           | LRWT Reserve, LWS                     | 0.99  |
| Rutland Water, reedbed         | LRWT                              | 2005           | SSSI/SPA                              | 7.04  |
| Groby Pool reedbed             | SSSI citation/aerial photo        | 2011           | SSSI                                  | 1.12  |
| Cave's Inn Pits reedbed        | SSSI Citation/aerial photos       | 2011           | SSSI                                  | 0.29  |
| Watermead N reedbed            | G Hall, Habitat survey            | 2013           | LWS, Country Park                     | 2.89  |
| Stanford Reservoir reedbed     | LWS (LRERC)                       | 2006           | LWS 56872                             | 1.35  |
| Ullesthorpe Old Manor reedbed  | LWS (LRERC)                       | 2006           | LWS 57769                             | 0.30  |
| Hermitage Estate reedbed       | LWS 49423 (CBC)                   | 2004           | LWS 49423                             | 0.37  |
| Nook Farm Great Glen reedbed   | cLWS, LRERC P1 Survey 2015        | 2009/2015      | cLWS 90349/                           | 0.44  |
| Grounds Farm pit reedbed       | G Hall/U Hamzaoui, Habitat Survey | 2008           | not designated                        | 0.43  |
| Winterfield Spinney reedbed    | LWS (LRERC)                       | 2007           | LWS 60109                             | 0.37  |
| Syston Marsh Extension reedbed | LWS (CBC)                         | 2002           | LWS 25513                             | 0.22  |
| Grantham Canal                 | SSSI Citation/cLWS (LRERC)        | 2010           | SSSI, cLWS 90604, 90605, 90608, 90610 | Est. 6ha (canal is c.20km and 12ha, but not all is reedbed) |

*Compiled by LRERC, February 2016*



Leicester, Leicestershire and Rutland BAP 2016



## ***Local Biodiversity Action Plan***

### **Fast-flowing streams**

#### **Action plan objectives**

- **Promote the restoration of degraded stream habitats**
- **Compile and maintain register of sites**



#### **Introduction**

Fast flowing streams are for the purposes of this plan defined as any stream flowing over a substrate mainly composed of gravel or coarser particles. Fast flowing streams are found throughout Leicestershire and Rutland from the hard rock relatively nutrient poor areas of Charnwood Forest to the nutrient rich lowland reaches in the rest of the counties. The streams are often narrow; some are only a few kilometres in length whilst others comprise the headwaters of main rivers. Streams of importance for their specialist fauna are concentrated in the Charnwood Forest, and include the River Linn, Wood Brook and Grace Dieu Brook. In Rutland the River Chater and Eye Brook also have significant flora and fauna.

Grace Dieu Brook is unique in Leicestershire and Rutland for flowing through a small ravine with outcropping rocks in the stream bed and sides of the ravine. The mossy cliffs and boulder are known to be especially good for bryophytes and some ferns.

#### **Current extent**

An Inventory of these sites has not been compiled, and the current extent is not known.

## Some characteristic species

Fast flowing streams support a number of specialist plants and animals including 22 key species. Amongst these are White-clawed Crayfish (*Austropotamobius pallipes*), Bullhead (*Cottus gobio*), Brook Lamprey (*Lampetra planeri*) and native Brown Trout (*Salmo trutta*). *Tinodes pallidulus*, a nationally rare Caddis fly, has been recorded from the Wood Brook in Charnwood Forest.

## Local Wildlife Site criteria

There are no specific LWS criteria for fast-flowing streams; however, streams can be designated for the following features, all of which may be associated with fast-flowing streams:

| Feature                              | Size threshold |
|--------------------------------------|----------------|
| • Riffle and pool system             | none           |
| • Gravel substrate                   | 20m stretch    |
| • Earth cliff eroded by water course | 1m high        |
| • Waterfall                          | 1.5m high      |
| • Moss-covered bedrock or boulders   | none           |

## Most important factors affecting the habitat

- Land drainage increasing storm flow and fine sediment load.
- Nutrient-rich run-off from agricultural land leading to eutrophication.
- Channel straightening resulting in removal of important habitat features.
- Diffuse and point source pollution.
- Drought and water abstraction leading to slow flows.

## Opportunities

- Flood prevention and catchment management plans
- Pollution control and enforcement

## ***Local Biodiversity Action Plan***

### ***Sphagnum ponds***

#### **Action plan objectives**

- No further loss of existing *Sphagnum* ponds
- Compile and maintain register of *Sphagnum* ponds



### **Introduction**

*Sphagnum* ponds are now a rare habitat in Leicestershire and Rutland, though they were once probably widespread in Charnwood Forest before the Enclosures. These ponds are usually small, covering only a few square metres. They contain varying quantities of acid water, and some are dry or only damp for part of the year. While most are open, trees heavily shade others. The habitat is nearly always in association with heath-grasslands.

Most of the known sites are in Charnwood Forest, and on designated SSSIs – Beacon Hill, Charnwood Lodge, Bradgate Park, Buddon Wood and Lea Meadows, for example. There are some regenerated on former coal-mining land in North-west Leicestershire. Great Bowden Borrow Pit SSSI is one of the few outside Charnwood Forest or North-west Leicestershire.

### **Current extent**

Derek Lott and Dennis Ballard (then County Recorder for Bryophytes) compiled an *Inventory of Sphagnum ponds* in 2000, to inform the first local BAP. This is attached, with updated site

designations. It is based on survey data between 1985 and 1999; the data can be found in LRERC files S16 004.

It is not known how many of these sites are still present, but where known, the Inventory has been updated. Several ponds have either been destroyed or are in poor condition, and probably now lost; there is evidence that this habitat is in serious decline.

Since the 2000 Inventory, 7 of the Inventory sites have been designated as Local Wildlife Sites. The presence of a *Sphagnum* pond was given as a reason for designation on only two sites (Bath Lane, Moira, and Benscliffe Wood), leading to doubt about whether the *Sphagnum* is still present on these sites.

Some new ponds discovered since 2000 have been added to the Inventory.

### **Some characteristic species**

*Sphagnum* ponds are an important habitat for many species of mosses, especially *Sphagnum* spp., as well as numerous invertebrates, including several species of Leicestershire Red Data Book beetles. A number of associated plant species are also locally scarce, including Common Cotton-grass (*Eriophorum angustifolium*), Bog Pondweed (*Potamogeton polygonifolius*) and Floating Water-plantain (*Luronium natans*).

### **Local Wildlife Site criteria**

All ponds with *Sphagnum* species can be designated as LWS; there are no size thresholds.

### **Most important factors affecting the habitat**

- Drought and lowered water tables resulting from land drainage
- Colonisation by trees, leading to drying out and shading.

## ***Sphagnum* ponds in Leicestershire and Rutland**

Based on 2000 Inventory compiled by Derek Lott and Dennis Ballard.

Updated status/designation notes, and additional records marked ‘\*’, by Sue Timms Feb 2016

| Site name                    | Grid Ref   | Dates of survey | District | Management status (where known)                                       | Site Status (updated 2015)                   |
|------------------------------|------------|-----------------|----------|---|--|
| *Beacon Golf Course          | SK524146   | 1989            | Charn    | Grid ref is not on golf-course-possibly Hangingstone Hills, SK524159? | Within SSSI                                  |
| Beacon Hill                  | SK519145   | 1989            | Charn    |   | SSSI   |
| Benscliffe Wood              | SK512121   | 1989            | Charn    |   | SSSI/LWS 25404                               |
| Benscliffe Wood              | SK518125   | 1989            | Charn    |   | SSSI/LWS 25404                               |
| Benscliffe Wood              | SK515125   | 1987            | Charn    |   | SSSI/LWS 25404                               |
| Benscliffe Wood              | SK513123   | 1988            | Charn    |   | SSSI/LWS 25404                               |
| Bradgate Park                | SK535109   | 1989            | Charn    |   | SSSI   |
| Bradgate Park                | SK525105   | 1993            | Charn    |   | SSSI   |
| Bradgate Park                | SK539105/7 | 1993            | Charn    |   | SSSI   |
| Bradgate Park                | SK529119   | 1992            | Charn    |   | SSSI   |
| Bradgate Park                | SK541115   | 1986            | Charn    |   | SSSI   |
| Bradgate Park                | SK537111   | 1986            | Charn    |   | SSSI   |
| Bradgate Park                | SK539118   | 1985            | Charn    |   | SSSI   |
| Bradgate Park                | SK533108   | 1986            | Charn    |   | SSSI   |
| Bradgate Park                | SK531115   | 1986            | Charn    |   | SSSI   |
| Bradgate Park                | SK536115   | 1985            | Charn    |   | SSSI   |
| Bradgate Park                | SK523106   | 1989            | Charn    |   | SSSI   |
| Bradgate Park                | SK526107   | 1985            | Charn    |   | SSSI   |
| *Buck Hill                   | SK508165   | 1988            | Charn    | Pond not referred to in LWS citation, 2002                            | LWS 25391/25392                              |
| Buddon Wood                  | SK577152   | 1988            | Charn    |   | SSSI   |
| Buddon Wood                  | SK558153   | 1988            | Charn    |   | SSSI   |
| Buddon Wood                  | SK556151   | 1988            | Charn    |   | SSSI   |
| Burley Wood                  | SK890098   | 1986            | Charn    | unfavourable  | SSSI   |
| Lea Meadows                  | SK506113   | 1992            | Charn    |   | SSSI, LRWT Reserve                           |
| Ulverscroft Reserve          | SK489131   | 1988            | Charn    | Not referred in LWS citation  | LWS 54199, LRWT Reserve                      |
| Ulverscroft Reserve          | SK486130   | 1987            | Charn    | Not referred in LWS citation  | LWS 54199, LRWT Reserve                      |
| *Benscliffe Wood             | SK513128   | 1999            | Charn    |   | SSSI – record in LWS 25404 notification, CBC |
| Altar Stones                 | SK484109   | 1999            | H&B      | Not referred to in LWS citations                                      | LWS 80053, LRWT Reserve                      |
| Lawn Wood, Groby             | SK507094   | 1988            | H&B      |   | None   |
| *Martinshaw Wood             | SK509072   | 1988            | H&B      | Not referred to in LWS citation, 2004                                 | LWS 25883                                    |
| *Bagworth Heath Country Park | SK457074   | 2009            | H&B      | Favourable (ST, 09).  | cLWS 90370                                   |
| *Great Bowden Pit            | SP743898   | 1992            | Harb     | Favourable (NE, 2009)   | SSSI   |
| The Mot, Gumley              | SP676898   | 1990            | Harb     |   | none   |
| Stapleford Park              | SK821184   | 1990            | Melt     |   | none   |

|                               |            |                      |     |  |                    |
|-------------------------------|------------|----------------------|-----|--|--------------------|
| *Bardon Rise Rocks Farm       | SK469120   | 1989<br>1999<br>2008 | NWL | Site given quarry permission in 2011. Not present in 2008 (Pedley)   | none               |
| *Bath Lane, Moira             | SK307157   | 1991<br>2014         | NWL | Not re-found in 2014 survey by WYG; drying out and tree-shading  | LWS 26225          |
| *Cademan Moor                 | SK437171   | 1988                 | NWL | The grid ref is just outside SSSI, but may be error: in a plantation.  | SSSI?              |
| Charnwood Lodge               | SK465151/2 | 1988                 | NWL |  | SSSI, LRWT Reserve |
| Charnwood Lodge               | SK465157   | 1988                 | NWL |  | SSSI, LRWT Reserve |
| Charnwood Lodge               | SK467154/5 | 1986                 | NWL |  | SSSI, LRWT Reserve |
| Charnwood Lodge               | SK470153   | 1986                 | NWL |  | SSSI, LRWT Reserve |
| Charnwood Lodge               | SK476154   | 1991                 | NWL |  | SSSI, LRWT Reserve |
| Charnwood Lodge               | SK463154   | 1985                 | NWL |  | SSSI, LRWT Reserve |
| Grace Dieu Wood               | SK435179   | 1997                 | NWL |  | SSSI               |
| Moira                         | SK307166   | 1988                 | NWL | Site of Conkers?   | none               |
| *Newfield Colliery            | SK320154   | 1992<br>2009         | NWL | In 2009, poor – drying out and shaded by trees (ST). Not referred to in LWS citation (2014) or surveys by Pedley, 2014 | LWS 62500          |
| *Newfield Colliery            | SK321155   | 1993                 | NWL | Not referred to in LWS citation (2014) or Pedley 2014  | LWS 62500          |
| Spring Wood, Staunton Harold  | SK380228   | 1986                 | NWL |  | Derbyshire WT      |
| *Bardon Hill, Plantation pond | SK461136   | 2008                 | NWL | Found by Pedley, 2008, in survey for Quarry planning application; not referred in LWS notification                     | LWS 64294          |
| *Hick's Lodge, Moira          | SK327152   | 1994                 | NWL | Pond destroyed during coal-mining activities (see 2000 aerial photos). Site is now open space                          | None               |

Compiled by LRERC, February 2016

## Local Biodiversity Action Plan

# Springs and flushes

### Action plan objectives

- **Compile and maintain register of springs and flushes that meet LWS criteria**
- **Provide advice on management**

## Introduction

Springs occur where water wells up to the surface from underground aquifers, while flushes are areas of sloping ground with impeded drainage that are wet as a result of surface run-off. Most flushes of conservation interest are associated with springs that give them a long history of hydrological continuity. They usually have a mineral substrate and so are a type of 'marsh' habitat, but on gently sloping ground, such as at Botcheston Bog SSSI, local peaty deposits can build up and give rise to a 'bog' habitat.

## Current extent

There is no Inventory of sites.

In 1998, John Kramer carried out some detailed survey work on 15 representative sample spring/flush sites, with the aim of evaluating value of the habitat through analysis of dipterous fauna as key indicator species of quality.

He identified and visited c.46, estimating that this represented 10% of the entire habitat resource in Leicestershire and Rutland. The 46 sites are listed in the report's Appendix 4, with some brief notes.

Kramer's list of 16 sites is attached, with some additional information on site status and Crane-fly species-richness and site quality, taken from his subsequent proposal for 'Rapid Monitoring' of springs and flushes. All but one are identified as being of LWS quality.

The reports are held at LRERC, archive reference S80-32-010.

Sources: J. Kramer. A Preliminary Evaluation of some Leicestershire Springs and Flushes using their Dipterous Fauna, 1998 (LCC)

J Kramer. Rapid Monitoring Methodology – Site Evaluation (no date)

## Some characteristic species

Typical plants of springs and flushes include Marsh-marigold *Caltha palustris*, Tussock Sedge *Carex paniculata*, Great Horsetail *Equisetum telmateia*, Soft Rush *Juncus effusus* and Marsh Valerian *Valeriana dioica*. The moss *Calliergon cuspidatum* is characteristic of many calcareous flushes in the East Midlands. The subterranean parts of springs support the water beetles *Hydroporus obsoletus* and *Agabus biguttatus* and probably other specialist invertebrates, although these have not been fully investigated in Leicestershire and Rutland.



## **Local Wildlife Site criteria**

All unmodified woodland springs and flushes can be designated, as long as they have been established for over 50 years. This has proved to be a difficult criterion to use, and springs and flushes have more often been designated in association with other habitats, such as mesotrophic/wet grassland, swamp and wet woodland.

Following his survey and evaluation of some spring and flush sites (see 'Current extent', above), John Kramer devised a 'Rapid Monitoring System' based on Crane fly species richness and rarity.

## **Most important factors affecting the habitat**

Drying out due to:

- Drainage for agricultural purposes or development.
- Lack of appropriate management leading to scrub invasion and natural succession to woodland.
- Groundwater abstraction leading to lowered water table
- Drought

Other factors:

- Inappropriate pond excavation leading to loss of spring and flush fauna and flora.
- Eutrophication from fertiliser application to surrounding land.
- Overgrazing leading to excessive poaching and removal of cover.

## Springs and flushes in Leicestershire and Rutland

### 1. Identified in J. Kramer: A Preliminary Evaluation of some Leicestershire Springs and Flushes using their Dipterous Fauna, 1998 (LCC)

Also see *J Kramer: Rapid Monitoring Methodology – Site Evaluation (no date)* – ‘Any Site having a Species Richness of 8 or more, or a Site Quality Index of more than 2 should be designated as a [LWS].’

Table 8.1

| Ref | Site                | Grid ref   | District | Habitat               | *SR | **SQI | Site designation/note                                  |
|-----|---------------------|------------|----------|-----------------------|-----|-------|--|
| S1  | Bradgate Pond       | SK52941154 | Charn    | Pond margin           | 12  | 4.17  | SSSI   |
| S2  | Poultney Wood       | SK49501327 | Charn    | Pond margin           | 21  | 2.57  | LWS 54199. Spring not referred to in citation          |
| S3  | Croxtan Kerrial     | SK83262898 | Melt     |                       | 28  | 2.5   | none   |
| S4  | Scam Hazel Spring   | SK33601832 | NWL      | Brook source          | 37  | 4.24  | LWS 61217. Spring not referred to in citation          |
| S5  | Saltby Swallet      | SK83842770 | Melt     | Temporary brook       | 13  | 1.62  | none   |
| S6  | Shacklewell Spinney | SK97610741 | Rutl     | Temporary trickle     | 22  | 3.09  | SSSI   |
| S7b | Barsby Brook Spring | SK69561111 | Melt     | Brook in ditch        | 10  | 1.6   | none   |
| S7a | Barsby Field Spring | SK69581108 | Melt     | Man-made field spring | 4   | 1.5   | Does not meet LWS on species richness and site quality |
| S8  | Skeffington Wood    | SK75570371 | Harb     | Brook source          | 23  | 3.0   | SSSI   |
| F9  | Swithland Wood      | SK53861242 | Charn    | Seepage-fed carr      | 43  | 4.4   | SSSI   |
| F10 | Ulverscroft Priory  | SK50131260 | Charn    | Spring-fed flush      | 20  | 3.2   | SSSI   |
| F11 | Scam Hazel Marsh    | SK33681832 | NWL      | Spring-fed marsh      | 45  | 3.93  | LWS 61217. Flush not referred to in citation           |
| F14 | Empingham Meadow    | SK95740896 | Rutl     | Spring-fed flush      | 40  | 3.83  | None - ? grid ref?                                     |
| F15 | Noseley Copse       | SP73209970 | Harb     | Spring-fed carr       | 43  | 4.02  | none   |
| F16 | Hallaton Meadow     | SP78279662 | Harb     | Seep-fed flush        | 11  | 2.09  | none   |

**\*Species Richness.** The number of separate crane-fly species recorded

**\*\* Site Quality Index** - A Rarity Index was produced for each crane-fly species by allocating it a score that depended on the number of sites where it was recorded during this study.

Then Site Quality Index (SQI) = *Total of Species Rarity Indices* divided by *Species richness value*

## 2. Wildlife Sites designated with reference to 'unmodified spring in woodland'

Table 8.2

|      | Ref no | Site   | Grid ref | Survey date | District  | Description   |
|------|--------|--|----------|-------------|-----------|---|
| LWS  | 56374  | Clinker Line, Cosby                                | SP544929 | 2006        | Blaby     | Woodland and spring-fed flush.  |
| LWS  | 25283  | Fields south of Ulverscroft Wood                   | SK490108 | 2005        | Charn     | Mesotrophic grassland with spring-fed flush.  |
| LWS  | 25390  | Nowell Spring Wood, Ulverscroft                    | SK502120 | 1999        | Charn     | Ancient semi-natural woodland and several unmodified woodland springs.  |
| LWS  | 25367  | Lubcloud Alder Woodland, Shepshed                  | SK474164 | 2002        | Charn/NWL | Wet woodland, unmodified springs and brook.   |
| LWS  | 23326  | Tilton Grassland                                   | SK760062 | 2007        | Harb      | Mesotrophic grassland and Red Data Book species, with spring-fed flush.   |
| LWS  | 53651  | Sauvey Woodlands, Withcote                         | SK786052 | 2003        | Harb      | Woodland, with spring-fed flush.  |
| LWS  | 56637  | Quenby Wood, Hungarton                             | SK705059 | 2006        | Harb      | Woodland and spring-fed flush adjacent to other LWS.  |
| LWS  | 56646  | Kicklewell Spinney, Laughton                       | SP656876 | 2006        | Harb      | Woodland, mature trees, spring-fed flush and scrub.   |
| LWS  | 57060  | Stackley Barn Scrub/ Stream/ Grassland, Great Glen | SP660988 | 2006        | Harb      | Wet grassland, unmodified spring, stream and mature trees - 1 <i>Salix fragilis</i> , 1 <i>Fraxinus excelsior</i> . |
| LWS  | 57909  | Bushby Spinney, Thurnby                            | SK660033 | 2006        | Harb      | Woodland, with spring-fed flush.  |
| LWS  | 60108  | Rye Close Spinney, Misterton                       | SP561843 | 2007        | Harb      | <i>Carex acutiformis</i> swamp, with spring-fed flush and woodland.   |
| LWS  | 60109  | Winterfield Spinney, Misterton                     | SP564844 | 2007        | Harb      | <i>Phragmites australis</i> reedbed, with spring-fed flush and woodland.  |
| cLWS | 56897  | Fox Covert / Marsh, Bitteswell                     | SP540871 | 2006        | Harb      | Wet woodland, mature tree and spring  |

## 3. Other sites

Table 8.3

|      |                |          |  |     |                   |
|------|----------------|----------|--|-----|-------------------|
| SSSI | Botcheston Bog | SK485046 |  | H&B | Wet grassland/bog |
|------|----------------|----------|--|-----|-------------------|