



ENVIRONMENT
AGENCY

ENVIRONMENT AGENCY

MIDLANDS REGION

WETLAND SITES OF SPECIAL SCIENTIFIC INTEREST
REGIONAL MONITORING STRATEGY

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ENVIRONMENT AGENCY MIDLANDS REGION

WETLAND SITES OF SPECIAL SCIENTIFIC INTEREST REGIONAL MONITORING STRATEGY

1 INTRODUCTION

This document presents the Environment Agency, Midlands Region's strategy for *hydrological* monitoring of the wetland Sites of Special Scientific Interest (SSSIs) in the Midlands Region. It is the result of a programme of work undertaken by the Region's Water Resources and Conservation Sections over approximately five years, both internally and in collaboration with external bodies.

This strategy document is intended to be a 'living' document, flexible and able to be adapted as conditions change. Whilst the specifics of the programme of work for monitoring sites will almost certainly change, the over-arching rationale should not, enabling the document to be used as a framework for new and on-going monitoring in the future.

The intended readership of this document is anyone in the Agency involved in the process of protecting and enhancing wetlands, from Regional/Area managers deciding policy to hydrometric staff involved in the installation of gaugeboards and dataloggers for monitoring purposes. It is also intended to be available to other interested parties and stakeholders such as English Nature, the Royal Society for the Protection of Birds (RSPB) and the Wildlife Trusts.

1.1 THE AGENCY'S ROLE IN WETLAND CONSERVATION AND MANAGEMENT

The Agency's aims 'to encourage the conservation of natural resources, animals and plants' and 'to manage water resources to achieve the proper balance between the country's water needs and the environment' are outlined in the document *An Environmental Strategy for the Millennium and Beyond*. That document also sets out nine Environmental Themes, under which the Agency's work to achieve those aims (and others) will fall. This monitoring strategy for wetlands cuts across a number of the nine Environmental Themes, including:

- Enhancing biodiversity
- Managing our water resources
- Delivering integrated river-basin management
- Addressing climate change

With regard to wetlands, *An Environmental Strategy for the Millennium and Beyond* also sets out a number of commitments, including:

- Improving the management of wetlands for conservation purposes (*Enhancing biodiversity*)
- Researching into more efficient methods of managing water and into the potential risks for the aquatic environment arising from its mismanagement (*Managing our water resources*)
- Improving wetland management, river habitat quality and riverside landscapes (*Delivering integrated river-basin management*)

- Developing techniques to identify changes in plant life using remote sensing techniques, to measure the effects of different weather patterns in sensitive areas (*Addressing climate change*)

1.2 WETLAND SSSIS IN THE MIDLANDS REGION

There are over 300 nationally important wetland SSSIs in the Region. These include many sites of international importance, from large estuaries, such as the Humber and the Severn, to the peatlands of South Yorkshire and the Shropshire meres. It is thus clear that there is a large resource to protect.

1.3 THE THREAT TO WETLANDS

The Agency's report *A Price Worth Paying* (May 1998) summarised the 'threat to precious habitats' thus:

'Since 1945, as a result of housing development and drainage for intensive agricultural production, we have lost:

- 70 % of our reedbeds
- 60% of our wet grassland
- 94% of our lowland raised bog'

'Recent threats are more insidious:

- Lowering of water tables by pumping and land drainage
- Increased abstraction to meet rising demands
- Pollution from sewage treatment works and farmland run-off'

Whilst there have been many well-publicised cases of dried-up streams and pools and there is a wealth of anecdotal evidence to suggest that many more locations are threatened or already affected, it is important to put these high-profile cases into perspective: there are many thousands of well-managed wetlands in England and Wales that are not at threat, and also many more that may be at threat but are not yet impacted.

1.4 MONITORING & MANAGEMENT OF WETLANDS

The proper management of wetland habitats requires, amongst other things, the maintenance of appropriate water levels, flows and quality. Unfortunately, the term 'appropriate' is difficult to define, not only because it is necessarily site- and species-specific but also because the relationships between changes in water levels, flows and quality and the associated ecological effects are, at present, incompletely understood. In order to address this, there is a need not only for hydrological monitoring but also for ecological studies to be undertaken in parallel (Bradley, 1995).

1.5 SCOPE OF THE REPORT

This report pulls together the findings of previous and on-going work by the Agency's Midlands Region and external bodies to present a coherent strategy and suggested programme for undertaking monitoring of the Region's wetland SSSIs.

It is important to note that not all wetlands are SSSIs. There are many other sites that have been identified as being of importance for nature conservation but have not yet been afforded statutory status, although some may in the future. The most common title given to sites designated by county councils is Sites of Importance for Nature Conservation (SINCs). The Agency document *Conservation Designations in England and Wales (1998)* gives a very good introduction. However, at present this strategy is solely concerned with SSSIs.

This report will explain the rationale behind the selection of the sites and the methods used for prioritising their monitoring needs. The main actions and conclusions are presented in tabular format at the end of the report and take the form of site-by-site recommendations.

One of the aims of this strategy is to be flexible enough to enable the assessment and incorporation of new SSSIs as they are notified. If a new SSSI of high risk is notified then the monitoring programme must be flexible enough to allow its incorporation above older but lower risk sites.

The overall objective of the Midlands Region's wetlands monitoring strategy may be summarised as:

To provide information to support proposals to remedy existing problems, prevent further decline and to protect and enhance those sites that are currently in good condition.

Specific objectives include:

- Through publicising the preparation and implementation of this strategy, to act as a focus for all work currently on-going and planned on wetlands in the Midlands Region.
- To review and bring together the findings of previous studies in order to gain an overall picture of the condition of the Region's wetland SSSIs.
- To use the overall picture to identify sites' specific needs and to start to address them through the collection of relevant data.
- To begin to compile a comprehensive data set on the sites' hydrological and hydrogeological regimes.
- To use the data to improve management decision-making (e.g. licensing)
- To collect, in parallel with hydrological data, ecological data to build up site-specific and generic information on the sensitivity of flora to changes in hydrological regime.

1.6 STRUCTURE OF THE REPORT

This report proceeds as follows:

Section 2 addresses the selection of the sites included in the monitoring strategy. The definition of "Wetland" is discussed and the criteria used for the selection of the sites included in this monitoring strategy are explained.

Section 3 comprises a brief review of recent major initiatives by the Agency and external bodies addressing the issues concerning the proper management of wetlands of which staff involved in the implementation of the strategy should be aware.

Section 4 outlines the methods used and consultation undertaken in order to assess the monitoring needs of the sites.

Section 5 presents the results of the assessments covered in Section 4.

Section 6 explains the basis on which the results of the assessments have been translated into a prioritised list of monitoring actions.

2 SELECTION OF SITES

2.1 DEFINITION OF A WETLAND SITE

There is currently no widely-recognised, precise definition of a 'wetland' (Wheeler *et al.* 1995). Nonetheless, there is general agreement about the type of site that constitutes a wetland, i.e. peatland, blanket and raised mires, fens, river, lakes and ponds and the coast (Newbold, 1998).

This view is supported by an English Nature report, *Wildlife & Fresh Water: an agenda for sustainable development* (English Nature, 1997), which considered the demands of seven categories of freshwater wetlands:

1. Rivers and streams
2. Lakes
3. Ponds
4. Canals
5. Flooded pits and reservoirs
6. Fens
7. Lowland wet grassland

Raised and blanket bogs were also mentioned but covered in a separate report (Brooks & Stoneman, 1998).

In a series of reports on wetland classification and resource evaluation prepared by the Environmental Consultancy of the University of Sheffield in 1995 for the National Rivers Authority (R&D Notes 377, 378 & 381), Wheeler *et al* (1995) offered the following definition:

Wetland is land that has (or had until modified) a water level predominantly at, near, or up to 1.5m above the ground surface for sufficient time during the year to allow hydrological processes to be a major influence on the soils and biota. These processes may be expressed in certain features, such as characteristic soils and vegetation.

Unfortunately, the criterion 'for sufficient time during the year to allow hydrological processes to be a major influence on the soils and biota' is difficult to quantify; at many sites, data on the variation in water levels over time and the effect that this variation has on the site's ecology are not available. Consequently, the presence of water close to the surface is frequently inferred from the observed ecosystems.

2.2 SELECTION OF SITES INCLUDED IN THIS MONITORING STRATEGY

The sites in the current study have been selected using an approach proposed by Andrew Heaton, Regional Conservation Officer. It is a 'very simple/pragmatic approach, which should be recognised by all ecologists' (Heaton, 1999). For the purposes of the current study, sites are included if they contain or are bordered by any of the following:

1. River
2. Stream
3. Lake

4. Pond
5. Canal
6. Reservoir
7. Marsh/swamp/fen/bog/flush
8. Drain
9. Springs/seepages

It is clear that the categories used by Andrew Heaton largely coincide with those considered by English Nature (1997) and listed in Section 2.1.

Based on the eight categories listed above, 314 sites were considered to qualify as 'wetlands', and were scheduled for desk-study hydrogeological assessments (see Section 3.1.5 and Appendix A). Sites included in the joint English Nature/Environment Agency list (see Section 3.1.2) added another 33 making a total of 347 SSSIs covered by this monitoring strategy.

3 RELATED WORK

This section briefly covers the major recent (completed and on-going) initiatives by the Agency at national and local levels and by external bodies addressing the issues concerning the proper management of wetlands. These initiatives include work that directly contributes to this monitoring strategy and background and related work of which staff involved in the implementation of the strategy should be aware. A summary of the work described below is presented in Table 3.1.

3.1 Previous Work

The previous work on wetlands presented in this section is covered in chronological order.

3.1.1 The Role of the National Rivers Authority in Wetland Conservation

In 1995, the Environmental Consultancy of the University of Sheffield produced a series of three reports on the role of the National Rivers Authority (NRA) in wetland conservation and management (R&D Notes 377, 378 and 381, see References). This series provides a useful background to both the technical and administrative issues associated with wetland management.

3.1.2 Impact of Water Abstraction on Wetland SSSIs

This document was published by English Nature in 1996 and comprised the results of EN-commissioned desk-study reports on the risk of 152 wetland SSSIs (nationwide) being impacted by surface water or groundwater abstraction. In combination with the High & Dry Report (see Section 3.1.3 below) and the Agency's own hydrogeological reports (see Section 3.1.5 below) this document prompted the joint EN/Agency list (see Section 3.2.1.2) that is in preparation at the time of writing.

3.1.3 High & Dry Report

The Biodiversity Challenge Group, comprising Friends of the Earth, the RSPB etc., published its High & Dry report in 1996. This report presented the results of investigations and consultations by the Agency, EN and others. Although repeating much that had already been done by the Agency and other bodies and consisting of only a little original work, this report was highly publicised and served to focus public attention on low-flow and wetland issues.

3.1.4 Water Level Requirements of Wetland Plants and Animals

This report was published by English Nature in 1997. It aims to supply water users and managers with the known water level requirements of a range of wetland plants and animals. Water level requirements for wetland plants, where known, are defined as the upper and lower limits with the preferred level also stipulated. For other flora and fauna, the information is less quantitative but still reasonably definitive. This is a useful document for integrating hydrology and ecology.

3.1.5 A Price Worth Paying

In May 1998, as part of the Water Companies' Third Periodic Review (Asset Management Planning Round 3, or AMP3), the Agency published 'A Price Worth Paying' (PWP). PWP contained the Agency's proposals for dealing with 'the impact of the water industry on the environment and the actions needed to meet the requirements of legislation, including those necessary to help achieve the Government's aim of sustainable development'.

The document listed improvements and investigations considered by the Agency to be needed to protect SSSIs (including Habitats Directive sites) and non-SSSIs at risk from water company abstractions or discharges. Note that this list of sites was only a proposal by the Agency, not the final decision by Government. At the time of writing, the final list is still under review, and is discussed further in Section 3.2.4.

Table 3.2 presents those SSSIs in the Midlands Region that were listed in PWP as being at risk from water company abstraction and in need of further investigation or remedial action.

3.1.6 Hydrogeological Reports on Wetlands in the Midlands Region

Desk-study hydrogeological reports on 314 wetland SSSIs in the Midlands Region have been produced to evaluate the vulnerability of the sites to groundwater abstraction. The work was undertaken in two phases, the first in 1994/5 and the second in 1997/8. The first phase was commissioned by Severn Trent NRA and undertaken by Aspinwall & Co. and covered 129 sites. The second phase was commissioned by the Agency's Midlands Region and undertaken by Water Management Consultants and covered a further 185 sites, in order to complete assessments of all wetland sites in the Region classified as SSSIs at the time.

These reports form a very comprehensive set of assessments of the vulnerability of wetland SSSIs to groundwater abstraction and form the basis for this monitoring strategy. The detail of the reports and how their findings have been employed in the formation of this strategy are covered in later sections of this document. A list of all 314 sites, by Area, is included in Appendix A.

3.1.7 Low Flows, Groundwater & Wetland Interaction

In November 1998, *Low Flows, Groundwater & Wetland Interactions – a scoping study* was published by the Agency in conjunction with UK Water Industry Research Ltd (UKWIR) and the Natural Environment Research Council (NERC). This document aimed to review the level of scientific understanding of the issues and methods available to address them, set them into a framework and propose further research to close any gaps.

The publication of the document was followed by 2 seminars, in November 1998 and February 1999, to explore methods for setting sustainable objectives and the tools available for modelling groundwater-surface water interactions.

3.1.8 Ten-Point Action Plan 1998/99

As part of the National 1998/99 Ten-Point Action Plan, Midlands Region Water Resources commissioned Entec to undertake a review of abstraction licences potentially affecting four wetland SSSIs, one in each Area of the Region. These reports expanded the brief of the Aspinwall and Water Management Consultants' reports to investigate the potential effects on the sites of surface water abstractions as well as groundwater abstractions.

The sites covered in this review were:

- Sutton Park (UT)
- Rainworth Lake (LT)
- Hurcott & Podmore Pools (US)
- Hewell Park Lake (LS)

3.2 ON-GOING WORK

Almost all the work covered in this section is being undertaken exclusively by the Agency. It is grouped into National, Regional and Area categories.

3.2.1 National Initiatives

3.2.1.1 Habitats Directive Review of Authorisations

The European Council Directives 'Conservation of Wild Birds' and 'Natural Habitats & Wild Fauna & Flora' (1979 and 1992 respectively) allowed the designation of sites of special scientific interest that are of European, rather than just national, importance. These sites, in all EU countries, will form the Natural 2000 list and comprise:

- Special Protection Areas – SPAs – for birds
- Special Areas of Conservation – SACs – for specific habitats or species

These Directives were implemented in UK law by the Conservation (Natural Habitats etc) Regulations 1994. Under these Regulations, the Agency has a statutory duty to review by 2004 all Agency authorisations that may affect SACs and SPAs. At the time of writing, this programme is being co-ordinated regionally by Regional Conservation.

Further information on SACs and SPAs is given in Box 3.1.

3.2.1.2 Joint EN/EA List

Following the first set of Agency hydrogeological reports, EN's report (*Impact of Water Abstraction on Wetland SSSIs*) and the High & Dry report, the Agency and EN began discussions to produce a list of wetland SSSI sites with action categories agreed between the two organisations. A thorough consultation process in 1997/98 involving Agency staff at National, Regional and Area level and English Nature staff produced a draft agreed list at the end of 1998. The final document is due to be published in July 1999.

3.2.1.3 Asset Management Plan Round 3 (AMP3)

Section 3.1.4 explained how the Agency's proposals for environmental improvements to be undertaken as part of the third five-yearly Periodic Review of water company price limits (also known as Asset Management Planning Round 3, or AMP3) were set out in *A Price Worth Paying* in May 1998.

Subsequent discussions resulted in the selection of eleven sites for low flow alleviation, which represented a significant reduction of the 25 sites proposed in PWP. The business cases for these sites were presented in *AMP3 benefits assessment: low-flow alleviation schemes* (Midlands Region, November 1998).

On 1 March 1999, the Government announced that it would be supporting almost all of the Environmental programme proposed for AMP3 by the Agency and that for Midlands Region the whole programme - i.e. all the Agency's proposals in PWP - had been approved.

Box 3.1 SSSIs, NNRs, SACs, SPAs & Ramsars

Site of Special Scientific Interest (SSSI) is the term used to denote an area of land notified under the Wildlife & Countryside Act 1981, as amended by the Wildlife & Countryside (Amendment) Act 1985, as being of special nature conservation interest. Sites are notified by English Nature or the Countryside Council for Wales. In 1996 there were approximately 4000 SSSIs in England and over 900 in Wales. All NNRs, SACs, SPAs and Ramsars are also SSSIs.

National Nature Reserves (NNRs) are among the best examples of particular habitats in the country and are managed to a high conservation standard. In 1996 there were 185 NNRs in England and 55 in Wales.

Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). As explained in Section 3.2.2, SACs and SPAs are sites designated under European Council Directives as being of importance for, respectively, fauna/flora and birds. SACs and SPAs may comprise more than one SSSI, or only part of a SSSI, and their names do not always correspond to SSSI names. At the time of writing, there are 20 (proposed) SACs and 6 (proposed or designated) SPAs in the Midlands Region.

The regional Habitats Directive review programme is being co-ordinated by Andrew Heaton and is part of a national initiative which is separate from the monitoring strategy described in this document.

Ramsar sites. Ramsar, in Iran, was the location of the 1971 Convention on Wetlands of International Importance, especially as Waterfowl Habitat. Sites across the world were designated following this conference. By the end of 1996, there were 64 Ramsar sites in England and Wales, 20 in the Midlands Region.

3.2.1.4 Low-Flow Catalogue (Sustainable Abstraction Programme)

This is a national project begun in 1999. Its aims are to bring together the results of the various initiatives listed above to promote consistency in the Agency's approach to dealing with wetland and low-flow issues and to draw up a national strategy to address them (e.g. financial and staff resources needed in each region, support from the National Centres, response to government etc.). This project covers not only SSSIs but non-statutory sites as well and is run from Head Office.

3.2.2 Regional Initiatives

3.2.2.1 Anglian Region Wetland Monitoring Programme

In 1996 Anglian Region Water Resources began a programme of installing monitoring equipment (monitoring wells and gaugeboards) at 52 wetland sites (some SSSIs, some not). Phase 1 comprising 21 sites, was completed in June 1996 and Phase II, comprising the

remaining sites, was completed in January 1998. Monitoring of the sites is planned for a minimum of 10 years.

3.2.2.2 Midlands Region Pilot Programme

As part of the development of the Midlands Region's wetland monitoring strategy, four SSSIs were chosen as pilot sites for instrumentation. The aims of this process are to identify the steps in the process and to establish contacts with English Nature in local areas prior to the initiation of a full-scale monitoring installation programme.

Case studies of the pilot sites, together with lessons learned, key steps in the process of installing monitoring equipment and key internal and external contacts, are included in a separate report.

3.2.2.3 Midlands Region SSSI Database

An essential part of the preparation of the report has been the development of a database containing information on each of the wetland SSSIs in the Midlands Region. The database was created as a way of bringing together the findings of the initiatives listed in Table 3.1 and is managed at Regional Water Resources at Sapphire East. The intention is to make the database available to all offices on a read-only basis, all amendments being undertaken centrally with regular updates being issued.

3.2.2.4 Midlands Region Geographical Information System (GIS)

In parallel with the SSSI database, a GIS facility in Arcview is being developed to aid management not only of wetland sites monitoring but also of regional water resources. At present this is being developed and managed at Groundwater Regional HQ in Olton Court, with close co-operation with Regional Scientist, also at Olton Court and Regional Water Resources at Sapphire East. In the future the GIS files should also be available to all offices on a read-only basis, all amendments being undertaken centrally with regular updates issued.

3.2.3 Area Initiatives

The following projects involving wetlands (though not exclusively SSSIs) are on-going at the time of writing in the Midlands Region:

Upper Severn: Shropshire Wildlife Trust project
Meres & Mosses (in collaboration with English Nature)

Lower Trent: 'Valuing Wetness' (in collaboration with English Nature)

Upper Trent: Surveys of wetlands in Staffordshire (in partnership with the Wildlife Trust)

4 METHODS OF ASSESSMENT OF SITES' RISKS & PRIORITISATION OF MONITORING REQUIREMENTS

4.1 INTRODUCTION

The diverse nature and needs of wetlands were introduced in Section 2. As a result of this diversity, it is not possible to assign a generic prioritisation to the hydrological factors that may affect their habitats. Whilst it is clear that a wetland cannot remain a wetland without water - hence water *supply* must come top of the list - it is also essential that the balance between flow, level and quality is correct for each particular habitat. Consequently, the results of this study are a combination of a number of different tasks.

Many wetland sites are groundwater-supported or are fed by rivers that are themselves supported by groundwater. Consequently, the initial and most structured analysis of the hydrological needs of wetlands has been the set of desk-study hydrogeological assessments of the 314 wetland SSSIs undertaken in 1995 and 1997 (Section 3.1.5).

As will be seen in Section 5, the majority (between half and two-thirds) of the sites are considered to be at low risk of impact from *groundwater* abstraction. However, this does not necessarily mean that there are no other hydrological concerns at these sites, or that those sites that are at higher risk from groundwater abstraction have no other concerns. Consequently, other parties (principally English Nature and Agency Conservation staff) have been consulted to ensure that a strategy is produced that covers as many of these aspects as possible; it will be necessary to continue this dialogue to ensure that a wide-ranging strategy is maintained.

4.2 STEPS IN ASSESSMENT OF WETLAND RISK

The steps undertaken in the assessment of the risk to the wetlands of impact from various sources are listed briefly below. The process has been iterative so the various steps are not necessarily sequential.

1. **Desk-study hydrogeological assessments of wetland SSSIs** (see Section 3.1.5 and Appendix A). The principal aim of these reports was to assess the vulnerability of the wetland nature of the sites to the impacts of current and potential future levels of groundwater abstraction. Sites were thus rated in terms of both their present and future vulnerabilities.
2. **Review of desk-study hydrogeological assessments of wetland SSSIs.** Area or Regional Water Resources staff reviewed all reports to ensure consistency (including interpretation of *risk* and *vulnerability* (see Box 4.1)) and to impart additional local knowledge where available.
3. **Consultation with English Nature** (see Section 3.2.3). The discussions between the Agency and English Nature addressed 57 sites in the Midlands Region. Each of the sites was assigned one of the following categories:
 - 1a. Remedial action completed
 - 1b. Remedial action underway
 - 1c. Remedial action specified
 - 2a. Monitoring investigation underway

- 2b. Monitoring investigation proposed
3. Not yet evaluated
4. Not affected by abstraction

The categories on the joint Agency/EN 'agreed' list dealing with the threat to wetlands from groundwater and surface water abstraction supersede those independently obtained by Agency or EN.

4. **Input and analysis of results in SSSI database.** The results of the hydrogeological assessments were input into the SSSI database, which was then used for analysis. The results of the analysis are presented in Section 5.
5. **Consultation with English Nature and Agency Conservation staff.** EN and Conservation staff in Midlands Region were invited to give their views on the hydrological concerns at all sites excluding groundwater abstraction. The monitoring need of each site was given a rating of 1-4, as follows:
 1. Essential
 2. Useful
 3. Of some use
 4. Not necessary

The results of this process are also presented in Section 5.

Box 4.1 Risk versus Vulnerability

Risk is the product of severity and likelihood. Consider, for example, that each is graded on a range of 1 to 3, 1 being low and 3 being high. A matrix may be assembled as follows:

		Likelihood		
		1	2	3
Severity	1	1	2	3
	2	2	4	6
	3	3	6	9

A risk value of 1-3 may be considered low, a score of 4-6 medium and 9 high

Example

The *severity* of a potential impact (e.g. significant lowering of the water table) on a given site is 3, i.e. high. However, the *likelihood* of this impact occurring – for example, if the site is in an area of low population density, with no developments planned, or if the groundwater unit is already closed and will remain so – is 1, i.e. low. Consequently the risk of deleterious impact to the site is:

$$\text{Risk} = \text{severity} \times \text{likelihood} = 3 \times 1 = 3$$

Reference to the table above shows that a score of 3 means that the *risk* to the site is *low*, bordering on medium. Thus whilst the site may be highly vulnerable, it is not a high risk.

4.3 SACs, SPAs & RAMSARS

Sites that are SACs, SPAs or Ramsars as well as SSSIs (see Box 3.1) do not, simply as a result of being sites of international rather than just national importance, automatically gain priority over sites that are just SSSIs: this monitoring strategy has been put together on the basis of risk of impact rather than legislative designation.

5 RESULTS OF ASSESSMENTS OF SITES' RISKS

This section presents the results of the steps outlined in Section 4. The results are discussed in two sections: the first section (Section 5.1) considers the risk of impact from water abstraction, whilst the second (Section 5.2) reviews the risk to sites from other hydrological factors.

Rather than discuss individual sites, this section looks at the general distribution of risk and the present/future trends. Consequently, individual sites are not discussed in detail in the text but are presented in Tables 5.1 to 5.5.

5.1 RISK OF IMPACT FROM WATER ABSTRACTION

5.1.1 Joint Environment Agency/English Nature List

28 of the 57 sites were assigned category 4 (not affected by abstraction), with only three yet to be evaluated (category 3). The remainder were all considered to require further monitoring (category 2a or 2b, 21 sites) or remedial action (category 1a-c, 5 sites); these are discussed further in Section 6.

At the time of writing (May 1999), the final categories are substantially agreed and due for publication in July 1999.

The sites and their categories are presented in Table 5.1.

5.1.2 Agency Hydrogeological Assessments

The results of the assessments of the sites' risk of impact from groundwater abstraction are presented graphically on Figure 5.1 and in Tables 5.2 to 5.4. A general trend of increasing risk is evident. Nonetheless, over half (58%) of the sites are considered to remain at low risk of impact from groundwater abstraction in the future.

An analysis of the change in category of the sites shows that the majority of sites (258 sites, or 82%) retain the same risk category in the future that they are assigned at present. At 44 sites the risk increases and at only 2 sites is the risk considered to decrease.

It is important to note the reason for the decrease in the risk at these two sites. These two sites lie in closed groundwater management units i.e. the policy of the Agency is to refuse further abstraction licences in these units and to revise current abstraction licensing policy to improve the aquatic environment. For this reason, whilst the sites still remain *vulnerable*, they are considered to be at lower *risk* in the future that at present. However, in the event that groundwater management policy changes, the risk of impact to the site from groundwater abstraction may also change and the site may have to be re-prioritised.

5.2 RISK OF IMPACT FROM HYDROLOGICAL FACTORS OTHER THAN GROUNDWATER ABSTRACTION

The results of the assessments of the sites' risk of impact from other hydrological factors, together with the comments provided by English Nature and Agency Conservation staff to justify the score given, are presented graphically on Figure 5.2 and in Tables 5.6 to 5.9.

Over 50% of the sites for which comments were received fall into Categories 2 and 3 – monitoring is considered to be 'useful' or 'of some use'. At only 10% is monitoring considered 'essential' whilst at just over a third it is considered to be 'not necessary'.

The number of sites assessed for risk of impact from hydrological factors other than groundwater abstraction (208) is fewer than the 314 sites on which hydrogeological desk studies were undertaken, as comments were not received from all parties on all sites. In addition, some sites benefit from the comments of only one of English Nature or Agency Conservation.

Where comments and scores have been received from both English Nature and Agency Conservation staff, and where these differed on the particular site, a combination of the different views was taken, and consistent with the precautionary principle, the more urgent monitoring need has been assigned to the site.

6 PRIORITISATION OF MONITORING REQUIREMENTS

6.1 INTRODUCTION

Previous sections of this document have outlined the various national and regional initiatives, in addition to the Midland's wetland monitoring strategy, that are addressing the concerns of wetland sites, both SSSI and non-SSSI. This section explains how the various methods of assessing the risk ratings of the sites are translated into prioritised categories for monitoring.

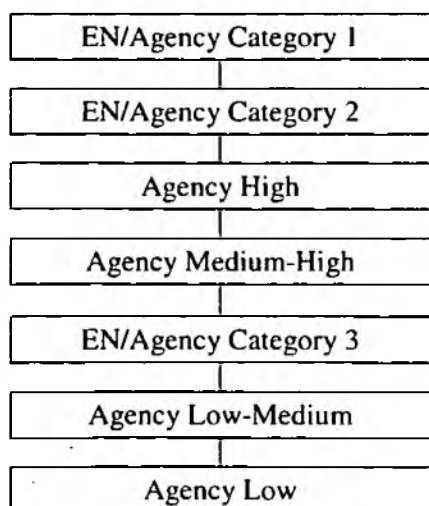
Note that sites that have been identified for action under AMP3 are not included here.

6.2 PRIORITISATION OF SITES

The hierarchy for installation of monitoring equipment generally follows the risk categorisations. There cannot be a definitive 1 to 347 list so sites are instead grouped in batches of similar priority. The analysis of change of risk category undertaken presented in Section 5.1.2 found that the majority of sites (>80%) remain in the same category and that, of those that do change, over 90% do so by only one category. Consequently, categories for prioritisation of monitoring needs have not been broken down into present and future risks. Where sites' risks change, the sites are included in the monitoring plan with the *higher* category.

A flow chart showing the general order of site prioritisation is presented below. At the high end of the risk scale, prioritisation of sites is straightforward, the Agency/EN Category 1 and 2 sites at the top along with the Agency – only (i.e. groundwater risk) HIGH category, followed by MEDIUM-HIGHS etc.; sites in these categories number only 61 in total. The non-groundwater monitoring needs of these sites, identified by EN Conservation Officers and Agency Conservation staff, further refine the prioritisation.

The majority of sites fall into the Agency Medium-Low and Low categories and EN/Agency Category 4. These sites will require more detailed consideration than can be given at the strategic level that this document is addressing. Whilst some recommendations for groundwater monitoring have been proposed by Aspinwalls and Water Management Consultants, non-groundwater monitoring may prove to be of higher priority at these sites.



Importance of EN/Agency non-groundwater hydrological monitoring needs

7 IMPLEMENTATION MONITORING PROGRAMME

7.1 HYDROLOGICAL MONITORING

The implementation of monitoring actions will be undertaken at Area level with Water Resources staff in Regional Head Office providing support and a co-ordinating role. The programme of implementation will vary according to the resources available.

The order in which sites are instrumented should generally be determined by the prioritisation process described in Section 6. Prioritised lists of sites, by Area, together with recommendations for monitoring actions, are presented in Tables 7.1 to 7.4. The priorities of sites are indicated by the colours assigned to them: sites highlighted in RED are considered to be the most at risk, through ORANGE and YELLOW to GREEN, which indicates those that are considered to be least at risk.

Detailed site-specific monitoring proposals and plans will be required and it is strongly recommended that there is close co-ordination between Area Water Resources and Conservation staff and Conservation Officers from the relevant English Nature offices. This should ensure that, where possible, instrumentation to address a variety of monitoring needs is installed, thereby avoiding duplication of effort and maximising the benefit of the work.

7.2 ECOLOGICAL MONITORING

As noted by Bradley (1995), hydrological monitoring of wetlands is of limited use if ecological monitoring is not undertaken in parallel. Such monitoring would be best undertaken by either or both of English Nature and Agency Conservation, so a commitment from these bodies to assist in the programme should be obtained at an early date.

8 RECOMMENDATIONS FOR FURTHER WORK

The report has focussed primarily on the preparation and overview of the implementation of a monitoring programme for the Region's SSSIs. The nature of a 'strategy', however, is to take a wider view. It is hoped that the recommendation below are taken up by Senior Management within the Agency to make the protection and enhancement of wetlands an integral part of water management in the Midlands Region.

1. Include in every LEAP an action to evaluate the condition of wetland SSSIs and scope remedial actions.
2. Set up a working group comprising staff from Agency Water Resources and Conservation, English Nature and the Wildlife Trusts to develop a standard site ranking system.
3. Commit resources to support the further development and use of GIS for wetland and general water resource management.
4. Use data collected from the monitoring programme to build up a Regional picture of the impacts of eutrophication, diffuse and point pollution.
5. Use data collected to identify the optimum ratio of surface water and groundwater for each type of vegetation.
6. Evaluate the existing (mostly unpublished) English Nature and Environment Agency reference material for each SSSI and archive the information in a database; such that information may give guidance on how best to co ordinate the monitoring and may identify existing disused hydrometric equipment currently on site.
7. Continue to develop relationships with universities for collaborative projects on wetland monitoring and to maximise the use of placement and MSc students to undertake preliminary studies of sites.
8. Make a commitment to building closer relationships with English Nature, the Wildlife Trusts and other conservation bodies to develop a mechanism of feeding site visits back to the Agency; this would act as an early-warning system for potential deterioration of sites.

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GLOSSARY

Blanket bog – acid, nutrient – poor peatland habitat following the contours of the topography and covering large areas of the uplands

Bog – peatland that received water and nutrients almost entirely from rainfall; however, these may also come partly from soil, rock and groundwater

Dingle – a small hollow, natural or caused by quarrying, often wooded or covered with scrub, not necessarily wet.

Dumble – steep-sided valley carved by a stream or small river, usually wooded.

Fen – peatland that receives water and nutrients from soil, rock and groundwater, as well as rainfall.

Flush – area of sloping ground with impeded drainage, wet as a result of surface run-off.

TABLES

Project	Initiator	National/Region/Area	Author	Year completed	On going
Wetland Resource Evaluation & the NRA's Role in its Conservation. Resource Assessment	Agency	National	University of Sheffield. Environmental Consultancy	1995	
Wetland Resource Evaluation & the NRA's Role in its Conservation. Wetland Classification	Agency	National	University of Sheffield. Environmental Consultancy'	1995	
The Role of the National Rivers Authority in Wetland Conservation	Agency	National	University of Sheffield. Environmental Consultancy	1995	
Impact of Water Abstraction on Wetland SSSIs	English Nature	National	English Nature	1996	
High & Dry – The Impacts of Over-Abstraction of Water on Wildlife	Biodiversity Challenge Group	National	Biodiversity Challenge Group	1996	
A Price Worth Paying	Agency	National	Agency	1998	
Hydrogeological Reports on Wetlands in the Midlands Region	Agency	Regional - Midlands	Aspinwall & Company	1995	
			Water Management Consultants	1998	
Low Flows, Groundwater & Wetland Interactions – A Scoping Study	Agency, UKWIR, NERC	National	Acreman, M(BGS) & Adams B (IoH)	1998	
Ten-Point Action Plan 1998/99	Agency	National	Entec (Midlands Region)	1999	
Habitats Directive Review of Authorisations	Agency	National	Agency		On-going
Joint English Nature/Environment Agency List	English Nature & Agency	National	English Nature & Agency		On-going
Low-Flow Catalogue (Sustainable Abstraction Programme)	Agency	National	Agency/Ewan Associates Ltd		On-going
Midlands Region Pilot Instrumentation Programme	Agency	Regional – Midlands	Agency		On-going
Midlands Region SSSI Database	Agency	Regional – Midlands	Agency, Midlands Region Water Resources		On-going
Midlands Region Geographical Information System (GIS)	Agency	Regional – Midlands	Agency, Midlands Region Water Resources		On-going
Anglian Region Wetland Monitoring Programme	Agency	Regional – Anglian	Anglian Region/HSI Ltd		On-going
Shropshire Wildlife Trust Wetland Project	Agency/Shropshire Wildlife Trust	Area – Upper Severn	Water Management Consultants		On-going
Meres & Mosses	Agency/English Nature	Area – Upper Severn	TBC		On-going
Valuing Wetness	Agency/English Nature	Area – Lower Trent	TBC		On-going
Survey of Wetlands in Staffordshire	Agency/Wildlife Trust	Area – Upper Trent	TBC		On-going

Table 3.1 Recent Initiatives in Wetland Management

Site Name	County	G Ref	G Ref - E	G Ref - N	Area	SSSI	SAC	SPA
Hewell Park Lake (at Hewell Grange)	H&W	SP	0100	6900	LS	Y	no	no
Bow Brook	Warwickshire	SO	9400	5700	LS	N	no	no
River Sherbourne	Warwickshire	SP	2800	8100	LS	N	no	no
Thorne Crowle and Goole Moors	Humberside	SE	7300	1600	LT	Y	SAC I Thorne only	SPA F (p) Thorne only
River Eye	Leicestershire	SK	7640	1880	LT	Y	no	no
Chesterfield Canal	Nottinghamshire	SK	7220	8210	LT	Y	no	no
Clumber Park	Nottinghamshire	SK	6220	7440	LT	Y	no	no
Dover Beck	Nottinghamshire	SK	6600	4600	LT	N	no	no
Rainworth Lake (L Lake)	Nottinghamshire	SK	5830	5830	LT	Y	no	no
Rainworth Water	Nottinghamshire	SK	5830	5830	LT	N	N	N
River Idle Washlands	Nottinghamshire	SK	6620	9360	LT	Y	no	no
Hatfield Moors	South Yorkshire	SE	7050	0600	LT	Y	no	SPA F (p)
River Worfe (headwaters at Cosford)	?	?	?	?	US	N	no	no
Blakedown Valley	H&W	SO	8810	7850	US	N	no	no
Hurcott and Podmore Pools	H&W	SO	8540	7790	US	Y	no	no
Puxton Marshes	H&W	SO	8280	7770	US	Y	no	no
River Stour Flood Plain	H&W	SO	8230	7310	US	Y	no	no
Stourvale Marsh	H&W	SO	8300	7800	US	Y	no	no
River Meece & Lonco Brook	Shropshire				US	N	N	N
Aqualate Mere	Staffordshire	SJ	7700	2050	US	Y	no	no
Smestow Brook	Staffordshire				US	N	N	N
Battlefield, Sugar and Catshill Brooks	Worcestershire	SO	9600	7000	US	N	N	N

Table 3.2 Price Worth Paying / AMPIII Sites

Site Name	County	G Ref	G Ref - E	G Ref - N	Area	SSSI	SAC	SPA
Burntwood Pools	Staffordshire	SJ	7600	3200	UT	N	N	N
Churnet Valley	Staffordshire	SK	0130	4830	UT	Y	no	no
Croxden Brook	Staffordshire	SK	0500	4000	UT	N	no	no
River Blithe	Staffordshire	SP	1090	7290	UT	N	N	N
Scotch Brook	Staffordshire				UT	N	N	N
Swynnerton Pool (Tittensor)	Staffordshire				UT	N	N	N
River Blythe	West Midlands	SP	1090	7290	UT	Y	no	no

Table 3.2 Price Worth Paying / AMPIII Sites

Site Name	County	G Ref	G Ref - E	G Ref - N	Area	EN/EA	EA Pres	EA Future
Edgbaston Pool	West Midlands	SP	0540	8410	UT	1a	Low	Med-High
River Blythe	West Midlands	SP	1090	7290	UT	1a	Low-Med	Low-Med
Hewell Park Lake (at Hewell Grange)	H&W	SP	0100	6900	LS	1b	Med-High	High
Hurcott and Podmore Pools	H&W	SO	8540	7790	US	1b	High	High
Aqualate Mere	Staffordshire	SJ	7700	2050	US	1c	High	High
Ashmoor Common	H&W	SO	8520	4670	LS	2a	High	High
Hatfield Moors	South Yorkshire	SE	7050	0600	LT	2a	Med-High	Med-High
Lathkill Dale	Derbyshire	SK	1870	6580	LT	2a	Low	Low
Rainworth Lake (L Lake)	Nottinghamshire	SK	5830	5830	LT	2a	Low-Med	Low-Med
River Idle Washlands	Nottinghamshire	SK	6620	9360	LT	2a	Med-High	Med-High
Thorne Crowle and Goole Moors	Humberside	SE	7300	1600	LT	2a	Med-High	Med-High
Hartlebury Common and Hillditch Coppice	H&W	SO	8240	7070	US	2a	High	High
Hodnet Heath	Shropshire	SJ	6200	2620	US	2a	Med-High	Med-High
Brandon Marsh	Warwickshire	SP	3850	7550	LS	2b	Low-Med	Low-Med
Ipsley Alders Marsh	H&W	SP	0780	6760	LS	2b	Med-High	Med-High
Walmore Common	Gloucestershire	SO	7400	1620	LS	2b	Low	Low
Hills & Holes & Sookholme Brook, Warsop	Nottinghamshire	SK	5550	6780	LT	2b	Med-High	Med-High
Bomere, Shomere & Betton Pools	Shropshire	SJ	5040	0780	US	2b	Low	Low
Brown Moss	Shropshire	SJ	5620	3950	US	2b	Low	Low-Med
Fenemere	Shropshire	SJ	4450	2280	US	2b	Low	Low-Med
Grimley Brick Pits	H&W	SO	8400	6050	US	2b	Low	Low
Lin Can Moss	Shropshire	SJ	3750	2110	US	2b	High	High

Table 5.1 Sites on Joint English Nature / Environment Agency List

Site Name	County	G Ref	G Ref - E	G Ref - N	Area	EN/EA	EA Pres	EA Future
Puxton Marshes	H&W	SO	8280	7770	US	2b	Low	Low
Shrawley Wood	H&W	SO	8080	6600	US	2b	Low	Low-Med
Stourvale Marsh	H&W	SO	8300	7800	US	2b	Low	Low
White Mere	Shropshire	SJ	4140	3300	US	2b	Low-Med	Low-Med
Doley Common	Staffordshire	SJ	8160	2170	UT	2b	Low	Low
Upton Ham	H&W	SO	8600	4000	LS	3	Low	Low
Besthorpe Meadows	Nottinghamshire	SKsk	620	683	LT	3		
Upton Warren Pools	H&W	SO	9350	6720	US	3	Low	Low
Ailshurst Coppice	H&W	SO	7740	5020	LS	4	Low	Low
Ashleworth Ham	Gloucestershire	SO	8330	2630	LS	4	Low	Low
Bittel Reservoirs (British Waterways)	H&W	SP	0180	7500	LS	4	Low	Low
Frampton Pools	Gloucestershire	SO	7530	0730	LS	4	Low	Low
Poolhay Meadows	H&W	SO	8290	3080	LS	4	Low	Low
Rookery Cottage Meadows	H&W	SO	9960	6140	LS	4	Low	Low
Severn Ham, Tewkesbury	Gloucestershire	SO	8850	3250	LS	4	Low	Low
Stock Wood Meadows	H&W	SO	9980	5860	LS	4	Low	Low
Tiddesley Wood	H&W	SO	9280	4550	LS	4	Low	Low
Wylde Moor, Feckenham	H&W	SP	0110	6030	LS	4	Low	Low
Birklands & Bilhaugh	Nottinghamshire	SK	6200	6830	LT	4	Low-Med	Low-Med
Messingham Sand Quarry	Humberside	SE	9130	0350	LT	4	Low	Low
River Eye	Leicestershire	SK	7640	1880	LT	4	Low	Low
Burrington Meadow	H&W	SO	4460	7160	US	4	Low	Low

Table 5.1 Sites on Joint English Nature / Environment Agency List

Site Name	County	G Ref	G Ref - E	G Ref - N	Area	EN/EA	EA Pres	EA Future
Feckenham Forest	H&W	SO	9220	7320	US	4	Low	Low
Leigh Brook Valley	H&W	SO	7460	5160	US	4	Low	Low
Northwick Marsh	H&W	SO	8350	5790	US	4	Low	Low
Penorchard & Spring Farm Pastures	H&W	SO	9420	8120	US	4	Low	Low
Ruewood Pastures	Shropshire	SJ	4960	2800	US	4	Low	Low
Shrawardine Pool	Shropshire	SJ	3980	1620	US	4	Low	Low
Westwood Great Pool	H&W	SO	8800	6630	US	4	Low	Low
Wilden Marsh and Meadows	H&W	SO	8270	7380	US	4	Low-Med	Low-Med
Wyre Forest	H&W	SO	7500	7600	US	4	Low	Low
Churnet Valley	Staffordshire	SK	0130	4830	UT	4	Low-Med	Low-Med
Gentleshaw Common	Staffordshire	SK	0500	1130	UT	4	Low	Low
Leek Moors	Peak District	SK	0200	6500	UT	4	Low	Low
Sutton Park	West Midlands	SP	0980	9740	UT	4	Low	Low

Table 5.1 Sites on Joint English Nature / Environment Agency List

Site Name	County	G Ref	G Ref - E	G Ref - N	Area	EN Ref	EA Pres	EA Future	EN/EA	Other Des'n
Juniper Hill, Edgeworth	Gloucestershire	SO	9280	0580	LS	1001694	Med-High	High		no
Ashmoor Common	H&W	SO	8520	4670	LS	1001315	High	High	2a	no
Ticknall Quarries	Derbyshire	SK	3580	2380	LT	1001240	High	High		no
Grace Dieu And High Sharpley	Leicestershire	SK	4370	1700	LT	1000029	High	High		no
Welbeck Lake	Nottinghamshire	SK	5800	7290	LT	1001932	High	High		no
Abney & Bretton Cloughs	Peak District	SK	2100	7900	LT	1001834	High	High		no
Hartlebury Common and Hillditch Coppice	H&W	SO	8240	7070	US	1000046	High	High	2a	no
Lin Can Moss	Shropshire	SJ	3750	2110	US	1000221	High	High	2b	no
Old River Bed, Shrewsbury	Shropshire	SJ	4970	1480	US	1000328	High	High		no
Sweat Mere & Crose Mere	Shropshire	SJ	4340	3040	US	1001821	Med-High	High		RAMSAR
Maer Pool	Staffordshire	SJ	7890	3840	US	1000283	High	High		no
Biddulphs Pool & No Man's Bank	Staffordshire	SK	0300	1030	UT	1004070	Low	High		no
Pipe Green Meadows	Staffordshire	SK	1010	0950	UT	no	High	High		none
Berkswell Marsh	West Midlands	SP	2280	7980	UT	1006055	High	High		no

Table 5.2 Sites at High Risk of Impact From Groundwater Abstraction

Site Name	County	G Ref	G Ref - E	G Ref - N	Area	EN Ref	EA Pres	EA Future	EN/EA	Other Des'n
Woodchester Park	Gloucestershire	SO	8200	0140	LS	1003561	Med-High	Med-High		no
Ipsley Alders Marsh	H&W	SP	0780	6760	LS	1000148	Med-High	Med-High	2b	no
Crabtree Wood	Derbyshire	SK	4900	7850	LT	1000343	Med-High	Med-High		no
Ginny Spring/Whitwell Wood	Derbyshire	SK	5200	7880	LT	1000403	Low	Med-High		no
Hollinhill & Markland Grips	Derbyshire	SK	5100	7500	LT	1000466	Med-High	Med-High		no
Broughton Alder Wood	Humberside	SE	9600	0090	LT	no	Low-Med	Med-High		no
Scotton Beck Fields	Lincolnshire	SK	8770	9880	LT	1001900	Low-Med	Med-High		no
Bevercotes Park	Nottinghamshire	SK	7010	7090	LT	1003450	Med-High	Med-High		no
Bulwell Wood	Nottinghamshire	SK	5180	4630	LT	1003512	Med-High	Med-High		no
Creswell Crags	Nottinghamshire	SK	5350	7420	LT	1003950	Med-High	Med-High		no
Hills & Holes & Sookholme Brook, Warsop	Nottinghamshire	SK	5550	6780	LT	1000771	Med-High	Med-High	2b	no
Rainworth Heath	Nottinghamshire	SK	5900	5900	LT	1001686	Med-High	Med-High		no
Thoresby Lake	Nottinghamshire	SK	6300	7030	LT	1001902	Med-High	Low-Med		no
Clough Woods	Peak District	SK	2560	6150	LT	1002696	Low-Med	Med-High		no
Monks Dale	Peak District	SK	1350	7450	LT	1003861	Med-High	Med-High		no
Wye Dale and Monsal Dale	Peak District	SK	0990	7240	LT	PD/S/12	Med-High	Low-Med		no
Hatfield Moors	South Yorkshire	SE	7050	0600	LT	1000536	Med-High	Med-High	2a	PWP, RAMSAR
Maltby Low Common	South Yorkshire	SK	5450	9130	LT	1000605	Med-High	Med-High		no
Dumbleton Dingle	H&W	SO	7050	7040	US	1004366	Low	Med-High		no
Crofts Mill Pasture	Shropshire	SJ	3050	2460	US	1000078	Med-High	Med-High		no
Fernhill Pastures	Shropshire	SJ	3210	3280	US	1000132	Med-High	Med-High		no
Hodnet Heath	Shropshire	SJ	6200	2620	US	1000183	Med-High	Med-High	2a	no

Table 5.3 Sites at Medium-High Risk of Impact From Groundwater Abstraction

Site Name	County	G Ref	G Ref - E	G Ref - N	Area	EN Ref	EA Pres	EA Future	EN/EA	Other Des'n
Burnt Wood	Staffordshire	SJ	7350	3500	US	1004454	Med-High	Med-High		no
Checkhill Bogs	Staffordshire	SO	8520	8790	US	1000001	Med-High	Med-High		no
Hulland Moss	Derbyshire	SK	2500	4620	UT	1000495	Low	Med-High		no
Baswich Meadows	Staffordshire	SJ	9500	2270	UT	1003845	Med-High	Med-High		no
Dimmings Dale and the Ranger	Staffordshire	SK	0530	4340	UT	1007136	Med-High	Med-High		no
Stafford Brook	Staffordshire	SK	0230	1940	UT	1000348	Med-High	Med-High		no
Stanton Pastures & Cuckooclipf Valley	Staffordshire	SK	1220	4730	UT	1001324	Med-High	Med-High		no
Thorncliffe Moor	Staffordshire	SK	0240	5860	UT	1003081	Med-High	Med-High		no

Table 5.3 Sites at Medium-High Risk of Impact From Groundwater Abstraction

Site Name	County	G Ref	G Ref - E	G Ref - N	Area	EA Pres	EA Future	EN/EA	Other Des'n
Kingscote and Horsley Woods	Gloucestershire	ST	8310	9710	LS	Low	Low-Med		no
Puckham	Gloucestershire	SP	0100	2240	LS	Low-Med	Low-Med		no
Bredon Hill	H&W	SO	9530	4000	LS	Low	Low-Med		no
Cave's Inn Pits	Leicestershire	SP	5380	7950	LS	Low	Low-Med		no
Brandon Marsh	Warwickshire	SP	3850	7550	LS	Low-Med	Low-Med	2b	no
Long Itchington & Ufton Woods	Warwickshire	SP	3880	6270	LS	Low-Med	Low-Med		no
Ullenhall Meadows	Warwickshire	SP	1220	6780	LS	Low-Med	Low-Med		no
Whichford Wood	Warwickshire	SP	3050	3420	LS	Low-Med	Low-Med		no
Herald Way Marsh	West Midlands	SP	3800	7690	LS	Low	Low-Med		no
Tilehill Wood	West Midlands	SP	2790	7900	LS	Low-Med	Low-Med		no
Breadsall Railway Cutting	Derbyshire	SK	3950	3940	LT	Low-Med	Low-Med		no
Mercaston Marsh and Mugginton Bottoms	Derbyshire	SK	2690	4350	LT	Low	Low-Med		no
Morley Brick Pits	Derbyshire	SK	3890	4180	LT	Low-Med	Low-Med		no
Shining Cliff Woods	Derbyshire	SK	3350	5300	LT	Low-Med	Low-Med		no
Via Gellia Woodlands	Derbyshire	SK	2650	5620	LT	Low-Med	Low-Med		no
Crowle Borrow Pits	Humberside	SE	7900	1050	LT	Low	Low-Med		no
Haxey Grange Fen	Humberside	SK	7370	9730	LT	Low	Low-Med		no
Messingham Heath	Humberside	SE	8750	0370	LT	Low-Med	Low-Med		no
Misson Line Bank	Humberside	SK	7150	9610	LT	Low	Low-Med		no
Charnwood Lodge	Leicestershire	SK	4670	1530	LT	Low	Low-Med		no
Croxton Park	Leicestershire	SK	8230	2790	LT	Low	Low-Med		no
Dimminsdale	Leicestershire	SK	3770	2180	LT	Low	Low-Med		no

Table 5.4 Sites at Low-Medium Risk of Impact From groundwater Abstraction

Site Name	County	G/Ref	G/Ref/E	G/Ref/N	Area	EA/Pres	EA/Future	EN/EA	Other Des'n
Harby Hills Wood	Leicestershire	SK	7620	2840	LT	Low	Low-Med		no
Holwell Mouth	Leicestershire	SK	7250	2450	LT	Low	Low-Med		no
Lockington Marshes	Leicestershire	SK	4860	3040	LT	Low	Low-Med		no
Lount Meadows	Leicestershire	SK	3850	1910	LT	Low	Low-Med		no
Newton Burgoland Marshes	Leicestershire	SK	3810	0840	LT	Low	Low-Med		no
Swithland Wood And The Brand	Leicestershire	SK	5390	1250	LT	Low	Low-Med		no
Terrace Hills Pasture, Eaton	Leicestershire	SK	7950	3090	LT	Low	Low-Med		no
Birklands & Bilhaugh	Nottinghamshire	SK	6200	6830	LT	Low-Med	Low-Med	4	no
Holme Pit	Nottinghamshire	SK	5360	3450	LT	Low	Low-Med		no
Hoveringham Pastures	Nottinghamshire	SK	7070	4660	LT	Low-Med	Low-Med		no
Linby Quarries	Nottinghamshire	SK	5350	5230	LT	Low	Low-Med		no
Redgate Wood & Mansey Common	Nottinghamshire	SK	6770	5980	LT	Low-Med	Low-Med		no
Wilford Claypits	Nottinghamshire	SK	5710	3550	LT	Low-Med	Low-Med		no
Cressbrook Dale	Peak District	SK	1730	7380	LT	Low-Med	Low-Med		no
Eastern Moors	Peak District	SK	2700	7700	LT	Low	Low-Med		no
Goyt Valley	Peak District	SK	0100	7200	LT	Low	Low-Med		no
Hallam Moors	Peak District	SK	2590	8350	LT	Low	Low-Med		no
Stoney Middleton Dale	Peak District	SK	2100	7600	LT	Low-Med	Low-Med		no
Topley Pike & Deepdale	Peak District	SK	0990	7170	LT	Low-Med	Low-Med		no
Anston Stones Wood	South Yorkshire	SK	5310	8310	LT	Low	Low-Med		no
Dyscarr Wood	South Yorkshire	SK	5810	8710	LT	Low	Low-Med		no
Lindrick Golf Course	South Yorkshire	SK	5430	8250	LT	Low	Low-Med		no

Table 5.4 Sites at Low-Medium Risk of Impact From groundwater Abstraction

Site Name	County	G Ref	G Ref - E	G Ref - N	Area	EA Pres	EA Future	EN/EA	Other Des'n
Brampton Bryan Park	H&W	SO	3600	7160	US	Low	Low-Med		no
Shrawley Wood	H&W	SO	8080	6600	US	Low	Low-Med	2b	no
Wilden Marsh and Meadows	H&W	SO	8270	7380	US	Low-Med	Low-Med	4	no
Betton Dingle & Gulley Green	Shropshire	SJ	3160	0170	US	Low	Low-Med		no
Brown Moss	Shropshire	SJ	5620	3950	US	Low	Low-Med	2b	RAMSAR
Bush Wood & High Wood	Shropshire	SO	7080	8250	US	Low	Low-Med		no
Catherton Common	Shropshire	SO	6350	7850	US	Low	Low-Med		no
Chorley Covert & Deserts Wood	Shropshire	SO	7050	8400	US	Low	Low-Med		no
Clarepool Moss	Shropshire	SJ	4330	3420	US	Low	Low-Med		RAMSAR
Cole Mere	Shropshire	SJ	4330	3320	US	Low	Low-Med		RAMSAR
Fenemere	Shropshire	SJ	4450	2280	US	Low	Low-Med	2b	RAMSAR
Fenn's, Whixall, Bettisfield, Wem & Cadney Mosses	Shropshire	SJ	4900	3650	US	Low	Low-Med		RAMSAR, SAC
Marton Pool, Chirbury	Shropshire	SJ	2960	0270	US	Low	Low-Med		RAMSAR
Oss Mere	Shropshire	SJ	5650	4380	US	Low	Low-Med		no
Redwith Canal to Maesbury Marsh	Shropshire	SJ	3040	2470	US	Low	Low-Med		no
Sweeney Fen	Shropshire	SJ	2750	2500	US	Low	Low-Med		no
Titterstone Clee	Shropshire	SO	5950	7800	US	Low	Low-Med		no
Trefonen Marshes	Shropshire	SJ	2460	2650	US	Low	Low-Med		no
White Mere	Shropshire	SJ	4140	3300	US	Low-Med	Low-Med	2b	RAMSAR
Whitwell Coppice	Shropshire	SJ	6200	0200	US	Low	Low-Med		no
Sheepy Fields	Leicestershire	SK	3320	0250	UT	Low-Med	Low-Med		no
Bath Pasture	Staffordshire	SK	0630	4590	UT	Low	Low-Med		no

Table 5.4 Sites at Low-Medium Risk of Impact From groundwater Abstraction

Site Name	County	G/Ref	G Ref - E	G Ref - N	Area	EA Pres	EA Future	EN/EA	Other Des'n
Chartley Moss	Staffordshire	SK	0270	2830	UT	Low-Med	Low-Med		RAMSAR
Chasewater Heaths	Staffordshire	SK	0390	0800	UT	Low-Med	Low-Med		no
Cop Mere	Staffordshire	SJ	8020	2970	UT	Low-Med	Low-Med		RAMSAR
King's & Hargreaves Woods	Staffordshire	SJ	8600	4020	UT	Low-Med	Low-Med		no
Swineholes Wood & Black Heath	Staffordshire	SK	0480	5040	UT	Low-Med	Low-Med		no
Whiston Eaves	Staffordshire	SK	0370	4630	UT	Low-Med	Low-Med		no
Bentley Park Wood	Warwickshire	SP	2890	9550	UT	Low-Med	Low-Med		no
Hoar Park Wood	Warwickshire	SP	2650	9330	UT	Low-Med	Low-Med		no
Kingsbury Wood	Warwickshire	SP	2330	9760	UT	Low-Med	Low-Med		no
Whitacre Heath	Warwickshire	SP	2080	9280	UT	Low-Med	Low-Med		no
Windmill Naps Wood	Warwickshire	SP	0930	7240	UT	Low-Med	Low-Med		no
Clayhanger	West Midlands	SK	0340	0450	UT	Low-Med	Low-Med		no
Jockey Fields	West Midlands	SK	0410	0300	UT	Low-Med	Low-Med		no
Monkspath Meadow	West Midlands	SP	1450	7630	UT	Low-Med	Low-Med		no

Table 5.4 Sites at Low-Medium Risk of Impact From groundwater Abstraction

Site Name	County	G Ref	G Ref - E	G Ref - N	Area	EN Ref	EA Pres	EA Future	EN/EA	Other Des'n
Bishop's Hill Wood	Avon	ST	7380	8730	LS	no	Low	Low		no
Yarley Meadows	Avon	ST	7570	8880	LS	1002054	Low	Low		no
Ashleworth Ham	Gloucestershire	SO	8330	2630	LS	1000526	Low	Low	4	no
Badgeworth	Gloucestershire	SO	9110	2060	LS	1000542	Low	Low		no
Bushley Muzzard, Brimpsfield	Gloucestershire	SO	9440	1330	LS	1003794	Low	Low		no
Chaceley Meadows	Gloucestershire	SO	8570	3060	LS	1000673	Low	Low		no
Cleeve Common	Gloucestershire	SO	9900	2600	LS	1000720	Low	Low		no
Coombe Hill Canal	Gloucestershire	SO	8700	2690	LS	1000789	Low	Low		no
Cotswold Commons and Beechwoods	Gloucestershire	SO	9000	1300	LS	1003801	Low	Low		no
Crickley Hill and Barrow Wake	Gloucestershire	SO	9290	1610	LS	1001395	Low	Low		no
Frampton Pools	Gloucestershire	SO	7530	0730	LS	1001493	Low	Low	4	no
Lineover Wood	Gloucestershire	SO	9870	1870	LS	1002850	Low	Low		no
May Hill	Gloucestershire	SO	6950	2140	LS	1001791	Low	Low		no
Midger	Gloucestershire	ST	7970	8950	LS	1002832	Low	Low		no
Minchinhampton Common	Gloucestershire	SO	8550	0100	LS	1002432	Low	Low		no
Old River Severn, Upper Lode	Gloucestershire	SO	8800	3310	LS	1003255	Low	Low		no
Severn Ham, Tewkesbury	Gloucestershire	SO	8850	3250	LS	1002725	Low	Low	4	no
Soudley Ponds	Gloucestershire	SO	6620	1120	LS	1003725	Low	Low		no
Upham Meadow & Summer Leasow	Gloucestershire	SO	9170	3750	LS	1005981	Low	Low		no
Walmore Common	Gloucestershire	SO	7400	1620	LS	1003511	Low	Low	2b	RAMSAR
Aileshurst Coppice	H&W	SO	7740	5020	LS	1005535	Low	Low	4	no
Aston Ingham Meadows	H&W	SO	6890	2400	LS	1004216	Low	Low		no

Table 5.5 Sites at Low Risk of Impact From Groundwater Abstraction

Site Name	County	G Ref	G Ref - E	G Ref - N	Area	EN Ref	EA Pres	EA Future	EN/EA	Other Des'n
Avon Valley	H&W	SO	9450	4350	LS	1000807	Low	Low		no
Berry Mount Pastures	H&W	SP	0940	7760	LS	1007264	Low	Low		no
Bittel Reservoirs	H&W	SP	0180	7500	LS	1000942	Low	Low	4	no
Castlemorton Common	H&W	SO	7840	3920	LS	1003434	Low	Low		no
Cooksholme Meadows	H&W	SO	8890	5050	LS	1005946	Low	Low		no
Dagnell End Meadow	H&W	SP	0520	6920	LS	1003656	Low	Low		no
Eastnor Park	H&W	SO	7450	3780	LS	1000829	Low	Low		no
Foster's Green Meadows	H&W	SO	9780	6480	LS	1004455	Low	Low		no
Grafton Wood	H&W	SO	9720	5600	LS	1004480	Low	Low		no
Long Meadow, Thorn	H&W	SP	0150	5530	LS	1000925	Low	Low		no
Malthouse Farm Meadows	H&W	SO	8060	3900	LS	1001214	Low	Low		no
Micklefield Meadow	H&W	SO	8130	3840	LS	1005774	Low	Low		no
Pipershill Common	H&W	SO	9580	6500	LS	1001952	Low	Low		no
Poolhay Meadows	H&W	SO	8290	3080	LS	1001966	Low	Low	4	no
Rookery Cottage Meadows	H&W	SO	9960	6140	LS	1007254	Low	Low	4	no
Rye Street Meadows	H&W	SO	7850	3560	LS	1002192	Low	Low		no
Stock Wood Meadows	H&W	SO	9980	5860	LS	1007255	Low	Low	4	no
Tiddesley Wood	H&W	SO	9280	4550	LS	1003066	Low	Low	4	no
Trench Wood	H&W	SO	9260	5880	LS	1004181	Low	Low		no
Upton Ham	H&W	SO	8600	4000	LS	1001604	Low	Low	3	no
Wylde Moor, Feckenham	H&W	SP	0110	6030	LS	1000459	Low	Low	4	no
Misterton Marshes	Leicestershire	SP	5570	8520	LS	1004320	Low	Low		no

Table 5.5 Sites at Low Risk of Impact From Groundwater Abstraction

Site Name	County	G Ref	G Ref - E	G Ref - N	Area	EN Ref	EA Pres	EA Future	EN/EA	Other Des'n
Stanford Park	Leicestershire	SP	5870	7930	LS	1001950	Low	Low		no
Aston Grove & Withycombe Wood	Warwickshire	SP	1420	5730	LS	1000014	Low	Low		no
Calcutt Locks Meadows	Warwickshire	SP	4660	6330	LS	1000932	Low	Low		no
Combe Pool	Warwickshire	SP	3920	7940	LS	1001242	Low	Low		no
Draycote Meadows	Warwickshire	SP	4510	7080	LS	1001298	Low	Low		no
Harbury Railway Cutting	Warwickshire	SP	3770	6030	LS	1001314	Low	Low		no
Knavenhill Wood	Warwickshire	SP	2460	4920	LS	1002005	Low	Low		no
Loxley Church Meadow	Warwickshire	SP	2590	5330	LS	1002460	Low	Low		no
Oxhouse Farm	Warwickshire	SP	3000	5090	LS	1002143	Low	Low		no
Rough Hill & Wirehill Woods	Warwickshire	SP	0520	6400	LS	1002487	Low	Low		no
Ryton Wood	Warwickshire	SP	3810	7250	LS	1002217	Low	Low		no
Sherbourne Meadows	Warwickshire	SP	2420	6180	LS	1006459	Low	Low		no
Snitterfield & Bearley Bushes	Warwickshire	SP	1990	6050	LS	1002251	Low	Low		no
Stockton Railway Cutting and Quarry	Warwickshire	SP	4400	6500	LS	1002324	Low	Low		no
Ufton Fields	Warwickshire	SP	3830	6150	LS	1001036	Low	Low		no
Wolford Wood & Old Covert	Warwickshire	SP	2370	3350	LS	1002375	Low	Low		no
Calke Park	Derbyshire	SK	3650	2300	LT	1005792	Low	Low		no
Carver's Rocks	Derbyshire	SK	3300	2270	LT	1000278	Low	Low		WTRES
Lathkill Dale	Derbyshire	SK	1870	6580	LT	1003711	Low	Low	2a	no
Epworth Turbary	Humberside	SE	7550	0400	LT	1002281	Low	Low		WT RES
Haxey Turbary	Humberside	SE	7480	0180	LT	1002323	Low	Low		no
Manton And Twigmoor	Humberside	SE	9400	0440	LT	1003182	Low	Low		no

Table 5.5 Sites at Low Risk of Impact From Groundwater Abstraction

Site Name	County	G Ref	G Ref - E	G Ref - N	Area	EN Ref	EA Pres	EA Future	EN/EA	Other Des'n
Messingham Sand Quarry	Humberside	SE	9130	0350	LT	1001209	Low	Low	4	no
Barrow Gravel Pits	Leicestershire	SK	5680	1660	LT	1002661	Low	Low		no
Beacon Hill, Hangingstone And Out Woods	Leicestershire	SK	5120	1470	LT	1002689	Low	Low		no
Botcheston Bog	Leicestershire	SK	4850	0460	LT	1003405	Low	Low		no
Burbage Wood And Aston Firs	Leicestershire	SP	4530	9410	LT	1003526	Low	Low		no
Cotes Grassland	Leicestershire	SK	5540	2080	LT	1003698	Low	Low		no
Croft Pasture	Leicestershire	SP	5100	9580	LT	1003760	Low	Low		no
Frisby Marsh	Leicestershire	SK	6860	1740	LT	1004512	Low	Low		no
Grobby Pool and Woods	Leicestershire	SK	5210	0830	LT	1000094	Low	Low		no
Loughborough Meadows	Leicestershire	SK	5380	2180	LT	1002254	Low	Low		no
Muston Meadows	Leicestershire	SK	8240	3670	LT	no	Low	Low		no
Narborough Bog	Leicestershire	SP	5490	9790	LT	1000968	Low	Low		no
Pasture And Asplin Woods	Leicestershire	SK	4260	2160	LT	1001129	Low	Low		no
Seagrave Meadows	Leicestershire	SK	6240	1880	LT	no	Low	Low		no
Sproxton Quarry	Leicestershire	SK	8640	2530	LT	1001934	Low	Low		no
Ulverscroft Valley	Leicestershire	SK	5000	1260	LT	1002060	Low	Low		no
Wymondham Rough	Leicestershire	SK	8310	1750	LT	1002070	Low	Low		no
Scotton and Loughton Forest Ponds	Lincolnshire	SK	8600	9950	LT	1000357	Low	Low		no
Annesley Woodhouse Quarry	Nottinghamshire	SK	4890	5340	LT	1003390	Low	Low		no
Attenborough Gravel Pits	Nottinghamshire	SK	5220	3410	LT	1003408	Low	Low		LNR
Bagthorpe Meadows	Nottinghamshire	SK	4690	5190	LT	1002878	Low	Low		no
Bogs Farm Quarry	Nottinghamshire	SK	4820	5340	LT	1003494	Low	Low		no

Table 5.5 Sites at Low Risk of Impact From Groundwater Abstraction

Site Name	County	G Ref	G Ref - E	G Ref - N	Area	EN Ref	EA Pres	EA Future	EN/EA	Other Des'n
Dovedale Wood	Nottinghamshire	SK	4660	6320	LT	17W/S/ZW	Low	Low		no
Dyscarr Wood	Nottinghamshire	SK	5810	8710	LT	1000682	Low	Low		no
Eakring & Maplebeck Meadows	Nottinghamshire	SK	7050	6220	LT	1000704	Low	Low		no
Friezeland Grassland	Nottinghamshire	SK	4760	5060	LT	1000713	Low	Low		no
Kinoulton Marsh & Canal	Nottinghamshire	SK	6780	3050	LT	1000873	Low	Low		no
Mattersey Hill Marsh	Nottinghamshire	SK	6720	8740	LT	1000999	Low	Low		no
Mother Drain, Misterton	Nottinghamshire	SK	7710	9560	LT	1006392	Low	Low		no
Orston Plaster Pits	Nottinghamshire	SK	7630	4020	LT	1001660	Low	Low		no
Sellers Wood	Nottinghamshire	SK	5230	4550	LT	1001822	Low	Low		no
Sledder Wood Meadow	Nottinghamshire	SK	4970	4690	LT	1001832	Low	Low		no
Teversal Pastures	Nottinghamshire	SK	4930	6170	LT	1001866	Low	Low		no
Wellow Park	Nottinghamshire	SK	6830	6710	LT	1001955	Low	Low		no
Willwell Cutting	Nottinghamshire	SK	5670	3480	LT	1002006	Low	Low		no
Dark Peak	Peak District	SK	1100	9600	LT	PD/S/31	Low	Low		no
Houndkirk Moor	Peak District	SK	2860	8230	LT	PD/S/29	Low	Low		no
Jumble Coppice	Peak District	SK	2680	7210	LT	1003941	Low	Low		no
Longstone Moor	Peak District	SK	1950	7350	LT	1001029	Low	Low		no
Yarncliff Wood, Padley	Peak District	SK	2550	7950	LT	1003953	Low	Low		no
Burrington Meadow	H&W	SO	4460	7160	US	1003344	Low	Low	4	no
Downton Gorge	H&W	SO	4390	7390	US	1004330	Low	Low		SAC
Feckenham Forest	H&W	SO	9220	7320	US	1001994	Low	Low	4	no
Grimley Brick Pits	H&W	SO	8400	6050	US	1004509	Low	Low	2b	no

Table 5.5 Sites at Low Risk of Impact From Groundwater Abstraction

Site Name	County	G Ref	G Ref - E	G Ref - N	Area	EN Ref	EA Pres	EA Future	EN/EA	Other Des'n
Leigh Brook Valley	H&W	SO	7460	5160	US	1000821	Low	Low	4	no
Little Byefields Meadow	H&W	SO	7450	4900	US	1000857	Low	Low		no
Monk Wood	H&W	SO	8040	6080	US	1001125	Low	Low		no
Monkwood Green	H&W	SO	8000	6030	US	1001146	Low	Low		no
Northwick Marsh	H&W	SO	8350	5790	US	1002655	Low	Low	4	no
Oakley Pool	H&W	SO	8930	6060	US	1001802	Low	Low		no
Penorchard & Spring Farm Pastures	H&W	SO	9420	8120	US	1007262	Low	Low	4	no
Romsley Manor Farm	H&W	SO	9660	7890	US	1006623	Low	Low		no
Upton Warren Pools	H&W	SO	9350	6720	US	1003130	Low	Low	3	no
Westwood Great Pool	H&W	SO	8800	6630	US	1003218	Low	Low	4	no
Wyre Forest	H&W	SO	7500	7600	US	1004198	Low	Low	4	no
Berrington Pool	Shropshire	SJ	5250	0720	US	1002833	Low	Low		RAMSAR
Blodwel Marsh	Shropshire	SJ	2640	2340	US	1002800	Low	Low		no
Bomere, Shomere & Betton Pools	Shropshire	SJ	5040	0780	US	1003107	Low	Low	2b	RAMSAR
Brownheath Moss	Shropshire	SJ	4600	3000	US	1004532	Low	Low		RAMSAR
Chermes Dingle	Shropshire	SJ	6110	0700	US	1003228	Low	Low		no
Cornbrook Dingle	Shropshire	SO	6020	7570	US	1001044	Low	Low		no
Coundmoor Brook	Shropshire	SJ	5580	0370	US	1001241	Low	Low		no
Cuckoopen Coppice	Shropshire	SO	5380	8000	US	1003249	Low	Low		no
Hencott Pool	Shropshire	SJ	4900	1600	US	1000173	Low	Low		no
Hope Valley	Shropshire	SJ	3420	0150	US	1003210	Low	Low		no
Hughley Brook	Shropshire	SO	5660	9840	US	1002181	Low	Low		no

Table 5.5 Sites at Low Risk of Impact From Groundwater Abstraction

Site Name	County	G Ref	G Ref - E	G Ref - N	Area	EN Ref	EA Pres	EA Future	EN/EA	Other Des'n
Muxton Marsh	Shropshire	SJ	7160	1340	US	1002720	Low	Low		no
Newport Canal	Shropshire	SJ	7340	1920	US	1000116	Low	Low		no
Oak Dingle	Shropshire	SO	5650	8710	US	1004119	Low	Low		no
Prees Heath	Shropshire	SJ	5580	3680	US	1005712	Low	Low		no
Rhos Fiddle	Shropshire	SO	2080	8530	US	1000360	Low	Low		no
Ruewood Pastures	Shropshire	SJ	4960	2800	US	1000375	Low	Low	4	no
Sheinton Brook	Shropshire	SJ	6070	0400	US	1004309	Low	Low		no
Shelve Pool	Shropshire	SO	3350	9790	US	1004349	Low	Low		no
Shrawardine Pool	Shropshire	SJ	3980	1620	US	1004361	Low	Low	4	no
Spywood & Aldress Dingle	Shropshire	SO	2790	9590	US	1004108	Low	Low		no
Thatchers Wood & Westwood Covert	Shropshire	SO	7030	9040	US	1001114	Low	Low		no
Trewern Brook	Shropshire	SJ	3040	1160	US	1003185	Low	Low		no
Loynton Moss	Staffordshire	SJ	7880	2440	US	1000230	Low	Low		no
Fens Pools	West Midlands	SO	9200	8860	US	1003757	Low	Low		no
Illey Pastures	West Midlands	SO	9770	8120	US	1002670	Low	Low		no
Bees Nest & Green Clay Pits	Derbyshire	SK	2400	5470	UT	1004504	Low	Low		no
Hilton Gravel Pits	Derbyshire	SK	2490	3150	UT	1000431	Low	Low		no
Old River Dove, Marston On Dove	Derbyshire	SK	2380	2850	UT	1001024	Low	Low		no
Hamps & Manifold Valleys	Peak District	SK	1000	5400	UT	1002911	Low	Low		no
Leek Moors	Peak District	SK	0200	6500	UT	1003770	Low	Low	4	no
Moss Carr	Peak District	SK	0730	6590	UT	1003901	Low	Low		no
Allimore Green Common	Staffordshire	SJ	8580	1930	UT	1003768	Low	Low		no

Table 5.5 Sites at Low Risk of Impact From Groundwater Abstraction

Site Name	County	G-Ref	G-Ref - E	G-Ref - N	Area	EN Ref	EA Pres	EA Future	EN/EA	Other Des'n
Big Hyde Rough	Staffordshire	SJ	8640	0830	UT	1005758	Low	Low		no
Braken Hurst	Staffordshire	SK	1370	2220	UT	1003871	Low	Low		no
Cannock Chase	Staffordshire	SJ	9900	1800	UT	1004497	Low	Low		no
Cannock Extension Canal	Staffordshire	SK	0190	0440	UT	1006558	Low	Low		no
Doley Common	Staffordshire	SJ	8160	2170	UT	1003618	Low	Low	2b	no
Ford Green Reedbed	Staffordshire	SJ	8870	5110	UT	1005763	Low	Low		no
Forest Banks	Staffordshire	SK	1200	2840	UT	1000108	Low	Low		no
Four Ashes Pit	Staffordshire	SJ	9140	0830	UT	1000962	Low	Low		no
Gentleshaw Common	Staffordshire	SK	0500	1130	UT	1005764	Low	Low	4	no
Goat Lodge	Staffordshire	SK	0840	2650	UT	1000165	Low	Low		no
Motley Meadows	Staffordshire	SJ	8400	1340	UT	1002612	Low	Low		no
Pasturefields Salt Marsh	Staffordshire	SJ	9920	2480	UT	1003939	Low	Low		no
Rawbones Meadow	Staffordshire	SJ	9850	2250	UT	1001338	Low	Low		no
The Wilderness & Vermin Valley	Staffordshire	SO	8120	8380	UT	1000580	Low	Low		no
Alvecote Pools	Warwickshire	SK	2490	0500	UT	1003784	Low	Low		no
Clowes Wood & New Fallings Coppice	Warwickshire	SP	1020	7400	UT	1001494	Low	Low		no
Coleshill & Bannerly Pools	Warwickshire	SP	2000	8600	UT	1001216	Low	Low		no
Middleton Pool	Warwickshire	SP	1900	9830	UT	1002103	Low	Low		no
Woodlands Quarry	Warwickshire	SP	3250	9470	UT	1003037	Low	Low		no
Bickenhill Meadows	West Midlands	SP	1820	8220	UT	1002847	Low	Low		no
Moseley Bog	West Midlands	SP	0940	8210	UT		Low	Low		no
Stubbers Green Bog	West Midlands	SK	0460	0160	UT	1001541	Low	Low		no

Table 5.5 Sites at Low Risk of Impact From Groundwater Abstraction

Site Name	County	G Ref	G Ref - E	G Ref - N	Area	EN Ref	EA Pres	EA Future	EN/EA	Other Des'n
Sutton Park	West Midlands	SP	0980	9740	UT	1001574	Low	Low	4	no
Swan Pool & The Swag	West Midlands	SK	0400	0190	UT	1000981	Low	Low		no

Table 5.5 Sites at Low Risk of Impact From Groundwater Abstraction

Site Name	County	G Ref	G Ref-E	G Ref-N	Area	EN Ref	Comment
Upton Warren Pools	H&W	SO	9350	6720	US	1003130	Vulnerable to abstraction? Water quality issues, especially saltmarsh
Fenn's, Whixall, Bettisfield, Wern & Cadney Mosses	Shropshire	SJ	4900	3650	US	1007134	Vulnerable to impacts of drainage and pollution within catchment
Wilden Marsh and Meadows	H&W	SO	8270	7380	US	1003227	Marsh-abstraction, water quality – water table – Stour
Burrington Meadow	H&W	SO	4460	7160	US	1003344	Abstraction and land drainage problems – site declining
Lathkill Dale	Derbyshire	SK	1870	6580	LT	1003711	Agency monitoring to continue. Investigate sewage pollution. Impact from small abs?
Crabtree Wood	Derbyshire	SK	4900	7850	LT	1000343	On sand therefore very sensitive – locally uncommon eriophorum angustifolium
Ginny Spring/Whitwell Wood	Derbyshire	SK	5200	7800	LT	10000403	On limestone therefore sensitive – molinia flush and other wetland plants
Maltby Low Common	South Yorkshire	SK	5450	9130	LT	1000605	Pollution from pumping station overflow, water levels & quality in stream
Mercaston Marsh and Mugginton Bottoms	Derbyshire	SK	2690	4350	LT	1005567	Very important marshy grassland – potential working of gravel could be threat
Cressbrook Dale	Peak District	SK	1730	7380	LT	1002731	Agency to continue WQ monitoring. Flow/level monitoring to be added? Pollution from spar workings?
Doley Common	Staffordshire	SJ	8160	2170	UT	1003618	Needs monitoring
Berkswell Marsh	West Midlands	SP	2280	7980	UT	1006055	Very sensitive habitat. Some threats
Thorncliffe Moor	Staffordshire	SK	0240	5860	UT	1003081	Very sensitive habitat. Needs baseline data
Cop Mere	Staffordshire	SJ	8020	2970	UT	1000057	RAMSAR site – quality and quantity of R Sow water
Jockey Fields	West Midlands	SK	0410	0300	UT	1007138	Sensitive habitat – needs baseline data
Hamps & Manifold Valleys	Peak District	SK	1000	5400	UT	1002911	Important karst area with numerous caves and swallowholes, seasonal river and crayfish.
Moss Carr	Peak District	SK	0730	6590	UT	1003901	Small mire site, thought to be drying out. Very sensitive habitats. Vulnerable. Drainage?

Tables 5.6 Sites Where Hydrogeological Monitoring Considered 'Essential' by English Nature / Agency Conservation Staff

Cannock Extension Canal	Staffordshire	SK	0190	0440	UT	1006558	cSAC – WQ – concerns re adjacent landfill/road. Water height fixed.
Pasturefields Salt Marsh	Staffordshire	SJ	9920	2480	UT	1003939	cSAC – does WQ (salt/fresh water balance) of Trent and other adjoining water courses affect site?
Rawbones Meadow	Staffordshire	SJ	9850	2250	UT	1001338	Very sensitive habitat
Coleshill & Bannerly Pools	Warwickshire	SP	2000	8600	UT	1001216	Several threats need quantifying, incl motorway runoff

Tables 5.6 Sites Where Hydrogeological Monitoring Considered 'Essential' by English Nature / Agency Conservation Staff

Site Name	County	G Ref	G Ref-E	G Ref-N	Area	EN Ref	Comment
Old River Bed, Shrewsbury	Shropshire	SJ	4970	1480	US	1000328	Baseline hydrological information required to identify and assess change
Sweat Mere & Crose Mere	Shropshire	SJ	4340	3040	US	1001821	Baseline hydrological information required to identify and assess change
Maer Pool	Staffordshire	SJ	7890	3840	US	1000283	Based on EA Hydrogeological Assessments
Fernhill Pastures	Shropshire	SJ	3210	3280	US	1000132	Baseline hydrological information required to identify and assess change
Checkhill Bogs	Staffordshire	SO	8520	8790	US	1000001	Based on EA hydrogeological Assessments
Catherton Common	Shropshire	SO	6350	7850	US	1003146	Baseline hydrological information required to identify and assess change
Clarepool Moss	Shropshire	SJ	4330	3240	US	1003192	Baseline hydrological information required to identify and assess change
Cole Mere	Shropshire	SJ	4330	3320	US	1003090	Baseline hydrological information required to identify and assess change
Marton Pool, Chirbury	Shropshire	SJ	2960	0270	US	1004464	Baseline hydrological information required to identify and assess change
Sweeney Fen	Shropshire	SJ	2750	2500	US	1001094	Baseline hydrological information required to identify and assess change
Trefonen Marshes	Shropshire	SJ	2460	2650	US	1001123	Baseline hydrological information required to identify and assess change
Berrington Pool	Shropshire	SJ	5250	0720	US	1002833	Baseline hydrological information required to identify and assess change
Blodwel Marsh	Shropshire	SJ	2640	2340	US	1002800	Baseline hydrological information required to identify and assess change
Brownheath Moss	Shropshire	SJ	4600	3000	US	1004532	Baseline hydrological information required to identify and assess change
Hencott Pool	Shropshire	SJ	4900	1600	US	1000173	Baseline hydrological information required to identify and assess change
Muxton Marsh	Shropshire	SJ	7160	1340	US	1002720	Baseline hydrological information required to identify and assess change

Table 5.7 Sites where Hydrological Monitoring Considered 'Useful' by English Nature / Agency Conservation Staff

Site Name	County	G Ref	G Ref-E	G Ref-N	Area	EN Ref	Comment
Newport Canal	Shropshire	SJ	7340	1920	US	1000116	Baseline hydrological information required to identify and assess change
Rhos Fiddle	Shropshire	SO	2080	8530	US	1000360	Baseline hydrological information required to identify and assess change
Ruewood Pastures	Shropshire	SJ	4960	2800	US	1000375	Baseline hydrological information required to identify and assess change
Shelve Pool	Shropshire	SO	3350	9790	US	1004349	Baseline hydrological information required to identify and assess change
Shrawardine Pool	Shropshire	SJ	3980	1620	US	1004361	Baseline hydrological information required to identify and assess change
Grimley Brick Pits	H&W	SO	8400	6050	US	1004509	Are any parts groundwater-fed?
Hartlebury Common and Hillditch Coppice	H&W	SO	8240	7070	US	1000046	Bog – water level issue – hydrogeology
Crofts Mill Pasture	Shropshire	SJ	3050	2460	US	1000078	Baseline hydrological information required to identify and assess change
Oss Mere	Shropshire	SJ	5650	4380	US	S/S/30	Baseline hydrological information required to identify and assess change
Monkwood Green	H&W	SO	8000	6030	US	1001146	Several pools – wet grassland in places
Northwick Marsh	H&W	SO	8350	5790	US	1002655	Where does water come from – groundwater component?
Oakley Pool	H&W	SO	8930	6060	US	1001802	Pool created by subsidence, vulnerable to abstraction/catchment changes
Abney & Bretton Cloughs	Peak District	SK	2100	7900	LT	1001834	Monitoring of spring flows identified as assisting, in light of major abstraction at Cavendish Mill. Also drainage.
Hollinhill & Markland Grips	Derbyshire	SK	5100	7500	LT	1000466	On limestone and old mine – could dry out but no especially important for wetland plants
Broughton Alder Wood	Humberside	SE	9600	0090	LT	No	Effects of adjacent arable land
Clough Woods	Peak District	SK	2560	6150	LT	1002696	Not especially threatened. Nice wet communities – alder woodland.
Monks Dale	Peak District	SK	1350	7450	LT	1003861	STW abstraction soon to cease (already?). Important springs and seepages in site, better understanding of gw-sw interaction required.

Table 5.7 Sites where Hydrological Monitoring Considered ‘Useful’ by English Nature / Agency Conservation Staff

Site Name	County	G Ref	G Ref-E	G Ref-N	Area	EN Ref	Comment
Shining Cliff Woods	Derbyshire	SK	3350	5300	LT	1001215	Flushes with rare bryophytes but on springline so probably OK
Crowle Borrow Pits	Humberside	SE	7900	1050	LT	1002090	Effects of surrounding arable and Stainforth & Keadby canal outfall
Haxey Grange Fen	Humberside	SK	7370	9730	LT	1002307	To tie in with last 3 years' dipwell monitoring around site by IDB
Lockington Marshes	Leicestershire	SK	4860	3040	LT	1000882	Wetland interest, threat of adjacent mineral extraction
Goyt Valley	Peak District	SK	0100	7200	LT	1002841	Monitoring of spring flows and seepages req'd. Drainage
Hallam Moors	Peak District	SK	2590	8350	LT	1002892	Important area of blanket bog supporting moorland birds and birds of prey and with botanically rich wet flushes.
Stoney Middleton Dale	Peak District	SK	2100	7600	LT	1004059	Is the large abstraction at Cavendish Mill affecting cave development? Pollution.
Calke Park	Derbyshire	SK	3650	2300	LT	1005792	Ponds used by toads – also issue of dredging
Epworth Turbary	Humberside	SE	7550	0400	LT	1002281	To tie in with proposed groundwater monitoring by IDB – WQ in drains around site.
Messingham Sand Quarry	Humberside	SE	9130	0350	LT	1001209	Effects of adjacent arable land.
Groby Pool and Woods	Leicestershire	SK	5210	0830	LT	1000094	Wetland interest, flooding issue, water level management required
Narborough Bog	Leicestershire	SP	5490	9790	LT	10000968	Surface water input, quantity – needs WLMP
Eastern Moors	Peak District	SK	2700	7700	LT	1002822	Important site for birds with bogs, flushes and springs and associated flora – streams sensitive to future abstraction
Attenborough Gravel Pits	Nottinghamshire	SK	5220	3410	LT	1003408	Water levels, quality and quantity issues
Baswich Meadows	Staffordshire	SJ	9500	2270	UT	1003845	Water quality may be a threat
Chartley Moss	Staffordshire	SK	0270	2830	UT	1002337	Rainwater quality a problem
Chasewater Heaths	Staffordshire	SK	0390	0800	UT	1004325	WQ of streams
Clayhanger	West Midlands	SK	0340	0450	UT	1003040	Need baseline data
Monkspath Meadow	West Midlands	SP	1450	7630	UT	1001744	Threats already known
Bees Nest & Green Clay Pits	Derbyshire	SK	2400	5470	UT	1004504	Reworking could affect water table. Some sensitive habitats
Leek Moors	Peak District	SK	0200	6500	UT	1003770	Much concern in recent years re drying out and thus loss of moorland birds. Drainage?
Allimore Green Common	Staffordshire	SJ	8580	1930	UT	1003768	Very sensitive habitats

Table 5.7 Sites where Hydrological Monitoring Considered 'Useful' by English Nature / Agency Conservation Staff

Site Name	County	G Ref	G Ref-E	G Ref-N	Area	EN Ref	Comment
Gentleshaw Common	Staffordshire	SK	0500	1130	UT	1005764	Some sensitive habitats – no known threats
Motley Meadows	Staffordshire	SJ	8400	1340	Ut	1002612	cSAC – Flood meadow, concerns over WQ in surrounding water courses
Alvecote Pools	Warwickshire	SK	2490	0500	UT	1003784	Agricultural pollution, silt load
Stubbers Green Bog	West Midlands	SK	0460	0160	UT	1001541	Very sensitive

Table 5.7 Sites where Hydrological Monitoring Considered ‘Useful’ by English Nature / Agency Conservation Staff

Site Name	County	G Ref	G Ref-E	G Ref-N	Area	EN Ref	Comment
Burnt Wood	Staffordshire	SJ	7350	3500	US	1004454	Based on EA Hydrogeological Assessments
Fens Pools	West Midlands	SO	9200	8860	US	1003757	Further data necessary to confirm low importance of groundwater
Dumbleton Dingle	H&W	SO	7050	7040	US	1004366	Dingle Woodland – stream of interest
Brampton Bryan Park	H&W	SO	3600	7160	US	1001473	Pools + seepages add to interest
Leigh Brook Valley	H&W	SO	7460	5160	US	1000821	Stream through wood, some wetland along stream. Water quality issues
Little Byefields Meadow	H&W	SO	7450	4900	US	1000857	Damp grassland – high water table?
Monk Wood	H&W	SO	8040	6080	US	1001125	Some pools
Romsley Manor Farm	H&W	SO	9660	7890	US	1006623	Grasslands
Wyre Forest	H&W	SO	7500	7600	US	1004198	Dowls Brook – heavy silt load from farms
Shrawley Wood	H&W	SO	8080	6600	US	1002918	Pools – surface water fed
Westwood Great Pool	H&W	SO	8800	6630	US	1003218	Surface water fed. Needs WLMP. Quality issues
Ticknall Quarries	Derbyshire	SK	3580	2380	LT	1001240	Interest of SSSI not associated with the water
Welbeck Lake	Nottinghamshire	SK	5800	7290	LT	1001932	Water quality – risk from minewater pollution
Thoresby Lake	Nottinghamshire	SK	6300	7030	LT	1001902	
Wye Dale and Monsal Dale	Peak District	SK	0990	7240	LT	PD/S/12	River not part of core interest. Useful to know impact of abstraction on small flush features across site.
Breadsall Railway Cutting	Derbyshire	SK	3950	3940	LT	1000193	
Morley Brick Pits	Derbyshire	SK	3890	4180	LT	1000522	Probably OK because on clay, main issue is eutrophication of the water
Via Gellia Woodlands	Derbyshire	SK	2650	5620	LT	1003009	
Newton Burgoland Marshes	Leicestershire	SK	3810	0840	LT	1001033	
Holme Pit	Nottinghamshire	SK	5360	3450	LT	1000826	
Linby Quarries	Nottinghamshire	SK	5350	5230	LT	1000938	Springfed woodland

Tables 5.8 Sites where Hydrological Monitoring Considered ‘Essential’ by English Nature / Agency Conservation Staff

Site Name	County	G Ref	G Ref-E	G Ref-N	Area	EN Ref	Comment
Topley Pike & Deepdale	Peak District	SK	0990	7170	LT	1000145	Monitor ephemeral winterbourne. Possible impact if adjacent quarry goes sub-aqua
Anston Stones Wood	South Yorkshire	SK	5310	8310	LT	1004347	Water quality in Anston Brook
Barrow Gravel Pits	Leicestershire	SK	5680	1660	LT	1002661	Wetland interest – water quality important
Botcheston Bog	Leicestershire	SK	4850	0460	LT	1003405	Spring-fed more – no immediate threat
Frisby Marsh	Leicestershire	SK	6860	1740	LT	1004512	Wetland interest – no immediate threat
Loughborough Meadows	Leicestershire	SK	5380	2180	LT	1002254	Floodplain meadow, water level management required
Mother Drain, Misterton	Nottinghamshire	SK	7710	9560	LT	1006392	Water quality issue
Dark Peak	Peak District	SK	1100	9600	LT	PD/S/31	Low-ish priority, monitoring may help identify if abstraction affects damp rushy pastures on site fringes. Drainage
Yarncliffe Wood, Padley	Peak District	SK	2550	7950	LT	1003953	Mainly woodland interest and birds but does have important lichen and bryophytes along stream.
Houndkirk Moor	Peak District	SK	2860	8230	LT	PD/S/29	Not especially sensitive but has important wet flush vegetation and wet dwarf shrub heath
Hills & Holes & Sookholme Brook, Warsop	Nottinghamshire	SK	5550	6780	LT	1000771	Calcareous steams.springs – inflow issue
Carver's Rocks	Derbyshire	SK	3300	2270	LT	1000278	Marsh now dries up in periods of reservoir drawdown
Mattersey Hill Marsh	Nottinghamshire	SK	6720	8740	LT	1000999	Drying out – water level management may be required
Biddulphs Pool & No Man's Bank	Staffordshire	SK	0300	1030	UT	1004070	Being monitored as part of Bleak House opencast
Dimmings Dale and the Ranger	Staffordshire	SK	0530	4340	UT	1007136	WQ of stream – important for crayfish
Stafford Brook	Staffordshire	SK	0230	1940	UT	1000348	Quality and quantity of water in Stafford Brook
Stanton Pastures & Cuckoocliff Valley	Staffordshire	SK	1220	4730	UT	1001324	Not known
Sheepy Fields	Leicestershire	SK	3320	0250	UT	1001283	Not sure
Bath Pasture	Staffordshire	SK	0630	4590	UT	1003862	Sensitive habitat. No known threat

Tables 5.8 Sites where Hydrological Monitoring Considered 'Essential' by English Nature / Agency Conservation Staff

Site Name	County	G Ref	G Ref-E	G Ref-N	Area	EN Ref	Comment
King's & Hargreaves Woods	Staffordshire	SJ	8600	4020	UT	1000991	Very small part of site susceptible to hydrological impacts. No known threats.
Swineholes Wood & Black Heath	Staffordshire	SK	0480	5040	UT	1000970	Not very sensitive
Whiston Eaves	Staffordshire	SK	0370	4630	UT	2000137	Not known
Hoar Park Wood	Warwickshire	SP	2650	9330	UT	1002159	Not very sensitive habitat
Kingsbury Wood	Warwickshire	SP	2330	9760	UT	1001991	Water quality in colliery spoil. Not very sensitive habitat.
Whitacre Heath	Warwickshire	SP	2080	9280	UT	1002177	Water quality in flood
Windmill Naps Wood	Warwickshire	SP	0930	7240	UT	1005718	Not known
Cannock Chase	Staffordshire	SJ	9900	1800	UT	1004497	Not sure
Ford Green Reedbed	Staffordshire	SJ	8870	5110	UT	1005763	Quality of inflowing water. Probably robust habitat.
Clowes Wood & New Fallings Coppice	Warwickshire	SP	1020	7400	UT	1001494	Agricultural pollution. Some sensitive habitats.
Middleton Pool	Warwickshire	SP	1900	9830	UT	1002103	Agricultural pollution silt load
Bickenhill Meadows	West Midlands	SP	1820	8220	UT	1002847	Probably not sensitive

Tables 5.8 Sites where Hydrological Monitoring Considered 'Essential' by English Nature / Agency Conservation Staff

Site Name	County	G Ref	G Ref-E	G Ref-N	Area	EN Ref	Comment
Betton Dingle & Gulley Green	Shropshire	SJ	3160	0170	US	1001185	
Bush Wood & High Wood	Shropshire	SO	7080	8250	US	1000010	
Chorley Covert & Deserts Wood	Shropshire	SO	7050	8400	US	1000022	
Redwith Canal to Maesbury Marsh	Shropshire	SJ	3040	2470	US	1004263	
Titterstone Clee	Shropshire	SO	5950	7800	US	1001623	
Whitwell Coppice	Shropshire	SJ	6200	0200	US	1003199	
Chermes Dingle	Shropshire	SJ	6110	0700	US	1003228	
Cornbrook Dingle	Shropshire	SO	6020	7570	US	1001044	
Coundmoor Brook	Shropshire	SJ	5580	0370	US	1001241	
Cuckoopen Coppice	Shropshire	SO	5380	8000	US	1003249	
Hope Valley	Shropshire	SJ	3420	0150	US	1003210	
Hughley Brook	Shropshire	SO	5660	9840	US	1002181	
Oak Dingle	Shropshire	SO	5650	8710	US	1004119	
Sheinton Brook	Shropshire	SJ	6070	0400	US	1004309	
Spywood & Aldress Dingle	Shropshire	SO	2790	9590	US	1004108	
Thatchers Wood & Westwood Covert	Shropshire	SO	7030	9040	US	1001114	
Trwern Brook	Shropshire	SJ	3040	1160	US	1003185	
Loynton Moss	Staffordshire	SJ	7880	2440	US	1000230	Based on EA Hydrogeological Assessments
Illey Pastures	West Midlands	SO	9770	8120	US	1002670	Hydrology of minor significance to SSSI interest
Feckenham Forest	H&W	SO	9220	7320	US	1001994	Minor streams, wet grassland, small pool
Downton Gorge	H&W	SO	4390	7390	US	1004330	Small streams etc dingle woodland – high water table need, Elan Valley outfall
Grace Dieu And High Sharpley	Leicestershire	SK	4370	1700	LT	1000029	

Table 5.9 Sites Where Hydrological Monitoring Considered ‘Not Necessary’ by English Nature / Agency Conservation Staff

		Ref					
Scotton Beck Fields	Lincolnshire	SK	8770	9880	LT	1001900	
Bevercotes Park	Nottinghamshire	SK	7010	7090	LT	1003450	
Bulwell Wood	Nottinghamshire	SK	5180	4630	LT	1003512	
Creswell Crags	Nottinghamshire	SK	5350	7420	LT	1003950	
Rainworth Heath	Nottinghamshire	SK	5900	5900	LT	1001686	
Messingham Heath	Humberside	SE	8750	0370	LT	1003260	
Charnwood Lodge	Leicestershire	SK	4670	1530	LT	1003563	
Croxton Park	Leicestershire	SK	8230	2790	LT	1003785	
Harby Hills Wood	Leicestershire	SK	7620	2840	LT	1000126	
Holwell Mouth	Leicestershire	SK	7250	2450	LT	1000146	
Lount Meadows	Leicestershire	SK	3850	1910	LT	1000905	
Swithland Wood And The Band	Leicestershire	SK	5390	1250	LT	1003912	
Terrace Hills Pasture, Eaton	Leicestershire	SK	7950	3090	LT	1001980	
Hoveringham Pastures	Nottinghamshire	SK	7070	4660	LT	1000842	
Redgate Wood & Mansey Common	Nottinghamshire	SK	6770	5980	LT	1001728	
Wilford Claypits	Nottinghamshire	SK	5710	3550	LT	1001992	
Dyscarr Wood	South Yorkshire	SK	5810	8710	LT	1000682	
Lindrick Golf Course	South Yorkshire	SK	5430	8250	LT	1000123	
Haxey Turbary	Humberside	SE	7480	0180	LT	1002323	
Manton And Twigmoor	Humberside	SE	9400	0440	LT	1003182	
Beacon Hill, Hangingstone And Out Woods	Leicestershire	SK	5120	1470	LT	1002689	
Burbage Wood And Aston Firs	Leicestershire	SP	4530	9410	LT	1003526	
Cotes Grassland	Leicestershire	SK	5540	2080	LT	1003698	
Croft Pasture	Leicestershire	SP	5100	9580	LT	1003760	

Table 5.9 Sites Where Hydrological Monitoring Considered 'Not Necessary' by English Nature / Agency Conservation Staff

Site Name	County	G Ref	G Ref-E	G Ref-N	Area	EN Ref	Comment
Muston Meadows	Leicestershire	SK	8240	3670	LT	No	
Pasture And Asplin Woods	Leicestershire	SK	4260	2160	LT	1001129	
Sproxtton Quarry	Leicestershire	SK	8640	2530	LT	1001934	
Ulvercroft Valley	Leicestershire	SK	5000	1260	LT	1002060	
Wymondham Rough	Leicestershire	SL	8310	1750	LT	1002070	
Scotton and Loughton Forest Ponds	Lincolnshire	SK	8600	9950	LT	1000357	
Annesley Woodhouse Quarry	Nottinghamshire	SK	4890	5340	LT	1003390	
Bagthorpe Meadows	Nottinghamshire	SK	4690	5190	LT	1002878	
Bogs Farm Quarry	Nottinghamshire	SK	4820	5340	LT	1003494	
Dovedale Wood	Nottinghamshire	SK	4660	6320	LT		
Eakring & Maplebeck Meadows	Nottinghamshire	SK	7050	6220	LT	1000704	
Fiezeland Grassland	Nottinghamshire	SK	4760	5060	LT	1000713	
Kinoulton Marsh & Canal	Nottinghamshire	SK	6780	3050	LT	1000873	
Orston Plaster Pits	Nottinghamshire	SK	7630	4020	LT	1001660	
Sledder Wood Meadow	Nottinghamshire	SK	4970	4690	LT	1001832	
Teversal Pastures	Nottinghamshire	SK	4930	6170	LT	1001866	
Wellow Park	Nottinghamshire	SK	6830	6710	LT	1001955	
Willwell Cutting	Nottinghamshire	SK	5670	3480	LT	1002006	
Jumble Coppice	Peak District	SK	2680	7210	LT	1003941	Geological SSSI for carboniferous stratigraphy
Longstone Moore	Peak District	SK	1950	7350	LT	1001029	Ponds are only minor part of SSSI interest
Edgbaston Pool	West Midlands	SP	0540	8410	UT	1001509	Water height controlled by weir
Bentley Park Wood	Warwickshire	SP	2890	9550	UT	1001109	Not sensitive
Old River Dove, Marston On Dove	Derbyshire	SK	2380	2850	UT	1001024	Water height fixed by weir
Big Hyde Rough	Staffordshire	SJ	8640	0830	UT	1005758	Probably no threats

Table 5.9 Sites Where Hydrological Monitoring Considered 'Not Necessary' by English Nature / Agency Conservation Staff

Site Name	County	G Ref	G Ref-E	G Ref-N	Area	EN Ref	Comment
Braken Hurst	Staffordshire	SK	1370	2220	UT	1003871	Probably robust habitat
Forest Banks	Staffordshire	SK	1200	2840	UT	1000108	Low vulnerability
Four Ashes Pit	Staffordshire	SJ	9140	0830	UT	1000962	Geological
Goat Lodge	Staffordshire	SK	0840	2650	UT	1000165	Robust habitat – no known threats
The Wilderness & Vermin Valley	Staffordshire	SO	8120	8380	UT	1000580	Not in Upper Trent
Swan Pool & The Swag	West Midlands	SK	0400	0190	UT	1000981	

Table 5.9 Sites Where Hydrological Monitoring Considered 'Not Necessary' by English Nature / Agency Conservation Staff

Site Name	County	G Ref	G Ref - E	G Ref - N	EN Ref	EA Pres	EA Future	GW COMMENT	EN/CONSERVATION COMMENT
Ashmoor Common	H&W	SO	8520	4670	1001315	High	High	BH installed into terrace deposits July 1999 to help assess GW contribution to site wetness. Monitor borehole to relate to other hydrological factors (precipitation, level of R Severn etc.)	
Walmore Common	Glos	SO	7400	1820	1003511	Low	Low	None	
Ipsley Alders Marsh	H&W	SP	10130	6760	1000148	Med-High	Med-High	Current meter gauging survey to establish baseline conditions	
Brandon Marsh	Warks	SP	3850	7550	1001151	Low-Med	Low-Med	Periodic (summer) mapping of surface wetness, monitoring of springflow	
Juniper Hill, Elyeworth	Glos	SO	9280	0580	1001694	Med-High	High	Determine local GW levels and gauge flows in the Holy Brook and its tributaries	
Upton Ham	H&W	SO	8600	4000	1001604	Low	Low	None	
Woodchester Park	Glos	SO	8200	0140	1003561	Med-High	Med-High	Tubewell to be installed and monitored along with springflows during pumping tests to quantify any derogation effects	
Kingscote and Horsley Woods	Glos	ST	8310	9710	1001720	Low	Low-Med	Determine water levels in Cotswold oolitic limestones	
Puckham	Glos	SP	0100	2240	G/S/50	Low-Med	Low-Med	Gauging of the springflow should be undertaken to provide a baseline for any future impact assessment	
Long Itchington & Ufton Woods	Warks	SP	3880	6270	1002035	Low-Med	Low-Med	Periodic mapping of surface wetness incl. Records of springs and seepages and photos	
Ullenhall Meadows	Warks	SP	1220	6780	1003442	Low-Med	Low-Med	Install shallow and deep piezos	
Whichford Wood	Warks	SP	3050	3420	1002348	Low-Med	Low-Med	Install shallow piezo. Periodic mapping of site wetness incl. Springflows	
Herald Way Marsh	WM	SP	3800	7690	1005052	Low	Low-Med	Install tubewell to the N or W of site to determine if any hydraulic connexion exists between the Sand and Gravel and the site	
Bredon Hill	H&W	SO	9530	4000	1001495	Low	Low-Med	None urgent but piezos should be installed to improve understanding of spring flow + spot gauging to establish whether there is a gw contribution to on-site streamflows	
Cave's Inn Pits	Leics	SP	5380	7950	1003549	Low	Low-Med	None	
Tilehill Wood	WM	SP	2790	7900	1001592	Low-Med	Low-Med	None	
Cotswold Commons and Beechenods	Glos	SO	8000	1310	1003891	Low	Low	Collect gw data from Inferior Oolite	
Crickley Hill and Barrow Wake	Glos	SO	8290	1610	1001395	Low	Low	Collect gw data from Inferior Oolite	
Frampton Pools	Glos	SO	7530	3710	1001493	Low	Low	Any licence applications should include Pumping Test results	
Castlemorton Common	H&W	SO	7840	5920	1003434	Low	Low	Spot gauging to establish whether there is gw contribution to on-site streamflows	
Eastnor Park	H&W	SO	7450	3780	1000829	Low	Low	Spot gauging to establish whether there is gw contribution to on-site streamflows	
Trench Wood	H&W	SO	8390	5860	1004161	Low	Low	Install piezos to monitor gw levels in Westbury Formation sandstone and Walmore Marshes limestone	
Wyde Moor, Feckenham	H&W	SP	0110	3030	1000459	Low	Low	Install piezos into peat to establish long-term trends in gw levels	
Misterton Marshes	Leics	SP	5570	9520	1004320	Low	Low	Install and monitor tubewell in any future p-tests to quantify any derogation effects	

Table 7.1 Lower Severn Wetland Monitoring Actions



Site Name	County	G Ref	G Ref - E	G Ref - N	EN Ref	EA Pres	EA Future	GW COMMENT	EN/CONSERVATION COMMENT
Snitterfield & Bearley Bushes	Warks	SP	1990	6050	1002251	Low	Low	Install shallow piezoes	
Stockton Railway Cutting and Quarry	Warks	SP	4400	6500	1002324	Low	Low	Install shallow piezoes	
Wolston Weist & Old Covert	Warks	SP	2370	3350	1000174	Low	Low	Periodic monitoring of site wetness including streamflow	
Bishop's Hill Wood	Avon	ST	7390	8700	no	Low	Low	None	
Varley Meadows	Avon	ST	7570	8080	1002054	Low	Low	None	
Ashleworth Ham	Glos	SO	6030	2600	1000526	Low	Low	None	
Badgeworth	Glos	SO	9110	2060	1000542	Low	Low	None	
Bushley Muzzard, Brimsfield	Glos	SO	9440	1330	1003794	Low	Low	None	
Chaceley Meadows	Glos	SO	8570	3060	1000673	Low	Low	None	
Cleve Common	Glos	SO	9900	3600	1000720	Low	Low	None	
Coccombe Hill Canal	Glos	SO	8700	3690	1000769	Low	Low	None	
Lincoln Wood	Glos	SO	9870	1870	1002850	Low	Low	None	
May Hill	Glos	SO	6950	1140	1001791	Low	Low	None	
Midger	Glos	ST	7970	1890	1002632	Low	Low	None	
Minchenhampton Common	Glos	SO	8550	2700	1003430	Low	Low	None	
Old River Severn, Upper Lode	Glos	SO	8600	3310	1003255	Low	Low	None	
Severn Ham, Tewkesbury	Glos	SO	8850	3150	1003725	Low	Low	None	
Sordley Ponds	Glos	SO	8620	1120	1003725	Low	Low	None	
Upham Meadow & Summer Leasow	Glos	SO	9170	3750	1003981	Low	Low	None	
Berry Mount Pastures	H&W	SP	0940	7180	1007294	Low	Low	None	
Abchurch Coppice	H&W	SO	7740	6080	1005335	Low	Low	None	
Aston Ingham Meadows	H&W	SO	6890	2820	1004216	Low	Low	None	
Avon Valley	H&W	SO	9450	4350	1000907	Low	Low	None	
Birtel Reservoirs	H&W	SP	0160	7510	1000942	Low	Low	British Waterways monitor levels	
Cockshole Meadows	H&W	SO	8890	5010	1005948	Low	Low	None	
Dagnall End Meadow	H&W	SP	0520	6910	1009658	Low	Low	None	
Foster's Green Meadows	H&W	SO	9780	6410	1004455	Low	Low	None	
Grafton Wood	H&W	SO	9720	5810	1004480	Low	Low	None	
Long Meadow, Thross	H&W	SP	0150	5510	1000925	Low	Low	None	
Maltby Farm Meadows	H&W	SO	8060	3900	1001814	Low	Low	None	
Micklefield Meadow	H&W	SO	8190	3840	1005774	Low	Low	None	
Pipershill Common	H&W	SO	8580	3500	1001952	Low	Low	None	
Pockley Meadows	H&W	SO	8290	3080	1001906	Low	Low	None	
Rye Street Meadows	H&W	SO	7850	3660	1002192	Low	Low	None	
Stock Wood Meadows	H&W	SO	9980	5660	1007255	Low	Low	None	
Stokery Cottage Meadows	H&W	SO	9060	6140	1007264	Low	Low	None	
Tiddesley Wood	H&W	SO	8280	4850	1001906	Low	Low	None	
Stanford Park	Leics	SP	5970	7930	1001950	Low	Low	None	
Aston Grove & Wilbycombe Wood	Warks	SP	1420	5730	1000014	Low	Low	None	
Cakrill Lodge Meadows	Warks	SP	4660	6330	1003332	Low	Low	None	
Combe Pool	Warks	SP	3920	7940	1001242	Low	Low	None	
Draycote Meadows	Warks	SP	8510	7080	1001298	Low	Low	None	
Hartley Railway Cutting	Warks	SP	3770	6030	1001314	Low	Low	None	

Table 7.1 Lower Severn Wetland Monitoring Actions



Site Name	County	G Ref	G Ref - E	G Ref - N	EN Ref	EA Pres	EA Future	GW COMMENT	EN/CONSERVATION COMMENT
Knarvenhill Wood	Warks	SP	2460	4920	1002305	Low	Low	None	
Losley Church Meadow	Warks	SP	2590	5330	1002480	Low	Low	None	
Oxhouse Farm	Warks	SP	3000	5090	1002143	Low	Low	None	
Rough Hill & Wirehill Woods	Warks	SP	0520	8400	1003487	Low	Low	None	
Ryton Wood	Warks	SP	3810	7250	1002217	Low	Low	None	
Shertons Meadows	Warks	SP	2420	6180	1000498	Low	Low	None	
Ulton Fields	Warks	SP	3830	8750	1001036	Low	Low	None	

Table 7.1 Lower Severn Wetland Monitoring Actions

Site Name	County	G Ref	G Ref - E	G Ref - N	EN Ref	EA Pres	EA Future	EN/EA	GW COMMENT	EN/CONSERVATION COMMENT
Hartlebury Common and Hilditch Coppice	H&W	SO	8240	7070	US	High	High	2a	Monitor on-site boreholes and relate data from the various sources to build up hydrological conceptual model	Monitor gaugeboard in Hilditch Pool and relate to local gw levels
Hodnet Heath	Shrops	SJ	6200	2820	US	Med-high	Med-high	2a	Continue shropshire GW borehole monitoring	Install gaugeboard in a perennial pond and compare with gw level
Grimley Brick Pits	H&W	SO	8400	5050	US	Low	Low	2b	Ascertain sources of inflow WLMP?	Ascertain sources of inflow
Shrawley Wood	H&W	SO	8080	6800	US	Low	Low-Med	2b	Ascertain sources of inflow to pools	Ascertain sources of inflow to pools
Bomere, Shomere & Betton Pools	Shrops	SJ	5040	0780	US	Low	Low	2b	None	
Brown Moss	Shrops	SJ	5620	3950	US	Low	Low-Med	2b	Additional tubewells should be installed preferably at various depths	Permanent sw gauges within the major ponds should be maintained or established
Fenemere	Shrops	SJ	4450	2280	US	Low	Low-Med	2b	Any application for abstraction licence should be supported with results from a constant rate test which requires shallow obs BH to be installed	
Lin Can Moss	Shrops	SJ	3750	2110	US	High	High	2b	Continue to monitor existing BHs in peat and deeper BHs to establish hydraulic connexion between peat and solid geology	
White Mere	Shrops	SJ	4140	3300	US	Low-Med	Low-Med	2b	Further info needed. Regular monitoring of existing dipwells required at SJ4145 3330, SJ 4044 3226, SJ 4219 3322 and SJ 4188 3220	Continued monitoring of White Mere lake level
Old River Bed, Shrawsbury	Shrops	SJ	4970	1480	US	High	High		Monitor tubewells and BH within and around site regularly	Baseline hydrological info reqd to identify and assess change
Sweat Mere & Crose Mere	Shrops	SJ	4340	3040	US	Med-high	High		Monitor GW levels through nearby existing SGS BHs	Baseline hydrological info reqd to identify and assess change
Maer Pool	Staffs	SJ	7890	3640	US	High	High		Install tubewells and flow gauges to ascertain seasonal/long-term trends in GW levels and the connexion with baseflow	
Dumbleton Dingle	H&W	SO	7050	7040	US	Low	Med-high		Detailed EIA must accompany any future coal mining applications	Dingle woodland - stream of interest
Crofts Mill Pasture	Shrops	SJ	3050	2460	US	Med-high	Med-high		Install shallow piezos on site and nearby to monitor elevation of local water table + gaugeboards in R Morda near piezos. Map surface wetness periodically.	Baseline hydrological info reqd to identify and assess change
Femhill Pastures	Shrops	SJ	3210	3280	US	Med-high	Med-high		Install shallow piezos to observe relationship between water levels in sandstone and superficial deposits. Also gauge R Perry flow and map surface wetness periodically	Baseline hydrological info reqd to identify and assess change
Burnt Wood	Staffs	SJ	7350	3500	US	Med-high	Med-high		Install shallow piezos and gaugeboards in stream and ponds to ascertain SW/GW interaction. Monthly current meter gauging on-going ALF site	
Checkhill Bogs	Staffs	SO	8520	8790	US	Med-high	Med-high		Gauge flows between 2 pts on spittle Brook to detect possible flow decrease and hence aquifer recharge from SW courses. If flow rates have reduced install 2 piezos to determine the direction of any vertical head gradient	
Upton Warren Pools	H&W	SO	9350	6720	US	Low	Low	3	None	WQ issues, esp salt marsh
Wilden Marsh and Meadows	H&W	SO	8270	7380	US	Low-Med	Low-Med	4	Cut GW abstraction and raise water level e.g. by weir. Monitor site by measuring two nearby tubewells, pond surface level and Stour flow rates. WLMP.	Marsh - abstraction, water quality - water table - Stour

Table 7.2 Upper Severn Wetland Monitoring Actions



Site Name	County	G Ref	G Ref - E	G Ref - N	EN Ref	EA Pres	EA Future	EN/EA	GW COMMENT	EN/CONSERVATION COMMENT
Fenn's, Whixall, Bettisfield, Wem & Cadney Mosses	Shrops	SJ	4900	3650	US	Low	Low-Med		EN priority consents review (not AMP III) agric poll, indust poll, refuse. Install obs tubewells. Licence applications must be accompanied by 7day constant rate test	Vulnerable to impacts of drainage and pollution within catchment
Catherton Common	Shrops	SO	6350	7850	US	Low	Low-Med		Current metering during low flow conditions in Crumps Brook to assess gw contribution to site	Baseline hydrological info reqd to identify and assess change
Clarepool Moss	Shrops	SJ	4330	3420	US	Low	Low-Med		Install >1 tubewell and determine significance of gw inflow	Baseline hydrological info reqd to identify and assess change
Cole Mere	Shrops	SJ	4330	3320	US	Low	Low-Med		Continue monitoring of local obs BH and streamflow during baseflow conditions	Baseline hydrological info reqd to identify and assess change
Marton Pool, Chirbury	Shrops	SJ	2960	0270	US	Low	Low-Med		New abstraction applications should be accompanied by investigation into drift geology/gw flow directions plus constant rate test	Baseline hydrological info reqd to identify and assess change
Sweeney Fen	Shrops	SJ	2750	2500	US	Low	Low-Med		Streamflow should be monitored and origin and significance of gw baseflow determined. GW levels should be monitored in both aquifers on site during any future local constant rate tests	Baseline hydrological info reqd to identify and assess change
Trefonen Marshes	Shrops	SJ	2460	2650	US	Low	Low-Med		Monitor water levels in gravel and limestone aquifers at east edge of site to quantify significance of gw contribution if any	Baseline hydrological info reqd to identify and assess change
Oss Mere	Shrops	SJ	5650	4380	US	Low	Low-Med		Shallow piezos into S&G and gaugeboard in mere to determine GW contribution if any	Baseline hydrological info reqd to identify and assess change
Brampton Bryan Park	H&W	SO	3600	7160	US	Low	Low-Med		Install piezos to improve understanding of spring	Pools + seepages add to interest
Betton Dingle & Gulleys Green	Shrops	SJ	3160	0170	US	Low	Low-Med		Periodic monitoring of streamflow, piezo between abstraction and stream and p test if abs licence granted	
Chorley Covert & Deserts Wood	Shrops	SO	7050	8400	US	Low	Low-Med		Install shallow piezos and gaugeboards in ponds to see whether pools and stream are gw fed	
Redwith Canal to Maesbury Marsh	Shrops	SJ	3040	2470	US	Low	Low-Med		Install gaugeboard to monitor water level in canal and compare with Moreton Pool BH. British Waterways site - Montgomery Canal	
Titterstone Clee	Shrops	SO	5950	7800	US	Low	Low-Med		Install piezos and monitor streamflow to estimate baseflow contribution to streams and monitor local water table	
Whitwell Coppice	Shrops	SJ	6200	0200	US	Low	Low-Med		Assess whether stream receives baseflow with combination of piezos and gauging	
Bush Wood & High Wood	Shrops	SO	7080	8250	US	Low	Low-Med		Monitor carefully if new applications are submitted	
Burrington Meadow	H&W	SO	5485	8385	AS	Low	Low		None	Abstraction and drainage problems - site declining
Oakley Pool	H&W	SO	8230	8060	AS	Low	Low		None	Pool created by subsidence - vulnerable to abstraction/catchment changes
Brindwell Marsh	Shrops	SJ	2640	2340	AS	Low	Low		Install piezos to ascertain if any gw contribution to site water features	Baseline hydrological info reqd to identify and assess change
Burrington Pool	Shrops	SJ	5250	0720	AS	Low	Low		Need to verify underlying geology	Baseline hydrological info reqd to identify and assess change
Brindoverall Gazebo	H&W	SO	6300	0370	AS	Low	Low		None	Several pools - wet grassland in places
Northwick Marsh	H&W	SO	0850	0280	AS	Low	Low		None	Is there a gw component?
Brownheath Moss	Shrops	SJ	4800	8020	US	Low	Low		None	Baseline hydrological info reqd to identify and assess change

Table 7.2 Upper Severn Wetland Monitoring Actions



Site Name	County	G Ref	G Ref - E	G Ref - N	EN Ref	EA Pres	EA Future	EN/EA	GW COMMENT	EN/CONSERVATION COMMENT
Hencott Pool	Shrops	SJ	4900	1600	US	Low	Low		None	Baseline hydrological info reqd to identify and assess change
Muxton Marsh	Shrops	SJ	7160	1340	US	Low	Low		None	Baseline hydrological info reqd to identify and assess change
Newport Canal	Shrops	SJ	7340	1920	US	Low	Low		None British Waterways site	Baseline hydrological info reqd to identify and assess change
Rhos Fiddle	Shrops	SO	2060	8530	US	Low	Low		None	Baseline hydrological info reqd to identify and assess change
Bluewood Pastures	Shrops	SJ	4960	2800	US	Low	Low	4	None	Baseline hydrological info reqd to identify and assess change
Shelve Pool	Shrops	SO	3350	9790	US	Low	Low		None	Baseline hydrological info reqd to identify and assess change
Shrawardine Pool	Shrops	SJ	3980	1620	US	Low	Low	8	Carefully plan and monitor any future dredging	Baseline hydrological info reqd to identify and assess change
Westwood Great Pool	H&W	SO	8800	6830	US	Low	Low	4	None	BW fed - Needs WLMP - WQ issues
Leigh Brook Valley	H&W	SO	7460	5160	US	Low	Low	4	Install piezos in Cowditch Park Formation to obtain further gw hydrograph data for site	Low risk as wetland character not controlled by stream or groundwater flow - WQ issues
Fens Pools	WM	SO	9200	8860	US	Low	Low		Install piezos to establish prevailing gw conditions in Keele formation and Middle Coal Measures. BW site - BW monitors reservoir level	Baseline hydrological info reqd to identify and assess change
Little Byefields Meadow	H&W	SO	7450	4900	US	Low	Low		None	Damp grassland - high water table?
Bank Wood	H&W	SO	8040	8080	US	Low	Low		None	Some pools
Romsley Manor Farm	H&W	SO	9680	7890	US	Low	Low		None	Grasslands - wet flushes - groundwater fed?
Pyre Forest	H&W	SO	7500	7800	US	Low	Low	4	None	Cowls Brook - high silt load from farms
Downton Gorge	H&W	SO	4390	7390	US	Low	Low		None	Small streams etc. dingle woodland - high water table need. Elen Valley outfall
Cuckoopen Coppice	Shrops	SO	5380	9000	US	Low	Low		Install tubewell to ascertain local WT - near surface here?	
Thatchers Wood & Westwood Covert	Shrops	SO	7030	7040	US	Low	Low		Monitor springs to E of site - are they perennial?	
Feckenham Forest	H&W	SO	9220	8320	US	Low	Low	4	None	Minor streams, wet grassland, small pool
Illey Pastures	WM	SO	8220	1620	US	Low	Low		None	Hydrology of minor significance to SSSI interest
Chermes Dingle	Shrops	SO	6110	0700	US	Low	Low		None	
Cornbrook Dingle	Shrops	SO	8020	8570	US	Low	Low		None	
Groundmoor Brook	Shrops	SJ	5580	1570	US	Low	Low		None	
Hope Valley	Shrops	SJ	3420	1150	US	Low	Low		None	
Hughley Brook	Shrops	SO	5680	1840	US	Low	Low		None	
Oak Dingle	Shrops	SO	6050	8210	US	Low	Low		None	
Eminton Brook	Shrops	SJ	6070	4400	US	Low	Low		None	
Sprywood & Aldress Dingle	Shrops	SO	2780	9390	US	Low	Low		None	
Trawern Brook	Shrops	SJ	3040	1180	US	Low	Low		None	
Loynton Moss	Staffs	SJ	7880	2140	US	Low	Low		None	
Baronchard & Spring Farm Pastures	H&W	SO	9420	8120	US	Low	Low	4	None	
Prags Heath	Shrops	SO	8580	9380	US	Low	Low		None	

Table 7.2 Upper Severn Wetland Monitoring Actions

Site Name	County	G Ref	G Ref - E	G Ref - N	EN Ref	EA Pres	EA Future	EN/EA	GW COMMENT	EN/CONSERVATION COMMENT
Lathkill Dale	Derbys	SK	1870	6580	1003711	Low	Low	2a	Agency monitoring to continue. Impact from small abs?	Investigate sewage pollution
Abney & Bretton Cloughs	Peaks	SK	2100	7900	1001834	High	High		Monitoring of springflows and major seepages within the cloughs for better understanding of site's hydrologic regime	Monitoring of springflows identified as assisting, in light of major abstraction at Cavendish mill. Also drainage
Hills & Holes & Soakholme Brook, Warsop	Notts	SK	5550	3780	1000771	Med-high	Med-high	2b	Regular monitoring of stream and springflows. Continued monitoring of Hodhill water levels. Recommend new, more local limestone obs BH be constructed	Calcareous streams/springs - inflow issue
Ticknall Quarries	Derbys	SK	3580	2380	1001240	High	High		Install several tubewells to provide more details on site geology and prevailing gw conditions	Interest of SSSI no associated with the water
Welbeck Lake	Notts	SK	5800	7290	1001932	High	High		Install tubewell to monitor gw levels below the site and the impact of any changes in abstraction regime	WQ - risk from minewater pollution
Grace Dieu And High Sharpley	Leics	SK	4370	1700	1000029	High	High		Install shallow tubewell to monitor on-site gw conditions	
Besthorpe Meadows	Notts	SK	620	683	2000300			3		
Crabtree Wood	Derbys	SK	4900	7850	1000343	Med-high	Med-high		Periodically map the site's surface wetness to detect long term trends. Piezo used to measure head in the Lower main limestone	On sand therefore v sensitive - locally uncommon eriophorum angustifolium
Ginny Spring/Whitwell Wood	Derbys	SK	5200	7380	1000403	Low	Med-high		Any future licence applications should be critically assessed to protect the site	On limestone therefore sensitive - molinia flush and other wetland plants
Maltby Low Common	S Yorks	SK	5450	9130	1000605	Med-high	Med-high		Periodic mapping of surface wetness + install piezo(s) in Mid Permian Marl	Pollution from pumping station overflow, water levels and quality in stream
Hollinhill & Markland Grips	Derbys	SK	5100	7500	1000466	Med-high	Med-high		Gauging study on the site's streams to determine if discharges are falling	On limestone and old mine - could dry out but not especially important for wetland plants
Broughton Alder Wood	Humbs	SE	9600	0090	no	Low-Med	Med-high		Install piezos and monitor levels in the Northampton Sand. Gauge flow rates in the stream as it leaves the site	Effects of adjacent arable land
Clough Woods	Peaks	SK	2560	6150	1002696	Low-Med	Med-high		Install BH in Ashover Grit of the Millstone Grit series	Not especially threatened. Nice wet communities - alder woodland
Monks Dale	Peaks	SK	1350	7450	1003861	Med-high	Med-high		Monitor springflows and major seepages within the cloughs to improve understanding of hydraulic regime. Future applications should be accompanied by flow monitoring before and during a constant rate pump test	STW abstraction soon to cease (already?). Important springs and seepages in site; better understanding of gw-sw interaction required
Thoresby Lake	Notts	SK	6300	7030	1001902	Med-high	Low-Med		Install a shallow tubewell to monitor gw levels and the impact of any changes in the abstraction regime	
Wye Dale and Monsal Dale	Peaks	SK	0990	7240	PD/S/12	Med-high	Low-Med		Gauge flows in the Wye, the springs to thye north of Wormhill and on a tributary winterbourne valley	River not part of core interest. Useful to know impact of abstraction on small flush features across site
Scotton Beck Fields	Lincs	SK	8770	9860	1001900	Low-Med	Med-high		Install shallow piezos (up to 5) to monitor water table in blown sand	
Bevercotes Park	Notts	SK	7010	7090	1003450	Med-high	Med-high		Gauge flow rates of the site stream and install a piezo to measure heads in the Colwick Formation	
Bulwell Wood	Notts	SK	5180	4630	1003512	Med-high	Med-high		A closer inspection of the site (WMC were refused site access) and collection of gw head data from the Mag Limestone	

Table 7.3 Lower Trent Wetland Monitoring Actions

Site Name	County	G Ref	G Ref - E	G Ref - N	EN Ref	EA Pres	EA Future	EN/EA	GW COMMENT	EN/CONSERVATION COMMENT
Creswell Craggs	Notts	SK	5350	7420	1003950	Med-high	Med-high		Gauge streamflows into and out of Craggs Pond to determine any losses to gw storage. Large or nearby applications to abstract should be accompanied by an EIA	
Rainworth Heath	Notts	SK	5900	5900	1001686	Med-high	Med-high		Water levels in the perched aquifers should be established, but via a method other than drilling which may accidentally degrade the shallow aquifer	
Mercaston Marsh and Mugginton Bottoms	Derbys	SK	2690	4350	1005567	Low	Low-Med		Install a shallow tubewell into the Sherwood sandstone	Very important marshy grassland - potential working of gravel could be threat
Cressbrook Dale	Peaks	SK	1730	7380	1002731	Low-Med	Low-Med		Monitor duration and flow rates in the Cress Brook. Install obs well in bottom of dale	Agency to continue WQ monitoring. Flow/level monitoring to be added? Pollution from spar workings?
Eastern Moors	Peaks	SK	2700	7700	1002822	Low	Low-Med		Monitor springflows and seepages	Important site for birds with bogs, flushes and springs and associated flora - streams sensitive to future abstraction
Shining Cliff Woods	Derbys	SK	3350	5300	1001215	Low-Med	Low-Med		Install piezos in Ashover Grit	Flushes with rare bryophytes but on springline so probably OK
Crowle Borrow Pits	Humbs	SE	7900	1050	1002090	Low	Low-Med		Any applications to abstract from the blown sand should be accompanied by site margin gw level monitoring	Effects of surrounding arable land and Stainforth & Keadby Canal outfall
Haxey Grange Fen	Humbs	SK	7370	9730	1002307	Low	Low-Med		Install tubewells into superficial deposits and Sherwood sandstone. Dry weather monitoring of North Carr Drain discharge to confirm the gw contribution to surface waters	To tie in with last 3 years' dipwell monitoring around site by IDB
Lockington Marshes	Leics	SK	4860	3040	1000882	Low	Low-Med		Threat of mineral abstraction. Require BH installation and monitoring as part of any new application	
Goyt Valley	Peaks	SK	0100	7200	1002841	Low	Low-Med		Monitor springflows and major seepages within the cloughs to improve understanding of hydraulic regime.	Monitoring of springflows and seepages reqd. Drainage
Hallam Moors	Peaks	SK	2590	8350	1002892	Low	Low-Med		Future applications should be accompanied by a constant rate pumping test and streamflow monitoring of the 2 drainage systems	Important area of blanket bog supporting moorland birds and birds of prey and with botanically rich wet flushes
Morley Brick Pits	Derbys	SK	3890	4180	1000522	Low-Med	Low-Med		Install a piezo into the gritstone to determine the direction of any head gradient between the pools and the gritstone gw store	Main issue is eutrophication of the water
Via Gellia Woodlands	Derbys	SK	2650	5620	1003009	Low-Med	Low-Med		Gauge flow rates of the stream running through the dale in order to detect any long term trends	
Newton Burgoland Marshes	Leics	SK	3810	0840	1001033	Low	Low-Med		Install piezos in alluvium to determine horizontal and vertical components of gw flow	
Linby Quarries	Notts	SK	5350	5230	1000938	Low	Low-Med		Testing of future large licence applications should include flow monitoring of springs and the R Leen	Springfed woodland
Topley Pike & Deepdale	Peaks	SK	0990	7170	1000145	Low-Med	Low-Med		Monitor winter flow rates in ephemeral streams. Information with respect to sw and gw and EIA on the adjacent quarry would also be useful	Monitor ephemeral winterbourne. Possible impact if adjacent quarry goes sub-aqua
Anston Stones Wood	S Yorks	SK	5310	8310	1004347	Low	Low-Med		Survey bed and gauge stream to ascertain gaining and losing reaches of river. Careful interpretation of p test necessary for any new licence application	WQ in Anston Brook

Table 7.3 Lower Trent Wetland Monitoring Actions

Site Name	County	G Ref	G Ref - E	G Ref - N	EN Ref	EA Pres	EA Future	EN/EA	GW COMMENT	EN/CONSERVATION COMMENT
Messingham Heath	Humbs	SE	8750	0370	1003260	Low-Med	Low-Med		Install piezos to monitor local water table elevation, esp in NE corner. Careful interpretation of pumping test during licence application essential	
Charnwood Lodge	Leics	SK	4670	1530	1003563	Low	Low-Med		Install gaugeboard in Colony Reservoir + shallow obs BH in Mercia Mudstone	
Croxton Park	Leics	SK	8230	2790	1003785	Low	Low-Med		Install BHs in Northampton Sands whence springs issue	
Harby Hills Wood	Leics	SK	7620	2840	1000126	Low	Low-Med		If any abstractions are considered, pumping tests must include obs BHs between abs BH and site	Periodic mapping of site wetness
Holwell Mouth	Leics	SK	7250	2450	1000146	Low	Low-Med		Monitor spring and seepage flows to determine impact of any abstractions in the area	
Lount Meadows	Leics	SK	3850	1910	1000905	Low	Low-Med		Install shallow BH in Central site near pond to monitor water table	
Swithland Wood And The Brand	Leics	SK	5390	1250	1003912	Low	Low-Med		Install piezo to establish whether pools are gw fed	
Hoveringham Pastures	Notts	SK	7070	4660	1000842	Low-Med	Low-Med		Monitor water levels in the site's pond. Install piezos in the superficial deposits overlying the Mercia mudstone to detect gw levels and head gradients	
Wilford Claypits	Notts	SK	5710	3550	1001992	Low-Med	Low-Med		Periodically map the surface wetness of the site and install a piezo into the Mercia Mudstone	
Dyscarr Wood	S Yorks	SK	5810	8710	1000682	Low	Low-Med		Install gaugeboards in pools to establish whether gw fed + piezos to monitor local water table; careful interpretation of p tests if new applications received	
Lindrick Golf Course	S Yorks	SK	5430	8250	1000123	Low	Low-Med		Levelling survey of R Ryton to enable assessment of when/whether baseflow occurs + periodic flow monitoring to estimate quantity of inflow	
Misson Line Bank	Humbs	SK	7150	9510	1001020	Low	Low-Med		Install shallow piezos to monitor water levels in superficial deposits and sherwood sandstone. Regular monitoring is required to establish whether hydraulic continuity exists between surface and sandstone	
Dimmisdale	Leics	SK	3770	2180	1005587	Low	Low-Med		Install obs BH in limestone to see if Laundry Pool is gw fed	
Birklands & Bilhaugh	Notts	SK	6200	6830	1003476	Low-Med	Low-Med	4	Continued modelling and a management strategy based around reducing gw abstraction wherever possible	Negligible risk as site is free draining (?contradicts GW comment)
Terrace Hills Pasture, Eaton	Leics	SK	7950	3090	1001980	Low	Low-Med		None unless abstraction application submitted	
Stoney Middleton Dale	Peaks	SK	2100	7600	1004059	Low-Med	Low-Med		None	Is the large abstraction at Cavendish mill affecting cave development? Pollution
Breadsall Railway Cutting	Derbys	SK	3950	3940	1000193	Low-Med	Low-Med		None	
Holme Pit	Notts	SK	5360	3450	1000826	Low	Low-Med		None	
Redgate Wood & Mansey Common	Notts	SK	6770	5980	1001728	Low-Med	Low-Med		None	
Wade Park	Derbys	SK	8850	2300	1005792	Low	Low		Install on-site tubewell to establish significance of gw	Water levels, quality and quantity issues Ponds used by toads - also issue of dredging
Wigworth Turbary	Humbs	SE	7550	0400	1002281	Low	Low		None	To tie in with proposed GW monitoring by IDB - also WQ in drains around site

Table 7.3 Lower Trent Wetland Monitoring Actions



Site Name	County	G Ref	G Ref - E	G Ref - N	EN Ref	EA Pres	EA Future	EN/EA	GW COMMENT	EN/CONSERVATION COMMENT
Messingham Sand Quarry	Humbs	SE	130	0350	1001209	Low	Low	4	Future low if nearby dewatering or development of superficial aquifers	Effects of adjacent arable land
Grobby Pool and Woods	Leics	EK	10	0690	1000094	Low	Low		None	Wetland interest, flooding issues, water level management reqd
Wardour Hill Bog	Leics	SP	598	1890	1000988	Low	Low		None	SW input, quantity - needs WLMP
Garver's Reservoir	Derbs	SM	300	1890	1000288	Low	Low		None	Marsh now dries up in periods of reservoir drawdown
Malton Hill Marsh	Notts	SE	6720	8740	1000998	Low	Low		None	Drying out - water level management may be reqd
Pinby Marsh	Leics	SM	8860	1340	1004512	Low	Low		None	Wetland interest, no immediate threat
Barrow Gravel Pits	Leics	SE	5000	1680	1002884	Low	Low		None	Wetland interest - WQ important
Selkirkton Bog	Leics	SM	8858	1450	1003408	Low	Low		None	Spungled mire - no immediate threat
Loughborough Meadows	Leics	SK	5380	5180	1002254	Low	Low		Placement student installing and monitoring shallow gw during spring and summer 2000. Possibility for Agency to take over monitoring at a later date	Flood plain meadow, water level management reqd
Wether Dene, Minton	Notts	SE	7710	1580	1008392	Low	Low		None	WQ issue
Dark Peak	Peaks	SK	1100	1800	PD/S/31	Low	Low		None	Low-ish priority - monitoring may help identify if abstraction affects damp rushy pastures on site fringes.
Yarncliff Wood, Padley	Peaks	SK	8850	950	1003953	Low	Low		None	Drainage
Roundkirk Moor	Peaks	SK	8860	1830	PD/S/29	Low	Low		None	Mainly woodland interest and birds but does have important lichen and bryophytes along stream
Hexey Turbary	Humbs	SE	7480	0980	1002323	Low	Low		Install nested piezos to establish connexion if any between superficial deposits and Sherwood Sandstone	Not especially sensitive but has important wet flush vegetation and wet dwarf shrub heath
Scotton and Laughton Forest Ponds	Lincs	EK	8600	8180	1000357	Low	Low		Commence regular monitoring of water levels in ponds and any local private wells. If it is established that ponds receive gw inflow, all future abstraction applications should be accompanied by constant rate pump tests	
Manton And Vengrove	Humbs	SE	8608	0480	1001180	Low	Low		None	
Bacon Hill, Hangingstone And Out Woses	Leics	SK	5120	1490	1002689	Low	Low		None	
Burbage Wood And Aston Firs	Leics	SP	8530	8410	1003526	Low	Low		None	
Cotes Grassland	Leics	SK	5540	8010	1003658	Low	Low		None	
Croft Pasture	Leics	SP	5160	8540	1003760	Low	Low		None	
Muston Meadows	Leics	SK	8240	8850	SK	Low	Low		None	
Pasture And Aspin Woods	Leics	SM	4780	2180	1001189	Low	Low		None	
Sproton Quarry	Leics	EK	8540	2580	1001934	Low	Low		None	
Uverscroft Valley	Leics	SK	5000	1260	1002080	Low	Low		None	
Annesley Woodhouse Quarry	Notts	SK	4890	5340	1003390	Low	Low		None	
Boxthorpe Meadows	Notts	SK	6698	4190	1002878	Low	Low		None	
Bogs Farm Quarry	Notts	SK	4830	7340	1003404	Low	Low		None	
Dovedale Wood	Notts	SK	4680	8320	17W/S/2A	Low	Low		None	
Haknng & Maplebeck Meadows	Notts	SK	7050	8220	1000704	Low	Low		None	
Embsayland Grassland	Notts	SK	6760	3080	1000745	Low	Low		None	

Table 7.3 Lower Trent Wetland Monitoring Actions

Site Name	County	G Ref	G Ref - E	G Ref - N	EN Ref	EA Pres	EA Future	EN/EA	GW COMMENT	EN/CONSERVATION COMMENT
Kincoburn Marsh & Canal	Notts	SK	6780	1050	1000673	Low	Low		None	
Orston Plover Pits	Notts	SK	7630	1020	1001660	Low	Low		None	
Stedder Wood Meadow	Notts	SK	4970	1890	1001832	Low	Low		None	
Teversal Pastures	Notts	SK	4030	1170	1001866	Low	Low		None	
Willow Park	Notts	SK	6030	1710	1001955	Low	Low		None	
Willow Cutting	Notts	SK	5670	1460	1002036	Low	Low		None	
Jumble Coppice	Peaks	SK	2680	1210	1000541	Low	Low		None	Geological SSSI for carboniferous stratigraphy
Longstone Moor	Peaks	SK	1950	1350	1001023	Low	Low		None	Ponds are only a minor part of SSSI interest
Wymondham Rough	Leics	SK	8310	1750	1002070	Low	Low		None	
Bellers Wood	Notts	SK	5250	1150	1001822	Low	Low		None	

Table 7.3 Lower Trent Wetland Monitoring Actions



Site Name	County	G Ref	G Ref - E	G Ref - N	EN Ref	EA Pres	EA Future	EN/EA	GW COMMENT	EN/CONSERVATION COMMENT
Edgheaston Pool	WM	SP	0540	8410	1001500	Low	Med-High	1a	Install shallow tubewell into Sherwood sandstone	Water height controlled by weir
Daley Common	Staffs	SJ	0100	2170	1003618	Low	Low	2b	Reinstall tubewell monitoring in superficial deposits	
Barkwell Marsh	WM	SP	2280	7980	1006055	High	High		Install shallow tubewells to confirm (or otherwise) gw seepage to stream	Very sensitive habitat. Some threats
Biddulphs Pool & No Man's Bank	Staffs	SK	0300	1030	1004070	Low	High		Continue hydrometric and hydrochemical monitoring	Being monitored as part of Bleak House opencast
Pipe Green Meadows	Staffs	SK	1010	0000	no	High	High		Many - see WMC report: review of Unit licensing policy, reduce abstractions, review Leamonsley Brook augmentation BH rates, TV log of BH at Darwin's Bath Spring, hydrogeological investigation, site wetness mapping	
Hulland Moss	Derbys	SK	2500	4620	1000495	Low	Med-High		Install shallow tubewells into Millstone Grit to establish prevailing gw conditions and evaluate effects of drainage ditches	
Thorncliffe Moor	Staffs	SK	0240	5860	1003081	Med-High	Med-High		Undertake regular current meter gauging survey to establish baseline conditions and seasonality of flow. Tubewells should also be installed to monitor gw levels	V sensitive habitat. Needs baseline data
Baswich Meadows	Staffs	SJ	9500	2270	1003845	Med-High	Med-High		Install shallow and deep piezos into alluvium and SS respectively and gaugeboards in R Sow and compare with nearby obs borehole records	WQ may be a threat
Dimmings Dale and the Ranger	Staffs	SK	0530	4340	1007136	Med-High	Med-High		Gauge flows in Dimmings Dale river. Install piezos in sandstone beneath Ranger and map surface wetness periodically	WQ of stream - important for crayfish
Stafford Brook	Staffs	SK	0230	1940	1000348	Med-High	Med-High		Install nested piezos to identify gw head in alluvium and alluvium thickness and head gradient with SS. Also twice-yearly surface wetness mapping	Quality and quantity of water in Stafford Brook
Stanton Pastures & Cuckoocliff Valley	Staffs	SK	1220	4730	1001324	Med-High	Med-High		Piezos in Milldale Limestone nr EllisBk/Ellis Hill, in SS in S of site + gauge flows in Ellis Bk	
Cop Mere	Staffs	SJ	8020	2470	1000057	Low-Med	Low-Med		Monitor the 3 recently installed tubewells along R Sow u/s of Cop Mere and relate to stream stage to establish baseflow contribution. Link to Burntwood ALF	RAMSAR site - quality and quantity of R Sow water
Jockey Fields	WM	SK	0410	0330	1007138	Low-Med	Low-Med		Install piezos to obtain gw head data for the marl from which sw/gw interaction can be gauged	Sensitive habitat - needs baseline data
Chartley Moss	Staffs	SK	0270	2830	1002337	Low-Med	Low-Med		Abstractions in Mercia Mudstone should be critically assessed to avoid any derogation of gw beneath peat	Rainwater quality a problem
Chasewater Heaths	Staffs	SK	0390	0800	1004325	Low-Med	Low-Med		Install shallow piezos to investigate perched water in Coal Measures + gaugeboard in permanent pond	WQ of streams
Clayhanger	WM	SK	0340	0450	1003040	Low-Med	Low-Med		Install piezos and map surface wetness to establish the degree of interaction between sw and gw systems	Need baseline data
Monkspath Meadow	WM	SP	1450	7630	1001744	Low-Med	Low-Med		Install piezos in superficial deposits and mudstone and establish long-term trends	Threats already known
Sheepy Fields	Leics	SK	3320	0250	1001283	Low-Med	Low-Med		Shallow tubewells should be sunk to establish gw conditions	
Bath Pasture	Staffs	SK	0630	4590	1003862	Low	Low-Med		Current meter gauging survey	Sensitive habitat. No known threats
King's & Hargreaves Woods	Staffs	SJ	8600	4020	1000991	Low-Med	Low-Med		Install shallow piezos to determine sw/gw interaction	Very small part of site susceptible to hydrological impacts. No known threats
Swineholes Wood & Black Heath	Staffs	SK	0480	5040	1000970	Low-Med	Low-Med		Monitor springflow, site wetness, piezos in sandstone, streamflow	Not very sensitive habitat

Table 7.4 Upper Trent Wetland Monitoring Actions

Site Name	County	G Ref	G Ref - E	G Ref - N	EN Ref	EA Pres	EA Future	EN/EA	GW COMMENT	EN/CONSERVATION COMMENT
Whiston Eaves	Staffs	SK	0370	4630	2000137	Low-Med	Low-Med		Flow gauging and surveying to see if streams accept baseflow. Long-duration p test and monitoring of springflow if applications for gw abs received	
Hoar Park Wood	Warks	SP	2650	9330	1002159	Low-Med	Low-Med		Install shallow piezos on site, gauge flows and survey streambed	Not very sensitive habitat
Kingsbury Wood	Warks	SP	2330	3760	1001991	Low-Med	Low-Med		Install shallow piezo and survey streambed levels	WQ in colliery spoil. Not v sensitive habitat
Whitacre Heath	Warks	SP	2080	9280	1002177	Low-Med	Low-Med		Install piezos to compare water table with river stage at Lea marston gauging station	Mainly river influenced. WQ in flood
Windmill Naps Wood	Warks	SP	0930	7240	1005718	Low-Med	Low-Med		Install shallow piezos	Not known
Bentley Park Wood	Warks	SP	2890	9550	1001109	Low-Med	Low-Med		Periodic monitoring of site wetness (summer). Maybe also installation of shallow piezos, flow gauging/surveying of streambed levels	Not sensitive
Hamps & Manfield Valleys	Peaks	SK	1000	1400	1002911	Low	Low		Site's rivers vulnerable to baseflow degradation?	Important karst area with numerous caves and swallowholes, seasonal river and crayfish
Miss Carr	Peaks	SK	0730	590	1003901	Low	Low		Potentially vulnerable to abstractions upgradient at Milestone Grit	Small mire site, thought to be drying out. Very sensitive habitats. Vulnerable. Drainage?
Rawbones Meadow	Staffs	SL	9850	1250	1001238	Low	Low		Shallow tubewells to improve understanding of alluvium/Sherrwood Sandstone relationship	V sensitive habitat. Needs baseline data
Cannock Extension Canal	Staffs	SK	0190	840	1006568	Low	Low		None	eSAC - WQ - concerns re adjacent landfill/road. Water might flood
Pasturefields Salt Marsh	Staffs	SL	9920	1480	1003939	Low	Low		None	eSAC - does WQ of Trent and other adjoining water courses affect site? Needs baseline data urgently including WQ (salt/fresh balance)
Colleshill & Barnsley Pools	Warks	SP	2000	4300	1001218	Low	Low		None	Waterway runoff
Motley Meadows	Staffs	SL	8400	1440	1002612	Low	Low		Regular monitoring including site wetness and photographic records to ensure that any drying out is noticed early if abstractions are granted from cravels	eSAC - flood meadow. V sensitive. Concerns over WQ in adjoining water courses. Else no known threats
Beas Nest & Green Clay Pits	Derbys	SK	2400	8170	1004504	Low	Low		None	Reworking could affect water table
Leak Motts	Peaks	SK	0200	6100	1003770	Low	Low	4	More info needed	Historic drainage issue. Much concern in recent years over drying out and thus loss of moorland birds
Allmore Green Common	Staffs	SL	8580	1100	1003900	Low	Low		None	Very sensitive habitats
Gentleshaw Common	Staffs	SK	0500	1100	1005784	Low	Low	4	None	Some sensitive habitats - no known threats
Nyecliffe Pools	Warks	SK	2490	6100	1003784	Low	Low		None	Agricultural pollution, silt load
Shubbers Green Bog	WM	SK	0480	3160	1001541	Low	Low		None	Very sensitive
Cannock Chase	Staffs	SL	9900	1100	1004487	Low	Low		EN Priority Consents Review (not AMP III) industrial pollution	None
Ford Green Floodbed	Staffs	SL	8870	5110	1005753	Low	Low		Shallow tubewell into alluvium to establish local gw and baseflow conditions	Quality of inflowing water. Probably robust habitat
Middleton Pool	Warks	SP	1900	9140	1002103	Low	Low		Install subwell into adjacent Second River Terrace deposits to establish if any gw inflow to Middleton Pool or lower stream	Agricultural pollution, silt load
Clowes Wood & New Fallings Cordice	Warks	SP	1020	7110	1001494	Low	Low		None	Agricultural pollution. Some sensitive habitats
Bickenhill Meadows	WM	SP	1820	4020	1002647	Low	Low		None	Probably not v sensitive
Old River Dove, Marston On Dove	Derbys	SK	2380	2810	1001024	Low	Low		None	Water height controlled by weir
The Hyde Rough	Staffs	SL	1840	0810	1005758	Low	Low		None	Probably no threats
Broken Hurst	Staffs	SK	1370	2210	1003871	Low	Low		None	Probably robust habitat
Forest Banks	Staffs	SL	1270	0810	1005108	Low	Low		None	Low vulnerability

Table 7.4 Upper Trent Wetland Monitoring Actions



Site Name	County	G Ref	G Ref - E	G Ref - N	EN Ref	EA Pres	EA Future	EN/EA	GW CLIMATE	ENVIRONMENTAL ACTION COMMENT
Emm Ashes Pit	Staffs	SJ	9140	0630	1000982	Low	Low		None	Geological
Emm Lodge	Staffs	SK	0640	2650	1000166	Low	Low		Redundant mapping of site withness plus regular monitoring of adjacent pool (orangeboard)	Robust habitat - no known threats
The Wilderness & Vermin Valley	Staffs	SO	8120	8380	1000580	Low	Low		None	Not in Upper Trent
Emm Pool & The Swag	WM	SK	0400	0190	1000981	Low	Low		Install siltfallow tubewell to establish gw levels in underlying gravels	All threats known
Emm Gravel Pits	Derbys	SK	2490	3150	1000451	Low	Low		None	
Emmlands Quarry	Warks	SP	3250	9470	1000987	Low	Low		None	
Emm Park	WM	SP	0890	9740	1001574	Low	Low		Monitoring investigation completed by Area (Spring 1999). GW monitoring by SSWC in place as new licences to East, which are time-limited. Continue to monitor condition of the site.	

Table 7.4 Upper Trent Wetland Monitoring Actions

FIGURES

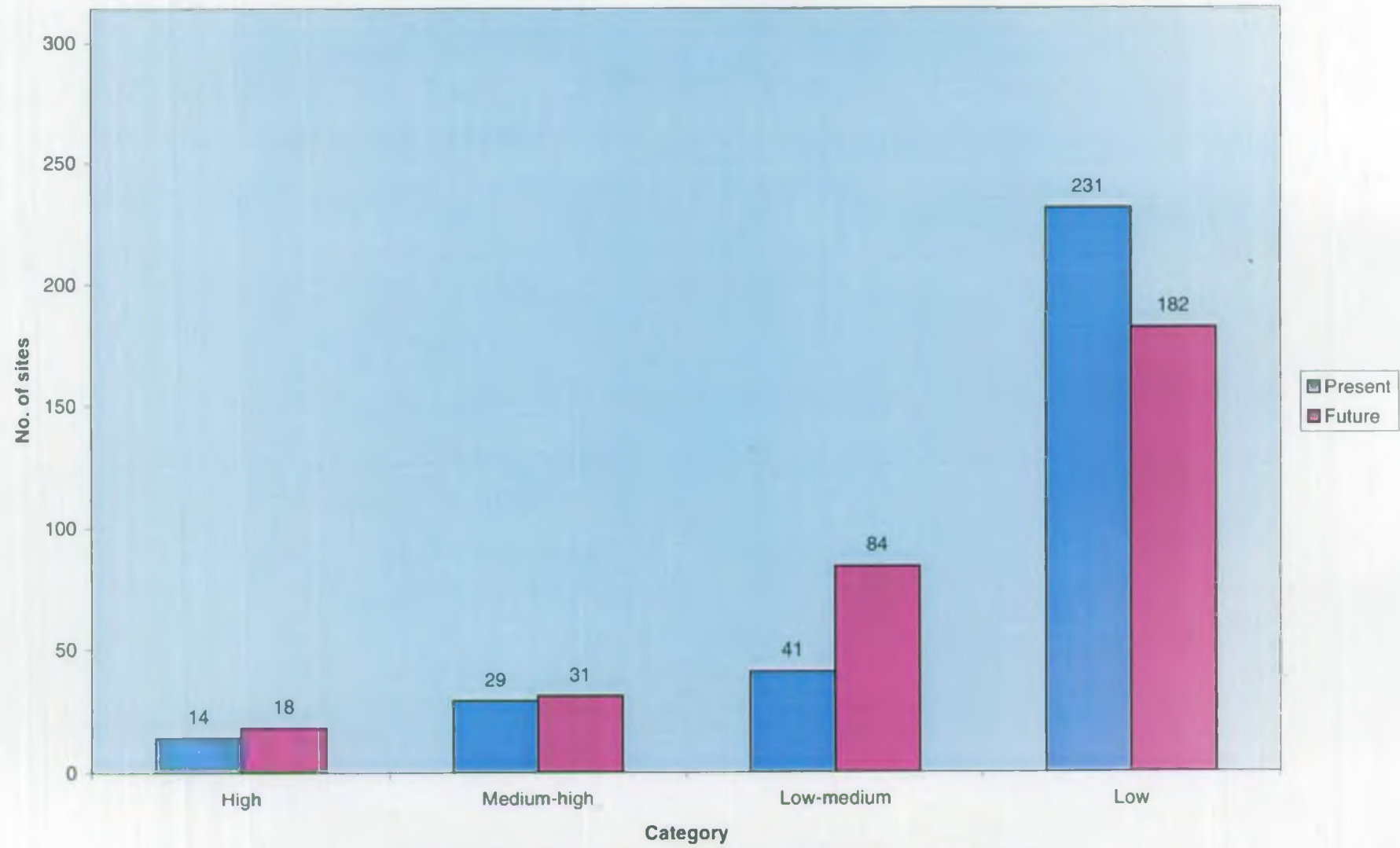


Figure 5.1 Risk of impact from groundwater abstraction

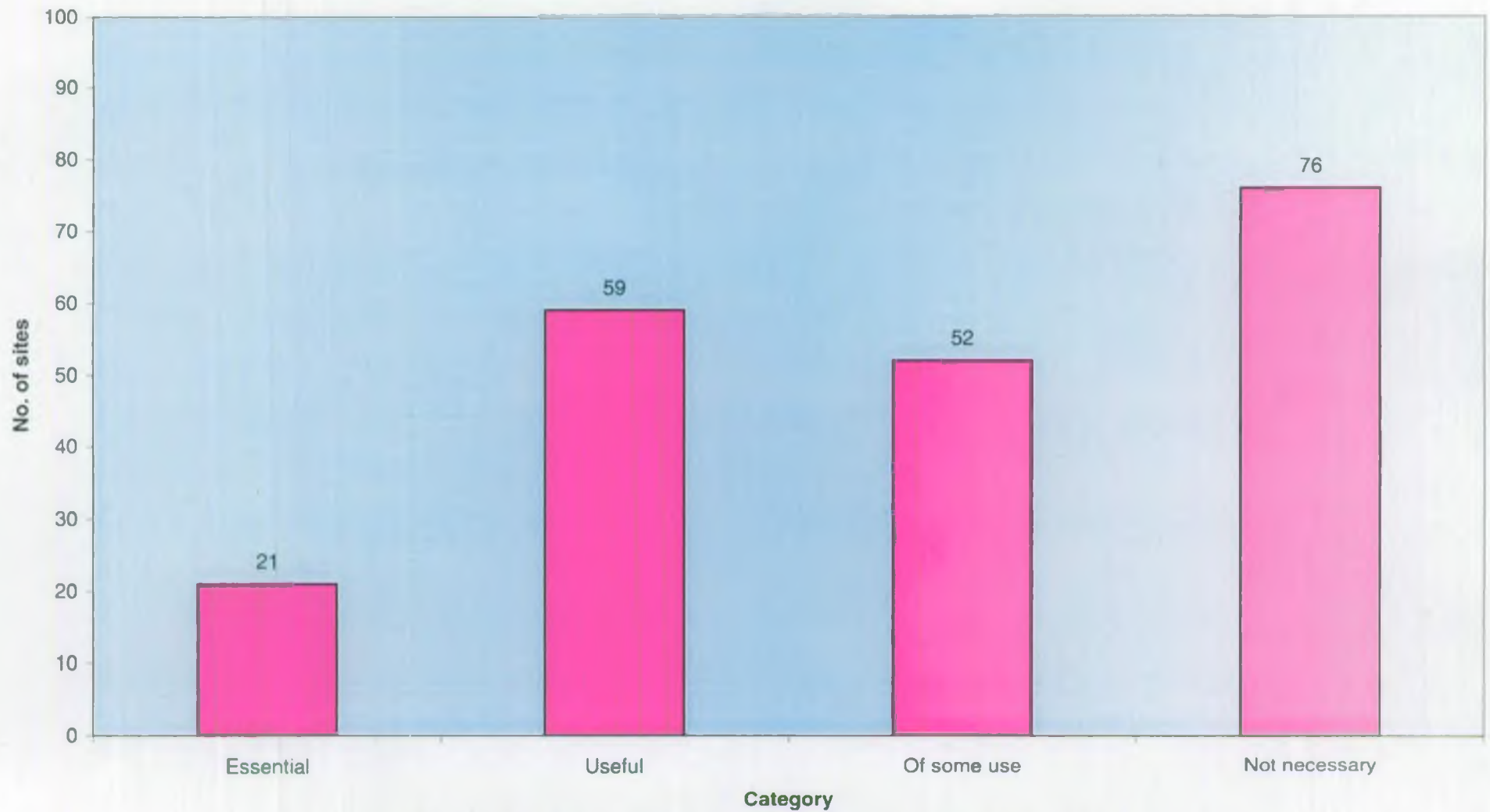


Figure 5.2 Non-groundwater hydrological monitoring needs



APPENDIX A

Appendix A Agency Hydrogeological Report Sites

Site Name	County	G Ref	G Ref - E	G Ref - N	Area	Year
Bishop's Hill Wood	Avon	ST	7380	8730	LS	1997
Yarley Meadows	Avon	ST	7570	8880	LS	1997
Ashleworth Ham	Gloucestershire	SO	8330	2630	LS	1997
Badgeworth	Gloucestershire	SO	9110	2060	LS	1997
Bushley Muzzard, Brimpsfield	Gloucestershire	SO	9440	1330	LS	1995
Chaceley Meadows	Gloucestershire	SO	8570	3060	LS	1997
Cleeve Common	Gloucestershire	SO	9900	2600	LS	1995
Coombe Hill Canal	Gloucestershire	SO	8700	2690	LS	1997
Cotswold Commons and Beechwoods	Gloucestershire	SO	9000	1300	LS	1997
Crickley Hill and Barrow Wake	Gloucestershire	SO	9290	1610	LS	1997
Frampton Pools	Gloucestershire	SO	7530	0730	LS	1995
Juniper Hill, Edgeworth	Gloucestershire	SO	9280	0580	LS	1997
Kingscote and Horsley Woods	Gloucestershire	ST	8310	9710	LS	1997
Lineover Wood	Gloucestershire	SO	9870	1870	LS	1997
May Hill	Gloucestershire	SO	6950	2140	LS	1995
Midger	Gloucestershire	ST	7970	8950	LS	1997
Minchinhampton Common	Gloucestershire	SO	8550	0100	LS	1995
Old River Severn, Upper Lode	Gloucestershire	SO	8800	3310	LS	1997
Puckham	Gloucestershire	SP	0100	2240	LS	1995
Severn Ham, Tewkesbury	Gloucestershire	SO	8850	3250	LS	1997
Soudley Ponds	Gloucestershire	SO	6620	1120	LS	1995
Upham Meadow & Summer Leasow	Gloucestershire	SO	9170	3750	LS	1997
Walmore Common	Gloucestershire	SO	7400	1620	LS	1995
Woodchester Park	Gloucestershire	SO	8200	0140	LS	1995
Ailshurst Coppice	Hereford and Wores.	SO	7740	5020	LS	1997
Ashmoor Common	Hereford and Wores.	SO	8520	4670	LS	1995
Aston Ingham Meadows	Hereford and Wores.	SO	6890	2400	LS	1997
Avon Valley	Hereford and Wores.	SO	9450	4350	LS	1997
Berry Mount Pastures	Hereford and Wores.	SP	0940	7760	LS	1997
Bredon Hill	Hereford and Wores.	SO	9530	4000	LS	1997
Castlemorton Common	Hereford and Wores.	SO	7840	3920	LS	1995
Cooksholme Meadows	Hereford and Wores.	SO	8890	5050	LS	1997
Dagnell End Meadow	Hereford and Wores.	SP	0520	6920	LS	1997
Eastnor Park	Hereford and Wores.	SO	7450	3780	LS	1995
Foster's Green Meadows	Hereford and Wores.	SO	9780	6480	LS	1995
Grafton Wood	Hereford and Wores.	SO	9720	5600	LS	1997
Hewell Park Lake (at Hewell Grange)	Hereford and Wores.	SP	0100	6900	LS	1995
Ipsley Alders Marsh	Hereford and Wores.	SP	0780	6760	LS	1995
Long Meadow, Thorn	Hereford and Wores.	SP	0150	5530	LS	1997
Malthouse Farm Meadows	Hereford and Wores.	SO	8060	3900	LS	1995
Micklefield Meadow	Hereford and Wores.	SO	8130	3840	LS	1997
Pipershill Common	Hereford and Wores.	SO	9580	6500	LS	1997
Poolhay Meadows	Hereford and Wores.	SO	8290	3080	LS	1997
Rookery Cottage Meadows	Hereford and Wores.	SO	9960	6140	LS	1997
Rye Street Meadows	Hereford and Wores.	SO	7850	3560	LS	1997
Stock Wood Meadows	Hereford and Wores.	SO	9980	5860	LS	1997
Tiddesley Wood	Hereford and Wores.	SO	9280	4550	LS	1997
Trench Wood	Hereford and Wores.	SO	9260	5880	LS	1997
Upton Ham	Hereford and Wores.	SO	8600	4000	LS	1997
Wylde Moor, Feckenham	Hereford and Wores.	SP	0110	6030	LS	1997
Cave's Inn Pits	Leicestershire	SP	5380	7950	LS	1997
Misterton Marshes	Leicestershire	SP	5570	8520	LS	1995
Stanford Park	Leicestershire	SP	5870	7930	LS	1997
Aston Grove & Withycombe Wood	Warwickshire	SP	1420	5730	LS	1997
Brandon Marsh	Warwickshire	SP	3850	7550	LS	1997
Calcutt Locks Meadows	Warwickshire	SP	4660	6330	LS	1997

Appendix A Agency Hydrogeological Report Sites

Site Name	County	G Ref	G Ref - E	G Ref - N	Area	Year
Combe Pool	Warwickshire	SP	3920	7940	LS	1995
Draycote Meadows	Warwickshire	SP	4510	7080	LS	1997
Harbury Railway Cutting	Warwickshire	SP	3770	6030	LS	1997
Knavenhill Wood	Warwickshire	SP	2460	4920	LS	1997
Long Itchington & Ufton Woods	Warwickshire	SP	3880	6270	LS	1997
Loxley Church Meadow	Warwickshire	SP	2590	5330	LS	1997
Oxhouse Farm	Warwickshire	SP	3000	5090	LS	1997
Rough Hill & Wirehill Woods	Warwickshire	SP	0520	6400	LS	1995
Ryton Wood	Warwickshire	SP	3810	7250	LS	1997
Sherbourne Meadows	Warwickshire	SP	2420	6180	LS	1997
Snitterfield & Bearley Bushes	Warwickshire	SP	1990	6050	LS	1997
Stockton Railway Cutting and Quarry	Warwickshire	SP	4400	6500	LS	1997
Ufton Fields	Warwickshire	SP	3830	6150	LS	1995
Ullenhall Meadows	Warwickshire	SP	1220	6780	LS	1997
Whichford Wood	Warwickshire	SP	3050	3420	LS	1997
Wolford Wood & Old Covert	Warwickshire	SP	2370	3350	LS	1997
Herald Way Marsh	West Midlands	SP	3800	7690	LS	1995
Tilehill Wood	West Midlands	SP	2790	7900	LS	1997
Breadsall Railway Cutting	Derbyshire	SK	3950	3940	LT	1997
Calke Park	Derbyshire	SK	3650	2300	LT	1995
Carver's Rocks	Derbyshire	SK	3300	2270	LT	1995
Crabtree Wood	Derbyshire	SK	4900	7850	LT	1997
Ginny Spring/Whitwell Wood	Derbyshire	SK	5200	7880	LT	1995
Hollinhill & Markland Grips	Derbyshire	SK	5100	7500	LT	1997
Lathkill Dale	Derbyshire	SK	1870	6580	LT	1995
Mercaston Marsh and Mugginton Bottoms	Derbyshire	SK	2690	4350	LT	1995
Morley Brick Pits	Derbyshire	SK	3890	4180	LT	1997
Shining Cliff Woods	Derbyshire	SK	3350	5300	LT	1997
Ticknall Quarries	Derbyshire	SK	3580	2380	LT	1995
Via Gellia Woodlands	Derbyshire	SK	2650	5620	LT	1997
Broughton Alder Wood	Humberside	SE	9600	0090	LT	1997
Crowle Borrow Pits	Humberside	SE	7900	1050	LT	1995
Epworth Turbary	Humberside	SE	7550	0400	LT	1995
Haxey Grange Fen	Humberside	SK	7370	9730	LT	1995
Haxey Turbary	Humberside	SE	7480	0180	LT	1995
Manton And Twigmoor	Humberside	SE	9400	0440	LT	1995
Messingham Heath	Humberside	SE	8750	0370	LT	1997
Messingham Sand Quarry	Humberside	SE	9130	0350	LT	1995
Misson Line Bank	Humberside	SK	7150	9610	LT	1995
Thorne Crowle and Goole Moors	Humberside	SE	7300	1600	LT	1995
Barrow Gravel Pits	Leicestershire	SK	5680	1660	LT	1995
Beacon Hill, Hangingstone And Out Woods	Leicestershire	SK	5120	1470	LT	1997
Botcheston Bog	Leicestershire	SK	4850	0460	LT	1995
Burbage Wood And Aston Firs	Leicestershire	SP	4530	9410	LT	1997
Charnwood Lodge	Leicestershire	SK	4670	1530	LT	1997
Cotes Grassland	Leicestershire	SK	5540	2080	LT	1997
Croft Pasture	Leicestershire	SP	5100	9580	LT	1997
Croxton Park	Leicestershire	SK	8230	2790	LT	1997
Dimmingsdale	Leicestershire	SK	3770	2180	LT	1997
Frisby Marsh	Leicestershire	SK	6860	1740	LT	1995
Grace Dieu And High Sharpley	Leicestershire	SK	4370	1700	LT	1995
Grobby Pool and Woods	Leicestershire	SK	5210	0830	LT	1995
Harby Hills Wood	Leicestershire	SK	7620	2840	LT	1997
Holwell Mouth	Leicestershire	SK	7250	2450	LT	1995
Lockington Marshes	Leicestershire	SK	4860	3040	LT	1995
Loughborough Meadows	Leicestershire	SK	5380	2180	LT	1997

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Site Name	County	G Ref	G Ref - E	G Ref - N	Area	Year
Lount Meadows	Leicestershire	SK	3850	1910	LT	1997
Muston Meadows	Leicestershire	SK	8240	3670	LT	1997
Narborough Bog	Leicestershire	SP	5490	9790	LT	1995
Newton Burgoland Marshes	Leicestershire	SK	3810	0840	LT	1997
Pasture And Asplin Woods	Leicestershire	SK	4260	2160	LT	1997
Seagrave Meadows	Leicestershire	SK	6240	1880	LT	1997
Sproxton Quarry	Leicestershire	SK	8640	2530	LT	1997
Swithland Wood And The Brand	Leicestershire	SK	5390	1250	LT	1997
Terrace Hills Pasture,Eaton	Leicestershire	SK	7950	3090	LT	1997
Ulverscroft Valley	Leicestershire	SK	5000	1260	LT	1995
Wymondham Rough	Leicestershire	SK	8310	1750	LT	1995
Scotton and Loughton Forest Ponds	Lincolnshire	SK	8600	9950	LT	1995
Scotton Beck Fields	Lincolnshire	SK	8770	9880	LT	1997
Annesley Woodhouse Quarry	Nottinghamshire	SK	4890	5340	LT	1997
Attenborough Gravel Pits	Nottinghamshire	SK	5220	3410	LT	1995
Bagthorpe Meadows	Nottinghamshire	SK	4690	5190	LT	1995
Bevercotes Park	Nottinghamshire	SK	7010	7090	LT	1997
Birklands & Bilhaugh	Nottinghamshire	SK	6200	6830	LT	1997
Bogs Farm Quarry	Nottinghamshire	SK	4820	5340	LT	1995
Bulwell Wood	Nottinghamshire	SK	5180	4630	LT	1997
Chainbridge	Nottinghamshire	SK	7120	8570	LT	1997
Clumber Park	Nottinghamshire	SK	6220	7440	LT	1995
Creswell Craggs	Nottinghamshire	SK	5350	7420	LT	1997
Dovedale Wood	Nottinghamshire	SK	4660	6320	LT	1997
Dyscarr Wood	Nottinghamshire	SK	5810	8710	LT	1995
Eakring & Maplebeck Meadows	Nottinghamshire	SK	7050	6220	LT	1995
Friezeland Grassland	Nottinghamshire	SK	4760	5060	LT	1995
Hills & Holes & Sookholme Brook, Warsop	Nottinghamshire	SK	5550	6780	LT	1995
Holme Pit	Nottinghamshire	SK	5360	3450	LT	1995
Hoveringham Pastures	Nottinghamshire	SK	7070	4660	LT	1997
Kinoulton Marsh & Canal	Nottinghamshire	SK	6780	3050	LT	1995
Linby Quarries	Nottinghamshire	SK	5350	5230	LT	1995
Lound washlands	Nottinghamshire	SK	6720	9320	LT	1997
Mattersey Hill Marsh	Nottinghamshire	SK	6720	8740	LT	1995
Mother Drain, Misterton	Nottinghamshire	SK	7710	9560	LT	1995
Orston Plaster Pits	Nottinghamshire	SK	7630	4020	LT	1997
Rainworth Heath	Nottinghamshire	SK	5900	5900	LT	1995
Rainworth Lake (L Lake)	Nottinghamshire	SK	5830	5830	LT	1995
Redgate Wood & Mansey Common	Nottinghamshire	SK	6770	5980	LT	1997
River Idle Washlands	Nottinghamshire	SK	6620	9360	LT	1997
Sellers Wood	Nottinghamshire	SK	5230	4550	LT	1997
Sledder Wood Meadow	Nottinghamshire	SK	4970	4690	LT	1995
Teversal Pastures	Nottinghamshire	SK	4930	6170	LT	1997
Thoresby Lake	Nottinghamshire	SK	6300	7030	LT	1995
Welbeck Lake	Nottinghamshire	SK	5800	7290	LT	1995
Wellow Park	Nottinghamshire	SK	6830	6710	LT	1997
Wilford Claypits	Nottinghamshire	SK	5710	3550	LT	1997
Willwell Cutting	Nottinghamshire	SK	5670	3480	LT	1997
Abney & Bretton Cloughs	Peak District	SK	2100	7900	LT	1995
Clough Woods	Peak District	SK	2560	6150	LT	1997
Cressbrook Dale	Peak District	SK	1730	7380	LT	1997
Dark Peak	Peak District	SK	1100	9600	LT	1997
Eastern Moors	Peak District	SK	2700	7700	LT	1995
Goyt Valley	Peak District	SK	0100	7200	LT	1995
Hallam Moors	Peak District	SK	2590	8350	LT	1995
Houndkirk Moor	Peak District	SK	2860	8230	LT	1997

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Site Name	County	G Ref	G Ref - E	G Ref - N	Area	Year
Jumble Coppice	Peak District	SK	2680	7210	LT	1997
Longstone Moor	Peak District	SK	1950	7350	LT	1997
Monks Dale	Peak District	SK	1350	7450	LT	1995
Stoney Middleton Dale	Peak District	SK	2100	7600	LT	1997
Topley Pike & Deepdale	Peak District	SK	0990	7170	LT	1997
Wye Dale and Monsal Dale	Peak District	SK	0990	7240	LT	1997
Yarncliff Wood, Padley	Peak District	SK	2550	7950	LT	1997
Anston Stones Wood	South Yorkshire	SK	5310	8310	LT	1997
Dyscarr Wood	South Yorkshire	SK	5810	8710	LT	1997
Lindrick Golf Course	South Yorkshire	SK	5430	8250	LT	1997
Maltby Low Common	South Yorkshire	SK	5450	9130	LT	1997
Potteric Carr	South Yorkshire	SE	5990	0030	LT	1995
Roche Abbey Woodlands	South Yorkshire	SK	5420	8990	LT	1995
Sandall Beat	South Yorkshire	SE	6130	0370	LT	1995
Brampton Bryan Park	Hereford and Worcs.	SO	3600	7160	US	1997
Burrington Meadow	Hereford and Worcs.	SO	4460	7160	US	1995
Captains and Stanklyns	Hereford and Worcs.	SO	8540	7510	US	1997
Downton Gorge	Hereford and Worcs.	SO	4390	7390	US	1997
Dumbleton Dingle	Hereford and Worcs.	SO	7050	7040	US	1997
Feckenham Forest	Hereford and Worcs.	SO	9220	7320	US	1997
Grimley Brick Pits	Hereford and Worcs.	SO	8400	6050	US	1997
Hadley, Elmely and Hockley Brooks	Hereford and Worcs.	SO	8570	6590	US	1997
Hartlebury Common and Hillditch Coppice	Hereford and Worcs.	SO	8240	7070	US	1995
Hurcott and Podmore Pools	Hereford and Worcs.	SO	8540	7790	US	1995
Leigh Brook Valley	Hereford and Worcs.	SO	7460	5160	US	1997
Little Byefields Meadow	Hereford and Worcs.	SO	7450	4900	US	1997
Monk Wood	Hereford and Worcs.	SO	8040	6080	US	1997
Monkwood Green	Hereford and Worcs.	SO	8000	6030	US	1997
Northwick Marsh	Hereford and Worcs.	SO	8350	5790	US	1997
Oakley Pool	Hereford and Worcs.	SO	8930	6060	US	1995
Penorchard & Spring Farm Pastures	Hereford and Worcs.	SO	9420	8120	US	1997
Puxton Marshes	Hereford and Worcs.	SO	8280	7770	US	1995
Romsley Manor Farm	Hereford and Worcs.	SO	9660	7890	US	1995
Shrawley Wood	Hereford and Worcs.	SO	8080	6600	US	1997
Stourvale Marsh	Hereford and Worcs.	SO	8300	7800	US	1995
Upton Warren Pools	Hereford and Worcs.	SO	9350	6720	US	1995
Westwood Great Pool	Hereford and Worcs.	SO	8800	6630	US	1995
Wilden Marsh and Meadows	Hereford and Worcs.	SO	8270	7380	US	1997
Wyre Forest	Hereford and Worcs.	SO	7500	7600	US	1995
Berrington Pool	Shropshire	SJ	5250	0720	US	1995
Betton Dingle & Gulley Green	Shropshire	SJ	3160	0170	US	1997
Blodwel Marsh	Shropshire	SJ	2640	2340	US	1995
Bomere, Shomere & Betton Pools	Shropshire	SJ	5040	0780	US	1995
Brown Moss	Shropshire	SJ	5620	3950	US	1995
Bush Wood & High Wood	Shropshire	SO	7080	8250	US	1997
Catherton Common	Shropshire	SO	6350	7850	US	1995
Chermes Dingle	Shropshire	SJ	6110	0700	US	1997
Chorley Covert & Deserts Wood	Shropshire	SO	7050	8400	US	1997
Combroke Dingle	Shropshire	SO	6020	7570	US	1997
Coundmoor Brook	Shropshire	SJ	5580	0370	US	1997
Crofts Mill Pasture	Shropshire	SJ	3050	2460	US	1997
Cuckoopen Coppice	Shropshire	SO	5380	8000	US	1997
Fenemere	Shropshire	SJ	4450	2280	US	1995
Fernhill Pastures	Shropshire	SJ	3210	3280	US	1997
Hencott Pool	Shropshire	SJ	4900	1600	US	1995
Hodnet Heath	Shropshire	SJ	6200	2620	US	1995

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Site Name	County	G Ref	G Ref - E	G Ref - N	Area	Year
Hope Valley	Shropshire	SJ	3420	0150	US	1997
Hughley Brook	Shropshire	SO	5660	9840	US	1997
Lin Can Moss	Shropshire	SJ	3750	2110	US	1995
Marion Pool, Chirbury	Shropshire	SJ	2960	0270	US	1995
Muxton Marsh	Shropshire	SJ	7160	1340	US	1995
Newport Canal	Shropshire	SJ	7340	1920	US	1997
Oak Dingle	Shropshire	SO	5650	8710	US	1997
Old River Bed, Shrewsbury	Shropshire	SJ	4970	1480	US	1995
Oss Mere	Shropshire	SJ	5650	4380	US	1997
Prees Heath	Shropshire	SJ	5580	3680	US	1997
Redwith Canal to Maesbury Marsh	Shropshire	SJ	3040	2470	US	1997
Rhos Fiddle	Shropshire	SO	2080	8530	US	1995
Ruewood Pastures	Shropshire	SJ	4960	2800	US	1997
Sheinton Brook	Shropshire	SJ	6070	0400	US	1997
Shelve Church Section	Shropshire	SO	3370	9900	US	1995
Shrawardine Pool	Shropshire	SJ	3980	1620	US	1995
Spywood & Aldress Dingle	Shropshire	SO	2790	9590	US	1997
Sweat Mere & Crose Mere	Shropshire	SJ	4340	3040	US	1995
Sweeney Fen	Shropshire	SJ	2750	2500	US	1995
Thatchers Wood & Westwood Covert	Shropshire	SO	7030	9040	US	1997
Titterstone Clee	Shropshire	SO	5950	7800	US	1997
Trefonen Marshes	Shropshire	SJ	2460	2650	US	1995
Trewern Brook	Shropshire	SJ	3040	1160	US	1997
White Mere	Shropshire	SJ	4140	3300	US	1995
Whitwell Coppice	Shropshire	SJ	6200	0200	US	1997
Aqualate Mere	Staffordshire	SJ	7700	2050	US	1995
Burnt Wood	Staffordshire	SJ	7350	3500	US	1997
Checkhill Bogs	Staffordshire	SO	8520	8790	US	1997
Loynton Moss	Staffordshire	SJ	7880	2440	US	1995
Maer Pool	Staffordshire	SJ	7890	3840	US	1995
Fens Pools	West Midlands	SO	9200	8860	US	1995
Illey Pastures	West Midlands	SO	9770	8120	US	1995
Bees Nest & Green Clay Pits	Derbyshire	SK	2400	5470	UT	1997
Hilton Gravel Pits	Derbyshire	SK	2490	3150	UT	1995
Hulland Moss	Derbyshire	SK	2500	4620	UT	1995
Old River Dove, Marston On Dove	Derbyshire	SK	2380	2850	UT	1997
Sheepy Fields	Leicestershire	SK	3320	0250	UT	1995
Hamps & Manifold Valleys	Peak District	SK	1000	5400	UT	1997
Leek Moors	Peak District	SK	0200	6500	UT	1997
Moss Carr	Peak District	SK	0730	6590	UT	1995
Baswich Meadows	Staffordshire	SJ	9500	2270	UT	1997
Bath Pasture	Staffordshire	SK	0630	4590	UT	1995
Biddulphs Pool & No Man's Bank	Staffordshire	SK	0300	1030	UT	1995
Big Hyde Rough	Staffordshire	SJ	8640	0830	UT	1995
Braken Hurst	Staffordshire	SK	1370	2220	UT	1997
Cannock Extension Canal	Staffordshire	SK	0190	0440	UT	1997
Chasewater Heaths	Staffordshire	SK	0390	0800	UT	1997
Churnet Valley	Staffordshire	SK	0130	4830	UT	1997
Cop Mere	Staffordshire	SJ	8020	2970	UT	1995
Dimmings Dale and the Ranger	Staffordshire	SK	0530	4340	UT	1997
Doley Common	Staffordshire	SJ	8160	2170	UT	1995
Ford Green Reedbed	Staffordshire	SJ	8870	5110	UT	1995
Forest Banks	Staffordshire	SK	1200	2840	UT	1997
Four Ashes Pit	Staffordshire	SJ	9140	0830	UT	1997
Gentleshaw Common	Staffordshire	SK	0500	1130	UT	1995
Goat Lodge	Staffordshire	SK	0840	2650	UT	1997

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Site Name	County	G Ref	G Ref - E	G Ref - N	Area	Year
King's & Hargreaves Woods	Staffordshire	SJ	8600	4020	UT	1997
Montey Meadows	Staffordshire	SJ	8400	1340	UT	1997
Pasturefields Salt Marsh	Staffordshire	SJ	9920	2480	UT	1995
Pipe Green Meadows	Staffordshire	SK	1010	0950	UT	1997
Rawbones Meadow	Staffordshire	SJ	9850	2250	UT	1995
Stafford Brook	Staffordshire	SK	0230	1940	UT	1997
Stanton Pastures & Cuckoocliff Valley	Staffordshire	SK	1220	4730	UT	1997
Swineholes Wood & Black Heath	Staffordshire	SK	0480	5040	UT	1997
The Wilderness & Vermin Valley	Staffordshire	SO	8120	8380	UT	1997
Thorncliffe Moor	Staffordshire	SK	0240	5860	UT	1995
Whiston Eaves	Staffordshire	SK	0370	4630	UT	1997
Alvecote Pools	Warwickshire	SK	2490	0500	UT	1997
Bentley Park Wood	Warwickshire	SP	2890	9550	UT	1997
Clowes Wood & New Fallings Coppice	Warwickshire	SP	1020	7400	UT	1997
Coleshill & Bannerly Pools	Warwickshire	SP	2000	8600	UT	1995
Hoar Park Wood	Warwickshire	SP	2650	9330	UT	1997
Kingsbury Wood	Warwickshire	SP	2330	9760	UT	1997
Middleton Pool	Warwickshire	SP	1900	9830	UT	1995
Whitacre Heath	Warwickshire	SP	2080	9280	UT	1997
Windmill Naps Wood	Warwickshire	SP	0930	7240	UT	1997
Woodlands Quarry	Warwickshire	SP	3250	9470	UT	1997
Berkswell Marsh	West Midlands	SP	2280	7980	UT	1995
Bickenhill Meadows	West Midlands	SP	1820	8220	UT	1995
Clayhanger	West Midlands	SK	0340	0450	UT	1997
Edgbaston Pool	West Midlands	SP	0540	8410	UT	1995
Jockey Fields	West Midlands	SK	0410	0300	UT	1997
Monkspath Meadow	West Midlands	SP	1450	7630	UT	1997
Moseley Bog	West Midlands	SP	0940	8210	UT	1995
River Blythe	West Midlands	SP	1090	7290	UT	1997
Stubbers Green Bog	West Midlands	SK	0460	0160	UT	1995
Sutton Park	West Midlands	SP	0980	9740	UT	1995
Swan Pool & The Swag	West Midlands	SK	0400	0190	UT	1995