Stoke Upon Tern

Neighbourhood Plan

2016-2033

Regulation 15 Submission Version

Habitats Regulations Assessment

Screening Report

February 2019

1. Introduction

It is a legal requirement for Local Authorities to prepare a Habitats Regulations Assessment (HRA) for plans and projects which have the potential to impact on habitats of European importance. This document undertakes a Habitats Regulations Assessment (HRA) of the Stoke Upon Tern Neighbourhood Plan 2016-2036 (SUTNP). It has been completed by Shropshire Council on behalf of the Stoke Upon Tern Parish Council.

The purpose of this Screening Report is to identify which international sites could possibly be affected by the proposals in the SUTNP, the potential pathways by which the sites may be affected and, where possible, to detail avoidance or mitigation measures to be applied in allocating sites or drafting the wording of any policies.

The SUTNP is not directly connected with or necessary to the management of an international site [Conservation of Habitats and Species Regulations 2017, 63 (1) (b)] and so is not exempt from HRA on this basis.

Consultation
A copy of the SUTNP and this HRA Screening Report are available on the Shropshire Council's 'Get Involved' section of the websitehttp://shropshire.gov.uk/get-involved/. . The HRA Screening Report is subject to consultation for four weeks between **Wednesday 6th February and Wednesday 6th March 2019.**

1.1 What are Habitats Regulations Assessments?

Habitats Regulations Assessment (HRA) (required under the Conservation of Habitats and Species Regulations 2017 or the 'Habitats Regulations') plays an important role in protecting the conservation objectives of the Natura 2000 network of sites. These sites, often referred to as 'European Sites', include Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Candidate SACs (cSACs). Following UK government policy, potential SPAs (pSPAs), possible SACs (pSACs) and proposed and listed Wetlands of International Importance (Ramsar Sites) designated under the Ramsar Convention are also treated as though covered by the Habitats Regulations. The term 'international sites' includes all the above designations and is used throughout this report.

The purpose of a HRA is to ensure that the proposals of any plan or project, or the cumulative effect of a number of plans or projects, will not adversely affect the integrity of any international site.

The 'integrity' of the site is defined in ODPM Circular 06/2005: (Biodiversity and Geological Conservation – Statutory Obligations and their impact within the

Planning System) as “the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or levels of populations of species for which it was classified”.

European guidance (EU 2001) describes a four-stage process to HRA and is summarised below:

Stage 1: Screening

The process to identify the likely impacts of a policy or proposal upon a Natura 2000 site, either alone or in combination with other plans and projects, and consider whether the impacts are likely to be **significant** or uncertainty exists. Previously, case law suggested straightforward counter-acting measures could be recommended for incorporation into policy wordings and then sites re-screened. However, recent case law (*People Over Wind v Coillte Teoranta* C-323/17) has indicated that this is not acceptable and if mitigation measures are required, HRA screening should proceed immediately to Stage 2.

Stage 2: Appropriate assessment

Consideration of impacts on the **integrity** of the Natura 2000 sites, either alone or in combination with other plans and projects, with regard to the site's structure and function and its conservation objectives. Where there are adverse impacts, an assessment of mitigation options is carried out to determine adverse effect on the integrity of the site. If these mitigation options cannot avoid adverse effects then proceed to stage 3.

Stage 3: Assessment of alternative solutions

Examining alternative ways of achieving the objectives of the policy or proposal to establish whether there are solutions that would avoid or have a lesser effect on Natura 2000 sites.

Stage 4: **Assessment where no alternative solutions remain and where adverse impacts remain**:

This is the assessment where no alternative solution exists and where adverse impacts remain. The process to assess whether the development is necessary for imperative reasons of overriding public interest (IROPI) and, if so, the potential compensatory measures needed to maintain the overall coherence of the site or integrity of the European site network

1.2 Background to the Stoke upon Tern Neighbourhood Plan 2016-2036 and the HRA Screening Report

The draft SUTNP has been prepared under the guidance of the SUT Neighbourhood Development Plan Steering Group following the adoption of the Shropshire Local Plan. The Local Plan comprises the Core Strategy adopted in March 2011 and the Site Allocations and Management of Development (SAMDev) Plan adopted in December 2015, both by Shropshire Council. Policies

and proposals within the SUTNP will become part of the Development Plan guiding what might receive planning permission as well as indicating what further measures are necessary to guide new development.

Stoke upon Tern Neighbourhood Plan must be consistent with both Shropshire Core Strategy and the Shropshire SAMDev Plan, and comply where relevant, with their policies and proposals.

This HRA Initial Screening Report should be read in conjunction with the Shropshire Core Strategy Development Plan Document: Habitats Regulations Assessment, Screening Report (March 2009), the Core Strategy Development Plan Document: Habitats Regulations Assessment, Stage 2 Report (February 2010) and the Shropshire Site Allocation and Management of Development Plan Habitats Regulations Assessment (July 2014). These HRA Reports identified international sites in and around Shropshire (together with their designated features and conservation objectives), which could potentially be impacted by proposed plans or projects in the County. review of the Local Plan (LPR) is now in progress and will allocate additional sites for housing and employment up to 2036. It should be noted that the LPR is currently in preparation, and the Council are consulting on preferred site allocations until 8th February 2019. The Plan is likely to be submitted to the Government for examination in late 2019. At this stage the Council have not identified any additional development proposals in Stoke Upon Tern. The LPR will be subject to HRA.

2. Methodology

2.1 Purpose of the HRA Screening Report

This Screening Report seeks to:

- identify which international sites could possibly be affected by the proposals in the SUTNP,
- identify the potential pathways by which the sites may be affected,
- Identify all aspects of the SUTNP which would have **no effect** on an international site, so that that they can be eliminated from further consideration in respect of this and other plans;
- identify all aspects of the SUTNP which would **not be likely to have a significant effect** on an international site (i.e. would have some effect, but minor residual), either alone or in combination with other aspects of the same plan or other plans or projects, which therefore do not require 'appropriate assessment';
- identify those aspects of the SUTNP where it is not possible to rule out the risk of significant effects on an international site, either alone or in combination with other plans or projects, and which would require Appropriate Assessment, and

- where necessary, undertake further research and complete an Appropriate Assessment, signposting sites which will be particularly sensitive to development and giving recommendations for any counteracting measures required to avoid adverse effects on international site integrity.

2.2 Identification of international sites requiring consideration

Previous Shropshire Local Plan HRA Reports identified international sites in and around Shropshire (together with their designated features and conservation objectives), which could potentially be impacted by proposed plans or projects in the county. This information was updated for the purposes of the LPR HRA screening reports published to date, and again for this SUTNP HRA Screening Report.

Following the precautionary principle, the first step in the screening process was to identify all international sites within 15km of the SUTNP area. This figure was chosen as a starting point as the largest buffer identified in the literature to cover negative effects from a pathway was 15km (recreational effects on Cannock Chase). Additional sites were added to the screening by considering possible longer distance pathways e.g. River Severn SAC/SPA/Ramsar Sites downstream of the neighbourhood plan area.

Map 1 in Appendix 1 shows the SUTNP area with a 15km buffer and the spread of international sites screened in to the assessment across the area being considered. Maps of each international site are also found in Appendix 1.
The international sites initially considered in this HRA Screening Report are listed below. Those sites within Shropshire are shown in bold:

1. **Brown Moss SAC**
2. **Midland Meres & Mosses Ramsar Phase 1**
    a. **Brown Moss**
3. **Midland Meres & Mosses Ramsar Phase 2**
    a. Aqualate Mere
    b. Cop Mere
    c. Oss Mere
4. **Fenn's Whixall, Bettisfield Cadney and Wem Mosses SA**
5. River Severn SPA/SAC/Ramsar Site

2.3 Collation of information on international sites

Details of the international sites, their reasons for designation, conservation objectives and vulnerabilities can be found in Appendix 2 of this report. The SSSI's within the Midland Meres and Mosses Ramsar Phases 1 and 2 which are included in this assessment are also listed in Appendix 2. Conservation Objectives for the individual elements of the two Ramsar Sites are not available

and Natural England has advised that Favourable Condition Tables for SSSI units may be used in their place.

Data on the international sites, including qualifying features were taken from the following sources:

- Natural England web site (www.publications.naturalengland.org.uk) including conservation objectives, site citations and SIPs;
- Joint Nature Conservation Committee website (www.jncc.gov.uk);
- Verbal and written evidence from officers in Natural England and the Environment Agency;
- A wide range of published and un-published reports on individual sites as indicated in section 6 References;
- Favourable Condition Tables for SSSI units provided by Natural England.
- HRA of Phase Two Revision of the West Midlands RSS – Screening note prepared for Government Office for the West Midlands by Treweek Environmental Consultants;
- Background information on Ramsar designation and specific site descriptions from www.ramsar.wetlands.org/

2.4 Identifying possible mechanisms for significant effects (effect pathways)

Mechanisms or 'effect pathways' have been identified by which the site allocations and policies in the SUTNP might affect international sites. These mechanisms may apply during construction or through long-term after-use of the development and have been summarised in Table 1 below.

Table 1: General effect pathways

General Effect pathway	Sub-categories
Air pollution	From increased traffic long term.
	Increased NOx gasses and nitrogen deposition.
	Increased sulphur dioxide.
	Increased acid deposition.
Hydrological impacts (water pathways)	Changes to groundwater quality and quantity.
	Changes to surface water quality and quantity.
	Overloading of waste water infrastructure.
	Pollution during flooding events.

	Increased run-off from hard surfaces.
	Increased silt from development, during and post construction, stirring up of sediment by boats, or other leisure activities.
Recreational impacts	Trampling and erosion of international site.
	Disturbance by people, dogs and other pets.
	Swimming by people and dogs.
	Increased hunting pressure from domestic animals.
	Eutrophication through dog faeces.
	Fishing and boat use.
	Damage from bikes and other vehicles.
	Interference with grazing and other management designed to maintain the features of the international sites.
	'Induced development' – development in some form required on international sites to counteract demand from visitors.
Biosecurity	Introduction or spreading of invasive species or disease e.g. through vehicle movement or by boats, people or dogs, or introduction of fish, non-native plants or other non-native organisms.
Light pollution	Effects of lighting on wildlife including behaviour and life-cycles.

2.5 Detailed consideration of potential effect pathways and buffer distances where applicable

Potential effect pathways identified in Table 1 are discussed below under the five main headings for this screening, namely:

- Air pollution,
- Water pathways
- Recreation
- Biosecurity
- Lighting.

2.5.1 Air pollution

All international sites in Shropshire and its 15km buffer have a background level of air-borne pollutants (particularly ammonia and NOx gases) above their Critical Levels or Critical Loads (levels or loads above which damage to habitats and species is likely). Hence, any additional pollution could have significant effects.

Environment Agency (2013) scoping criteria for examining air impacts, used in their permitting process, scopes out consideration of all Natura 2000 sites situated more than 10km from the source of emissions for all but the largest point-source emitters (e.g. smelting works or major power stations). The SUTNP does not allocate sites specifically for point sources of airborne pollution such as incinerators, bio-digesters, slurry lagoons etc. Only the south-eastern most tip of the place plan area lies between 9 and 10km of the nearest international site (Aqualate Mere Ramsar Site and NNR).

The new National Planning Policy Framework (NPPF, 2018) identifies a number of policy considerations relevant to air quality. Section 181 states that opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. These issues will be considered in the development of new Local Plan policies as part of the ongoing review process and, in the allocation of additional development land to meet local housing and employment requirements.

A significant source of emissions likely to affect international sites are from combustion of fuel through traffic movements. Housing and employment allocations can significantly increase traffic movements from cars, HGVs and other vehicles. According to the Design Manual for Roads and Bridges 2007, the designated sites at risk from local air quality impacts are those which feature habitats that are vulnerable to nitrogen deposition/acidification and are within 200m of a road with increased traffic. For sites within 200m, if the number of traffic movements do not increase (in this case due to the SUTNP), by more than 1000 Annual Average Daily Traffic (AADT) movements or by 200 HGV AADT, either alone or in combination with other plans or projects, then they can be considered insignificant. When looking at in-combination effects, we must not only consider AADTs generated by new allocations, but also the AADTs generated by the Local Plans of surrounding counties. Where necessary these will need to be assessed using traffic projections followed by local air quality modelling.

No international sites within 15km of the SUTNP area lie within 200m of a major road. Research is currently being carried out at a Shropshire and surrounding counties level on predicted road traffic emissions. If necessary, adjustments will be made to site allocations, or mitigation measures will be applied, to take the research findings into account at the Local Plan Review level. Further research is not recommended for the SUTNP as it does not allocate land for development.

2.5.2 Hydrological impacts (water pathways)

Hydrological impacts can be divided into strategic and local and qualitative and quantitative. It is not possible to use a standard set buffer distance for hydrological impacts as it depends on whether there is hydrological continuity between proposed development and the protected site.

Strategic impacts include water abstraction from regional groundwater and the capacity of sewage treatment works to cope with the additional sewage before discharge into water courses. If insufficient water is available for new development in aquifers, then abstraction could reduce water levels in wetland international sites that are fed by main aquifers. If there is insufficient infrastructure to cope with the additional foul-water drainage, then damage could occur to international sites through in-wash of nutrient-rich water during floods or through use of less efficient waste disposal methods (package treatment plants and cesspits).

The 'Shropshire Outline Water Cycle Study 2010' and the 'Water cycle evidence for Shropshire Local Plan, 2014' were commissioned to inform the Shropshire Core Strategy and SAMDev Plan. These documents cover water resources, water quality and wastewater treatment. A revised Water Cycle Study is being commissioned as part of the evidence for the Local Plan Review and allocation of sites and policy wording in the submission document will be informed by this study. The SUTNP does not allocate sites and so any site allocations will be made in the LPR, informed by its own Habitats Regulations Assessment.

Local effects could be those that cause an increase in abstraction from surface water catchments or perched water tables of international sites or result in increased numbers of package treatment plants/cesspits or other sources of pollution in surface water catchments of international sites.

The surface water catchments of most of the Midland Meres and Mosses Ramsar sites have been mapped by Natural England. Shropshire Council has sought further information contained within the Environmental Consultancy University of Sheffield (ECUS) reports, which has allowed refinement of the surface water catchment areas. In addition, Natural England has now published Impact Risk Zones (IRZ's) for SSSI's. This information has been used during the screening process for local effects on water pathways.

According to Atkins (2012), consideration of water level data suggests that all of the meres and their respective groundwater catchments are perched above the deep regional groundwater system. The meres and mosses are therefore more strongly influenced by the functioning and character of the local aquifer systems of recent, post-glacial origin rather than conditions in the regional aquifer. As a

result, they are likely to strongly reflect activities in the landscape local to them and may be susceptible to land use changes in their respective catchments. Atkins concluded that in most cases the surface water catchment can be broadly taken as the groundwater catchment for these sites.

Abstractions require consent from the Environment Agency or Natural Resources Wales and these are assessed in line with the Habitats Regulations. The Water Framework Directive is the first line of defence for groundwater, and will drive action on point source pollution as well as the widespread pollutants such as nitrate.

Existing Council policies already require development to avoid adverse impacts on water quality and levels. Policy CS18 Sustainable Water Management of the Core Strategy states that Developments will integrate measures for sustainable water management to reduce flood risk, avoid an adverse impact on water quality and quantity within Shropshire, including groundwater resources and sets out detailed requirements of developments. Furthermore, Shropshire Council Sustainable Design (Part 1) SPD 2011 provides detailed guidance to developers on avoiding impacts on water quality and levels through water efficiency and SUDs schemes. As part of planning applications, detailed information necessary to assess impacts on international sites such as groundwater flow direction and levels, any proposed abstraction and so forth will be required from the applicant.

2.5.3 Recreation pathways

Natural England have advised that any international sites that do not have public access can generally be screened out for recreational effects. Additional checks have been made for sites without public access but with footpaths nearby. Where use appears to be minimal or absent it is assumed additional housing will not add to recreational impacts on these sites.

The only sites within 15km of the SUTNP area boundary with public access or signs of public use are **Brown Moss Ramsar** (31ha), Aqualate Mere Ramsar (241.00ha) and Fenn's, Whixall, Bettisfield, Cadney and Wem Mosses SAC and Ramsar Site.

Natural England's Accessible Natural Greenspace Guidance (2010) has been used in estimating how far people are likely to travel to natural green spaces. The research which fed into development of this guidance found that larger sites attracted visits from further away and also that a walking distance of approximately 5 minutes from home was defined as a threshold above which daily park visits decreased significantly.

The so-called ANGSt, Natural England's Accessible Natural Greenspace Standard, recommends that everyone should have an accessible natural greenspace:

- of at least 2 hectares in size, no more than 300 metres (5 minutes walk) from home;
- at least one accessible 20 hectare site within two kilometres of home;
- one accessible 100 hectare site within five kilometres of home; and
- one accessible 500 hectare site within ten kilometres of home;

The background research from which this standard was developed suggested that for sites of the following sizes, people were prepared to travel the following distances to accessible natural greenspace of differing sizes:

- At least 2ha in size, no more than 300m (5 minute walk)
- At least 20 ha in size, no more than 2km
- At least 100ha in size, no more than 5km
- At least 500ha in size, no more than 10km

Brown Moss SAC and Ramsar Site is a Shropshire Council countryside site identified as having potential issues with recreational impacts. Visitor surveys are currently underway to provide an evidence base for the LPR and to draft a Site Visitor Management Plan to help assess if effects will be significant and allow development of mitigation measures. Survey results obtained so far suggest that that the 'zone of influence' (distance within which 75% of visitors travel to the site) is 3.8km for Brown Moss, which is over 10km from the edge of the SUTNP area boundary. Aqualate Mere is over 9km and Fenn's, Whixall, Bettisfield, Cadney and Wem Mosses SAC and Ramsar Site is over 10km from the SUTNP area boundary.

2.5.4 Biosecurity pathways

Biosecurity issues as a result of development, such as the spread of invasive species, can occur through increased recreation or lack of suitable controls at the construction phase. No biosecurity pathways have been identified via proposals in the SUTNP.

2.5.5 Lighting pathways

Lighting effects will only be an issue if the international site is close enough to receive light pollution from a site allocation. Light can interfere with the life cycles of many nocturnal animals including bats, otters and a wide range of invertebrates, for which international sites may have been designated. The nearest international site to the SUTNP area boundary is over 8km away.

3. Screening or assessment of potential effects

3.1 Initial screening of policies and site allocations in the SUTNP

The policies in the SUTNP have been initially screened for possible ecological pathways to international sites and the results are presented in Appendix 3.

Under 'Housing and Design' in the SUTNP, a definition of a 'community hub' is provided and three are identified:

- Dutton Close Community Hub, anticipated to deliver up to 25 additional dwellings
- Warrant Camp, Warrant Road Community Hub, anticipated to deliver up to 38 additional dwellings.
- Clive Barracks, Tern Hill Community Hub, anticipated to deliver up 500 additional dwellings.

However, these are not referred to in the SUTNP policies. Dutton Close Community Hub has already been allocated in the SAMDev Plan (STH002). **For the purpose of this HRA, it is assumed that the Local Plan Review and the HRA of the LPR will cover the remaining two allocations should they be brought forward.**

'Policy H3: Homes for Gypsies and Travellers' specifically refers to two sites; The Paddocks, Warrant Road (8 pitches) and Abdo Hill Farm, Rosehill (4 pitches). However, the former is already built (8 pitches) and the latter has been granted planning permission (4 pitches) on appeal by the Planning Inspectorate. **This HRA assumes that Policy H3 does not allocate sites for Gypsies and Travellers, but merely restricts the growth of existing sites.**

If any changes occur that result in the assumptions above being incorrect, then this HRA must be updated to reflect the new situation.

Bearing the above in mind, all policies in the SUTNP have been **screened out** as they do not allocate sites for development or determine the size of new development. Instead, the policies are concerned with protecting the natural environment, enhancing the natural or cultural environment where the enhancements will not have a negative effect on an international site or are concerned with the design of development, not its location.

The housing allocation in the Stoke Heath area in the SAMDev Plan, which has not yet been developed, will be carried forward into the Local Plan Review. This site, any possible effect pathways and any required mitigation measures, have already been considered in the SAMDev Plan HRA. During the LPR, as a precautionary measure, such sites/areas are being re-screened against any new information on international sites, if this has become available since the adoption of the SAMDev Plan, and against any relevant policy wording changes proposed by the LPR. In general, it is likely that these sites and their mitigation measures will be carried over to the new Local Plan.

3.2 Screening for likely significant effects on international sites via the policies in the SUTNP

For each of the international sites screened in to this assessment, the likelihood of significant effects resulting from the identified potential effect pathways has been considered for the SUTNP policies. The potential for in-combination effects has also been considered. The results are summarised in the tables below:

Table 2 Screening of Aqualate Mere

Site Name:	**Aqualate Mere, Midlands Meres and Mosses Ramsar Phase 2, NNR**						
	Direct habitat loss	**Air Quality**	**Water Quality**	**Water Quantity**	**Recreational Pressures**	**Biosecurity**	**Light pollution**
Is site sensitive to effect pathway?	**Yes**	**Yes**	**Yes**	**Yes**	**Potential effect**	**Yes**	**Yes**
Is SUTNP likely to impact upon this site	No effect, outside plan area.	No effect, large point sources not allocated. No major roads within 200m of Aqualate Mere.	No effect, Plan area is outside the surface water catchment.	No effect, Plan area is outside the surface water catchment.	No effect, Plan area is at least 9km from Site boundary.	No effect, Plan area is at least 9km from Site boundary.	No effect, Plan area is at least 9km from Site boundary.
Possible effects in combination with other plans	As no housing or other residential sites have been allocated in the SUTNP and no effect pathways have been identified to Aqualate Mere, there can be no effects in-combination with other plans or projects.						
Assessment of effects and their likely significance	No effects, either alone or in-combination have been identified.						
Conclusion	No effects, alone or in-combination.						

Table 3 Screening of Brown Moss

Site Name:	**Brown Moss SAC and Meres and Mosses Ramsar Phase 1**						
	Direct habitat loss	**Air Quality**	**Water Quality**	**Water Quantity**	**Recreational Pressures**	**Biosecurity**	**Light pollution**
Is site sensitive to effect pathway?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
Is SUTNP likely to impact upon this site	No effect, Site lies outside the Plan boundary.	No effect, large point sources not allocated. No major roads within 200m.	No effect, Plan area is outside the surface water catchment.	No effect, Plan area is outside the surface water catchment.	No effect, Plan area outside the 'Zone of Influence'.	No effect. Plan area outside the 'Zone of Influence' for recreation impacts.	No effect, Plan boundary is over 10 km from the Site.
Possible effects in combination with other plans	As no housing or other residential sites have been allocated in the SUTNP and no effect pathways have been identified to Brown Moss, there can be no effects in-combination with other plans or projects.						
Assessment of effects and their likely significance	No effects, either alone or in-combination have been identified.						
Conclusion	No effects, alone or in-combination.						

Table 4 Screening of Cop Mere

Site Name:	**Cop Mere, Midland Meres and Mosses Ramsar Phase 2**						
	Direct habitat loss	**Air Quality**	**Water Quality**	**Water Quantity**	**Recreational Pressures**	**Biosecurity**	**Light pollution**
Is site sensitive to effect pathway?	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**
Is SUTNP likely to impact upon this site	No effect, outside plan area.	No effect, large point sources not allocated. No major roads within 200m.	No effect, Plan area is outside the surface water catchment.	No effect, Plan area is outside the surface water catchment.		No effect, no public access so transfer of invasive species via visits from additional residents very unlikely.	No effect, Site is outside Plan area and >12km to east.
Possible effects in combination with other plans	As no effects from the SUTNP have been identified on Cop Mere, there can be no effects in-combination with other plans or projects.						
Assessment of effects and their likely significance	No effects, either alone or in-combination have been identified.						
Conclusion	No effects, alone or in-combination.						

Table 5 Screening of Fenn's, Whixall, Bettisfield, Wem and Cadney Mosses

Site Name:	**Fenn's, Whixall, Bettisfield, Wem and Cadney Mosses SAC and West Midlands Meres and Mosses Ramsar Phase 2**						
	Direct habitat loss	**Air Quality**	**Water Quality**	**Water Quantity**	**Recreational Pressures**	**Biosecurity**	**Light pollution**
Is site sensitive to effect pathway?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
Is SUTNP likely to impact upon this site.	No effect, outside plan area.	No effect, large point sources not allocated. No major roads within 200m.	No effect, Plan area is outside the surface water catchment.	No effect, Plan area is outside the surface water catchment.	No effect, Plan boundary is over 13km from the Site.	No effect, Plan boundary is over 13km from the Site.	No effect, Plan boundary is over 13km from the Site.
Possible effects in combination with other plans	As no effects from the SUTNP have been identified on **Fenn's, Whixall, Bettisfield, Wem and Cadney Mosses**, there can be no effects in-combination with other plans or projects.						
Assessment of effects and their likely significance	No effects, either alone or in-combination have been identified.						
Conclusion	No effects, alone or in combination.						

Table 6 Screening of Oss Mere

Site Name:	**Oss Mere, Midland Meres and Mosses Ramsar Phase 2**						
	Direct habitat loss	**Air Quality**	**Water Quality**	**Water Quantity**	**Recreational Pressures**	**Biosecurity**	**Light pollution**
Is site sensitive to effect pathway?	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**
Is SUTNP likely to impact upon this site	No effect, outside plan area.	No effect, large point sources not allocated. No major roads within 200m.	No effect, Plan area is outside the surface water catchment.	No effect, Plan area is outside the surface water catchment.		No effect, no public access so transfer of invasive species via visits from additional residents very unlikely.	No effect, Site is outside Plan area and >13km to the north-west.
Possible effects in combination with other plans	As no effects from the SUTNP have been identified on Oss Mere, there can be no effects in-combination with other plans or projects.						
Assessment of effects and their likely significance	No effects, either alone or in-combination have been identified.						
Conclusion	No effects, alone or in-combination.						

Table 7 Screening of River Severn

Site Name:	**River Severn SAC, SPA and Ramsar Site**						
	Direct habitat loss	**Air Quality**	**Water Quality**	**Water Quantity**	**Recreational Pressures**	**Biosecurity**	**Light pollution**
Is site sensitive to effect pathway?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
Is SUTNP likely to impact upon this site	No effect, outside plan area.	No effect, large point sources not allocated. Site is over 70km from Plan area.	Plan area drains into the Severn catchment but no sites have been allocated.	Water for the plan is drawn from the River Severn catchment, but no sites allocated.	No effect, Plan area is over 70km from the Site.	No effect, due to distance of Site from Plan area.	No effect.
Possible effects in combination with other plans	As no effects from the SUTNP have been identified on the River Severn, there can be no effects in-combination with other plans or projects.						
Assessment of effects and their likely significance	No effects, either alone or in-combination have been identified.						
Conclusion	No effects alone or in-combination						

4 Conclusions and recommendations

A total of 4 international sites (comprising 5 separate SSSIs) have been identified for consideration in this Stoke upon Tern Neighbourhood Plan HRA Screening Report. Possible pathways for significant adverse effects on these international sites, as a result of the SUTNP, have been identified and placed in five main categories: air pollution; water pathways; recreation pathways; biosecurity pathways and light pollution. Policies within the SUTNP have been screened for potential to effect international sites.

All international sites have been screened out as the SUTNP policies do not provide the size or location of development, and would have no identifiable effect, alone or in-combination with other plans or projects. No mitigation measures were required to screen out these sites.

This Stoke upon Tern Neighbourhood Plan HRA Screening report concludes that the Plan will have no adverse effects, alone or in-combination with other plans or projects, on international sites.

5 Public consultation

The draft Stoke upon Tern Neighbourhood Plan has been subject to public consultation through the legislative requirements governing Neighbourhood Plan making. Stoke upon Tern Parish Council submitted the Regulation 15 version of the Plan to Shropshire Council in August2018 and this was subject to a six week consultation in line with Regulation 16. This included an SEA Screening assessment which incorporated conclusions on Habitats Regulations Assessment (HRA).

The Council will soon be appointing an independent examiner to assess the SUPNP. Responses to the Reg 16 consultation in 2018 and any further responses to this HRA Screening Assessment will be sent to the Examiner for their consideration. .

This HRA Screening Assessment is therefore going to be subject to consultation for four weeks ending on Wednesday 6th March 2019.

6 References and abbreviations

The following documents have informed this report:

References

1. Article 6(3) and (4) of the European Communities (1992) Council Directive 92/43/EEC on the conservation of natural habitats and wild fauna and flora (the Habitats Directive)
2. Atkins for Environment Agency and Natural England (October 2014) River Clun SAC Nutrient Management Plan- FINAL
3. David Tyldesley and Associates for Countryside Council for Wales. (2012) Draft Guidance for Plan Making Authorities in Wales, The Appraisal of Plans Under the Habitats Regulations for Countryside Council for Wales CCW Bangor

4. Department for Communities and Local Government (2012) The National Planning Policy Framework
5. European Commission (2001) Assessment of plans and projects significantly affecting Natura 2000 sites
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14. Core Strategy Development Plan Document: Habitats Regulation Assessment, Screening Report (March 2009)
15. Core Strategy Development Plan Document: Habitats Regulation Assessment, Stage 2 Report (February 2010)
16. Draft Stage 3 Habitats Regulation Assessment Reports of potential allocations was prepared in October 2011 for the Site Allocations and Management of Development DPD
17. SAMDev Draft Development Management Policies HRA January 2013
18. SamDEv Pre-Submission Draft Habitats Regulation Assessment (draft March 2014)
19. Shropshire Council SAMDev Habitats Regulation Assessment (July 2014)
20. Shropshire Council (January 2017) Local Plan Review 2016 – 2036, Issues and Strategic Options Habitat Regulations Assessment Initial Screening Report.
21. Shropshire Council Local Plan Review 2016-2036, Preferred Options: Scale and Distribution of Development, Habitats Regulations Assessment Screening Report, (October 2017).

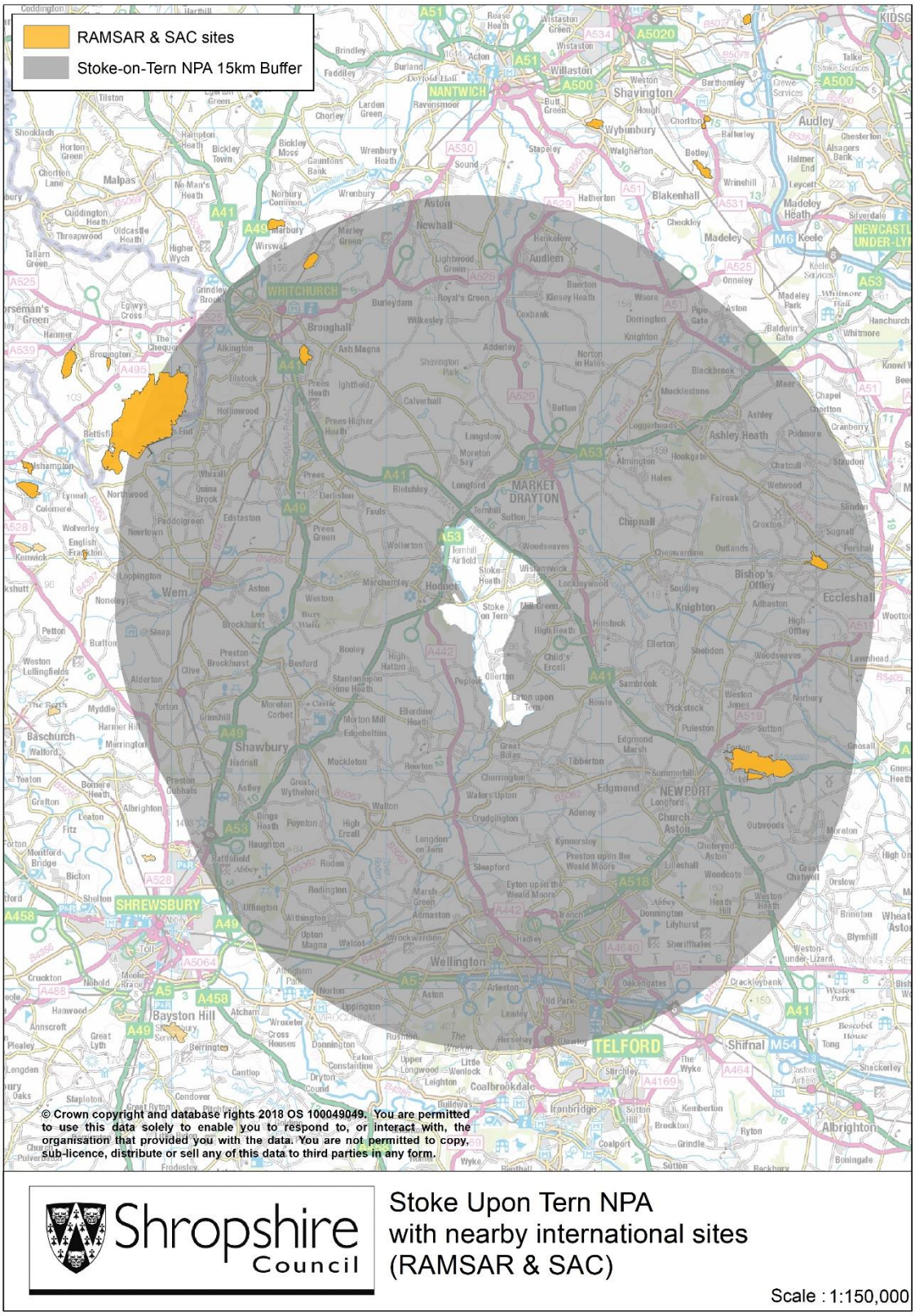
Abbreviations and definitions

NE	Natural England
EA	Environment Agency
HRA	Habitats Regulations Assessment
SPA	Special Protection Area classified in accordance with Article 4 of the EC Birds Directive (1979)
SAC	Special Area of Conservation designated under the EC Habitats Directive.
Ramsar site	A site listed as a wetland of international importance under the provision of the Ramsar Convention. A Ramsar site is

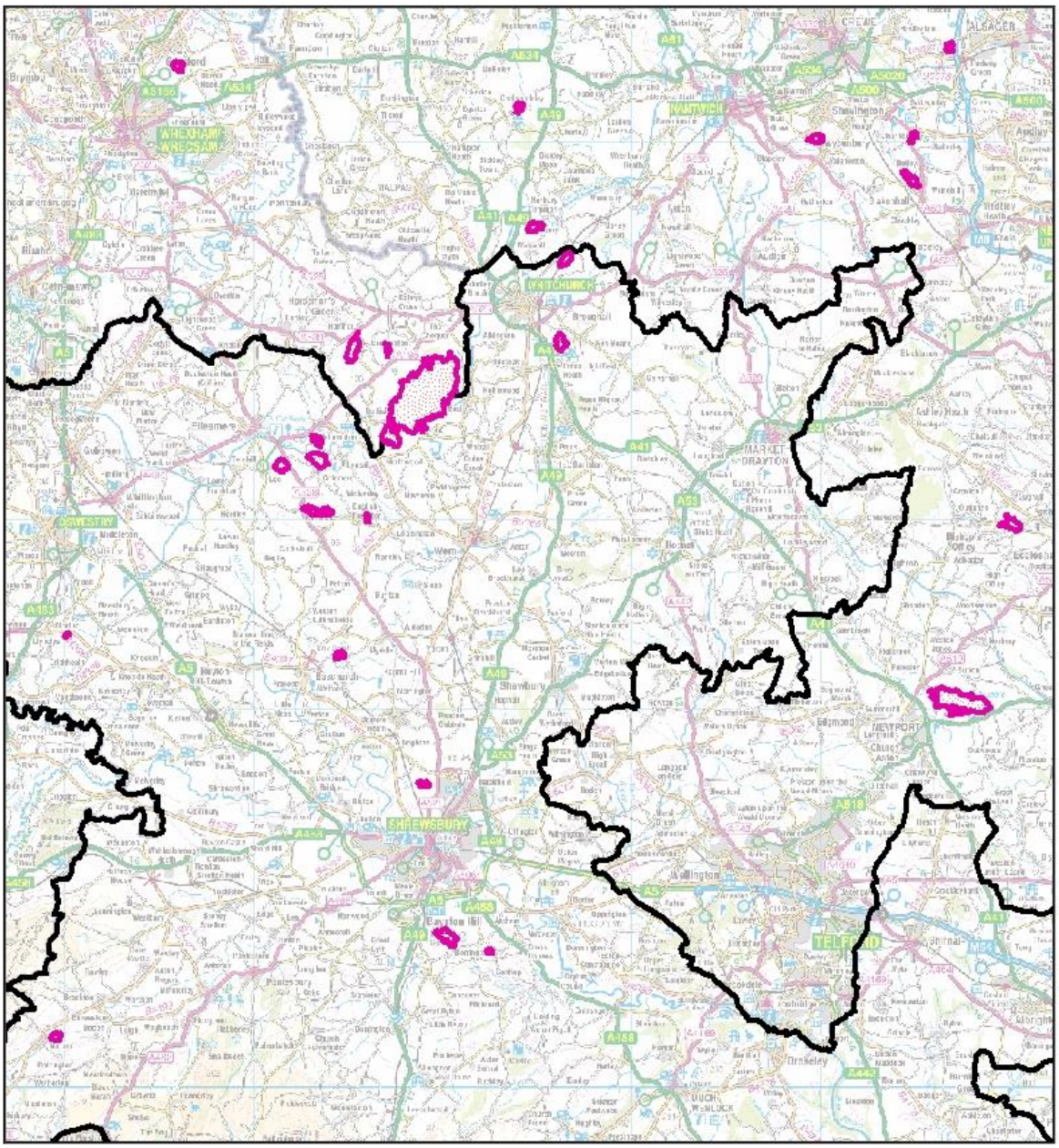
	not a ‘European site’ as a matter of law but is given the same protection as SPA’s and SAC’s.
International site	One of the following designated sites: • Special Area of Conservation (SAC), • candidate SAC (cSAC), • possible SAC (pSAC), • Special Protection Area (SPA), • potential SPA (pSPA), • proposed and listed Wetlands of International Importance (Ramsar Sites)
Natura 2000 Site	The Europe-wide network of SPA’s and SAC’s
IRZ	Natural England Impact Risk Zone
LPR	Local Plan Review
SAMDev	Site Allocations & Management of Development Plan
SPD	Supplementary Planning Document

Appendix 1: Maps of international sites considered in this report

Map 1 SUTNP Plan Area with 15km buffer



Map 2 Midlands Meres and Mosses Ramsar sites Phase 1 and 2



Shropshire Council

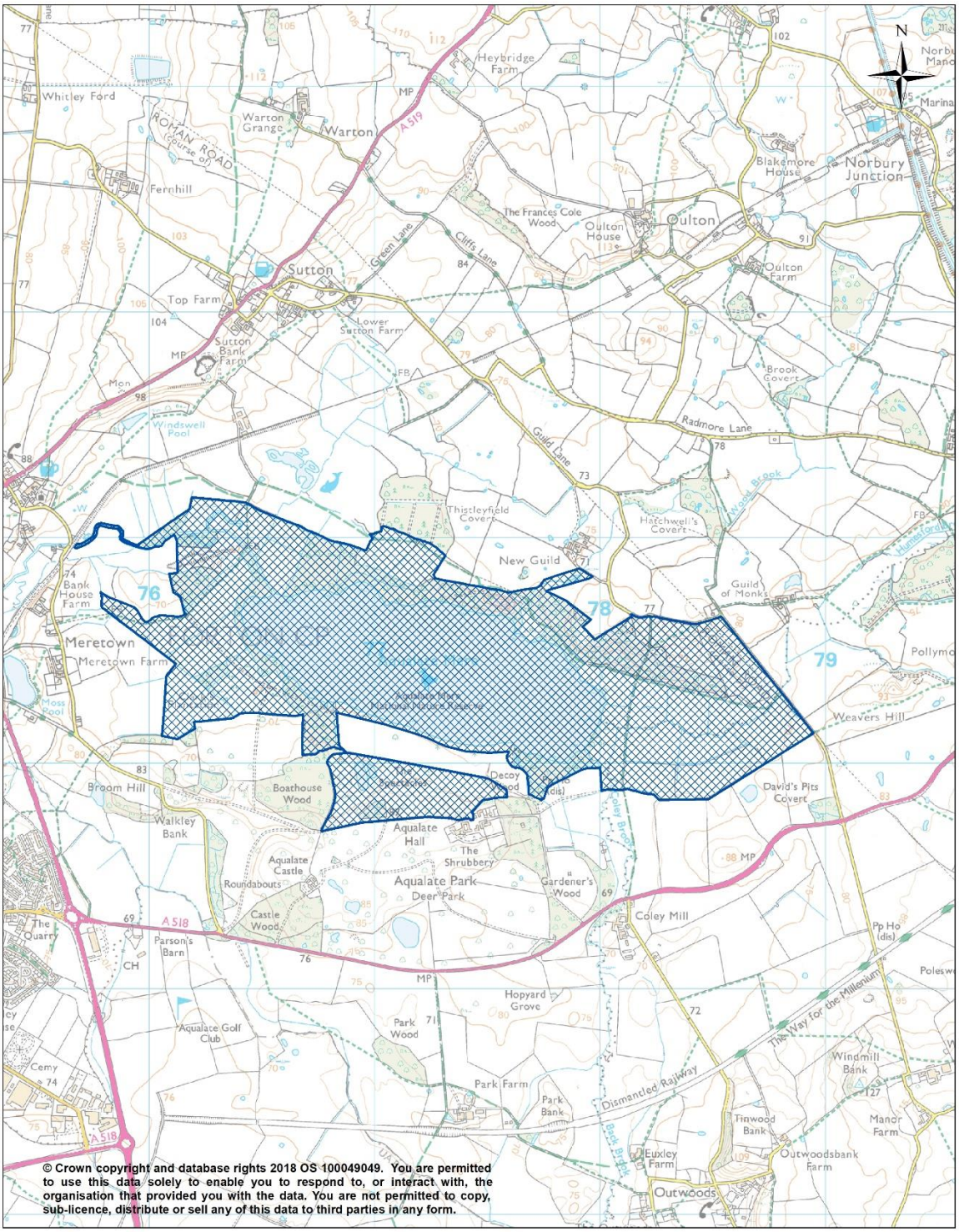
Midland Meres & Mosses Ramsar
Phase 1 & Phase 2

Development Services
The Shirehall, Abbey Foregate
Shrewsbury, Shropshire, SY2 6ND

N
W E
S

Scale: 1:268,390

Map 3 Aqualate Mere Ramsar site

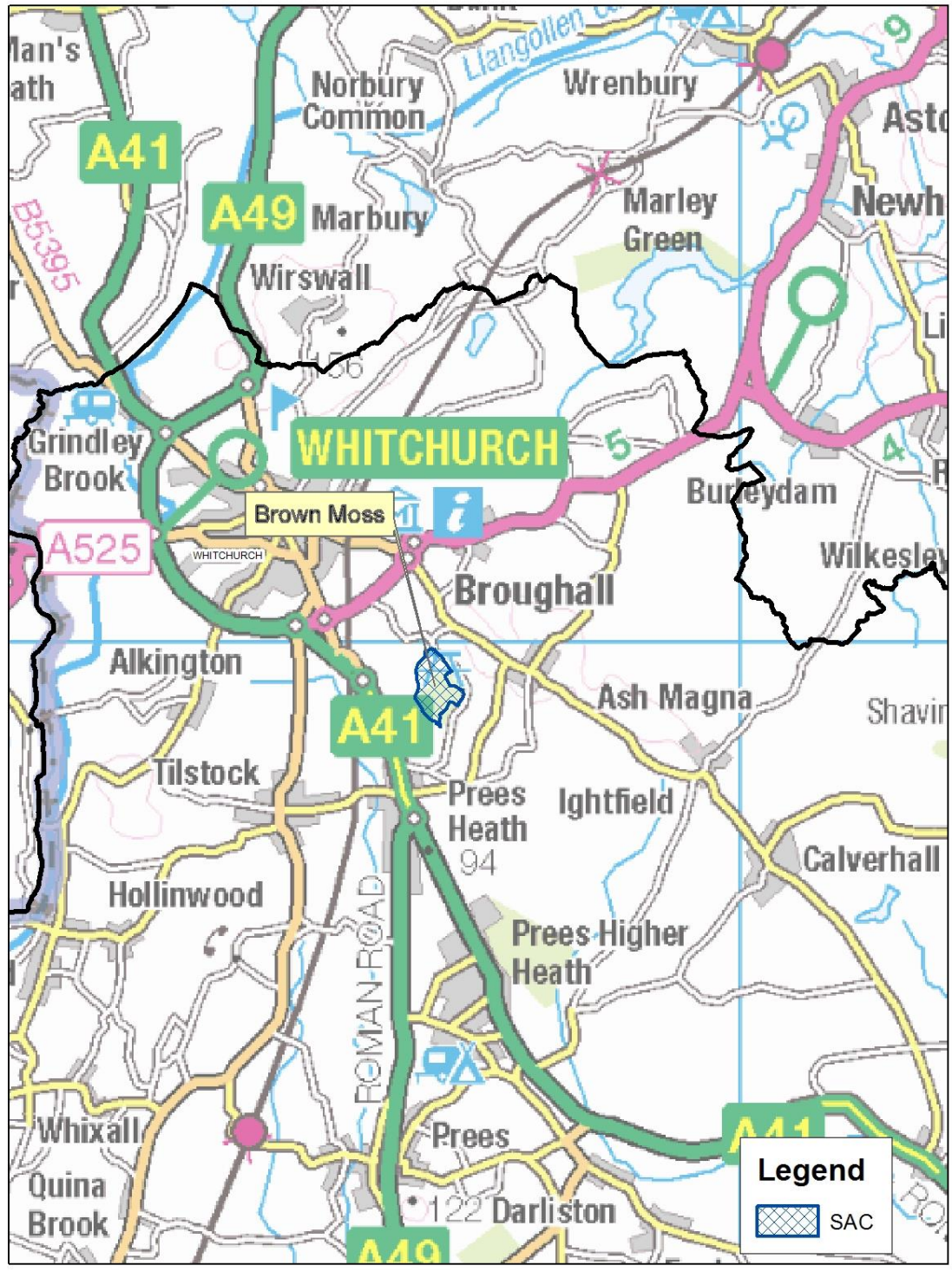


Shropshire Council

Aqualate Mere SSSI

Scale : 1:15,000

Map 4 **Brown Moss SAC/Ramsar site**

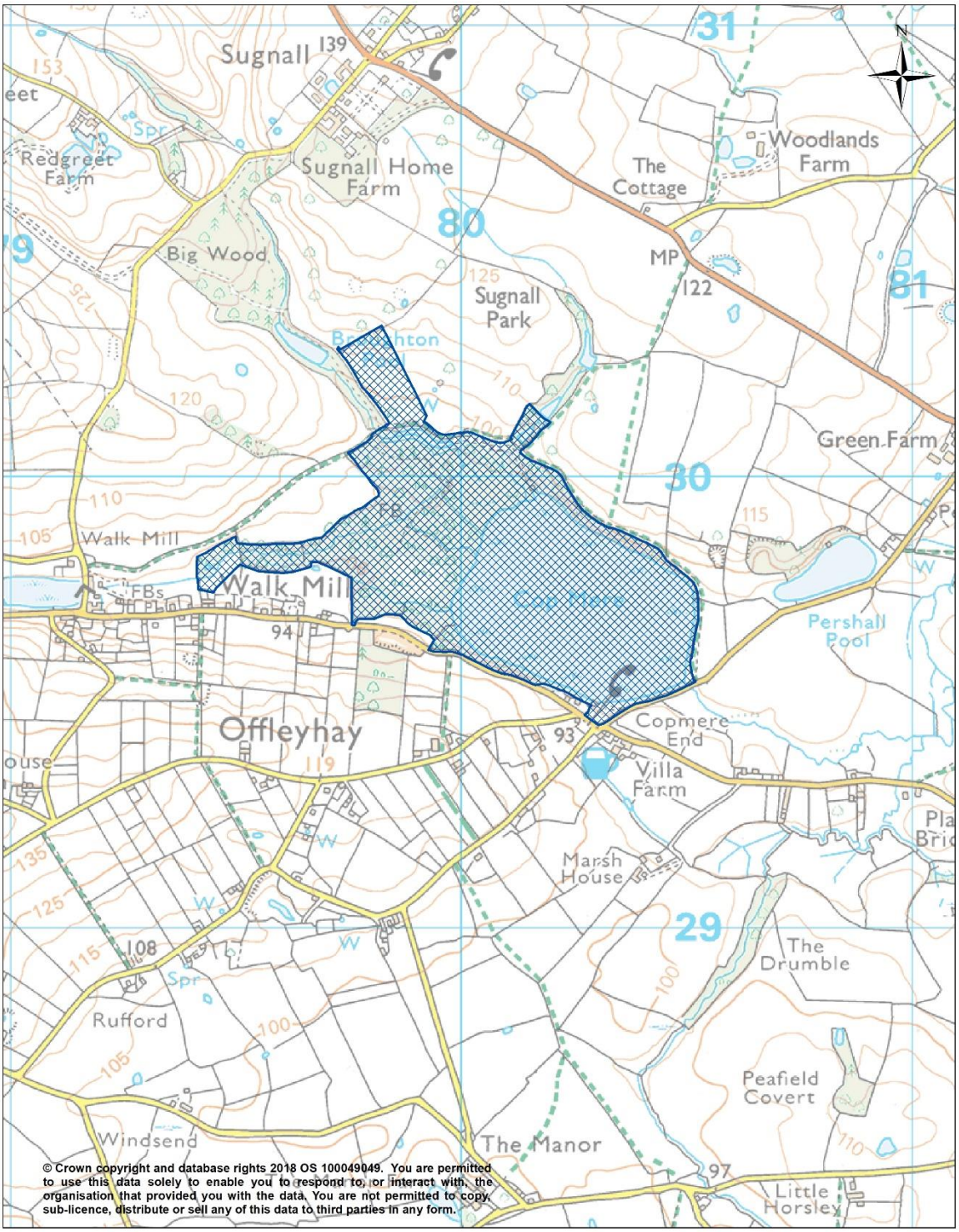


Brown Moss SAC

Shropshire Council

0 0.5 1 2 Kilometers

Map 5 Cop Mere Ramsar site

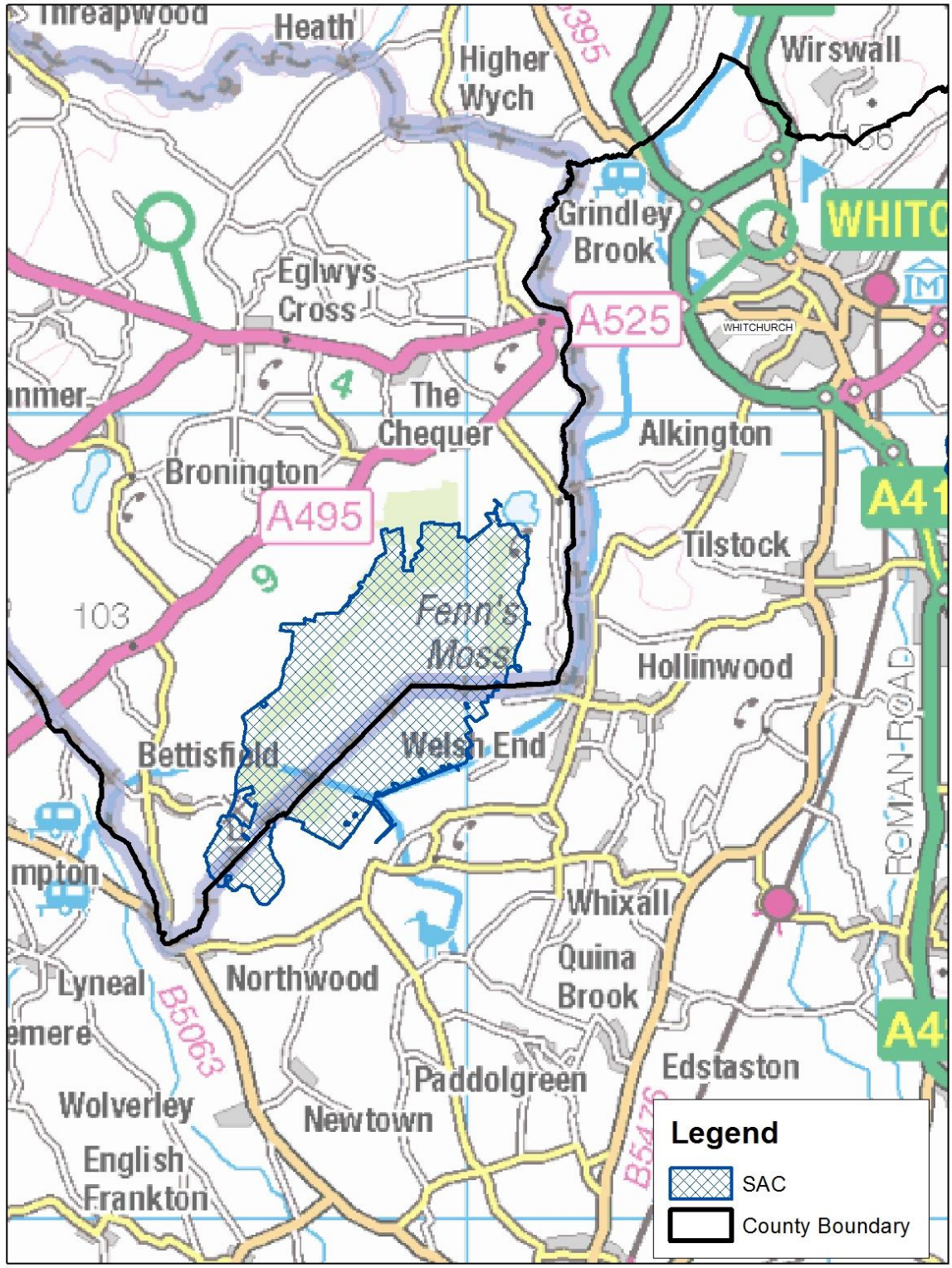


Shropshire Council

Cop Mere SSSI

Scale : 1:7,500

Map 6 Fenn's, Whixall, Bettisfield, Wem and Cadney Mosses SAC

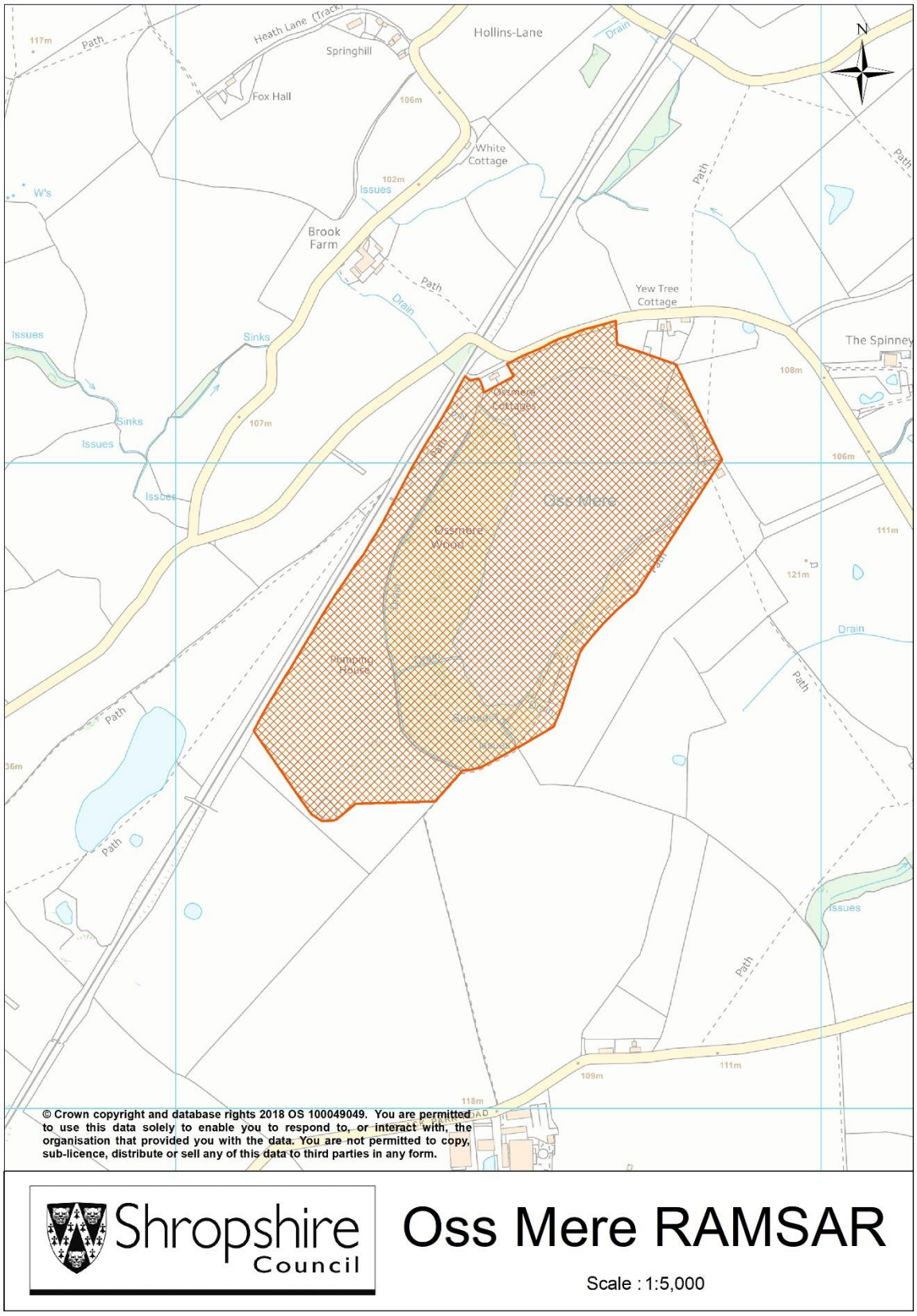


Fenn's, Whixall, Bettisfield, Wem and Cadney Mosses SAC

Shropshire Council

0 0.5 1 2 Kilometers

Map 7 Oss Mere Ramsar site



Map 8 River Severn SAC/SPA/Ramsar sites

Severn Estaury SPA, SAC & RAMSAR (& River Wye SAC)

Shropshire Council

0 4.25 8.5 17 Kilometers

Appendix 2 Description of international sites including conservation objectives and sensitivities

Table 1: Brown Moss SAC

Site Name: Brown Moss SAC, SJ561394, Shropshire, England.

Site Description:

Brown Moss (32.02ha) is a series of pools set in heathland and woodland. The pools support Floating water plantain *Luronium natans* for which the SAC is designated, and vary considerably in their water chemistry and also in their water levels which fluctuate considerably and apparently independently. Floating water plantain appears to behave as a metapopulation on this site, colonising the various pools according to their suitability.The site is of special importance for the marsh, swamp and fen communities associated with the pools which occupy hollows in the sand and gravel substrate.

Conservation Objectives for SAC:

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of *Luronium natans*,
- The structure and function (including typical species) of the habitat of *Luronium natans*,
- The supporting processes on which the habitat of *Luronium natans* rely,
- The populations of *Luronium natans*, and,
- The distribution of *Luronium natans* within the site.
-

Supplementary Advice to support the Conservation Objectives is not currently available.

Definition of Favourable Condition for Brown Moss SSSI: Subject to natural change, to maintain, in favourable condition, the habitat for the internationally important population of Floating Water Plantain (*Luronium natans*), with particular reference to the standing open water. (Maintenance implies restoration if the feature is not currently in favourable condition).

Site Vulnerability: Colonisation by trees is being addressed but continues to be of concern due to the shading, nutrient and hydrological effects on the open water and heathland.

The presence of *Crassula helmsii* is a threat to *Luronium natans* and various control mechanisms are being explored.

The site dried out almost completely in summer 2013. The influence of groundwater and direction of flow is thought to be key to the management of the notified feature. Surface drains and ditches also exist, some draining surrounding farmland, others linking the pools. Some of these have become silted up or diverted and need further investigation to determine the quantity and quality of water coming into the site.

High phosphorus and nitrogen concentrations in groundwater and surface water feeding the pools is being caused by agricultural run-off, gathering geese, septic tanks and release from sediment. The eutrophication this causes impacts on the suitability of the pools for Floating water plantain.

Of the total external and internal sources of phosphorus, sediment was the major contributor. Phosphorus release from sediment contributed up to 84% of the total supply. Birds are a major contributor leading to high phosphorus levels in pools, thereby affecting macrophyte communities. Control of geese has been mooted but the area is open access land and is well used by the local public.

Nitrogen deposition exceeds site relevant critical loads.

Reason for Designation	**Environmental Conditions Needed to Support Site Integrity**
Annex II Species that is a primary reason for selection of site: Floating Water Plantain *Luronium natans*.	Sensitive to; • Hydrological changes, • Water pollution, • Invasive species, • Siltation, • Air pollution including atmospheric nitrogen deposition, • Shading through tree colonisation, and Changes in grazing regime.

Table 2: Fenn`s, Whixall, Bettisfield, Wem and Cadney Mosses

Site Name: Fenn`s, Whixall, Bettisfield, Wem and Cadney Mosses SAC, SJ486364, Shropshire / Wrexham, England / Wales.

Site Description: Fenn`s, Whixall, Bettisfield, Wem and Cadney Mosses (949.2ha) together form an outstanding example of lowland raised mire, straddling the English/Welsh border. It is amongst the largest and most southerly raised bogs in the UK. The site as a whole supports a wide range of characteristic acid peat bog vegetation including thirteen species of Sphagnum moss, which represent successional stages in the development of a raised mire.

Conservation Objectives for SAC:

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats
- The structure and function (including typical species) of qualifying natural habitats, and
- The supporting processes on which qualifying natural habitats rely

Supplementary Advice to support the Conservation Objectives is not currently available.

Definition of Favourable Condition for Fenn's, Whixall, Bettisfield, Wem & Cadney Mosses SSSI: To maintain, in favourable condition, the active raised bogs and degraded raised bogs still capable of natural regeneration on the site.

Site Vulnerability: The lowland raised mire is dependent upon high water levels and a continuation of active peat-forming processes.

Much of the site is subject to mineral planning consents for peat extractions which are currently being reviewed. The site has a history of peat-cutting and until recently, part of the site has been subject to large-scale commercial extraction, involving drainage over much of the peat body.

Afforestation and agricultural improvement on marginal areas of the peat body have accelerated the lowering of water levels, resulting in encroachment by scrub and a decline in the extent of peat-forming communities.

Nutrient enrichment through water in drainage ditches will damage low-nutrient bog habitats.

Aerial nitrogen deposition is similarly raising nutrient levels on the bog surface.

A greater part of the site is now owned, leased or managed under agreement by conservation organisations. Within these areas, mire rehabilitation management is taking place under the guidance of a management plan.

It is intended to seek to increase the areas under positive conservation management by implementation of the joint Countryside Council for Wales/English Nature acquisition strategy.

The Fenn's and Whixall NNR has an up to date management plan and visitor management strategy.

Reason for Designation	**Environmental Conditions Needed to Support Site Integrity**
Annex I Habitats that are a primary reason for selection of site: Active raised bog (priority habitat). Annex I Habitats present as a qualifying feature but not a primary reason for selection of site: Degraded raised bogs still capable of natural regeneration; Degraded raised bog	Maintenance of appropriate (high) water levels. Prevention of nutrient-rich drainage water contaminating the site. Control and amelioration of aerial nitrogen deposition. Prevention of afforestation and removal of scrub/trees on designated habitat. Prevention of peat extraction. Monitoring and control invasive species.

Table 3: Midland Meres and Mosses (Ramsar Phase 1)

Site Name: Midland Meres and Mosses (Ramsar phase 1), Shropshire/ Clwyd/ Cheshire/ Staffordshire, England.
Site Description: Phase 1 of the Ramsar designation covers 513.25ha and is entirely co-incident with the following 16 Sites of Special Scientific Interest (SSSI). These are Bagmere, Berrington Pool, **Betley Mere**, Bomere, Shomere & Betton Pools, **Brown Moss**, Chartley Moss, Clarepool Moss, Fenemere, Flaxmere, Hatchmere, Marton Pool (Chirbury), Quoisley Mere, Tatton Mere, The Mere (Mere), White Mere and **Wybunbury Moss** SSSI's. NB. Those SSSIs in the Ramsar phase 1 designation indicated in bold above are considered in this screening document. Diverse series of lowland open water and peatland sites supporting habitats such as meres with associated fringing habitats, reed swamp, fen, carr and damp pasture. Peat accumulation has resulted in nutrient poor peat bogs (mosses) forming in some sites on the fringes of the meres or completely infilling basins.These habitats support a wide range of nationally important flora and fauna.
Conservation Objectives: Ramsar criterion – peatland. The conservation objectives for the site are to maintain in favourable condition: • the habitat types for which the site is designated.
Site Vulnerability: Invasive species: considered a major impact on this site. Water quality: eutrophication is considered a major impact on this site.

Recreational pressure and disturbance: in line with other bog and mire habitats, trampling and erosion are likely to be a significant issue where public access occurs. Water quality: declines in water quality through nutrient enrichment and sediment. Land use in surrounding areas: agricultural practices and urban runoff are likely to affect the scattered sites through nutrient enrichment and sedimentation.	
Reasons for Designation:	**Environmental Conditions Needed to Support Site Integrity**
Criterion 1a. A particularly good example of a natural or near natural wetland, characteristic of this biogeographical region, The site comprises the full range of habitats from open water to raised bog. **Criterion 2a.** Supports a number of rare species of plants associated with wetlands. The site contains the nationally scarce six-stamened waterwort *Elatine hexandra*, needle spike-rush *Eleocharis acicularis*, cowbane *Cicuta virosa*, marsh fern *Thelypteris palustris* and elongated sedge *Carex elongata*. **Criterion 2a.** Contains an assemblage of invertebrates, including the following rare wetland species. 3 species considered to be endangered in Britain, the caddis fly *Hagenella clathrata*, the fly *Limnophila fasciata* and the spider *Cararita limnaea*. Other wetland Red Data Book species are; the beetles *Lathrobium rufipenne* and *Donacia aquatica*, the flies *Prionocera pubescens* and *Gonomyia abbreviata* and the spider *Sitticus floricola*.	Environmental Conditions needed to support site integrity will need to be considered at the full Habitats Regulations stage since this range of sites is varied and needs consideration in relation to specific plans and policies.

Table 4: Midland Meres and Mosses (Ramsar Phase 2)

Site Name: Midland Meres and Mosses (Ramsar phase 2), Shropshire/ Clwyd/ Cheshire/ Staffordshire, England.

Site Description: Phase 2 of the Ramsar sites covers 1740.3ha and is entirely co-incident with the following 19 Sites of Special Scientific Interest (SSSI). These are: Abbots Moss, **Aqualate Mere**, Black Firs & Cranberry Bog, Brownheath Moss, Chapel Mere, **Cole Mere**, **Cop Mere**, **Fenn's, Whixall, Bettisfield, Wem & Cadney Mosses**, Hanmer Mere, Hencott Pool, Linmer Moss, Llyn Bedydd, Morton Pool & Pasture, Oak Mere, Oakhanger Moss, **Oss Mere**, Rostherne Mere, Sweat Mere & Crose Mere and Vicarage Moss. NB. Those SSSIs in the Ramsar phase 2 designation indicated in bold above are considered in this screening document.
Conservation Objectives: Ramsar criterion – peatland. The conservation objectives for the site are to maintain in favourable condition: • the habitat types for which the site is designated.
Site Vulnerability: Invasive species: considered a major impact on this site. Water quality: eutrophication is considered a major impact on this site. Land take for development · Recreational pressure and disturbance: in line with other bog and mire habitats, trampling and erosion are likely to be a significant issue where public access occurs. Water quality: declines in water quality through nutrient enrichment and sediment. Land use in surrounding areas: agricultural practices and urban runoff are likely to affect the scattered sites through nutrient enrichment and sedimentation.

Reason for Designation:	**Environmental Conditions Needed to Support Site Integrity**
Criterion 1a. A particularly good example of a natural or near natural wetland, characteristic of this biogeographical region, The site comprises the full range of habitats from open water to raised bog.	Environmental Conditions needed to support site integrity will need to be considered at the full Habitats Regulations Assessment stage since this

Criterion 2a. Supports a number of rare plants associated with wetlands, including the nationally scarce cowbane *Cicuta virosa*, elongated sedge *Carex elongate* and bog rosemary *Andromeda polifolia*. Also present are the nationally scarce bryophytes *Dicranum undulatum*, *Dircranum affine* and *Sphagnum pulchrum*. **Criterion 2a.** Containing an assemblage of invertebrates, including several rare wetland species. There are 16 species of Red Data Book insect listed for the site including the following endangered species: the moth *Glyphipteryx lathamella*, the caddisfly *Hagenella clathrata* and the sawfly *Trichiosoma vitellinae*.	range of sites is varied and needs consideration in relation to specific plans and policies.

Table 5: Midland Meres & Mosses Ramsar Phases 1 and Phase 2 – individual sites and features

Ramsar phases split into Ramsar features/SSSI unit from Information on Natura 2000 Sites in the West Midlands, Prepared for Natural England by Treweek Environmental Consultants, 2009.

Phase 1 Sites/Ramsar feature	Open water	Swamp	Fen	Basin Mire	Raised bog	Wet pasture	Carr	Invertebrates	Plants
Clarepool Moss	+			+				dotted footman	
Wybunbury Moss				+		+	+	assemblage *Carorita limnaea*	*Andromeda polifolia Thelypteris palustris*
Brown Moss	+	+	+	+					*Luronium natans*
Berrington Pool	+	+	+						
Betley Mere	+	+	+			+	+		
Bomere, Shomere & Bomere Pools	+	+		+			+		*Elatine hexandra* *Thelypteris palustris*
Fenemere	+	+	+			+	+		*Cicuta virosa* *Thelypteris palustris*
Marton Pool	+	+					+		
Quoisley Meres	+	+	+			+	+		*Cicuta virosa* *Thelypteris palustris*
White Mere	+						+		*Carex elongata* *Eleocharis acicularis*

Phase 2 Sites/Ramsar feature	Open water	Swamp	Fen	Basin Mire	Raised bog	Wet pasture	Carr	Invertebrates	Plants
Fenns and Whixall Moss					+		+	assemblage *Hagenella* small pearl	*Andromeda polifolia* *Dicranum undulatum* *Sphagnum pulchrum*
Aqualate Mere	+	+	+			+	+	assemblage	
Black Firs & Cranberry Bog	+			+			+		*Cicuta virosa*
Brownheath Moss			+				+		*Carex elongata*
Chapel Mere	+	+					+		
Cole Mere	+					+	+		*Carex elongata*
Cop Mere	+	+	+				+		
Hencott Pool							+		*Carex elongata*
Llinmer Moss				+					*Cicuta virosa* *Thelypteris palustris*
Morton Pool & Pasture	+	+				+	+		*Thelypteris palustris*
Oss Mere	+	+				+	+		*Cicuta virosa* *Thelypteris palustris*
Sweat Mere & Crose Mere	+	+	+			+	+		*Carex elongata* *Thelypteris palustris*

Natural England is in the process of revising conservation objectives for SSSI units in Shropshire in order to take secondary European Features such as species into account. The tables below include Conservation Objectives where they have been provided by Natural England. The most up to date Conservation objectives for the SSSI units will be sought from Natural England prior to carrying out a full Appropriate Assessment on any lower tier document.

Table 6: Ramsar Midland Meres & Mosses Phase 1 individual site descriptions

Site Name: Brown Moss SSSI, SJ562395, Shropshire, England also SAC
Site Description: Brown Moss (31.32ha) differs from the other North Shropshire Mosses in consisting of a series of pools set in an area of heathland and woodland, rather than an expanse of peat. It has been suggested that the site may once have been peat covered, and that peat removal in the past has led to the present condition of the site.
Definition of Favourable Condition for SSSI: Subject to natural change, to maintain, in favourable condition, the habitat for the internationally important population of Floating Water Plantain (*Luronium natans*), with particular reference to the standing open water. (Maintenance implies restoration if the feature is not currently in favourable condition).
Site Vulnerability: Colonisation by trees is being addressed but continues to be of concern due to the shading, nutrient and hydrological effects on the open water and heathland. The presence of *Crassula helmsii* is a threat to *Luronium natans* and various control mechanisms are being explored.

Table 7: Ramsar Midland Meres & Mosses Phase 2 individual site descriptions

Site Name: Aqualate Mere SSSI, SJ770205, Staffordshire
Site Description: Aqualate Mere (241.00ha) is the largest of the meres with the most extensive reedswamp community. The mere and its surrounds form a complex of open water, fen, grassland and woodland unrivalled in Staffordshire for the variety of natural features of special scientific interest. The esker formation on the north side of the mere is of national geomorphological importance in its own right. The large area and juxtaposition of seminatural habitats supports an outstanding assemblage of beetles, moths and sawflies. The site has nationally important numbers of breeding herons Ardea cinerea and passage shoveler Anas clypeata and is regionally significant for breeding waders.
Definition of Favourable Condition for SSSI:
Site Vulnerability: Reductions in water levels from ground water and surface water abstractions, eutrophication from raised nitrogen and phosphorous and siltation entering the site via incoming water, largely from the nearby canal, as well as the presence of invasive species, in particular fish.

Site Name: Cop Mere SSSI, SJ802297, Staffordshire
Site Description: Cop Mere (37.8ha) is a shallow lake lying in a hollow in Keuper Marl. In many respects, it is an outlier of the series of meres concentrated in North Shropshire and Cheshire. However, it differs from many of the meres in having a distinct inflow and outflow, the River Sow, which enters the mere at the western end and leaves at the eastern end.
Definition of Favourable Condition for SSSI:

Site Vulnerability: Reductions in water levels (possibly from long-term increased abstraction rates from the River Sow), eutrophication and siltation from surrounding agricultural run-off and invasive species, especially encroaching rhododendron scrub.

Site Name: Fenn's, Whixall, Bettisfield, Wem & Cadney Mosses SSSI, SJ490365, Shropshire/Clwyd, England/Wales also SAC
Site Description: Fenn's, Whixall, Bettisfield, Wem and Cadney Mosses (948.4ha) together form an outstanding example of a lowland raised mire. The moss complex, which straddles the border between Shropshire, England and Clwyd, Wales, is one of the largest and most southerly raised mires in Britain. The site is highly valued ecologically as an example of mire development occurring under relatively warm and dry conditions and lying at the edge of the British range for this type of habitat.
Definition of Favourable Condition for SSSI: To maintain, in favourable condition, the active raised bogs and degraded raised bogs still capable of natural regeneration on the site.
Site Vulnerability: The lowland raised mire is dependent upon high water levels and a continuation of active peat-forming processes. Much of the site is subject to mineral planning consents for peat extractions which are currently being reviewed. The site has a history of peat-cutting and until recently, part of the site has been subject to large-scale commercial extraction, involving drainage over much of the peat body. Afforestation and agricultural improvement on marginal areas of the peat body have accelerated the lowering of water levels, resulting in encroachment by scrub and a decline in the extent of peat-forming communities. A greater part of the site is now owned, leased or managed under agreement by conservation organisations. Within these areas, mire rehabilitation management is taking place under the guidance of a management plan.

It is intended to seek to increase the areas under positive conservation management by implementation of the joint Countryside Council for Wales/English Nature acquisition strategy.

Site Name: Oss Mere SSSI, SJ565438, Shropshire, England
Site Description: Oss Mere (28.32ha) is a shallow mere of moderate fertility, bordered on two sides by reedswamp and alder carr. The site also includes woodland on dry peat and on fringe of damp grassland. Within the mere both white and yellow water lilies Nymphaea alba and Nuphar lutea occur, but are scarce. Horned pondweed Zannichellia palustris is the dominant submerged aquatic plant. The alder carr is particularly rich, and has a flora which includes cyperus sedge Carex pseudocyperus, cowbane Cicuta virosa, bog violet Viola palustris, marsh fern Thelypteris thelypteroides and royal fern Osmunda regalis, all of which are uncommon in Shropshire.
Definition of Favourable Condition for SSSI: Maintain the Fen, Marsh and Swamp, Broadleaved, mixed and yew woodland and Standing open water in favourable condition
Site Vulnerability:

Table 8: River Severn SAC/SPA/European Marine Site(EMS), Ramsar.

Site Name: Severn EstuarySAC/SPA/EMS, Ramsar, Bristol City, Gloucestershire, Bath & North East Somerset, Somerset, South Gloucestershire, England. Bro Morgannwg/Vale of Glamorgan, Caerdydd/Cardiff, Casnewydd/ Newport, Sir Fynwy/ Monmouthshire, Wales.
Site Description:

The Severn Estuary is located between Wales and England in south-west Britain. It is a large estuary with extensive intertidal mud-flats and sand-flats, rocky platforms and islands. Saltmarsh fringes the coast backed by grazing marsh with freshwater ditches and occasional brackish ditches. The subtidal seabed is rock and gravel with subtidal sandbanks. The site also supports reefs of the tube forming worm Sabellaria alveolata.

The estuary's classic funnel shape, unique in the UK, is a factor causing the Severn to have one of the highest tidal ranges in the world. A consequence of the large tidal range is an extensive intertidal zone, one of the largest in the UK. The tidal regime results in plant and animal communities typical of the extreme physical conditions of liquid mud and tide-swept sand and rock. The species-poor intertidal invertebrate community includes high densities of ragworms, lugworms and other invertebrates forming an important food source for passage and wintering waders and fish.

The site is of importance during the spring and autumn migration periods for waders, as well as in winter for large numbers of waterbirds, especially swans, ducks and waders. The fish fauna is very diverse with more than 110 species identified. The site is of particular importance for migratory fish.

Conservation Objectives for SAC:

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats and habitats of qualifying species
- The structure and function (including typical species) of qualifying natural habitats
- The structure and function of the habitats of qualifying species
- The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- The populations of qualifying species, and,
- The distribution of qualifying species within the site.

Conservation Objectives for SPA:

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site.

Site Vulnerability:

Public access and recreation may have an impact on bird species sensitive to disturbance, causing displacement from feeding, roosting and moulting areas, and if severe could affect long term survival and population numbers and distributions within the Estuary. There are a wide range of recreational activities within the site (walking, dog walking, horse riding, biking, beach activities, angling, wildfowling, other shooting (eg clay pigeon)) that may cause damage to habitats where pressure is high.

Modification to water courses and barriers to Annex II migratory fish (and those included in the fish assemblage) in the tributary rivers are preventing completion of the life cycle and potentially altering the hydrodynamics of the site. This includes existing structures and operations (bridges, power station lagoons, jetties, dredging, flood alleviation) influencing the flow of water, sediments and therefore migration.

As sea levels rise, man-made defences are constraining the natural roll back of estuarine habitats, causing squeeze and loss of habitat and having impacts on species dependant upon those habitats (birds: feeding/ roosting, and fish: feeding/ nursery and shelter areas).

Changes in ownership and other land practices can result in changes in management and use of land (eg.changes in grazing practice) which affects species composition, habitat availability, and quality of saltmarsh habitats and use of land for other activities that may cause damage or disturbance.

There is a risk of significant changes in estuarine populations (including declines in some SPA bird populations) in parts of the Estuary resulting from climate change and other man-made and natural modifications to on- and offsite environments.

There is uncertainty over water quality in the Estuary due to diffuse (including agricultural) or direct pollution (eg. industrial, sewage treatment works, thermal, radioactive).

Activities around the Estuary include fertiliser application, potentially dairy and poultry production, road traffic, industry (including power stations), and shipping which are all sources of nitrogen pollution. Nitrogen deposition exceeds site relevant critical loads, with potential impacts on vegetation structure and diversity.

Commercial fishing activities can cause habitat damage and disturbance to wildlife.

There are recent reports of marine invasive non-native species (the Australian barnacle Austrominius modestus, Mitten crab Eriocheir sinensis, and the Pacific Oyster Crassostrea gigas) in the Estuary (or the Bristol Channel). These could have an impact on native species and habitats but the abundance and impact in the Severn Estuary of these species is unclear.

Reason for Designation	**Environmental Conditions Needed to Support Site Integrity**
The site is designated under Article 4(4) of the Habitats Directive (92/43/EEC) as it hosts the following habitats listed in Annex I: • Sandbanks which are slightly covered by sea water all the time. (Subtidal sandbanks) • Estuaries • Mudflats and sandflats not covered by seawater at low tide. (Intertidal mudflats and sandflats) • Atlantic salt meadows (Glauco-Puccinellietalia maritimae) • Reefs **Qualifying species:** The site is designated under Article 4(4) of the Directive (92/43/EEC) as it hosts the following species listed in Annex II: • Sea Lamprey (Petromyzon marinus) • River Lamprey (Lampetra fluviatilis) • Twaite Shad (Alosa fallax)	Reduction of human impacts on disturbance to birds and damage to habitats. Reduction, removal (where possible), and prevention of barriers to migratory species. Limit coastal squeeze by provision of sustainable coastal defences, Improvement to existing structures and delivery of compensatory habitat. Appropriate levels and timing of grazing, and management of intertidal saltmarsh habitat. Understand/prepare for changes in species distribution (caused by climate change/other events). Prevention/reduction in decline in water and sediment quality (applying relevant measures to all relevant tributaries in England and Wales).

SPA • A037 Cygnus columbianus bewickii; Bewick's swan (Non-breeding) • A048 Tadorna tadorna; Common shelduck (Non-breeding) • A051 Anas strepera; Gadwall (Non-breeding) • A149 Calidris alpina alpina; Dunlin (Non-breeding) • A162 Tringa totanus; Common redshank (Non-breeding) • A394 Anser albifrons albifrons; Greater white-fronted goose (Non-breeding) Waterbird assemblage	

Appendix 3: Screening of SUTNP polices for potential significant effects

See separate Pdf.