Woore

Neighbourhood Plan

2016-2036

Regulation 15 Submission Version

May 2018

Habitats Regulations Assessment

Screening Report

Updated October 2018

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 Woore Neighbourhood Plan 2016-2036 (WNP). It has been completed by Shropshire Council on behalf of the Woore Parish Council.

The purpose of this Screening Report is to identify which international sites could possibly be affected by the proposals in the WNP, 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 WNP 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 WNP and this HRA Screening Report are available on the Shropshire Council website. The HRA Screening Report is subject to consultation for four weeks between **Wednesday 7th November and Wednesday 5th December**

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 Woore Neighbourhood Plan 2016-2036 and the HRA Screening Report

The draft WNP has been prepared under the guidance of the Woore Neighbourhood 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 WNP 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.

Woore 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.

A partial review of the Local Plan is now in progress and will allocate additional sites for housing and employment for 2026 to 2036. It should be noted that the LPR is at an early stage of preparation. More specific information regarding location of site allocations and wording of policies is likely to be available later in the plan making process and will form the basis for subsequent LPR HRA reports. The policies in the final WNP will be taken into account in the Shropshire Local Plan Review.

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 WNP,
- identify the potential pathways by which the sites may be affected,
- Identify all aspects of the WNP 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 WNP 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 WNP 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 WNP HRA Screening Report.

Following the precautionary principle, the first step in the screening process was to identify all international sites within 15km of the WNP 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 Woore.

Map 1 in Appendix 1 shows Woore 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. Betley Mere
    b. Brown Moss
    c. Wynbunbury Moss
3. **Midland Meres & Mosses Ramsar Phase 2**
    a. Black Firs and Cranberry Bog
    b. Cop Mere
    c. Oakhanger Moss
    d. Oss Mere
4. West Midlands Mosses SAC – Wybunbury Moss
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 WNP 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 WNP does not allocate sites specifically for point sources of airborne pollution such as incinerators, bio-digesters, slurry lagoons etc.

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 WNP), 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.

Two international sites within 15km of the WNP area lie within 200m of a major road, namely Wybunbury Moss, Midland Meres & Mosses Ramsar Phase 1 and West Midlands Mosses SAC, and Black Firs andCranberry Bog, Midland Meres & Mosses Ramsar Phase 2. 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 WNP as it does not allocate land for development. Any site allocations in the Local Plan Review will be subject to HRA screening for this effect pathway.

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. The studies

described the settlement of Woore as being capable of taking further development. This is supported by early results of the new Water Cycle Study for the Local Plan Review, for sewage treatment.

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 WNP area boundary with public access or signs of public use are **Brown Moss Ramsar** (31ha) and Wybunbury Moss SAC and Ramsar (23.3ha).

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 16km from the WNP development boundary and 14.6km from the edge of the WNP area boundary. Wybunbury Moss is c. 7.9km from the proposed development boundary and over 6km from the WNP area boundary.

2.5.4 Biosecurity pathways

No biosecurity pathways have been identified via proposals in the WNP.

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 WNP area boundary is over 3km away.

3. Screening or assessment of potential effects

3.1 Initial screening of policies and site allocations in the WNP

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

The following policies have been **screened out** as they relate to policies that 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:

- Policy HOU2 – New housing location
- Policy HOU3 – Design
- Policy GAP1 – Sensitive gaps
- Policy ECON1 – Rural Economy
- Policy INF – Parking
- Policy INF2 – Communications Infrastructure
- Policy COM1 – Community facilities
- Policy COM2 – Recreation, Play and outdoor sports facilities
- Policy COM3 – Local Green Spaces
- Policy ENV1 - Footpaths/Sustainable Transport
- Policy ENV2 – HS2

The remaining policy, which could potentially affect international sites is as follows:

- Policy HOU1 – Scale of new housing location

This policy proposes the location of the development boundary in Woore and suggests an appropriate level of housing to be around 30 houses. Hence the policy provides a general location for development and an approximate limit for the number of houses, but does not allocate sites. Site allocation for more specific numbers of houses has been left to the Local Plan Review being produced by Shropshire Council. Housing allocations in the Woore area in the SAMDev Plan, which have not yet been developed, will be carried forward into the Local Plan Review. These sites, possible effect pathways and any required mitigation measures, have already been considered in the SAMDev Plan HRA (SAMDev policy S11.2 (vii)). During the LPR, as a precautionary measure, these 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. New sites have yet to be allocated through the LPR, although the scale of new development from 2026 to 2036 has been published.

3.2 Screening for likely significant effects on international sites via the remaining policy in the WNP

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 remaining WNP policy. The potential for in-combination effects has also been considered. The results are summarised in the tables below:

Table 2 Screening of Betley Mere

Site Name:	**Betley Mere, Midlands 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**	**No- no public access**	**Yes**	**Yes**
Is WNP 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, no public access so transfer of invasive species via visits from additional residents very unlikely.	No effect, Site is outside Plan area and >3km to north-east.
Possible effects in combination with other plans	As no effects from the WNP have been identified on Betley Mere, then 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 Black Firs and Cranberry Bog

Site Name:	**Black Firs and Cranberry Bog, 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**	**No**	**Yes**	**Yes**
Is WNP likely to impact upon this site	No effect, outside plan area.	No effect from large point sources as not allocated.	No effect, Plan area is outside the surface water catchment.	No effect, Plan area is outside the surface water catchment.	No effect, due to distance from the Plan area and no public access.	No effect, due to distance from the Plan area and no public access.	No effect, Site is outside Plan area and >5km from the plan area boundary.
Possible effects in combination with other plans	Possible effects from an increase in traffic movements causing pollution from NOx emissions. However, Black Firs and Cranberry Bog is c. 5.5km away from the WNP area and c. 7.5km from the development boundary. It lies between Nantwich and Crewe in the west and Newcastle-Under-Lyme in the east.						
Assessment of effects and their likely significance	Additional road traffic movements on the A531, as a result of 'around 30 houses' in Woore, are likely to be minimal and have negligible impacts alone on Black Firs and Cranberry Bog. Further research on road traffic impacts in-combination is being carried out for the Local Plan Review. As no site allocations are made in the WNP and allocation will take place via the LPR following a full HRA, no effects as a result of the WNP, either alone or in-combination have been identified.						
Conclusion	No effects alone or in-combination						

Table 4 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 WNP 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 14 km from the Site.
Possible effects in combination with other plans	A maximum of around 30 dwellings is proposed by the WNP and the distance to the Ramsar site is such that no effects from the WNP have been identified on Brown Moss. Therefore, there can be no effects in-combination with other plans or projects.						
Assessment of effects and their likely significance	For a site with the area of Brown Moss, ANGst values (see section 2.5.3) indicate that the majority of visits would be from people living within 5km of the Site. The nearest Plan boundary is over 14km away. An informal visitor survey on Brown Moss recorded 92% of visitors travelling less than 5km in 2014. A formal visitor survey in 2017 found that 75% of visitors from Shropshire travelled from within 3.4km. In view of these distances, it is considered there will be no effect on Brown Moss as a result of the WNP.						
Conclusion	No effects, alone or in-combination.						

Table 5 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 WNP 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 >10km to south-east.
Possible effects in combination with other plans	As no effects from the WNP 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 6 Screening of Oakhanger Moss

Site Name:	**Oakhanger Moss, West Midlands Mosses SAC, 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**	**No**	**Yes**	**Yes**
Is WNP likely to impact upon this site	No effect, outside plan area.	No effect from large point sources as not allocated. However, M6 passes close to the site.	No effect, Plan area is outside the surface water catchment.	No effect, Plan area is outside the surface water catchment.	No effect, due to distance from the Plan area and no formal public access.	No effect, due to distance from the Plan area and no public access.	No effect, Site is outside Plan area and >10.5km from the plan area boundary.
Possible effects in combination with other plans	Possible effects from an increase in traffic movements causing pollution from NOx emissions. However, Oakhanger Moss is over 10.5km away from the development boundary, adjacent to the M6.						
Assessment of effects and their likely significance	Additional road traffic movements on the M6, as a result of 'around 30 houses' in Woore, are likely to be minimal and have negligible impacts alone on Oakhanger Moss. Much larger settlements such as Crewe, Shavington, Alsager and Kidsgrove lie closer to the site. Further research on road traffic impacts in-combination is being carried out for the Local Plan Review. As no site allocations are made in the WNP and allocation will take place via the LPR following a full HRA, no effects as a result of the WNP, either alone or in-combination have been identified.						

Conclusion	No effects alone or in-combination

Table 7 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 WNP 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 west.
Possible effects in combination with other plans	As no effects from the WNP have been identified on Oss Mere (>13km from plan boundary), 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 8 Screening of Wybunbury Moss

Site Name:	**Wybunbury Moss, West Midlands Mosses SAC, Midlands meres and Mosses Ramsar Phase 1, 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**	**Yes, limited public access**	**Yes**	**Yes**
Is WNP likely to impact upon this site	No effect, outside plan area.	No effect from large point sources as not allocated. No A roads within 200m. However, B5071 is close to the AADT levels that could lead to exceedance by 2036	No effect, Plan area is outside the surface water catchment.	No effect, Plan area is outside the surface water catchment.	No effect, due to distance from the Plan area and limited public access.	No effect, due to distance from the Plan area and limited public access.	No effect, Site is outside Plan area and >6km from the plan area boundary.
Possible effects in combination	Possible recreational effects on Wybunbury Moss. However, this 23.3 ha site is over 6 km from the Plan boundary and c. 8km from the proposed development boundary. Due to the dangerous nature of the majority of the site (floating peat and deep water), public access is limited to a circular walk on public						

with other plans	footpaths around the outside of the moss and a small section of permissive path into the moss itself. Otherwise access is by permit only, issued by Natural England. Possible effects from an increase in traffic movements causing pollution from NOx emissions. However, Wybunbury Moss is c. 8km away from the development boundary, on a B road which serves the settlements of Wybunbury and Shavington, and is much closer to Nantwich and Crewe.
Assessment of effects and their likely significance	Recreational effects on Wynbunbury Moss have been discounted as, based on the ANGst distance for a site of this size, one would expect the majority of visitors to come from less than 5km away. Both the Plan area and the development boundary are beyond this distance and only 'around 30 houses' are proposed. In addition, public access is carefully controlled by Natural England. Additional road traffic movements on the B5071, as a result of 'around 30 houses' in Woore, are likely to be minimal and have negligible impacts alone on Wybunbury Moss. The closest distance between the road edge and the Moss is 50m, stretching to 109m. The intervening land consists of housing and back gardens before reaching the international site boundary. There is a very steep reduction in the amount of NOx gases as the distance from the road increases. Further research on road traffic impacts in-combination is being carried out for the Local Plan Review. As no site allocations are made in the WNP and allocation will take place via the LPR following a full HRA, no effects as a result of the WNP, either alone or in-combination have been identified.
Conclusion	No effects alone or in-combination

Table 9 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 WNP likely to	No effect, outside plan area.	No effect, large point sources not	Possible effect, Plan area is	Possible effect, water for Plan area	No effect, Plan area is over 70km	No effect, due to distance of	No effect.

impact upon this site		allocated. Site is over 70km from Plan area.	drained into the Severn catchment.	is drawn from the River Severn catchment.	from the Site.	Site from Plan area.	
Possible effects in combination with other plans	The Outline Water Cycle Study 2010 (Ref. 10) and the 'Water cycle evidence for Shropshire Local Plan, 2014' (Ref. 11) indicated that there was hydrological capacity for the additional 900 or so dwellings in the SAMDev Plan. As part of the Local Plan Review a new water cycle study has been commissioned to cover additional housing allocations to 2036. The full results of this study are not yet available, although early results for sewage treatment indicate no problems for the proposed growth in Woore.						
Assessment of effects and their likely significance	A very limited number of additional dwellings, up to around 30, are said to be acceptable in the WNP. Although the development boundary is proposed, site allocations are not made in the Plan's policies. Site allocations will be made via the Local Plan Review, which will be subject to a full HRA, and will be evidenced by the new Water Cycle Study for Shropshire. Any site allocations must pass the HRA of the LPR. Hence, the WNP will have no effect on the River Severn SAC/SPA or Ramsar Site.						
Conclusion	No effects alone or in-combination						

4 Conclusions and recommendations

A total of 5 international sites (comprising 8 separate SSSIs) have been identified for consideration in the Woore Neighbourhood Plan HRA Screening Report. Possible pathways for significant adverse effects on these international sites, as a result of the WNP, have been identified and placed in five main categories: air pollution; water pathways; recreation pathways; biosecurity pathways and light pollution. Policies within the WNP have been screened for potential to effect international sites and the policy which could not be immediately screened out has been assessed against the sensitivities of the international sites.

All international sites have been screened out as the WNP would have no effect, alone or in-combination with other plans or projects. No mitigation measures were required to screen out these sites.

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

5 Public consultation

The Woore Neighbourhood Plan has been subject to public consultation through the legislative requirements governing Neighbourhood Plan making. Woore Town Council submitted the Regulation 15 version of the Plan to Shropshire Council in May 2018 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).

In July Shropshire Council appointed an independent examiner to conduct the examination into the Woore Neighbourhood Plan. Following concern raised by the examiner regarding the the HRA process, it has been agreed with the Examiner that Shropshire Council will formally consult on this HRA Screening Assessment, and that the outcome of this process will be considered by the Examiner before he publishes his final report.

This HRA Screening Assessment is therefore going to be subject to consultation for four weeks between 8th November and 5th December 2018.

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

6. Highways Agency, (2007) Design Manual for Roads and Bridges HA207/07, Volume 11, Section 3, (2007), Environmental Assessment Techniques.
7. ODPM Circular 06/2005: (Biodiversity and Geological Conservation – Statutory Obligations and their impact within the Planning System)
8. Scottish Natural Heritage (January 2015) Habitats Regulations Appraisal of Plans
9. Shropshire Council Local Development Framework Adopted Core Strategy March 2011
10. Shropshire Council (2010) Outline Water Cycle Study Final Report
11. Shropshire Council (2014) Water Cycle Evidence for Shropshire Local Plan
12. The Conservation of Habitats and Species Regulations 2017 (the "Habitats Regulations")
13. White, J, Liley, D. & Underhill-Day, J. (2009). Cannock Chase Visitor Impact Mitigation Strategy. Footprint Ecology. Previous Shropshire HRA documents
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).

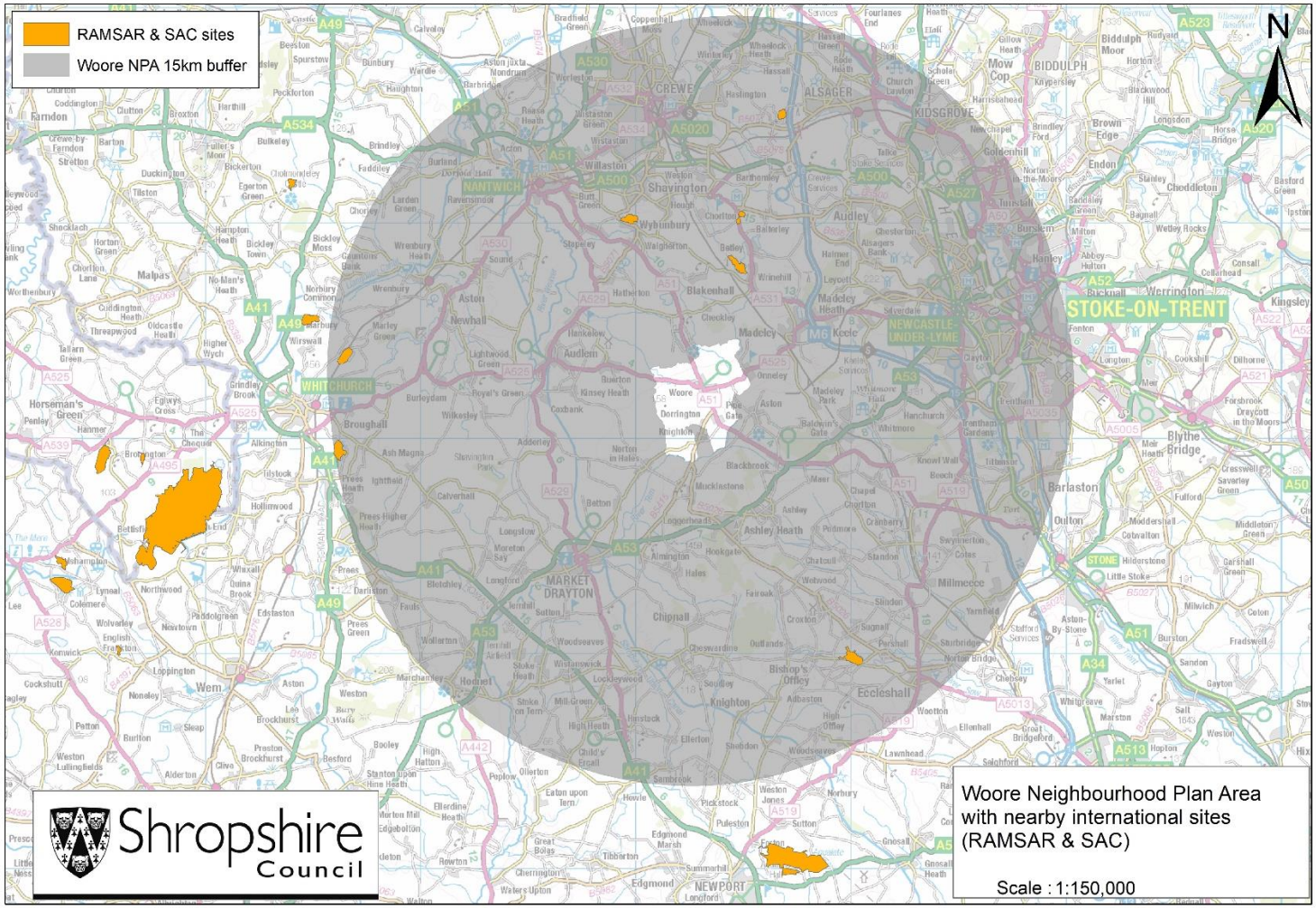
Abbreviations and definitions

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

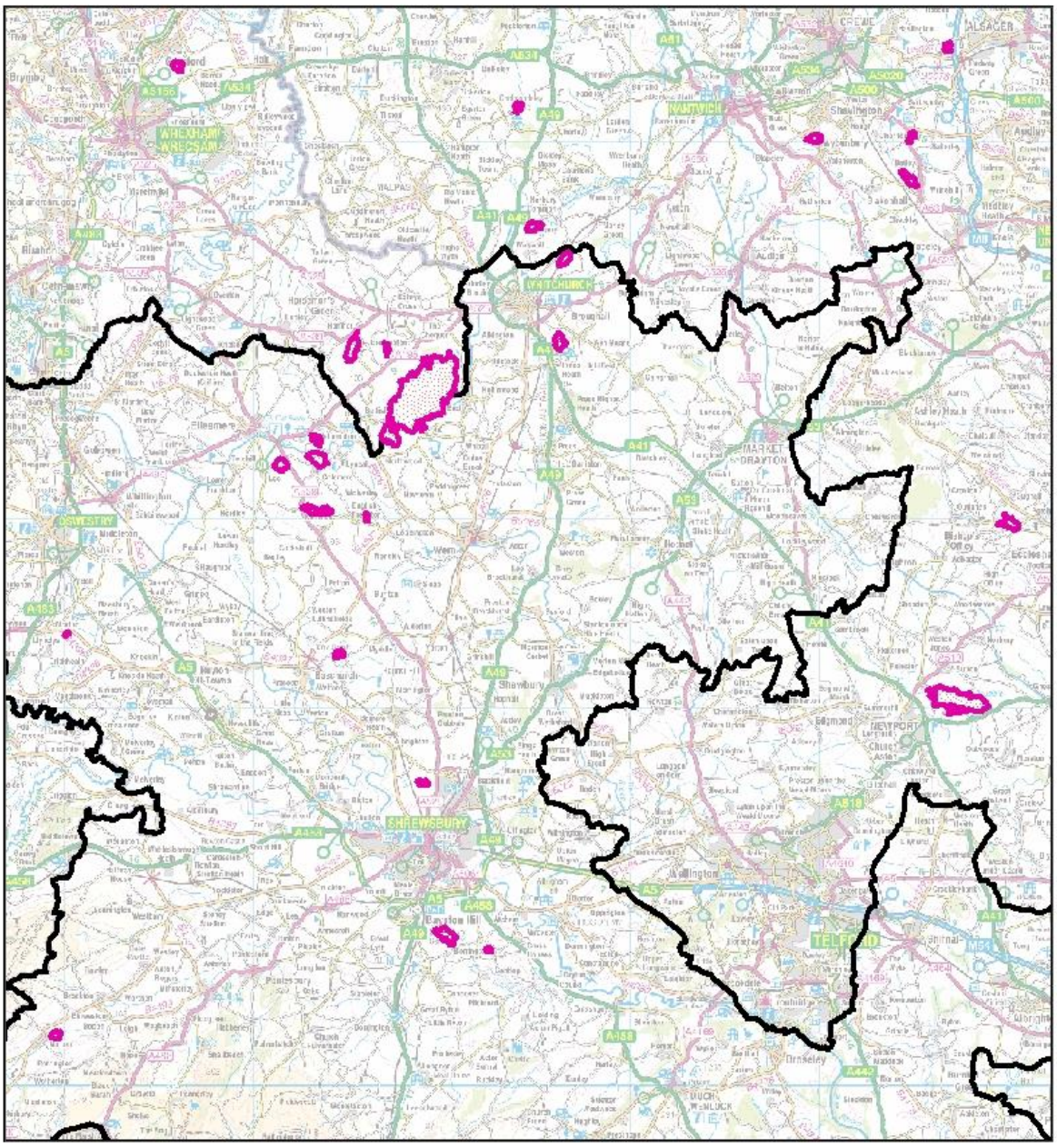
IRZ	Natural England Impact Risk Zone
LPR	Local Plan Review
SAMDev	Site Allocations & Management of Development Plan
SPD	Supplementary Planning Document

Appendix 1: Maps of international sites considered in this report

Map 1 WNP Plan Area with 15km buffer



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



Shropshire Council

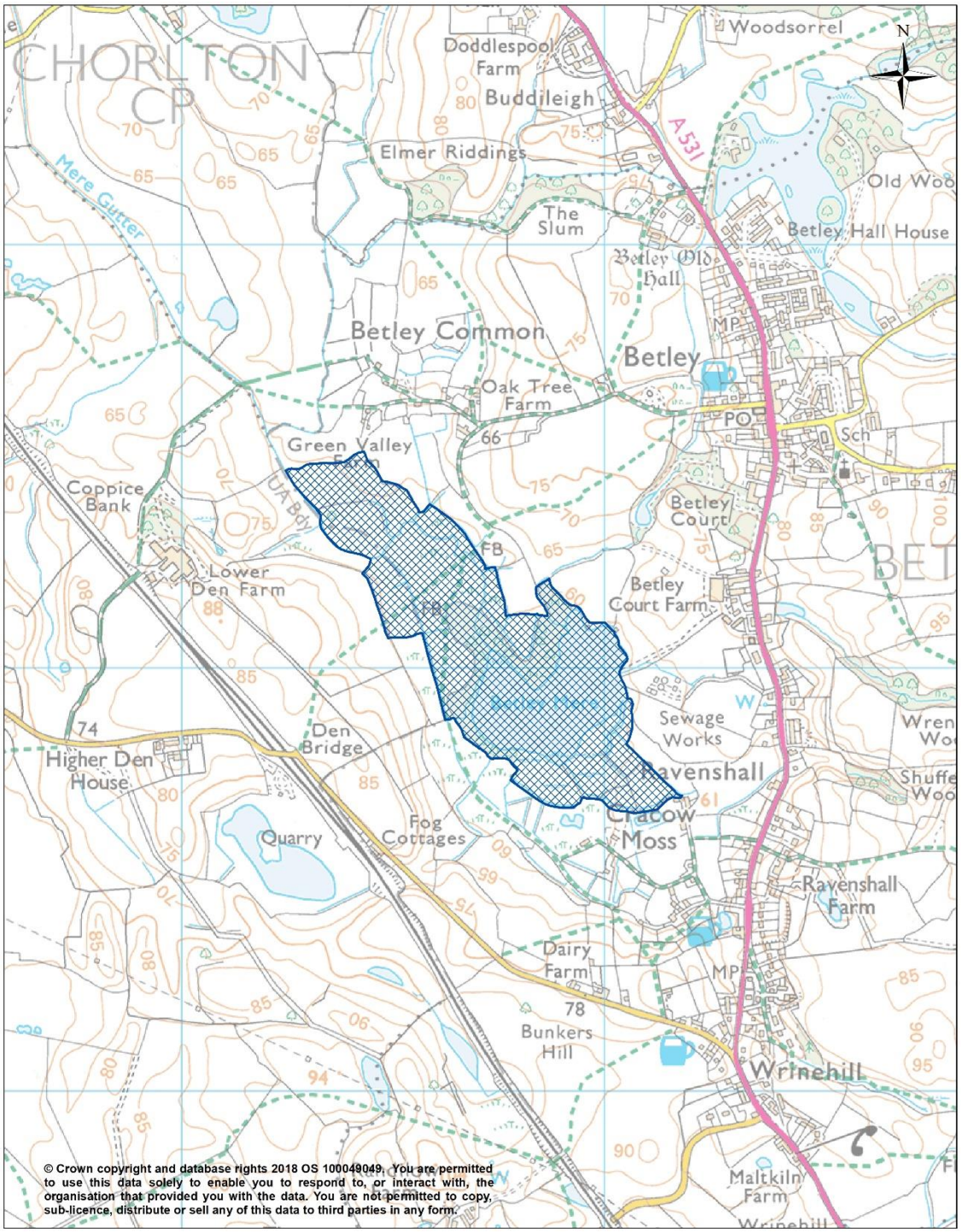
Midland Meres & Mosses Ramsar
Phase 1 & Phase 2

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

N
W E
S

Scale: 1:268,390

Map 3 Betley Moss Ramsar site

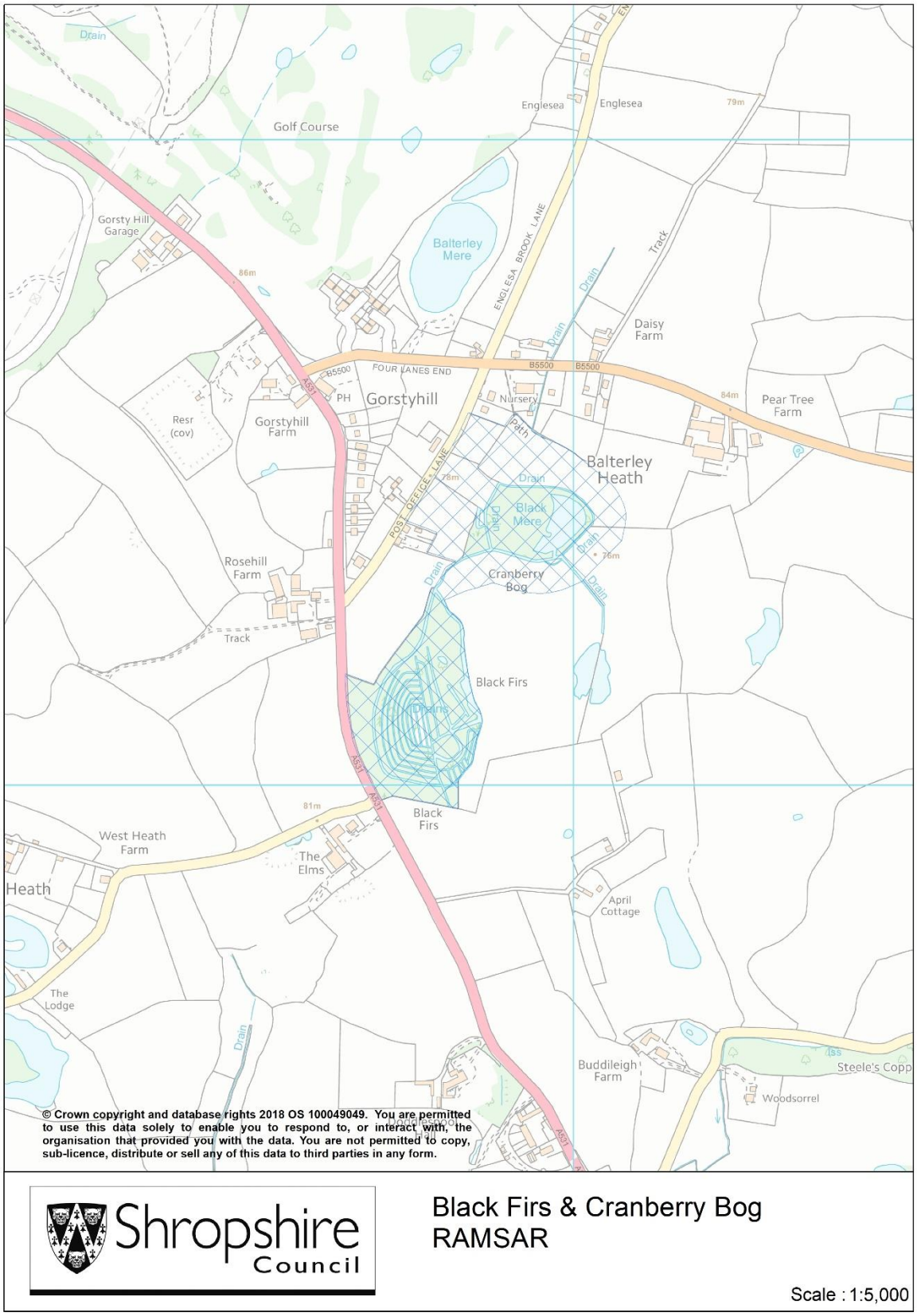


Shropshire Council

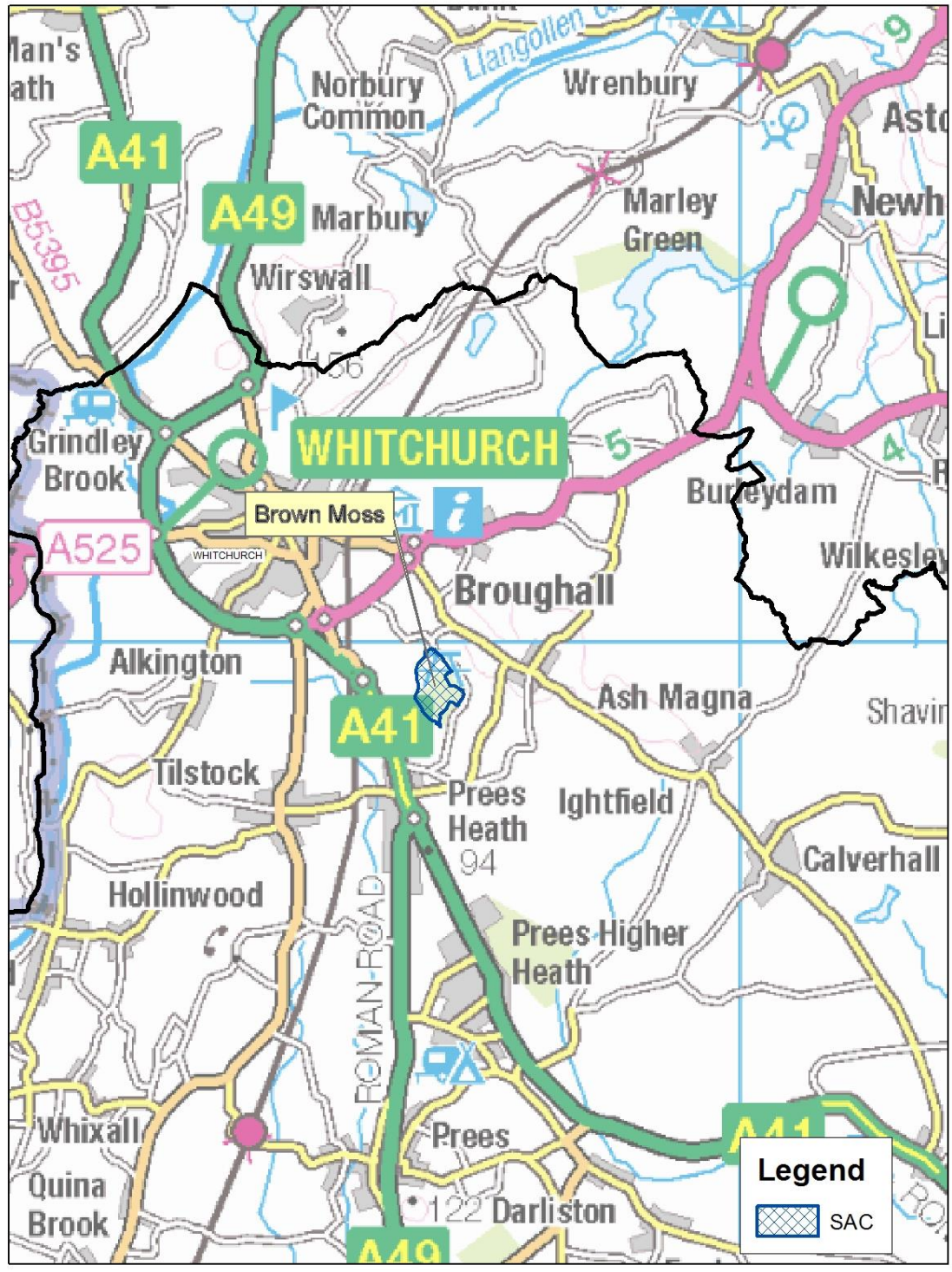
Betley Mere SSSI

Scale : 1:8,000

Map 4 Black Firs and Cranberry Bog Ramsar Site



Map 5 **Brown Moss SAC/Ramsar site**

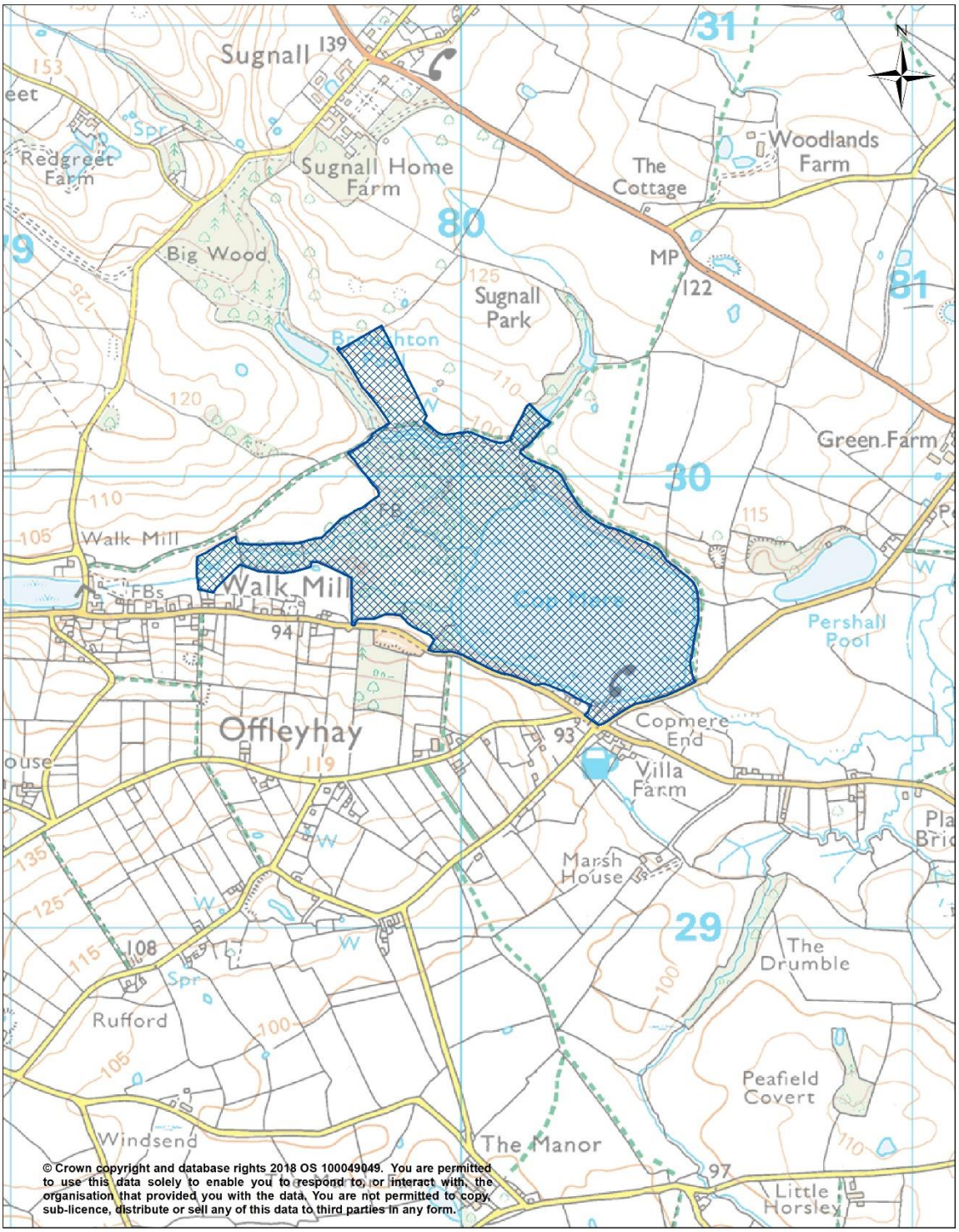


Brown Moss SAC

Shropshire Council

0 0.5 1 2 Kilometers

Map 6 Cop Mere Ramsar site

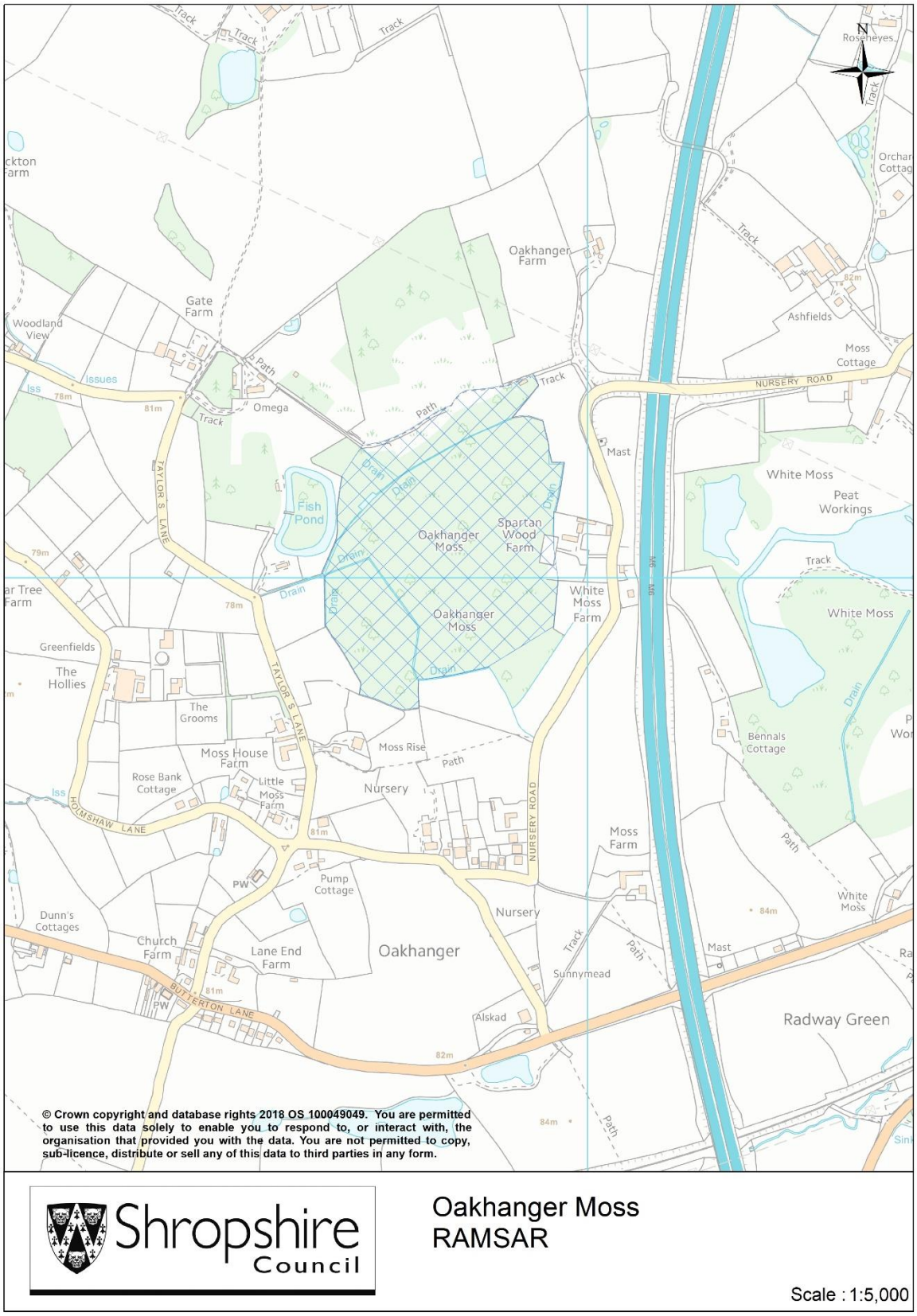


Shropshire Council

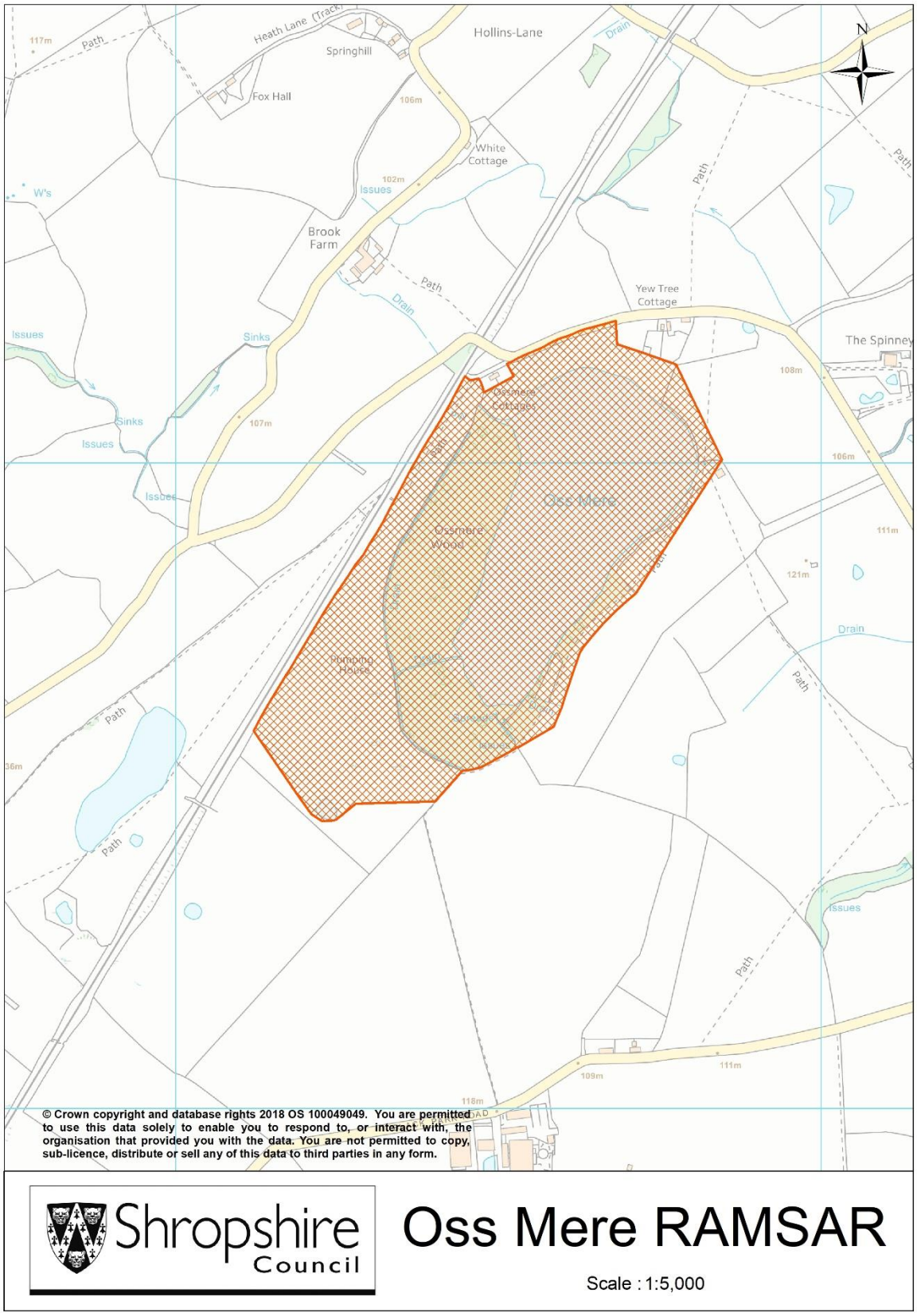
Cop Mere SSSI

Scale : 1:7,500

Map 7 Oakhanger Moss Ramsar Site



Map 8 Oss Mere Ramsar site



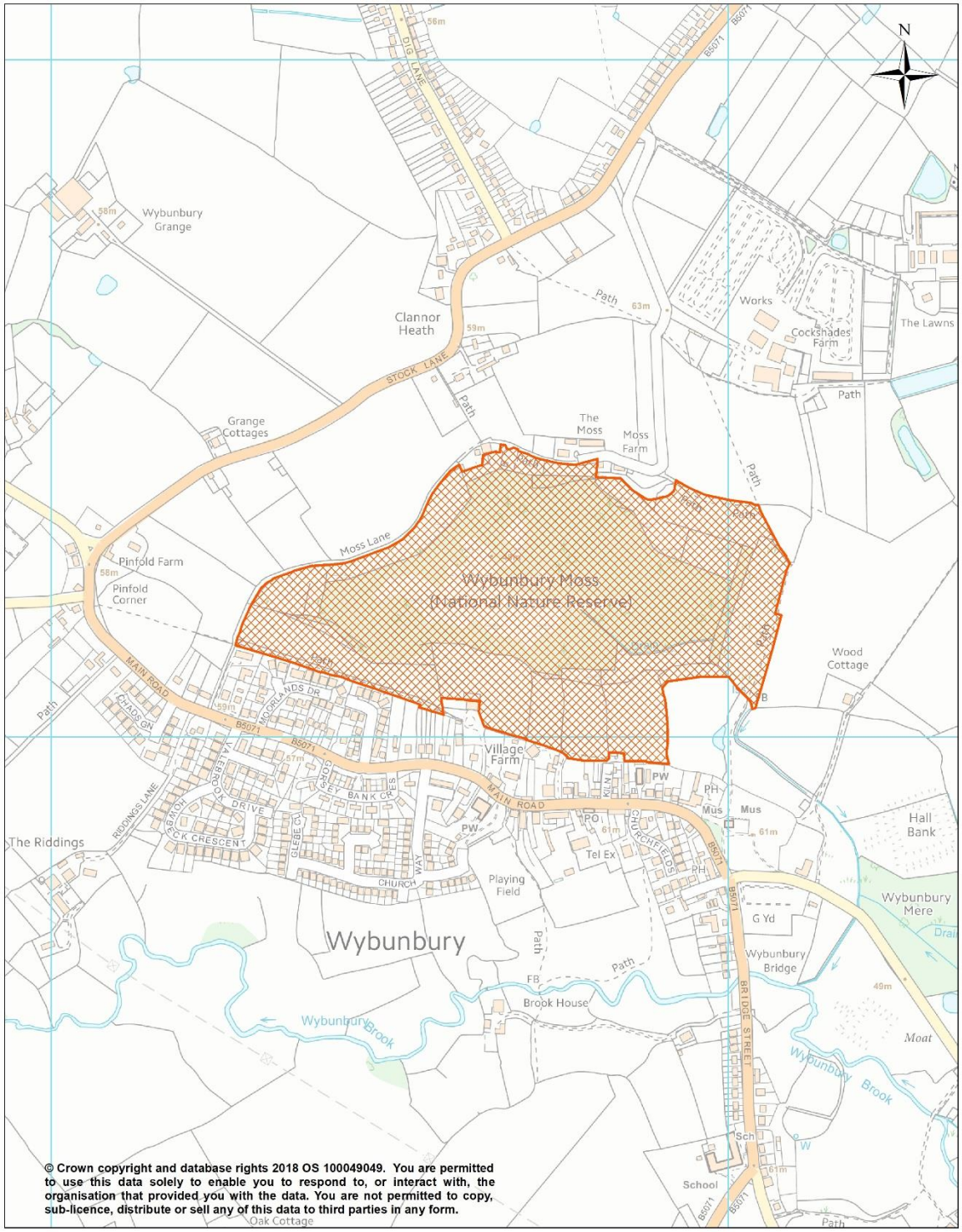
Map 9 River Severn SAC/SPA/Ramsar sites

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

Shropshire Council

0 4.25 8.5 17 Kilometers

Map 10 Wybunbury Moss, West Midlands Mosses SAC/Ramsar site



Shropshire Council

Wybunbury Moss SAC

Scale : 1:5,000

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: West Midlands Mosses SAC – Wybunbury Moss

Site Name: Wybunbury Moss, West Midlands Mosses SAC, SJ842 399, Shropshire, England.

Site Description:

West Midlands Mosses (184.18ha) comprise four sites supporting large basin mires which have developed as quaking bogs, known as Schwingmoors, together with a variety of associated hollows and pools showing various types and stages of mire development. This complexity of habitats gives rise to a diverse assemblage of associated plants and invertebrates of national significance.

Dystrophic water bodies are very acidic and poor in plant nutrients. Their water has a high humic acid content and is usually stained dark brown through exposure to peat. This habitat is rare in England, and is represented in only 2 SACs. Most examples of this habitat type are small (less than 5 ha in extent), shallow, and contain a limited range of flora and fauna.

The term 'transition mire' relates to vegetation that in terms of its floristic composition and general ecological characteristics is transitional between acid bog and alkaline fens, in which the surface conditions range from markedly acidic to slightly base-rich. As a result, the mire vegetation normally has intimate mixtures of species considered to be tolerant of acid conditions and others which flourish in more base-rich conditions.

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.

Draft Supplementary Advice to support the Conservation Objectives is available.

There should be no measurable net reduction (excluding any trivial loss) in the extent and area of the H7140 feature, and in some cases, the full extent of the feature may need to be restored. Addition relevant targets are:

- Restore the total extent of the H7140 feature to 110 hectares, based on the mapped extent of peat and basin dimensions.
- Restore the distribution and configuration of the H7140. feature, including where applicable its component vegetation types, across the site

- Ensure the component vegetation communities of the H7140 feature are referable to and characterised by the following National Vegetation Classification types (including transitions between them ;
  M1, M2, M3, M4, M5, M9, M18, M22, S2, S3, S24, S27, W2,W4, W5
- Restore the abundance of the species listed below to enable each of them to be a viable component of the H7140 habitat.
- Assemblage of vascular plants;
  - *Calliergon giganteum (*giant spearmoss), *Campylium stellatum* (yellow starry feather moss), *Carex diandra* (lesser tussock-sedge), *Carex lasiocarpa* (slender sedge), *Carex limosa* (bog sedge), *Carex rostrate* (bottle sedge), *Scorpidium (Drepanocladus) revolvens* (rusty hook-moss), *Scorpidium scorpioides* (hooked scorpion-moss), *Rhychospora alba*(white beak-sedge), *Menyanthes trifoliate* (bogbean), *Pedicularis palustris* (marsh lousewort),
  - *A*ssemblage of *Sphagnum* mosses including *Sphagnum papillosum, S. angustifolium, S. fimbriatum; S. riparium S. cuspidatum*
  - *Aneura pinguis*
  - *Cryptocephalus decemacaulatus* (ten-spotted pot beetle), *Hagenella clathrata (*window winged sedge)*, Leucorrhinia dubia* (white-faced darter) and *Vertigo geyeri* (Geyer's whorl snail).
- Ensure invasive and introduced non-native species are either rare or absent, but if present are causing minimal damage to the H7140 feature.
- Restore a low cover (<10% of the area) of scrub or trees within stands of H7140.
- At a site, unit and catchment level, restore natural hydrological processes to provide the conditions necessary to sustain the H7140 feature within the site.
- Restore the surface water and groundwater supplies supporting the hydrology of the component sites of the SAC to a natural, low-nutrient status.
- Restore the H7140 feature's ability, and that of its supporting processes, to adapt or evolve to wider environmental change, either within or external to the site.
- Restore the extent, quality and spatial configuration of land or habitat surrounding or adjacent to the site which is known to support (directly or indirectly) the H7140 feature.
- Restore as necessary, the concentrations and deposition of air pollutants to at or below the site-relevant Critical Load or Level values given for this feature of the site on the Air Pollution Information System (www.apis.ac.uk).
- Maintain or establish the management measures (either within and/or outside the site boundary as appropriate) which are necessary to restore the structure, functions and supporting processes associated with the H7140 feature.

Definition of Favourable Condition for Wynbunbury Moss SSSI: Achievement of the stated targets above.

Site Vulnerability:

The component sites have been all modified by human activity to a greater or lesser extent, including drainage, peat cutting and nutrient enrichment, generally to the detriment of the natural features.

Site is vulnerable to:

- Drainage resulting in a reduction in the extent and quality of the designated habitat, increasing its susceptibility to scrub invasion and drainage channels providing a pathway for nutrients into the site.
- Invasive or introduced non-native species can be a serious potential threat to the structure and function of these habitats, because they are able to exclude, damage or suppress the growth of their associated typical species, reduce structural diversity of the habitat and prevent the natural regeneration of characteristic site-native species.
- Although some native tree cover forms part of the designated feature, extensive tree or scrub growth is detrimental.
- Changes in source, depth, duration, frequency, magnitude and timing of water supply can have significant implications for the assemblage of characteristic plants and animals present.
- West Midland Mosses is currently subject to nutrient pressures, principally from agriculture, forestry and development, via both water borne and airborne pollution. Site critical loads are currently exceeded, and evidence exists of impacts on bryophytes as a result of this.
- The overall vulnerability of this SAC to climate change has been assessed by Natural England as being high, taking into account the sensitivity, fragmentation, topography and management of its habitats. This means that these sites are considered to be the most vulnerable sites overall and are likely to require the most adaptation action, most urgently. This means that action to address specific issues is likely, such as reducing habitat fragmentation, creating more habitat to buffer the site or expand the habitat into more varied landscapes and addressing particular management and condition issues. Individual species may be more or less vulnerable than their habitat itself. In many cases, change will be inevitable so appropriate monitoring would be required.
- Changes in surrounding land-use may adversely (directly/indirectly) affect the functioning of the feature and its component species. Sympathetic management of the catchments of the component sites is critical to achieving good condition.

Reason for Designation	**Environmental Conditions Needed to Support Site Integrity**
H3160. Natural dystrophic lakes and ponds (Acid peat-stained lakes and ponds) H7140. Transition mires and quaking bogs. (Very wet mires often identified by an unstable `quaking` surface)	Sensitive to; Hydrological changes, Water pollution, Invasive species, Siltation, Air pollution including atmospheric nitrogen deposition, Shading through tree colonisation, and Changes in grazing regime, Surrounding land-use change.

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.

<table>
<tr><td colspan="2">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.</td></tr>
<tr><td>Reasons for Designation:</td><td>Environmental Conditions Needed to Support Site Integrity</td></tr>
<tr><td>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.</td><td>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.</td></tr>
</table>

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

<table>
<tr><td colspan="2">Site Name: Midland Meres and Mosses (Ramsar phase 2), Shropshire/ Clwyd/ Cheshire/ Staffordshire, England.</td></tr>
<tr><td colspan="2">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.</td></tr>
<tr><td colspan="2">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.</td></tr>
<tr><td colspan="2">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.</td></tr>
<tr><td>Reason for Designation:</td><td>Environmental Conditions Needed to Support Site Integrity</td></tr>
</table>

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 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*.	Environmental Conditions needed to support site integrity will need to be considered at the full Habitats Regulations Assessment stage since this 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 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*
Linmer 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: Betley Mere SSSI, SJ 747482, Staffordshire, England
Site Description: Betley Mere (37.5ha) is one of the few natural standing waters in Staffordshire. It occupies a shallow valley in glacial deposits overlying Triassic strata and is bounded on three sides by extensive peat deposits on which a wide range of vegetation types have developed. The zonation from open water with floating-leaved aquatic plants through emergent reedswamp, fen and carr to mature fen woodland is as complete an example of a wetland hydrosere as occurs in the county. Betley is highly rated among the meres for the diversity of plant communities, the variety of higher plant species and the large areas of reedswamp, alderwillow woodland and species-rich tall fen. The last community and an acidic marshy grassland type found in the wettest parts of the adjoining pastures, are now of very restricted distribution in Staffordshire. Betley Mere is shallow and eutrophic (nutrient rich) with a sparse submerged aquatic vegetation mostly of Canadian waterweed *Elodea canadensis* but including the nationally rare autumnal water-starwort *Callitriche hermaphroditica* and regionally scarce blunt-fruited water-starwort *C. obtusangula*. Other species of note include grey club-rush *Schoenoplectus lacustris* subsp *tabernaemontani* **–** a county rarity and the regionally uncommon blunt-flowered rush *Juncus subnodulosus.* A nationally uncommon type of wet alder-willow woodland abuts the northern and western sides of Betley Mere and surrounds most of the former Little Mere. The pastures north of Betley Mere occupy the site of a former raised bog and comprise a range of semi-natural grassland types reflecting differences in peat nutrient status, drainage and management treatments. The least agriculturally improved parts have pockets of dry acidic grassland and larger areas of acidic marshy grassland. These are rich in sedges, such as brown sedge *Carex disticha*, star sedge *C. echinata* and carnation sedge *C. panicea*; other noteworthy species include marsh pennywort *Hydrocotyle vulgaris*, bog pimpernel *Anagallis tenella* and bristle club-rush *Isolepis setacea*. The water courses and field ditches provide additional habitats for aquatic plants and animals such as water vole *Arvicola*

terrestris and the freshwater mussel *Anodonta cygnea*. The site attracts many birds throughout the year and more than 50 species breed including little and great crested grebes *Tachybaptus ruficollis* and *Podiceps cristatus*, grey wagtail *Motacilla cinerea* and seven species of warbler. There is a representative and diverse aquatic invertebrate fauna associated with Betley Mere including the rare water flea *Daphnia magna*.
Definition of Favourable Condition for SSSI: Currently c.62% of the SSSI is classed as 'Unfavourable – No change and 38% Unfavourable – Recovering. No definition of Favourable Condition available.
Site Vulnerability: Vulnerable to application of manure, fertilizers, lime, pesticides and herbicides, dumping of materials or damage/destruction of vegetation or wild animals, drainage, changing water levels, modification of the structure of water courses or wetland features, recreational activities or game and wildfowl management (see full list of damaging operations).

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.

Site Name: Wybunbury Moss SSSI, SJ 697502, Cheshire, England

Site Description: Wybunbury Moss (23.3 ha)

Wybunbury Moss is a nationally important site as it is one of the finest examples in the country of a 'schwingmoor' and supports an outstanding assemblage of invertebrates including many nationally and locally rare species. Current evidence suggests that the origin of the lake basin containing the 'schwingmoor' was a secondary process associated with the solution and subsidence of the underlying salt bearing strata. This is a very rare occurrence and can be seen at only one other British site. The central floating raft is surrounded by fen and mixed woodland.

Where the floating raft is wettest tree growth is inhibited and an open 'sphagnum lawn' occurs dominated by *Sphagnum recurvum*. Other bryophytes are also abundant as well as plants such as cotton-grass *Eriophorum angustifolium*, cranberry *Vaccinium oxycoccus* and cross-leaved heath *Erica tetralix*. Other notable species include round-leaved sundew *Drosera rotundifolia*, bog rosemary *Andromeda polifolia* and bog asphodel *Narthecium ossifragum* all of which are rare in Cheshire. A small pool in one area contains various sedges including the regionally rare *Carex limosa.* Towards the edge of the open lawn where the water table is lower there is a transition from scattered and stunted Scots pine *Pinus sylvestris* and downy birch *Betula pubescens* to taller and denser mixed woodland. Areas of fen woodland occur with a diverse groundflora. Notable species include marsh fern *Thelypteris palustris* and saw sedge *Cladium mariscus* both of which are rare in Cheshire.

The range of habitats present at Wybunbury Moss support many invertebrate species including 47 species of spider of which 5 are nationally rare and one, *Carorita limnaea* is only known from this site. Three hundred and seven species of moth and butterfly have been recorded of

which the Manchester treble bar *Carsia sororiata* ssp. *anglica* and the scallop shell *Rheumoptera undulata* are very rare in Cheshire. Several rare caddis-flies and beetles have also been found as well as the rare white-faced dragonfly *Leucorrhinia dubia*.
Definition of Favourable Condition for SSSI: Currently c.37% of the SSSI is classed as 'Favourable' and 63% Unfavourable – Recovering. No definition of Favourable Condition available.
Site Vulnerability: Vulnerable to cultivation, grazing, application of manure, fertilizers, lime, pesticides and herbicides, changes in tree/woodland management, dumping of materials or damage/destruction of vegetation or wild animals, drainage, changing water levels, modification of the structure of water courses or wetland features, recreational activities or game and wildfowl management (see full list of damaging operations).

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

Site Name: Black Firs & Cranberry Bog SSSI, SJ748503, Shropshire, England
Site Description: Black Firs and Cranberry Bog (12.3ha) Cranberry Bog is an outstanding example of a schwingmoor basin mire, a nationally rare habitat and one of only two such sites in Staffordshire. It exhibits a near-natural structure and floristic composition and is notably rich in bog and fen plants in relation to its small size. Black Mere, the open water part of the site, is the surviving part of a former kettle hole lake and forms the largest dystrophic open water in the county. The mere and the mire represent lowland habitats which are nationally threatened and declining due largely to drainage and ground-water enrichment. Black Firs is a modified valley alderwood on a peat-filled depression. Such woodlands are now much reduced in extent. The site contains many locally rare plants and invertebrates and some nationally uncommon plants.
Definition of Favourable Condition for SSSI:
Site Vulnerability:

Recorded as Unfavourable – No Change (2018). Drainage and lowered water levels means the habitat occupies a smaller area than it would if a more natural hydrological regime was restored. Eutrophication from surrounding catchment – diffuse water pollution from agriculture and septic tanks.

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: 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:

Site Name: Oakhanger Moss SSSI, SJ767550, Cheshire, England
Site Description: Oakhanger Moss (13.58ha) Oakhanger Moss is one of the shallowest of a cluster of depressions in glacial sands lying to the west of Alsager. It is of greatest importance for the range of mire vegetation communities it supports and the way that they, together with the sediment and peat deposit record, demonstrate the vegetation succession stages from open water to raised bog. Oakhanger was known to be a mere at least until the 1600s. Since that time the basin has become completely infilled, firstly with sedge and reedswamp peat, and latterly with peat derived from *Sphagnum* mosses. Oakhanger supports four different mire communities, each of which has a well-developed shrub cover giving the site a wooded appearance. Over much of the site, in the wettest, low-lying areas associated with the few drains which cross the site, there is a swamp vegetation dominated by lesser pond-sedge *Carex acutiformis*, over which willow carr has developed. In the south-west, where inundation from the drains has less effect on water level and nutrient supply, sedges give way to purple moor-grass *Molinea caerulea* with broad buckler-fern *Dryopteris dilatata* locally, and birch displacing willow from the shrub layer. Areas of fen which have developed along the site's eastern edge. Here alder *Alnus glutinosa* and willows dominate above mature greater tussock-sedge *Carex paniculata*, with cyperus sedge *C. pseudocyperus*, marsh pennywort *Hydrocotyle vulgaris*, marsh violet *Viola palustris*, purple-loosestrife *Lythrum salicaria* and marsh cinquefoil *Potentilla palustris*, all uncommon plants in Cheshire. Two distinct areas of vegetation dominated by bog moss *Sphagnum recurvum* occur in the centre of the site. The moss 'lawns' are noticeably higher than the surrounding communities and at times of high groundwater continue to remain free of its nutrient influence because of the buoyant properties of *Sphagnum*. This incipient raised bog community includes common cotton-grass *Eriophorum angustifolium*, cross-leaved heath *Erica tetralix*, and cranberry *Vaccinium oxycoccos*. Birch dominates the canopy which is comparatively open in character, and around

the edges of the *Sphagnum* areas, in the transition to more nutrient-rich fen, alder buckthorn *Frangula alnus* becomes a common shrub with white sedge *Carex curta* and narrow buckler-fern *Dryopteris carthusiana* growing amongst the mosses. Adders *Vipera berus*, a protected species, are found here and at only one other known site in Cheshire.
Definition of Favourable Condition for SSSI: Condition is described as Unfavourable-Declining (2012) due largely to over dry conditions and scrub/woodland encroachment.
Site Vulnerability: Drainage of the site causing a lowering of the water table. Inappropriate scrub control.

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) 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	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).

Appendix 3: Screening of WNP polices for potential significant effects

See separate Pdf.