

# Habitats Regulations Assessment of the Options for the Telford and Wrekin Shaping Places Local Plan

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LEPUS CONSULTING

LANDSCAPE ECOLOGY, PLANNING AND URBAN SUSTAINABILITY



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Assessment of Spatial Options

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# Abbreviations

<b>JNCC</b>	Joint Nature Conservation Committee
<b>LPA</b>	Local Planning Authority
<b>NPPF</b>	National Planning Policy Framework
<b>SAC</b>	Special Area of Conservation
<b>SNH</b>	Scottish Natural Heritage
<b>SPA</b>	Special Protection Area
<b>SSSI</b>	Site of Special Scientific Interest
<b>STW</b>	Severn Trent Water
<b>WWTW</b>	Waste Water Treatment Works

# Executive Summary

## E1 Introduction

E1.1 This report has been prepared under the requirements of the Habitats Regulations 2010 to assess the effects of development proposals associated with growth options and spatial options for the Telford and Wrekin Local Plan. It has been prepared by Lepus Consulting on behalf of Telford and Wrekin Council.

E1.2 The assessment process examines the likely significant effects of the different spatial options on the integrity of European sites of nature conservation importance within, close to or connected to plan area. European sites are areas of international nature conservation importance that are protected for the benefit of the habitats and species they support.

E1.3 Three growth options have been considered are as follows:

- 13,640
- 17,800; and
- 26,500.

E1.4 Three spatial options have been considered to deliver the growth option for 26,500 new homes. These are known as:

- Option 1: Dispersed Development
- Option 2: Urban Concentration; and
- Option 3: Growth Hub.

## E2 Scope of Assessment

E2.1 The following eleven sites have been included in the assessment. Ramsar sites have been included since they are considered relevant by Natural England:

- Brown Moss SAC
- Cannock Chase SAC
- Motte Meadows SAC
- Fenn's, Whixall, Bettisfield, Wem and Cadney Mosses SAC
- Midland Meres & Mosses – Phase 2 (Ramsar)
- Midland Meres & Mosses – Phase 1 (Ramsar)
- Severn Estuary SAC
- Severn Estuary SPA
- Severn Estuary Ramsar Site
- The Stiperstones and the Hollies SAC; and
- West Midlands Mosses SAC.

E2.2 Effects of both sets of options, the quantitative and spatial options, have been considered alone and conclusions remain outstanding. Drawing on high level

information in the Shaping Places Options Document, and available data for the European sites, initial findings suggest there is a low likelihood of adverse effects arising, however this position requires validation and appropriate exploration of the issues in greater detail. Future assessment will be informed by a number of ongoing projects some of which are presently in progress. These include the draft Severn Trent Water Resources Management Plan, the Council's ongoing Water Cycle Study and on-going research into the effects of visitors at Cannock Chase SAC. In-combination effects will be considered in due course where adverse effects, if any, are identified.

## E2 Findings

E2.1 Of the potential effects associated with the spatial options for the plan, namely water supply, wastewater treatment, air quality and recreation none of the spatial options perform better than the other with the possible exception that air quality emissions may be lower with Option 2 'Urban Concentration'. The precise quantification of this difference to other options can only be made with more detail from the forward planning team.

## E3 Recommendations and Next Stages

E3.1 At this early stage in the plan making and HRA processes it is not possible to confirm which of the three options performs better than any other.

E3.2 Once further detail is available from the planning team, air quality, recreational impacts and effects on 'water' sites can be revisited in more detail.

E3.3 It is therefore recommended on the basis of the precautionary principle that the next round of plan making undertakes another HRA assessment phase to explore details about the plan which are presently unavailable. Similarly, revisiting the HRA process at this time will enable the various research and evidence reports to be used to inform the assessment process.

# 1 Introduction

## 1.1 Background

1.1.1 Lepus Consulting on behalf of Telford and Wrekin Council is conducting the Habitats Regulations Assessment (HRA) process for the Local Plan. This is a requirement of Regulation 102 of the Conservation of Habitats and Species Regulations 2010 (the Habitats Regulations).

1.1.2 The approach taken is one of iteration and the Local Plan is being assessed at different key phases of its development. This report is concerned with the appraisal of Spatial Options for the Local Plan.

1.1.3 Following a screening exercise in April 2012, the emerging Telford & Wrekin Local Plan document referred to as "Shaping Places" concluded that the following sites should be screened into the next round of the assessment process for further scrutiny:

- Motte Meadows SAC
- West Midlands Mosses
- Midland Meres and Mosses Phase 1 Ramsar
- Midland Meres and Mosses Phase 2 Ramsar
- Severn Estuary SAC
- Severn Estuary Ramsar
- Severn Estuary SPA
- Cannock Chase SAC.

1.1.4 This HRA report seeks to establish the likelihood of any adverse effects on the ecological integrity of these European sites as a result of proposals in the plan. These have been considered along with others that have been scoped into the process (see **Chapters 3 and 4**). The HRA process is designed to act as an early warning system that identifies any potential effects at this stage in the plan making process, which could adversely impact European sites as a result of proposals in the development and implementation of the Local Plan.

1.1.5 The Spatial Options will be used to inform the next stage of the plan making process during which the draft Local Plan will begin to take a defined shape, including strategic allocations and policies.

## 1.2 Approach to report preparation

1.2.1 The outputs of this report include information in relation to:

- The HRA process;
- Methodology for HRA;
- Evidence gathering in relation to European sites;
- Understanding vulnerabilities of sites;
- Assessing potential effects of the plan; and

- **Conclusions and recommendations.**

1.2.2 This report comprises an evidence gathering exercise to provide a baseline of designated sites within proximity to the plan area. A search radius of 20km<sup>1</sup> around the boundary of the plan area has been used with additional attention placed upon sites with the potential for impact pathways beyond this distance such as hydrological or other physiographical links. Tourism and recreational impacts occasionally may also be considered in this way for popular recreational destinations. These sites require consideration as they could theoretically be affected by the plan due to their specific intrinsic qualities and environmental vulnerabilities.

1.2.3 Evidence gathered during the April 2012 screening exercise did so without nature conservation objectives for each European site. These have now been assembled and collated in **Appendix A** so that assessment may be prepared and potential impacts measured against these. Full citation details for each site have not been included here but are available at [www.jncc.gov.uk](http://www.jncc.gov.uk).

### 1.3 The HRA Process

1.3.1 The application of HRA to land-use plans is a requirement of the Conservation of Habitats and Species Regulations 2010, the UK's transposition of European Directive 92/43/EEC *on the conservation of natural habitats and of wild fauna and flora* (the Habitats Directive). HRA applies to all Local Development Documents in England and Wales.

1.3.2 The HRA process assesses the potential effects of a land-use plan against the conservation objectives of any sites designated for their importance to nature conservation. These sites form a system of internationally important sites throughout Europe and are known collectively as the 'Natura 2000 network'.

1.3.3 European sites provide valuable ecological infrastructure for the protection of rare endangered or vulnerable natural habitats and species of exceptional importance within the EU. These sites consist of Special Areas of Conservation (SAC) designated under the Habitats Directives and Special Protection Areas (SPA) designated under European Directive 2009/147/EC *on the conservation of wild birds* (the Birds Directive). Additionally Government policy requires that sites designated under the Ramsar Convention (The Convention on Wetlands of International Importance, especially as Waterfowl Habitat) are treated as if they are fully designated European sites for the purpose of considering development proposals that may affect them.

1.3.4 Under Regulation 102 of the Habitats Regulations, the assessment must determine whether or not a plan will adversely affect the integrity of the European sites concerned. The process is characterised by the precautionary principle. The European Commission describes the principle as follows:

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<sup>1</sup> A search zone of 20km is larger than that used previously in the April 2012 HRA report. This larger distance follows best practice in the latest UK HRA Guidance, as published for Scotland (see **Chapter 2**).

- 1.3.5 “If a preliminary scientific evaluation shows that there are reasonable grounds for concern that a particular activity might lead to damaging effects on the environment, or on human, animal or plant health, which would be inconsistent with protection normally afforded to these within the European Community, the **Precautionary Principle** is triggered.”
- 1.3.6 Decision-makers then have to determine what action/s to take. They should take account of the potential consequences of no action, the uncertainties inherent in scientific evaluation, and should consult interested parties on the possible ways of managing the risk. Measures should be proportionate to the level of risk, and to the desired level of protection. They should be provisional in nature pending the availability of more reliable scientific data.
- 1.3.7 Action is then undertaken to obtain further information, enabling a more objective assessment of the risk. The measures taken to manage the risk should be maintained so long as scientific information remains inconclusive and the risk is unacceptable.
- 1.3.8 The hierarchy of intervention is important: where significant effects are likely or uncertain, plan makers must firstly seek to avoid the effect through for example, a change of policy. If this is not possible, mitigation measures should be explored to remove or reduce the significant effect. If neither avoidance, nor subsequently, mitigation is possible, alternatives to the plan should be considered. Such alternatives should explore ways of achieving the plan’s objectives that do not adversely affect European sites.
- 1.3.9 If no suitable alternatives exist, plan-makers must demonstrate under the conditions of Regulation 103 of the Habitats Regulations, that there are Imperative Reasons of Overriding Public Interest (IROPI) to continue with the proposal. This is widely perceived as an undesirable position and should be avoided if at all possible.

## 1.4 Growth Scenarios

- 1.4.1 The Council have identified three growth scenarios for growth in terms of new homes:
- 13,640;
  - 17,800;
  - 26,500.
- 1.4.2 Spatial options have been prepared for the last of these growth options, the 26,500 figure.

## 1.5 Spatial Options for the Shaping Places Local Plan

- 1.5.1 The Council presently envisages a total of 26,500 new homes being delivered during the plan period. Three strategic areas of the borough have been identified as receptor zones for new development<sup>2</sup>. The spatial options document explores how to best configure the locations for new development.

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<sup>2</sup> Telford & Wrekin Council (2013) Shaping Places Spatial Options. Version 10.

- 1.5.2 Each strategic area provides a different variety of opportunities to achieve successful housing growth as well as a number of challenges.

## 1.6 Urban

- 1.6.1 The location of development within the urban areas of Telford and Newport with particular emphasis upon existing centres such as the borough towns and the Sports & Learning Communities.

- 1.6.2 Opportunities associated with this strategic area include the sustainable benefits of proximity to and support for existing facilities and services and the ability to aid urban regeneration.

- 1.6.3 Challenges associated with this strategic area include the perceived loss of green infrastructure, the increased pressure upon existing infrastructure and the potential impact upon viability through land preparation costs.

## 1.7 Urban /Rural Fringe

- 1.7.1 The location of development as Sustainable Urban Extensions in the area immediately beyond the boundary of the existing urban areas of Telford and Newport, connected and relating to the existing urban areas.

- 1.7.2 Opportunities associated with this strategic area include the ability to increase the choice of new housing, the ability to enhance the urban edge and to be responsive to development appetite.

- 1.7.3 Challenges associated with this strategic area include the impact upon Rural Parishes, the requirement for new infrastructure and the impact upon rural landscape quality.

## 1.8 Rural

- 1.8.1 The location of development in the rural area with particular emphasis upon existing rural communities and previously developed land.

- 1.8.2 Opportunities associated with this strategic area include the ability to support the viability and vitality of rural communities and previously developed rural sites.

- 1.8.3 Challenges associated with this strategic area include the proximity and accessibility to facilities and services and the affect upon the quality of the rural landscape.

## 1.9 The Three Spatial Options

- 1.9.1 There are three spatial options being considered as part of the plan making process. These are presented in **Table 1.1**.

**Table 1.1:** Spatial Options in terms of housing distribution (26,500 houses)

	Urban	Urban/Rural Fringe	Rural
<b>Option 1: Dispersed Development</b>	19,250	5,250	2,000
<b>Option 2: Urban Concentration</b>	25,250	750	500
<b>Option 3: Growth Hub</b>	22,500	3,000	1,000

## 1.10 The Plan Area: Telford and Wrekin

- 1.10.1 Telford & Wrekin has a very varied spatial character which includes industrial development of the 18<sup>th</sup> and 19<sup>th</sup> century, a historic market town (Newport), urban and semi urban development associated with a modern New Town (Telford) as well as an extensive lowland rural landscape containing many dispersed hamlets, villages and estates.
- 1.10.2 This diverse spatial character is an expression of its rich heritage, its landscape and its people. It is key to the way it looks, feels and functions as well as being key to its image and identity, its economic prosperity, its social health and well being and its future.

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## 2 Methodology

### 2.1 Guidance and best practice

- 2.1.1 Guidance on HRA has been published in draft form by the Government (DCLG, 2006) and Natural England in conjunction with David Tyldesley Associates (Local Development Plan Documents under the Provisions of the Habitats Regulations, 2009); both draw in part on European Union guidance (European Commission, 2001) regarding the methodology for undertaking appropriate assessment of plans.
- 2.1.2 All guidance recognises that there is no statutory method for undertaking HRA and that the adopted method must be appropriate to its purpose under the Habitats Directive and Regulations; this concept is one of the reasons why HRA is also often referred to as Appropriate Assessment.
- 2.1.3 Due to a moratorium on the publication of new guidance as issued by the Government, the draft guidance may not be published. As an alternative Natural England has suggested that the guidance on HRA published by Scottish Natural Heritage (SNH, 2012), can be used to assess land use plans.
- 2.1.4 Local authorities are required by the Habitats Regulations to undertake an HRA of a plan where the said plan results in impacts upon a European (Natura 2000) site. The procedure referred to by the guidance is that of "Habitats Regulations Appraisal" which encompasses the requirements of Article 6(3) of the Habitats Directive. The term Habitats Regulations Appraisal is used to encompass the decision on whether the plan should be subject to appraisal, the 'screening' process for determining whether an appropriate assessment is required as well as any appropriate assessment that may be required (SNH, 2012).

### 2.2 Habitats Regulations Methodology

- 2.2.1 The HRA process follows the methodology prepared by David Tyldesley Associates for Scottish Natural Heritage<sup>3</sup> (SNH, 2012). A step-by-step methodology is outlined in the guidance and has been summarised below in **Figure 2.1**.
- 2.2.2 A synoptic version of the flow chart is presented in **Table 2.1**. Stages 2-5 are relevant to this report.

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<sup>3</sup> Scottish Natural Heritage (2012): Habitats Regulations Appraisal of Plans. Guidance for plan making bodies in Scotland. Doc. Ref 1739. Version 2.0, August 2012. Initially prepared by David Tyldesley and Associates.

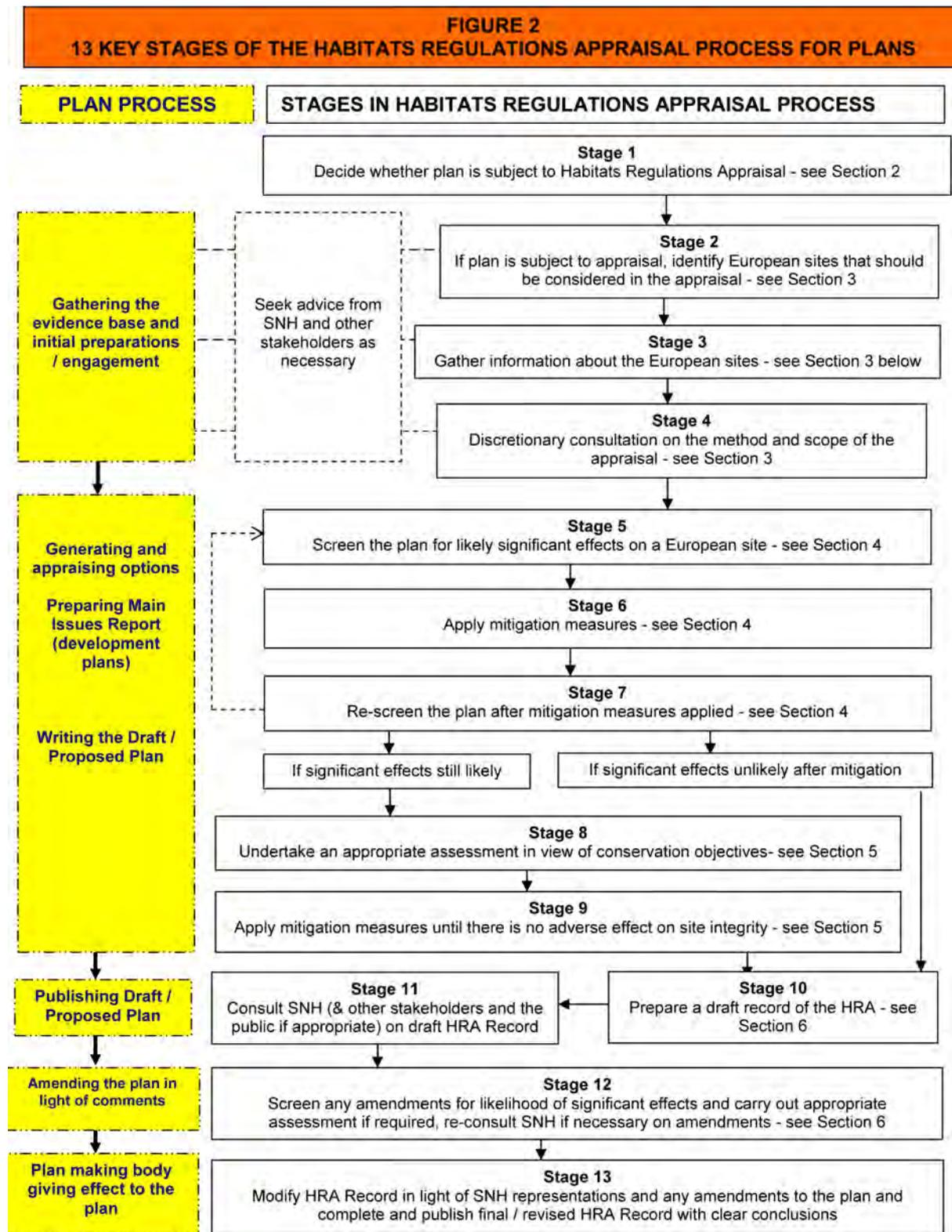


Figure 2.1: The 13 Key Stages of the Habitats Regulations Appraisal Process (SNH, 2012)

Group		HRA Stages
A. Determination of Need and Compilation of Evidence Base	Stage 1	Determination of need
	Stage 2	Identification of European sites that should be considered in the appraisal
	Stage 3	Gathering information on European sites
	Stage 4	Discretionary discussions on the method and scope of the appraisal
B. Screen all aspects of plan (Screening)	Stage 5	Screening the plan
	Stage 6	Applying mitigation measures at screening stage to avoid likely significant effects
	Stage 7	Rescreen the plan and decide on the need for appropriate assessment
C. Appropriate Assessment	Stage 8	The appropriate assessment – site integrity, conservation objectives and the precautionary principle
	Stage 9	Amending the plan until there would be no adverse effects on site integrity
D. Consultation of Draft	Stage 10	Preparing a draft of HRA
	Stage 11	Consultation
	Stage 12	Proposed modifications
	Stage 13	Modifying and completing HRA

## 2.3 Dealing with uncertainty

2.3.1 The assessment of effects can be affected by uncertainty in a number of ways, some of these are addressed below.

2.3.2 **Regulatory Uncertainty:** Some plans will include references to proposals that are planned and implemented through other planning and regulatory regimes, for example, trunk road or motorway improvements. These will be included because they have important implications for spatial planning, but they are not proposals of the LPA, nor are they proposals brought forward by the plan itself. Their potential effects will be assessed through other procedures. The LPA may not be able to assess the effects of these proposals. Indeed, it may be inappropriate for them to do so, and would also result in unnecessary duplication.

2.3.3 There is a need to focus the Habitat Regulations Assessment on the proposals directly promoted by the plan, and not all and every proposal for development and change, especially where these are planned and regulated through other statutory procedures which will be subject to a Habitat Regulations Assessment.

2.3.4 **Planning Hierarchy Uncertainty:** The higher the level of a plan in the hierarchy the more general and strategic will be its provisions and therefore the more uncertain its effects will be. The protective regime of the Directive is intended to operate at differing levels. In some circumstances assessment 'down the line' will be more effective in assessing the potential effects of a proposal on a particular site and protecting its integrity. However, three tests should be applied.

2.3.5 It will be appropriate to consider relying on the Habitat Regulations Assessments of lower tier plans, in order for a LPA to ascertain a higher tier plan would not have an adverse effect on the integrity of a European site, only where:

A] The higher tier plan assessment cannot reasonably assess the effects on a European site in a meaningful way; whereas

B] The Habitat Regulations Assessment of the lower tier plan, which will identify more precisely the nature, scale or location of development, and thus its potential effects, will be able to change the proposal if an adverse effect on site integrity cannot be ruled out, because the lower tier plan is free to change the nature and/or scale and/or location of the proposal in order to avoid adverse effects on the integrity of any European site (e.g. it is not constrained by location specific policies in a higher tier plan); and

C] The Habitat Regulations Assessment of the plan or project at the lower tier is required as a matter of law or Government policy.

2.3.6 It may be helpful for the Habitat Regulations Assessment of the higher tier plan to indicate what further assessment may be necessary in the lower tier plan.

2.3.7 **Implementation Uncertainty:** In order to clarify the approach where there is uncertainty because effects depend on how the plan is implemented, and to ensure compliance with the Regulations, it may be appropriate to impose a caveat in relevant policies, or introduce a free-standing policy, which says that any development project that could have an adverse effect on the integrity of a European site will not be in accordance with the plan.

2.3.8 This would help to enable the assessors to reasonably conclude, on the basis of objective information, that even where there are different ways of implementing a plan, and even applying the precautionary principle, no element of the plan can argue that it draws support from the plan, if it could adversely affect the integrity of a European site.

## 2.4 Likely significant effect

2.4.1 The plan and its component policies are assessed to determine and identify any potential for '**likely significant effect**' upon European sites. The guidance (SNH, 2012) provides the following interpretation.

- 2.4.2 “A likely effect is one that cannot be ruled out on the basis of objective information. The test is a ‘likelihood’ of effects rather than a ‘certainty’ of effects. Although some dictionary definitions define ‘likely’ as ‘probable’ or ‘well might happen’, in the Waddenzee case the European Court of Justice ruled that a project should be subject to appropriate assessment “if it cannot be excluded, on the basis of objective information, that it will have a significant effect on the site, either individually or in combination with other plans and projects”. Therefore, ‘likely’, in this context, should not simply be interpreted as ‘probable’ or ‘more likely than not’, but rather whether a significant effect can objectively be ruled out”.

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## 3 European Sites

### 3.1 About European Sites

- 3.1.1 Each site of European importance has its own intrinsic qualities, besides the habitats or species for which it has been designated, that enables the site to support the ecosystems that it does. An important aspect of this is that the ecological integrity of each site can be vulnerable to change from natural and human induced activities in the surrounding environment. For example, sites can be affected by land use plans in a number of different ways, including the direct land take of new development, the type of use the land will be put to (for example, an extractive or noise emitting use), the pollution a development generates and the resources uses (during construction and operation for instance).
- 3.1.2 An intrinsic quality of any European site is its functionality at the landscape ecology scale. This refers to how the site interacts with the zone of influence of its immediate surroundings, as well as the wider area. This is particularly the case where there is potential for developments resulting from the plan to generate water or air-borne pollutants, use water resources or otherwise affect water levels. Adverse effects may also occur via impacts to mobile species occurring outside of a designated site but which are qualifying features of the site. For example, there may be effects on protected birds that use land outside the designated site for foraging, feeding, roosting or loafing.
- 3.1.3 As a starting point, to explore and identify where European sites occur which might be affected by the Shaping Place Local Plan Spatial Options, a 20km area of search has been applied. The guidance (SNH, 2012) specifies no specific size of search area. The inclusion of a specific search area was to facilitate the use of the following list of criteria for identification of European sites.

**Table 3.1:** Criteria for identification of European sites (SNH, 2012)

Selection of European Sites	
Criteria	European Sites to check
All plans	Sites within the plan area, including those for the criteria listed below
For plans that could affect the aquatic environment	Sites upstream of downstream of the plan area in case of river or estuary
	Peatland and other wetland sites with relevant hydrological links to land within the plan area, irrespective of distance from the plan area
For plans that could affect mobile species	Sites which have significant ecological links with land in the plan area, for example, land in the plan area may be used by migratory birds, which also use a SPA, outside the plan area, at different times of year
For plans that could increase recreational pressure on European sites potentially vulnerable to such pressure	Such European sites in the plan area
	Such European sites within a reasonable travel distance of the plan area boundaries that may be affected by local recreational or other visitor pressure within the plan area (the appropriate distance in each case will need to be considered on its merits, in light of any available evidence)
	Such European sites within a longer travel distance of the plan area,

	which are major (regional or national) visitor attractions such as European sites which are National Nature Reserves where public visiting is promoted, sites in National or Regional Parks, coastal sites and sites in other major tourist or visitor destinations (the appropriate distance in each case will need to be considered on its merits, in light of any available evidence)
For plans that would increase the amount of development	Sites that are used for, or could be affected by, water abstraction in or close to the plan area
	Sites used for, or could be affected by, discharge or effluent from waste water treatment works or other waste management streams serving land in the plan area, irrespective of distance from the plan area
	Sites could be affected by transport or other infrastructure (e.g. by noise or visual disturbance)
	Sites that could be affected by increased deposition of air pollutants arising from the proposals, including emissions from significant increases in traffic
For plans that could affect the coast	Sites in the same coastal 'cell', or part of the same coastal ecosystem, or where there are interrelationships with or between different physical coastal processes

### 3.2 Ecological Information

3.2.1 **Appendix A** provides conservation objectives for each European site where available. Information for each European site is drawn from the Joint Nature Conservancy Council (JNCC) and Natural England (NE). Natura 2000 dataforms are held by JNCC for SAC and SPA sites. Ramsar site information is also available and held on Information Sheets for Ramsar Wetlands (known as RIS). Where Ramsar sites are coincident with SPAs or SACs it should be noted that the citation information often covers different matters to those associated with the Natura 2000 site. Nature on the Map (a Natural England website) is also used to obtain information on SSSI status and condition of SSSI units is used to inform the assessment. Website information has not been repeated here but has been accessed through the following websites:

<http://jncc.defra.gov.uk/page-4>; and

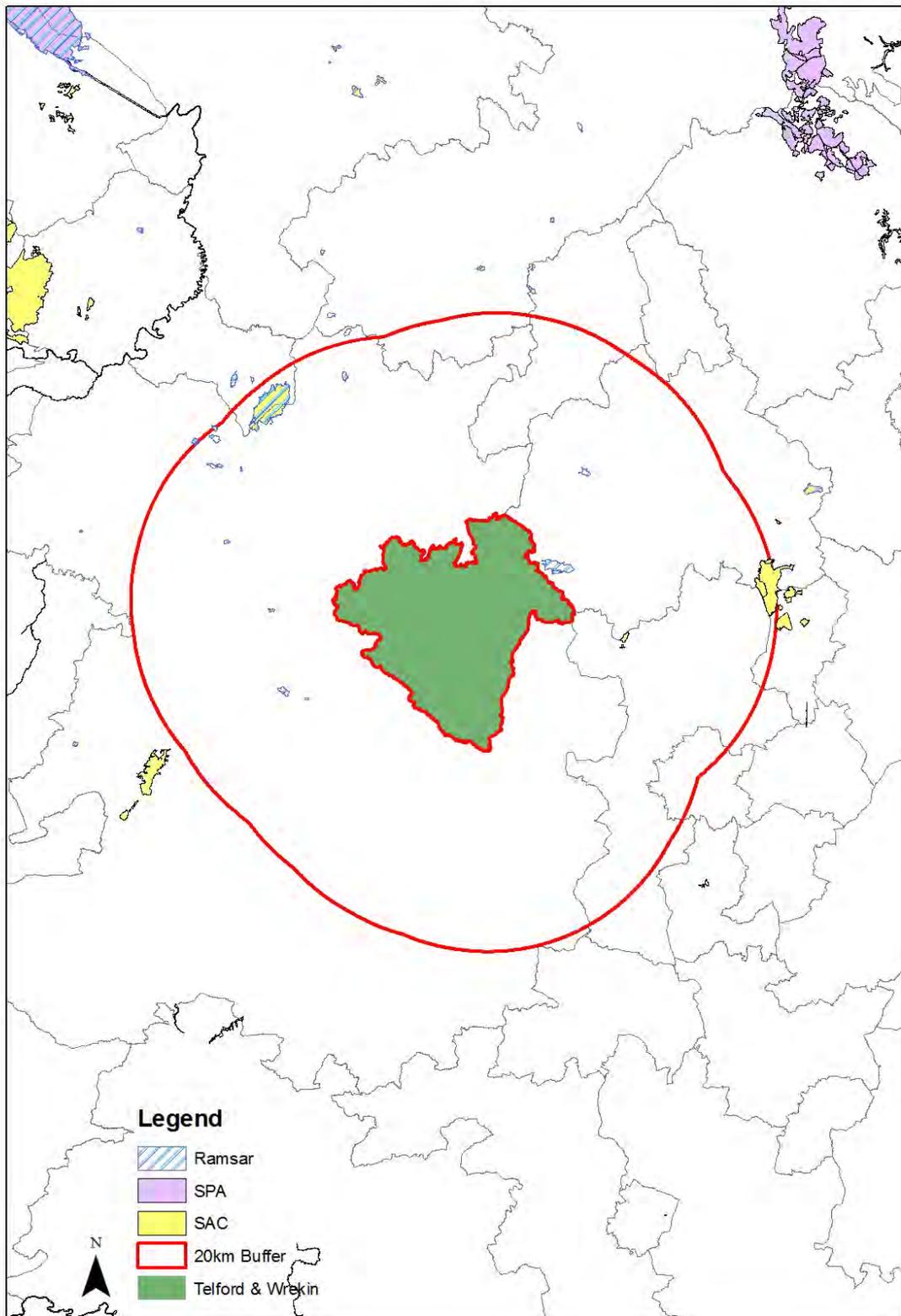
<http://www.natureonthemap.co.uk><sup>4</sup>

3.2.2 Applying the 20km area of search, and considering any sites close to the boundary or linked by a potential impact pathway beyond this 20km area of search, eleven European sites have been identified as being relevant to the search criteria in **Table 3.1**. The sites are listed in **Table 3.2**.

<sup>4</sup> This website was due to close on 22<sup>nd</sup> May 2013 and merge with [www.magic.gov.uk](http://www.magic.gov.uk). At the time of writing this had not happened.

**Table 3.2:** European Sites identified during earlier screening (2012) and revisited in this report

Site name	Location	Designation Type
Brown Moss	Inside 20km	SAC
Cannock Chase	Inside 20km	SAC
Mottey Meadows	Inside 20km	SAC
Fenn's, Whixall, Bettisfield, Wem and Cadney Mosses SAC	Inside 20km	SAC
Midland Meres & Mosses – Phase 1	Inside 20km	Ramsar
Midland Meres & Mosses –Phase 2	Inside 20km	Ramsar
Severn Estuary	Outside 20km	SAC
Severn Estuary	Outside 20km	SPA
Severn Estuary	Outside 20km	Ramsar
The Stiperstones and the Hollies	Outside 20km	SAC
West Midland Mosses	Inside 20km	SAC



*Draft Figure 3.1: Location of European sites*

# 4 Potential Effects

## 4.1 Introduction

4.1.1 This chapter explores the potential impact pathways and associated effects associated with the three growth scenarios and the proposed alternative spatial options for Shaping Places Local Plan.

4.1.2 Site vulnerabilities have been derived from various datasets held by the JNCC. SAC and SPA information is held on Natura 2000 Data Forms; Ramsar data is presented on Ramsar Information Sheets. Known vulnerabilities are summarised in **Table 4.1** and discussed in the following sections.

**Table 4.1:** Vulnerabilities of European sites

Site name	Afforestation	Dredging	Erosion	Intro. of non-native plant species	Large scale man-made interference on-site	Lowering Ground Water Levels	Lowering Surface Water Levels	Nutrient Enrichment	Pollution	Scrub invasion	Visitor pressure
Brown Moss SAC Jan 2001				✘						✘	
Cannock Chase SAC March 2001			✘		✘	Possibly				✘	✘
Motley Meadows SAC January 2001						✘	✘	✘			
Fenn's etc SAC October 2002	✘						✘			✘	
Midland Meres and Mosses (Phase 1) Ramsar May 1994				✘				✘			
Midland Meres and Mosses (Phase 2) Ramsar February 1997				✘				✘	✘		
Severn Estuary SAC August 2007		✘	✘		✘			✘	✘		✘
Severn Estuary SPA February 1999		✘	✘		✘			✘	✘		✘
Severn Estuary Ramsar July 1995		✘	✘					✘			✘

Site name	Afforestation	Dredging	Erosion	Intro. of non-native plant species	Large scale man-made interference on-site	Lowering Ground Water Levels	Lowering Surface Water Levels	Nutrient Enrichment	Pollution	Scrub invasion	Visitor pressure
The Stiperstones and the Hollies SAC June 1995										×	
West Midlands Mosses SAC June 1995								×		×	×

## 4.2 Afforestation

4.2.1 Afforestation usually concerns the planting of commercial timber crops. Historically these have used fast growing coniferous species. New woodland policies in the UK have introduced improved and enhanced appreciation of a planting strategy that can deliver multiple benefits for not only the economy but also health, wildlife and access.

4.2.2 The negative effects associated with Fenn’s, Whixall, Bettisfield, Wem and Cadney Mosses SAC that arise from tree planting relate to impacts on the water table, surface water levels and the ability of water to move through the landscape. This can lead to effects on the peat forming (and carbon capturing ability) communities at the Mosses. Another lesser effect is the effect of seed rain and associated scrub invasion.

4.2.3 Planting of trees for commercial production is unlikely to arise from the Local Plan proposals at any scale.

## 4.3 Dredging

4.3.1 **Dredging** is a broad term and includes the use of any device to move any material from one part of the sea or seabed to another part. This includes dredging for any purpose, for example, creating new channels or berths, maintaining existing channels or aggregate dredging for commercial supply. This also includes all types of dredging, for example, suction dredging, water injection dredging or seabed levelling<sup>5</sup>.

4.3.2 This activity is mostly associated with erosion of the seabed but dredging outside of the SAC can also have impacts on wider marine areas hence activities outside of the SAC/SPA/Ramsar site might lead to adverse effects on the designation.

4.3.3 Dredging has been identified as activity likely to affect the intrinsic qualities of all three European sites located at the Severn Trent Estuary. Dredging is not likely to arise as a result of the Shaping Local Plan.

<sup>5</sup> Definition provided by the Marine Management Organisation.

## 4.4 Erosion

4.4.1 Erosion is identified for a number of European sites. It is associated with recreational impacts at Cannock Chase SAC where unmanaged visitor access is cited as leading to erosion. In the case of the Severn Estuary, erosion is associated with scraping of the seabed, largely as a result of dredging activities (see **section 4.3**).

4.4.2 Erosion has been associated with dredging activities in the Severn Estuary as well as recreational activities at Cannock Chase SAC. In terms of the estuary, the tidal range is the second highest in the world and the scouring of the seabed and strong tidal streams result in natural erosion of the habitats.

4.4.3 The heathland habitats for which Cannock Chase SAC has been designated are vulnerable to uncontrolled activities which have been known to include a range of different pastimes. Visitor pressures include dog walking, horse riding, mountain biking and off-track activities such as orienteering, all of which cause disturbance and result in erosion, new track creation and vegetation damage.

## 4.5 Introduction of non-native plant species

4.5.1 Some non-native plant species can have an impact on biodiversity by interfering with natural levels of competition, altering habitat function and reducing biodiversity.

4.5.2 Amongst the Midland Mosses and Meres sites, a risk of invasion by non-natives has been identified. For example where they occur, rhododendron (*Rhododendron ponticum*) and pine (*Pinus* sp.) species can invade bogs and associated wet heathland. The impact of these species on the bog and wet heathland is regarded as undesirable and the negative impact will persist as long as the species grow on or near to Mosses sites. Threats from aggressive non-native species can be a vulnerability of wetland sites that form part of the Midland Mosses and Meres Ramsar network. Threats from New Zealand Pygmyweed (*Crassula helmsii*) is a recognised vulnerability at Brown Moss SAC.

## 4.6 Large man-made interference on site and lack of traditional management

4.6.1 Large man-made interference is a generic category of influence that can lead to multiple impacts on the Severn Estuary. The estuary is therefore vulnerable to large-scale interference, mainly as a result of human actions. These include land-claim, aggregate extraction, physical developments such as barrage construction and other commercial construction activities, flood defences, industrial pollution, oil spillage and tourism-based activities and disturbance.

## 4.7 Lowering Ground Water and Surface Water Levels

4.7.1 Water levels affect the floristic composition at Motte Meadows as well as the Midland Mosses and Meres Ramsar sites. The sites are dependent on a high water table in autumn and winter. This is generally a localised impact associated with a range of factors that can include drainage and also changing weather patterns.

## **4.8 Nutrient Enrichment and Pollution**

- 4.8.1 Eutrophication, or nutrient enrichment, is the enrichment of ecosystems by nitrogen or phosphorus. In water it causes algae and higher forms of plant life to grow too fast. This disturbs the balance of organisms present in the water and the quality of the water concerned. On land, it can stimulate the growth of certain plants which then become dominant so that the natural diversity is lost.
- 4.8.2 Pollution which originates from a single identifiable source such as a building, store or field, or from a particular event or action, for example, overflow or leakage from a manure store is called "point source pollution". By contrast "diffuse pollution" comes from fields or many sources within a catchment which need to be identified and managed.
- 4.8.3 Whilst the two processes are different yet related, they lead to similar vulnerabilities in terms of the impacts on a number of the European sites listed. Eutrophication is associated with run-off from agricultural fields and can lead to dominance of particular species whilst overall biodiversity levels drop. Pollution events can cause eutrophication or cause more widespread destructive effects such as affecting the long term ability of a wetland or watercourse to recover to a natural state following impact.

## **4.9 Scrub invasion**

- 4.9.1 All transition habitats such as grasslands and heathlands are vulnerable to scrub invasion where grazing or another form of management ceases to prevent succession to woodland. Scrub invasion is a natural process but is considered undesirable at locations with habitats that have intrinsic qualities due only to the fact that woodland canopy is absent. European sites considered vulnerable to scrub invasion are the Stiperstones and the Hollies SAC, Cannock Chase SAC and Fenn's, Whixall, Bettisfield, Wem and Cadney Mosses SAC.

## **4.10 Visitor pressure**

- 4.10.1 Visitor pressure takes place where the overall numbers of visitors and not managed and the special qualities of a site have not been carefully protected through intervention management of one sort or another. Much of Cannock Chase SAC is open country without restrictions on access and even where access is enforced, visitors appear to venture off tracks without enforcement. This can lead to adverse effects. The natural dystrophic lakes at West Midland Mosses SAC are also vulnerable to visitor impacts from a nearby scout site.

## 5 Chapter 5: Assessment of Effects

### 5.1 Effects of the Plan

5.1.1 Of the vulnerabilities identified and explored in **Chapter Four**, the following characteristics are associated with the plan to develop the spatial options:

- Demand for Water;
- Treatment of Waste Water;
- Recreational activities; and
- Air Quality.

5.1.2 These are discussed in terms of their potential impacts on European Sites.

### 5.2 Demand for Water

5.2.1 Demand for water can lead to a number of effects if there is not enough water to supply ne homes, or alternatively, if water is being supplied from a source that may itself be an important nature conservation location. Sites affected by water levels and water quality, both of which are factors that can be influenced by water abstraction, include: Cannock Chase SAC and Motte Meadows SAC. The Severn Estuary is unlikely to be affected directly although may suffer indirect effects of low flows and changes in biological and chemical water quality.

5.2.2 In the case of water supply, all water in the plan area is supplied by the water company Severn Trent Water (STW). Like all water companies, STW prepare a Water Resources Management Plan to publically declare how water will be supplied to customers. The present draft Water Resource Management Plan (May 2013) includes plans to supply and treat water in the Telford area across the next 25 years. Demand and supply forecasts have been used to inform the plan. A number of commitments are cited in the plan to improve water efficiency and ensure adequate infrastructure is in place during the plan period to meet demand and supply. Exact details in relation to supply and demand for the proposed housing numbers in the spatial options paper will be subject to a Water Cycle Study being prepared by the Council.

5.2.3 Severn Trent Water have confirmed<sup>6</sup> that there are no known water supply issued for the plan period as all water supply commitments are carefully prepared from the Water Resource Planning process which is undertaken in conjunction with the Council.

5.2.4 It is considered that no significant adverse effects will arise as a result of supplying water through the water network since water supply is regulated by the Environment Agency who themselves undertake HRA of consents before allowing abstraction to take place.

5.2.5 At this stage in the HRA process, it is suggested that the forthcoming Water Cycle Study be used to inform an assessment of effects in terms of water supply and water quality issues that might be impacted.

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<sup>6</sup> Steve Southern, Severn Trent Water, Pers comm April 2013.

## 5.3 Treatment of Waste Water

- 5.3.1 As is the case with water supply, the treatment of wastewater is undertaken by STW. There are several main Wastewater Treatment Works (WWTW) in or near to the plan area. Early Water Cycle Scoping Analysis has identified that capacity exists at all WWTWs although expansion of facilities will be necessary to cope with predicted housing numbers during the survey period. Before this information has been more fully understood it is not possible to determine likely significant effects at this point in the process. The forthcoming updated Water Cycle Study will enable more up to date information to be used in the HRA process during the next phase of the plan making process.

## 5.4 Recreation

- 5.4.1 Recreation is likely to increase in and around the plan area with new homes. A number of factors are likely to be important in being able to consider where recreation will take place such as the findings of the green infrastructure strategy which is in press at the time of writing.
- 5.4.2 In terms of European sites it is not anticipated that there will be any adverse effects associated with Cannock Chase SAC due to its distance at almost 20km away from the edge of the plan area.
- 5.4.3 Visitor survey analysis at Cannock Chase SAC and AONB has explored patterns of visitor use at this location. Activities were examined as part of a questionnaire which asked almost 5,000 visitors about the reasons for visiting the AONB (and by association the SAC). The same research also considered effects on the SAC arising from visitor activities. A strategy is now being pursued to capture contributions from new development in the adjacent areas surrounding the SAC. Telford and Wrekin is outside of the furthest zone presently being considered by the Cannock Chase SAC partnership within which contributions on the basis of impact are being sought.
- 5.4.4 Whilst not presently associated with visitor impacts, Aqualate Meres is a large lake outside of Newport with a range of features that have led to its designation as a Ramsar site and also a national nature reserve. Access however is restricted. Apart from public rights of way, which are limited to a single footpath and a bridleway, access to the reserve is limited to permit holders. Similarly, access to Motte Meadows SAC is by permit only. Vulnerability to recreation has also been recognized at West Midland Mosses. A local issue with camping has been cited in the Natura 2000 form. Any research into visitor patterns and open air recreation activities in the borough would help inform the likely significance of the plan exacerbating impacts at this site.

## 5.5 Air Quality

- 5.5.1 West Midlands Meres SAC has been recognised to be vulnerable to several sources of nutrient enrichment, including atmospheric deposition of nutrients, which pose a potential threat at these sites. Whilst a management agreement controls agricultural run-off at Chartley Moss, increases to air pollution issues associated with increased traffic levels will be important to explore when more detail is available from the plan makers.

- 5.5.2 None of the European Sites have identified vulnerabilities to air quality according to the statutory data forms whilst some such as the Midlands Meres and Mosses Ramsar Phase II sites eutrophication from agricultural run-off. Several sites have features which in themselves are vulnerable to air quality effects such as the natural dystrophic lakes but have not been listed, presumably because the effects have not been recorded at the site in any significant way. In some cases, e.g. Midland Mosses and Meres Ramsar Phase I, eutrophication effects have been cited without reference to air as the impact pathway.
- 5.5.3 Recent work at Cannock Chase SAC explored the issue of nitrogen deposition on heathland habitats at this location, following a review of evidence submitted by Staffordshire County Council. Following consideration of the research, Natural England has issued advice<sup>7</sup> recommending that HRA work should include consideration of effects at the local level and from further distances in terms of diffuse pollution.
- 5.5.4 On the basis of the precautionary principle, it is suggested that air quality effects be reviewed as the plan takes shape following selection of options. In terms of the spatial options, it is logical to assume that Option 2 will lead to lowest levels of air emissions from transport as housing is located mainly in urban Telford leading to reduced reliance on cars and the ability to encourage use by sustainable means of transport. Much depends however, on the overall anticipated levels of transport in each option as well as the receptor sites that are likely, if any, to experience local effects (i.e. within 200m of the impact source). The nearest European site within proximity to the plan boundary is part of the Midlands Mosses and Meres Ramsar site at Aqualate Mere. And in this case the lake is more than 200m from either the A518, A519 or A41. Other parts of the extensive network of meres and mosses should also be revisited once further detail on the plan becomes available.
- 5.5.5 In terms of longer distance diffuse effects, it will be necessary to explore potential impact pathways in this respect. Again, more detail is required before an assessment can be made. This issue should be revisited when more details are available from the forward planning team.

## 5.6 Cumulative Effects

- 5.6.1 Without being able to complete the assessment in terms of water quality and treatment of water, air quality or recreation, an assessment of cumulative effects remains inappropriate since if no adverse effects are deemed to arise from development proposals there will be no need to consider cumulative effects.

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<sup>7</sup> Advice to Cannock Chase Partnership, 10<sup>th</sup> April 2013 from Antony Muller at Natural England.

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## 6 Conclusions and Recommendations

### 6.1 Assessment findings

- 6.1.1 This HRA has established that potentially eleven European sites are within the influence of the Telford and Wrekin Shaping Place Spatial Options. Of these, a range of vulnerabilities have been reviewed for each of the eleven European sites.
- 6.1.2 The consideration of impacts concerns potential adverse effects associated with water supply and treatment, air quality and recreation that might arise from either a particular magnitude of proposed housing (see the growth options) or a particular spatial configuration of a particular options (see spatial options for growth option three).
- 6.1.3 In terms of the growth options, there is little to differentiate between either of the options since information about water supply and treatment needs to be explored further with Severn Trent Water. All growth options will presently strain resource capacity for wastewater treatment (Hyder, 2012<sup>8</sup>). However as stated, Severn Trent Water have confirmed available capacity at all wastewater treatment locations should they require expansion. More restrictive factors relate to water quality which as stated in Chapter 5, is governed by a strict consents procedure which itself is influenced by the Habitats Regulations Assessment Process.
- 6.1.4 In terms of water supply and treatment of waste water, the indications from liaison with Severn Trent Water are that careful planning of necessary infrastructure will take place for the treatment of waste water so that future development can be accommodated. It is implied that this may need to be on a sequential basis and be guided by the WRMP.
- 6.1.5 Severn Trent Water point out that Water Framework Directive requirements and a consents process run by the Environment Agency to strictly regulate water quality issues is itself subject to the HRA process. An HRA has been prepared for the draft WRMP and will be reviewed as part of the next stage of the HRA process for the Local Plan.
- 6.1.6 The Draft Water Resources Management Plan provides strategic details of water supply and wastewater treatment issues in the next 25 years with a special focus on the next five years. The Water Cycle Study will enable a detailed review of water issues in the borough and help inform the HRA.
- 6.1.7 Air quality and recreation effects remain unclear and will be explored in more detail in response to more information being supplied in the Local Plan.
- 6.1.8 In terms of the spatial options, with the information presently available, no single option appears to perform better than another with the possible exception of potential (unquantified) air quality effects being lesser in the case of Option 2.

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<sup>8</sup> Hyder (2012) Water Cycle Scoping Study for Telford and Wrekin Council.

## 6.2 Next Steps

- 6.2.1 At this stage in the process it is not possible to confirm which of the three growth options or the spatial options performs better than any other. This is because the options lack detail and there are a number of forthcoming research and evidence reports which will better inform the HRA process. Another factor is the consideration of cumulative effects which can only be considered once more information about the water situation is made available. It is suggested by Severn Trent Water that in terms of growth, the capacity can be delivered on a sequential basis. This needs evidencing and reviewing as part of the HRA process.
- 6.2.2 The next stage is to review the draft Water Resource Management plan and identify how infrastructure planning will be designed and scheduled to meet demand for growth coupled with the consenting process by the Environment Agency. Air quality issues will be explored more fully when further information about transport planning and energy infrastructure is available. Recreation issues at Cannock Chase SAC will be informed by the ongoing considerations of the Cannock Chase SAC Working Group.

# APPENDIX A

## *European sites: Conservation Objectives for Natura 2000 Sites (where available from Natural England)*

### **Brown Moss SAC**

Avoid the deterioration of the qualifying natural habitats and the habitats of qualifying species, and the significant disturbance of those qualifying species, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving Favourable Conservation Status of each of the qualifying features.

Subject to natural change, to maintain or restore:

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

### **Cannock Chase SAC**

Avoid the deterioration of the qualifying natural habitats and the habitats of qualifying species, and the significant disturbance of those qualifying species, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving Favourable Conservation Status of each of the qualifying features.

Subject to natural change, to maintain or restore:

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

#### **Qualifying Features:**

Northern Atlantic wet heaths with *Erica tetralix*; Wet heathland with cross-leaved heath  
European dry heaths

### **Mottey Meadows (SAC)**

Avoid the deterioration of the qualifying natural habitats and the habitats of qualifying species, and the significant disturbance of those qualifying species, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving Favourable Conservation Status of each of the qualifying features.

Subject to natural change, to maintain or restore:

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

#### **Qualifying Features:**

Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*)

### Fenn's, Whixall, Bettisfield, Wem and Cadney Mosses (SAC)

Avoid the deterioration of the qualifying natural habitats and the habitats of qualifying species, and the significant disturbance of those qualifying species, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving Favourable Conservation Status of each of the qualifying features.

Subject to natural change, to maintain or restore:

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

#### Qualifying Features:

Active raised bogs

Degraded raised bogs still capable of natural regeneration; Degraded raised bog

### The Stiperstones and the Hollies SAC

Avoid the deterioration of the qualifying natural habitats and the habitats of qualifying species, and the significant disturbance of those qualifying species, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving Favourable Conservation Status of each of the qualifying features.

Subject to natural change, to maintain or restore:

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

### Severn Estuary SAC & SPA

Comprehensive details of conservation objectives are available in this document: Natural England & the Countryside Council for Wales' advice given under Regulation 33(2)(a) of the Conservation (Natural Habitats, &c.) Regulations 1994, as amended (June, 2009). Conservation objectives for the Severn Estuary SAC and SPA are provided in the form of eight and seven interest features respectively. In the interests of report brevity these have not been reproduced here. For full detail please see: <http://www.severnestuary.net/asera/docs/Regulation%2033%20Advice.pdf>

### West Midlands Mosses SAC

Avoid the deterioration of the qualifying natural habitats and the habitats of qualifying species, and the significant disturbance of those qualifying species, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving Favourable Conservation Status of each of the qualifying features.

Subject to natural change, to maintain or restore:

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

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