

Telford & Wrekin Council

Shaping Places

Habitat Regulation Assessment

Screening Report

April 2012

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1. Background and Summary

- 1.1 It is a legal requirement for Local Authorities to prepare a Habitat Regulation Assessment (HRA) for plans and projects which have potential to impact on habitats of European importance. The purpose of HRA of land use plans is to ensure that protection of the integrity of European sites is part of the planning process.
- 1.2 There are four stages of the HRA process. These are summarised below:

Stage 1 – Screening	To test whether a plan or project either alone or in combination with other plans and projects is likely to have a significant effect on an European site
Stage 2 – Appropriate Assessment	To determine whether, in view of an European site's conservation objectives ¹ , the plan (either alone or in combination with other projects and plans) would have an adverse effect on the integrity of the site with respect to the site structure, function and conservation objectives. If adverse impacts are anticipated, potential mitigation measures to alleviate impacts should be proposed and assessed
Stage 3 – Assessment of alternative solutions	Where an plan is assessed as having an adverse impact (or risk of this) on the integrity of an European site, there should be an examination of alternatives (e.g. alternative locations and designs of development); and
Stage 4 – Assessment where no alternative solutions remain and where adverse impacts remain	In exceptional circumstances (e.g. where there are imperative reasons of overriding public interest). Compensatory measures would usually be required to offset negative impacts.

- 1.3 This document represents the initial Screening Report for the Habitat Regulation Assessment (HRA) for the emerging Telford & Wrekin Local Plan document referred to as "Shaping Places".
- 1.4 The Habitat Regulation Assessment (often referred to as „Appropriate Assessment“) plays an important role in protecting the Conservation Objectives of the Natura 2000 network of sites. These sites, often referred to as European Sites, consist of Special Areas of Conservation (SACs); Special Protection Areas (SPAs); and Offshore Marine Sites (OMS). Additionally, despite not being included in the Natura 2000 network of sites, Ramsar Sites are covered by the Directive, and are therefore also included in this Assessment. European Sites are designated to protect areas of important and valuable habitat, or

¹ A statement of the nature conservation aspirations for a site, expressed in terms of the favourable condition required for the habitats and / or species for which the site was selected.

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species of flora, fauna and birds which are rare or threatened in a European context.

- 1.5 The Habitats Regulations require the plan making/competent authority (Telford & Wrekin Council) to consult the appropriate nature conservation statutory body (Natural England [NE]). Natural England (Telford Office) was involved in the early development of a method for undertaking the HRA work in early 2012, including the decision on the scale of buffer required and which European sites should be „screened“ for Assessment.
- 1.6 There are no Ramsar, SPA or SAC sites within Telford & Wrekin Council’s administrative boundary, however significant effects² may be incurred even in cases where the area covered by the plan is some distance away. Thus it is important that the Council’s emerging Shaping Places Plan is still „screened“ to identify and mitigate any likely significant effects on nearby European Sites.
- 1.7 The purpose of this initial Screening Report is therefore to establish which European sites close to the boundary of Telford & Wrekin could potentially be affected by the Borough’s emerging Shaping Places Plan. It should be noted that Shaping Places is currently at a very early stage of preparation, and no firm decisions have been made on a number of important land use issues. In taking this into consideration, a precautionary approach to identifying potential significant effects has been adopted.
- 1.8 In considering the potential impact on all of the identified European Sites, this Screening Report has concluded that that all the sites identified within the Screening Report should be taken forward to the next stage of the Habitat Regulation Assessment.
- 1.9 This Screening Report is open to consultation for six weeks between 30th April 2012 – 11th June 2012. Your comments are welcome.

² Determining whether an effect is „significant“ is undertaken in relation to the designated interest features and conservation objectives of the Natura 2000 sites. If an impact on any conservation objective is assessed as being adverse then it should be treated as significant. Where information is limited the precautionary principle applies and significant effects should be assumed until evidence exists to the contrary.

2. Habitat Regulation Assessment – Screening Report

Legal Framework

- 2.1 The Habitats Directive³ places specific requirements on the preparation of plans and projects to ensure the protection of the integrity of European Sites. This Directive was transposed into UK law in Schedule 1 of the Conservation Regulations 2006.
- 2.2 Guidance notes on preparing a Habitat Regulation Assessment (HRA) have been prepared by the Department for Communities and Local Government (CLG)⁴ and The Royal Society for the Protection of Birds (RSPB)⁵. Telford & Wrekin Council have used these guidance notes in the preparation of this Screening Report.
- 2.3 This report documents the methodology employed during this initial screening stage of the Habitat Regulation Assessment (HRA), and records the evidence gathered and the process leading to any decisions made.

Telford & Wrekin Shaping Places Development Plan

- 2.4 The Shaping Places Development Plan will be the principal Local Plan document. It will set out Telford & Wrekin Council's spatial vision, strategic objectives, spatial strategy, policies and key proposals to guide future development and growth during the period to 2031.
- 2.5 Shaping Places is currently at an early stage of its preparation. A preliminary engagement exercise was carried out between 16 January and 27 February 2012.
- 2.6 The next stage will be consultation on Strategy and Options, setting out a range of key choices for the plan and the preferred option in each case.
- 2.7 On completion, the plan will set out proposals for housing and employment growth, and related infrastructure.

HRA Screening Process

- 2.8 The main purpose of this HRA Screening Process is to establish whether there is likely to be any significant effects from the emerging policies and proposals contained in Shaping Places on European Sites applying a buffer of 15km around the Local Authority boundary (as

³ 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.

⁴ Planning for the Protection of European Sites: Appropriate Assessment, DCLG, August 2006.

⁵ The Appropriate Assessment of Spatial Plans in England: A Guide to Why, When, and How to do it, RSPB, August 2007.

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there are no European Sites within the Telford & Wrekin boundary). In doing so, the effect of policies and proposals, either on their own or in combination with other plans and projects, needs to be considered.

- 2.9 It is important to remember that the HRA process is concerned solely with identifying significant effects on the Conservation Objectives of European Sites.
- 2.10 Following this assessment, it may be possible to „screen“ out sites which are unlikely to be affected by Shaping Places proposals. If, however, significant effects cannot be ruled out, sites will be taken forward to the full Appropriate Assessment stage. Table 2.1 below shows how the Habitat Regulation Assessment Stages will interact with Shaping Places document preparation.

Table 2.1: Sustainability Appraisal (SA) / Habitat Regulation Assessment (HRA) / Local Plan interaction

SA Stage	Habitat Regulation Assessment Stage	Local Plan Stage
1. Sustainability Appraisal Scoping Report	1. Evidence Gathering on European Sites	1. Evidence gathering for Development Plan
2. Initial Sustainability Appraisal of Strategy & Options	2. Screening and scoping of significant effects from Local Plan on European Sites	2. „Strategy and Options“ Document
3. Draft Sustainability Appraisal Report	3. Full Appropriate Assessment, Strategy and Options document. Results of HRA then fed into Draft Plan.	3. Draft Plan
4. Final Sustainability Appraisal Report	4. Revised Habitat Regulations Assessment Report in response to changes made following consultation at Draft Plan stage. Results fed into Final Plan	4. Final Plan
Independent examination and Inspector’s binding report		
5. SA Statement and Monitoring Procedures		5. Local Plan Adoption and Monitoring Procedures

- 2.11 It is important to remember that Shaping Places is still at a very early stage of preparation, and preferred options have yet to be defined. By following the precautionary principle, it is therefore difficult, and often not advisable, to rule out significant effects on European sites. However, by the same token, taking a site forward to the full Appropriate Assessment stage does not necessarily mean that a

significant effect on a European Site is likely; it may just be too early to say.

Methodology

- 2.12 The Habitat Regulation Assessment, screening stage, has been carried out according to the European Habitats Directive. The Habitats Directive is relevant to the designation and protection of Special Areas of Conservation (SAC). The HRA screening stage has also been carried out according to the European Directive on the Conservation of Wild Birds (79/409/EEC) known as the Birds Directive⁶ under which Special Protection Areas (SPA) are designated. SPAs and SACs are collectively known as Natura 2000 sites.
- 2.13 A third group of sites, Ramsar sites, have been included in this HRA under the term „European Sites“ following procedures set out in Circular 06/05⁷. Sites designated as globally important wetlands under the Ramsar convention (1971) are not European Sites by law but the circular states that they should be treated the same during Habitat Regulation Assessment „as a matter of policy“.

Evidence Gathering

- 2.14 The process of evidence gathering was undertaken as detailed within *Planning for the Protection of European Sites: Appropriate Assessment*⁸ as follows:
- European sites within and outside the plan area potentially affected;
 - The characteristics of these European sites;
 - Their conservation objectives; and
 - Other relevant plans or projects.
- 2.15 Tables containing information on individual European Sites can be found in appendix 4.

Site identification

- 2.16 The first step in the scoping process was to identify all European Sites in Telford & Wrekin and within 15km of the Borough boundary. The map in appendix 2 shows Telford & Wrekin with a 15km buffer and the spread of European Sites across the area being considered in the HRA. Information on specific sites are included in appendix 3.
- 2.17 The precautionary principle has been applied throughout the screening stage of the HRA by the use of a 15km buffer zone around the Telford & Wrekin boundary.

⁶ Implemented in the UK by the Wildlife and Countryside Act 1981 (as amended) and the Conservation (Natural Habitats &c) Regulations 1994 (as amended)

⁷ Circular 06/2005: Biodiversity & Geological Conservation – Statutory Obligations and Their Impact Within the Planning System

⁸ Planning for the Protection of European Sites: Appropriate Assessment, DCLG, August 2006

Site Information

- 2.18 Information for the report has been compiled from a variety of sources, including:
- The Joint Nature Conservation Committee (JNCC) website www.jncc.gov.uk
 - Original Natura 2000 Standard Data forms
 - HRA of Phase Two Revision of the West Midlands Regional Spatial Strategy – Screening note prepared for Government Office for the West Midlands by Treweek Environmental Consultants
 - Background information on Ramsar designation www.ramsar.org/
 - Specific site descriptions and further information on Ramsar sites from www.ramsar.wetlands.org/

Identifying Possible Mechanisms for Significant Effects

- 2.19 At this stage it is not possible to look at the scale of effect on individual European Sites since Shaping Places has yet to identify the appropriate level of detail about growth options.
- 2.20 It is, however, possible to consider some broad mechanisms by which proposals contained in Shaping Places might affect European Sites. These broad mechanisms and direct effects include, but are not limited to:
- Alteration in water quality
 - Increased water abstraction
 - Increased run off from new roads and development
 - Air pollution from development work
 - Air pollution from increased traffic in the long term
 - Increased NO_x gasses
 - Increased sulphur dioxide
 - Increased Acid deposition
 - Increased Nitrogen deposition
 - Increased recreational use and disturbance including dog walking
 - Increased fishing on open water sites
 - Increased introduced and invasive species issues
 - Alterations in site management
 - Increased hunting pressure from domestic animals e.g. cats

In-Combination Effects

- 2.21 The Habitats Directive requires Local Authorities to assess „in-combination“ effects alongside direct effects. „In-combination“ effects occur when otherwise non-significant proposals combine, and can cumulatively lead to a significant effect. This interaction can occur from proposals within the Development Plan or between the Development Plan and other proposals and strategies.

- 2.22 In terms of Shaping Places there are some obvious synergies with adjoining authority Development Plans. Appendix 1 provides a breakdown of the plans considered to have potential to have „In-combination“ effects.

3 Summary of Findings

- 3.1 A total of 8 European Sites have been identified in this Screening Report.
- 3.2 There are no relevant sites within Telford & Wrekin's boundary. The following sites within a 15km of the Telford & Wrekin boundary have however been included. The sites identified are as follows:
- Motte Meadows SAC:
 - West Midlands Mosses:
 - Midland Meres and Mosses (Ramsar – Phase 1), and:
 - Midland Meres and Mosses (Ramsar – Phase 2).
- 3.3 In addition, the following sites have also been included:
- Severn Estuary SAC:
 - Severn Estuary Ramsar:
 - Severn Estuary SPA:
 - Cannock Chase SAC
- 3.4 Appendix 3 provides information for each site, including their Conservation Objectives and site vulnerability (where known).
- 3.5 Shaping Places is at an early stage of preparation and it is still unclear as to the scale and direction for growth on a number of important issues. Taking into account the fluidity of both the Development Plan, and adopting a precautionary approach, it is felt that **all** European sites identified above could potentially directly or indirectly be affected by Shaping Places.
- 3.6 All these sites will be carried forward to the full Appropriate Assessment Stage. The reasoning behind these decisions is explained below.

Sites carried forward to the full Appropriate Assessment stage

- 3.7 The Appropriate Assessment for these sites will be carried out in parallel with the preparation of the Draft Plan stage. This stage of Shaping Places will provide more clarity and greater detail about the plans and policies being proposed, and it will therefore be easier to gauge how Shaping Places may impact on each site.
- 3.8 This parallel preparation process will ensure that the results of the HRA will be fully considered in decisions on Shaping Places. It will also ensure Telford & Wrekin Council meets its responsibility against the Habitats Regulations Assessment.

Consultation

- 3.9 This Screening Report is open to consultation for six weeks between 30th April 2012 – 11th June 2012. Responses will be analysed and where

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appropriate fed into future stages of the Habitat Regulation Assessment.

- 3.10 Please send your comments to the Shaping Places Team, Telford & Wrekin Council at the following email address:
Shapingplaces@telford.gov.uk
- 3.11 Alternatively, post comments to Shaping Places Team, Housing & Development Planning, Wellington Civic & Leisure Centre, Larkin Way off Tan Bank, Wellington, Telford, TF1 1LX.

Appendix 1: Projects and Plans with potential ‘in-combination’ effects

This list is not exhaustive, but begins to pick out those plans with potential for in-combination effects with Shaping Places. It does not take into account wider planning applications which may come forward. The list does not include national and international strategies as it is accepted that these are reflected in the strategies at the local scale.

Organisation	Main Elements	Potential for In-Combination effects with Shaping Places
<p>South Staffordshire Council HRA Review January 2010</p> <p>The HRA Review included:</p> <ul style="list-style-type: none"> ➤ Mottey Meadows SAC ➤ Cannock Chase SAC ➤ Midlands Meres and Mosses Ramsar site (Phase 2 site) ➤ West Midland Mosses SAC, ➤ Severn Estuary SPA/SAC/Ramsar site 	<p>The international sites considered in this HRA Review are Mottey Meadows SAC, Cannock Chase SAC and Cannock Extension Canal SAC. The other international sites were eliminated from the HRA. The international sites were eliminated from the HRA Review process because the sites were not considered to be vulnerable to effects arising from policies within the Plan.</p> <p>Following the HRA Review of the Policy Choices Document, it considered that none of the policies in the Plan as it currently stands will lead to likely significant effects on these three international sites.</p>	<p>The plans and proposals from South Staffordshire Council could have an impact on European Sites within Telford & Wrekin’s 15km buffer.</p> <p>Due to the strategic nature of the policies in the Plan, the exact location of future developments is not known and it is not, therefore, possible to assess likely significant effects on the international sites at this stage. Therefore in-combination effects could result from allocations or planning policies from existing Local Plans, or from emerging proposals coming forward as part of each authority’s Development Plans.</p> <p>As Shaping Places gets further towards adoption issues identified will be kept under review and will be taken account of in the full Appropriate Assessment stage. The use of a 15 km buffer zone around Telford & Wrekin takes these potential cross boundary issues into account.</p>
<p>Shropshire Council HRA Stage 2 - of Core Strategy February 2010</p> <p>The HRA Stage 2 included:</p> <ul style="list-style-type: none"> ➤ Brown Meadows SAC ➤ West Midlands Mosses SAC ➤ Midland Meres and Mosses Ramsar Phase 1 ➤ Midland Meres and Mosses Ramsar 	<p>The Habitat Regulation Assessment of the Core Strategy Final Plan concluded no likely significant effects on any European Sites, provided that HRA decisions for 9 of the policies are passed down to the next tier of the Core Strategy which will be the Site Allocations and Management of Development DPD.</p>	<p>The plans and proposals from Shropshire Council could have an impact on European Sites within Telford & Wrekin’s 15km buffer. These in-combination effects could result from allocations or planning policies from existing Local Plans, or from emerging proposals coming forward as part of each authority’s Development Plans.</p> <p>As Shaping Places gets further towards adoption issues identified will be kept under review and will be taken account</p>

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Phase 2.		of in the full Appropriate Assessment stage. The use of a 15 km buffer zone around Telford & Wrekin takes these potential cross boundary issues into account.
<p>Stafford Borough Council HRA Stage 1 – Screening completed on Core Strategy January 2011</p>	<p>These screening assessments concluded that the implementation of the Plans may lead to likely significant effects on the Cannock Chase SAC and Motte Meadows SAC.</p>	<p>The plans and proposals from Stafford Borough Council could have an impact on European Sites within Telford and Wrekin’s 15km buffer.</p> <p>Due to the strategic nature of the policies in the Plan, the exact location of future developments is not known and it is not, therefore, possible to assess likely significant effects on the international sites at this stage. Therefore in-combination effects could result from allocations or planning policies from existing Local Plans, or from emerging proposals coming forward as part of each authority’s Development Plans.</p> <p>As Shaping Places gets further towards adoption issues identified will be kept under review and will be taken account of in the full Appropriate Assessment stage. The use of a 15 km buffer zone around Telford & Wrekin takes these potential cross boundary issues into account.</p>
<p>Telford & Wrekin Council HRA Review of Third Local Transport Plan (LTP3) December 2010</p> <p>The LTP3 sets out the objectives for transport in Telford & Wrekin</p>	<p>The review considered that there were no likely significant effects alone or in-combination.</p> <p>However, the Review stated that though it may not be necessary to complete a Stage 1 Screening for the Plan, this will be determined once the Plan is finalised, all other documents have been reviewed and the formal findings of “no likely significant effects” has been submitted to Natural England.</p>	<p>Shaping Places will need to reflect priorities and objectives set out in LTP3. This has potential to influence the type and location of development and the need for associated infrastructure.</p>
<p>Telford & Wrekin Council – Water Cycle Scoping Study (to be published May 2012)</p>	<p>The Telford & Wrekin Water Cycle Study assesses the impact development will have on the water environment,</p>	<p>The Study recognises that there is a finite capacity within the environment to provide new water for development and to</p>

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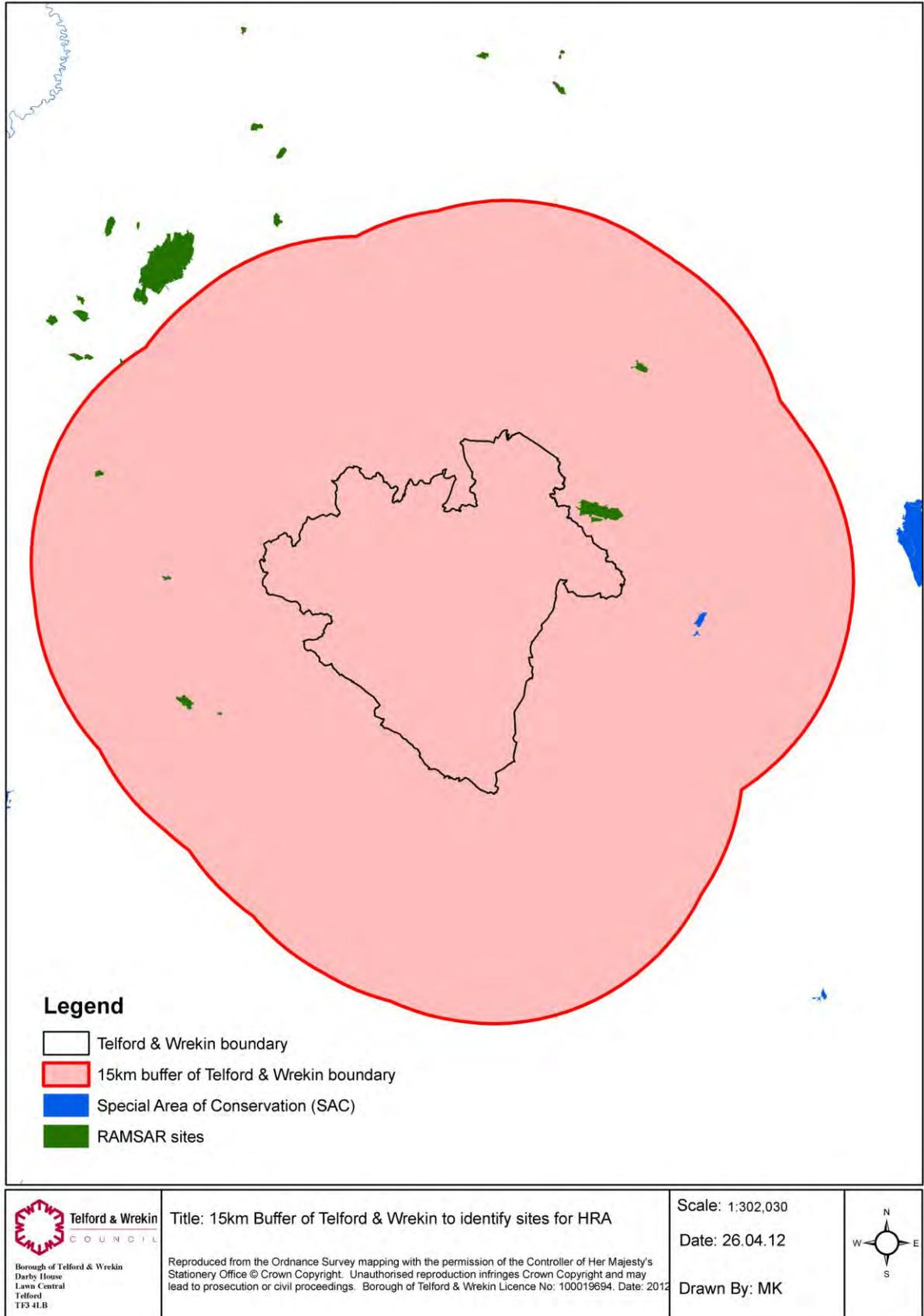
	<p>and identifies whether the necessary water infrastructure will be provided in a timely manner to support growth.</p> <p>The Scoping Study will identify where further more detailed studies will be required to clarify the potential impacts of development proposals. It will identify a suitable strategy, through the assessment of need for further studies, and programme of measures to ensure that the proposed growth is not constrained by the water environment, through the timely provision of suitable infrastructure.</p> <p>The assessment focuses on water demand and supply, water quality and waste water collection and treatment as well as flood risk and drainage. The Scoping Study is expected to be completed in Summer 2012. The outline stage of the Study will be prepared late 2012 following on from the recommendations of the Scoping Study.</p>	<p>deal with waste water, so that it is returned safely to rivers and the sea without having a detrimental impact.</p> <p>Climate change is also bringing fresh challenges as patterns of rainfall change, increasing the risk of flooding as drains become overwhelmed. The Study will consider the key issues with respect to the water environment, particularly in regard to water resources and water supply; flood risk management; wastewater collection and treatment.</p> <p>The Water Cycle Study as a whole identifies what impact development will have on the water environment and identifies the most appropriate locations and timing of development, so that adequate water infrastructure is in place and the quality and quantity of Telford & Wrekin's water environment is maintained.</p>
<p>Telford & Wrekin Council – Green Infrastructure Framework (to be published mid to late 2012)</p>	<p>The Green Infrastructure Framework will provide a comprehensive overview of the current green provision in the borough. It will tell us what there is, where it is, how much there is, as well as the benefits it can and is providing. It will also explore the ways in which we can use these green resources to help address the social, economic and environmental issues facing the borough.</p> <p>Green infrastructure not only provides us with recreation, habitats for ecology and wildlife and areas for agricultural production, but it is also plays an important role in making distinctive and positive places, attracting people and investment to the area. It is also a very valuable</p>	<p>The Green Infrastructure Framework will provide a strategy for the coordination of the planning, design and management of the green infrastructure in Telford & Wrekin. It will enable us to value, plan, design and manage every green space and natural feature including water in an integrated and connected way; optimising its performance for multiple social, economic and environmental benefits.</p> <p>This will be an integral evidential and guidance document in setting a new approach for future green space and green infrastructure planning in the new Shaping Places plan.</p>

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	asset in helping us to address the issues involved in climate change such as flooding and extremes in the weather.	
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Appendix 2: Telford & Wrekin with 15km buffer

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Appendix 3: European Site Information Tables

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The HRA Screening process for Shaping Places: Strategy and Options identified the following European Sites as being relevant to the plan. The following tables provide detailed information on each European Site including: site name, location, conservation objectives (where known), site vulnerabilities and reasons for designation. Please refer to 2.18 which lists the information sources.

Where up-to-date Conservation Objectives exist, it is hoped that these will be available from Natural England prior to the full Appropriate Assessment.

Table 1: Cannock Chase SAC

Site Name: Cannock Chase SAC, SJ 982 188, Staffordshire, England
Site Description: Cannock Chase (1,236.93 ha) is a dry heath and wet heath with Cross-leaved Heath
Conservation Objectives: Maintain European dry heaths and North Atlantic wet heaths with <i>Erica tetralix</i> (cross-leaved heath) in a favourable condition, with particular reference to the NVC communities ⁹ present: H8, H9 and M16.
<p>Site Vulnerability: The site is vulnerable for a number of reasons, including the threat of:</p> <p>Recreational pressure and disturbance: A variety of activities are popular on-site, including horse-riding, mountain biking, dog-walking, orienteering and informal activities – all contribute to erosion and fragmentation (see below);</p> <p>Fragmentation: A consequence of site management and of visitor pressure, affecting plant communities through increased isolation and access for competitive species;</p> <p>Burning and/or grazing: Often required to maintain open heathland, helping prevent invasion by scrub and grasses;</p> <p>Invasive species: These species affect the extent and distribution of habitats on site. Individual species, for example gorse and bracken, that are natural components of the heathland community can have a damaging effect on the site if allowed to become dominant through lack of management. Other species such as heather beetle and <i>phytophthora</i> can affect individual species;</p> <p>Succession of habitats: Management is required to prevent succession to woodland, including non-native species such as pine;</p> <p>Changes in air quality leading to eutrophication: Heathlands are naturally low nitrogen habitats and therefore inputs of nitrogen tend to be detrimental in increasing the relative competitive advantage of grasses and scrub (see also invasive species above);</p> <p>Changes in air quality leading to acidification: Acidification of heathland ecosystems, through aerial inputs of nitrogen and sulphur, may change the species composition of the habitat and lead to premature death of desired species;</p> <p>Toxic contamination: Direct contamination of habitats through toxic pollutants, leading to direct mortality;</p>

⁹ National Vegetation Classification community – a system devised to consistently describe vegetation communities in the UK.

Reduction in water levels: *Erica tetralix* is restricted to wetter or waterlogged ground. Therefore abstraction that causes drying will affect distribution and abundance; and,

Changes in water quality leading to eutrophication: The vegetation of wet heath is particularly sensitive to nutrient nitrogen, whether from atmospheric or aquatic sources.

Reason for Designation

Annex I habitats¹⁰:

- European dry heaths (the dry heath communities present belong to National Vegetation Classification types H8 (*Calluna vulgaris* – *Ulex gallii*) and H9 (*Calluna vulgaris* – *Deschampsia flexuosa*) heaths.

Also present are northern Atlantic wet heaths with cross leafed heath *Erica tetralix*.

Table 2: Severn Estuary SAC / SPA / Ramsar site

Note: Due to the GIS dataset used, the map in Appendix 3 does not show the Severn Estuary. However please see the following weblink depicting the Severn Estuary SAC:

<http://data.nbn.org.uk/siteInfo/siteSpeciesGroups.jsp?useIntersects=1&allIDs=1&engOrd=1&srcKey=UK0013030&srcDsKey=GA000327>

Site Name: Severn Estuary SAC / SPA / Ramsar Site, Vale of Glamorgan, Stroud, Forest Of Dean, Cardiff, Newport, City of Bristol, Monmouthshire, North Somerset, South Gloucestershire.

Site Description:

The estuary's classic funnel shape, unique in Britain, is a factor causing the Severn to have the second-largest tidal range in the world. This 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 invertebrate community includes high densities of ragworms, lugworms and other invertebrates forming an important food source for passage and wintering waders. A further consequence of the large tidal range is the extensive intertidal zone, one of the largest in the UK, comprising mudflats, sand banks, shingle and rocky platforms. Glassworts and annual sea-blite colonise the open mud, with beds of all three species of eelgrass occurring on more sheltered mud and sandbanks. Large expanses of common cord-grass also occur on the outer marshes. Grazed saltmarsh fringes the estuary with a range of saltmarsh types present. The middle marsh sward is dominated by common saltmarsh-grass with typical associated species. In the upper marsh, red fescue and saltmarsh rush become more prominent. The estuary is an important habitat for migratory fish.

Conservation Objectives:

Only the SAC conservation objectives are detailed in this report due to the fact that there are considerable overlaps with the SPA and Ramsar objectives. The conservation objective for the „estuaries“ feature of the Severn Estuary SAC is to maintain the feature in favourable condition.

Site Vulnerability:

¹⁰ Habitat listed in Annex I of the EU Habitats directive.

The conservation of the site features is dependent on the tidal regime. The 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. The estuary is therefore vulnerable to large scale interference, including human actions.

These include:

- land-claim
- aggregate extraction/dredging
- physical developments such as barrage construction
- flood defences
- pollution (industrial, oil spillage)
- eutrophication
- tourism based activities and disturbance.

Reason for Designation

The SAC interest features are:

- Estuaries
- Subtidal sandbanks which are covered by sea water all the time (subtidal sandbanks)
- Mudflats and sandflats not covered by seawater at low tide (mudflats and sandflats)
- Atlantic salt meadow
- Reefs
- River lamprey

Table 3: Mottey Meadows SAC

Site Name: Mottey Meadows SAC, SJ840134, Staffordshire, England
Site Description: Mottey Meadows (43.87ha) represents one of the best areas in England for Lowland Meadow with <i>Alopecurus pratensis</i> , <i>Saguisorba officinalis</i> . It has been maintained through traditional agricultural practices and contains an extensive example of an alluvial flood meadow.
Conservation Objectives: To maintain the lowland hay meadows in favourable condition, with particular reference to the MG4 and MG8 NVC communities.
<p>Site Vulnerability:</p> <p>The site is vulnerable for a number of reasons, including the threat of:</p> <p>Increase in water levels: Waterlogging from increased flooding levels has potential to affect the site, particularly if nutrient-rich water is able to lie on the meadows for any length of time. This may facilitate competition by more generalist plant species, leading to a loss of species that make up the designated habitat;</p> <p>Changes in water quality leading to eutrophication: This may change the composition and structure of the vegetation on the site and may lead to the invasion by generalist native and non-native species;</p> <p>Physical damage: Site-specific management requires grazing and/or mowing annually. Early grazing may affect Snake"s-head Fritillary populations, whilst poaching, stock feeding and late flooding also cause problems;</p> <p>Changes in air quality leading to eutrophication: As with water pollution inputs, increases the risk of competitive exclusion by other plant</p>

<p>species, changes vegetation composition and structure; and, Changes in air quality leading to acidification: The vegetation of this site is sensitive to increased acidification, which will change the vegetation composition and structure.</p>
<p>Reason for Designation Annex I habitats: lowland hay meadows (<i>Alopecurus pratensis</i>, <i>Sanguisorba officinalis</i>).</p> <p>The site contains grassland with limited influence of agricultural intensification and so demonstrates good conservation of structure and function. There are transitions to other dry and wet grassland types. The site is important for a range of rare meadow species, including fritillary <i>Fritillaria meleagris</i> at its most northerly native locality.</p>

Table 4: West Midland Mosses SAC

<p>Site Name: West Midland Mosses SAC, SK026282, Cheshire / Shropshire / Staffordshire, England</p>
<p>Site Description: West Midland Mosses (184.18ha) is a collection of sites which between them represent nationally important dystrophic water bodies, transition mires and quaking bogs.</p>
<p>Conservation Objectives: The conservation objectives for the site are to maintain both Annex I habitats in a favourable condition (and to restore if the feature is currently not in a favourable condition).</p>
<p>Site Vulnerability: Colonisation of open schwingmoors or <i>Sphagnum</i> lawns and rafts in the West Midland Mosses by birch and pine is controlled by works under Management Agreement or by National Nature Reserve management, and in liaison with the local wildlife trust at Abbots Moss.</p> <p>Several sources of nutrient enrichment, including atmospheric deposition of nutrients, pose a potential threat at these sites. A Management Agreement controls agricultural run-off at Chartley Moss. Trees at this site trap airborne nutrients and provide roost areas for birds, but the enrichment effect of both is only localised. At Abbots Moss the threat of enrichment from atmospheric sources has been reduced by clear-felling of basin slopes adjacent to the mires.</p> <p>All parts of that site are vulnerable to recreational disturbance, particularly the northern portion which is a scout camp.</p>
<p>Reason for Designation Annex I Habitats that are a primary reason for selection of site: Natural dystrophic lakes and ponds, Transition mires and quaking bogs</p>

Table 5: 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 Meres, Tatton Mere, The Mere (Mere), White Mere and Wynbunbury Moss SSSI"s.
Conservation Objectives: Maintenance of habitat extent and suitable conditions for characteristic species.
Site Vulnerability: Invasive species: considered a major impact n 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. The specific threats or hazards to each of the composite sites that are within the 15km buffer are as follows: <ul style="list-style-type: none">- Berrington Pool – biological disturbance (trampling / erosion etc) from increased public access and from native and non-native invasive species such as crassula or scrub, lowering of the water table from abstractions or conversely water-logging, eutrophication and siltation from surrounding land use, in particular agricultural run-off and potentially sewage outfalls.- Bomere, Shomere and Betton Pools – biological disturbance from (trampling/erosion etc) from increased public access – watersports are already popular at the site and having an impact – as well as from native and non-native invasive species such as crassula, rhododendron and sycamore, fluctuations in the water table from nearby land drainage or abstractions, eutrophication from surrounding land use, in particular agricultural run-off and potentially sewage outfalls.

Reasons for Designation:

Criterion 1.

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 2.

- 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 elongate*.
- Contains an assemblage of invertebrates, including the following rare wetland species.

Three 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*.

NB. Of the SSSI in the Ramsar phase 1 designation the following considered in this screening document as they fall within the 15km buffer: Bomere, Shomere and Betton Pools, Berrington Pool.

Table 6: Midland Meres and Mosses (Ramsar – Phase 2)

Site Name: Midland Meres and Mosses (Ramsar phase 2), Shropshire / Clwyd / Cheshire / Staffordshire, England.
Site Description: Phase 2 of the Ramsar sites covers 1740.3ha and is entirely co-incident with the following 19 Sites of Special Scientific Interest (SSSI). These are: Abbots Moss, Aqualate Mere, Black Firs & Cranberry Bog, Brownheath Moss, Chapel Mere, Cole Mere, Cop Mere, Fenn's, Whixall, Bettisfield, Wem & Cadney Mosses, Hanmer Mere, Hencott Pool, Linmer Moss, Llyn Bedydd, Morton Pool & Pasture, Oak Mere, Oakhanger Moss, Oss Mere, Rostherne Mere, Sweat Mere & Crose Mere and Vicarage Moss.
Conservation Objectives: Maintenance of habitat extent and suitable conditions for characteristic species.
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.

The specific threats or hazards to each of the composite sites that are within the 15km buffer are as follows:

- Aqualate Mere – reductions in water levels from ground water and surface water abstractions, eutrophication from raised nitrogen and phosphorous and siltation entering the site via incoming water, largely from the nearby canal, as well as the presence of invasive species, in particular fish.
- Hencott Pool – eutrophication mainly from surrounding agricultural run-off, lowering of the water table from surrounding activities, invasive species, in particular Canadian geese that graze, trample and enrich the vegetation.
- Cop Mere – 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.

Reasons for Designation:

Criterion 1.

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 2.

- 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*, *Dicranum affine* and *Sphagnum pulchrum*.
- Containing an assemblage of invertebrates, including several rare wetland species. There are 16 species of Red Data book insect for the site including the following endangered species: the moth *Glyphipteryx lathamella*, the caddisfly *Hagenella clathrata* and the sawfly *Trichiosoma vitellinae*.

NB. Of the SSSI in the Ramsar Phase 2 designation the following are considered in this screening document as they fall within the 15km buffer: Aqualate Mere, Hencott Pool, Cop Mere.