

Screening Opinion for Stafford Borough Council Core Strategy in Respect of Natura 2000 Sites



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1 Introduction / Background

1 Introduction / Background

1.1 This screening opinion has been prepared in order to assist Stafford Borough Council in deciding whether an Appropriate Assessment of the Core Strategy in relation to Natura 2000 sites is required under the European Directive 92/43/EEC (The Habitats Directive).

1.2 The screening opinion has been prepared in accordance with the Requirements of article 6 (3) and (4) of the Habitats Directive and the draft Conservation (Natural Habitats and Conservation) (Amendment) (England and Wales) Regulations 2006.

1.3 This report has also drawn on guidance contained in PPS9, Circular 06/2005 and the EC publications 'Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC', and 'Assessment of plans and projects significantly affecting Natura 2000 sites – Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC'.

1.4 Following the ECL judgement on the 20th October 2005, the Department for Communities and Local Government (DCLG) have drawn up guidance titled 'Planning for the Protection of European Sites: Appropriate Assessment', which has also been taken into account.

The Habitats Regulations Assessment

1.5 A Habitats Regulations Assessment is the requirement that Local Authorities and Regional Planning Bodies (RPBs) should consider whether projects or plans, as part of land use planning documents, will have adverse effects on Natura 2000 Sites (also known as European Sites). Natura 2000 Sites are nature conservation sites designated as Special Protection Areas (SPAs), Special Areas of Conservation (SACs), and includes species outlined in Regulation 10 of the Habitats Regulations 1994.

1.6 This requirement was brought about by the United Kingdom's failure to implement Articles 6(3) and 6(4) of the European Directive regarding Habitats (92/43/EEC) and enforced through the European Court of Justice (ECJ). The Court ruled that UK law did not adequately transfer the Directive into British legislation.

1.7 Planning Policy Statement 9 (PPS9): 'Biodiversity and Geological Conservation' states that RAMSAR sites should receive the same protection as SPAs and SACs and so have been included in this assessment.

Natura 2000 Sites

1.8 This document, relates to all Natura 2000 sites within the Borough, apart from Cannock Chase SAC. A separate screening opinion and Appropriate Assessment report has been produced relating specifically to impacts on Cannock Chase SAC.

1.9 The purpose of a Habitats Regulations Assessment is to assess the impacts of land-use plans and projects against the conservation objectives of a Natura 2000 site and to ascertain whether there will be an adverse effect on the integrity of the site. If significant effects are identified by the assessment, alternative plan options need to be examined.

1.10 Within Stafford Borough there are the following Natura 2000 sites:

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- Cannock Chase SAC
- Chartley Moss SAC (under West Midland Mosses SAC)
- Pasturefields Salt Marsh SAC

1.11 Within Stafford Borough there are the following Ramsar sites:

- Cop Mere (under Midland Meres and Mosses Phase II Ramsar designation)
- Aqualate Mere (under Midland Meres and Mosses Phase II Ramsar designation)

1.12 The following site is on the edge of the Borough:

- Motte Meadows SAC

1.13 The following sites lie outside the Borough boundary and have been 'screened out' of the Habitat Regulations Assessment:

- Betley Mere (under Midlands Meres and Mosses Phase I Ramsar designation) - 10km from the Borough Boundary
- Black Firs and Cranberry Bog (under Midlands Meres and Mosses Phase II Ramsar designation) - 13km from the Borough Boundary
- Cannock Chase Extension Canal SAC - 10km from the Borough Boundary
- Humber Estuary SAC - approximately 115 miles from the Borough Boundary.

1.14 The purpose of a Habitats Regulations Assessment is to assess the impacts of land-use plans and projects against the conservation objectives of a Natura 2000 site and to ascertain whether there will be an adverse effect on the integrity of the site. If significant effects are identified by the assessment, alternative plan options need to be examined.

The Habitats Regulations Assessment Process

1.15 EC guidance and the publication from DCLG titled Planning for the Protection of European Sites: Appropriate Assessment agree the following stages or tasks: -

Stage one: Likely Significant Effects (Screening)

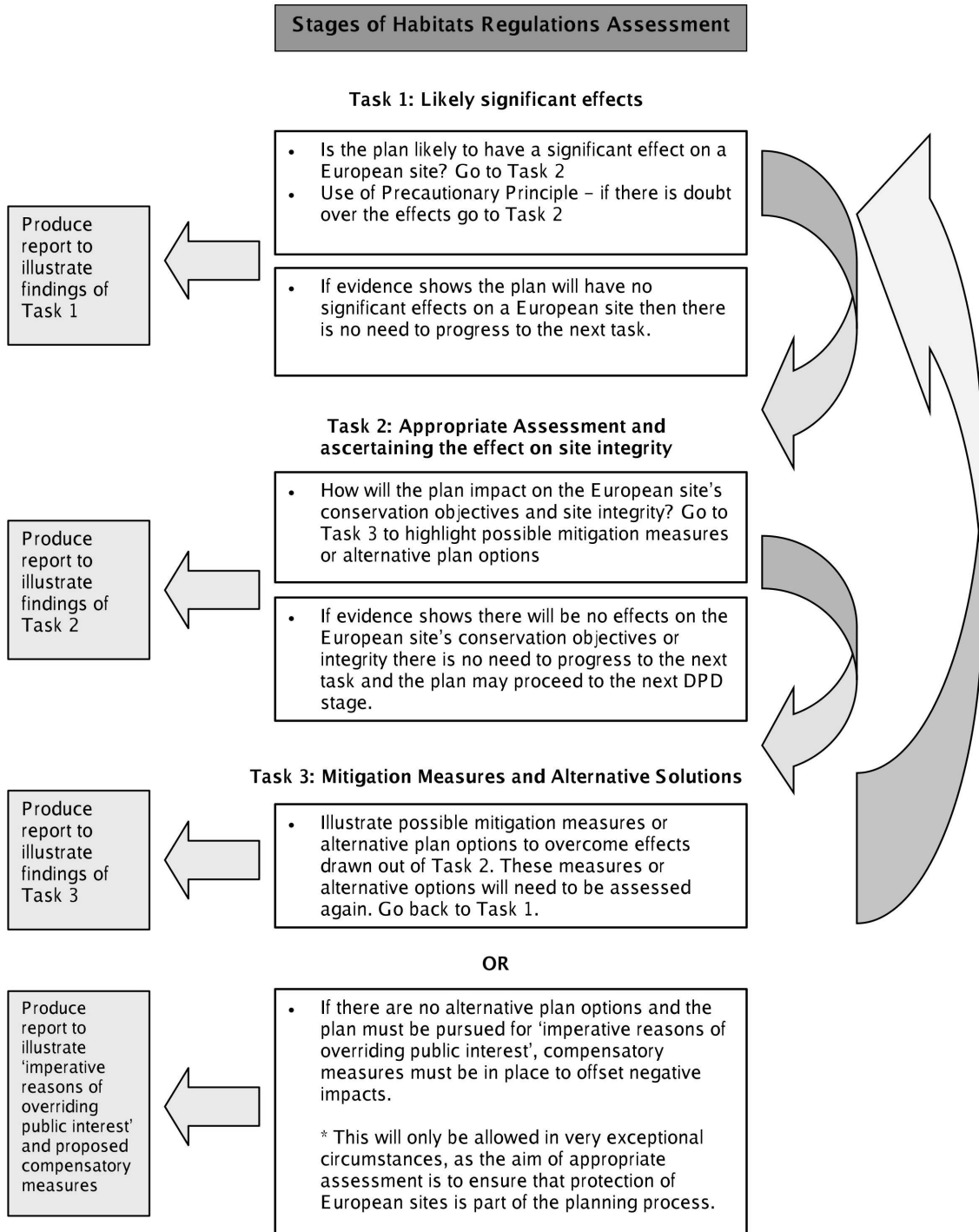
Stage two: Appropriate Assessment and ascertaining on the site integrity

Stage three: Mitigation and alternative solutions and

- * Imperative reasons of overriding public interest

1 Introduction / Background

Picture 1.1 The Habitats Regulations Assessment Process



Outcomes of Screening Decision

1.16 This report is dealing primarily with Stage One of the Habitats Regulations Assessment, the screening stage. This stage assesses in general terms whether the proposals in the Core Strategy, alone or in combination with other plans or projects are likely to have a significant impact on Natura 2000 sites. If no likely effects are determined, the Appropriate Assessment stage need not be carried out and the Core Strategy proposals may continue through the LDF process.

1.17 However, if the screening stage decides that the plans or projects will result in likely significant effects on any of the Natura 2000 sites, a separate Appropriate Assessment of the Core Strategy will need to be carried out.

Screening Methodology

1.18 The Core Strategy Issues and Options have been screened in detail to determine the potential impact on Natura 2000 sites within the administrative boundary, and outside if appropriate.

1.19 For each location option, it has been determined whether the option could have a significant adverse effect upon the Natura 2000 sites.

1.20 It is important to remember that the HRA process is concerned solely with identifying significant effects on the Conservation Objectives of European Sites. The effects of plans and proposals on wider aspects of the European Sites will be taken into consideration as part of the Sustainability Appraisal / Strategic Environmental Assessment(SA/SEA) process.

1.21 The assessment considers the following impacts:

Direct impacts - represent a straight route between an action or event and a resultant effect on the ecological interest feature. For example, development that removes habitat for which a Natura 2000 sites was designated.

Indirect impacts - do not arise directly from the plan but instead occur away from the original effect or as a result of a complex pathway. For example development which alters the hydrology of a catchment area may impact on water levels further downstream

Induced impacts - are secondary actions which may result from the actions set out in the plan, which may promote further development or change.

1.22 The following types of impacts have been considered as part of this screening assessment

- Eutrophication associated with sewage discharges
- Diffuse air pollution
- Surface run-off
- Flooding
- Nitrogen deposition
- Spread of invasive plants
- Sedimentation
- Recreational pressure
- Water transfer impacts

1 Introduction / Background

- Nutrient increase
- Alterations in flow regime
- Water quality
- Habitat fragmentation
- Vegetation change

Screening Results

HRA of Regional Spatial Strategy

1.23 The Habitat Regulations Assessment of the Regional Spatial Strategy prepared by URSUS Consulting Ltd & Treweek Environmental Consultants in 2007 highlighted the following likely significant effects on Natura 2000 sites within Stafford Borough:

Pasturefields Saltmarsh

This site is periodically affected by flood water from River Trent which has high sewage loadings and additional loadings from surface water runoff. This problem could be exacerbated by housing development upstream. There could be possible impacts associated with water abstraction in future if further water is sourced from the River Trent.

Midland Meres and Mosses

Midlands Meres and Mosses Sites are likely to be affected by different pressures depending on their location. Some may be liable to significant effects. Risks are possible from water quality and supply issues, recreational pressures, land take and invasive species.

Summary of effect on Natura 2000 Sites

The following impacts have been identified:

Salt Pasturefields

1.24 A combination of housing development upstream and climate change is likely to increase surface water run off and flooding, impacting on the natural salinity levels of the saltmarsh, which in turn may reduce the salt marsh community and coverage.

Chartley Moss

1.25 Increase in atmospheric pollution from increased population and transport could be a significant issue when considered alongside the current exceedence of acid deposition and nitrate deposition critical loads.

Aqualate Mere

1.26 The main possible impacts, that could result from Core Strategy in combination with other Core Strategies, are increased reduced in lake depth due to increased surface run off and change in water quality due to increased surface run off.

Cop Mere

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1.27 The main impacts that could impact on Cop Mere are an increase in water run-off, eutrophication and change of the flow regime. The significance of these impacts are not known at this stage.

Mottey Meadows

1.28 The main impact which could be significant is increased pressure on water abstraction and surface water levels. Further investigation into future water demand and supply is required to assess likely significance.

Next Steps

1.29 It is concluded that an Appropriate Assessment of the Core Strategy will be required to investigate the possible impacts in more detail. The Appropriate Assessment should consider in detailed policy wording and locations of development as set out in the Preferred Options document, as well as mitigation measures.

2 Stage One: Likely Significant Effects (Screening)

2 Stage One: Likely Significant Effects (Screening)

2.1 Screening has four tasks: –

1. Determining whether the plan or project is directly connected with or necessary for the management of the site
2. Describing the project or plan and any others that in combination have the potential to significantly affect the Natura 2000 site
3. Characteristics of the site and identification of possible effects
4. Assessing the significance of any effects

Task 1: Determining whether the plan or project is directly connected with or necessary for the management of the site

2.2 The Stafford Borough Council Core Strategy is not directly necessary to the site management for nature conservation of any of the Natura 2000 sites listed above.

2.3 The purpose of the Core Strategy is to set out the development framework for Stafford Borough, supported by a range of other more detailed documents such as Development Plan Documents and Supplementary Plan Documents.

2.4 The Core Strategy sets out the Vision, Strategic Objectives, delivery Strategy, locations for Strategic Development, arrangements for managing and monitoring the delivery.

Describing the project or plan and any others that in combination have the potential to significantly affect the Natura 2000 sites

Description of the Plan	
Size of the Plan	Stafford Borough Core Strategy relates to the whole of Stafford Borough, which covers approximately 230 square miles
Plan Sector	Spatial Plan for Stafford Borough
Physical changes resulting from the project or plan	In accordance with the West Midlands Regional Spatial Strategy Stafford Borough Core Strategy will aim to deliver approximately 10,100 new dwellings between 2006 – 2026, 7,000 of which are to be located at Stafford. This along with the delivery of 120 hectares employment land will lead to physical changes in certain parts of the Borough.
Resource Requirements	Uncertain at this strategic stage
Duration of construction, operation and decommissioning	The Core Strategy covers the time period from 2006 to 2026

Stage One: Likely Significant Effects (Screening) 2

Description of the Plan	
Emissions and waste	The Stafford Borough Core Strategy, in combination with neighbouring authorities Core Strategies, future plans to control traffic at the M6 and changes in electricity production at Rugeley Power Station may have a negative impact on air quality.
Transportation requirements	New road infrastructure may be required to support future development
Plan implementation period	The Core Strategy covers the time period from 2006 to 2026
Distance from Natura 2000 site or key features of the site	<p>Salt Pasturefields lies within Stafford Borough, approximately 4.8km from Stafford, 1km from Hixon and adjacent to Pasturefields Enterprise Park.</p> <p>Chartley Moss lies within Stafford Borough and is approximately 8.5km from Stafford urban area and approximately 8km from Uttoxeter.</p> <p>Aqualate Mere lies within Stafford Borough and is approximately 12km from Stafford Urban Area and approximately 1km from Newport.</p> <p>Cop Mere lies within Stafford Borough and is approximately 11km from Stafford Urban Area and 2.7km from Eccleshall.</p> <p>Mottey Meadows is approximately 10km from Stafford Urban Area, with only 0.1ha lying within Stafford Borough. The remaining site area lies within South Staffordshire District Council. Mottey Meadows is approximately 7.8km from Penkridge and 5km from Brewood.</p>

2.5 The following plans and projects have been considered as part of the 'in combination' impacts:

- Staffordshire Local Transport Plan
- Lichfield District Council Core Strategy
- South Staffordshire District Council Core Strategy
- Cannock Chase AONB Management Plan 2006 - 2010
- Rugeley Power Station Flue Gas Desulphurisation (FGD) plans
- Environment Agency consents for water extraction
- Severn Trent Water Water Resources Plan
- Stoke -on-Trent and Newcastle Core Strategy
- East Staffordshire Core Strategy
- Regional Spatial Strategy and Phase II Revision
- Telford and Wrekin Core Strategy
- Outline Planning Application for housing development at Pye Green

2 Stage One: Likely Significant Effects (Screening)

Cumulative impacts with other projects or plans

There may be water resource and water quality impacts, air quality impacts, and recreation impacts arising from Stafford Borough Core Strategy in combination with neighbouring authorities Core Strategies, water discharge, Environment Agency consents for water extraction, water company Water Resources Plan, planning applications for residential development and Rugeley Power Station Flue Gas Desulphurisation (FGD) plans.

Characteristics of the site and identification of possible effects

Description of the Site

Name	Pasturefields Salt Marsh SAC
Date of designation	April 2005
Site Description	Pasturefields Salt Marsh is an example of a natural salt spring with inland saltmarsh vegetation. The vegetation consists of red fescue <i>Festuca rubra</i> , with common saltmarsh-grass (<i>Puccinellia maritima</i>), lesser sea-spurrey (<i>Spergularia marina</i>), saltmarsh rush (<i>Juncus gerardii</i>) and sea arrowgrass (<i>Triglochin maritimum</i>) in the most saline situations
Site condition	Unfavourable recovering
Reason for European Designation	<p>Pasturefields Salt Marsh is the only known remaining example in the UK of a natural salt spring with inland saltmarsh vegetation</p> <p>Inland salt meadows</p> <ul style="list-style-type: none"> • for which this is the only known outstanding locality in the United Kingdom. • which is considered to be rare as its total extent in the United Kingdom is estimated to be less than 10 hectares
Key Environmental features that support site integrity	<p>Sympathetic agricultural management</p> <p>Maintenance of brine source</p>
Distance from Stafford BC Boundary	The whole site lies within Stafford Borough
Size	7.7 hectares

Stage One: Likely Significant Effects (Screening) 2

Description of the Site	
General site character	Salt marshes. Salt pastures. Salt steppes (6.5%) Inland water bodies (standing water, running water) (3%) Humid grassland. Mesophile grassland (90.5%)
Site Objectives	<p>Primary Management Objective</p> <p>1. Subject to natural change, maintain in a favourable condition, the continental salt meadow.</p> <p>Favourable condition: This is achieved when the given mandatory attributes meet the defined targets: -</p> <p>Habitat: The habitat should be stable or increasing in area. The structure of the habitat must be sustainable and the condition of typical species and communities favourable.</p> <p>(Taken from The Staffordshire Wildlife Trust Management Plan - Natural England to be consulted)</p>
Site vulnerability / Issues	<p>Wetland habitats and their associated species are sensitive to changes in hydrology. The saltmarsh plant community is particularly susceptible to significant changes in grazing levels, salinity and hydrology.</p> <p>Abstractions from the ground aquifer pose as a significant threat as the site is dependent upon the brine source being maintained. The Environment Agency are currently reviewing their abstraction consents.</p>

Description of the Site	
Name	Chartley Moss SAC
Date of designation	April 2005
Site Description	Chartley Moss is a partially wooded basin mere occupying two depressions in glacial deposits overlying Keuper Marl. The site is home to the largest 'Schwingmoor' in Britain which is when a raft of oligotrophic sphagnum peat floats above a deep-water body. This is an exceptionally uncommon phenomenon.
Site condition	59.77% Favourable
Reason for European Designation	The site has been designated for its Schwingmoor vegetation including sedges (<i>Carex</i>) species and cranberry (<i>Vaccinium oxycoccos</i>)

2 Stage One: Likely Significant Effects (Screening)

Description of the Site	
	<p>Natural dystrophic lakes and ponds</p> <ul style="list-style-type: none"> For which this is considered to be one of the best areas in the United Kingdom <p>Transition mires and quaking bogs</p> <ul style="list-style-type: none"> For which this is considered to be one of the best areas in the United Kingdom
Key environmental features that support site integrity	<p>Maintenance of soil chemistry</p> <p>Maintenance of agricultural run-off</p>
Distance from Borough Boundary	The whole site lies within Stafford Borough
Size	105.8 hectares
Other features	The site has European importance for the study of mire ecology and the invertebrate fauna includes many nationally rare and threatened species
Site Objectives	<p>The Conservation Objectives for this site are to maintain the following habitats and geological features in favourable condition, with particular reference to any development component special interest features for which the land is designated as individually listed.</p> <p>Dwarf shrub heath</p> <p>Bog</p> <p>Broadleaved, mixed and yew woodland</p> <p>On this site favourable condition requires the maintenance of the extent of each designated habitat type. Maintenance implies restoration if evidence from condition assessment suggests a reduction in extent.</p> <p>To maintain the dwarf shrub heath, bog and wet woodland habitats at this site in favourable condition, with particular reference to relevant specific designated interest features.</p>
Site vulnerability / Issues	Septic tanks and drainage from the built environment are the biggest threat to this site. Increased nutrient enrichment, such as atmospheric deposition of nutrients pose a threat at these sites.

Stage One: Likely Significant Effects (Screening) 2

Description of the Site	
	<p><i>NB Because of the danger to visitors, and the easily damaged nature of the bog surface, access to Chartley Moss is by permit only.</i></p> <p>A management agreement controls agricultural run-off at the site. Trees at this site trap airborne nutrients and provide roost areas for birds, but enrichment effect of both is only localised.</p>

Description of the Site	
Name	Motley Meadows SAC
Date of designation	April 2005
Site Description	The meadows lie in the broad valley of the Motley Meadows Brook. They have peaty soils overlying sand and gravel deposits which result in the meadows being characteristically wet in winter with the ground drying out rapidly in spring. This provides excellent conditions for growth and the meadows supports over 200 species of flowers, grasses and sedges. The damp lowland also provides important breeding sites for wading birds including the snipe, curlew and lapwing.
Site condition	Favourable
Reason for European Designation	Lowland hay meadows that hold a relatively large area (approx 40 hectares) of the habitat. The site is important for a range of rare meadow species, including fritillary (<i>Fritillaria melagris</i>) at its most northerly native locality.
Key Environmental features that support site integrity	<p>Sympathetic agricultural management of hay cutting and aftermath grazing</p> <p>Maintenance of natural nutrient levels</p> <p>Maintenance of ground water levels</p>
General site character	<p>Humid grassland. Mesophile grassland (97%)</p> <p>Non-Forest areas cultivated with woody plants (including orchards groves, vineyards) (3%)</p>
Distance from Stafford BC Boundary	0.11 hectares lie within Stafford Borough
Size	43.87 hectares of which 0.11 hectares in Stafford Borough

2 Stage One: Likely Significant Effects (Screening)

Description of the Site	
Site Objectives	<p>The Conservation Objectives for this site are to maintain the following habitats and geological features in favourable condition, with particular reference to any development component special interest features for which the land is designated as individually listed.</p> <p>Neutral grassland</p> <p>On this site favourable condition requires the maintenance of the extent of each designated habitat type. Maintenance implies restoration if evidence from condition assessment suggests a reduction in extent.</p> <p>To maintain the neutral grassland at Motte Meadows SSSI in favourable condition, with particular reference to relevant specific designated interest features.</p>
Site vulnerability / Issues	<p>The meadows are dependent upon traditional agricultural management - hay-cutting and aftermath grazing with no use of agrochemicals, changes in agricultural practices and land use will have a significant effect on the sites.</p> <p>The site is vulnerable to nutrient run-off from adjacent agricultural land and diffuse pollution from the built environment, such as farms.</p> <p>The site is also vulnerable to a lowering of both ground and surface water levels, because the floristic composition is dependent on a high water table in autumn and winter, pressures on water resources along with climate change effects will then be a threat to the site.</p>

Description of the Site	
Name	Cop Mere Ramsar site
Date of designation	May 1994
Site Description	<p>The Midland Meres and Mosses comprise a series of open water and peatland sites. Most of these sites have been developed in natural depressions left by the retreating ice sheets at the last Ice Age. The Mere's make up the open water sites with the Mosses consist of peatland sites.</p> <p>Cop Mere is a shallow lake or 'Mere' lying in a hollow in Keuper Marl. It differs from many of the mere in the surrounding area in having a distinct inflow and outflow, the River Sow.</p>
Site Condition	Unfavourable

Stage One: Likely Significant Effects (Screening) 2

Description of the Site	
Reason for European Designation	<p>The site comprises a diverse range of habitats from open water to raised bog</p> <p>Supports a number of rare species of plants associated with wetlands including 5 nationally scarce species together with an assemblage of rare wetland invertebrates (3 endangered insects and five other British Red Data Book species of invertebrates)</p>
Key Environmental features that support site integrity	<p>Maintenance of natural nutrient levels</p> <p>Maintenance of native plant species</p>
General site character	<p>The site hosts a range of swamp, fen and Carr communities, aswell as unimproved pasture and a fringe of dry woodland on the banks of the mere.</p> <p>The open water hosts a range of submerged water plants, some of which are uncommon not only in Staffordshire but also uncommon in other Mere's within the Ramsar Meres and Mosses classification.</p>
Distance from Stafford BC Boundary	The whole site lies within Stafford Borough
Size	37.42 hectares
Site Objectives	<p>The Conservation Objectives for this site are, subject to natural change, to maintain the following habitats and geological features in favourable condition (*), with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages etc.) for which the land is designated</p> <p>Habitat Types represented (Biodiversity Action Plan categories)</p> <ul style="list-style-type: none"> • Broadleaved, Mixed & Yew Woodland • Neutral Grassland • Standing Open Water <p>(*) or restored to favourable condition if features are judged to be unfavourable.</p>
Site vulnerability / Issues	<p>Eutrophication continues to be a threat, leading to an increase in algae growth and loss of water plants</p> <p>Introduction or invasion of non-native plant species</p>

2 Stage One: Likely Significant Effects (Screening)

Description of the Site

Increased visitor use

Description of the Site

Name	Aqualate Mere Ramsar site
Date of designation	May 1994
Site Description	Aqualate Mere is the largest natural lake in the Midlands. Surrounding the mere are reedbeds and low-lying woodlands, which form an extensive complex of wetland habitats. The lake is an important place for wintering birds and ducks and also provides breeding areas for wading birds.
Reason for European Designation	The site comprises a diverse range of habitats from open water to raised bog Supports a number of rare species of plants associated with wetlands including 5 nationally scarce species together with an assemblage of rare wetland invertebrates (3 endangered insects and five other British Red Data Book species of invertebrates)
Site condition	Unfavourable
Key Environmental features that support site integrity	Maintenance of lake depth Maintenance of natural nutrient levels
General site character	The site represents the largest of the midland mere with the most extensive reedswamp community. The land surrounds form complex open water, fen, grassland and woodland which is unrivalled in Staffordshire. The Mere occupies a shallow basin in glacial drift over-lying Triassic sandstone.
Distance from Stafford BC Boundary	The whole site lies within Stafford Borough
Size	241 hectares
Site Objectives	(Natural England to be consulted)
Site vulnerability / Issues	Biggest threat is the quantity of sediment being washed up into the lake and reducing its depth

Stage One: Likely Significant Effects (Screening) 2

Description of the Site	
	<p>Eutrophication continues to be a threat, leading to an increase in algae growth and loss of water plants</p> <p>Increased visitor use</p>

Assessing the significance of any effects on each Natura 2000 site

Table 2.8 Assessment Criteria for Salt Pasturefields SAC

<p>Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 site</p>	<p>Stafford Borough Core Strategy</p> <p>10,100 new dwellings in the Borough between 2006 – 2026, 7,000 of which are to be located at Stafford town. In addition, 120 hectares of employment land provision between 2006 - 2021.</p> <p>Other plans and projects include:</p> <p>11,400 new dwellings in Stoke-on-Trent between 2006 - 2026.</p>
<p>Describe any likely direct, indirect or secondary impacts of the project (either along or in combination with other Plans or projects) on the Natura 2000 site by virtue of:</p> <ul style="list-style-type: none"> • Size and scale; • Land-take; • Distance from the Natura 2000 site or key features of the site; • Resource requirements (water abstraction etc); • Emissions (disposal to land, water or air); • Excavation requirements; • Transportation requirements; • Duration of construction, 	<p>Possible impacts include: -</p> <ul style="list-style-type: none"> • Increased eutrophication associated with sewage discharges • Diffuse Air pollution • Dilution of salt marsh • Nutrient contamination from the adjacent River Trent • Salt Pasturefields is approximately 4.8km from Stafford urban area, 1km from Hixon and adjacent to the A51 and Pasturefields Enterprise Park • The River Trent runs southwards from north Staffordshire • Increase surface water run-off and flooding

2 Stage One: Likely Significant Effects (Screening)

<p>operation, decommissioning;</p>	
<p>Describe any likely changes to the site arising as a result of:</p> <ul style="list-style-type: none"> • Reduction of habitat area; • Disturbance to key species; • Habitat or species fragmentation; • Reduction in species density; • Changes in key indicators of conservation value (water quality etc); • Climate change 	<p>Decline in salt marsh community</p> <p>Climate change could result in increased flooding, similar to the flooding of summer 2007. These could increase the nutrient deposition on the SAC as flood water may carry high pollution loads, with negative impacts on the salt marsh community.</p>
<p>Describe any likely impacts on the Natura 2000 site</p>	<p>Impacts may interfere with the natural salinity of the salt marsh, reducing the salt marsh community and coverage.</p>
<p>Provide indicators of significance as a result of the identification of effects set out above in terms of:</p> <ul style="list-style-type: none"> • Loss; • Fragmentation; • Disruption; • Disturbance; • Change to key elements of the site (e.g. water quality etc.) 	<p>Maintaining the salt marsh in a favourable condition, depends on the quality of water supply, seasonal flooding and vegetation management.</p> <p>Water Quality and Flooding</p> <p>The <i>HRA for the Phase II Revision of the RSS for the West Midlands</i> draws on technical studies carried out by the Environment Agency, stating that of the sewage treatment works upstream of the SAC, 1 is at high risk and 1 at medium risk of breaching either discharge quality or quantity standards. This in combination with flooding increases the risk that floodwater will carry a high pollution load.</p> <p>The <i>Met Office Annual Summaries</i> indicate that since 2002, 5 years in the Midlands have had a higher annual level of rainfall than the average level of rainfall between 1961 - 1990.</p> <p>The UK Climate Impacts Programme and Sustainability West Midlands publication <i>The Potential Impacts of Climate Change in the West Midlands 2004</i> predicts an increase between 0 - 10% of winter rainfall by 2020's and a possible increase up to 20% by 2050's. The report also predicts a decrease in summer rainfall of 0 - 20% by 2020's and possible 30% decrease by 2050's.</p>

Stage One: Likely Significant Effects (Screening) 2

	<p>Increased levels of housing and other development upstream will result in greater surface run off contributing to flooding and pollution deposition problems.</p> <p>Vegetation management</p> <p><i>Pasturefields SSSI Nature Reserve Management Plan 2005 - 2010</i>, by the Staffordshire Wildlife Trust describes the management of the site.</p> <p>Before 1987, much of the grassland around the marsh had been agriculturally improved to provide silage (receiving quantities of artificial fertiliser and pesticide).</p> <p>After 1987, the Trust managed the grassland outside the saltmarsh as summer hay meadows. This was followed approximately a month later by aftermath grazing with cattle on both the saltmarsh and meadows. The grass was initially cut in early August to allow possible second broods of waders to fledge chicks.</p> <p>Unfortunately, this late cutting regime resulted in low quality hay and the saltmarsh was not grazed until late August / early September. In 1996 the cutting regime was brought forward to July. However, by the late 1990's, the species composition and height of the saltmarsh sward was deteriorating rapidly with coarser vegetation becoming increasingly dominant.</p> <p>In 2000 the long-term grazier discontinued his involvement in the site. Subsequent grazing regimes have failed to achieve such a desirable sward.</p> <p>It is impossible to say if current management of the site would either improve the saltmarsh, or exacerbate the unfavourable condition of the site.</p>
<p>Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale or magnitude of impacts is not known</p>	<p>A combination of housing development upstream and climate change is likely to increase surface water run off and flooding, impacting on the natural salinity levels of the saltmarsh, which in turn may reduce the salt marsh community and coverage.</p>

2 Stage One: Likely Significant Effects (Screening)

Table 2.9 Assessment Criteria for Chartley Moss SAC

<p>Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 site</p>	<p>Stafford Borough Core Strategy</p> <p>10,100 new dwellings in the Borough between 2006 – 2026, 7,000 of which are to be located at Stafford town. In addition 120 hectares of employment land provision between 2006 - 2021.</p> <p>East Staffordshire District Core Strategy</p> <p>A figure of 12,900 (net) new dwellings in East Staffordshire District Council, 11,000 of which are to be located at Burton on Trent and 150 hectares of employment land between 2006 – 2021.</p>
<p>Describe any likely direct, indirect or secondary impacts of the project (either along or in combination with other Plans or projects) on the Natura 2000 site.</p>	<ul style="list-style-type: none"> • Chartley Moss is approximately 8.5km from Stafford urban area and approximately 8km from Uttoxeter • Stafford Borough Core Strategy may increase surface run-off, which could impact on the site in combination with current agricultural surface run-off which affects the site • Potential increase in nitrogen deposition through increased atmospheric pollution, in combination with current exceedence of acid and nitrogen deposition.
<p>Describe any likely changes to the site</p>	<ul style="list-style-type: none"> • Reduction in peat bog due to increased pollution affecting peat microbial activity
<p>Describe any likely impacts on the Natura 2000 site as a whole in terms of:</p>	<ul style="list-style-type: none"> • Reduction in peat bog due to increased pollution affecting peat microbial activity • Interference with natural peat environment due to surface run-off
<p>Provide indicators of significance as a result of the identification of effects set out above in terms of:</p>	<p><i>Department of the Environment study of the effects of pollution climate upon peat chemistry and drainage water (year unknown).</i> The study results present a strong link between precipitation chemistry and peat chemistry, with a clear link that microbial activity in peat is affected by incident acid load.</p> <p><i>The Habitat Regulations Assessment for the West Midlands RSS Phase II revision</i> indicates that the critical loads for acid deposition and nitrogen deposition are currently being exceeded on the West Midlands Mosses SAC. The effect these levels are having on Chartley Moss is undetermined.</p> <p>Public access to Chartley Moss SAC is not permitted, but only through arrangements with Natural England, who manage the site. Possible increased visitor numbers are not thought to be a significant issue.</p>

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	<p>Unlikely that development at Stafford would increase surface run-off at Chartley Moss due to distance away from the site. A management agreement controls agricultural run-off at the site, and so surface run off not thought to be a significant issue.</p>
<p>Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale or magnitude of impacts is not known</p>	<p>Increase in atmospheric pollution from increased population and transport could be a significant issue when considered alongside the current exceedence of acid deposition and nitrate deposition critical loads.</p>

2.6 Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 site

Table 2.10 Assessment Criteria for Aqualate Mere Ramsar Site

<p>Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 site</p>	<p>Stafford Borough Core Strategy</p> <p>10,100 new dwellings in the Borough between 2006 – 2026, 7,000 of which are to be located at Stafford town. In addition the allocation of 150 hectares of additional employment land.</p> <p>Telford and Wrekin Unitary Authority Adopted Core Strategy</p> <p>26,500 new dwellings in the authority between 2006 - 2026, 25,000 of which are to be located at Telford and approximately 600 at Newport. Employment land provision also to be increased at Newport.</p>
<p>Describe any likely direct, indirect or secondary impacts of the project (either alone or in combination with other Plans or projects) on the Natura 2000 site by virtue of:</p>	<ul style="list-style-type: none"> ● Aqualate Mere is approximately 12km from Stafford Urban Area and approximately 1km from Newport. ● Reduction of lake depth, due to increased sediment being washed into the lake ● Spread of invasive plants ● Water transfer impacts ● Waste disposal
<p>Describe any likely changes to the site arising as a result of:</p>	<p>Possible impacts on Aqualate Mere include</p> <ul style="list-style-type: none"> ● Reduction in habitat area, due to reduced lake depth caused by sedimentation

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	<ul style="list-style-type: none"> • Reduction in species density and mere habitats due to spread of invasive plants • Change in water quality due to increased surface run-off and associated increased nutrient load
<p>Describe any likely impacts on the Natura 2000 site as a whole:</p>	<p>Increased surface run off from development may increase the amount of sediment being washed in the lake, reducing lake depth.</p> <p>Increased surface run off may also carry higher pollution loads impacting on the mere species.</p>
<p>Provide indicators of significance as a result of the identification of effects set out above:</p>	<p>Severn Trent Water supply water to Stafford Borough. Severn Trent Water public water supply sources are located at Hollies, approximately 3.5km from Aqualate Mere and Newport, approximately 1.7km from Aqualate Mere. In their Water Resources Plan 2005 - 2010, Severn Trent Water do not include plans for increased abstraction at Hollies or any new abstraction sites near Aqualate Mere. A new Water Resources Plan will be published in March 2008 and will be considered under the 'in combination' test.</p> <p>According to Natural England information on Aqualate Mere, the site receives approximately 250 visitors annually. The impact this is having on the Ramsar site is undetermined and it is impossible to say if the Core Strategy would be responsible for increases in visitor numbers, without clearer indication of locations of development.</p> <p>It is however thought that recreation pressures are suitably controlled at the site, due to location of car parking, paths etc and so it is unlikely that recreational pressure will have a significant impact.</p> <p><i>The Recent sedimentation history of Aqualate Mere (Central England): Assessing the potential for lake restoration (2005) Hutchinson, S, Journal of Paleolimnology</i> indicates that the rapid recent sedimentation of the mere is thought to be derived from the nearby canal. The Stafford Borough Core Strategy does not currently propose any canal associated development which may increase this sedimentation further.</p> <p>However sedimentation from other sources cannot be ruled out at this stage.</p> <p>British Waterways and the Newport and Shrewsbury Canal Trust aim to preserve the canals remaining features and promote restoration amongst local authorities</p> <p>There are existing issues surrounding abstraction, moorings and septic tanks at Norbury Junction.</p>

Stage One: Likely Significant Effects (Screening) 2

Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale or magnitude of impacts is not known	The main possible impacts, that could result from Stafford Borough Core Strategy in combination with other Core Strategy's, plans to re-join the canals and current abstraction and moorings, are reduced lake depth due to increased surface run off, change in water quality due to increased surface run off and increase in nutrients due to discharge from built development.
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Table 2.11 Assessment Criteria for Cop Mere Ramsar Site

Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 site	<p>Stafford Borough Core Strategy</p> <p>10,100 new dwellings in the Borough between 2006 – 2026, 7,000 of which are to be located within Stafford town. In addition the allocation of additional employment land.</p> <p>Newcastle-under-Lyme</p> <p>5,700 new dwellings in Newcastle under Lyme, 4,800 of which are to be located at Newcastle urban area</p>
Describe any likely direct, indirect or secondary impacts of the project (either along or in combination with other Plans or projects) on the Natura 2000 site by virtue of:	<ul style="list-style-type: none"> • Cop Mere lies approximately 11km from Stafford Urban Area, 2.4km from Eccleshall and 13km from Newcastle Under Lyme • Increased surface run off as a result in increased level of housing • Increased water run off
Describe any likely changes to the site arising as a result of:	<ul style="list-style-type: none"> • Eutrophication as a result of increased surface run off • Changes in 'flow regime'
Describe any likely impacts on the Natura 2000 site as a whole	<ul style="list-style-type: none"> • Loss of native plant species due to eutrophication • Loss of native plants and species due to increased visitor numbers • Change in bog habitat due to water run-off
Provide indicators of significance as a result of the identification of effects set out above in terms of:	The most recent survey of Cop Mere carried out by Natural England in December 2007 states that the reason for the unfavourable condition of the water at the site is water pollution agriculture / run off. It cannot be determined if increased development would further impact this unfavourable condition.

2 Stage One: Likely Significant Effects (Screening)

	Recent plans for the old water mill at Walk Mill and desilting of the Walk Mill Pool could alter the flow regime upstream of Cop Mere
Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale or magnitude of impacts is not known	<p>The main impacts that could impact on Cop Mere are increased water run-off, change in flow regime and eutrophication. The significance of these impacts is not known at this stage.</p> <p>However, it is assumed that these issues can be addressed with appropriate wording</p>

Table 2.12 Assessment Criteria for Mottey Meadows SAC

Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 site	<p>Stafford Borough Core Strategy</p> <p>10,100 new dwellings in the Borough between 2006 – 2026, 7,000 of which are to be located within Stafford town.</p> <p>South Staffordshire District Core Strategy</p> <p>A figure of 3,500 new dwellings in South Staffordshire District between 2006 - 2026.</p>
Describe any likely direct, indirect or secondary impacts of the project (either along or in combination with other Plans or projects) on the Natura 2000 site by virtue of:	<ul style="list-style-type: none"> • Mottey Meadows is approximately 10km from Stafford Urban Area, with only 0.1ha lying within Stafford Borough. The remaining site area lies within South Staffordshire District Council. • Mottey Meadows is approximately 7.8km from Penkridge and 5km from Brewood • Increased emissions from development and transport altering the natural nutrient levels of the SAC. • Alteration of ground and surface water levels, due to increased water demand and abstraction • Potential change in use of surrounding land
Describe any likely changes to the site arising as a result of:	<ul style="list-style-type: none"> • Disturbance in natural nutrient levels of the SAC • Alteration of ground and surface water levels
Describe any likely impacts on the Natura 2000 site as a whole	<ul style="list-style-type: none"> • Disturbance in natural nutrient levels of the SAC • Alteration of ground and surface water levels

Stage One: Likely Significant Effects (Screening) 2

<p>Provide indicators of significance as a result of the identification of effects set out above in terms of:</p>	<p>Neither Stafford Borough Core Strategy or South Staffordshire Core Strategy propose allocations surrounding the SAC at this stage. Agricultural management not thought to be affected by each authorities Core Strategy's.</p> <p>The nearest water abstraction site is Hollies, 9km from Motte Meadows and Newport, 10km from Motte Meadows. In their Water Resources Plan 2005 - 2010, Severn Trent Water do not include plans for or any new abstraction sites near Motte Meadows. A new Water Resources Plan will be published in March 2008 and will be considered under the 'in combination' test.</p> <p>The Staffordshire County Council Local Transport Plan (LTP) does not propose any major transport development in this area. Increased emissions from transport not thought to be a significant issue.</p>
<p>Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale or magnitude of impacts is not known</p>	<p>The main impacts that could be significant could be increased pressure on water abstraction and surface water levels and impacts on water quality. Further investigation into future water demand and supply required to assess likely significance.</p>

Table of Likely Significant Effects for Stafford Borough Local Development Framework

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Site	Qualifying Features	Key environmental conditions to support site integrity	Possible impacts that will arise from Stafford Core Strategy	Is the impact 'significant'?	Describe other plans, projects or trends that 'in combination' will have possible impacts	Are impacts 'significant'?
Pasturefields Salt Marsh SAC	Inland salt meadows for which this is the only known outstanding locality in the UK which is considered to be rare as its total extent in the UK is estimated to be less than 10 hectares	Sympathetic agricultural management	Allocation of housing and employment areas at Hixon Possible change in land use Possible expansion of industrial areas	No	Change in farming subsidies Possible change in agricultural land or practices	No
Pasturefields Salt Marsh SAC	Inland salt meadows for which this is the only known outstanding locality in the UK which is considered to be rare as its total extent in the UK is estimated to be less than 10 hectares	Sympathetic agricultural management	Possible increase in nitrogen deposition due to atmospheric pollution and increase vehicle exhaust gases	Yes?	Change in farming subsidies Possible change in agricultural land or practices	Yes?

Table of Likely Significant Effects for Stafford Borough Local Development Framework

Site	Qualifying Features	Key environmental conditions to support site integrity	Possible impacts that will arise from Stafford Core Strategy	Is the impact 'significant'?	Describe other plans, projects or trends that 'in combination' will have possible impacts	Are impacts 'significant'?
Pasturefields Salt Marsh SAC	Inland salt meadows for which this is the only known outstanding locality in the UK which is considered to be rare as its total extent in the UK is estimated to be less than 10 hectares	Maintenance of brine source	10,100+ new houses in Stafford Borough between 2001 - 2026. Impacts include Increase in demand for water, which could result in increased water abstraction Increased surface run off and water pollution	Yes?	Regional Spatial Strategy indicates 11,400 new houses (River Trent flows from Stoke on Trent to Pasturefields Salt Marsh) North Staffordshire identified as a priority location for a Regional Logistics Site Increased surface run off and water pollution	Yes?
Chartley Moss SAC	Natural dystrophic lakes and ponds, for which this is considered to be one of the best areas in the UK. Transition mires and quaking bogs, for which this is	Maintenance of soil chemistry	10,100+ new houses for Stafford Borough between 2001 - 2026 Possible increases in nitrogen deposition due to atmospheric pollution	Yes?	12,900+ new houses for East Staffs District between 2001 - 2026 Possible increases in nitrogen deposition due to atmospheric pollution	Yes?

Table of Likely Significant Effects for Stafford Borough Local Development Framework

Site	Qualifying Features	Key environmental conditions to support site integrity	Possible impacts that will arise from Stafford Core Strategy	Is the impact 'significant'?	Describe other plans, projects or trends that 'in combination' will have possible impacts	Are impacts 'significant'?
	considered to be one of the best areas in the UK Bog woodland					
Chartley Moss SAC	Natural dystrophic lakes and ponds, for which this is considered to be one of the best areas in the UK. Transition mires and quaking bogs, for which this is considered to be one of the best areas in the UK Bog woodland	Maintenance of agricultural run-off	Allocation of housing and employment areas Possible change in land use Increase in surface run-off	No	Allocation of housing and employment areas for East Staffs Borough Possible change in land use Increase in surface run off Possible change in agricultural use of the land	No
Mottey meadows SAC	Lowland hay meadows, for which this is considered to be one of the best areas in the UK	Sympathetic agricultural management of hay-cutting and aftermath grazing	Allocation of housing and employment areas Possible change in land uses	No	Allocations of housing and employment areas for South Staffordshire District. Majority of Mottey Meadows lies within	No

Table of Likely Significant Effects for Stafford Borough Local Development Framework

Site	Qualifying Features	Key environmental conditions to support site integrity	Possible impacts that will arise from Stafford Core Strategy	Is the impact 'significant'?	Describe other plans, projects or trends that 'in combination' will have possible impacts	Are impacts 'significant'?
Mottey meadows SAC	Lowland hay meadows, for which this is considered to be one of the best areas in the UK	Maintenance of natural nutrient levels	10,100+ new houses for Stafford Borough between 2001 - 2026 Increased surface runoff due to level of future development	No	South Staffordshire District 3,500+ new houses for South Staffordshire District between 2001 - 2026 Increase surface runoff due to level of future development	No
Mottey meadows SAC	Lowland hay meadows, for which this is considered to be one of the best areas in the UK	Maintenance of ground and surface water levels	Possible increase in nitrogen deposition due to atmospheric pollution and increase in vehicle exhaust gases	No	Possible increase in nitrogen deposition due to atmospheric pollution and increase in exhaust gases	No
Mottey meadows SAC	Lowland hay meadows, for which this is considered to be one of the best areas in the UK	Maintenance of ground and surface water levels	10,100+ new houses for Stafford Borough between 2001 - 2026 Increase in demand for water, which could result in increased pressure on water abstraction and surface water levels	Yes?	3,500+ new houses for South Staffordshire District between 2001 - 2026 Increase in demand for water, which could result in increased pressure on water abstraction and surface water levels	Yes?

Table of Likely Significant Effects for Stafford Borough Local Development Framework

Site	Qualifying Features	Key environmental conditions to support site integrity	Possible impacts that will arise from Stafford Core Strategy	Is the impact 'significant'?	Describe other plans, projects or trends that 'in combination' will have possible impacts	Are impacts 'significant'?
Aqualate Mere Ramsar Site	The site comprises a diverse range of habitats from open water to raised bog. Supports a number of rare plants associated with wetlands including 5 nationally scarce species together with rare wetland invertebrates	Maintenance of lake depth	Water pollution upstream 10, 100+ new houses for Stafford Borough between 2001 - 2026 Increase in demand for water, which could result in increased pressure on water abstraction and water levels	Yes?	Water pollution upstream Telford and Wrekin Core Strategy proposes approx 600 new houses in Newport, approx 1.5km away from Aqualate Mere	Yes?
Aqualate Mere Ramsar Site	The site comprises a diverse range of habitats from open water to raised bog. Supports a number of rare plants associated with wetlands including 5 nationally scarce species together with rare wetland invertebrates	Maintenance of lake depth	Future development rates could possibly result in greater surface run off and sedimentation resulting in a reduced lake depth	Yes?	Telford and Wrekin Core Strategy proposes approx 600 new houses in Newport, approx 1.5km away from Aqualate Mere Greater surface run off	Yes?

Table of Likely Significant Effects for Stafford Borough Local Development Framework

Site	Qualifying Features	Key environmental conditions to support site integrity	Possible impacts that will arise from Stafford Core Strategy	Is the impact 'significant'?	Describe other plans, projects or trends that 'in combination' will have possible impacts	Are impacts 'significant'?
Aqualate Mere Ramsar Site	The site comprises a diverse range of habitats from open water to raised bog. Supports a number of rare plants associated with wetlands including 5 nationally scarce species together with rare wetland invertebrates	Maintenance of natural nutrient levels	10,100+ new houses for Stafford Borough between 2001 - 2026. Increase in population may increase nitrogen deposition due to discharge from built development	Yes?	26,500 new houses for Telford and Wrekin Unitary Authority between 2001 - 2026. Increase in population may increase nitrogen deposition due to discharge from built development	Yes?
Cop Mere Ramsar Site	The site comprises a diverse range of habitats from open water to raised bog. Supports a number of rare species of plants associated with wetlands including 5 nationally scarce species together with rare wetland invertebrates	Maintenance of natural nutrient levels	10,100+ new houses for Stafford Borough between 2001 - 2026. Impacts include eutrophication through increase in nitrogen deposition	Yes	5,700+ new houses in Newcastle under Lyme District between 2001 - 2026. Impacts include eutrophication through increase in nitrogen deposition	No

Table of Likely Significant Effects for Stafford Borough Local Development Framework

Site	Qualifying Features	Key environmental conditions to support site integrity	Possible impacts that will arise from Stafford Core Strategy	Is the impact 'significant'?	Describe other plans, projects or trends that 'in combination' will have possible impacts	Are impacts 'significant'?
Cop Mere Ramsar Site	The site comprises a diverse range of habitats from open water to raised bog Supports a number of rare species of plants associated with wetlands including 5 nationally scarce species together with rare wetland invertebrates	Maintenance of native plant species	10, 100+ new houses for Stafford Borough between 2001 - 2026. Impacts include Increased water run-off and change in flow regime	Yes?	Redevelopment of Walk Mill - Change in flow regime	Yes?