Introduction / Background

This screening opinion has been prepared jointly to assist Stafford Borough Council and Cannock Chase District Council in deciding whether an Appropriate Assessment of their Local Development Frameworks (LDF) in relation to Cannock Chase Special Area of Conservation is required under the European Directive 92/43/EEC (The Habitats Directive).

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.


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

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 affects 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.

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.

Planning Policy Statement 9 (PPS9): 'Biodiversity and Geological Conservation' states that RAMSAR sites should receive the same protection as SPAs and SACs.

Cannock Chase SAC

This document, relates only to Cannock Chase SAC, which lies both within Stafford Borough and Cannock Chase District. Whilst there are other Natura 2000 sites within and surrounding Stafford Borough and Cannock Chase District, these will be covered in separate documents.

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 affect on the integrity of the site. If significant effects are identified by the assessment, alternative plan options need to be examined.

**Methodology**

EC guidance and the recent 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
The Habitats Regulations Assessment Process

Outcomes of Screening Decision

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 Stafford Borough Council and Cannock Chase District Council LDF’s are likely to have a significant impact on Cannock Chase SAC. If no likely effects are determined, the Appropriate Assessment stage need not be carried out and each authorities LDF proposals may continue through the LDF process.
However, if the screening stage decides that the plans or projects will result in likely significant effects on Cannock Chase SAC, a separate Appropriate Assessment of Stafford Borough Council and Cannock Chase District Council LDF’s will need to be carried out.

**Stage One: Likely Significant Effects (Screening)**

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**

<table>
<thead>
<tr>
<th>Management of the site</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Location of the plan</strong></td>
</tr>
<tr>
<td><strong>Area of the project or plan</strong></td>
</tr>
<tr>
<td><strong>Brief Description</strong></td>
</tr>
<tr>
<td><strong>Is the proposed plan or policy directly necessary to the site management for nature conservation?</strong></td>
</tr>
</tbody>
</table>

**Task 2: Describing the project or plan and any others that in combination have the potential to significantly affect the Natura 2000 site**

<table>
<thead>
<tr>
<th>Description of the Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size of the Plan</strong></td>
</tr>
<tr>
<td><strong>Plan Sector</strong></td>
</tr>
<tr>
<td><strong>Physical changes resulting from the project or plan</strong></td>
</tr>
</tbody>
</table>
Cannock Chase District LDF will aim to deliver dwellings in the range of 6,000 – 8,842 between 2006 – 2026

In addition the Cannock Chase District LDF proposes a range of 85 – 152 hectares of employment land between 2006 – 2026

<table>
<thead>
<tr>
<th>Resource Requirements</th>
<th>Both LDF’s cover the time period from 2006 to 2026</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration of construction, operation and decommissioning</td>
<td>Both Stafford Borough LDF and Cannock Chase LDF, in combination with neighbouring authorities LDF’s, the M6 widening and changes in electricity production at Rugeley Power Station may have a negative impact on air quality.</td>
</tr>
<tr>
<td>Emissions and waste</td>
<td>None specified in the LDFs, although the both LDF’s may have negative impacts in combination with the M6 widening project</td>
</tr>
<tr>
<td>Transportation requirements</td>
<td>Both LDF’s cover the time period from 2006 to 2026</td>
</tr>
<tr>
<td>Plan implementation period</td>
<td>Two thirds of Cannock Chase SAC lie within Stafford Borough and one third lies within Cannock Chase District. In terms of distance to particular settlements, Cannock Chase SAC lies approximately 2km from Stafford, 1.6km from Rugeley and adjacent to Hednesford and Pye Green.</td>
</tr>
<tr>
<td>Distance from Natura 2000 site or key features of the site</td>
<td>There may be water resource, air quality and recreation cumulative impacts arising from both Stafford Borough and Cannock Chase LDF’s in combination with each other and neighbouring authorities LDF’s, water company abstraction rates, M6 widening plans and Rugeley Power Station Flue Gas Desulphurisation (FGD) plans.</td>
</tr>
</tbody>
</table>

**Task 3: Characteristics of the site and identification of possible effects**

**Description of the Site**

<table>
<thead>
<tr>
<th>Name</th>
<th>Cannock Chase SAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of designation</td>
<td>April 2005</td>
</tr>
</tbody>
</table>

**Site Description**

The site comprises of lowland heathland and is the most extensive in the Midlands region.

Character of the vegetation is intermediate between the upland and northern heaths of England and Wales and those of the southern counties.

The heathland includes species of cowberry (Vaccinium vitis-idaea) and crowberry (Empetrum nigrum), alongside being home to the main British population of the hybrid bilberry (Vaccinium intermedium), a plant of restricted occurrence.

The site has important populations of butterflies and beetles, European nightjar (caprimulgus europaeus) and five species of bats.
| Site condition | 2.27% Favourable  
95.29% Unfavourable recovering  
2.45% Unfavourable no change |
|---|---|
| Reason for European Designation | **European dry heaths Annex 1 habitat**  
for which this is considered to be one of the best areas in the United Kingdom. |
| Qualifying Features | **Northern Atlantic wet heaths Annex 1 habitat**  
present as a qualifying feature, but not primary reason for site selection |
| Key Environmental features that support site integrity | Sympathetic management of heathland vegetation  
Climate  
Maintenance of soil chemistry  
Maintenance of hydrology  
Water chemistry |
| Distance from Stafford BC Boundary | Approximately two thirds of the SAC lies within Stafford Borough boundary and one third lies within Cannock Chase District boundary. |
| Size | 1,271.78 ha of which 886.81 ha is within Stafford Borough |
| General site character | Inland water bodies (standing water, running water) (0.5%)  
Heath. Scrub. Maquis and garrigue. Phygrana (76.3%)  
Coniferous woodland (12%)  
Non-Forest areas cultivated with woody plants (including orchards, groves, vineyards, (10.5%)  
Other land (including towns, villages, roads, waste places, mines, industrial sites) (0.7%) |
| Site Objectives | 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:  
• Dwarf shrub heath  
• Broadleaved, mixed and yew woodland  

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.  

To maintain the dwarf shrub heath habitats at Cannock Chase SSSI in favourable condition, with particular reference to relevant specific designated interest features. |
| Site Vulnerability / Issues | Due to much of Cannock Chase being popular and well-used as a Country Park there are many threats to track creation and vegetation damage from visitors including;  
• Dog walking  
• horse riding  
• mountain biking  
• Off-track activities such as orienteering  
• Car parking  

Other threats include the invasion of other plant species including  
• Bracken invasion  
• Birch and pine scrub  

Loss of heathland to fragmentation and scrub/woodland encroachment |
The land is registered as Common Land which poses a threat to the site as the Secretary of State must give approval before fencing can take place, this means that the reintroduction of sustainable management in the form of livestock grazing has many problems.

Although mining in the area has ceased the site overlies coal measures which have been deep mined, resulting in fissures across the site. This is a threat to the hydrology of the site.

Furthermore the underlying Sherwood Sandstone is a major aquifer with water abstracted for public and industrial uses and the effects of this on the wetland features of the Chase are not fully understood. Major increase in its use would obviously impact significantly on the site.

The prime air pollution concerns for heathlands and sub-artic scrub habitats in the UK are nitrogen deposition and ozone. Acid deposition may also be substantial, with implications for catchment water quality.

### Task 4: Assessing the significance of any effects on Cannock Chase SAC

**Assessment Criteria**

<table>
<thead>
<tr>
<th>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</th>
<th>Stafford Borough LDF 12,500 new dwellings in the Borough between 2006 – 2026 and the allocation of additional employment land may impact on the Cannock Chase SAC.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cannock Chase LDF A range of 6,000 – 8,842 new dwellings in Cannock Chase District Council and 85 – 152 hectares of employment land between 2006 – 2026.</td>
</tr>
<tr>
<td></td>
<td>Other plans and projects include: 16,000 new dwellings in Lichfield Borough and 5,000 new dwellings in South Staffordshire District.</td>
</tr>
<tr>
<td></td>
<td>Current water abstraction rates by Seven Trent Water and South Staffs Water at sites on or surrounding the SAC. It is currently unknown if abstraction at some of these sites are having a negative impact on the wet heaths at Cannock Chase or whether an increase in water abstraction could have a negative impact on the SAC.</td>
</tr>
<tr>
<td></td>
<td>The FGD Plant presently under construction will reduce the amount of sulphur Dioxide produced by the station, but the process will increase Nitrogen emissions.</td>
</tr>
<tr>
<td></td>
<td>The widening of the M6 within Stafford Borough may lead to an increase in usage and therefore an increase in Carbon Dioxide and Nitrogen emissions. The effect on Cannock Chase SAC is unknown.</td>
</tr>
<tr>
<td>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:</td>
<td>Possible impacts include</td>
</tr>
<tr>
<td>---</td>
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</tr>
<tr>
<td>• 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, operation, decommissioning;</td>
<td>• Increased visitor use and associated impacts on Cannock Chase SAC • Increased water demand may lead to increased water abstraction at boreholes within and surrounding the Chase • Increased nitrogen deposition • No initial phasing of development for the districts – the delivery of housing and employment land likely to be constant over the plan period of 2006 – 2026 • No development proposed within the Cannock Chase SAC • Two thirds of the 1268-hectare SAC lie in Stafford Borough with the remaining third in Cannock Chase District.</td>
</tr>
</tbody>
</table>

Describe any likely changes to the site arising as a result of:  
• 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

Reduction in water flows  
Water quality  
Habitat fragmentation  
Reduction in habitat area  
Vegetation change

Describe any likely impacts on the Natura 2000 site as a whole in terms of:  
• Interference with the key relationships that define the structure of the site  
• Interference with the key relationships that define the function of the site

Impacts may interfere with the soil chemistry of the SAC and give rise to other species, which may invade the heathland. Increased Nitrogen levels can be expected to favour grassland species rather than those that are characteristic of dwarf shrub heath.

Impacts may alter the hydrology of the SAC, interfering with the wet heath habitats.
### Recreation

*The Cannock Chase AONB Visitor Survey 2000* concludes that approximately 1.27 million visits are made to Cannock Chase on an annual basis. 70% of visitors originate within 10 miles of their destination. The most popular locations are Milford Common, Marquis Drive, Birches Valley, Seven Springs, the Sherbrook Valley and Castle Ring.

Visitors mostly cite walking as their reason for visiting the Chase, but other activities such as cycling, games and equine activities are other activities for which people visit the Chase.

The report states that the principal areas of conflict centre on the use of the Chase by growing numbers of mountain bike riders and a smaller number of horse riders. Conflicts centre especially upon concerns over personal safety as well as problems of damage to paths.

Using the evidence above, it is possible to judge that an increase in dwellings in Stafford Borough and Cannock Chase District will increase visitor numbers to the Chase, based on current distance travelled by visitors. Damage to paths is an existing problem and may be exacerbated by an increase in visitors.

Dog walking is already resulting in vegetation change along path edges due to fouling. Survey evidence (Cannock Chase Council 2007) shows vegetation change attributable to increased nutrient levels at distances of up to 280 metres from car parks and other access points.

### Water abstraction

The 2002 Seven Trent Water commissioned Halcrow report titled *Cannock Chase Hydrogeological Study: Final Report* investigates current Seven Trent Water abstraction sites in or surrounding the SAC. Two of these, Shugborough and Milford pumping stations may have an impact on the wet heaths at Sherbrook and Oldacre Valleys. An updated study in 2006 by ESI confirmed that while there is no conclusive evidence to suggest that the public water supply sources are having a detrimental impact on groundwater levels across the SAC area, it is possible that abstraction at licensed rates could affect stream flows and local groundwater levels further. If this is the case, the extent of the wet heaths may be affected and this would conflict with the conservation objectives for the SAC. Further investigations, regarding the issue of groundwater levels are being carried out and results are expected in March 2008.

Current abstraction levels are below the full licensed abstraction levels.
South Staffs Water Plc have several water abstraction licences at pumping stations within Cannock Chase District, surrounding the SAC at Moors Gorse, Brindley Bank and Slitting Mill. In addition South Staffs Plc operate other pumping stations at Maple Brook, Seedy Mill and Shenstone, which lie within a different groundwater catchment. Following discussions with The Environment Agency and Natural England, South Staffs Water Plc have been informed that the scale of their operations does not warrant the need for Appropriate Assessment but the impact of abstractions at Moors Gorse and Slitting Mill are being investigated by the EA as part of the Memorandum of Understanding that is linked to a group licence.

In addition South Staffs Water Plc have no plans to increase our abstraction licence quantities for these sources. Should a supply demand shortfall be identified in the next South Staffs Water Plc water resources plan, the deficit will be met by alternative measures/locations.
Air Quality

Air Pollution Information System (APIS) state that the main concerns for lowland heathland are the impacts of nitrogen deposition and acid deposition. Lowland heaths may also be at risk from nearby air pollutant sources such as farming or industrial activity.

For upland heathland the key concerns are the effects of nitrogen deposition and ozone.

The critical load for nitrogen deposition on lowland heathland is 10 – 25 kg N ha⁻¹ year⁻¹.

Acid deposition consists of sulphur dioxide and nitrogen oxides for which the critical loads are:
- Sulphur Dioxide 20 μg SO₂ m⁻³ annual mean and half-year (Oct-March) mean
- Nitrogen oxides 30 μg NOx (as N02) m⁻³ annual mean; 75 μg NOx (as N02) m⁻³ 24-hour mean

The critical load for nitrogen deposition on upland heathland is 10-20 kg N ha⁻¹ year⁻¹ and 3000 ppb hours (accumulated over a threshold of 40 ppb or AOT40) over a period of up to three months for ozone.

While collection of such data on or nearby the SAC is limited Nitrogen Dioxide is measured at Birches Valley, approximately 1.5km from the SAC boundary. Figures are provided monthly from January 1994, with the most recent figure for November 2006. In the last three months there has been an increase in Nitrogen Dioxide from 11.9 to 16.7 ug/m³. The highest measurement of nitrogen dioxide was recorded in November 1997 at 62.8 ug/m³. Currently nitrogen dioxide measured at low level is below the critical load, but in the past this has been exceeded and the effects of this are unknown.

The total load deposited on the SAC may not be directly correlated with atmospheric nitrogen levels recorded at Birches Valley as much of the nitrogen reaching the SAC will be in rainwater derived at least in part from high-level sources. Data published by the Critical Loads Network suggests that total nitrogen deposition in the area exceeds critical load.
Environment data for 2006 report to local authorities for Rugeley Power Station

CO2 emissions from Rugeley Power Station have fluctuated over the last 7 years, but were reduced in 2006. Levels of Sulphur Dioxide, Oxides of Nitrogen and Hydrogen Chloride were also reduced in 2006. However the amount of electricity produced in 2006 was below that generated in previous years.

Rugeley Power Station is presently installing a flue gas desulphurisation plant in order to comply with the European Union Large Combustion Plant Directive, which aims to apply tighter limits on sulphur dioxide emissions.

The 2002 Rugeley Power Station Proposed FGD Plant – Environmental Statement states that the plant may lead to an increase in carbon dioxide emissions, but these should be insignificant. The process will result in decreased Sulphur emissions but there will be an increase in Nitrogen.

| 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 |
| Water abstraction and water quality impacts are not known. Air quality impacts from increased populations and households in Stafford Borough and neighbouring authorities along with increase traffic in Stafford Borough due to the M6 widening are unknown. Recreational impacts. It is thought that a significant increase in dwellings and population, in both Stafford Borough, Cannock Chase along with neighbouring authorities areas will lead to an increase in visitors to the Chase. |

Conclusion: Screening Opinion
Task 4: Assessing the significance of any effects on Cannock Chase SAC: Conclusion

| Is the plan or project directly linked to the management of the site? | No, neither Stafford Borough LDF nor Cannock Chase LDF are directly linked to the management of the site. |
| Are significant effects likely? | It is not certain whether the effects identified in this report (see task 4 table) are significant and/or likely but following the precautionary principle, the next stage of the Habitats Regulations Assessment, the Appropriate Assessment stage will be carried out in relation to both Stafford Borough LDF and Cannock Chase District LDF to clarify on issues of significance. |
### Task 4: Table of likely Significant Effects Matrix for Stafford Borough and Cannock Chase District Local Development Frameworks

<table>
<thead>
<tr>
<th>Site</th>
<th>Qualifying features</th>
<th>Key environmental conditions to support site integrity</th>
<th>Possible impacts that will arise from Stafford and Cannock LDF’s</th>
<th>Is the impact 'significant'?</th>
<th>Describe other plans, projects or trends that ‘in combination’ will have possible impacts</th>
<th>Are impacts 'significant'?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cannock Chase SAC</td>
<td>European dry heaths, intermediate between uplands of northern England and Wales and those of southern counties</td>
<td>Sympathetic management of heathland vegetation</td>
<td>12,900+ new houses for Stafford Borough between 2006 – 2026. Impacts include: • Increased visitors and recreational use of Chase resulting in erosion, trampling of vegetation etc</td>
<td>Yes?</td>
<td>6,000 – 8,842 new houses for Cannock Chase District between 2006 – 2026. Impacts include: • Increased visitors and recreational use of the Chase resulting in erosion, trampling of vegetation etc</td>
<td>Yes?</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5,000+ new houses for South Staffordshire District between 2006 – 2026. Impacts include: • Increased visitors and recreational use of the Chase resulting in erosion, trampling of vegetation etc</td>
<td>Yes?</td>
</tr>
<tr>
<td>Site</td>
<td>Qualifying features</td>
<td>Key environmental conditions to support site integrity</td>
<td>Possible impacts that will arise from the plan</td>
<td>Is the impact ‘significant’?</td>
<td>Describe other plans, projects or trends that ‘in combination’ will have possible impacts</td>
<td>Are impacts ‘significant’?</td>
</tr>
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</tr>
</tbody>
</table>
| Cannock Chase SAC    | European dry heaths, intermediate between uplands of northern England and Wales and those of southern counties | Maintenance of soil chemistry                          | 12,900+ new houses for Stafford Borough between 2006 – 2026  
• Increased levels of eutrophication resulting from dog fouling along path/edges etc. | Yes?                                                                 | 16,000+ new houses for Lichfield District between 2006 – 2026. Impacts include  
• Increased levels of eutrophication resulting from dog fouling along path/edges etc. | Yes?                                                                 |
|                      |                                                                                      |                                                        | 6,000 – 8,842 new houses for Cannock Chase District between 2006 – 2026. Impacts include  
• Increased levels of eutrophication resulting from dog fouling along path/edges etc. | Yes?                                                                 | 5,000+ new houses for South Staffordshire District between 2006 – 2026. Impacts include  
• Increased levels of eutrophication resulting from dog fouling along path/edges etc. | Yes?                                                                 |
<table>
<thead>
<tr>
<th>Site</th>
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<th>Describe other plans, projects or trends that ‘in combination’ will have possible impacts</th>
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</tr>
</thead>
</table>
| Cannock Chase SAC | European dry heaths, intermediate between uplands of northern England and Wales and those of southern counties | Maintenance of soil chemistry | Expansion of industrial areas in Cannock Chase District  
• Possible increase in nitrogen deposition due to atmospheric pollution | Yes? | Widening of M6 motorway in Stafford Borough  
• Possible increase in atmospheric pollution due to more traffic travelling through the Borough | Yes? |
| | | | | | Installation of a flue gas desulphurisation plant at Rugeley Power Station  
• Reduction in SO2 emissions but possible increase in carbon dioxide and N emissions | No, Rugeley Power Station Proposed FGD Plant – Environment Statement states that carbon dioxide emissions should be insignificant in the context of sector and national carbon dioxide emissions |
<table>
<thead>
<tr>
<th>Site</th>
<th>Qualifying features</th>
<th>Key environmental conditions to support site integrity</th>
<th>Possible impacts that will arise from the plan</th>
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<th>Describe other plans, projects or trends that ‘in combination’ will have possible impacts</th>
<th>Are impacts ‘significant’?</th>
</tr>
</thead>
</table>
| Cannock Chase SAC       | North Atlantic wet heaths with *Erica tetralix* | Maintenance of hydrology                                | 12,900+ new houses for Stafford Borough between 2006 – 2026. Impacts include:  
  • Increase in demand for water, which could result in increased water abstraction                      | Yes?                        | 5,000+ new houses for South Staffordshire District between 2006 – 2026. Impacts include:  
  • Increase in demand for water                                                                      | Yes?                        |
|                         |                                        |                                                        | 6,000 – 8,842 new houses for Cannock Chase District between 2006 – 2026. Impacts include:  
  • Increase in demand for water                                                                      |                             | 16,000+ new houses for Lichfield District  
  • May increase demand for water                                                                      |                             |
|                         |                                        |                                                        |                                                                                                              |                             | No, South Staffs Water state there will be no increase in abstraction rates at Pumping Stations on Cannock Chase                  |                             |