



Planning for the Protection of European (International) Sites: Habitat Regulations Assessment (HRA)

Evidence Gathering / Baseline Report

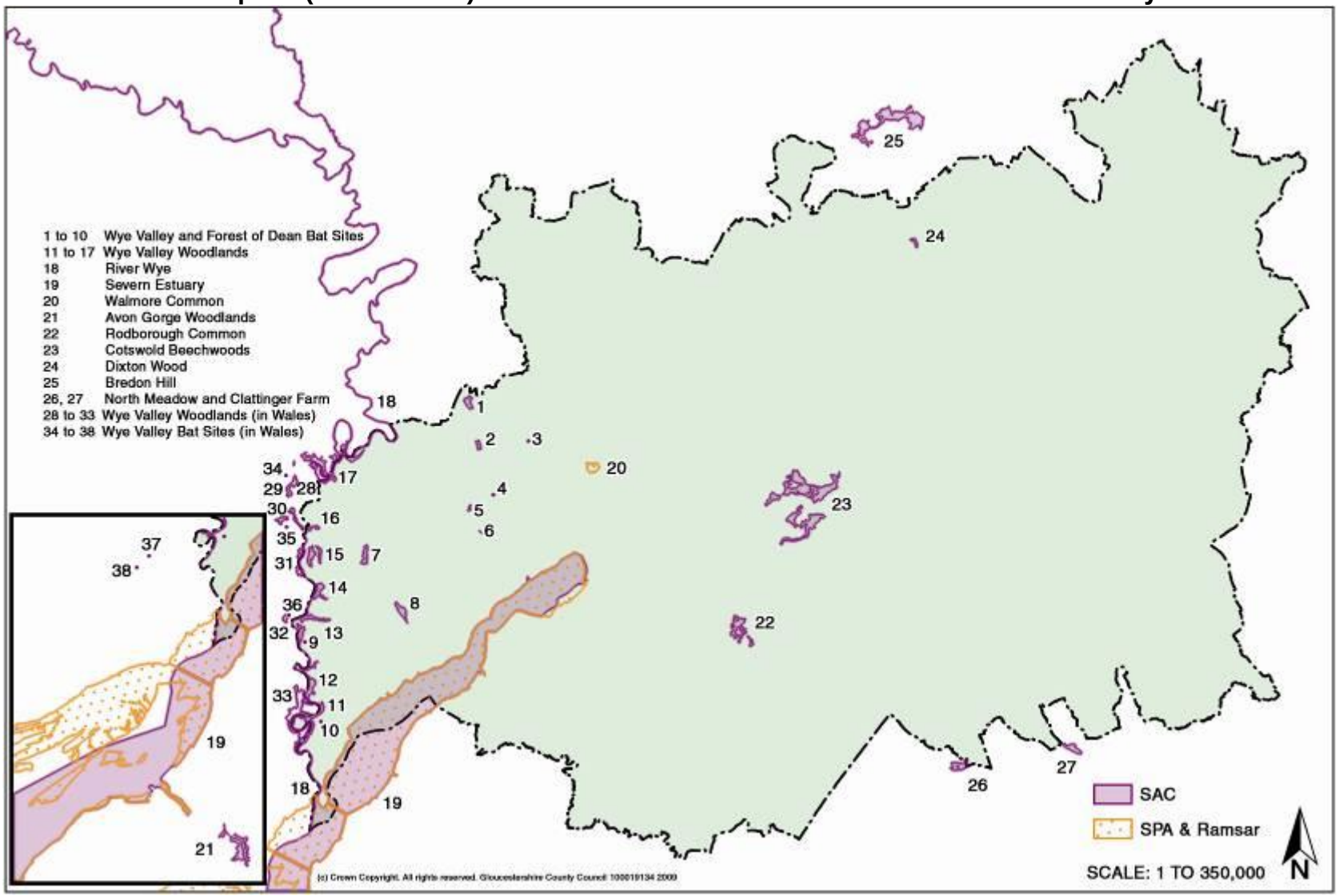
for the

Gloucestershire Minerals Local Plan

Update 6 – 6th November 2017

Contents

European (International) Sites in and within 15km of Gloucestershire's boundary



Section 1: Introduction

International / European Sites - An Introduction

The EU *Natura 2000* network provides ecological infrastructure for the protection of sites which are of exceptional importance in respect of rare, endangered or vulnerable natural habitats and species within the European Union. These sites, which are also referred to as 'European Sites' consist of Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Offshore Marine Sites (OMSs). Ramsar sites (Internationally Important Wetlands) are treated as it they were European Sites in accordance with the Government's policy statement of November 2000, the DEFRA Circular 01/2005 (paragraph 5) and the National Planning Policy Framework 2012 (paragraph 118). The European (international) Sites in Gloucestershire or within 15km of its administrative boundary are:

- **Rodborough Common** SAC – (Stroud)
- **Dixton Wood** SAC – (Tewkesbury)
- **Wye Valley and Forest of Dean Bat Sites** SAC – (Forest of Dean, Monmouthshire)
- **River Wye** SAC – (Forest of Dean, Monmouthshire, Herefordshire, Powys)
- **Wye Valley Woodlands** SAC – (Forest of Dean, Monmouthshire, Herefordshire)
- **North Meadow and Clattinger Farm** SAC – (Wiltshire)
- **Cotswold Beechwoods** SAC – (Stroud, Cotswold, Tewkesbury)
- **Bredon Hill** SAC – (Worcestershire)
- **Walmore Common** SPA, Ramsar – (Forest of Dean)
- **Severn Estuary** SPA, SAC, Ramsar – (Stroud, Forest of Dean, South Gloucestershire, Monmouthshire, Bristol City, North Somerset, Newport, Cardiff, Vale of Glamorgan)
- **Avon Gorge Woodlands** SAC – (City of Bristol)

The requirements for Habitats Regulation Assessment/Appraisal (HRA) of plans or projects is outlined in Article 6(3) and (4) of the European Communities (1992) Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora ('Habitats Directive'). Gloucestershire County Council acting as Mineral Planning Authority is a 'competent authority' under the 'Habitats Directive'. The Directive applies a precautionary principle, and plans can only be permitted once it has been shown that there will be no adverse effect on the integrity of the European Sites in question. It is possible that plans may still be permitted if there is a lack of viable alternatives and there are imperative reasons of overriding public interest as to why they should go ahead. Previous rulings show that these cases are rare and in this scenario compensatory measures will need to be implemented to ensure the overall integrity of the site network. The requirements of the Habitats Directive are enshrined in national law by The Conservation of Habitats and Species Regulations 2017 which is sometimes referred to as the 'Habitats Regulations'. The HRA process for land use plans is specifically covered by Regulation 102 of the legislation with Regulation 61 applying to all plans and projects where HRA may be required.

The Conservation of Habitats and Species Regulations 2017 which is sometimes referred to as the 'Habitats Regulations' states at 105: "Where a land use plan – (a) is likely to have a significant effect on a European Site or a European offshore marine site (either alone or in combination with other plans or projects), and (b) is not directly connected with or necessary to the management of the site, the plan-making authority for that plan must, before the plan is given effect, make an appropriate assessment of the implications for the

site in view of that site's conservation objectives." Conservation objectives for sites can be found at http://publications.naturalengland.org.uk/category/6490068894089216 .

The National Planning Policy Framework (NPPF, 2012) highlights European (International) Sites at paragraphs 118, 119, 166, 167 and 192. Draft guidance by Defra (December 2012) also provides assistance on HRA requirements.

The purpose of HRA of land use plans is to ensure that the protection of the integrity of European (International) Sites is a part of the planning process at a national and local level. Please note that Appropriate Assessment (AA) is a specific stage within the HRA process which may be required once the first stage of screening has been carried out.

Update 6 for the Minerals Local Plan (MLP)

This HRA Evidence Gathering / Baseline Report has been updated for the latter stages of the emerging MLP which is being progressed now that the Waste Core Strategy has been adopted (2012). This updated report is relevant to the HRA Main Report for the emerging MLP as well as any other Gloucestershire based HRA document. This update 6 of the HRA Evidence Gathering / Baseline Report can be viewed on-line, as well as other documents related to the Minerals Local Plan, at:

http://www.gloucestershire.gov.uk/planning-and-environment/planning-policy/minerals-local-plan-for-gloucestershire/emerging-minerals-local-plan-for-gloucestershire-2018-2032/ and
http://www.gloucestershire.gov.uk/planning-and-environment/ecology-and-landscape/habitats-regulations-assessment-hra/

Background to Evidence Gathering for HRA

The Gloucestershire MWDF Sustainability Appraisal (SA) Framework (comprising the SA Context Report and the SA Scoping Report) contains a large volume of environmental data and specifically details the sites and species protected under the Habitats Directive (92/43/EEC) and the Birds Directive (79/409/EEC). Thus the evidence gathering process for HRA started with, and is linked to the SA Framework process.

The Department for Communities and Local Government (DCLG) Draft Guidance on HRA/AA (August 2006) states at paragraph 4.1 that it would be best practice to collect information especially in relation to:

1. European (International) Sites within and outside the plan area potentially affected;
2. The characteristics of these sites;
3. Their conservation objectives; and
4. Other relevant plans or projects.

In accordance with this guidance information on items 1 to 4 was presented for scrutiny by **Natural England** as the statutory consultee in November of 2006. It was also presented to the following:

- Authorities in which the site is located;
- Authorities whose plans and projects may potentially have an impact on the sites;
- Organisations that had particular environmental interests in the listed sites.

In 2007 consultees were sent the first version of this report via email or they received a printed copy where an email address was not available. The report was also made available to all stakeholders and members of the public on Gloucestershire County Council's website. All subsequent updates of the HRA Evidence Gathering / Baseline Report have been presented alongside other draft MLP documents as they became available. Minor updates have been produced as a result of consultation responses and this current update has been produced to update text in readiness for the final stages of the MLP process.

List of Consultees

The following is an updated list of consultees relevant to the European (International) Sites that need to be considered by the Gloucestershire MLP or any County based HRAs. It takes into account previous consultations, some changes to Local Authorities and the need to include all sites that are within 15km of Gloucestershire's administrative boundary. Where no site is shown against a Local Authority consultee then they have been selected because their administrative area is still close enough to have a potential bearing on the site(s) being considered by the MLP's HRA process.

Authorities in Gloucestershire	
District / Borough / City	*European (International) Site*
Cheltenham Borough Council	
Cotswold District Council	Cotswold Beechwoods SAC
Forest of Dean District Council	Wye Valley & Forest of Dean Bat Sites SAC River Wye SAC Severn Estuary SAC, SPA/Ramsar Wye Valley Woodlands SAC Walmore Common SPA/Ramsar
Gloucester City Council	
Stroud District Council	Cotswold Beechwoods SAC Rodborough Common SAC Severn Estuary SAC, SPA/Ramsar
Tewkesbury Borough Council	Cotswold Beechwoods SAC Dixton Wood SAC

Authorities bordering Gloucestershire		
Unitary or County	*District / Borough*	*European (International) Site*
Warwickshire County Council	Stratford-on-Avon	
Oxfordshire County Council	West Oxfordshire	
	Vale of White Horse	
Wiltshire Council (Unitary)		North Meadow & Clattinger Farm SAC
Swindon Borough Council (Unitary)		
South Gloucestershire Council (Unitary)		Severn Estuary SAC, SPA/Ramsar
Monmouthshire County Council (Unitary)		River Wye SAC Wye Valley & Forest of Dean Bat Sites SAC Wye Valley Woodlands SAC Severn Estuary SAC, SPA/Ramsar
Herefordshire County Council (Unitary)		River Wye SAC Wye Valley Woodlands SAC
Worcestershire County Council	Wychavon District Council	Bredon Hill SAC

Authorities not bordering Gloucestershire but that share a European site or sites, or who have a European site which is within 15km of Gloucestershire's boundary		
Unitary or County	*District / Borough*	*European (International) Site*
Bristol City Council (Unitary)		Severn Estuary SAC, SPA/Ramsar Avon Gorge Woodlands SAC
Powys County Council (Unitary)		River Wye SAC
North Somerset (Unitary)		Severn Estuary SAC, SPA/Ramsar
Somerset County Council	Sedgemoor District Council	Severn Estuary SAC, SPA/Ramsar
Newport City Council (Unitary)		Severn Estuary SAC, SPA/Ramsar
Cardiff Council (Unitary)		Severn Estuary SAC, SPA/Ramsar
The Vale of Glamorgan Council (Unitary)		Severn Estuary SAC, SPA/Ramsar

Land Owners & Interested Groups
Natural England
Gloucestershire Wildlife Trust
Royal Society for the Protection of Birds
Wildfowl and Wetlands Trust – Slimbridge Nature Reserve
Cotswold Water Park Trust
Woodland Trust
Wye Valley AONB Partnership
Cotswolds Conservation Board
Forestry Commission – Forest of Dean Offices
The National Trust
The Crown Estate
Environment Agency
Countryside Council for Wales

Other Plans & Projects

Although more focused on planning applications draft guidance has been produced by Defra (*The Habitats and Wild Birds Directives in England and its seas. Core guidance for developers, regulators & land/marine managers. December 2012 (draft for public consultation)*). This usefully summarises the topic of the 'in combination effects' part of HRA. Table 3 in the document includes the following relevant advice:

That "the effects of a plan or project must be considered both individually and in combination with other relevant plans or projects. This is a requirement of the Habitats Directive which helps ensure that European Sites are not damaged by the additive effects of multiple plans or projects."

To "take account of all current and proposed plans or projects of which it [the competent authority] is aware …….. This would include proposals where planning permission (or a similar regulatory consent) has been applied for or granted."

“It is not necessary to take account of plans or projects for which there have been no formal applications under an approvals process.”

“The authority should take account of the effects of past plans or projects if they are having an ongoing effect on the conservation objectives of the site.”

Paragraph 5.9 of DCLG Draft Guidance on AA (August 2006) *Planning for the Protection of European Sites: Appropriate Assessment – Guidance For Regional Spatial Strategies and Local Development Documents August 2006* states: “The assessment of significant effects of a given option needs to take account of the option’s impact in combination with other plans and projects. Only other key plans and projects which the RPB or LPA consider most relevant should be collected for the “in-combination” test. An exhaustive list could render the assessment exercise unworkable. Consult Natural England on the list identified.”

Through the original HRA Evidence Gathering / Baseline Report in 2007, Natural England were consulted, and a basic list of relevant plans was identified which was updated in 2013 for the MLP preparation process as follows:

❋ Gloucestershire and other relevant Local Transport Plans

❋ Relevant District Local Development Plans in Gloucestershire and of neighbouring Authorities (as deemed necessary)

❋ Relevant Local Development Plans of the District or Unitary Authority in which the European (International) Site is located

❋ Gloucestershire Waste Core Strategy Adopted 2012 (plus saved policies from Waste Local Plan 2002-2012)

❋ Gloucestershire Minerals Local Plan Adopted 2003 (only saved policies)

❋ Other Minerals and Waste Local Plans / Local Development Plans (as deemed necessary)

❋ Welsh Unitary Development Plans (UDPs) and other Development Plans (as necessary).

The above is a general list of plans and additional plans as well as specific projects are given for each European (International) Site in Section 2 but this is further updated as necessary within the HRA Main report for the draft MLP. The potential ‘in-combination’ effects of plans and projects are considered through the appraisal of options, sites and policy in the HRA Main Report for the MLP.

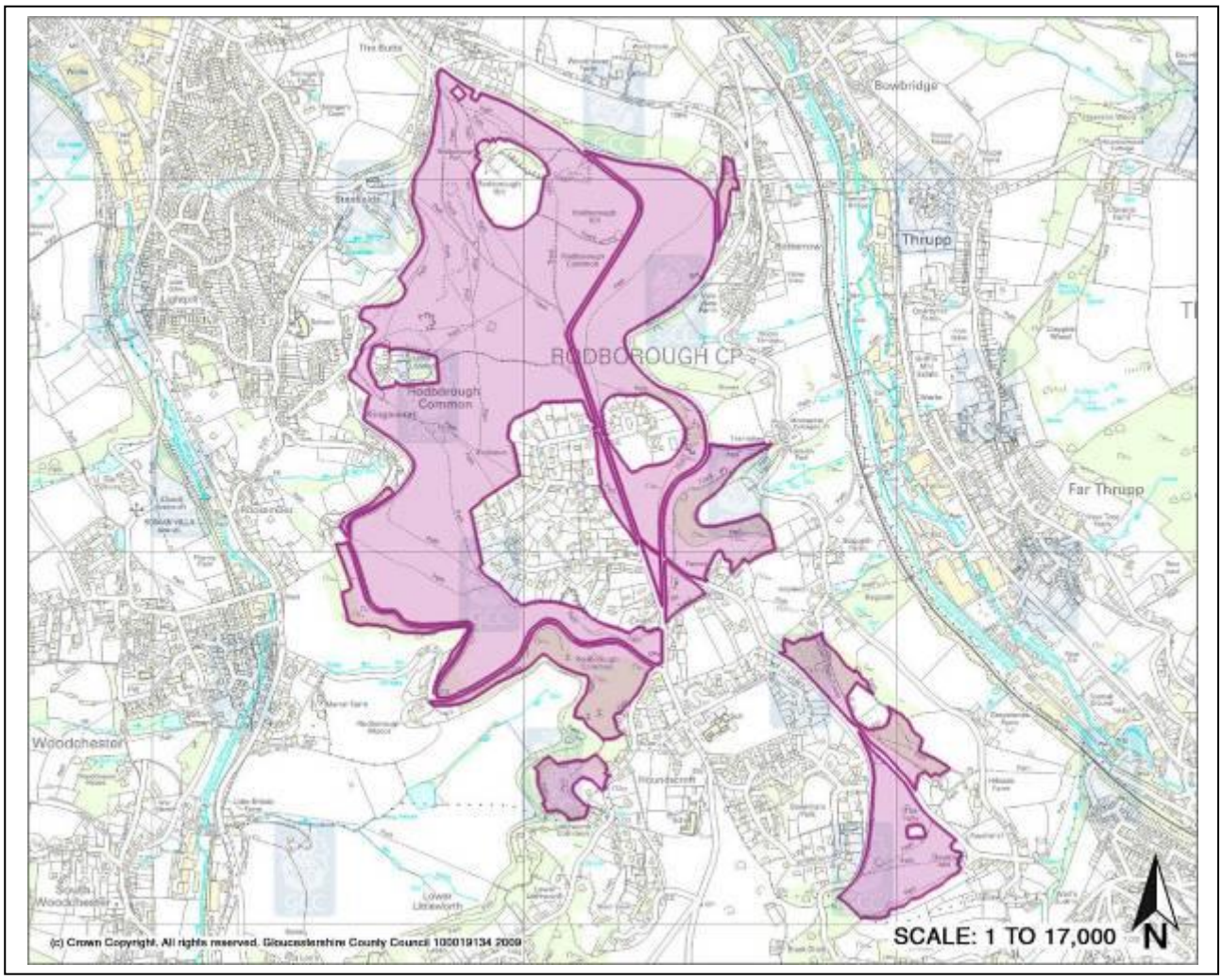
HRA Reporting: Methodology

This updated report presents data and evidence related to European (International) Sites. The HRA Main Report focuses on screening the strategic planning vision, objectives, policy and site allocations for minerals development (i.e. the emerging MLP). In terms of assessing the MLP the process of HRA is mandatory for Gloucestershire given the European (International) Sites present and is a standard which must be passed. The HRA process is designed to ensure that strategic planning options that are likely to have significant detrimental effects on sites will be rejected (or modified so that such effects cannot occur). The Key Stages of HRA are shown in the table below:

HRA (International Sites Impact Assessment Process) **Key Stages for a Plan or Plan Options**	
Stage One	
Screening	◆ Identify European (International) Sites in and around the plan area (primarily achieved through this Baseline Report) ◆ Examine qualifying features & conservation objectives ◆ Identify potential effects on European (International) Sites from plan/option. ◆ Take account of the potential 'in-combination' effects of other plans and projects (as highlighted in this Baseline Report).
	ACTION ⬇
	◆ If there are no likely significant effects on a European (International) Sites then this is recorded and progression to Stage Two is not required for plan/option. ◆ If significant effects are judged likely or some uncertainty exists – the precautionary principle applies and progression to **Stage Two** is required unless the plan/option is dropped or modified so that significant effects would not be likely to occur.
Stage Two	
Appropriate Assessment (AA)	◆ Collate information on European (International) Sites and evaluate impacts in the light of conservation objectives. ◆ Consider how the plan/option 'in-combination' with other plans and projects will interact when implemented. ◆ Consider how adverse effects on the integrity (AEoI) of European (International) Sites could be avoided by changes to the plan/option including any alternatives and mitigation measures such as details about timescales and mechanisms.
	ACTION ⬇
	◆ Report outcomes of AA giving consideration to alternatives and the development of mitigation measures. ◆ If the AA conclusion is that the plan/option will not have AEoI of European (International) Sites then consider developing a monitoring strategy before completing the HRA. ◆ If the AA conclusion is that the plan/option will have AEoI of European (International) Sites then drop plan/option or proceed to **Stage Three.**
Stage Three	
Derogation	◆ Despite the conclusion of AEoI a derogation in certain special circumstances can allow the plan/option to be adopted but this requires 3 tests to be met: Test 1: There must be no feasible alternatives Test 2: There are 'imperative reasons of overriding public interest' (IROPI) Test 3: All necessary compensatory measures can be secured to ensure that the overall coherence of the network of European (International) Sites as a whole will be protected.

Rodborough Common

Designation: Special Area of Conservation (SAC)
Location: Stroud
Grid Reference: SO849036
Area: 104.26ha



Rodborough Common: Natural England library image

1. The characteristics of the European Site:

General Site Character: Heath, Scrub, Maquis and Garrigue. Phygrana (10%) Dry grassland. Steppes (70%) Improved grassland (10%) Broad-leaved deciduous woodland (10%)

Vulnerability: The grassland is dependent upon the maintenance of grazing, and this is co-ordinated through a Commoners Committee. The numbers of cattle grazing has declined with the general decline in the livestock industry, and most of the stock tends to remain on the plateau. The site owners (National Trust and commoners) have developed a project to restore management to the species-rich slopes of the site. This, and scrub management is now being addressed through the newly signed Higher Level Scheme. A number of authorities are working together to provide traffic-calming measures on busy through roads to reduce the number of livestock injuries and promote further uptake of common rights. Recreation has an impact on areas accessible by cars, and is causing localised erosion. Source: Natura 2000 Standard Data Form – Joint Nature Conservation Committee (JNCC) & consultation response from Natural England – Feb 2007 & June 2009.

2. Conservation objectives:

■ Annex I habitats that are a primary reason for selection of this site:

Semi-natural dry grasslands and scrubland facies on calcareous substrates *Festuco-Brometalia (Dry grasslands and scrublands on chalk or limestone)*

Rodborough Common is the most extensive area of semi-natural dry grasslands surviving in the Cotswolds of central southern England, and represents CG5 *Bromus erectus – Brachypodium pinnatum* grassland, which is more or less confined to the Cotswolds. The site contains a wide range of structural types, ranging from short turf through to scrub margins, although short-turf vegetation is mainly confined to areas of shallower soils.

The conservation objectives are as follows:

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- **The extent and distribution of qualifying natural habitats**
- **The structure and function (including typical species) of qualifying natural habitats, and**
- **The supporting processes on which qualifying natural habitats rely**

3. Relevant plans or projects (indicative from 2015):

PLANS:

- Development Plans within **Stroud** District Council including Adopted Stroud Local Plan & potentially other Districts within Gloucestershire
- Gloucestershire Waste Core Strategy Adopted 2012
- Gloucestershire Minerals Local Plan Adopted 2003
- Gloucestershire Local Transport Plan (2015-2031)
- Gloucestershire Flood Risk Management Strategy

PROJECTS:

- Cotswolds Canal Restoration Project
- Housing at Hunts Grove
- Development at Aston Down
- Housing at Lister Petter
- Housing at Brockworth
- Waste Facilities at Javelin Park (consented) & Moreton Valence (consented)
- Any other major development identified in Development plans (or elsewhere) with the potential to have a significant effect on Rodborough Common SAC, including increases in traffic flows near or over the common.

4. Comment on plans or projects:

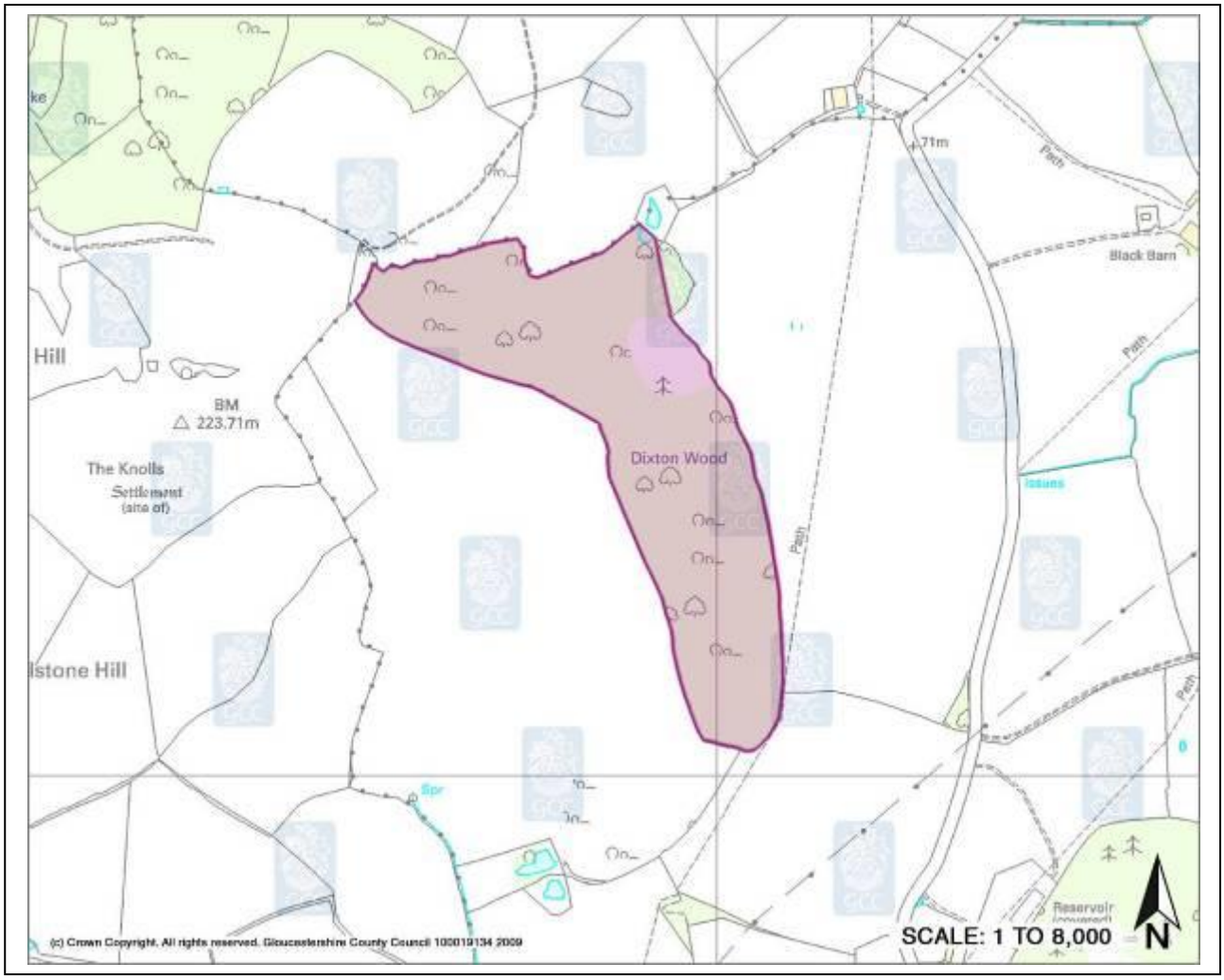
The nearest development to Rodborough in the above list is the Cotswolds Canal Restoration Project. Any comments on projects (e.g. especially from consultees outside or bordering Gloucestershire) that may potentially have 'in-combination' effects are welcomed.

5. General statements from Natural England on potential impacts from Minerals & Waste development:

European interest: dry limestone grassland. Not likely to be affected by water-borne pollution or effects on the groundwater caused by mineral extraction. Waste sites if close could have an effect through increased atmospheric deposition of nitrogen. Nearby mineral workings could have an adverse effect through dust deposition. Source: Letter from Natural England – July 2006.

Dixton Wood

Designation: Special Area of Conservation (SAC)
Location: Tewkesbury
Grid Reference: SO979313
Area: 13.14ha



Dixton Wood: Gloucestershire CC. GIS image 2006. Crown Copyright License No. 10019134

1. The characteristics of the European Site:

General Site Character: Broad-leaved deciduous woodland (100%)

Vulnerability: Dixton Wood is an area of broadleaved woodland (formerly partially grazed) with a dominance of ash including exceptionally large ancient pollards. *Limoniscus violaceaus* is largely dependent on these pollards (for breeding). The principal risks to the site's integrity are lack of future replacement pollards (age-class skewed to older generation) and storm damage to existing trees. This site and surrounding land is undr an agri-environment scheme that will include provision for creation of new pollards as well as management of existing resource to prevent loss through senescence and wind-blow. Source: Natura 2000 Standard Data Form – JNCC and consultation response from Natural England – June 2009.

2. Conservation objectives:

■ Habitat of Annex II species that are a primary reason for selection of this site:

Violet click beetle *Limoniscus violaceus*

The Violet click beetle *Limoniscus violaceus* was discovered at Dixton Wood in 1998 and it has been found at the site on a single occasion subsequently. It is a small site with large number of ancient ash *Fraxinus excelsior* pollards, and supports a rich fauna of scarce invertebrate species associated with decaying timber on ancient trees. Rare deadwood species such as the violet click beetle are mobile species which may depend on features outside of the wood for their life-cycle. These may include veteran trees beyond the boundary of the wood and hawthorn blossom for feeding. Impact on these features on the scarp slopes between Teddington and Cleeve Common may also affect the integrity of the site. Source: JNCC & consultation response from Natural England – Feb 2007.

The conservation objectives are as follows:

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- **The extent and distribution of the habitats of qualifying species**
- **The structure and function of the habitats of qualifying species**
- **The supporting processes on which the habitats of qualifying species rely**
- **The populations of qualifying species, and,**
- **The distribution of qualifying species within the site.**

3. Relevant plans or projects (indicative from 2015):

PLANS:

- Development Plans within **Tewkesbury** Borough including Adopted Tewkesbury Local Plan & other Districts within Gloucestershire
- Gloucestershire Waste Core Strategy Adopted 2012
- Minerals Local Plan Adopted 2003
- Gloucestershire Local Transport Plan (2015-2031)
- Bishops Cleeve, Southam & Woodmancote Surface Water Management Plan

PROJECTS:

- Housing at Brockworth / Brockworth District
- Housing north of Gloucester with associated infrastructure and employment
- Housing north west of Cheltenham and associated infrastructure and
- Housing and associated infrastructure at Leckhampton
- Housing at M and G Sports
- Housing at Southam
- Various waste disposal operations at Wingmoor Farm.
- Any other major development identified in Development Plans (or elsewhere) with the potential to have a significant effect on Dixton Wood.

4. Comment on plans and projects:

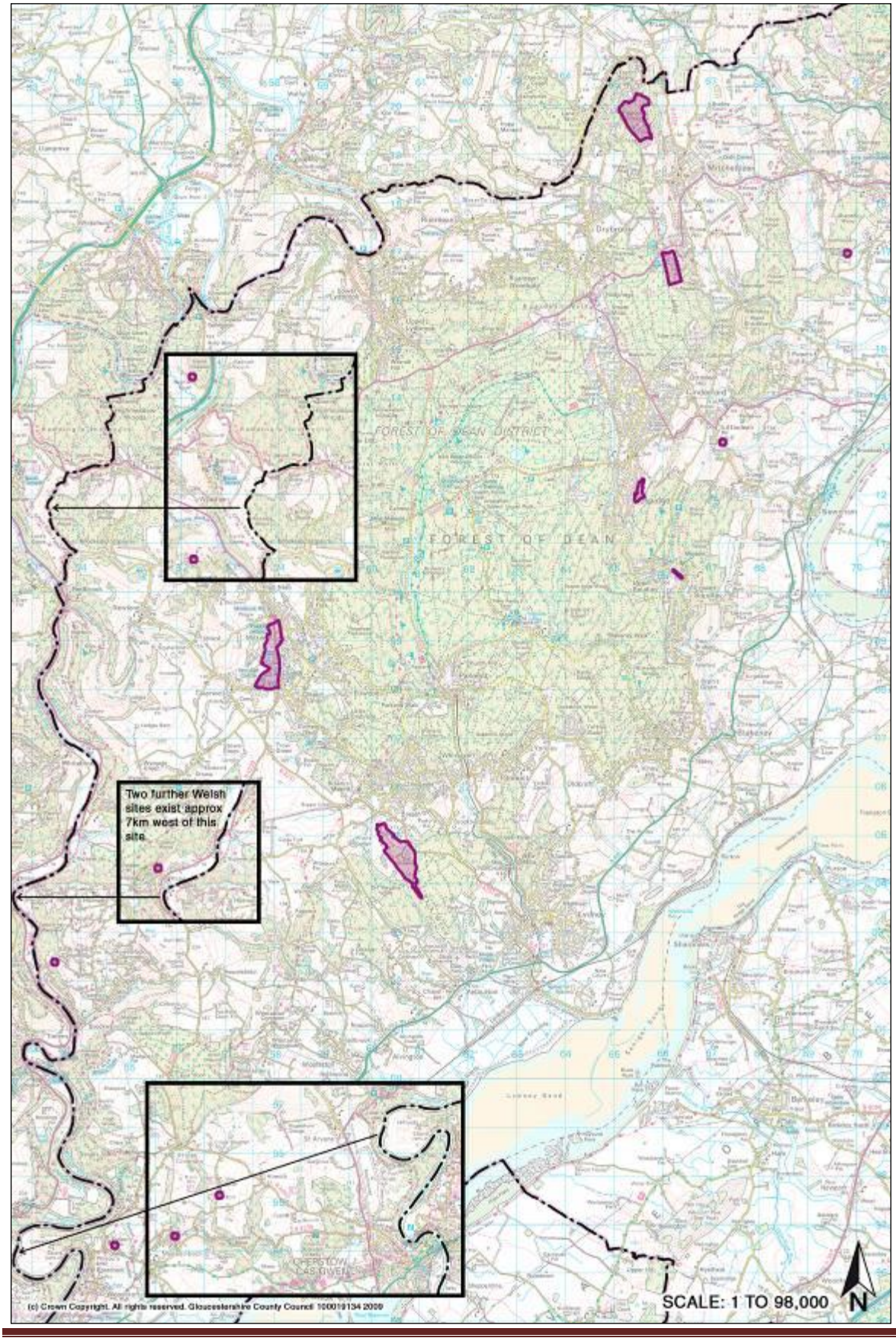
The above list of projects relates to the whole of Tewkesbury Borough, the majority of developments will be not near enough to Dixton Wood to have significant effects on the site. Any comments on projects (e.g. especially from consultees outside or bordering Gloucestershire) that may potentially have 'in-combination' effects are welcomed.

5. General statements from Natural England on potential impacts from Minerals & Waste development:

European interest: *Limoniscus violaceus* - the violet click beetle, which at this site lives in old ash trees. Ash trees like damp soil conditions, and the position of this site on the North west of the Cotswolds has ideal ground conditions. The site would be affected by mineral workings that affect soil water movements, or which cause dust deposition. Similarly the site would be affected by waste sites that led to contamination of the soil water. Source: Letter from Natural England – July 2006.

Wye Valley & Forest of Dean Bat Sites

Designation: Special Area of Conservation (SAC)
Location: Forest of Dean / Fynwy (Monmouthshire)
Grid Reference: SO605044
Area: 142.7ha



Forest of Dean: Natural England library image

1. The characteristics of the European Site:

General Site Character: Broad-leaved deciduous woodland (26.2%) Other land (including towns, villages, roads, waste places, mines, industrial sites) (73.8%).

Vulnerability: The site is composed of parts of a number of buildings in everyday use (mainly roof-spaces) used by the bats for breeding and a series of mines used by bats for hibernation. Within the roost the bats are vulnerable to disturbance at critical times, structural alteration and changes in the characteristic ventilation patterns. The designated sites only cover the major maternity and over-wintering roosts. The bats also depend on features outside the designated sites including intermediate roosts, foraging grounds and hedgerows/tree belts that the bats use as commuting routes. Impact on these features can also affect the integrity of the site. Any proposed changes which are likely to have an impact on the bat populations within the breeding roosts will be discussed with the relevant owners and occupiers. Where appropriate to any populations potentially damaging works will be addressed through appropriate planning regulation, management agreements and monitoring of individual roosts. Regular liaison takes place with site-owners. The human use of the mine systems (continued mineral working and recreational caving/research) is regulated by Forestry Commission in consultation with Natural England where appropriate. Site Management Statements have been agreed with the owners of working mines to secure conservation of the populations alongside continued working. In addition, the preparation of Cave Conservation Plans will be promoted to maintain and enhance the underground environment for bats. Source: Natura 2000 Standard Data Form – JNCC & consultation response from Natural England – Feb 2007.

2. Conservation objectives:

■ Annex II species that are a primary reason for selection of this site:

Lesser horseshoe bat *Rhinolophus hipposideros*

This complex of sites on the border between England and Wales contains by far the greatest concentration of lesser horseshoe bat *Rhinolophus hipposideros* in the UK. The entire site supports an exceptional breeding population as the majority of sites within the complex are maternity roosts. The site also includes several disused mines which are used as hibernation roosts.

Greater horseshoe bat *Rhinolophus ferrumequinum*

This complex of sites on the border between England and Wales supports large numbers of greater horseshoe bats *Rhinolophus ferrumequinum*. The entire site supports an exceptional breeding population as the majority of sites within the complex are maternity roosts. The site also includes several disused mines which are used as hibernation roosts.

The conservation objectives are as follows:

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- **The extent and distribution of the habitats of qualifying species**
- **The structure and function of the habitats of qualifying species**
- **The supporting processes on which the habitats of qualifying species rely**
- **The populations of qualifying species, and**
- **The distribution of qualifying species within the site.**

3. Relevant plans or projects (indicative from 2015)):

PLANS:

- Development Plans within the **Forest of Dean** District including adopted Core Strategy and Area Action Plans & potentially other Districts within Gloucestershire
- Monmouthshire Unitary Development Plan
- Gloucestershire Waste Core Strategy Adopted 2012
- Gloucestershire Minerals Local Plan Adopted 2003
- Wye Valley AONB Management Plan 2013-2018
- Gloucestershire Flood Risk Management Strategy
- Gloucestershire Local Transport Plan (2015-2031)
- Wales Transport Strategy plus Wales National Transport Plan

PROJECTS:

- Cinderford Regeneration Project – including the Northern Quarter Area Action Plan and major planning applications to deliver it.
- Lydney Docks Regeneration Project
- Housing at East Lydney
- Any other major development identified in Development Plans (or elsewhere) with the potential to have a significant effect on the Wye Valley & Forest of Dean Bat Sites (SAC).

4. Comment on plans and projects:

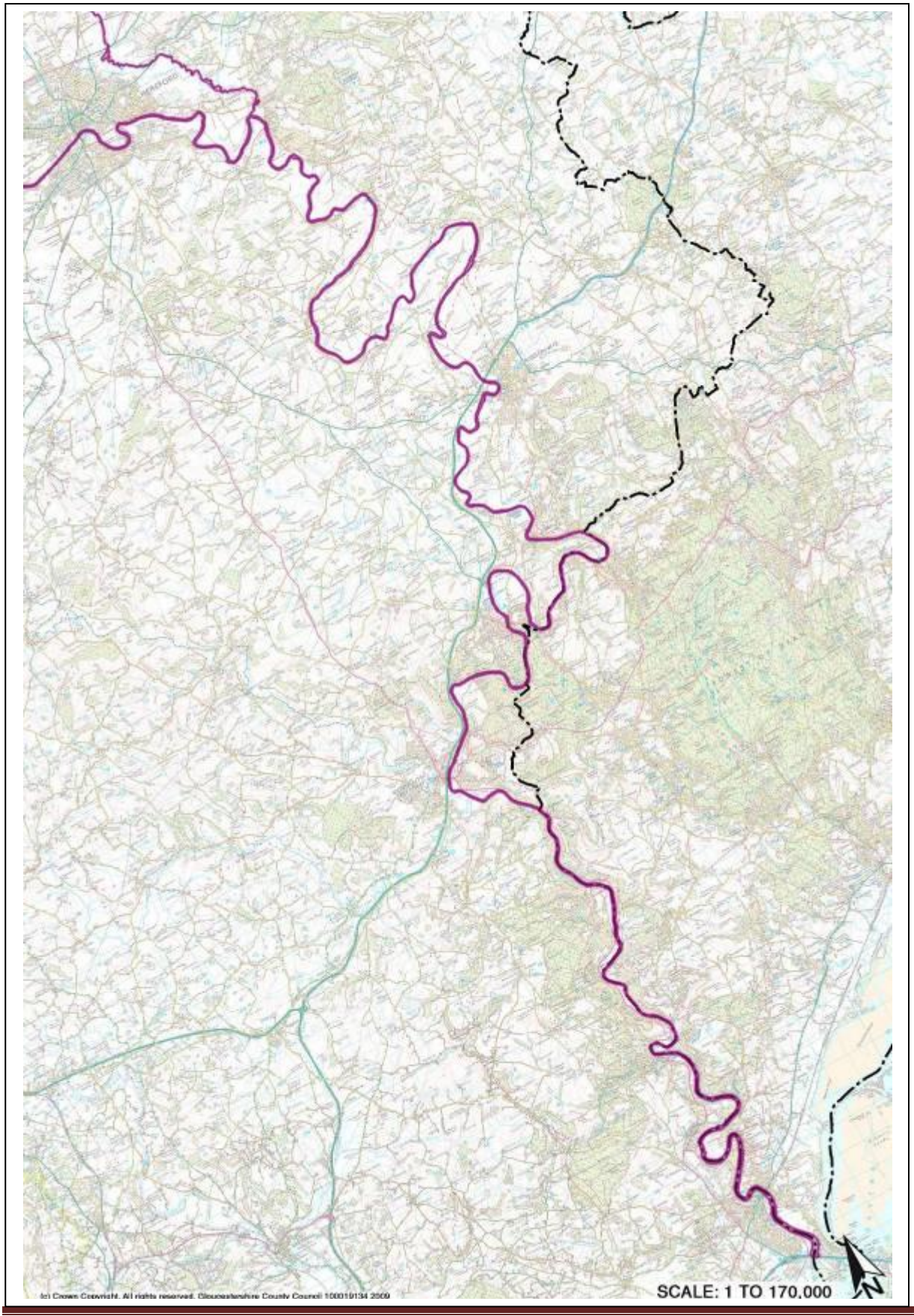
The above list of projects relates to the whole of the District, but it is likely that the majority of developments will not be near enough to bat sites to have significant effects. Any comments on projects (e.g. especially from consultees outside or bordering Gloucestershire) that may potentially have 'in-combination' effects are welcomed.

5. General statements from Natural England on potential impacts from Minerals & Waste development:

European interest: bat species, greater horseshoe bat; lesser horseshoe bats. These sites are especially vulnerable to mineral workings that could affect the integrity of the underground network of sites used by the bats for summer or winter roosts. Damage to these underground systems even if at distance from the notified site could harm their integrity by e.g. affecting underground air flows or temperature gradients. On the surface workings could affect important flight lines or feeding areas which, although outside of the notified area, are crucial to the survival of the bat colonies. Waste sites present a risk both in habitat loss and the potential for pollutants to enter the underground systems. Source: Letter from Natural England – July 2006.

River Wye

Designation: Special Area of Conservation (SAC)
Location: Forest of Dean / Fynwy - Monmouthshire / Herefordshire / Powys
Grid Reference: S0109369
Area: 2234.89ha



River Wye: Natural England library image

1. The characteristics of the European Site:

General Site Character: Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins) (9.5%) Salt marshes. Salt pastures. Salt steppes (1.5%) Inland water bodies (standing water, running water) (52.5%) Bogs. Marshes. Water fringed vegetation. Fens (3.1%) Heath. Scrub. Maquis and garrigue. Phygrana (1%) Dry grassland. Steppes (5.3%) Humid grassland. Mesophile grassland (2.4%) Improved grassland (10.4%) Broad-leaved deciduous woodland (12.3%) Inland rocks. Screes. Sands. Permanent snow and ice (0.2%) Other land (including towns, villages, roads, waste places, mines, industrial sites) (1.8%).

Vulnerability: Water quality impacts arising from changing agricultural land-use within the catchment are having direct and indirect effects on the SAC interests through effects of diffuse pollution such as nutrient run-off and increased siltation. Natural England and the Countryside Council for Wales (Natural Resources Wales) are seeking to address such issues through improved targeting of existing and new agri-environment schemes and through improvements in compliance with agricultural Codes of Practice. Water quality is also affected by synthetic pyrethroid sheep-dips and by point-source discharges within the catchment. The impact of sewage treatment works on the SAC is being addressed through the Asset Management Plan process and review under the Habitats Regulations. Loss of riparian habitat is occurring as a result of changes in agricultural land-use practices and other factors, including riverside development and the loss of alder tree-cover through disease. These impacts and concerns over water quality will be identified and actions recommended within the joint Natural England/Environment Agency/Countryside Council for Wales (Natural Resources Wales) conservation strategy for the river (see Site Improvement Plan and Proposed Targets for the SAC at http://publications.naturalengland.org.uk/publication).Fishing activities are implicated in the decline of the salmon but it is apparently Irish trawlers rather than local fishermen which have had the greatest impact. The trawler problems have now been resolved. There is increasing demand for abstraction from the river for agriculture and potable water. This is being addressed through the Environment Agency's Catchment Abstraction Management Strategy as well as the Review of Consents process. Demand for increased recreational activities is a source of potential concern for the future. Regularisation of the functions of the competent authorities, currently being sought, should reduce the risk of damage to the SAC as a result of developments for such activities. Source: Natura 2000 Standard Data Form – JNCC, consultation response from Natural England – Feb 2007 and documents at http://publications.naturalengland.org.uk/publication.

2. Conservation objectives:

■ Annex I habitats that are a primary reason for selection of this site:

Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation (Rivers with floating vegetation often dominated by water-crowfoot)

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site:

Transition mires and quaking bogs (Very wet mires often identified by an unstable 'quaking' surface)

■ Annex II species that are a primary reason for selection of this site:

White-clawed (or Atlantic stream) crayfish *Austropotamobius pallipes*
Sea lamprey *Petromyzon marinus*
Brook lamprey *Lampetra planeri*
River lamprey *Lampetra fluviatilis*
Twaite shad *Alosa fallax*
Atlantic salmon *Salmo salar*
Bullhead *Cottus gobio*
Otter *Lutra lutra*

■ Annex II species present as a qualifying feature, but not a primary reason for site selection:

Allis shad *Alosa alosa*

The conservation objectives are as follows:

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

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

3. Relevant plans or projects (indicative from 2015):

PLANS:

- Development Plans within the **Forest of Dean** District including adopted Core Strategy and Area Action Plans & potentially other Districts within Gloucestershire
- Monmouthshire Unitary Development Plan
- Development Plans within Herefordshire
- Powys Unitary Development Plan
- Gloucestershire Waste Core Strategy Adopted 2012
- Gloucestershire Minerals Local Plan Adopted 2003
- Ross and Hereford Flood Defence Schemes
- Severn Estuary Flood Risk Management Strategy
- Any other Environment Agency plans – e.g. covering river navigation issues (as advised).
- Gloucestershire Flood Risk Management Strategy
- Wye Valley AONB Management Plan
- Gloucestershire Local Transport Plan (2015-2031)
- Wales Transport Strategy plus Wales National Transport Plan

PROJECTS:

- Lydney Docks Regeneration Project
- Any other major development identified in Development Plans (or elsewhere) with the potential to have a significant effect on the River Wye.
- Any Severn Tidal Power Scheme that is confirmed in the future

4. Comment on plans or projects:

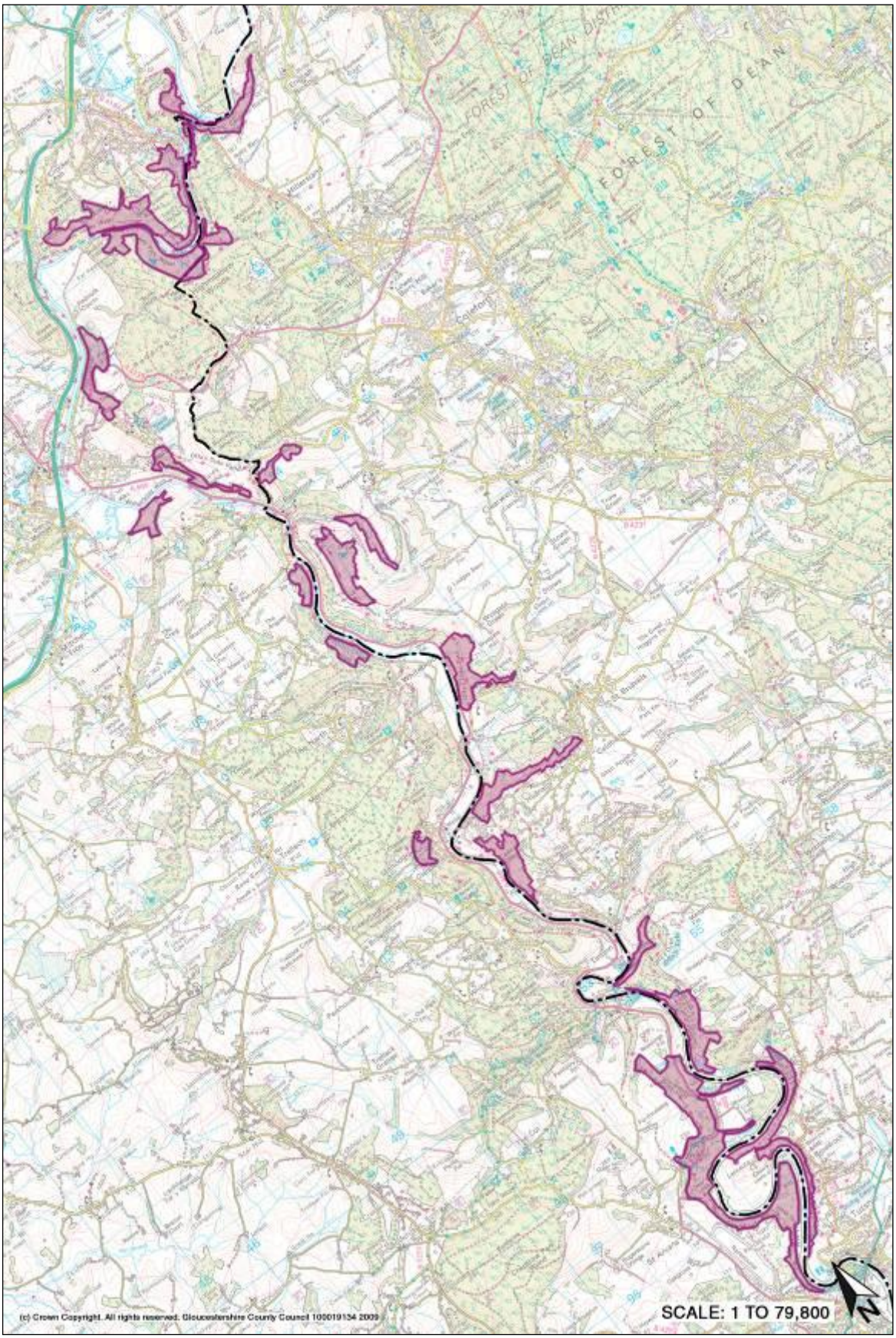
The above list of projects relates to the whole of the District, but it is likely that the majority of developments will not be near enough to the River Wye to have significant effects. Any comments on projects (e.g. especially from consultees outside or bordering Gloucestershire) that may potentially have 'in-combination' effects are welcomed.

5. General statements from Natural England on potential impacts from Minerals & Waste development:

European interest: allis shad; twaite shad; white-clawed crayfish; bullhead; river lamprey; brook lamprey; sea lamprey; otter; salmon; transition mires and quaking bogs; water-crowfoot communities. Mineral workings could affect these interests by damaging side water flows into the river and associated habitats and by pollution arising from the run-off from the workings. Waste sites would be a possible pollution source. Source: Letter from Natural England – July 2006.

Wye Valley Woodlands

Designation: Special Area of Conservation (SAC)
Location: Forest of Dean / Monmouthshire / Herefordshire
Grid Reference: SO530957
Area: 916.24



Wye Valley Woodlands: Natural England library image

1. The characteristics of the European Site:

General Site Character: Heath, Scrub, Maquis and Garrigue. Phygrana (10%) Dry grassland. Steppes (0.2%) Broad-leaved deciduous woodland (87%) Coniferous woodland (0.7%) Inland rocks. Screes. Sands. Permanent snow and ice (0.6%) Other land (including towns, villages, roads, waste places, mines, industrial sites) (1.5%)

Vulnerability: A significant proportion of the SAC is already managed sympathetically by the Forestry Commission, Natural England (as one of the owners*) the Woodland Trust and county Wildlife Trusts. Principal pressures are from lack of management (particularly traditional management, e.g. coppice), increasing deer numbers and inappropriate management proposals which would alter the recognised woodland stand types. Felling license approval and Forestry Commission consultation with Natural England/Countryside Council for Wales (Natural Resources Wales) are adequate in addressing the latter issue. Positive management is being promoted through management plans (CCW), Site Management Statements and management agreements, and the Woodland Grant Scheme (including specialised targeting) is being encouraged where possible and appropriate to return some woods to active management. *'Highbury' and 'The Hudnails' are both National Nature Reserve sites in the Wye Valley Woodlands. Source: Natura 2000 Standard Data Form – JNCC & consultation response from Natural England – Feb 2007 and June 2009.

2. Conservation objectives:

■ Annex I habitats that are a primary reason for selection of this site:

***Asperulo-Fagetum* beech forests (Beech forests on rich to neutral soils)**

The Wye Valley lies on the southern Carboniferous limestone and contains abundant and near-continuous semi-natural woodland along the river gorge. Beech stands occur as part of a mosaic with a wide range of other woodland types, and represent the western range of *Asperulo-Fagetum* beech forests. Such a variety of woodland types is rare within the UK. In places lime *Tilia* sp., elm *Ulmus* sp. and oak *Quercus* sp. share dominance with the beech. Structurally the woods include old coppice, pollards and high forest types. Lady Park Wood, one of the component sites, is an outstanding example of near-natural old-growth structure in mixed broad-leaved woodland, and has been the subject of detailed long-term monitoring studies.

***Tilio-Acerion* forests of slopes, screes and ravines (Mixed woodland on base-rich soils associated with rocky slopes)**

The woods of the lower Wye Valley on the border of south Wales and England form one of the most important areas for woodland conservation in the UK and provide the most extensive examples of *Tilio-Acerion* forest in the west of its range. A wide range of ecological variation is associated with slope, aspect and landform. The woodland occurs here as a mosaic with other types, including beech *Fagus sylvatica* and pedunculate oak *Quercus robur* stands. Uncommon trees, including large-leaved lime *Tilia platyphyllos* and rare whitebeams such as *Sorbus porrigentiformis* and *S. rupicola* are found here, as well as locally

uncommon herbs, including wood barley *Hordelymus europaeus*, stinking hellebore *Helleborus foetidus*, narrow-leaved bitter-cress *Cardamine impatiens* and wood fescue *Festuca altissima*.

Taxus baccata woods of the British Isles (Yew dominated woodland)

Wye Valley is representative of yew *Taxus baccata* woods in the south-west of the habitat's range. It lies on the southern Carboniferous limestone, and yew occurs both as an understorey to other woodland trees and as major yew-dominated groves, particularly on the more stony slopes and crags.

■ Annex II species present as a qualifying feature, but not a primary reason for site selection:

Lesser horseshoe bat *Rhinolophus hipposideros*

The conservation objectives are as follows:

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

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

3. Relevant plans or projects (indicative from 2015):

PLANS:

- Development Plans within the **Forest of Dean** District including adopted Core Strategy and Area Action Plans & potentially other Districts within Gloucestershire
- Monmouthshire Unitary Development Plan
- Development Plans within Herefordshire
- Gloucestershire Waste Core Strategy Adopted 2012
- Gloucestershire Minerals Local Plan Adopted 2003.
- Wye Valley AONB Management Plan
- Gloucestershire Flood Risk Management Strategy
- Gloucestershire Local Transport Plan (2015-2031)
- Wales Transport Strategy plus Wales National Transport Plan

PROJECTS:

- Any other major development identified in Development Plans (or elsewhere) with the potential to have a significant effect on the Wye Valley Woodlands.

4. Comment on plans or projects:

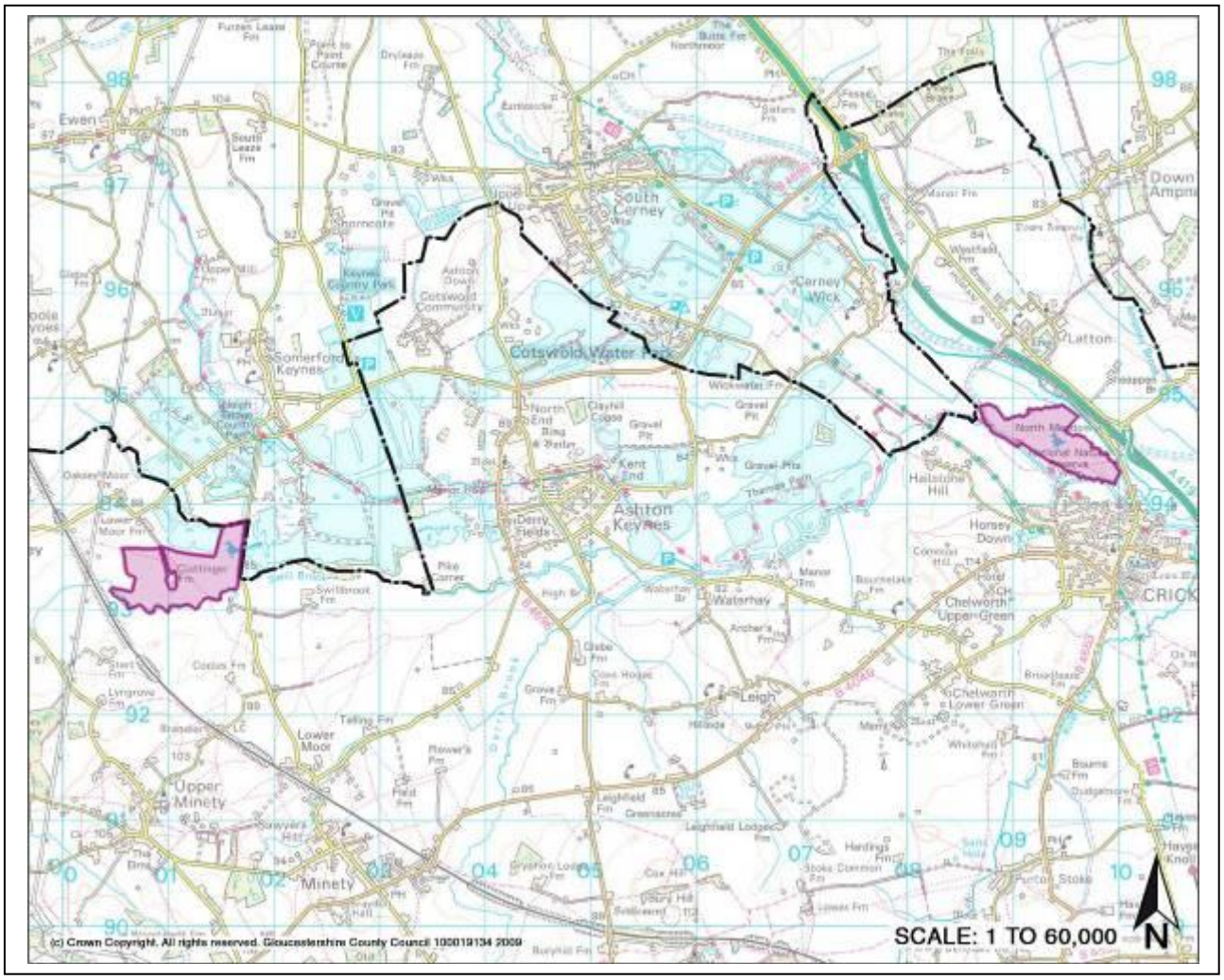
The above list of projects relates to the whole of the District, but it is likely that the majority of developments will not be near enough to the Wye Valley Woodlands to have significant effects. Any comments on projects (e.g. especially from consultees outside or bordering Gloucestershire) that may potentially have 'in-combination' effects are welcomed.

5. General statements from Natural England on potential impacts from Minerals & Waste development:

European interest: yew woods; lime/maple woods; beech woods; lesser horseshoe bats. Not likely to affected by water-borne pollution or effects on the groundwater caused by mineral extraction. Waste sites if close could have an effect through increased atmospheric deposition of nitrogen. Nearby mineral workings could have an adverse effect through dust deposition. Source: Letter from Natural England – July 2006.

North Meadow & Clattinger Farm

Designation: Special Area of Conservation (SAC)
Location: Wiltshire
Grid Reference: SU014934
Area: 104.88ha



North Meadow: Natural England library image

1. The characteristics of the European Site:

General Site Character: Inland water bodies (standing water, running water) (2%) Dry grassland. Steppes (15%) Humid grassland. Mesophile grassland (71%) Improved grassland (12%)

Vulnerability: These grasslands are partly a National Nature Reserve (NNR), with the other part owned by a wildlife charity. The habitat is dependent on traditional agricultural practices of hay-cutting with aftermath cattle grazing or seasonal cattle grazing. These management requirements are addressed in the NNR management plan and in a site management statement concerning the private land which stipulates an appropriate regime. The wildlife charity is developing a management plan with Natural England to secure the long-term maintenance of the interest feature. However the traditional hay meadow management is uneconomic in the present agricultural climate. Part of the site is currently in an agri-environment scheme; North Meadow is owned by Natural England and is a National Nature Reserve. Adjacent extraction and renovation of gravel workings are a potential threat to water levels and are subject to monitoring and mitigation measures. Source: Natura 2000 Standard Data Form – JNCC & consultation response from Natural England – Feb 2007.

2. Conservation objectives:

■ Annex I habitats that are a primary reason for selection of this site:

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

North Meadow and Clattinger Farm in the Thames Valley in southern England is one of two sites representing lowland hay meadows near the centre of its UK range. As in the case of the Oxford Meadows, this site represents an exceptional survival of the traditional pattern of management and so exhibits a high degree of conservation of structure and function. This site also contains a very high proportion (>90%) of the surviving UK population of fritillary *Fritillaria meleagris*, a species highly characteristic of damp lowland meadows in Europe and now rare throughout its range.

The conservation objectives are as follows:

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- **The extent and distribution of qualifying natural habitats**
- **The structure and function (including typical species) of qualifying natural habitats, and**
- **The supporting processes on which qualifying natural habitats rely**

3. Relevant plans or projects (indicative from 2015):

PLANS:

- Wiltshire & Swindon Development Plans including Minerals & Waste Plans and particularly the HRA for site minerals & waste allocations
- Development Plans within Cotswold District including Adopted Cotswold District Local Plan.
- Gloucestershire Waste Core Strategy Adopted 2012
- Gloucestershire Minerals Local Plan Adopted 2003
- Oxfordshire Minerals & Waste Local Plan Adopted (saved policies) and emerging plan(s)
- Gloucestershire Flood Risk Management Strategy

PROJECTS:

- Housing at Kingshill
- Restoration operations at Sandpool Farm, Somerford Keynes.
- Mineral extraction in the Cotswold Water Park at Cerney Wick Farm Quarry, Latton Farm Quarry and Eysey Manor Farm.
- Restoration sites in the Cotswold Water Park e.g. Cerney Wick Farm & Cleveland Lakes
- Proposed mineral extraction and restoration in the vicinity of Down Ampney
- Any other major development identified in Development Plans (or elsewhere) with the potential to have a significant effect on North Meadow & Clattinger Farm.

4. Comment on plans or projects:

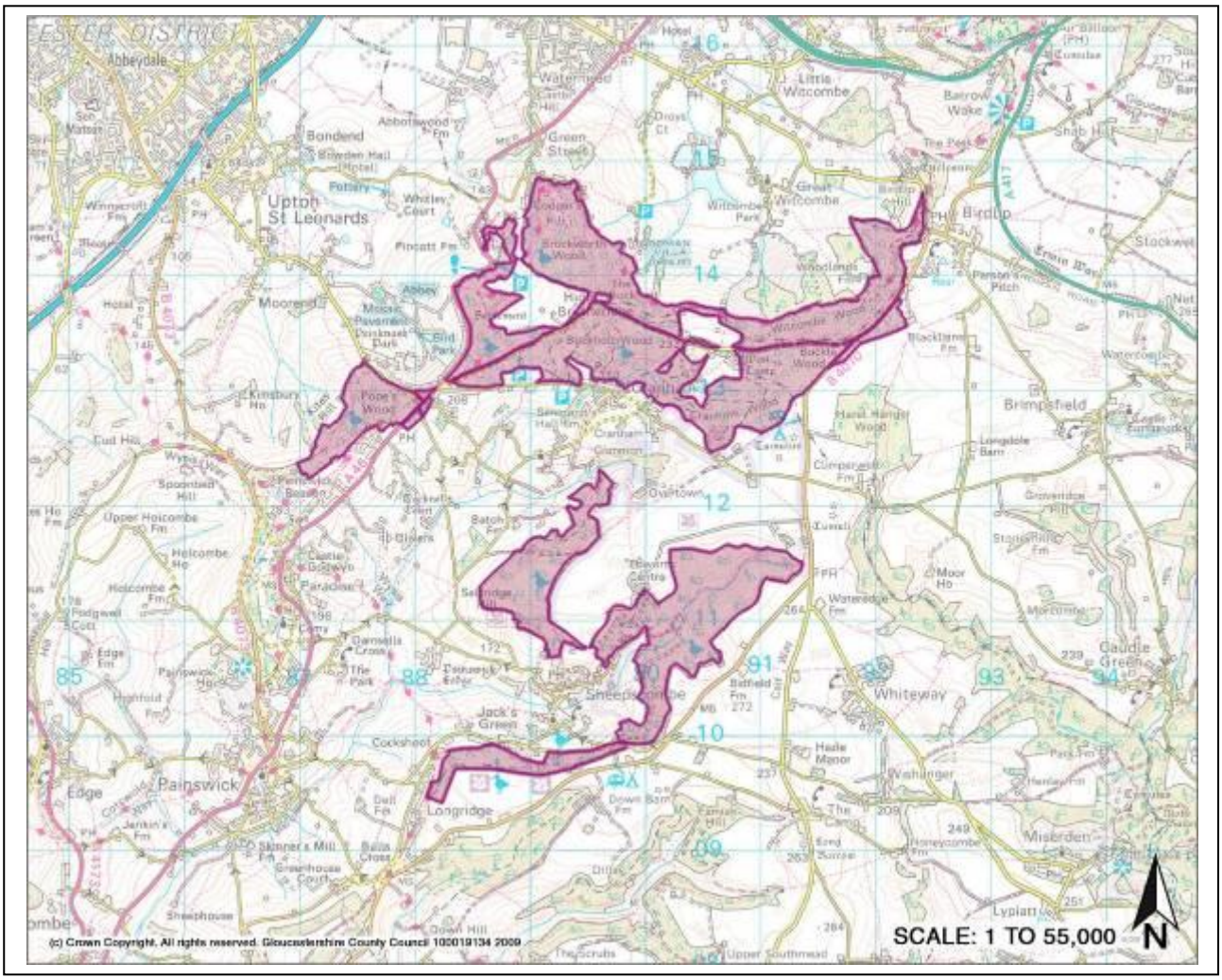
The above list of projects relates to the whole of the District, but it is likely that the majority of developments will not be near enough to North Meadow & Clattinger Farm to have significant effects. Any comments on projects (e.g. especially from consultees outside or bordering Gloucestershire) that may potentially have 'in-combination' effects are welcomed.

5. General statements from Natural England on potential impacts from Minerals & Waste development:

European interest: lowland hay meadow on river valley alluvial soil. Mineral extraction in or near the site could affect groundwater levels or surface or subsurface water movements. Extraction above the site could also lead to pollution from runoff. Waste sites could pose a pollution threat, especially from nutrient enrichment. Source: Letter from Natural England (July 2006).

Cotswold Beechwoods

Designation: Special Area of Conservation (SAC)
Location: Stroud / Cotswold / Tewkesbury
Grid Reference: SO898134
Area: 585.85ha



Cotswold Beechwoods: Natural England library image

1. The characteristics of the European Site:

General Site Character: Inland water bodies (standing water, running water) (1%) Dry grassland. Steppes (1.5%) Broad-leaved deciduous woodland (82%) Coniferous woodland (5%) Mixed woodland (10%) Other land (including towns, villages, roads, waste places, mines, industrial sites) (0.5%).

Vulnerability: The woodland is being maintained by a variety of silvicultural practices including selective forestry, group fellings and small areas of coppicing. Age-class and structural diversity is being enhanced through sympathetic Woodland Grant Schemes. Early removal of planted conifers and other non-native species is being encouraged in areas where planting occurred in the 1970s. Source: Natura 2000 Standard Data Form – JNCC and consultation response from Natural England – June 2009.

2. Conservation objectives:

■ Annex I habitats that are a primary reason for selection of this site:

***Asperulo-Fagetum* beech forests (Beech forests on neutral to rich soils)**

The Cotswold Beechwoods represent the most westerly extensive blocks of *Asperulo-Fagetum* beech forests in the UK. The woods are floristically richer than the Chilterns, and rare plants include red helleborine *Cephalanthera rubra*, stinking hellebore *Helleborus foetidus*, narrow-lipped helleborine *Epipactis leptochila* and wood barley *Hordelymus europaeus*. There is a rich mollusc fauna. The woods are structurally varied, including blocks of high forest and some areas of remnant beech coppice.

■ Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site:

Semi-natural dry grasslands and scrubland facies on calcareous substrates *Festuco-Brometalia (Dry grasslands and scrublands on chalk or limestone)*

The conservation objectives are as follows:

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- **The extent and distribution of qualifying natural habitats**
- **The structure and function (including typical species) of qualifying natural habitats, and**
- **The supporting processes on which qualifying natural habitats rely**

3. Relevant plans or projects (indicative from 2015):

PLANS:

- Development Plans within **Stroud** District including Adopted Stroud Local Plan.
- Development Plans within **Tewkesbury** Borough including Adopted Tewkesbury Local Plan
- Development Plans within **Cotswold** District including Adopted Cotswold Local Plan
- Gloucestershire Waste Core Strategy Adopted 2012
- Gloucestershire Minerals Local Plan Adopted 2003
- Gloucestershire Local Transport Plan (2015-2031)
- Gloucestershire Flood Risk Management Strategy
- Cheltenham Surface Water Management Plan

PROJECTS:

- Cotswolds Canal Restoration Project
- Housing at Hunts Grove/Whaddon
- Housing at Brockworth / Brockworth District
- Development at Aston Down
- Housing at Lister Petter
- Proposed Elmbridge Park & Ride
- Housing north of Gloucester
- Housing north west of Cheltenham and associated infrastructure and employment

- Housing at Leckhampton
- Housing at M and G Sports
- Housing at Southam
- Various waste disposal and management operations at Wingmoor Farm
- Housing at Kingshill North and South
- Housing at Bourton on the Water
- Waste Facilities at Javelin Park (consented) & Moreton Valence (consented)
- Any other major development identified in Development Plans (or elsewhere) with the potential to have a significant effect on the Cotswold Beechwoods (SAC).

4. Comment on plans and projects:

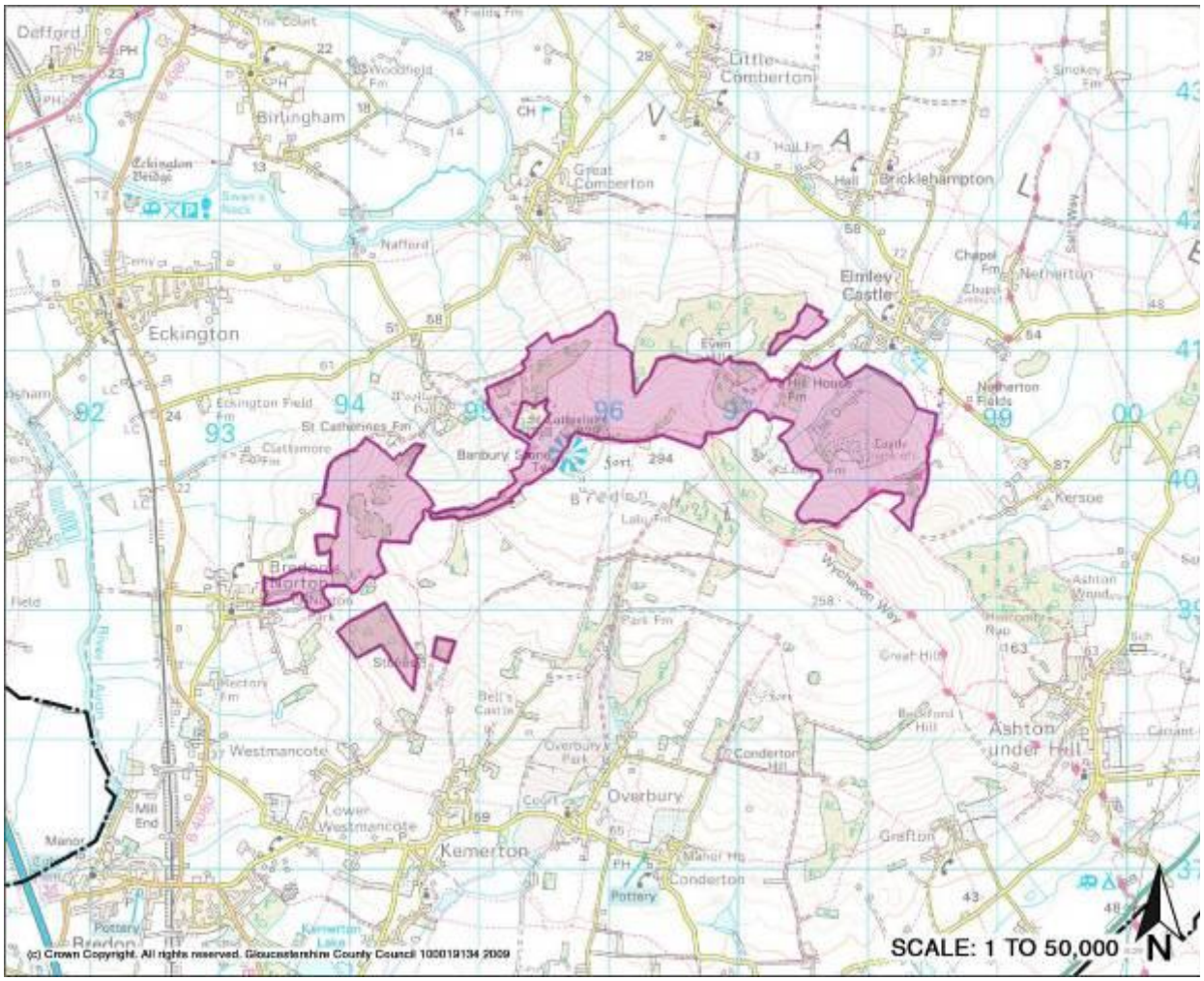
The above list of projects relates to the whole of the districts of Stroud, Tewkesbury and Cotswolds, but it is likely that the majority of developments will not be near enough to the Cotswolds Beechwoods to have significant effects. Any comments on projects (e.g. especially from consultees outside or bordering Gloucestershire) that may potentially have 'in-combination' effects are welcomed.

5. General statements from Natural England on potential impacts from Minerals & Waste development:

European interest: beech woodlands; dry limestone grasslands. Not likely to affected by water-borne pollution or effects on the groundwater caused by mineral extraction. Waste sites if close could have an effect through increased atmospheric deposition of nitrogen. Nearby mineral workings could have an adverse effect through dust deposition. Source: Letter from Natural England – July 2006.

Bredon Hill

Designation: Special Area of Conservation (SAC)
Location: Wychavon, Worcestershire
Grid Reference: SO965406
Area: 359.86ha



Bredon Hill: Natural England library image

1. The characteristics of the European Site:

General Site Character: Heath. Scrub. Maquis and garrigue. Phygrana (10%) Dry grassland. Steppes (10%) Non-Forest areas cultivated with woody plants (including orchards, groves, vineyards, (80%)

Vulnerability: Bredon Hill is an area of pasture woodland and ancient parkland providing habitat for *Limoniscus violaceus*. The main threats are the lack of a replacement generation of trees for the current ancient trees over much of the hill, as many of the younger trees have been removed to increase stock grazing areas; the overall number of ancient trees suitable for *Limoniscus violaceus* is relatively small. Management agreements are being used to preserve existing tree stocks and to provide replacement planting. Source: Natura 2000 Standard Data Form – JNCC.

2. Conservation objectives:

■ Annex II species that are a primary reason for selection of this site:

Violet click beetle *Limoniscus violaceus*

Violet click beetle *Limoniscus violaceus* were recorded at Bredon Hill in 1989, although there is a 1939 record from 'Tewkesbury', which may refer to Bredon Hill. It has been found in each of several years since. It should be noted that the Violet click beetle is a mobile species. The scarp slope that begins at Cleeve Common and extends north into Worcestershire contains many veteran trees in woods and hedgerows and is an important resource for deadwood invertebrates including the Violet click beetle. Impacts on the hedgerow and veteran tree resource in this area may affect the integrity of the site. Bredon Hill is a very important site for fauna associated with decaying timber on ancient trees, including many Red Data Book and Nationally Scarce invertebrate species. Source: JNCC & consultation response from Natural England – Feb 2007.

The conservation objectives are as follows:

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- **The extent and distribution of the habitats of qualifying species**
- **The structure and function of the habitats of qualifying species**
- **The supporting processes on which the habitats of qualifying species rely**
- **The populations of qualifying species, and,**
- **The distribution of qualifying species within the site.**

3. Relevant plans or projects (indicative from 2015):

PLANS:

- Worcestershire Minerals & Waste Development Plans
- Worcestershire Local Transport Plan 2017-2030
- Development Plans within Wychavon District including Adopted Wychavon Local Plan
- Development Plans within Tewkesbury Borough including Adopted Tewkesbury Borough Local Plan
- Gloucestershire Waste Core Strategy Adopted 2012
- Gloucestershire Minerals Local Plan Adopted 2003

PROJECTS:

- Housing north of Gloucester
- Housing north west of Cheltenham
- Housing at Brockworth / Brockworth District
- Housing at Southam
- Various waste disposal and management operations at Wingmoor Farm.
- Any other major development identified in Development Plans (or elsewhere) with the potential to have a significant effect on Bredon Hill.

4. Comment on plans and projects:

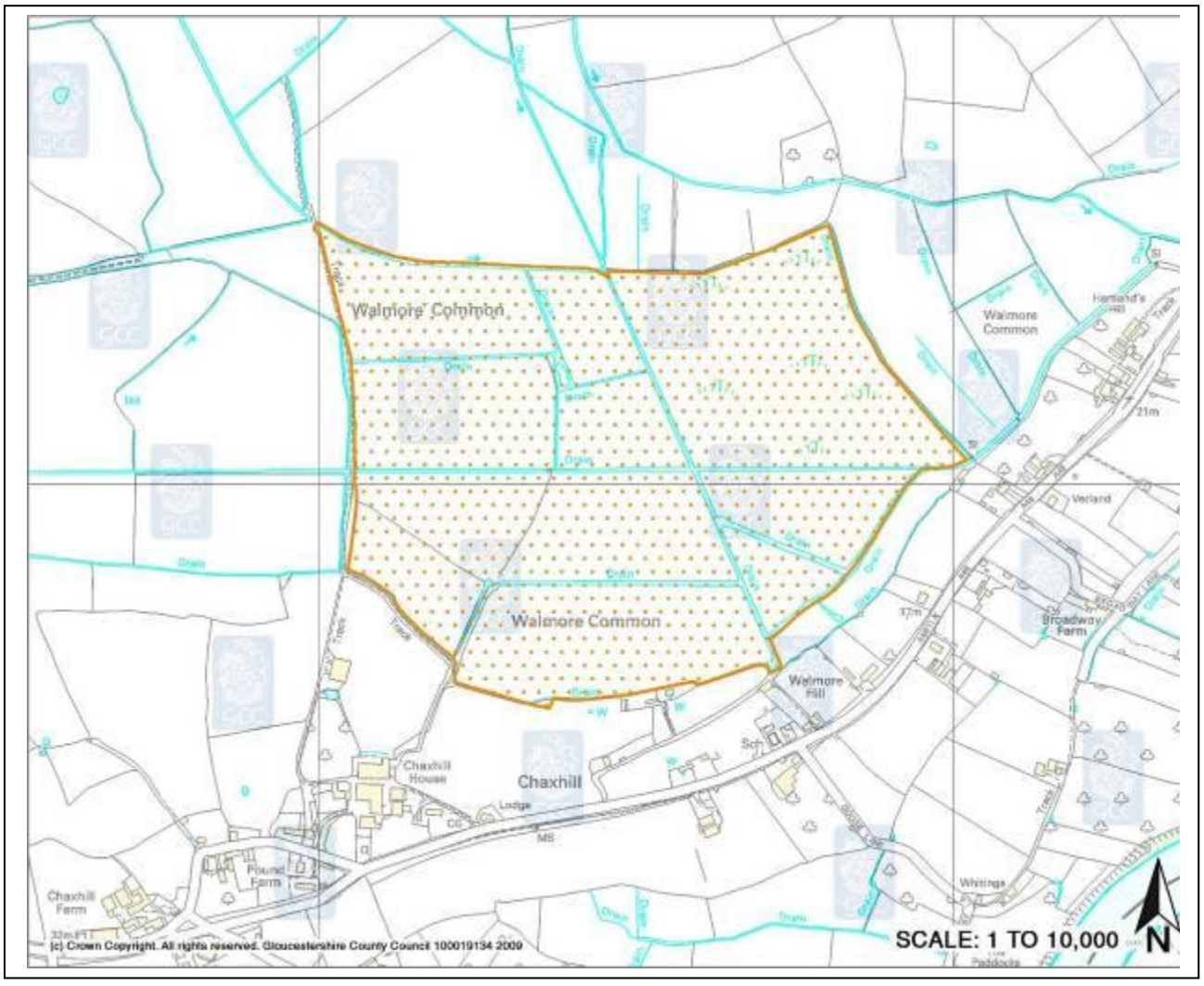
The above list of projects relates to the whole of Tewkesbury District, but it is likely that the majority of developments will not be near enough to Bredon Hill to have significant effects. Any comments on projects (e.g. especially from consultees outside or bordering Gloucestershire) that may potentially have 'in-combination' effects are welcomed.

5. General statements from Natural England on potential impacts from Minerals & Waste development:

European interest: *Limoniscus violaceus* - the violet click beetle. Similar issues as for Dixton Wood with respect to how the site may potentially be affected by minerals or waste development. Source: Letter from Natural England – July 2006.

Walmore Common

Designation: Special Protection Area (SPA) & Ramsar site
Location: Forest of Dean
Grid Reference: SO745150
Area: 52.85ha



Walmore Common: Natural England library image

1. The characteristics of the European Site:

General Site Character: Walmore Common occupies a low lying area in the Severn Vale, which is subject to winter flooding. The site is a wetland overlying peat providing a variety of habitats including improved neutral grassland, unimproved marshy grassland and open water ditches. The common is part of a series of sites within the Severn Vale which, in winter, form an important refuge and feeding area for wildfowl.

Vulnerability: The site is a Ramsar site, an EU Special Protection Area and a Site of Special Scientific Interest. A water level management plan, currently in preparation, will ensure appropriate conditions are retained for the wintering bird interest. The marsh grassland and ditches will be maintained and enhanced by maintaining high water levels from spring to autumn. The nearby Timber Preservation plant has contingency plans in the event of accidental spillage. (Source: Ramsar Sites Information Service at: http://www.wetlands.org/rsis/)

2. Conservation objectives:

■ This site qualifies under EU Habitats Directive 79/409/EES Article 4.1 by regularly supporting (in winter) internationally important numbers of Bewick's swan *Cygnus columbianus bewickii.* During the five winter periods 1986/87 to 1990/91 the average peak count was 207 birds (1% of the NW European population and 3% of British. Source: SPA citation.

■ This site qualifies under Ramsar criterion 6 by supporting species/populations occurring at levels of international importance: The qualifying species/populations (peak counts in winter) is Bewick's swan *Cygnus columbianus bewickii*, 43 individuals, representing an average of 0.5% of Great Britain's population (5 year peak mean 1998/9 – 2002/3). Source: JNCC.

The conservation objectives are as follows:

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- **The extent and distribution of the habitats of the qualifying features**
- **The structure and function of the habitats of the qualifying features**
- **The supporting processes on which the habitats of the qualifying features rely**
- **The population of each of the qualifying features, and,**
- **The distribution of the qualifying features within the site.**

3. Relevant plans or projects (indicative from 2015):

PLANS:

- Development Plans within the **Forest of Dean** District including Adopted Forest of Dean Core Strategy and Area Action Plans.
- Gloucestershire Waste Core Strategy 2012
- Gloucestershire Minerals Local Plan Adopted 2003
- Gloucestershire Local Transport Plan (2015-2031)
- Gloucestershire Flood Risk Management Strategy
- Severn Estuary Flood Risk Management Strategy
- Gloucester, Churchdown & Innsworth Surface Water Management Plan
- Tewkesbury Surface Water Management Plan

PROJECTS:

- Development of wind turbines or wind farms along the Severn Estuary and the area around Walmore Common.
- Open access on common land
- Operation of sluice and water levels; implementation of a Water Level Management Plan and ditch management rotation.
- Any other major development identified in Development Plans (or elsewhere) with the potential to have a significant effect on Walmore Common SPA.

4. Comment on plans and projects:

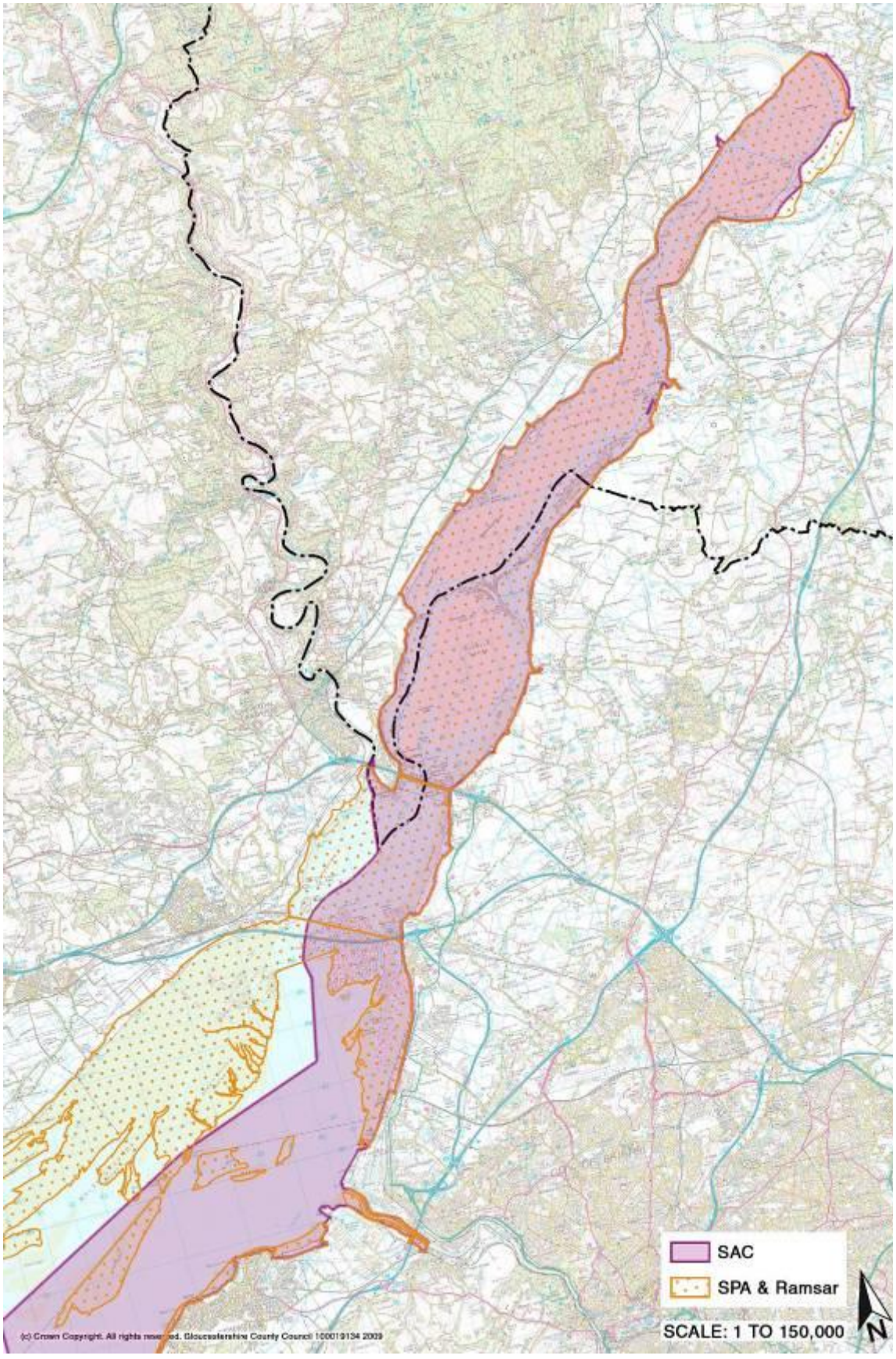
The above list of projects relates to the whole of the Forest of Dean District, but it is likely that the majority of developments will not be near enough to Walmore Common to have significant effects. Any comments on projects (e.g. especially from consultees outside or bordering Gloucestershire) that may potentially have 'in-combination' effects are welcomed.

5. General statements from Natural England on potential impacts from Minerals & Waste development:

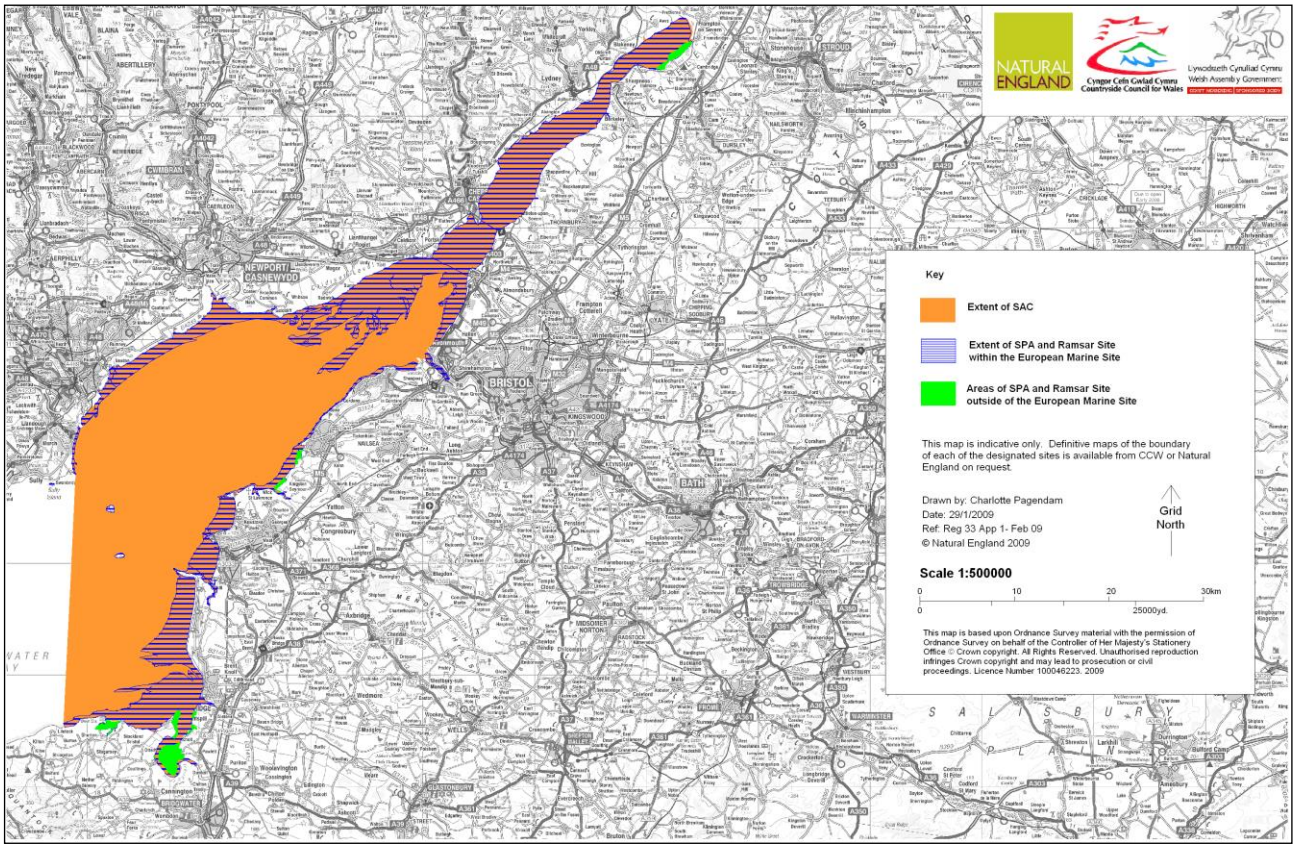
European interest: wintering Bewick's swans. Mineral extraction in or near the catchment could affect groundwater levels or water movements. Extraction above the site could also lead to pollution from runoff. Waste sites could pose a pollution threat. Source: Letter from Natural England – July 2006.

Severn Estuary

Designation: Special Area of Conservation (SAC) / Special Protection Area (SPA) / Ramsar site
Location: Stroud, Forest of Dean, South Gloucestershire, Monmouthshire, Bristol City, North Somerset, Newport, Cardiff, Vale of Glamorgan
Grid Reference: 51 13 29N 03 02 57W
Area: 24662.98 ha



Note: Due to the GIS dataset used, the above map as well as the Gloucestershire-wide map on page 3 does not show the full extent of the Severn Estuary SAC outside Gloucestershire. Thus for clarification please also refer to the maps available on-line at https://data.nbn.org.uk/Site_Datasets or http://magic.defra.gov.uk/ .



Severn Estuary: Natural England library image

Over and above the brief summaries for the Severn Estuary in this baseline report, the NE/CCW report (2009) below is an important as a source of much more detailed information on conservation objectives and particular vulnerabilities as well as additional detail on condition, advice on operations and various methods of assessment.

" The Severn Estuary / Môr Hafren European Marine Site comprising: The Severn Estuary / Môr Hafren Special Area of Conservation (SAC). The Severn Estuary Special Protection Area (SPA). The Severn Estuary / Ramsar Site

Natural England & the Countryside Council for Wales' advice given under Regulation 33(2)(a) of the Conservation (Natural Habitats, &c.) Regulations 1994, as amended. June 2009"

This report is available at:

http://www.severnestuary.net/asera/severn.html

Note - Regulation 33(2)(a) of the 1994 Regulations is now Regulation 37(3) in the consolidated 2017 Regulations.

1. The characteristics of the European Site:

General Site Character: 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 (after the Bay of Fundy, Canada). 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.

Vulnerability: 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 and tourism based activities and disturbance. These issues are being predominantly addressed through existing control measures. The Severn Estuary Strategy (a non statutory plan developed since 1995) has been working towards the sustainable management of the site, through the involvement of local authorities, interested parties and local people. In addition the marine part of the European site is managed under a Management Scheme prepared by the Association of Severn Estuary Relevant Authorities (ASERA) to ensure that the occurrence of current activities of all the Relevant Authorities are compatible with the site's conservation objectives.

2. Qualifying features

■ **Qualifies as a SAC as follows:**

The Severn Estuary has been designated an SAC on the basis that it supports occurrences of habitat types and species listed in Annexes I and II respectively of the Habitats Directive that are considered important in a European context and meeting the criteria in Annex III of the Directive. The designation includes an overarching **"estuaries"** feature within which **subtidal sandbanks**, **intertidal mudflats and sandflats, Atlantic salt meadows** and **reefs** (of *Sabellaria alveolata*) and **three species of migratory fish** are defined as both features in their own right and as sub-features of the estuary feature. In addition **hard substrate habitats** including **eel grass beds,** the estuary-wide **assemblage of fish species** and the **assemblage of waterfowl species** (for which the Ramsar Site and SPA are specifically designated) are identified as **notable estuarine assemblages** which are an intrinsic part of the estuary ecosystem – these are therefore covered by the "estuaries" feature.

Feature name	Scientific term (explanation)	EU Code
Annex I habitat types		
SAC interest feature 1: **Estuaries**	Estuaries	1130
SAC interest feature 2: **Subtidal sandbanks**	Sandbanks which are slightly covered by seawater all the time	1110
SAC interest feature 3: **Intertidal mudflats and sandflats**	Mudflats and sandflats not covered by seawater at low tide	1140
SAC interest feature 4: **Atlantic salt meadows (Glauco-Puccinellietalia maritimae)**	Atlantic salt meadows (*Glauco puccinellietalia maritimae)*	1330
SAC interest feature 5: **Reefs**	Reefs	1170
Annex II species		
SAC interest feature 6: **River lamprey**	*Lampetra fluviatilis*	1099
SAC interest feature 7: **Sea lamprey**	*Petromyzon marinus*	1095
SAC interest feature 8: **Twaite shad**	*Alosa fallax*	1103

Source: The Severn Estuary / Môr Hafren European Marine Site – NE/CCW – 2009.

Qualifies as a SPA as follows:

The Severn Estuary was classified as an SPA on 13 July 1995 (subsuming a previously designated SPA called the Upper Severn Estuary). It should be noted that since designation changes in bird numbers have occurred in relation to the qualifying thresholds, which have themselves changed. These changes are highlighted by the SPA review published by the JNCC. These changes are likely to be the subject of formal changes to the SPA designation in due course, however at present the legally protected species remain those in the original 1995 citation.

The SPA within the European Marine Site boundary includes saltmarshes and the adjacent extensive areas of intertidal mud, sand and rocky shores. All these habitats provide essential food and resting places for the wide range of wintering and migratory waterfowl and are therefore identified as key “supporting habitats” for the conservation of these species.

Species	Original SPA Citation (1995)	SPA Review (2001)	Natura 2000 Form (2006)	Notes & Supporting Habitats
Internationally important populations of regularly occurring Annex 1 species [Under Article 4.1 of the EU Birds Directive]				
SPA interest feature 1: **Bewick’s swan**	✓	✓	✓	Over-wintering. EU Code A037 Intertidal mudflats and sandflats. Saltmarsh
Internationally important populations of regularly occurring migratory bird species [Under Article 4.2 of the EU Birds Directive]				
SPA interest feature 2: **European white-fronted goose**	✓	☒	✓	All are over-wintering apart from the Ringed plover which is on passage. EU Codes A048, A051, A149, A162 & A394 Intertidal mudflats and sandflats. Saltmarsh Hard substrate habitats (Freshwater coastal grazing marsh, improved grassland and open standing waters also occur within the SPA but these lie outside the EMS boundary)
SPA interest feature 3: **Dunlin**	✓	✓	✓	
SPA interest feature 4: **Redshank**	✓	✓	✓	
SPA interest feature 5: **Shelduck**	✓	✓	✓	
SPA interest feature 6: **Gadwall**	✓	☒	✓	
Curlew	☒	✓	☒	
Pintail	☒	✓	☒	
Ringed plover	☒	✓	☒	
SPA interest feature 7: Internationally important assemblage of waterfowl (wildfowl and waders) [Under Article 4.2 of the EU Birds Directive] [waterbird assemblage]				
Bewick’s swan	✓	✓	The Natura 2000 data from does not list separate waterfowl	The wintering waterfowl assemblage includes all regularly occurring waterfowl. Species that qualify as a listed component of the assemblage include all internationally important regularly
European white-fronted goose	✓	✓		
Dunlin	✓	✓		

Redshank	✓	✓	species within this assemblage	occurring migratory species as well as the Annex 1 wintering species. The list also includes species present in nationally important numbers or species whose populations exceed 2,000 individuals. In the original citation, in winter, it is stated that the area regularly supported 68, 026 individual waterbirds. In the Natura 2000 form, in winter, it is stated that the area regularly supports 84,317 waterfowl Intertidal mudflats and sandflats. Saltmarsh Hard substrate habitats (Freshwater coastal grazing marsh, improved grassland and open standing waters also occur within the SPA but these lie outside the EMS boundary)
Shelduck	✓	✓		
Gadwall	✓	✓		
Wigeon	✓	✓		
Teal	✓	✓		
Pintail	✓	✓		
Pochard	✓	✓		
Tufted duck	✓	✓		
Ringed plover	✓	☒		
Grey plover	✓	✓		
Curlew	✓	✓		
Whimbrel	✓	✓		
Spotted redshank	✓	☒		
Lapwing	☒	✓		
Mallard	☒	✓		
Shoveler	☒	✓		

Source: The Severn Estuary / Môr Hafren European Marine Site – NE/CCW – 2009.

Qualifies as a Ramsar site as follows:

The Severn Estuary was classified as a Ramsar Site on 13 July 1995 (subsuming a previously designated Upper Severn Estuary Ramsar Site). The 1995 citation is the basis for advice as this defines the legally protected species covered by the Ramsar designation at this time. It should be noted that a number of changes have been made to the criteria since the listing of the Severn Estuary Ramsar Site. The table below shows the qualification under both the criteria used at the time of 1995 Ramsar designation and the revised 2005 criteria. The qualifying interest features of the Severn Estuary Ramsar Site overlap with those of the Severn Estuary SPA and SAC.

Ramsar Features (for which conservation objectives have been written)	**Criteria at designation (1995)** (original criteria)	**Revised Criteria (2005)** (criteria currently used on JNCC website)
Ramsar interest feature 1: ***Estuaries** *- characteristic physical form and flow, estuarine habitat communities and species assemblages* *- estuarine habitat communities and species assemblages*	**Criterion 1**: qualifies due to its immense tidal range affecting both the physical environment and biological communities present	**Criterion 1**: qualifies due to immense tidal range (second-largest in world), this affects both the physical environment and biological communities
	Criterion 2b: qualifies due to its unusual estuarine communities, reduced species diversity and high productivity. The high tidal range leads to strong tidal streams and high turbidity, producing communities characteristic of the extreme physical conditions of liquid mud and tide swept sand and rock	**Criterion 3**: qualifies due to its unusual estuarine communities, reduced diversity and high productivity
Ramsar interest feature 2: **Assemblage of migratory fish species:** Sea Lamprey River Lamprey Twaite Shad Allis Shad Salmon Sea Trout Eel	**Criterion 2c**: qualifies as it is important for the run of migratory fish between sea and river via estuary. Species include Salmon *Salmo salar*, sea trout *S. trutta*, sea lamprey *Petromyzon marinus*, river lamprey *Lampetra fluviatilis*, allis shad *Alosa alosa*, twaite shad *A. fallax*, and eel *Anguilla anguilla*	**Criterion 4**: qualifies as it is important for the run of migratory fish between sea and river via estuary. Species include Salmon *Salmo salar*, sea trout *S. trutta*, sea lamprey *Petromyzon marinus*, river lamprey *Lampetra fluviatilis*, allis shad *Alosa alosa*, twaite shad *A. fallax*, and eel *Anguilla anguilla*
** The wider estuarine fish assemblage is covered as a "notable species assemblage" sub feature of the SAC "Estuaries" feature*		**Criterion 8**: qualifies as the fish assemblage of the whole estuarine and river system is one of the most diverse in Britain, with over 110 species recorded

Ramsar Features (for which conservation objectives have been written)	**Criteria at designation (1995)** (Original criteria)	**Revised Criteria (2005)** (criteria currently used on JNCC website)
Ramsar interest feature 3: **Bewick's Swan** *Ramsar interest feature* 4: **European white-fronted goose** *Ramsar interest feature 5:* **Dunlin** *Ramsar interest feature 6:* **Redshank** *Ramsar interest feature 7:* **Shelduck** *Ramsar interest feature 8:* **Gadwall** **i.e. Internationally important <u>populations</u> of waterfowl**	**Criterion 3c**: qualifies by regularly in winter supporting internationally important populations (1% or more) of species of waterfowl Bewick's swan European white-fronted goose Dunlin Redshank Shelduck Gadwall	**Criterion 6**: qualifies as it regularly supports 1% of the individuals in a population of one species or subspecies of waterbird **Species with peak counts in winter - at designation:** Tundra/Bewick's swan Greater /European white-fronted goose Dunlin Common redshank Common shelduck Gadwall **Populations identified subsequent to designation:** Ringed plover (spring/autumn) Eurasian teal (winter) Northern pintail (winter) Lesser black-backed gull (breeding)
	Qualifies under **Criterion 2c** as it is particularly important for migratory birds during passage periods in spring and autumn. Nationally important populations of: Ringed plover Dunlin Whimbrel Redshank	
Ramsar interest feature 9: **Internationally important <u>assemblage</u> of waterfowl** This feature incorporates : ▪ waterfowl which contribute to the total peak **winter** count (criterion 3a) ▪ the above internationally important **wintering** populations (qualifying under criterion 3c) ▪ the migratory **passage** species (qualifying under criterion 2c) ▪ the nationally important populations (identified under other notable features of the Ramsar Site citation) The species are as follows : (w = wintering and p = passage): **Bewick's swan** (w) **European white-fronted goose** (w) **Shelduck** (w) **Dunlin** (w, p) **Redshank** (w, p) **Gadwall** (w) **Ringed plover** (w, p) **Whimbrel** (p) **Teal** (w) **Pintail** (w) **Wigeon** (w) **Pochard** (w) **Tufted duck** (w) **Grey plover** (w) **Curlew** (w) **Spotted redshank** (w)		
	Criterion 3a: qualifies by regularly supporting in winter over 20,000 waterfowl - (1988/89 to 1992/93) average peak count was 68,026 waterfowl: 17,502 wildfowl and 50,524 waders)	**Criterion 5**: qualifies as it supports an assemblage of international importance - (1998/99-2002/2003) 5 year peak mean was 70,919 waterfowl
	Other notable features: Nationally important wintering populations of: Wigeon Teal Pintail Pochard Tufted duck Ringed plover Grey plover Curlew Spotted redshank Also nationally important breeding population of Lesser black backed gull	

3. Conservation objectives

Severn Estuary SAC

The overall conservation objectives of the SAC are as follows:

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

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

The overall conservation objectives of the SPA are as follows:

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- **The extent and distribution of the habitats of the qualifying features**
- **The structure and function of the habitats of the qualifying features**
- **The supporting processes on which the habitats of the qualifying features rely**
- **The population of each of the qualifying features, and,**
- **The distribution of the qualifying features within the site.**

Note: Additionally more detailed SAC conservation objectives are set out below for SAC qualifying features but not also for SPA features. This is because (a) there are considerable overlaps with the SPA & Ramsar objectives and (b) there is a need to keep this document reasonably brief so as to be as user friendly as possible for interested parties and stakeholders. For the SPA and Ramsar conservation objectives, the 2009 CCW / NE report at http://www.severnestuary.net/asera/severn.html should be (and will be) referred to in relation to Gloucestershire's future HRA reporting.

■ SAC interest feature 1: Estuaries*

The conservation objective for the "estuaries" feature of the Severn Estuary SAC is to maintain the feature in favourable condition, as defined below:

The feature will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:

i. the total extent of the estuary is maintained.
ii. the characteristic physical form (tidal prism/cross sectional area) and flow (tidal regime) of the estuary is maintained;
iii. the characteristic range and relative proportions of sediment sizes and sediment budget within the site is maintained;
iv. the extent, variety and spatial distribution of estuarine habitat communities within the site is maintained;
v. the extent, variety, spatial distribution and community composition of hard substrate habitats and their notable communities is maintained;
vi. the abundance of the notable estuarine species assemblages is maintained or increased;
vii. the physico-chemical characteristics of the water column support the ecological objectives described above;
viii. Toxic contaminants in water column and sediment are below levels which would pose a risk to the ecological objectives described above.
ix. Airborne nutrient and contaminant loads are below levels which would pose a risk to the ecological objectives described above.

*****Hard substrate habitats including eel grass beds, the estuary-wide assemblage of fish species and the assemblage of waterfowl species (for which the Ramsar Site and SPA are specifically designated) are identified as notable estuarine assemblages which are an intrinsic part of the estuary ecosystem – these are covered by the "Estuaries" feature.

■ SAC interest feature 2: Subtidal sandbanks which are covered by sea water all the time (subtidal sandbanks)

The conservation objective for the "subtidal sandbanks" feature of the Severn Estuary SAC is to maintain the feature in favourable condition, as defined below:

The feature will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:

i. the total extent of the subtidal sandbanks within the site is maintained;
ii. the extent and distribution of the individual subtidal sandbank communities within the site is maintained;

iii. the community composition of the subtidal sandbank feature within the site is maintained;
iv. the variety and distribution of sediment types across the subtidal sandbank feature is maintained;
v. the gross morphology (depth, distribution and profile) of the subtidal sandbank feature within the site is maintained.

■ SAC interest feature 3: Mudflats and sandflats not covered by seawater at low tide (mudflats and sandflats)

The conservation objective for "mudflats and sandflats" feature of the Severn Estuary SAC is to maintain the feature in favourable condition, as defined below:

The feature will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:

i. The total extent of the mudflats and sandflats feature is maintained;
ii. the variety and extent of individual mudflats and sandflats communities within the site is maintained;
iii. the distribution of individual mudflats and sandflats communities within the site is maintained;
iv. the community composition of the mudflats and sandflats feature within the site is maintained;
v. the topography of the intertidal flats and the morphology (dynamic processes of sediment movement and channel migration across the flats) are maintained.

■ SAC interest feature 4: Atlantic salt meadow

The conservation objective for the "Atlantic salt meadow" feature of the Severn Estuary SAC is to maintain the feature in favourable condition, as defined below:

The feature will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:

i. the total extent of Atlantic salt meadow and associated transitional vegetation communities within the site is maintained;
ii. the extent and distribution of the individual Atlantic salt meadow and associated transitional vegetation communities within the site is maintained;
iii. the zonation of Atlantic salt meadow vegetation communities and their associated transitions to other estuary habitats is maintained;
iv. the relative abundance of the typical species**5** of the Atlantic salt meadow and associated transitional vegetation communities is maintained;
v. the abundance of the notable species of the Atlantic salt meadow and associated transitional vegetation communities is maintained.
vi. the structural variation of the salt marsh sward (resulting from grazing) is maintained within limits sufficient to satisfy the requirements of conditions iv and v above and the requirements of the Ramsar and SPA features;
vii. the characteristic stepped morphology of the salt marshes and associated creeks, pills, drainage ditches and pans, and the estuarine processes that enable their development, is maintained;
viii. any areas of *Spartina anglica* salt marsh (SM6) are capable of developing naturally into other saltmarsh communities.

■ SAC interest feature 5: Reefs

The conservation objective for the "reefs" feature of the Severn Estuary SAC is to maintain the feature in a favourable condition, as defined below:

The feature will be considered to be in favourable condition when, subject to natural processes**1**, each of the following conditions are met:

i. the total extent and distribution of *Sabellaria* reef is maintained;
ii. the community composition of the *Sabellaria* reef is maintained;
iii. the full range of different age structures of *Sabellaria* reef are present;
iv. the physical and ecological processes necessary to support *Sabellaria* reef are maintained.

■ SAC interest feature 6: River lamprey *Lampetra fluviatilis*

The conservation objective for the river lamprey *Lampetra fluviatilis* feature of the Severn Estuary SAC is to maintain the feature in a favourable condition, as defined below:

The feature will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:

i. the migratory passage of both adult and juvenile river lamprey through the Severn Estuary between the Bristol Channel and any of their spawning rivers is not obstructed or impeded by physical barriers, changes in flows, or poor water quality;
ii the size of the river lamprey population in the Severn Estuary and the rivers which drain into it, is at least maintained and is at a level that is sustainable in the long term;
iii. the abundance of prey species forming the river lamprey's food resource within the estuary, is maintained:
iv. Toxic contaminants in the water column and sediment are below levels which would pose a risk to the ecological objectives described above.

■ SAC interest feature 7: The conservation objective for sea lamprey *Petromyzon marinus*

The conservation objective for the sea lamprey *Petromyzon marinus* feature of the Severn Estuary SAC is to maintain the feature in a favourable condition, as defined below:

The feature will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:

i. the migratory passage of both adult and juvenile sea lamprey through the Severn Estuary between the Bristol Channel and any of their spawning rivers is not obstructed or impeded by physical barriers, changes in flows, or poor water quality;
ii. the size of the sea lamprey population in the Severn Estuary and the rivers which drain into it, is at least maintained as is at a level that is sustainable in the long term;
iii. the abundance of prey species forming the sea lamprey's food resource within the estuary, is maintained.
vi. Toxic contaminants in the water column and sediment are below levels which would pose a risk to the ecological objectives described above.

SAC interest feature 8: The conservation objective for twaite shad *Alosa fallax*

The conservation objective for the twaite Shad *Alosa fallax* feature of the Severn Estuary SAC is to maintain the feature in a favourable condition, as defined below:

The feature will be considered to be in favourable condition when, subject to natural processes, each of the following conditions are met:

i. the migratory passage of both adult and juvenile twaite shad through the Severn Estuary between the Bristol Channel and their spawning rivers is not obstructed or impeded by physical barriers, changes in flows or poor water quality;
ii. the size of the twaite shad population within the Severn Estuary and the rivers draining into it is at least maintained and is at a level that is sustainable in the long term.
iii. the abundance of prey species forming the twaite shad's food resource within the estuary, in particular at the salt wedge, is maintained.
iv. Toxic contaminants in the water column and sediment are below levels which would pose a risk to the ecological objectives described above.

Source: The Severn Estuary / Môr Hafren European Marine Site – NE/CCW – 2009 (at http://www.severnestuary.net/asera/severn.html) and overall conservation objectives at http://publications.naturalengland.org.uk.

4. Relevant plans or projects (indicative from 2015):

PLANS:

- Development Plans within the **Forest of Dean** District including Adopted Forest of Dean Core Strategy and Area Action Plans
- Development Plans within **Stroud** District including Adopted Stroud District Local Plan.
- Development Plans within South Gloucestershire including Adopted South Gloucestershire Local Plan and Minerals & Waste Local Plan.
- Gloucestershire Waste Core Strategy Adopted 2012
- Gloucestershire Minerals Local Plan Adopted 2003
- Development Plans within Bristol City including Adopted Bristol City Local Plan
- Development Plans within North Somerset including Adopted North Somerset Local Plan.
- Any relevant plans (including the Joint Waste Core Strategy) produced by the West of England Partnership.
- Monmouthshire Unitary Development Plan.
- Newport City Unitary Development Plan.
- Cardiff City Unitary Development Plan.
- The Vale of Glamorgan Council's Unitary Development Plan.
- The Shoreline Management Plan.
- Relevant Catchment Flood Management Plans & Catchment Abstraction Management Strategies (EA).
- Severn Estuary Flood Risk Management Strategy (EA)
- Severn Estuary River Basin Management Strategy
- Gloucestershire Flood Risk Management Strategy
- Gloucester, Churchdown & Innsworth Surface Water Management Plan
- Tewkesbury Surface water Management Plan
- Severn Estuary (European Marine Site) Management Scheme
- Devon & Severn IFCA Business Plan
- Rights of Way Improvement Plans
- Gloucestershire Local Transport Plan (2015-2031)
- Wales Transport Strategy plus Wales National Transport Plan
- Severn Estuary Partnership plans and strategies.
- Regional Technical Statement for Aggregates (South Wales RAWP)
- Wales Regional Waste Plans

PROJECTS:

Stroud

- Cotswolds Canal Restoration Project
- Housing at Hunts Grove

- Development /activity at Sharpness Docks
- Waste Facilities at Javelin Park (consented) & Moreton Valence (consented)

Forest of Dean

- Lydney Docks Regeneration Project
- Housing at East Lydney

Other – outside of Gloucestershire – English / East side of Estuary

- Development associated with the decommissioning of Berkeley power station.
- Development proposals at Oldbury power station.
- Development at Avonmouth Docks
- EA flood defence proposals for Avonmouth.
- Wind turbine proposals in South Gloucestershire and around Avonmouth.
- Development proposals at Hinkley Point B power station.

Other – outside of Gloucestershire – Welsh / West side of Estuary

- Development projects / activity at Chepstow Docks.
- Development projects / activity at Newport Docks.
- Development projects / activity at Cardiff Bay (Docks).
- Development projects / activity at Newport Docks.
- Development projects / activity at Barry Docks.
- EA flood defence proposals for Caldicot.

Other –

- The Crown Estate licences for sand and gravel dredging in English & Welsh water.
- Any Severn Tidal Power Scheme that is confirmed in the future

5. Comment on plans or projects:

Impacts on the tidal Severn Estuary could potentially arise from a number of different sources or different kinds of development in a number of Authorities (both in England and in Wales) adjoining the Estuary. A good source of information is the Severn Estuary Partnership website:

http://www.severnestuary.net/sep/

This site has a variety of useful information on the Severn Estuary including the State of the Estuary Report and other publications.

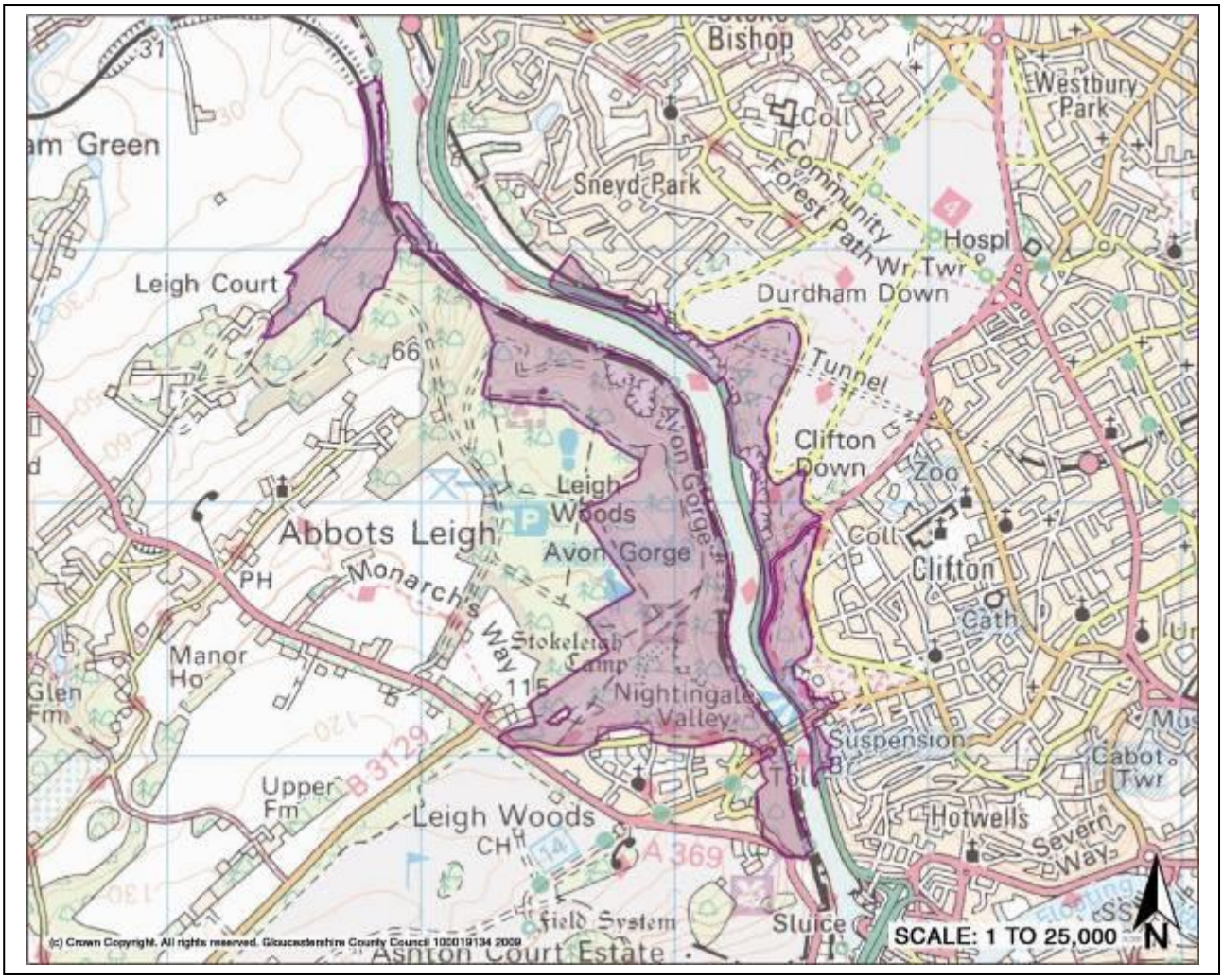
The assessment of 'in-combination' effects cannot be totally exhaustive; the list of other plans and projects has to be workable. Any comments on projects (e.g. especially from consultees outside or bordering Gloucestershire) that may potentially have 'in-combination' effects are welcomed.

6. General statements from Natural England on potential impacts from Minerals & Waste development:

European interest: 1) as SPA - wintering wildfowl (>10,000 regularly), plus important numbers of individual species Bewick's swan, European whitefronted goose, wigeon, gadwall, shoveler, pochard. 2) as SAC – Allis shad; twaite shad; Atlantic salt meadows; estuaries; river lamprey; intertidal mudflats and sandflats; sea lamprey; reefs; subtidal sandbanks. This site is unlikely to be affected directly by on land mineral extraction but there could be significant indirect effects from changes to water flow patterns into the site. (Note: marine aggregate extraction could have implications for many of the sites features by disruption of the sedimentary systems and natural processes operating throughout the estuary). Waste sites pose a threat from pollution. Source: Letter from Natural England – July 2006.

Avon Gorge Woodlands

Designation: Special Area of Conservation (SAC)
Location: Bristol City
Grid Reference: 51 27 50 N 02 38 01 W
Area: 152.35 ha



Avon Gorge Woodlands: Natural England library image

1. The characteristics of the European Site:

General Site Character:
Limestone cliffs and screes of a large river gorge: Heath, scrub, maquis, garrigue and phygrana (4%). Dry grassland and steppes (4%). Humid grassland and mesophile grassland (2%). Broad-leaved deciduous woodland (70%). Coniferous woodland (5%). Mixed woodland (5%). Inland rocks, screes, sands, permanent snow and ice (10%).

Vulnerability:
There are no significant threats to the Annex I habitat on this site. Part is managed as a National Nature Reserve and the management of the remainder is being addressed through a Site Management Statement. The presence of non-native trees throughout the site needs to be assessed. In addition, scrub invasion and non-native species (Rosy and Keeled Garlic) on calcareous grasslands is a problem. Both of these have begun to be tackled through the Avon Gorge and Downs Wildlife Project.

2. Conservation objectives:

■ Annex I habitats that are a primary reason for selection of this site:

Tilio-Acerion **forests of slopes, screes and ravines** (mixed woodland on base-rich soils associated with rocky slopes)

Avon Gorge is representative of *Tilio-Acerion* forests in south-west England on the limestone cliffs and screes of a large river gorge. It is important because of the high concentration of small-leaved lime *Tilia cordata*, compared with other sites in the region, the presence of rare whitebeams *Sorbus* spp., including two unique to the Avon Gorge (*S. bristoliensis* and *S. wilmottiana*), and other uncommon plants, such as green hellebore *Helleborus viridis*. Other characteristic species include soft shield-fern *Polystichum setiferum* and hart's-tongue *Phyllitis scolopendrium*. Species-rich transitions to scrub and grasslands are associated with the woodland. Small groves of yew *Taxus baccata* also occur on some of the stonier situations.

■ Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site:

Semi-natural dry grasslands and scrubland facies: on calcareous substrates *Festuco-Brometalia* (Dry grasslands and scrublands on chalk or limestone)

The conservation objectives are as follows:

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- **The extent and distribution of qualifying natural habitats**
- **The structure and function (including typical species) of qualifying natural habitats, and**
- **The supporting processes on which qualifying natural habitats rely**

3. Relevant plans or projects (indicative from 2015):

PLANS:

- Development Plans within **Bristol City** including Adopted Bristol City Council Local Plan.
- Development Plans within the **Forest of Dean** District including Adopted Forest of Dean Core Strategy and Area Action Plans
- Development Plans within Stroud District including Adopted Stroud Local Plan.
- Development Plans within Cotswold District including Adopted Cotswold Local Plan.
- Gloucestershire Waste Core Strategy Adopted 2012
- Gloucestershire Minerals Local Plan Adopted 2003
- Development Plans within South Gloucestershire including Adopted South Gloucestershire Local Plan and Minerals & Waste Local Plan
- Any relevant plans (including the Joint Waste Core Strategy) produced by the West of England Partnership.
- Bristol Avon Catchment Flood Management Plan & Catchment Abstraction Management Strategy.
- West of England Joint Transport Plan (2011-2026)

- Wales Transport Strategy plus Wales National Transport Plan

PROJECTS:

- Major housing or industrial development in and around the city of Bristol.
- Strategic waste management proposals as part of the West of England Partnership Joint Core Strategy.
- Any other major development identified in Development Plans (or elsewhere) with the potential to have a significant effect on the Avon Gorge Woodlands.

4. Comment on plans or projects:

As this is an added site for this updated Baseline Report, additional comments, particularly from Natural England are welcomed. It is likely that any significant impacts on this site are more likely to arise from development in Bristol rather than in Gloucestershire, but any comments on the need to include additional plans and projects and on potential 'in-combination' effects are welcome.

5. General statements from Natural England on potential impacts from Minerals & Waste development:

Currently no statement from Natural England.

Section 3: Conclusion and Contact Details

This updated Evidence Gathering / Baseline Report will inform future HRA reporting (as needed) in assessing policy and site options within Gloucestershire's Minerals Local Plan (MLP).

Contacts:

Minerals & Waste Planning Policy, Strategic Planning, Gloucestershire County Council, Shire Hall, Westgate Street, Gloucester, GL1 2TG
Tel: 01452 425667
Email: m&wplans@gloucestershire.gov.uk

Or:

Ecology, Gloucestershire County Council, Shire Hall, Westgate Street, Gloucester, GL1 2TG
Tel: 01452 425679
Email: ecology@gloucestershire.gov.uk

Appendix 1 List of Consultees for County HRAs

Proposed consultees for observations on County HRA documents are:

Gloucestershire:
- Cheltenham Borough Council
- Cotswold District Council
- Forest of Dean District Council
- Gloucester City Council
- Stroud District Council
- Tewkesbury Borough Council

Neighbouring and Nearby:
- Monmouthshire County Council
- Herefordshire County Council
- Wiltshire Council
- Worcestershire County Council
- Warwickshire County Council
- Oxfordshire County Council
- Powys County Council
- Somerset County Council
- South Gloucestershire Council
- Swindon Borough Council
- Bristol City Council
- Newport City Council
- Cardiff Council
- North Somerset Council
- The Vale of Glamorgan Council
- North Wiltshire District Council
- Wychavon District Council
- Sedgemoor District Council
- Stratford-on-Avon District Council
- West Oxfordshire District Council
- Vale of the White Horse District Council

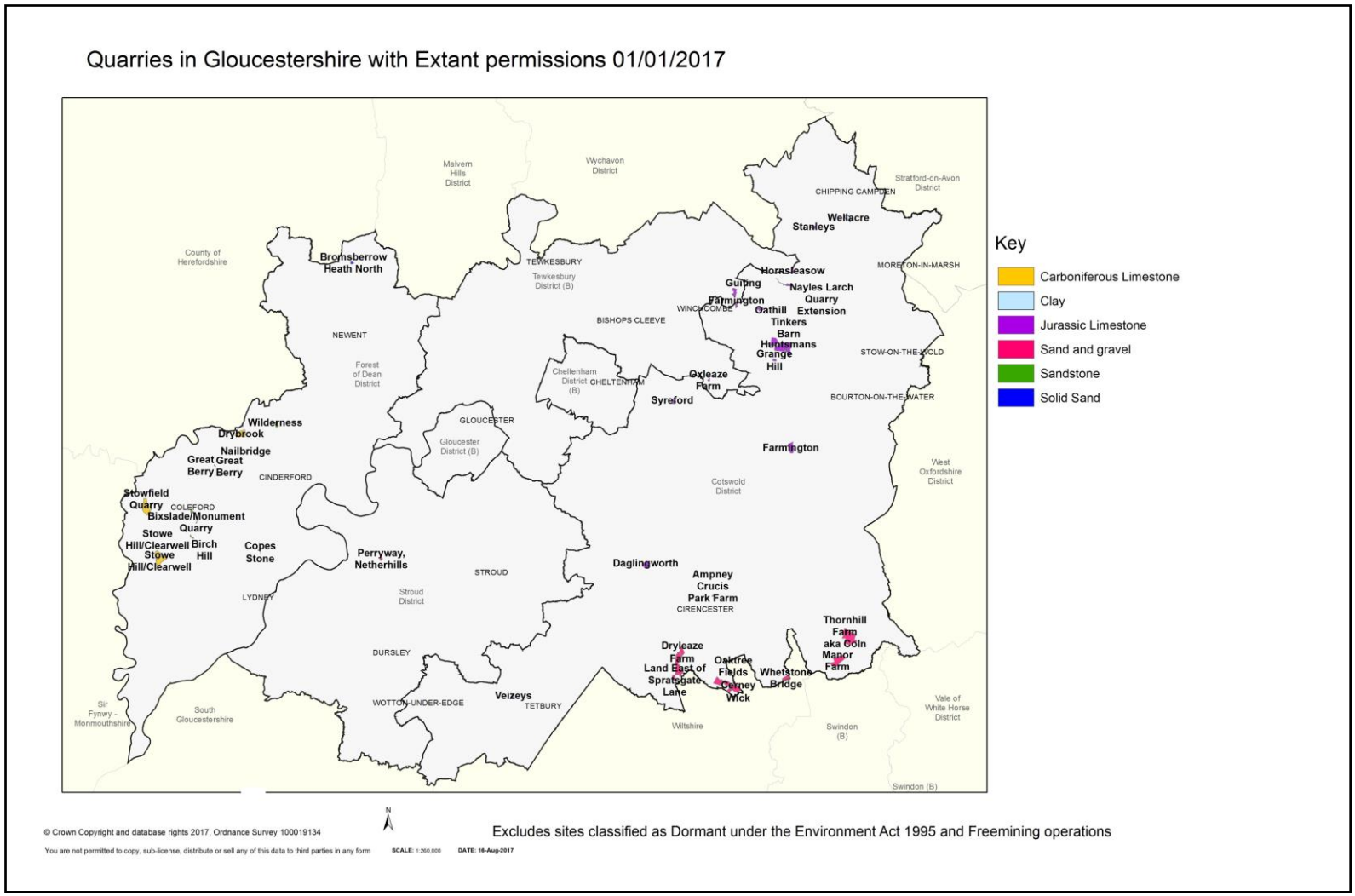
Owners / interested groups:
- Natural England
- Gloucestershire Wildlife Trust
- Royal Society for the Protection of Birds
- Wildfowl and Wetlands Trust, Slimbridge
- Cotswold Water Park Trust
- Woodland Trust
- Wye Valley AONB Partnership
- Cotswolds Conservation Board
- Forestry Commission – Forest of Dean Offices
- The National Trust
- The Crown Estate
- Environment Agency
- Countryside Council for Wales

The general public will also be able to comment on this HRA document through the consultation process of the various stages of the MLP.

Appendix 2 Spatial Distribution of Extant* Mineral Sites in Gloucestershire.

(Source GCC Minerals & Waste Planning Policy)

* 'Extant' means those sites that have valid minerals consents as of August 2017. Additionally, it should be noted that there are some 12 Freeminer quarries of limited output that produce mineral returns to the Forestry Commission (FC) and also some minerals sites that are dormant.



Minerals & Waste Planning Policy
Gloucestershire County Council
Shire Hall
Westgate Street
Gloucester
GL1 2TH

www.gloucestershire.gov.uk