



# Preliminary Evidence Base

# The Natural Environment Part One

Contents:	Page	
1. Green Infrastructure	-	2
1.1. Overview of Green Infrastructure		2
1.2 Green Infrastructure in residential areas		3
1.3 Green infrastructure linkages between parishes		3
1.4 Designated sites relating to the natural environment		3
2. Biodiversity		7
3. Landscape		8
4. Agricultural Land		8
5. Key Issues affecting the Natural Environment		11
6. Sources of information for Evidence Report		12
Attachments		
i. Sites of Special Scientific Interest		12
ii. Nature Reserves in Whitchurch and Ganarew Parish		14
iii. Biodiversity Summary - notable and protected species		15

# The Natural Environment Part Two – Water

Contents:	Page
1. Overview	17
2. Flood Risk	18
2.1. Local context	19
2.2. Flood risk from rivers	22
2.3. Flood risk from surface water	24
3. Water quality	25
<ol><li>Water supply and waste water management</li></ol>	25
5. Key Issues	25
6. Sources of information for Evidence Report	26
Attachments	
i. Strategic Policy Framework	27
ii. Extracts from Severn River Basin Management Plan	30

# PART ONE

# **Green Infrastructure**

#### 1.1 Overview of green infrastructure

WAG is a rural parish with only around 5% of its land area occupied by residential buildings, civic amenities, business premises and transport infrastructure. An estimated 50-60% of its land is used for agriculture and livestock and around 40% is woodland and commercial forestry.

The parish is bisected on a NE/SW axis by the busy dual carriage way of the A40 which also follows a geographical split between the lower rolling countryside of the central Herefordshire plain and the higher hills of the Doward. The River Wye forms the east and south boundary.

The countryside to the north and west of the A40 is mixed farmland with a mosaic of medium sized fields bounded by hedgerows with some large boundary trees and some areas of woodland at the western edge of the parish. This area has some footpaths, byways and quiet lanes but no open access land way from the village envelope.

The Countryside to the south and east of the A40 is a hilly well wooded landscape around Symonds Yat and the Doward there is an extensive network of footpaths and byways and Forestry Commission land which has open access to its woodlands for walkers only. Public access is also allowed on several nature reserves owned by Hereford Wildlife Trust and The Woodland Trust. There are several small and little used areas of common land.



Figure 5.1.1 Land Use in WAG from Defra's website magic.gov.

## 1.2 Green infrastructure in residential areas.

Whitchurch village has some areas of wide road verges some of which are tended and planted with garden bulbs and others are occasionally cut and left for natural vegetation to establish. The brook flows the length of the village is mainly inaccessible, canalised and in many parts underground. A narrow strip of woodland goes along the sides of this stream and covers the bank of the exit road and bridge over the A40, helping to buffer the sound and visual impact of the A40.

On Old Monmouth Road a flat area of land below the bank has been converted to a small park with playing and seating facilities. On the other side of the road there is a small green on the corner of Grange Park with one bench and several trees which offers residents some open space.

Most properties in Whitchurch have good sized gardens with many mature trees and beyond there are some fields and hedgerows which connect into the village.

Between Whitchurch and Symonds Yat there is a school with a playing field and a small but separate woodland zone used for outdoor teaching activities.

Symonds Yat is largely comprised of well spaced private properties many of which are on wooded sloping terrain with a network of narrow roads, byways and footpaths. There are few wide verges and no useable communal space. A riverside footpath runs along the parish edge from Wyastone Court through Biblins and the Wye Gorge, Symonds Yat (west), St Dubricius Church and on towards Goodrich.

The Doward with its footpaths, nature reserves and woodlands is a well used resource for the residents of Whitchurch and Symonds Yat and the many visitors to the area.

Most other housing in the parish is in scattered settlements which have little or no specific green infrastructure of their own but benefit from close access to very pleasant countryside.

#### 1.3 Green infrastructure linkages between parishes

To the south and east the footpaths and trails go beyond the River Wye connecting with High Meadow Woods (Reddings and Marion Enclosure) and Mailscot Wood using a suspension footbridge at Biblins or two hand-pulled ferries operated by local inns. This gives foot or bicycle connection to the edge of Monmouth, Coleford, Berry Hill and Staunton.

Along the river, the Wye Valley Walk goes through Monmouth where it can connect with Offa's Dyke Path and on to the Seven Estuary at Chepstow.

Connection to Goodrich and Llangrove parishes is limited to small roads and rough footpaths mainly along field edges.

#### 1.4 Designated sites relating to the Natural Environment

#### Statutory Designations

#### i) Area of Outstanding Natural Beauty (AONB)

Áround 85% of land in WAG is in the Wye Valley AONB. This takes in all the area south of the A40 and also includes Whitchurch and beyond to the boundary with Goodrich. The countryside around Ganarew is not included in the designation but is no less attractive.

#### ii) Sites of Special Scientific Interest (SSSI)

Around 10% of the total area of WAG is designated as an SSSI in three separate area designations:

1. Upper Wye Gorge SSSI

Designated for the quality and biodiversity of its ancient woodland habitats. The last condition assessment states it is 'Unfavourable but recovering'.

2. The River Wye (Lower Wye) SSSI

Designated as an important wildlife corridor, an essential migration route, and a key breeding area for many nationally and internationally important species.

The last condition assessment states it is 'Unfavourable but recovering'.

#### 3. Great Doward SSSIs)

Two small areas of former limestone quarry workings with species-rich grassland containing some notable flora and invertebrates but now in unfavourable condition.

See attachment i) for more details on each site.

#### iii) Special Areas of Conservation (SAC)

The Upper Wye Gorge SSSI and the The River Wye (Lower Wye) SSSI have been given the higher designation as 'Special Areas of Conservation' (SAC) under article 3 of the Habitats Directive which requires the establishment of a pan-European network of important high-quality conservation sites.

The River Wye is also designated as a salmonid fishery under the EC Freshwater Fish Directive 78/659/EC.

#### Non-statutory Designations

#### i) Nature Reserves

An estimated 8% of the land cover of WAG comprises of nature reserves totalling 109ha which belong to two charitable Trusts. These are Herefordshire Wildlife Trust who own or manage 24.8ha in 7 small reserves on Great Doward and the Woodland Trust who manage 84.3ha in three reserves the largest of which is on Little Doward. Some private land in the parish is also managed for wildlife conservation. See details about nature reserves in the parish in attachment 2.

No areas in the parish are designated National Nature Reserves although over the river to the south WAG adjoins Lady Park Wood National Nature Reserve in Monmouthshire.

#### ii) Special Wildlife Sites (SWS)

There are three zones registered under this County Council managed scheme (also known as 'Local Wildlife Sites') which although not statutory does still have to be taken into consideration in any development planning proposal. The zones are:

SO42/22 Garren Brook SWS

The register states: "Much of this brook has a good, wooded margin of alder and willow. The associated plants include Common Meadow-rue, Water-crowfoot and some interesting bryophytes"

SO51/02 The Doward and Huntsham Hill SWS

Within a broad area a few small additional fields and woodland areas on the Doward and near Wyastone Leys are listed as wildlife sites. (see HBRC map.)

SO53/06 River Wye SWS

This mirrors the SSSI designation of the river.

There are also no Local Nature Reserves (i.e. community owned or managed nature reserves) in WAG although a number of places could warrant future inclusion. There are also no 'roadside verge nature reserves'. Some potentially interesting areas on private land have either not been surveyed or information about them is not in the public domain.

#### iii) Geodiversity

There are seven Local Geological Sites (formerly known as Regionally Important Geological Sites - or RIGS) in the parish. These are non-statutory sites that are designated by the Herefordshire and Worcestershire Earth Heritage Trust as being of sites of geo-diversity importance. By designating a Local Geological Site, the features identified become a material consideration in any future development. These sites are:

Little Doward Hillside 1 -Devonian, Upper ORS, Quartz Conglomerate Formation

Little Doward Hillside 2 - Carboniferous, Lower Limestone Shales

Little Doward Hillside 3 - Carboniferous, Lower Dolomite and Crease Limestone Limestone Pavement, Little Doward - Quaternary, Carboniferous, Crease Limestone Formation Quarry north of King Arthur's Cave - Carboniferous, Crease Limestone and Whitehead

Limestone

King Arthur's Cave - Quaternary, Carboniferous, Crease Limestone Formation

Lordswood Quarry - Carboniferous, Carboniferous Limestone Series

The Biblins - Carboniferous and Quaternary

King Arthurs Cave and Merlin's Cave and several other sites on the Doward are important for Pleistocene palaeontology with many important fossil finds in the 19<sup>th</sup> Century.



fig 1.1. Herefordshire Biological Records site designations map.

# 2. Biodiversity

As is evident by the amount of land under statutory designations or in nature reserves, this parish is exceptional and even of national importance for its biodiversity. This particularly relates to its semi-natural woodlands, its patches of species-rich calcareous grassland and the aquatic and riparian habitats of the River Wye and its feeder streams such as the Garren Brook.

As the habitat diversity map shows, the river, woodland and open areas in the south of the parish are richest in biodiversity and the part of least interest is the farmland to the north of Whitchurch although other intensively grazed or cropped fields on sandstone soils also support very little wildlife.



Fig 2.1 Habitat Diversity from magic.gov.uk

Properly validated records exist for around 2,000 native species of plants, animals and fungi that have been found in the parish within the last 20 years. These are:

Plants: 350+ species of vascular plants and 120+ species of Bryophytes. Vertebrates: 96 species of birds, 35 mammals, 4 reptiles, 4 amphibians and 20+ fish. Invertebrates: Records exist for over 1,000 species Fungi and Lichens: Over 200 species are recorded.

Although these numbers may be high compared to many other parishes, they still represent only a small proportion of what actually exists in the parish. Our knowledge is constrained by a lack expertise in recording difficult to identify groups, poor reporting and archiving of data as well as limited access to some private sites.

Amongst the national rarities here are two species of Whitebeam trees (*Sorbus herefordensis* and *S. greenii*) that have never been recorded anywhere else in the UK and so are endemic to the Doward. A considerable number of other wildlife species occur here at their only known site in Herefordshire.

In addition to the main habitats in the parish there is also an area of heathland in Lords Wood, which is in need for restoration, and a privately owned area of wetland near Daff-y-Nant. There are also several small areas of species-rich limestone grassland which is a nationally important and highly threatened habitat.

The habitats and the species in the parish make a major contribution to the county and the national Biodiversity Action Plan (see Building Biodiversity into LDF2009 and BAP 2005). It also supports a significant number of 37 'actions' as listed on Defra's Biodiversity Action Reporting System.

Further details on biodiversity and a review of notable and protected species are available in attachment iii.

# 3. Landscape

Most of the parish is under the statutory designation of an Area of Outstanding Natural Beauty. Although its beauty may appear self evident there is a need provide a methodical explanation of the quality of the landscape to justify the added protection it gets.

The Unitary Development Plan of Herefordshire Council includes a set of guiding principles informed by strategic policies covering the protection, restoration and enhancement of its natural and historical assets. To do this it has six specific policies which relate to their commissioned work reported as 'Landscape Character Assessment - Supplementary Planning Guidance 2004' (updated 2009).

In this assessment WAG is deemed to comprise of three landscape types; Principal Settled Farmland (NW of A40), Forest Smallholdings and Dwelling (Doward), Principal Wooded Hills (Symonds Yat). It also looks out to the east on some Riverside Meadows and to the north to Sandstone Farmlands. See the reference document for details.

Landscape is determined by the underlying geology and subsequent geomorphologcal and anthropogenic changes that have taken place over more recent timescales. The geology of Whitchurch and Ganarew is essentially a continuation of the western edge of the Forest of Dean limestone and sandstone rock formations. The southern and eastern parish boundaries are formed by the River Wye, which has cut through the southerly dipping rocks, resulting in The Doward now being one of the few places in the area where you can see the complete geological succession from the late Early Devonian to the Early Carboniferous, a time span of roughly 55 million years. North of Little and Great Doward the older Lower Devonian rocks, mainly sandstones form the largely agricultural land with characteristic red soils in the north of the parish. The flatter land bordering the River Wye is overlain by more recent Quaternary estuarine alluvium.

The landscape of the River Wye and its gorge near Symonds Yat became a nationally important destination for 18<sup>th</sup> and 19<sup>th</sup> century tourism following the writings Reverent William Gilpin following his tour in 1770 which led to the 'picturesque' movement in the popular culture of that time.

Surveys by The Woodland Trust under the Ancient Tree Hunt project have identified a large number of ancient and veteran trees across WAG. Some old coppiced beech stools may be the largest in the country.

# 4. Agricultural Land

Around 70% of land in the parish is used for some sort of agricultural purpose whether livestock production, arable crops, horticulture (including glasshouses) or horse paddocks. There are over 10 commercial farming enterprises. The exact land usages have changed over time as economics of production has altered. Recent arable crops have included wheat, barley, oil seed rape and maize and now livestock production on temporary or permanent grassland dominates.

Defra's classification of the quality of land for agricultural production puts most of the areas NW of the A40 as grade 3 (good to moderate) with some patches being grade 2 (very good). The Doward is grade 4 (poor).

The whole parish apart from higher land on the Doward is designated a Nitrate Vulnerable Zone by Defra regarding ground water and the area around Garren Brook is sensitive regarding surface waters.

A significant area receives some level financial support from the government under the latest agri-environment scheme. This is mostly under a basic 'entry level' stewardship north west of the A40 with some plots on the Doward receiving 'higher level' Stewardship support.



#### Fig 4.1 WAG Agricultural Stewardship schemes northwest of A40



#### Fig 4.2 WAG Agricultural Stewardship schemes on the Doward

# 5. Key Issues affecting the natural environment

General issues for the villages and resident

- Flood damage risk to certain properties and travel/access difficulties especially in Whitchurch caused by upstream water load in River Wye and/or extreme weather events and/or blocked culverts. (for water see separate report)
- Decline in quality and quantity of wildlife-rich countryside and green infrastructure available for residents and visitors to enjoy.
- How to balance the quiet enjoyment of the countryside with growing numbers of residents and visitors, and their recreational needs and infrastructure.
- Negative visual impacts by inappropriate developments and litter and waste disposal issues.

General Issues for Biodiversity

- Increasing numbers of residents and visitors causing ever greater disturbance to sensitive areas causing damage to habitats and loss of species.
- Building developments causing loss and fragmentation of wildlife habitats.
- Agricultural intensification using practices that cause direct loss of species diversity.
- Poor woodland management such as a lack of coppicing reducing biodiversity.
- Excessive deer numbers (and now wild boar) with too much grazing/browsing /rooting causing loss of ground flora and middle storey.
- Invasive plants and animals outcompeting native species and spreading potentially serious diseases such as Ash Dieback and Sudden Oak Disease.
- Loss of species-rich wild flower meadows and verges to agricultural, commercial and recreational developments.
- Pollution of water courses from septic tanks, slurries, sewage, overflow drainage and accidental spillage. Includes lack of enforcement of statutory guidance.

Specific issues affecting SACs

- a) River Wye (Lower Wye) SAC
  - Sediment loading through soil erosion from agriculture and construction.
  - Overflow drainage of slurry from farming and road/housing.
  - High phosphates and nitrates from land use practices
  - Loss of bank-side flora and fauna through invasive species (e.g. Himalayan Balsam, Mink )
  - Lack of buffer zones in some areas
- b) Wye Valley Woodlands SAC
  - Destruction of flora and fauna by volume of foot/bike and horse traffic.
  - Damage to flora by deer and wild boar populations
  - Invasive non-indigenous species (mainly evergreen trees)
  - Scrub encroachment and poor management of calcareous grassland
  - Uncontrolled collection of natural resources on public land (wood, plants, fungi etc)

#### KEY ISSUES FOR W&G NEIGHBOURHOOD PLAN

- Balancing the attractive rural nature of the parish with a growing population and economy and the associated recreational and infrastructure requirements.
- Avoiding the negative visual and polluting impacts of excessive or inappropriate development on greenfield or brownfield sites and protecting the AONB status.
- Ensuring all future development does not cause net damage to the natural environment and protects or enhances the biodiversity and bioabundance of the SACs and other protected areas in the parish.

# 6. Sources of information for Evidence Report

# **Key Reports**

Herefordshire Core Strategy, Pre-submission document 2011-2031 Green Infrastructure Strategy Herefordshire - Local Development Framework Feb.2010 Wye Valley AONB management Plan 2009-2014 Herefordshire Local Biodiversity Action Plan (2007) Building Biodiversity into the LDF (2009) Herefordshire Green Infrastructure Strategy (2010) Biodiversity 2020: A strategy for England's wildlife and ecosystem services (2011) The EC Conservation of Habitats and Species Regulations (2010) Landscape Character Assessment - Supplementary Planning Guidance 2004' (updated 2009). Herefordshire Biological Records Centre (customized report Jan 2016)

## Useful websites.

http://publications.naturalengland.org.uk/

http://www.magic.gov.uk/MagicMap.aspx

https://www.herefordshire.gov.uk/corestrategy

https://www.herefordshire.gov.uk/greeninfrastructure

http://www.herefordshirewt.org/

https://www.woodlandtrust.org.uk/

https://www.herefordshire.gov.uk/environmental-protection/conservation-and-sustainability/environmental-services-ecology-and-geology

# Attachment i. Sites of Special Scientific Interest Designations.

The following texts are annotated extracts from the site notification documents produced by Natural England.

**1. Upper Wye Gorge SSSI** is 245ha but this is including land in Gloucestershire and Gwent. In the parish around 130ha of Lords Wood and adjoining King Arthurs Cave is part of this. It is designated for the quality of its ancient woodland habitats including populations of nationally rare Large-leaved Lime and various Whitebeam species some of which have been recently been determined to be endemic to the Doward. There are a host of other plant, fungi, invertebrates, birds and mammals that are nationally rare, scarce or local.

The site lies on the banks of the River Wye where it has cut a spectacular meandering gorge through Old Red Sandstone and Carboniferous Limestone in the vicinity of Symonds Yat. It consists of one of the most extensive blocks of semi -natural broadleaved woodland in the whole of

the Wye Valley. Other habitats represented include woodland streams, small areas of limestone grassland and limestone rock outcrops. The site is also important for' Pleistocene mammal remains. The woodlands have a range of soil types which are generally alkaline in character although in places more acidic surface layers have developed. The variety of rocks and soil types has resulted in a very diverse broadleaved woodland with ten different types of woodland having been identified with a correspondingly varied ground flora.

Site Condition on last survey - Favourable

#### 2. The River Wye (Lower Wye) SSSI

Together the River Wye (Lower Wye) and the River Wye (Upper Wye) SSSIs and several tributaries represent a large, linear ecosystem which acts as an important wildlife corridor, an essential migration route, and a key breeding area for many nationally and internationally important species. The site supports the following species and habitats covered by Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora: Allis shad Alosa alosa Annex IIa, Va; Twaite shad Alosa fallax Annex IIa, Va; Sea lamprey Petromyzon marinus Annex IIa Brook lamprey Lampetra planeri Annex IIa River lamprey Lampetra fluviatilis Annex IIa, Va; Atlantic salmon Salmo salar Annex IIa, Va; Bullhead Cottus gobio Annex IIa Grayling Thymallus thymallus Annex Va; Common otter Lutra lutra Annex IIa, IVa; Atlantic stream crayfish Austropotamobius pallipes Annex IIa, Va; Freshwater pearl mussel Margaritifera margaritifera Annex IIa, IVa; Floating vegetation of *Ranunculus* of plane and sub-mountainous rivers Annex I Common otter, Atlantic stream crayfish and freshwater pearl mussel are also listed under Schedule 5 of the Wildlife and Countryside Act 1981, as amended. The River Wye (Lower Wye) SSSI has been designated as a salmonid fishery under the EC Freshwater Fish Directive 78/659/EC.

The last site condition assessment was 'unfavourable (re-covering)'.

#### 3. Great Doward SSSIs.

Kiln Tumps and Webbs Quarry (1.1ha 2.6 acres).

This site consists of two small areas of limestone grassland, with associated scrub and woodland communities, situated on the south west facing slopes of the Great Doward Hill. Webbs Quarry is an area of old quarry workings, which over a long period has become colonised by a rich limestone flora. This includes such characteristic calcicole (lime-loving) species as salad burnet *Sanguisorba minor*, wild thyme *Thymus praecox*, wild basil *Clinopodium vulgare* and hairy violet *Viola hirta* as well as wild madder *Rubia peregrina* and fly orchid *Ophrys insectifera* both of which are of local distribution. Webbs Quarry is also important as a site for the nationally rare fingered sedge *Carex digitata*. Kiln Tumps is an area of ancient limestone pasture, where the grassland community is exceptionally rich, with over 140 plant species recorded. These include less common species such as greater butterfly-orchid *Platanthera chlorantha*, autumn lady's-tresses *Spiranthes spiralis* and green-winged orchid *Orchis morio*.

The last site condition assessment is 'unfavourable' and the last two species listed are likely to be extinct locally

Map of Sites of Special Scientific Interest (Ref. magic.com).



# Attachment ii. Nature Reserves in Whitchurch and Ganarew parish

Herefordshire Wildl	ife Trust	Woodland Trust
Leeping Stocks	8.0 ha	Quarry wood 1.95ha
White Rocks	5.3ha	Little Doward Woods 82.39ha
Miners Rest	3.1 ha	Great Doward west ca. 1ha
Woodside	3.7 ha	
King Arthurs Cave	1.5 ha	
Lords Wood Quarry	1.3 ha	
Lower Wood	0.9 ha	
7 reserves totalling = 24.8	ha (61 acres)	3 Reserves totalling 84.37 (208 acres)

In addition to these there are a number of sites that although not nature reserves are managed sympathetically for their wildlife conservation value. The Forestry Commission in its management of Lords Wood stands out in this regard. Some privately owned land is also managed for primarily for wildlife and a number of other sites have been are left sufficiently undisturbed that valuable semi- natural habitats have developed. Two other sites worthy of mention are the wetland near Daff y Nant service station and riverside grassland and scrub between the holiday park and the Ferry Inn. Other private sites may also be of significant biodiversity value but remain unsurveyed and often unprotected.

# Attachment iii. Biodiversity Summary.

## Notable and protected species in Whitchurch and Ganarew Parish

## Vascular Plants:

Over 350 species of native vascular plants have been recorded in the parish.

Trees;

The deciduous woodland is dominated by Beech, Oak and Ash but is actually very diverse. Of particular importance are *Sorbus* species especially Whitebeams of which Doward has 14 species, possibly more than any other site in UK. Of these 2 species (*Sorbus greenii* and *S. here-fordensis*) are endemic to Doward and 3 more species (*S. evansii*, *S. saxicola* & *S. eminen-tiformis*) are near-endemic meaning the parish is holding most of the world population. A good number of Wild Service Trees (*Sorbus torminalis*) is also notable.

Other scarce trees present here are the Large-leaved and the Small-leaved Lime (*Tilia platy-phyllos* and *T. cordata*), Wayfaring Tree (*Viburnum lantana*) and Buckthorn (*Rhamnus catharti-ca*).

## Other Dicot Plants;

Most of the notable plants are associated with the thin soils on carboniferous limestone especially around the crags in Lords Wood and Little Doward. Included in this list are the scarce Pale St Johns Wort (*Hypericum montanum*), Narrow-leaved Bittercress (*Cardamine impatiens*), Wild Clary (*Salvia verbenaca*), Yellow Bird's-nest (*Monotropa hypopitys*), Bloody Cranesbill (*Geranium sanguineum*), Wild Madder (*Rubia peregrina*), Hutshinsinia (*Hornungia petraea*) and Dropwort (*Filipendula vulgaris*).

#### Monocot plants;

At least 10 species of orchid still exist including a notable population of Greater Butterfly Orchids (*Platanthera chlorantha*) and the rare Fly Orchid (*Ophrys insectifera*)is just hanging on. Six further species, Autumn Ladies Tresses (*Spiranthes spiralis*), Narrow-leaved Helleborine (*Cephalanthera longifolia*), Narrow-lipped Helleborine (*Epipactis leptochila*), Red Helleborine (*Cephalanthera rubra*) and Green-winged Orchids (*Anacamptis morio*) were recorded prior to 2000 but now seem to be extinct in the area.

The dry limestone crags are also notable for three rare sedges (*Carex humilis*, *C. digitata and C. montana*).

There are several uncommon grasses including most of the county population of Wood Barley (*Hordelymus europeus*) and two species with a northerly distribution Mountain Melick (*Melica nutans*) and Blue Moor-grass (*Sesleria caerulea*). The Blunt-flowered Rush *Juncus subnodulosus* occurs here in a private wetland site and at its only site in south of county.

Ferns:

At least 16 species of Fern occur in the parish including the scarce Adders Tongue (*Ophioglossum vulgatum*) and a rare form of Maidenshair Spleenwort (*Asplenium trichomanes var. pachyrachis*).

At least 28 plant species on the Herefordshire Rare Plants Register occur in WAG

#### **Bryophytes:**

Mosses and Liverworts have been an under-recorded group in this parish since 18<sup>th</sup> century when several national rarities were recorded here. However, at least 80 moss and 25 liverwort species are now known to be present including scarcities such as *Gynmostomum viridulum*, *Marchensia mackaii* and *Porella arboris-vitae*. Much remains to be found.

#### Fungi and Lichens :

Over 200 species have been recorded in the parish though not all information is currently available.

Rare and scarce species found here include Devil's Bolete (*Boletus satanus*), Hollow Bolete (*Suillus cavipes*), Giant Clubs (*Clavariadelphus pistillaris*), Fluted Bird's Nest (*Cyathus olla*), Snakeskin Grisette (*Amanita cecilliae*).

#### Mammals:

35 species have been recorded in the parish. This includes 10 bat species of which there is a nationally important populations of Greater and Lesser Horseshoe Bats and the Western Barbastrelle has been found on a couple of occasions. The woods and open land hold Fallow, Roe and Muntjac Deer have recently been joined by Wild Boar. Hazel Dormice are present where there is sufficiently dense cover and the commonest mouse on the Doward is the Yellow-necked Mouse. The last records of Water Vole was from Garren Brook and the River Wye in 1964. There are several records of Polecat on the Doward and both Otter and American Mink can be found on the river. The most unusual visitor to the parish has to be a Grey Seal which swam up to Symond's Yat in the floods of winter 2012/13.

#### Birds:

At least 96 species of bird have been recorded in the parish. Some are accidental visitors such as the Hoopoe seen in 2003 and the Whooper Swan in 2014 but most occur annually and several are nationally uncommon or declining species with small local breeding populations such as Hawfinch, Goshawk, Woodcock, Lesser spotted Woodpecker, Pied Flycatcher and Wood Warbler. There are still many questions to be answered such as do Lapwings and Yellowhammer still breed in the parish and have Willow Tits and Tree Sparrows now disappeared.

#### **Reptiles and Amphibians:**

Of the four reptiles recorded a good population of Slow Worms still exists and Grass Snakes are still to be found occasionally. However the only known record of an Adder was from land to the west of Ganarew in 2005 and although they are frequent on the other side of the river, the last Common Lizard was reported here in 1861! Of the amphibians, frogs, toads and three species of newt occur here with one record of the specially protected Great Crested Newt near the Garren Brook.

#### Fish:

The River Wye is famous for its Atlantic Salmon though numbers have declined significantly in recent years. This part of the Wye is also of national importance as the main national breeding ground of the Twaite Shad and Allis Shad. Other notable fish in the parish are three species of Lamprey, as well as the native Brown Trout and the Bullhead which is sometimes cited as an indicator of good water quality. At least 25 fish species have been recorded in the parish including many of those well-known to the angling community.

#### Invertebrates:

Insects:

#### Butterflies;

There are records for 39 species of butterfly seen within the last 40 years. However three of these (Purple Emperor, High Brown Fritillary and Grayling) have almost certainly died out here and a further four (Wall Brown, Small Pearl-bordered Fritillary, Brown Argus and Green Hairstreak) that have not been recorded for 20 years and are unlikely to still be resident. Two more species (White-letter Hairstreak and Pearl-bordered Fritillary) have so few records in the last ten years that their status here must be critical.

On the positive side, Lords Wood still has a healthy colony of the scarce Wood White, of which there are only 40 locations in UK and the rather scarce White Admiral can still be found here.

Both Grizzled Skipper and Dingy Skipper still occur in some open areas of the Doward and the Essex Skipper has also moved into the area a few years ago.

Moths;

Around 700 species have been recorded around half of which are macro-moths. Of these over 60 species have been designated as scarce or local on a national scale. Examples of these are Great Oak Beauty, Ruddy Carpet, Scorched Pug, Bilberry Pug, Blomer's Rivulet, Drab Looper and Beautiful Snout.

#### Other insects;

A considerable number of species from other insect orders occur on the Doward as the only known site in Herefordshire or in just one or two other parishes. Some examples

Orthoptera (Grasshoppers and Crickets); Roesell's Bush Cricket and Long-winged Conehead.

Coleoptera (Beetles); Platydracus stercorarius, Anaglyptus mysticus

Diptera (True Flies); Lophosia fasciata, Criorhina berberina

Hemiptera (Plant Bugs); Ledra aurita

Hymenoptera (Bees, Wasps and Ants); *Gasteruption assecator, Omallus puncticollis* Ephemoroptera (Mayflies); This section of the Wye holds the main UK population of the endangered Yellow Mayfly *Potamanthus luteus*.

Mention should also be made of a healthy population of Glowworms and presence of the scarce Club-tailed Dragonfly as one of the River Wye specialities.

#### Other invertebrates:

Arachnida (Spiders and allies): The parish is the only known county site for the attractive Green Huntsman Spider and is notable for its Cave Spider *Meta menardi* population.

*Molluscs*: The scarce Lapidary Snail *Helicigona lapicida* on exists on crags of Little Doward. The river is notable for various freshwater mussels pearl mussel *Margaritifera margaritifera*.

*Crustaceans*; The now endangered White-clawed Freshwater Crayfish *Austropotamobius pallipes* has been reported in the parish as recently as 2007 and its status needs determining especially if it exists in local streams.

#### **Biodiversity Action Plans**

Herefordshire BAP 2005 listed 8 priority species and a further 7 species susceptible to development impact. WAG has recent records of 8 of these species. In addition the area holds 7 of the listed priority habitats.

# The Natural Environment Part Two – Water

## 1. OVERVIEW

Whitchurch and Ganarew (W&G) Parish is bounded by the River Wye, which is a major watercourse in the River Severn Catchment Area. It flows from source at Plumlumon through the Welsh Hills to Hay on Wye after which it flows through Hereford, the only major urban area it passes through, before reaching W&G parish.

The River Wye is of international ecological importance, as recognised by its European designation as a Special Area of Conservation - SAC. It is also popular for outdoor recreational and leisure pursuits, particularly in W&G where it flows through the Wye Gorge, and is unusual in that there is a public right of navigation. On the Western (W&G) bank there is a footpath restricted to pedestrians while on the Eastern bank there is a national cycle trail which can be accessed via the Biblins footbridge. Nowhere in the parish is more than 3 miles from the River Wye. Historically it was an important transport route as well as a source of power and site for industry, which is reflected in today's settlement pattern, with most of the houses being near to the river. This short distance severely limits any possibility of filtering out pollution before it reaches

the river. Therefore any pollution (point source pollution or diffuse from urban and agricultural runoff) could have a potentially high impact on the nearby River Wye and the SAC.

Areas of the Parish close to the River Wye have a high risk of serious flooding (1 in a 100 years without taking into account Climate Change) as shown by the Environment Agency Flood risk maps. There is also a risk of flooding from surface waters in some places, especially in the land on the less permeable red soils and in the more urban residential areas with hard standing, tarmac roads and other impermeable surfaces.

Flash flooding can occur with damage to properties when there is a combination of circumstances - for example extreme rainfall, river flooding, high run-off of surface water in residential areas, and restricted concrete culverts that may be blocked with rubbish and debris.

The Environment Agency has strategic responsibility for water quality and water resources, conservation and ecology, including fisheries and inland river, estuary and harbour navigation. The Agency is also responsible for managing the risk of flooding from main rivers, reservoirs, estuaries and the sea. The responsibility includes ensuring that the UK implements the Water Framework Directive, which includes provision for funding for capital works and grants to help landowners. Herefordshire County Council has a responsibility to implement national planning rules and legal constraints relating to water issues, particularly in their core strategy (see Appendix 1).

# 2. FLOOD RISK

## 2.1 Local context

The sources of flood water in Whitchurch & Ganarew (W&G) are the River Wye, the Garren Brook, and the stream which comes from near Llangrove (sometimes referred to as 'Slutty Brook') which is joined by another small stream from Welsh Newton.

Areas of the Parish close to the River Wye are classified as having a high risk of serious floods. As the source is in mid Wales it passes through a large catchment area, with many tributaries, on its way down through Herefordshire, consequently there are many occasions when water flow is high and flooding may occur.

The Garren Brook left to its own devices is not a problem within the Whitchurch area but can sometimes cause an issue when in spate at its confluence with the River Wye.

The streams which flow from Llangrove and Welsh Newton join near to the Daf-y-Nant service station and then flow under the A40 along the Symonds Yat side of the road returning to the Whitchurch side to flow as far as The Crown Hotel where the water flows back under the A40 and continues until its confluence with the River Wye. These two streams collect a significant amount of water which has the potential to cause flooding issues in Whitchurch village.

The village is also threatened by heavy rainfall causing surface water to run down the Llangrove Road and collect in front of The Crown Hotel and heavy flows of surface water have been known to course down between the Crown and Portland House.

It should be noted, however, that Whitchurch has not be flooded since the culverts were cleared and maintained.

Another area liable to small scale flooding is on the other side of the A40 at the bend in the B4164 at the turning to St Dubricous Church, where surface water can flow down from Symonds Yat and the streams above to accumulate on the bend and cause problems which, on occasion, can be compounded by the Wye if in full spate, causing the drains to backlog.

## 2.2 Flood Risk from Rivers

As can be seen from the Environment Agency (EA Maps for Planning - W&G (Page x) there several areas of Zone 3 land in the Parish. This is the highest risk flooding from rivers (shaded dark blue) - land having a 1 in 100 or greater annual probability of river flooding. These areas include the lower, residential parts of Whitchurch and Symonds Yat. The Environment Agency imposes restrictions on development in these areas. If there are any proposed developments they require a separate Flood Risk Assessment.

It should be noted that the Environment Agency classifications do not take into account Climate Change - Hereford Council should consider this in their Core Strategy. According to the Herefordshire Council's report - Herefordshire Strategic Flood Assessment - it is likely that lack of insurance cover will also influence any proposed developments in such high risk flood areas.

The other significant area of Zone 3 Flood risk is near the A40 east bound carriage-way, west of Whitchurch. This is an area of marsh and will serve as a holding for flood water from the streams described above, so helping to prevent overload and flooding in the village.

# ENVIRONMENT AGENCY FLOOD ZONE MAPS FOR PLANNING (Fig. 1 below) *KEY (from EA website)*

These Flood Zones refer to the probability of river and sea flooding, ignoring the presence of defences.

**<u>Zone 1</u>** - Low Probability - Land having a less than 1 in 1,000 annual probability of river or sea flooding.

(Shown as 'clear' on the Flood Map – all land outside Zones 2 and 3)

**<u>Zone 2</u>** - **Medium Probability** - Land having between a 1 in 100 and 1 in 1,000 annual risk and Land having between a 1 in 200 and 1 in 1,000 annual probability of sea flooding. (Land shown in **light blue** on the Flood Map)

Zone 3a

*High Probability -* Land having a 1 in 100 or greater annual probability of river flooding; or Land having a 1 in 200 or greater annual probability of sea flooding.

(Land shown in dark blue on the Flood Map)

**Zone 3b - The Functional Floodplain -** This zone comprises land where water has to flow or be stored in a **functional floodplain (**Not separately distinguished from Zone 3a on the Flood Map).

# Fig 1 W&G FLOOD ZONES FOR PLANNING



# Fig 1 (continued) W&G FLOOD ZONES FOR PLANNING



IR9 6DZ at scale 1:10,000

Other maps 🙂 Data search 🙂 Text only version 🙂



## 2.3 Flood Risk from Surface Water

Areas with non-permeable surfaces may be prone to surface water flooding, especially during periods of heavy rainfall. The flooding may be short lived but nonetheless can cause significant damage to properties. Built up areas, including roads, carparks, pavements, tarmac sports areas, concreted yards etc are especially prone to surface water flooding, which may be exacerbated by drains, gutters and culverts etc, which may be blocked due to poor maintenance, excessive litter and/or debris swept down by flash floods.

The Environment Agency Surface Flooding maps show the areas most at risk of surface flooding in Whitchurch and Ganarew, such as areas around road junctions, especially the A40, low-lying parts of Whitchurch and areas of harder ground in Symonds Yat West.

Land near to the A40 junction in the village (SP 550177) has suffered from severe flooding in the past. This is where the old Monmouth-Ross road, the steep lane from Llangrove and the A40 with its feeder road, all converge in a relatively built up area of the Parish. A track/footpath and a short stream that rises close to the village, which is identified as at risk of surface flooding also run between the pub and the guest house into this location. However serious flooding has not happened for several years.

Paved gardens can contribute to surface flooding, especially in built up areas, and since 2008 it been illegal to cover more than five square meters of front gardens without planning permission. Permission is not required for permeable (or porous) surfacing, such as gravel, permeable concrete block paving or porous asphalt, or if the rainwater is directed to a lawn or border to drain naturally.

Surface water flooding can may also pollute water courses by carrying pollutants from roads, garages, rubbish etc into nearby rivers and streams.



# Fig 2 W&G RISK OF FLOODING FROM SURFACE WATER (Environment Agency)

# Fig 2 (continued) W&G RISK OF FLOODING FROM SURFACE WATER MAPS (Environment Agency)



# **3. WATER QUALITY**

Whitchurch and Ganarew is In the River Wye catchment area which is managed and monitored by the Environment Agency (EA) in partnership with other organisations through the River Basin Management Plan, which has recently been out for consultation and was due to be published in December 2015. The parish is also in a Nitrate Vulnerable Zone where farmers have a duty to manage the land as required by law.

The River Wye is designated a Special Area of Conservation (SAC) due to its ecological importance Key areas of concern for the SAC identified by the EA and Natural England are upstream of the confluence of the River Wye and River Lugg. However inappropriate activities in other parishes bordering the river, such as W&G, can also have an adverse effect on the river. Herefordshire Council must therefore ensure that any future development does not adversely affect the river.

The draft Severn River Management Plan states that one of the main causes of low water quality water in the River Wye are phosphates from waste water (e.g. from sewage treatment works during high rainfall, over-flowing septic tanks etc) and from diffuse pollution in rural areas derived from runoff water on agricultural land that transports chemicals and sediment into the river, particularly if the land is compacted with no significant buffer zones of natural vegetation). Locally, it has been observed that some residents use the water courses to dispose of their garden waste. which may adversely affect water quality and damage the ecology of the streams and rivers, with species such as trout being quickly affected.

Loss of precious soil and consequent sedimentation is also a key issue that is highlighted in the Environment Agency documents. W&G parish includes a high proportion of agricultural land, including some directly bordering water courses that have the potential to cause water pollution. Some of this land is designated under the Countryside Stewardship scheme which pays farmers for managing the land to benefit the natural environment as well as provide food. The new Stewardship scheme, which is in its first year, now includes grants that will help meet the Government's Water Framework Directive obligations.

There is also a significant number of houses and businesses that are close to the river with the potential to cause water pollution through overflow pipes, compost heaps, overflowing septic tanks etc.



Figure 22 - Chart showing the confirmed reasons for not achieving good status of water bodies in the Wye catchment by type and source sector

# 4. WATER SUPPLY AND WASTEWATER MANAGEMENT (incomplete -should this be in Housing section?)

Welsh Water buys water from Severn Trent Water to supply drinking water to households in the parish. (*NB The source of this water is as yet unknown - is it from the source in the Forest of Dean?).* 

Wastewater management is also provided by Welsh Water, with the sewerage system taking waste water to the treatment works at the Old Forge in Goodrich. This includes excess flood water during periods of high rainfall. Many properties in the parish are not on the main sewerage system, which is largely in the Whitchurch area. (*NB - this important information has yet to be documented*)

*New dev*elopment which is not on mains sewerage can potentially affect the water quality of nearby rivers, in this case the River Wye which is a designated Special Area of Conservation (SAC - see Page x of this report). Accordingly the Herefordshire Core Strategy *states "Development should not undermine the achievement of water quality targets for rivers within the county, in particular through the treatment of wastewater. In the first instance developments should seek to connect to the existing mains wastewater infrastructure network."* 

# 5. KEY ISSUES

## The Key Issues concerning Water and the Neighbourhood Plan are:

## **DEVELOPMENT ISSUES**

- Flood Risk to properties from rivers: there are areas of W&G which are already designated as High Risk of Flooding Zone 3 where development is restricted, as well as areas of Zones 2 & 3 (Medium and Low Risk), according to the Environment Agency classification. *This does not take into account the effects of Climate Change* which Herefordshire County Council should include in their planning framework. However, development is not completely ruled out in the UK. Although there is some uncertainty in predictions, climate modelling indicates that severe weather events will become more common in the UK, thus increasing the risk of sudden flooding in low lying areas near rivers. Should the precautionary principle prevail ("better safe than sorry") when considering developments in the Parish which are in any of the flood risk categories?
- Flood risk to existing properties: are buildings adequately protected from flooding from river and surface waters now and in the future? Will new developments increase the risk to existing properties by increasing the amount of non permeable surfaces?
- **Construction of new properties:** will any new development be designed to withstand more severe weather patterns including high rainfall?
- Soft landscaping in new and existing developments of prevent flooding: will new areas of soft, natural landscaping (e.g. trees, areas of natural meadow or grass, community gardens etc) be included in any new developments in W&G Parish to slow down run-off and filter out any pollution from transport, business etc? Will existing developments be upgraded to include more natural areas, e.g where they may run off to the old Monmouth Ross road?
- Load on culverts, drains etc from surface waters: will any new developments include funding (e.g. Community Infrastructure Funding) to ensure that the existing culverts, drains etc

are adequate and are sufficiently resourced to ensure that they are continually maintained and do not cause flooding?

- Water Quality affected by increased load on wastewater systems and sewerage: is the existing system adequate or will it need to be upgraded to ensure that an extra 43 (or more) properties do not result in overload at sewage treatment works and consequent pollution of the river and the SAC? Is Herefordshire Council's Core Strategy sufficiently robust to account for extreme weather events?
- Water Quality affected by soil loss and sedimentation of the water courses through building construction: can we ensure that any new developments are constructed with care to ensure they do not cause sedimentation of the water courses and pollution of the River Wye SAC? Can any soil that has to be removed be be reused locally?
- **Rural land near to the river:** is there enough buffer zone with natural vegetation between agricultural land or existing developments or houses near the river? Can we increase the amount of riverine woodland in the parish, one of the key actions for the Wye River Catchment and Severn Basin Management Plan? Are there other areas where trees and natural vegetation would help to retain flood waters?

## LOCAL ACTION

- Water supply and public education: are people aware of the importance of not being wasteful and conserving water in the home and garden, especially if we experience severe droughts in the future?
- Water Quality in local water courses: are local people aware of how their actions (e.g. putting waste organic matter in or next to rivers and streams) can cause pollution of the water courses with subsequent loss of fish and other wildlife? How can the issue be publicised positively to ensure that people want to be involved in looking after their local environment?
- Water Quality and old septic tanks, on site treatment works: are local people aware of how leaking septic tanks and small scale treatment works can can cause pollution of the water courses with subsequent loss of fish and other wildlife? Do they know what measures they can take to ameliorate the situation including replacing the structure, de-sludging etc?
- Soil loss and sedimentation of the water courses though agricultural, horticultural and gardening practices: can gardeners, farmers, land managers etc be helped to avoid soil loss and possible sedimentation of water courses, with subsequent damage to the ecology of water courses?
- Local action for water: can the Parish run some community awareness 'look after our water' projects, e.g. use of laundry cleaning agents (in advance of a proposed government ban), look after your rivers don't dump garden waste make compost, save water etc etc?

# **6. SOURCES OF INFORMATION**

Defra Magic Interactive Mapping. www.magic.gov.uk

What's in your backyard - Environment Agency. www.apps.environment-agency.gov.uk/wiyby/

Severn Basin Management Plan <u>www.gov.uk/government/publications/river-basin-manage-</u> <u>ment-plan-severn-river-basin-district</u> Water for life and livelihoods: Consultation on the draft update to the river basin management plans - summary response document <u>www.gov.uk/government/uploads/system/uploads/attach-ment\_data/file/496502/12h\_FINAL\_Jan\_2016.pdf</u>

Catchment sensitive farming www.gov.uk/topic/farming-food-grants-payments/rural-grants-payments

Nitrate vulnerable Zones www.gov.uk/guidance/nutrient-management-nitrate-vulnerable-zones

Planning Practice Guidance - Flood Risk and Coastal Change <u>http://planningguidance.communi-ties.gov.uk/blog/guidance/flood-risk-and-coastal-change/planning-and-flood-risk/</u>

Herefordshire Core Strategy www.herefordshire.gov.uk/ldf

Herefordshire Strategic Flood Risk Assessment <u>www.herefordshire.gov.uk/media/5298440/Here-</u> fordshire Strategic Flood Risk Assessment.pdf

River Wye SAC Conservation Objectives <u>European Site Conservation Objectives for River Wye</u> <u>SAC - UK0012642</u>

# **APPENDIX 1** - STRATEGIC POLICY FRAMEWORK

#### **HEREFORDSHIRE CORE STRATEGY**

#### Policy SD3 – Sustainable water management and water resources

Measures for sustainable water management will be required to be an integral element of new development in order to reduce flood risk; to avoid an adverse impact on water quantity; to protect and enhance groundwater resources and to provide opportunities to enhance biodiversity, health and recreation. This will be achieved by ensuring that:

- 1. development proposals are located in accordance with the Sequential Test and Exception Tests (where appropriate) and have regard to the *Strategic Flood Risk Assessment (SFRA) 2009* for Herefordshire;
- 2. development is designed to be safe taking into account the lifetime of the development, and the need to adapt to climate change by setting appropriate floor levels, providing safe pedestrian and vehicular access, where appropriate, implementing a flood evacuation management plan and avoiding areas identified as being subject to Rapid Inundation from a breach of a Flood Defence;
- 3. **where flooding is identified as an issue**, new development should reduce flood risk through the inclusion of flood storage compensation measures, or provide similar betterment to enhance the local flood risk regime;
- 4. **development will not result in the loss of open watercourses**, and culverts are opened up, where possible, to improve drainage and flood flows. Proposals involving the creation of new culverts (unless essential to the provision of access) will not be permitted;
- 5. **development includes appropriate sustainable drainage systems** (SuDS) to manage surface water appropriate to the hydrological setting of the site. Development should not

result in an increase in runoff and should aim to achieve a reduction in the existing runoff rate and volumes, where possible;

- 6. water conservation and efficiency measures are included in all new developments, specifically:
  - residential development to meet the equivalent of Code for Sustainable Homes Level 5 for water efficiency (80 litres/person/day); or
  - non-residential developments in excess of 1,000 sq.m gross floorspace to achieve the equivalent of BREEAM 3 credits for water consumption as a minimum;
- 7. the separation of foul and surface water on new developments is maximised;
- development proposals do not lead to deterioration of EU Water Framework Directive water body status;

## Policy SD4 - Wastewater treatment and river water quality

Development should not undermine the achievement of water quality targets for rivers within the county, in particular through the treatment of wastewater. In the first instance developments should seek to connect to the existing mains wastewater infrastructure network. Where this option would result in nutrient levels exceeding conservation objectives targets, in particular additional phosphate loading within a SAC designated river, then proposals will need to fully mitigate the adverse effects of wastewater discharges into rivers caused by the development. This may involve:

- incorporating measures to achieve water efficiency and/or a reduction in surface water discharge to the mains sewer network, minimising the capacity required to accommodate the proposal, in accordance with policy SD3;
- phasing or delaying development until further capacity is available;
- the use of developer contributions/community infrastructure levy funds to contribute to improvements to waste water treatment works or other appropriate measures to release capacity to accommodate new development;
- in the case of development which might lead to nutrient levels exceeding the limits for the target conservation objectives within a SAC river, planning permission will only be granted where it can be demonstrated that there will be no adverse effect on the integrity of the SAC in view of the site's conservation objectives; and
- where the nutrient levels set for conservation objectives are already exceeded, new development should not compromise the ability to reduce levels to those which are defined as favourable for the site.

Where evidence is submitted to the local planning authority to indicate connection to the wastewater infrastructure network is not practical, alternative foul drainage options should be considered in the following order:

**1.** provision of or connection to a package sewage treatment works (discharging to watercourse or soakaway);

2. septic tank (discharging to soakaway).

With either of these non-mains alternatives, proposals should be accompanied by the following:

- information to demonstrate there will be no likely significant effect on the water quality, in particular of designated national and European sites, especially the River Wye SAC and the River Clun SAC; or

- where there will be a likely significant effect upon a SAC river, information to enable the council, in its role as a competent authority, to ascertain that the development will have no adverse effect on the integrity of the SAC;

- in relation to water courses with national or European nature conservation designations, the inclusion of measures achieving the highest standard of water quality discharge to the natural drainage system including provision for monitoring.

The use of cesspools will only be considered in exceptional circumstances and where it can be demonstrated that sufficient precautionary measures will ensure no adverse effect upon natural drainage water quality objectives.

The sub-catchment with the greatest current fluvial flood risk (hazard x consequence) is **the Lower Wye sub-catchment (**including Hereford), extending along the River Wye between Belmont and Monmouth.

Herefordshire Council has prepared throughout 2007 a major database of potential development sites. The availability of this database also in GIS format greatly enhances the capacity of the Sequential Test to be demonstrated in an open and transparent way, an essential requirement of PPS 25. Assessment of the sites in the database in accordance with the hierarchy of flood management measures is one of the core outputs of the Strategic Flood Risk Assessment. It can be stated that all of the Evidence Maps and supplementary tools of the SFRA are intended to support the transparent application of this hierarchy, including the Sequential Test.

#### Some key actions for this catchment (relevant to W&G)

- providing advice to farmers under both the England Catchment Sensitive Farming Delivery Initiative and the Environment Agency Wales Catchment Initiative;
  - improvements to sewage treatment work discharges to reduce levels of ammonia and phosphate;
  - improving in land management and reduction in sedimentation through the restoration of ancient ravine woodlands in the Wye Valley;
  - working with farmers at a local level to provide advice and encourage good practice in the use and disposal of sheep dip;
  - improvement in land management and reduction in sedimentation through the restoration of ancient ravine woodlands in the Wye Valley;
  - habitat improvements to reduce physical modification of watercourses and controlling non-native invasive weeds;

investigating the ability of eels to migrate through the Rhynes (also known as Reens) system.

# APPENDIX 2 Extract from Severn River Basin Management Plan

## Additional national measures

In addition to commitments already provided, the UK Government and Welsh Assembly Government will continue to demonstrate their commitment and bring forward significant work starting with;

- banning phosphates in household laundry detergents;
- a new requirement contained within the Flood and Water Management Bill making the right to connect to surface water sewers contingent on Sustainable Drainage

Systems (SuDS) being included in new developments. Local authorities will be responsible for adopting and maintaining SuDS that serve multiple properties and the highways authorities will maintain them in all adopted roads;

- general binding rules to tackle diffuse water pollution by targeting abuse of drainage systems, potentially including industrial estates, car washes and construction by 2012;
- transferring the responsibility for misconnections to water companies by 2012;
- the Water Protection Zones Statutory Instrument which will enter into force on 22 December 2009 and will be used to tackle diffuse pollution where voluntary measures are not sufficient;
- more funding for the Catchment Sensitive Farming Delivery Initiative in England from
  2010 – a 50% increase in capital grant spend, and evaluation of the initiative to ensure it is achieving maximum effectiveness;
- better targeting of agri-environment schemes for water protection. In Wales, this includes aligning the forthcoming "Glastir" agri-environment scheme to contribute towards

meeting

Water Framework Directive requirements;

- supporting the farming industry in the Campaign for the Farmed Environment, which has reducing impacts on water quality as one of its priorities;
- encouraging farmers to use buffer strips to reduce diffuse pollution through guidance and

advice provided under cross compliance;

- better understanding of the impact of sediment and measures to tackle it as a result of the additional funding announced in June 2009;
- further consideration of the impact of cross compliance and good agricultural and environmental conditions (GAEC) on water quality;

Given that implementation requires activity 'on the ground', it is essential that there is the maximum involvement and action from locally based organisations and people. Innovative ways of working together need to be identified that will deliver more for the environment than has been captured in this plan.

The Environment Agency will adopt a catchment-based approach to implementation that is efficient and cost-effective. This will support the liaison panels, complement existing networks and relationships, and enable better dialogue and more joined up approaches to action.

## Working with co-deliverers

This plan sets out in detail the actions required to improve the water environment. All organisations involved must play their part, record their progress and make the information available.

Where the work of a public body affects a river basin district, that body has a general duty to have regard to the River Basin Management Plan. Ministerial guidance states that the Environment Agency should:

- work with other public bodies to develop good links between river basin management planning and other relevant plans and strategies, especially those plans that have a statutory basis such as the Local Development Plans and Wales Spatial Plan;
- encourage public bodies to include Water Framework Directive considerations in their plans, policies, guidance, appraisal systems and casework decisions.

For some, the actions in this plan may be voluntary and for others they will be required under existing legislation. We want to work with you to make these actions happen, and identify new action to create a better place.

This Report is produced on behalf of Whitchurch and Ganarew Parish Council by the Steering Group's Natural Environment Team. Special thanks go to lan Draycott and Ruth Allen assisted by Sue Hughes, Chris Lloyd, Peter Hunt, Graham Wren, Peter Cruttwell and Anne Thomas (Theme Leader)