

## APPENDIX 1: FOREST OF DEAN HABITATS OF INTERNATIONAL AND NATIONAL SIGNIFICANCE

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The Forest of Dean District represents a complex landscape composed of a wide range of habitats and ecotones often in a mosaic and often with a high degree of connectivity due to the generally small scale mixed farming context in which they sit. Details of the main features for which the district is particularly important within a County, national and international context follow:

### **International:**

River Wye – near natural lowland river with high quality water and associated invertebrate and migratory fish communities; the focus for re-establishment of the west Gloucestershire otter population.

Wye Valley woodlands – native woodlands of near primeval woodland origin, demonstrate a wide range of nature woodland types with long and diverse traditional management and history; exceptionally rich in plant and invertebrate species and also important habitats for birds, dormouse and bats.

The Wye Valley and Forest of Dean offers a vital combination of suitable habitats for lesser and greater horseshoe bat populations. Of particular note are the many suitable breeding locations, extensive mines for hibernation and high quality woodland for feeding and transit habitats.

Severn Estuary Ecosystem – A wide range of dynamic coastal habitats (saltmarsh, extensive sand and mud flats and rocky shores) and associated species, particularly wintering bird populations and migratory fish.

### **National and County:**

Daffodil meadows.

Orchards with dead wood invertebrates.

Lowland heathland and associated species particularly nightjar.

Severn Vale floodplain grasslands, some floristically rich and many with significant populations of wintering birds and breeding waders.

Lowland ash/ oak/ lime and oak/ birch/ holly woods with characteristic and locally rich plant, invertebrate and bird assemblages.

Extensive mixed woodlands (the central forest is one of the top woodland areas in the UK) with a diverse structure, species mix and including a mosaic of semi-natural habitats (wetlands, grassland, heathland, and ephemeral habitats) and a wide range of associated species of plant, invertebrate and birds (some rare). Some areas of wood pasture type with veteran trees.

Ancient species rich hedgerows, locally in complex historical patterns and associated with important wall features (Wye Valley).

## APPENDIX 2: FOREST OF DEAN SUMMARY OF NATURE CONSERVATION INTEREST

\* Denotes a significant presence in the landscape type

### 1 WOODED VALLEYS - the Wye Valley

#### BAP HABITATS

Estuaries & Saltmarsh	*	In lower stretches of the River Wye (SSSI & cSAC) at junction with Severn Estuary SSSI, pSAC, Ramsar and SPA
Rivers and Streams	*	R Wye SSSI & cSAC <i>one of cleanest and most unaltered of lowland rivers in England</i> . Tributaries in from Dean Plateau. KWS = Mork Brook and tributaries
Standing Open Water		
Wet Grasslands		
Species rich grasslands	*	Small unimproved and semi-imp on steeper slopes - mosaics with scrub and as ecotones at woodland edges - some in orchards. KWS = Caudwell Bog
Farmland	*	River flood plain
Ancient Hedgerows	*	As part of the mosaic of woodland and open habitats on steep slopes
Woodland	*	Internationally important ASNW on steep slopes (several SSSI and one cSAC) - <i>the most important area within the FOD for near natural woodland</i>
Wood pasture park & Veteran trees	*	Veterans in ASNW (Cadora woods) and The Hudnalls SSSI as well as in ancient hedgerows - Oak, ash, lime, beech and elm of note
Lowland Heathland		
Limestone Pavement		
Old Orchards	*	Some derelict orchards in area 1b
Industrial spoil habitats		

#### BAP SPECIES

G.C.Newt		
Farmland Birds		
Migratory fish	*	R Wye SSSI & cSAC - shad, lampreys, salmon & eels
Otter	*	R Wye SSSI & cSAC - recovering population. KWS Mork Brook
Wintering wildfowl		
Breeding waders		
Brown Hare		

Vascular plants (Nat Scarce & notable species) *		Range of rare species associated with woodland habitats especially where coppice history and where limestone cliffs support grassland refuges and number of rare Sorbus hybrids
Dormouse	*	Throughout woodland and hedgerow habitats
Bats	*	Zone includes many important roosts (including lesser horseshoe breeding and hibernation roosts designated SSSI and cSAC). Woodland rides and edge and adjacent mosaic habitats provide essential feeding areas
Invertebrates	*	Range of rare and notable species - reflect diversity of habitats (including mosaics and wetland component) and history of management (low inputs and coppicing on steep slopes, retention of riparian zones)
Nightjar		
Woodland birds	*	Range associated with ASNW. Also Annex 1 birds - Peregrine, Raven and Goshawk

## 2 LIMESTONE HILLS

### BAP HABITATS

Estuaries & Saltmarsh

Rivers and Streams

Standing Open Water

Wet Grasslands

Species rich grasslands	*	Unimproved and semi-improved grasslands intermixed with more intensive farmland and in mosaic at woodland edges - some with calcareous influences
Farmland	*	Pastures with livestock on hilly ground
Ancient Hedgerows	*	Throughout
Woodland	*	Combination of ASNW and replanted ASNW with calcareous influence in ground flora. Linked in character to parts of area 5. SSSI - Dingle Wood, KWS - Blakes Wood. Woodland supports "scowles" - ASNW flora and access to underground systems with bats
Wood pasture park & Veteran trees	?	parts of woodland with history of grazing, some veterans
Lowland Heathland		
Limestone Pavement		
Old Orchards	*	Some in area 2e
Industrial spoil habitats		

### BAP SPECIES

G.C.Newt

Farmland Birds

Migratory fish

Otter

Wintering wildfowl

Breeding waders

Brown Hare

Vascular plants (Nat Scarce & notable species) *		Range of notable species associated with woodland habitats and open space within woods
Dormouse	*	Throughout the woodland landscape and probably in hedgerow network
Bats	*	Area include important underground mine complexes particularly for greater and lesser horseshoe bats. Entrances to these areas or surface mine workings - "scowles".

Invertebrates	*	Range of notable species associated with woodland habitats and open space within woods
Nightjar		
Woodland birds	*	Range of species typical of range of native and planted woodland types and including Annex 1 Birds Directive species

### 3 LIMESTONE PLATEAU

#### BAP HABITATS

Estuaries & Saltmarsh

Rivers and Streams

Standing Open Water

\* KWS - Noxon pond (degraded)

Wet Grasslands

Species rich grasslands

\* Particularly in area 3b where an important concentration of small, unimproved and semi-improved grassland have been retained on small holdings managing with traditional non-intensive methods. Also important acid grassland habitats at Tidenham Chase (Poors Allotment SSSI). *Together with Area 5 the most important location for species rich grasslands within the FOD - mostly neutral*

Farmland

\* Mixture of pasture and arable systems

Ancient Hedgerows

\* Retained in southern parts of Area 3a and a major landscape features of area 3b where a matrix of ancient field boundaries associated with the Hewlesfield Common area have been retained. *(Possibly one of the most important hedgerow landscapes in FOD if not the County)*

Woodland

? replanted ASNW in south of 3a

Wood pasture park & Veteran trees

\* Veteran tree - King Yew at East Wood

Lowland Heathland

\* Heathland and acid grassland mosaic site at Poor allotment SSSI with area of restored heathland adjacent (FE) forming *the most important heathland location in both the FOD and County*

Limestone Pavement

\* Small area of limestone pavement (probably indicative of a much larger area now covered by woodland) - *unique feature in the FOD*

Old Orchards

Industrial spoil habitats

#### BAP SPECIES

G.C.Newt

Farmland Birds

\* Suspected important area but little research done

Migratory fish

Otter

Wintering wildfowl

Breeding waders

Brown Hare

\* Area 3a - northern part - important location for hare?

Vascular plants (Nat Scarce & notable species) \*

Some notable plants in semi-natural habitats throughout the area - *Carex montana, tintern spurge*

Dormouse	*	Present in hedgerows and woodland throughout the area (including coniferous plantations)
Bats		
Invertebrates		
Nightjar	*	Re-established populations at Tidenham Chase in recent years
Woodland birds		

#### 4 WOODED SCARP AND LOWER SCARP SLOPES

##### BAP HABITATS

Estuaries & Saltmarsh

Rivers and Streams

Standing Open Water

Wet Grasslands

Species rich grasslands \* Unimproved and semi-improved grasslands on steep slopes in mosaic with woodland and hedgerow habitats KWS - Ridley Bottom

Farmland

Ancient Hedgerows \* Throughout the area

Woodland \* ASNW and replanted AW particularly in area 4a. KWS - Woolaston Lime Coppice

Wood pasture park & Veteran trees \* *Site at Lydney Park is probably the best parkland site in FOD*

Lowland Heathland

Limestone Pavement

Old Orchards

Industrial spoil habitats

##### BAP SPECIES

G.C.Newt

Farmland Birds

Migratory fish

Otter \* On tributaries of the River Severn

Wintering wildfowl

Breeding waders

Brown Hare

Vascular plants (Nat Scarce & notable species)

Dormouse \* Throughout area in hedgerows and woodland

Bats \* Important breeding roosts (in buildings) and underground mine sites (including SSSI and candidate SAC) for lesser and greater horseshoe bats - connected to the extensive underground systems in area 5



Invertebrates

Nightjar

Woodland birds

## 5 WOODED SYNCLINE AND SETTLED FOREST MARGIN

### BAP HABITATS

Estuaries & Saltmarsh

Rivers and Streams

- \* Many small streams throughout the area including Cannop Brook, Cinderford Brook and Soudley Brook

Standing Open Water

- \* Many open water sites throughout the area including important sites at Woorgreens, Cannop and Soudley (Soudley Ponds SSSI). *This area hold the most important locations for standing water habitats in the FOD*

Wet Grasslands

- \* Some of the extensive open areas within the forest (often opened by clearfell) support damp acidic grasslands (Molinia dominated) which sometimes grade into wet heath and bog habitats

Species rich grasslands

- \* Predominantly acid grasslands and complex ephemeral grasslands on old industrial sites (spoil heaps) - these areas contain many species (plant and animal) which are characteristic of the former semi-natural habitats prior to afforestation KWS - Cinderford Linear Park. *Together with Area 3 the most important area for species rich grasslands within the FOD - acid grasslands*

Farmland

Ancient Hedgerows

Woodland

- \* Main habitat - composed of small areas of true ASNW with large areas of broadleaved woodland retaining semi-natural character but being significantly modified and also extensive areas of replanted ASNW. All types found in mosaic and interconnected by belts of scrubby woodland and open space. Alder habitats along streams. *Very diverse range of woodland habitats with important open space elements contributing significantly to overall level of biodiversity - the largest and most diverse area within the FOD*

Wood pasture park & Veteran trees

- \* Some parts of the forest have a long history of wood pasture management and retain many characteristics. Includes Speech House Oaks SSSI - important for lichen communities. In general over mature and veteran trees are few.

Lowland Heathland

- \* Several significant areas of heathland (developing from clearfelled plantation woodland) showing characteristics of the former semi-natural habitats prior to afforestation e.g. Crabtree Hill, Oakenhill. Some farmland birds (skylark, linnet, tree sparrow) use clearfell areas

Limestone Pavement

Old Orchards

Industrial spoil habitats

- \* Ancient (pre roman) to recent industrial history has resulted in extensive surface and underground mine systems (of importance for bats) and ephemeral wasteland, grassland and scrub habitats (with associated plant and invertebrate interests). KWS - Cinderford Linear Park

**6 UNWOODED VALE****BAP HABITATS**

Estuaries & Saltmarsh	*	Saline inundation grasslands on lower reaches of Wye in area 6a
Rivers and Streams	*	Tributaries of the Severn including Ell Brook and River Leadon
Standing Open Water		
Wet Grasslands	*	Floodplain and inundation grasslands of above river streams. Saline inundation grasslands on lower sections of the River Wye e.g. Pennsylvania Fields SSSI - large populations of nationally scarce plants - see below
Species rich grasslands	*	Unimproved and semi-improved grasslands, mainly neutral or slightly acidic and in north supporting large populations of wild daffodil and green winged orchids. Kempeley Daffodil Meadow SSSI, Vell Mill meadow KWS, Oridge Street KWS and Merestones KWS. Also Ell Brook Meadows KWS alongside R Leadon.
Farmland	*	Mixed pasture and arable farming throughout
Ancient Hedgerows	*	Throughout areas but notable 6b and 6c, (Blaisdon & Westbury)
Woodland	*	ASNW e.g. Ley Park Wood Coppice
Wood pasture park & Veteran trees	*	Some sites retained - yet to be evaluated
Lowland Heathland		
Limestone Pavement		
Old Orchards	*	Significant historic feature(much declined in recent decades) throughout areas - important associated dead wood invertebrate populations (Broadway Orchard, Elton and Westbury areas)
Industrial spoil habitats		

**BAP SPECIES**

G.C.Newt	*?	Probable area for this species - poor records
Farmland Birds		
Migratory fish		
Otter	*	Re-establishing populations on tributaries of Severn and on R Leadon & tributaries
Wintering wildfowl		
Breeding waders	*	Redshank & curlew in wet meadows - unknown extent of remaining interest
Brown Hare	*	Particularly in areas 6c and 6d

Vascular plants (Nat Scarce & notable species) *	6a includes saline inundation grasslands with populations of nationally scarce plants e.g. <i>Alopecurus bulbosus</i> , <i>Bupleurum tenuissimum</i> . 6d is part of area which forms stronghold for wild daffodil populations. Also 6a has sole County location for <i>Carex divisa</i> .
Dormouse	* In ASNW woodlands
Bats	* Significant horseshoe bat roosts and important feeding habitats
Invertebrates	* Important localities for remnant populations of Stag beetle and Noble Chafer (old trees and orchards)
Nightjar	
Woodland birds	

## 7 DRAINED RIVERINE FARMLAND AND GRAZED SLATMARSH

### BAP HABITATS

Estuaries & Saltmarsh	*	Floodplain grasslands adjacent to the tidal section of the estuary - some with brackish influence and associated ditch habitats
Rivers and Streams		
Standing Open Water		
Wet Grasslands	*	inundation grasslands with winter flood regimes
Species rich grasslands		
Farmland	*	mostly pasture
Ancient Hedgerows	*	Locally e.g. AWRE peninsula important landscape features
Woodland		
Wood pasture park & Veteran trees		
Lowland Heathland		
Limestone Pavement		
Old Orchards		
Industrial spoil habitats		

### BAP SPECIES

G.C.Newt		
Farmland Birds		
Migratory fish		
Otter	*?	re-establishing populations
Wintering wildfowl	*	Inundation areas used by range of duck and wading species
Breeding waders	* ?	possible areas of residual interest
Brown Hare		
Vascular plants (Nat Scarce & notable species) *		River bank and saline grasslands species include several nationally scarce species
Dormouse		
Bats		
Invertebrates		
Nightjar		
Woodland birds		

## 8 LITTORAL SANDS AND ROCK OUTCROPS

### BAP HABITATS

Estuaries & Saltmarsh	*	Internationally important estuarine habitats of mud, sand and rock (Severn Estuary SSSI, Ramsar, SPA and pSAC. Unique physiographical regime with 2nd highest tide in world (tidal bore) and extreme dynamics
Rivers and Streams	*	Northern section of area more brackish/freshwater influence of River and number of freshwater tributaries throughout length
Standing Open Water		
Wet Grasslands		
Species rich grasslands		
Farmland		
Ancient Hedgerows		
Woodland		
Wood pasture park & Veteran trees		
Lowland Heathland		
Limestone Pavement		
Old Orchards		
Industrial spoil habitats		

### BAP SPECIES

G.C.Newt		
Farmland Birds		
Migratory fish	*	Important populations of shad, lamprey, salmon and eel - (Severn Estuary SSSI, Ramsar and pSAC features)
Otter	*	Re-establishing population
Wintering wildfowl	*	Important populations of wintering duck, geese, swans and waders - (Severn Estuary SSSI, Ramsar and SPA features)
Breeding waders		
Brown Hare		
Vascular plants (Nat Scarce & notable species)		
Dormouse		
Bats		
Invertebrates	*	Populations of inter-tidal invertebrates of high biomass and important as food for wintering birds populations.

Nightjar

Woodland birds

**9 UNDULATING FARMLAND****BAP HABITATS**

Estuaries &amp; Saltmarsh

Rivers and Streams

Standing Open Water

Wet Grasslands

Species rich grasslands \* Neutral and acidic/neutral grasslands some on steep slopes and often with hedgerow and scrub associations e.g. Clarke's Pool Meadow SSSI

Farmland \* Mixed pasture and arable

Ancient Hedgerows \* Throughout area

Woodland

Wood pasture park &amp; Veteran trees

Lowland Heathland

Limestone Pavement

Old Orchards

Industrial spoil habitats

**BAP SPECIES**

G.C.Newt

Farmland Birds

Migratory fish

Otter

Wintering wildfowl

Breeding waders

Brown Hare \* ?

Vascular plants (Nat Scarce & notable species) \* Rare sorbus hybrids on river cliffs at Gatcombe

Dormouse

Bats

Invertebrates

Nightjar

Woodland birds



**10 RIDGES AND VALLEYS****BAP HABITATS**

Estuaries &amp; Saltmarsh

Rivers and Streams

\* Longhope Brook KWS

Standing Open Water

Wet Grasslands

Species rich grasslands

\* Unimproved and semi-improved and acidic grasslands often on steep slopes and associated with hedgerow and woodland edge habitats Newnham Haie Bog KWS and 2 Bridges area

Farmland

\* Pasture and some arable

Ancient Hedgerows

\* Throughout area

Woodland

\* ASNW and replanted ancient woodland - some with significant historic context e.g. Flaxley, Welshbury and Chestnuts. Remnants of original native cover of the Dean ?? - lime woods

Wood pasture park &amp; Veteran trees

? Some areas - resource not yet evaluated

Lowland Heathland

\* Heathland and bog habitats at Wigpool common with associated notable plant species

Limestone Pavement

Old Orchards

\* Particularly in areas 10a,10b and 10d on steep slopes

Industrial spoil habitats

**BAP SPECIES**

G.C.Newt

Farmland Birds

Migratory fish

Otter

\* Longhope Brook

Wintering wildfowl

Breeding waders

Brown Hare

Vascular plants (Nat Scarce &amp; notable species) \*

Range of notable species on diverse habitats

Dormouse

\* Throughout woodland areas

Bats

\* Internationally important lesser and greater horseshoe breeding roosts (Dean Hall &amp; Blaisdon Hall SSSI and cSACs) and hibernation roosts (SSSI and cSAC) in mines at Wigpool and Edgehills

Invertebrates	*	Deadwood invertebrates associated with orchard habitats (Gnorimus nobilis - Noble Chafer) and variety of invertebrates associated with heath/bog, woodland, grassland and scrub habitats.
Nightjar		
Woodland birds	*	Range of typical birds of native and planted woodland

**11 WOODED HILLS****BAP HABITATS**

Estuaries &amp; Saltmarsh

Rivers and Streams

Standing Open Water

Wet Grasslands

Species rich grasslands \* Unimproved and semi-improved neutral to acid grasslands often on slopes associated with woodland edges, hedgerows and orchards  
Glasshouse Orchards KWS

Farmland

Ancient Hedgerows \* Throughout area

Woodland \* ASNW and planted AW , some with Silurian limestone influence

Wood pasture park &amp; Veteran trees

Lowland Heathland \*? Acid grassland and former heathland habitats at May Hill SSSI

Limestone Pavement

Old Orchards \* Throughout area

Industrial spoil habitats

**BAP SPECIES**

G.C.Newt

Farmland Birds

Migratory fish

Otter

Wintering wildfowl

Breeding waders

Brown Hare

Vascular plants (Nat Scarce & notable species) \* Area (also 15, 14, 6d , 11b) part of wild daffodil country

Dormouse \* Throughout woodland areas and hedgerows

Bats \* Breeding roosts and feeding habitats

Invertebrates \* Area includes important populations for Noble Chafer and Stag beetle

Nightjar

Woodland birds \* Range of typical woodland birds

**12 FLOODPLAIN FARMLAND****BAP HABITATS**

Estuaries &amp; Saltmarsh

Rivers and Streams

Standing Open Water

Wet Grasslands

\* Floodplain grasslands with ditch habitats (Walmore Common SSSI and Ramsar SPA). *The most important wetland meadow and bird site in the FOD*

Species rich grasslands

\* Inundation grassland and ditches

Farmland

\* Pasture

Ancient Hedgerows

\*

Woodland

Wood pasture park &amp; Veteran trees

Lowland Heathland

Limestone Pavement

Old Orchards

\* On steeper ground at flood basin edge

Industrial spoil habitats

**BAP SPECIES**

G.C.Newt

Farmland Birds

Migratory fish

Otter

Wintering wildfowl

\* Internationally important site for Bewicks Swan (SSSI and Ramsar SPA) and regionally important site for other wintering wildfowl and waders

Breeding waders

\* Re-establishing wader populations ?

Brown Hare

Vascular plants (Nat Scarce &amp; notable species) \*

Nationally scarce plants associated with wet grassland and ditch habitats

Dormouse

Bats

Invertebrates

\* Range of typical and notable invertebrate species associated with ditches. Some orchards with Noble Chafer populations

Nightjar

Woodland birds

**13 VALE HILLOCKS****BAP HABITATS**

Estuaries & Saltmarsh  
Rivers and Streams  
Standing Open Water  
Wet Grasslands  
Species rich grasslands  
Farmland  
Ancient Hedgerows  
Woodland  
Wood pasture park & Veteran trees  
Lowland Heathland  
Limestone Pavement  
Old Orchards  
Industrial spoil habitats

**BAP SPECIES**

G.C.Newt  
Farmland Birds  
Migratory fish  
Otter  
Wintering wildfowl  
Breeding waders  
Brown Hare  
Vascular plants (Nat Scarce & notable species)  
  
Dormouse  
Bats  
Invertebrates  
Nightjar  
Woodland birds

**14 LOW HILLS & ORCHARDS****BAP HABITATS**

Estuaries &amp; Saltmarsh

Rivers and Streams

\* River Leadon &amp; tributaries

Standing Open Water

Wet Grasslands

Species rich grasslands

\* Unimproved and semi-improved neutral grasslands (associated with hedgerow and orchard habitats)

Farmland

\* Mixed pasture and arable

Ancient Hedgerows

\* Throughout area

Woodland

\* Includes Collinpark Wood SSSI - important ASNW lime wood and Ryton Coppice KWS

Wood pasture park &amp; Veteran trees

Lowland Heathland

Limestone Pavement

Old Orchards

\* Throughout area - some with semi-improved grassland interest and invertebrate interest

Industrial spoil habitats

**BAP SPECIES**

G.C.Newt

Farmland Birds

Migratory fish

Otter

\* On River Leadon and its tributaries

Wintering wildfowl

Breeding waders

Brown Hare

Vascular plants (Nat Scarce &amp; notable species) \*

Red tipped Cudweed (BAP species)

Dormouse

\* In ASNW

Bats

\* Breeding roost locations

Invertebrates

\* Potential orchard dead wood invertebrate interest - Gnorimus nobilis (Noble chafer) ?? - research required

Nightjar

Woodland birds

**15 UNDULATING HILL FARMLAND****BAP HABITATS**

Estuaries &amp; Saltmarsh

Rivers and Streams

Standing Open Water

Wet Grasslands

Species rich grasslands \* Unimproved and semi-improved neutral grasslands often associated with woodland edge, hedgerow and orchard habitats. Daffodil meadows

Farmland

Ancient Hedgerows \* Throughout area

Woodland \* Extensive ASNW and planted AW in north of area (Dymock Woods SSSI)

Wood pasture park &amp; Veteran trees

Lowland Heathland \* Remnants of heathland vegetation within Dymock Forest

Limestone Pavement

Old Orchards \* Particularly in south - Gwen & Veras fields KWS

Industrial spoil habitats

**BAP SPECIES**

G.C.Newt

Farmland Birds

Migratory fish

Otter \* On Ell Brook (tributary of R Leadon)

Wintering wildfowl

Breeding waders

Brown Hare ?

Vascular plants (Nat Scarce & notable species) \* Part of a local stronghold of wildlife daffodil meadows

Dormouse \* Throughout woodland and hedgerow habitats

Bats

Invertebrates \* Important invertebrate populations in Dymock Forest (Dymock Woods SSSI) - particularly woodland butterflies and moths.

Nightjar

Woodland birds \* Range of typical species including Annex 1 Birds Directive species.