Appendix 1: Environment (Wales) Act 2016 – Section 7 Habitats in Monmouthshire (incl. BBNP)

Habitats of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales are listed below. This is an interim list, which is exactly the same as the previous list under Section 42 of the NERC Act 2006, and is currently under review in consultation with NRW.

Habitats	Cynefin	Priority Habitats	Cynefin sy'n Flaenoriaeth
Terrestrial, coastal & freshwater	Daearol, arfordirol a dŵr croyw		
Broadleaved, mixed and yew woodland	Coedwig lydanddail, gymysg ac ywen	Traditional orchards	Perllannau traddodiadol
		Wood pasture & parkland	Porfa goediog a pharcdir
		Upland oak woodland	Coedwig dderi yn yr ucheldir
		Lowland beech and yew woodland	Coedwig ffawydd ac ywen ar dir isel
		Upland mixed ash woodland	Coedwig ynn gymysg ar dir uchel
		Wet woodland	Coedwig wlyb
		Lowland mixed deciduous woodland	Coedwig gollddail gymysg ar dir isel
Boundary and linear features	Nodweddion llinellol a therfynau	Hedgerows	Gwrychoedd
Arable and horticultural	Tir âr a garddwriaethol	Arable field margins	Ymylon caeau ŷd
Improved grassland	Glaswelltir wedi ei wella	Coastal and floodplain grazing marsh	Tir pori corslyd ar forfa arfordirol a gorlifdir
Neutral grassland	Glaswelltir niwtral	Lowland meadows	Gweirgloddiau yr iseldir
Calcareous grassland	Glaswelltir calchaidd	Lowland calcareous grassland	Glaswelltir calchaidd yr iseldir

		Upland calcareous grassland	Glaswelltir calchaidd tir uchel
Acid grassland	Glaswelltir asidaidd	Lowland dry acid grassland	Glaswelltir asidaidd sych yr iseldir
Dwarf shrub heath	Gweundir o gorlwyni	Lowland heathland	Gweundir yr iseldir
		Upland heathland	Gweundir yr ucheldir
Fen, marsh and swamp	Ffen, cors a chors siglennaidd	Upland flushes, fens and swamps	Trylifiadau, ffeniau a chorsydd siglennaidd ar dir uchel
		Lowland fens	Ffeniau ar dir isel
		Purple moorgrass and rush pastures	Porfeydd brwyn a glaswellt y gweunydd
		Reedbeds	Gwelyau cyrs
Bogs	Corsydd	Lowland raised bog	Cyforgors ar dir isel
		Blanket bog	Gorgors
Montane Habitats	Cynefinoedd mynyddig	Mountain heaths and willow scrub	Gweundir a phrysgwydd helyg ar di mynyddig
Rivers and Streams	Afonydd a nentydd	Rivers	Afonydd
Standing open waters and canals	Dŵr llonydd agored a chamlesi	Oligotrophic and dystrophic lakes	Llynoedd oligotroffig a dystroffig
		Ponds	Pyllau dŵr

		Mesotrophic lakes	Llynnoedd mesotroffig
		Eutrophic standing waters	Dyfroedd llonydd ewtroffig
		Aquifer-fed naturally fluctuating water bodies	Dyfroedd a gyflenwir gan ddyfrhaen, ac sy'n arddangos amrywiadau naturiol yn lefel y dŵr
Inland rock	Craig fewndirol	Inland rock outcrop and scree habitats	Cynefinoedd brigiadau craig a sgri mewndirol
		Open mosaic habitats on previously developed land	Brithwaith o gynefinoedd agored ar dir a oedd cynt wedi ei ddatblygu
Supralittoral rock	Craig uwch-lanw	Maritime cliff and slopes	Clogwyni a llethrau arforol
Marine	Morol		
Littoral Rock	Craig o fewn cylchfa'r llanw	Sabellaria alveolata reefs	Riffiau Sabellaria alveolata
		Estuarine rocky habitats	Cynefinoedd creigiog aberol
		Coastal saltmarsh	Morfa heli
Littoral sediment	Gwaddodion o fewn cylchfa'r llanw	Intertidal mudflats	Eangderau llaid yn y gylchfa rhyng-lanw
		Seagrass beds	Gwelyau o wellt-y-gamlas
		Peat and clay exposures	Amlygiadau o fawn a chlai
		Tidal swept channels	Sianelau sy'n cael eu 'sgubo gan y Ilanw
Sublittoral rock	Craig is-lanw	Subtidal sands and gravels	Graean a thywod is-lanw

Appendix 2 Environment (Wales) Act 2016 – Section 7

Living organisms of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales. This list has been compiles using data from the South East Wales Biodiversity Record Centre and the Rare Plant Register for VC35.

Ψ Wales only species; † original S74 species; P Present; PB Present confirmed breeding; LA Likely Absent; H (year) Historical* (year last recorded) Historical, for the purposes of this list, is considered to be pre-1980.

Mammals / Mamaliad (16 species/rhywogaeth)			Monmouthshire
Arvicola terrestris	Water vole†	Llygoden bengron y dŵr	PB
Barbastella barbastellus	Barbastelle bat†	Ystlum du	Р
Erinaceus europaeus	West European hedgehog	Draenog	PB
Lepus europaeus	Brown hare†	Ysgyfarnog	PB
Lutra lutra	Otter†	Dyfrgi	PB
Martes Martes	Pine marten	Bele'r coed	Р
Micromys minutus	Harvest mouse	Llygoden yr ŷd	PB
Muscardinus avellanarius	Dormouse†	Pathew	PB
Mustela putorius	Polecat	Ffwlbart	PB
Myotis bechsteinii	Bechstein's bat†	Ystlum Bechstein	Р
Nyctalus noctula	Noctule	Ystlum mawr	PB
Pipistrellus pipistrellus	Common Pipistrelle†Ψ	Ystlum lleiaf	PB
Pipistrellus pygmaeus	Soprano Pipistrelle†	Ystlum lleiaf meinlais	PB
Plecotus auritus	Brown long-eared bat	Ystlum hirglust	PB
Rhinolophus ferrumequinum	Greater horseshoe bat†	Ystlum pedol mwyaf	PB
Rhinolophus hipposideros	Lesser horseshoe bat†	Ystlum pedol lleiaf	PB

Birds /Adar (44 species/rhywogaeth)			
Alauda arvensis subsp. arvensis/scotica	Skylark†	Ehedydd	Р
Anser albifrons subsp. flavirostris	Greenland greater white-	Gŵydd dalcen-wen yr	Р

	fronted goose	Ynys Las	
Anthus trivialis	Tree pipit	Corhedydd y coed	Р
Botaurus stellaris	Great bittern†	Aderyn y bwn	Р
Branta bernicula subsp. bernicula	Dark-bellied brent goose	Gwydd ddu Siberia	Р
Caprimulgus europaeus	European nightjar†	Troellwr mawr	PB
Carduelis cabaret	Lesser redpoll	Llinos bengoch fach	PB
Carduelis cannabina subsp.	Common linnett	Llings	PB
autochthona/cannabina	Common linnet†	Llinos	
Charadrius hiaticula	Ringed plover Ψ	Cwtiad torchog	Р
Circus cyaneus	Hen harrier †Ψ	Boda tinwyn	Р
Coccothraustes coccothraustes	Hawfinch	Gylfinbraff	Р
Crex crex	Corncrake†	Rhegen yr ŷd	Р
Cuculus canorus	Common cuckoo	Cog	Р
Cygnus columbianus subsp.	Tundra swan = Bewick's	Alarch Bewick	Р
Bewickii	swan	Alarch Bewick	
Dendrocopus minor subsp.	Lesser spotted woodpecker	Cnocell fraith leiaf	PB
Comminutus	Lesser spotted woodpecker	Chocen maith leiai	
Emberiza calandra subsp. calandra/clanceyi	Corn bunting†	Bras yr ŷd	H (1973)
Emberiza citrinella	Yellowhammer†	Bras melyn	PB
Emberiza schoeniclus	Reed bunting†	Bras y cyrs	PB
Falco tinnunculus	Kestrel Ψ	Cudyll coch	PB
Ficedula hypoleuca	Pied flycatcher Ψ	Gwybedog brith	PB
Lagopus lagopus subsp. scotica	Red grouse	Grugiar goch	PB
Larus argentatus subsp. argenteus	Herring gull	Gwylan y penwaig	PB

Larus ridibundus	Black-headed Gull Ψ	Gwylan benddu	PB
Limosa lapponica	Bar-tailed godwit Ψ	Rhostog gynffonfraith	Р
Locustella naevia	Common grasshopper warbler	Troellwr bach	PB
Lullula arborea	Woodlark	Ehedydd y coed	PB
Melanitta nigra	Common scoter†	Môr-hwyaden ddu	Р
Motacilla flava subsp. flavissima	Yellow wagtail	Siglen felen	PB
Muscicapa striata	Spotted flycatcher†	Gwybedog mannog	PB
Numenius arquata	Eurasian curlew†	Gylfinir	PB
Parus montanus subsp. Kleinschimdti	Willow tit	Titw'r helyg	PB
Parus palustris subsp. palustris/dresseri	Marsh tit	Titw'r wern	PB
Passer domesticus	House sparrow	Aderyn y to	PB
Passer montanus	Eurasian tree sparrow†	Golfan y mynydd	PB
Perdix perdix	Grey partridge†	Petrisen	PB
Phylloscopus sibilatrix	Wood warbler	Telor y coed	PB
Pluvialis apricaria	Golden plover†Ψ	Cwtiad aur	Р
Prunella modularis subsp. Occidentalis	Hedge accentor (Dunnock, Hedge sparrow)	Llwyd y gwrych	РВ
Pyrrhula pyrrhula subsp. pileata	Common bullfinch†	Coch y berllan	PB
Stretopelia turtur	European turtle dove†	Turtur	PB
Sturnus vulgaris subsp. vulgaris	Common starling	Drudwen	PB
Turdus philomelos subsp.clarkei	Song thrush†	Bronfraith	PB
Turdus torquatus	Ring ouzel	Mwyalchen y mynydd	PB
Vanellus vanellus	Northern lapwing†	Cornchwiglen	PB

Fish / Pysgod (7 species/rhywogaeth)	
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Alosa alosa	Allis shad†	Herlyn	H (1964)
Alosa fallax	Twaite shad†	Gwangen	РВ
Anguilla anguilla	European eel	Llysywen	Р
Lampetra fluviatilis	River lamprey	Llysywen bendoll yr afon	РВ
Petromyzon marinus	Sea lamprey	Llysywen bendoll y môr	Р
Salmo salar	Atlantic salmon	Eog	Р
Salmo trutta	Brown / Sea trout	Brithyll / Siwin	Р

Reptiles and amphibians / Ymlusgiaid ac Amffibiaid (6 species/rhywogaeth)			
Anguis fragilis	Slow-worm	Neidr ddefaid	PB
Bufo bufo	Common toad	Llyffant dafadennog	PB
Zootoca vivipara	Common lizard	Madfall	PB
Natrix natrix	Grass snake	Neidr y gwair / neidr y	PB
Natrix Hatrix	Grass strake	glaswellt	
Triturus cristatus	Great crested newt†	Madfall ddwr gribog	PB
Vipera berus	Adder	Gwiber	РВ

Invertebrates / Anifeiliaid Di-asgwrn-cefn (113 species/rhywogaeth)			
Acronicta psi	Grey dagger	Bidog llwyd	Р
Acronicta rumicis	Knot grass	Bidog y tafol	Р
Adscita statices	The forester	Coediwr	Р
Agonopterix atomella	A micro-moth (greenweed	Micro-wyfyn	Р
Agrochola helvola	flat-body) Flounced chestnut	Castan Grech	D
Agrochola litura	Brown-spot pinion	Castan Green Castan smotyn brown	P
Agrochola lychnidis	Beaded chestnut	Castan leiniog	P

Allophyes oxyacanthae	Green Brindled crescent	Green Brindled crescent Cilgant brych	
Amphipoea oculea	Ear moth	Ear moth Clustwyfyn llygeidiog	
Amphipyra tragopoginis	Mouse moth	Mouse moth Ôl-adain lyglwyd	
Anania funebris	A Pyralid moth	Gwyfyn o deulu'r	H (1974)
Anama junebris	A Fyralia moth	Pyralidiau	
Apamea remissa	Dusky brocade	Brithyn llwydolau	Р
Arctia caja	Garden tiger	Teigr yr ardd	Р
Argynnis adippe	High brown fritillary†	Britheg frown	Р
Asilus crabroniformis	Hornet robber fly†	Pryf llofrudd	Р
Asteroscopus sphinx	The sprawler	Cwcwll bwaog	Р
Atethmia centrago	Centre-barred sallow	Melyn yr onnen	Р
Austropotamobius pallipes	White-clawed freshwater	Cimwch dŵr croyw	Р
Austropotamobius pumpes	crayfish †	Cilliwell dwi croyw	
Bembidion quadripustulatum	A ground beetle	Chwilen ddaear	Р
Bembidion testaceum	A ground beetle†	Chwilen ddaear	Р
Boloria euphrosyne	Pearl-bordered fritillary†	Britheg berlog	Р
Boloria selene	Small pearl-bordered	Britheg berlog fach	Р
Boloria sciene	fritillary	Briting Berrog raen	
Bombus humilis	Brown-banded carder-bee†	Cardwenynen lwydfrown	Р
Bombus muscorum	Moss carder-bee	Cardwenynen y mwsogl	Р
Bombus ruderarius	Red-shanked carder-bee	Cardwenynen goesgoch	Р
Bombus sylvarum	Shrill carder-bee†	Cardwenynen feinlais	Р
Brachylomia viminalis	Minor shoulder-knot	Gwargwlwm bach	Р
Prachyntora nutata	Northern February red†	Coch y mis bach (math o	Р
Brachyptera putata	Northern replically red	bryf cerrig)	
Calosoma inquisitor	A ground beetle	Chwilen ddaear	Р
Carabus monilis	A ground beetle	Chwilen ddaear	Р

Caradrina morpheus	Mottled rustic	Gwladwr brith	Р
Celaena haworthii	Haworth's minor	Gwyfyn plu'r gweunydd	Р
Celaena leucostigma	The crescent	Clustwyfyn cilgantog	Р
Chesias legatella	The streak	Rhesen y banadl	Р
Chesias rufata	Broom-tip	Rhesen gam	Р
Chiasmia clathrata	Latticed heath	Seffyr delltog	Р
Cliorismia rustica	A Stiletto-fly†	Pryf pigfain	Р
Coenonympha pamphilus	Small heath	Gweirlöyn bach y waun	Р
Cossus cossus	Goat moth	Gwyfyn drewllyd	H (1971)
Cupido minimus	Small blue	Glesyn bach	Р
Cymatophorima diluta	Oak lutestring	Tant y derw	Р
Diarsia rubi	Small square-spot	Smotyn sgwâr bach	Р
Diloba caeruleocephala	Figure of eight	Crwbach ffigwr wyth	Р
Ecliptopera silaceata	Small phoenix	Ffenics bach	Р
Empis limata	A dance fly	Pryf dawnsio	Р
Ennomos erosaria	September thorn	Carpiog Medi	Р
Ennomos fuscantaria	Dusky thorn	Carpiog tywyll	Р
Ennomos quercinaria	August thorn	Carpiog Awst	Р
Entephria caesiata	Grey mountain carpet	Brychan llwyd y mynydd	Р
Epirrhoe galiata	Galium carpet	Brychan y friwydd	Р
Eriopygodes imbecilia	The silurianΨ	Gwyfyn Gwent	Р
Erynnis tages	Dingy skipper	Y gwibiwr llwyd	Р
Eucera longicornis	Long-horned Bee	Gwenynen gorniog	Р
Eugnorisma glareosa	Autumnal rustic	Gwladwr yr hydref	Р
Eulithis mellinata	The spinach	Brychan cyrens	Р
Eurodryas aurinia	Marsh fritillary†	Britheg y gor	Р

Euxoa nigricans	Garden dart	Dart y gerddi	Р
Formicoxenus nitidulus	Shining guest ant	Morgrugyn gwestai gloyw	Р
Graphiphora augur	Double dart	Dart deunod	Р
Heliophobus reticulata	Bordered gothic†	Rhwyll ymylog	H (1892)
Hamania tituus	Narrow-bordered bee	Gwalchwyfyn gwenynaidd	H (1933)
Hemaris tityus	hawk-moth†	ymyl gul	
Hemistola chrysoprasaria	Small emerald	Emrallt barf yr hen ŵr	Р
Hepialus humuli	Ghost moth	Chwimwyfyn rhithiol	Р
Hipparchia semele	Grayling	Gweirlöyn llwyd	Р
Hoplodrina blanda	The rustic	Llwyd llyfn	Р
Hydraecia micacea	Rosy rustic	Gwladwr gwridog	Р
Lasiommata megera	Wall brown	Gweirlöyn y cloddiau	Р
Leptidea sinapis	Wood white	Gwyn y coed	Р
Limenitis camilla	White admiral	Mantell wen	Р
Lipsothrix nervosa	A cranefly†	Pryf teiliwr gïeuog	Р
Lipsothrix nigristigma (nobilis)	A cranefly	Pryf teiliwr smotyn du	Р
Lucanus cervus	Stag beetle†	Chwilen gorniog	Р
Lycia hirtaria	Brindled beauty	Rhisglyn brith	Р
Macaria wauaria	V moth	Seffyr y ffyrch	Р
Malacosoma neustria	The lackey	Gwaswyfyn	Р
Melanchra persicariae	Dot moth	Gwyfyn dotiog	Р
Melanthia procellata	Pretty chalk carpet	Brychan hardd y calch	Р
Meloe proscarabaeus	An oil-beetle	Chwilen olew	Р
Meloe rugosus	An oil-beetle	Chwilen olew	Р
Meloe violaceus	An oil-beetle	Chwilen olew	Р
Meotica anglica	A rove beetle†	Chwilen grwydr	Р

Minoa murinata	Drab looper	Dolennwr llwydfelyn	Р
Monocephalus castaneipes	A money spider	Corryn lwcus	Р
Orthonama vittata	Oblique carpet	Brychan lletraws	Р
Orthosia gracilis	Powdered quaker	Crynwr llychlyd	Р
Perizoma albulata subsp. albulata	Grass rivulet	Gwregys y gwair	Р
Pisidium tenuilineatum	Fine-lined pea mussel†	Misglen rhesi main	Р
Potamanthus luteus	A mayfly	Gwybedyn Mai	Р
Pseudanodonta complanata	Depressed river mussel†	Misglen yr afon bantiog	Р
Pyrgus malvae	Grizzled skipper	Gwibiwr brith	Р
Rhabdomastix japonica	A cranefly	Pryf teiliwr	Р
Rheumaptera hastata	Argent and sable†	Brychan du a gwyn	Р
Rhizedra lutosa	Large wainscot	Gwelltwyfyn mawr	Р
Sabra harpagula	Scarce hook tip Ψ	Bachadain brin	Р
Satyrium w-album	White letter hairstreak	Brithribin wen	PB
Scopula marginepunctata	Mullein wave	Ton arfor	Р
Scotopteryx chenopodiata	Shaded broad-bar	Rhesen lydan dywyll	Р
Spilosoma lubricipeda	White ermine	Ermin gwyn	Р
Spilosoma luteum	Buff ermine	Ermin llwydfelyn	Р
Stilbia anomala	The anomalous	Llwyd gloyw	Р
Synanthedon scoliaeformis	Welsh clearwing †Ψ	Cliradain Gymreig	Р
Synaptus filiformis	Hairy click beetle†	Chwilen glec flewog	Р
Thecla betulae	Brown hairstreak†	Brithribin brown	Р
Tholera cespitis	Hedge rustic	Rhwyll y crawcwellt	Р
Tholera decimalis	Feathered gothic	Rhwyll bluog	Р
Timandra comae	Blood-vein	Gwyfyn gwythïen goch	Р
Trichiura crataegi	Pale eggar	Wylun gwelw	Р

Tyria jacobaeae	The cinnabar	Teigr y benfelen	Р
Watsonalla binaria	Oak Hook-tip	Bachadain y derw	Р
Xanthorhoe ferrugata	Dark-barred twin-spot carpet	Brychan deusmotiog tywyll	Р
Xestia agathina	Heath rustic	Clai'r rhos	Р
Xestia castanea	Neglected rustic	Clai'r waun	Р
Xylena exsoleta	Sword-grass†	Cleddwyfyn cyffredin	H (1892)

Vascular plants / Planhigion fasgwlaidd (26	species / rhywogaeth)		
Asplenium trichomanes subsp. pachyrachis	A maidenhair spleenwortΨ	Duegredynen gwallt y forwyn	Р
Bupleurum tenuissimum	Slender Hare`s-ear	Paladr trwyddo eiddilddail	Р
Campanula patula	Spreading bellflower†	Clychlys ymledol	Р
Centaurea cyanus	Cornflower	Glas yr ŷd	Р
Cephalanthera longifolia	Narrow-leaved Helleborine	Caldrist gulddail	LA
Clinopodium acinos	Basil thyme	Brenhinllys y maes	Р
Dianthus armeria	Deptford pink†	Penigan y porfeydd	Р
Fumaria purpurea	Purple ramping-fumitory†	Mwg y ddaear glasgoch	Р
Galeopsis angustifolia	Red hemp-nettle†	Y Benboeth gulddail	LA
Hypopitys monotropa (=Monotropa hypopitys)	Yellow bird`s-nest	Cytwf	Р
Hypopitys monotropa subsp			Р
hypophegea (=Monotropa hypopitys subsp	A bird's-nest	Cytwf	
hypophegea)			
Hypopitys monotropa subsp monotropa (=Monotropa hypopitys subsp	A bird`s-nest	Cytwf	Р

hypopitys)			
Lycopodium clavatum	Stag's-horn clubmossΨ	Cnwp-fwsogl corn carw	Р
Melittis melissophyllum	Bastard balm	gwenynog	H (1977)
Mentha pulegium	Pennyroyal†	Brymlys	LA
Oenanthe fistulosa	Tubular water-dropwort	Cegiden bibellaidd	Р
Ophrys insectifera	Fly orchid	Tegeirian y clêr	H (1979)
Platanthera bifolia	Lesser butterfly-orchid	Tegeirian llydanwyrdd bach	Р
Ranunculus arvensis	Corn buttercup	Blodyn-ymenyn yr ŷd	LA
Scleranthus annuus	Annual knawel	Dinodd unflwydd	LA
Sorbus eminens	A whitebeam	Cerddinen Mynwy	Р
Sorbus leptophylla	A whitebeam	Cerddinen Gymreig	Р
Trollius europaeus	Globe-flowerΨ	Cronnell	Р

Lichens /Cen (information to follow)

Mosses and liverworts / Mwsoglau a Llysiau'			
Anomodon longifolius	Long-leaved tail-moss†	Cynffon-fwsogl hirddail	Р
Weissia multicapsularis	Many-fruited Beardless- moss†		Р
Weissia squarrosa	Spreading-leaved beardless-moss	Mwsogl minfoel dail atblyg	Р

Fungi / Ffyngau (4 species / rhywogaeth)			
Clavaria zollingeri	A fairy club/violet coral†Ψ	Ffwng cwrel dulas	Р
Entoloma bloxamii	Big blue pinkgill	Tagell binc las fawr	Р
Microglossum olivaceum	Olive earthtongue†	Tafod daear bach	Р

		melynwyrdd	
Piptoporus quercinus	Oak polypore	Ysgwydd y derw	Р

Marine/Morol (3 species / rhywogaeth)					
Gadus morhua	Cod*	Penfras	Р		
Phocoena phocoena	Harbour porpoise†	Llamhidydd	Р		
Tursiops truncatus	Bottlenose dolphin†	Dolffin trwyn potel	Р		

Appendix 3 : Summary of findings of internal interviews

Who	Activities directly supporting biodiversity	Activities indirectly supporting biodiversity	Activities having a negative impact on biodiversity	Opportunities for change	Problems
Planning Development Control	Buildings and land often surveyed for wildlife presence	Training provided and checklist developed by MCC Ecologist has streamlined application process, speeding it up, empowering DC officers to make decisions themselves re likely impact on biodiversity. Prevents applicants having negative impression of protection of species through planning process	Giving consent for development		
	Green Infrastructure Strategy includes habitat creation in larger developments. This is seen as a flagship policy for MCC, and very positive.			Monitoring implementation of Green Infrastructure Strategy over time, and follow up post-development. Has green infrastructure been provided, is it being appropriately managed? What action can be taken if it isn't?	Planning Inspector /Welsh Government can overrule MCC decisions on planning if the applicant successfully appeals. This can result in policies that are inconsistently applied.
		Development control process will be entirely			

		paperless from 1/1/2017			
				Awareness of the bigger picture of biodiversity – eg "State of Nature"; why do we protect some species, why are they vulnerable, how does our work affect them?	Previous difficulties with NRW consultation.
Planning, Building Regs	Picking up on the need to protect certain Protected Species and providing advice on this.	Ensuring buildings are constructed to the right standard eg energy efficiency. Signposting clients to advice where necessary – eg trees, bats etc.	Cumulative impact of developments.	Continue and develop close working relationship with ecologists Better post-development monitoring, eg bat bricks at County Hall. Would be useful to develop a better working relationship with NRW eg the cumulative impact of domestic sewerage on	
				water quality of the R Usk. They are not necessarily aware of problem areas like this.	
Planning, Forward Plan	Identifying sites, and where to avoid, for future housing and other development, plus policies for Green Infrastructure.	Identifying sites, and where to avoid, for future housing and other development, plus policies for Green Infrastructure.	Identifying sites, and where to avoid, for future housing and other development, plus policies for	CIL may provide more opportunities for biodiversity improvements off site.	

	1				
			Green	An annual monitoring	
		Site assessments are	Infrastructure.	report is provided to WG,	
		undertaken for each of		which includes	
		the candidate sites,		monitoring the impact on	
		including biodiversity		biodiversity, but data on	
		surveys.		biodiversity is difficult to	
				find.	
				Information collected as	
				part of development of	
				the Env Act Plan would	
				be useful for the LDP, in	
				identifying risks and	
				opportunities.	
Who	Activities directly	Activities indirectly	Activities having a	Opportunities for	Problems
	supporting biodiversity	supporting biodiversity	negative impact on	change	
			biodiversity		
Sustainability		MCC Recycled paper,		Discussions with	Difficult to enforce
		Fairtrade, sustainable		Environment	sustainable
		procurement policy,		Agency/NRW or other	procurement, except
		waste and recycling		local authorities to follow	for high value items,
		production within MCC		good practice on	but lowest cost
		•		procurement and waste	remains the most
				management. Alison	important criteria. No
				Howard may have some	monitoring of waste
				info from some time ago	and recycling.
				re waste and recycling	
				from MCC	
		Reducing CO2	CO2 emissions		Staff resources are an
		emissions through	contribute to		issue if initiatives do
		reduced energy use.	climate change and		not result in cost
		Manitaring is already	therefore have a		savings.
		Monitoring is already	therefore have a		Savirigs.

		Staff vehicle mileage is monitored as part of Future Monmouthshire (Craig O'Connor has figures). MCC are introducing hydrogen powered vehicles and a filling station as a trial. A Green Travel Plan was a requirement of County Hall construction, but has not been implemented as it is felt that other projects elsewhere will	direct impact on biodiversity.		
		have a higher impact.			_
Who	Activities directly	Activities indirectly	Activities having a	Opportunities for	Problems/Threats
	supporting biodiversity	supporting biodiversity	negative impact on biodiversity	change	
Licensing	Licensing activities that prevent harm to biodiversity – litter, fumes, noise, storage of poisons and pollutants,		Activities that can cause harm to biodiversity are licensed.	The main consideration is protecting human health and wellbeing. The Events Safety Advisory Group has insufficient knowledge to understand the potential harm that could be done to biodiversity	
County Farms	Ownership of 31 farm holdings and land. MCC manages the infrastructure – eg drainage and buildings,		Poor maintenance of farm infrastructure, causing pollution issues to	Better understanding of the ecological resources, and the functioning of ecological services	Most tenancies are for the lifetime of the tenant, so the function of the County farms to provide a way in to

b	out farmers are left to	surrounding water	represented on the	agriculture for young
l n	manage their own	courses (especially	farms.	people is not being
	ousinesses.	dairy holdings).		fulfilled.
		, 0,	Providing tenant farmers	
2	2800 acres total,		with information about	County Farms unit
n	mostly grade 2 and 3		wildlife friendly	have a hands off
a	agricultural land (good		agriculture and access to	approach to managing
t	to moderate quality).		funding.	the farms. There are
				no policies to ensure
	Church Land Trust land		Opportunity for	that agricultural
h	nas recently been		landscape scale projects	practices are wildlife
10	eased to GWT and		in some places, eg	friendly.
N	Mon Meadows Group		Caldicot, Leechpool,	
t	to manage for its		Caerwent area.	Lack of knowledge in
C	conservation value			County farms team of
1	Wet Meadow,		County farms have	wildlife and
	Trellech), and this		worked with ADAS to	conservation
	could be positive in		provide advice and	legislation, and of the
b	peginning a dialogue.		information about	ecological resources
			various aspects of land	that the farms
			management.	represent.
			Data atial ta assurant	Camarama that
			Potential to connect	Concern that
			fragmented habitats, or	biodiversity interests
			to prevent	will prevent some uses
			fragmentation.	of land.
				Conflict between a
				land bank for
				development and
				biodiversity interests
				biodiversity interests

Who	Activities directly supporting biodiversity	Activities indirectly supporting biodiversity	Activities having a negative impact on biodiversity	Opportunities for change	Problems/Threats
Estates Ian Hoccom		Managing utility contracts and monitoring use of energy and water		Wood fuel purchasing for Council estate is done by a consortium, but could in future be linked to	
		throughout MCC estate. We report on carbon emissions as a PI.		local woodland management and production of chip/pellets more locally.	
	Hedges and orchard tree planting in association with PV farm development.	Installation of PV farm on County Farm estate at Crick.		Opportunities with the solar PV farm to investigate potential for further energy reductions – eg hydrogen fuel production, battery storage etc. The solar PV farm will have a community	
				benefit fund which the local community can bid for. Not sure currently how it will be administered.	
Who	Activities directly supporting biodiversity	Activities indirectly supporting biodiversity	Activities having a negative impact on biodiversity	Opportunities for change	Problems/Threats
Grounds maintenance Nigel Leaworthy	Maintenance of open spaces, cemeteries, verges, planting of	Working cooperatively with Bee Friendly Monmouthshire and	Maintenance of open spaces, cemeteries, verges,	Monitoring the impact of the changes made to cutting regimes and	Perception of 'untidyness' with reduced grass cutting

	annual flowers, hedge	Monmouthshire	planting of annual	planting as a result of the	and hedge cutting,
				•	J
	cutting etc.	Meadows Group	flowers, hedge	Pollinator Policy. How	both amongst the
	5 11: 1 1	botany experts.	cutting etc.	beneficial is it?	general public and
	Bedding planting has				Members. This can
	changed as a result of	Reduced cutting will		Introduce grass collecting	result in a reactive
	the Pollinator Policy,	reduce CO2 emissions		machinery and find an	service, rather than
	with annuals now			economic use for grass	planned activity, both
	sown.			cuttings eg	less effective and less
				composting/biodigestion.	biodiversity friendly.
	Reduced number of				
	grass cuts on verges			Manage areas for other	
	and some public open			stages of pollinators lives	
	spaces.			– eg hibernation, nesting	
				etc:	
	Introduction of yellow			education/awareness	
	rattle to reduce the			needed.	
	vigour of grasses and				
	therefore the number			Training requested on	
	of cuts.			how ecosystems	
				function.	
	Reduced use of		Use of glyphosate		
	glyphosate weedkiller		weedkiller and		
	and pesticides		pesticides.		
Who	Activities directly	Activities indirectly	Activities having a	Opportunities for	Problems/Threats
	supporting biodiversity	supporting biodiversity	negative impact on	change	
			biodiversity		
Rural Development	RDP provides grants to	Supporting biodiversity		RDP team would like to	
Plan Team	groups and	is one of the criteria for		know more about	
	organisations running	grant applications.		species and habitats of	
	projects in			local importance and	
	Monmouthshire, some			what can be done to	
	of which will have an			protect them. They	
	impact on biodiversity.			would also like to know	

	Transition Monmouth multi-faceted project that includes tree planting, flood prevention and renewable energy. Gwent Wildlife Trust Deer Management Project	Transition Monmouth multi-faceted project that includes tree planting, flood prevention and renewable energy Local Action Group approves grants, and includes representatives of groups with biodiversity expertise. They suggest improvements to applications if		more about SINCs and understand the potential for the RDP to connect sites/habitats. No environmental evaluation of funded schemes. Evaluation is purely financial – Welsh Gov set the parameters.	
Who	Activities directly supporting biodiversity	appropriate. Activities indirectly supporting biodiversity	Activities having a negative impact on	Opportunities for change	Problems/Threats
			biodiversity		
Attractions, Site Management	Managing Caldicot Castle & country park and Old Station, Tintern and Shirehall Monmouth. Management Plan in		Large events at Caldicot castle & Country Park	Input and advice from ecologists is needed as site managers lack the skills and knowledge. A Phase 1 habitat survey	Conflict between need to make an income via events and biodiversity Waste is collected in skips and not recycled at events.
	preparation for Caldicot Castle & Country Park			has been completed by GWT, and bioblitz event resulted in records for that day.	3.5.5.

Appendix 4: External contacts summary of points

Threats:

- Incremental development pressure in Monmouthshire part of the AONB, which includes urbanising the countryside, mowing verges, general tidying up.
- Environmental sustainability of agricultural practices mentioned by several respondents, especially those in conservation. Reducing nitrogen deposition, reducing soil erosion and compaction are urgent priorities, as well as changing agricultural practice including stocking rates, rodenticides and free range.
- Lack of liaison between Glastir/Farming Connect and conservation organisations resulting in habitat losses and environmental damage.
- Declining soil quality which affects agricultural yields, biodiversity, water quality and carbon sequestration
- New poultry units in Monmouthshire which if sited poorly can be environmentally damaging and affect water quality.
- Abstraction pressures on river flows combined with drought, or low flow conditions
- Agricultural policy post-Brexit (both a threat and an opportunity for improvement)
- Agricultural pollution
- Lack of succession in farming families on the Levels, resulting in loss of knowledge and tradition
- Economic viability of agriculture (on the Gwent Levels)
- Flooding resulting from loss of knowledge of reen and water management on the levels.
- M4 relief road, housing, industry, tidal and solar energy schemes and electrification of the rail line will all have an impact on biodiversity on the Levels.
- Climate change and sea level rise on the Levels
- Large area between Raglan and Vale of Usk with few protected sites and intensive agriculture
- Accessibility of public rights of way. Dense network, but poor information about quality and whether or not it's possible to use them.
 Resources do not exist to allow monitoring of access quality in a way that is representative of Monmouthshire's communities.
- Protected sites are often small and sometimes fragmented with poor connectivity compared with neighbouring areas such as the valleys, which do not have such a high density of protected sites but the sites are well connected.

- Water quality in the Gavenny, Trothy, Nedern and Olway (and the Angidy catchment siltation)
- Water quality in the Monmouthshire section of the River Usk due to agricultural and domestic pollution
- NRW are consulted regarding Glas Tir schemes, but by the time they are consulted it is too late to make any changes.
- There are compliance issues regarding Water Framework Directive on some County Council farm holdings, where infrastructure is in extremely poor condition. Without improvement legal action against MCC will become necessary.
- Opportunities not taken to use development to create good quality green infrastructure and connect wildlife sites together.
- Agriculture and development in the countryside, threat to riparian habitats. It is the cumulative impact, not an individual development or incident.
- Local Wildlife Site/SINC changes in ownership to a new, less sympathetic owner, especially on small high value sites
- Climate change, and changes in weather patterns will have an impact on structures of the canal eg bridges, reservoirs are vulnerable to wetter or drier weather
- Invasive Non Native Species have a large impact on habitats
- Development on flood plains should be avoided and permission for development should not be allowed in these areas.
- Nitrogen enrichment of botanically rich roadside verges due to pollution from adjacent farmland
- Public perception of management of sites, verges and public areas for biodiversity
- Uncultivated land regs are designed to protect natural and semi-natural habitats from undesirable change (eg ploughing, drainage, fertilising), by requiring an environmental impact assessment to be undertaken to assess the impact on biodiversity, but there are loopholes, and the penalty for ignoring the regulation is much smaller than the potential benefits to a landowner (£5000 max fine).
- Poor quality of surviving ponds, shading, pollution from surrounding farm land, invasive species, lack of management, infilling, nitrogen eutrophication
- Lack of capable volunteers lots of monitoring is happening (invertebrates, plants and birds), but there are not enough people with the skills
- Community groups (eg MMG) having sufficient funding to replace machinery or purchase new machinery

Possible delivery mechanisms/partnerships for Environment Act priorities/projects; examples from other areas:

- Herefordshire Wildlife Link https://herefordshirewildlifelink.wordpress.com/
- The delivery mechanism needs to reflect the issue being addressed rather than deciding on the area as a first priority, so might vary depending on the issue.
- More local will have better buy in from partners.
- Needs to be Monmouthshire based, but would be beneficial to have representative(s) from business that relies on the local environment farming, forestry, recreation or tourism, food production
- Needs to be at a catchment scale to have an impact. There is no land on which rain does not fall and runs off into a water course.
- Monmouthshire based rather than Gwent based.
- It would be very useful to have more opportunities to network with VC recorder groups currently 1 meeting per year arranged by SEWBREC
- Local Biodiversity Partnership in the Brecon Beacons National Park, guided by the Nature Recovery Plan
- LBAP Partnership should be a network for information sharing to prevent duplication of effort and promote partnership working. It can evolve into whatever is needed
- Possibility of a network/stakeholder meeting to celebrate the work that is currently underway in Monmouthshire
- BSBI work is at Vice County, not administrative county level

Other issues:

- WUF would like to have access to maps of Monmouthshire SINCs. Glastir staff also don't know about SINC locations, their mapping system only shows statutory designated sites. Brecon Beacons National Park would like us to share info about SINCs in National Park to double check that they have the same info as us.
- Priorities must be to retain existing capacity, be able to work with landowners, make simple messages available such as not to cut hedges while they are fruiting and providing a food source for wildlife.
- Need to monitor to be aware of any changes.

- Education is important so that people are aware of the impact of their actions, and why certain forms of management are being undertaken, which might not look tidy but are benefitting wildlife.
- Training for volunteers to continue managing sites when funding is finished (eg churchyards).
- Canal and Rivers Trust would like to reciprocally share information to develop indicators
- Lack of capacity (botanical recorders, though probably applies to other specialist recording groups) and time availability
- Expanding good wildlife sites and creating connectivity is important
- Infrastructure of County Farms should be improved/maintained to prevent run-off and pollution incidents

Opportunities:

- County Farms conditions for tenancy agreements, and selection of tenants based on good environmental practice. They could be exemplars, or models of good practice.
- Phase out MCC use of glyphosate and avoid spraying kerbsides
- Introduce cut and collect grass cutting machinery (MCC)

Appendix 5: Multi-benefit Partnership Projects

Project details	Partners	Social benefit	Economic benefit	Environmental benefit
SAC Woodlands (runs	GWT (lead) NRW,	Access improvements at	Tourism, venison production	Deer management,
until Dec 2017, funded	WVAONB, Woodland	Piercefield, viewpoint	associated with landscape	control of INNS,
by NRW, private	Trust, Deer Initiative	improvements, improved	management	coppicing
landowners, Leader, SDF,		interpretation of		
volunteer labour)		landscape, volunteer		
		involvement		
Venison project (project	Deer Initiative, Wye	Linking food production	Exploring local market for	Deer management in
in development, funding	Valley AONB, NRW,	to protected landscape	venison and skills in	woodlands
bids to Leader, SDF)	Woodland Trust, GWT	and need for	butchery, marketing, storage,	
		management	supply chain	
Wye Catchment	NRW, WVAONB,	Drinking water quality,	Improvements to agricultural	Water quality
Partnership, nutrient	landowners, MCC, Wye	improved understanding	practices, soil protection	
management	and Usk Foundation,	of the issues on a		
	Monnow Rivers	catchment basis		
	Association			
Control of INNS and	Monnow Rivers	Local skills, local	Angling, agriculture	Control of INNS (mink
agricultural pollution on	Association, NRW, Wye	understanding of the		and Himalayan balsam),
the Monnow	and Usk Foundation	issues		biodiversity benefits.
				INNS reduce biodiversity
Gavenny Project	Wye and Usk	Greater understanding	Assistance to farmers,	Water quality
	Foundation, farmers and	and awareness of the	angling	improvements, nutrients,
	landowners,	importance of the river		phosphates, sediment,
	Abergavenny Civic	and how to protect it.		minor problem with
	Society			pesticides, soil
				conservation
Living Levels, history,	RSPB, GWT, MCC, NCC,	Appreciation of shared	Tourism, destination	Biodiversity benefits
biodiversity, agriculture,	Gwent Archives, Cardiff	heritage, training and	management, agricultural	from reen management,

tourism. 5 year project with 15 project leads	CC, NRW plus 5 delivery partners eg Bumblebee Conservation	skills, capacity building, community engagement, volunteer opportunities, tourism ambassadors scheme	viability, small business support, piloting payments for eco-system services. Grant scheme for farmers from GWT.	orchard maintenance, surveying, fencing, pollarding, habitat creation and management, control of fly tipping, control of INNS
Trothy project	GWT, NRW, Woodland Trust	Natural flood management	Angling, help for farmers	Habitat creation and management. Tree planting
Olway project	GWT, NRW		Angling, help for farmers	Habitat creation and management. Tree planting
Llanthony Valley project	GWT, NRW, Woodland Trust	Natural flood management	Angling, help for farmers	Habitat creation and management. Tree planting
Natural Assets Project	GWT, MCC, NRW		Assistance to farmers and landowners	Habitat management and maintenance
Water vole reintroduction	GWT, NRW	Volunteer involvement opportunities	Tourism	Biodiversity, natural management
Charcoal making at Croes Robert Wood	GWT SSSI	Volunteer involvement, traditional skills	Economic opportunity from habitat management	Biodiversity
Glastir Advanced	Farming Connect, farmers			Habitat management, fencing, tree planting, nutrient management
Wildlife Prospectus for all Welsh waterways, based on the Wildcru model, with specific information about each	Canal and Rivers Trust	Awareness raising	Tourism	Identifying opportunities for improvements, preventing damage to biodiversity assets

canal in Wales.				
Identifies assets and				
opportunities for				
biodiversity				
improvements				
Development Strategy	Canal and Rivers Trust,	Improved accessibility to	Tourism	Opportunities to raise
Goytre Wharf	NRW, MCC	the canal, Active Travel		awareness of biodiversity
Ecological Network	BBNP, National Trust,	Volunteer opportunities	Tourism, agricultural grants,	Direct contribution to
Mapping, and Ecosystem	Woodland Trust, MCC,	in practical projects	traineeships/apprenticeships,	resilient ecosystems,
Services Mapping in the	NRW, BIS and others are	leading from the	National Park Ambassadors	improved recording
Brecon Beacons NP area	developing a SMS bid for	mapping exercise,		
	2017 submission	awareness raising of		
		biodiversity, directing		
		volunteer effort to areas		
		that have few wildlife		
		records		
Long Forest Project	KWT lead, supported by	Volunteer tree planting,		Improved biodiversity,
(funding being sought to	partners including MCC,	education and		ecological links,
extend to	WVAONB, Woodland	awareness of importance		landscape improvements
Monmouthshire)	Trust, GWT and others	of hedges and trees		·
Wet Meadow Project,	Monmouthshire	Volunteer input, GWT	Volunteering, skills, health	Wildflower meadow site
Trellech	Meadows Group, GWT,	wild health programme,	benefits etc	restoration and
	Trellech school, Trellech	WVAONB volunteers,		management, extension
	surgery, MCC, WVAONB	links to Trellech school		to existing adjacent sites.
	and others, using SDF			Ongoing monitoring of
	and MMG group funding			species/condition
Bee Friendly	BFM, will need to have			Hedges better able to
Monmouthshire	support of MCC,			fulfil ecosystem services
projects, hedgerow	contractors, private			
manifesto, campaigning	landowners for the			

aimed at gardeners, 'In	hedgerow manifesto			
Bloom' community	campaign. Funding via			
groups, MCC to reduce	SDF			
herbicide use				
GOS Goytre House	Gwent Ornithological	Volunteer opportunities,	Skills development	Ongoing management
Wood management	Society manage the Local	open access, education		for wildlife and visitor
	Wildlife Site for its flora			safety
	and fauna. Links to Canal			

Appendix 6 Evidence base:

Who	What	Where	When
LEMUR placements (AONB)	Phase 1 Habitat Survey	Monmouthshire part of AONB	2015-16?
Wye Valley AONB	Veteran Tree Survey	Monmouthshire part of AONB	2002-16
Wye Valley AONB	Dry stone wall condition survey	Monmouthshire part of AONB	2002-16
Deer Initiative	Deer monitoring and exclusion zones SAC woodland	SAC woodland Monmouthshire part of AONB	2014-16
Monnow Rivers Association	Mink Raft Monitoring	River Monnow, Monmouthshire part of AONB	Ongoing, since 2010
MCC	Footpath monitoring counters	Various locations including Wye Valley Walk, Offas Dyke Path, 3 Castles Walk, Castle Meadows	ongoing
Environment Agency	Canoe use on the River Wye	Not sure.	ongoing
NRW / Environment Agency	Fish (salmon) catches on the Wye and Usk	River Usk, River Wye	ongoing
Wye and Usk Foundation	Diatom monitoring	River Gavenny catchment	2 year project 2016-18
Wye and Usk Foundation	Electro fishing to assess age profile of fish	Trothy and Olway and tributaries	ongoing
Wye and Usk Foundation	Fish via angling passport scheme and salmon catches	Wye, Usk, Monnow, Trothy	ongoing
Wye and Usk Foundation	Engagement with schools	Monmouthshire	ongoing
Wye and Usk Foundation	Presence or absence of INNS	Rivers in Monmouthshire	ongoing
Living Levels	Various, baseline audits have been commissioned	Gwent Levels	2016-7
Living Levels	Landscape Assessment	Gwent Levels	2016-17
Living Levels	Green Infrastructure Strategy	Gwent Levels	2016-17
NRW	Water Quality (Water Framework Directive Reports)	Monmouthshire Rivers (SACs)	ongoing

MCC	Accessible Public Rights of Way	Long distance and Pathcare routes	ongoing
GWT/NRW/MCC	Local Wildlife Sites Condition Survey	Throughout Monmouthshire, grassland sites	2015-17
GWT	Engagement with schools at Magor Marsh and elsewhere	Magor Marsh	ongoing
Canal and Rivers Trust	Ecological surveys of Mon & Brec Canal	Mon & Brec canal	2016-7
Canal & Rivers Trust	INNS presence – hogweed, balsam, crayfish (?), zander	Mon & Brec Canal	ongoing
NRW	SSSI and SAC condition reports	SSSIs and SACs	Ongoing (frequency of reporting unknown)
GOS	Ongoing management and monitoring of Goytre House Wood SINC	Goytre House Wood SINC	Ongoing
MMG	Botanical and other species recording	MMG reserves and group member sites	Ongoing, returning to sites 5 years after initial survey to assess diversity and abundance
BSBI (Vice County Recorders)	VC35 Rare Plant Register	VC35 (old Monmouthshire)	Publication due spring 2017