

# Biodiversity and Ecosystem Resilience

## Forward Plan

Environment (Wales) Act 2016

Monmouthshire County Council

March 2017



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# 1. Introduction

This forward plan has been prepared by Monmouthshire County Council to meet the Section 6 Biodiversity and Ecosystem Resilience duty of the Environment (Wales) Act 2016 and to provide a mechanism for delivering the County's requirements under the Well-being of Future Generations (Wales) Act 2015.

The Monmouthshire County Council forward plan will:

- ❖ Summarise the relevant legislative requirements for biodiversity & the resilience of ecosystems.
- ❖ Consider the state of Biodiversity and Ecosystem Resilience of Monmouthshire and identify relevant habitats and species of principal importance for nature conservation.
- ❖ Consider the ways in which Monmouthshire County Council can influence Biodiversity and Ecosystem Resilience when exercising its functions as a Public Authority.
- ❖ Consider positive work that is already underway by Monmouthshire County Council and other relevant organisations and identify opportunities for collaborative delivery.
- ❖ Consider the governance of this delivery for biodiversity and ecological resilience in Monmouthshire
- ❖ Outline Monmouthshire County Council's commitments to meeting requirements of the legislation.
- ❖ Identify Objectives for Monmouthshire County Council's compliance with the Biodiversity & Ecosystem Resilience duty.
- ❖ Highlight the importance of the Green Infrastructure Approach to delivery including Green Infrastructure Policy and Supplementary Planning Guidance.
- ❖ Maximise Monmouthshire County Council's contributions across the Well-being goals.

The forward plan follows guidance prepared by Welsh Government and considers the Objectives of the Nature Recovery Plan for Wales<sup>1</sup>. It will be an evolving plan that can be updated in line with further evidence from Natural Resources Wales such as Area Statements. Monmouthshire County Council will be required to report on the outcomes of this plan in 2019 and then subsequently every three years. Forward plans will be reviewed accordingly in light of that reporting.

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<sup>1</sup> Nature Recovery Plan for Wales <http://gov.wales/topics/environmentcountryside/consmanagement/conservationbiodiversity/?lang=en>

## 2. The Legislative context of the Forward Plan

The Biodiversity and Resilience of Ecosystems forward plan has been produced in relation to two key pieces of legislation:

### 2.1 Environment (Wales) Act 2016 - The Biodiversity and Resilience of Ecosystems duty

Section 6 of the Environment (Wales) Act 2016 places a duty on public authorities to **seek to maintain and enhance biodiversity** where it is within the proper exercise of their functions. In doing so, public authorities must **seek to promote the resilience of ecosystems**.

This means that Monmouthshire County Council must take a pro-active approach to improve and not reduce biodiversity when carrying out functions.

The duty came into force on 21st May 2016 and replaces the earlier Biodiversity duty in the Natural Environment and Rural Communities Act 2006. The preparation of this Forward Plan assists in complying with the new duties and is a requirement on all public authorities. There is a requirement to report on the plan in 2019 and every 3 years following this. The plan can be subsequently reviewed.

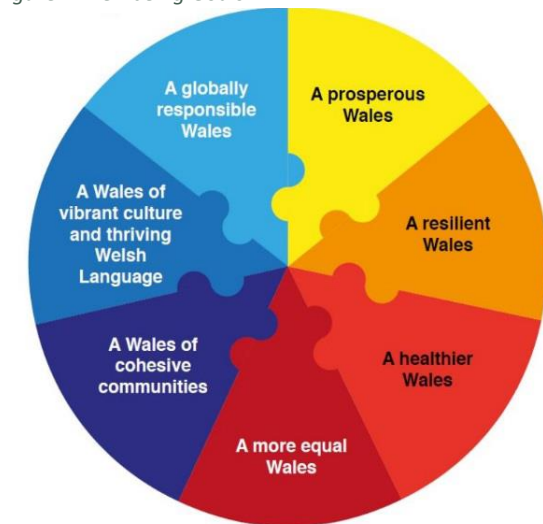
### 2.2 Well-being of Future Generations Act 2015 - A Resilient Wales

The work undertaken to meet the Biodiversity and Resilience of Ecosystems duty will assist Monmouthshire County Council to maximise contributions to Well-being Goals under the Well-being of Future Generations (Wales) Act 2015.

The Public Service Board for Monmouthshire which includes Monmouthshire County Council is preparing a Well-being Assessment, Well-being Objectives and a Well-being Plan to outline how the authority and other public services in the County will meet the 7 well-being goals which explicitly includes: **A Resilient Wales**.

This goal is to ensure Wales is a nation which maintains and enhances a biodiverse natural environment with healthy functioning ecosystems that support social, economic and ecological resilience and the capacity to adapt to change (for example climate change).

Figure 2 Well-being Goals



A summary of the duty published by Welsh Government can be found at: <http://gov.wales/docs/desh/publications/150512-biodiversity-and-resilience-of-ecosystems-duty-en.pdf>

The full text of the Environment (Wales) Act and Explanatory notes can be found at: <http://www.legislation.gov.uk/anaw/2016/3/contents>

Well-being of Future Generations (Wales) Act 2015 <http://www.thewaleswewant.co.uk/about/well-being-future-generations-wales-act-2015/well-being-future-generations-wales-act-2015>

More information on the Resilient Wales goal can be found at: <http://www.thewaleswewant.co.uk/goals/resilient>



### 3. Biodiversity and Ecosystem Resilience in Monmouthshire

Monmouthshire is a rural county with agriculture and forestry shaping the rich biodiversity and the resilience of ecosystems in the landscape. The Rivers Usk and Wye are designated as Special Areas of Conservation and together with their tributaries provide important wildlife corridors and migratory routes for key species such as otters, shad and white clawed crayfish. These habitats are under threat from water abstraction, pollution and siltation.

The east of the County is heavily wooded and together with woodland on the English side of the border, forms the Wye Valley Woodlands SAC, part of a large swathe of high quality habitat for woodland species including lesser horseshoe bats and dormouse. The quality of the woodland is predominantly under threat from lack of management.

In areas where agricultural intensification has not depleted quality there are networks of unimproved grassland. Much of it is included in the Local Wildlife Sites network and has no statutory protection. It is vulnerable to poor management and development pressures particularly in villages and on the edge of settlements.

The unique man-made landscape in the south of the County along the Gwent Levels has created a network of reens and coastal and floodplain grazing marsh. This sits inland of the internationally important Severn Estuary SPA, SAC and Ramsar site which is particularly important for wintering bird species. The Gwent Levels are under threat from the M4 relief road, housing and industrial development. The Estuary may face future threats from tidal power initiatives.

Areas of upland in the Brecon Beacons National Park such as the Black Mountains, the Blorenges and the Gilwern Hill SSSI's include a mixture of upland habitats including wet heath, blanket bog and limestone grassland. These sites have important populations of rare plants such as endemic Whitebeams, Hawkweeds, mosses, liverworts and lichens.



Figure 2 A Local Wildlife Site in the Wye Valley

J Lewis

No data specifically relating to the resilience of ecosystems has been published, however we know from protected site Core Management plans<sup>1</sup> that many of our protected sites are in an *unfavourable condition*, the extent and quality of habitats in the County is largely reducing, some species are increasing e.g. horseshoe bats and otters but most are decreasing e.g. butterflies and farmland birds and overall diversity is decreasing. Diversity is also varied across the County as demonstrated by vascular plant diversity in the Flora of Monmouthshire<sup>2</sup> with the north of the County having lower diversity by comparison to areas such as the Wye Valley where diversity is high.

Natural Resources Wales have identified that the ecological connectivity of the county is high<sup>3</sup>. However, when presented spatially, there are obvious exceptions to this where the landscape has become degraded and improved for agriculture. The north of the county in the catchment of the River Trothy and farmland around the lower Usk catchment are examples of this.

These factors make the adaptability of our ecosystems more difficult to achieve when episodes of drought or flooding occur but no specific data is currently available.

The Green Infrastructure Action Plan for Pollinators in South East Wales<sup>4</sup> identifies the demand and resource of pollinators across the region and considers not only the demand from agriculture but also the need of pollinators to support biodiversity. Large areas of the County are demonstrated to be important areas for pollinators including areas of commercial orchards and land associated with protected sites particularly in the uplands of the Brecon Beacons National Park.

Further information can be used to increase our understanding of biodiversity and ecosystem resilience as it becomes available e.g. the Monmouthshire Rare Plant Register<sup>5</sup> and other studies such as those relating to tranquillity and dark skies.



Figure 3 Common carder bee foraging on a road verge K Stinchcombe

1 NRW Protected sites Core Management Plans <https://naturalresources.wales/conservation-biodiversity-and-wildlife/find-protected-areas-of-land-and-seas/designated-sites-search/?lang=en>

2 Evans, T. G. (2007). *Flora of Monmouthshire*. Chepstow Society, Chepstow.

3 Natural Resources Wales (2016) Public Service Board - Sir Fynwy – Monmouthshire Environmental Information for well-being assessments

4 TACP (2015) *Green Infrastructure Action Plan for Pollinators in South East Wales Report to Monmouthshire County Council on behalf of Monmouthshire County Council and Blaenau Gwent, Caerphilly and Torfaen County Borough Councils*. TACP UK Ltd.

5 Tyler, S.J. & Wood, E. 2017. Monmouthshire Rare Plant Register, revised edition.

## 4. Developing the Monmouthshire County Council Forward Plan

Current guidance published by Welsh Government states that public authorities must take into account relevant evidence when complying with the Section 6 duty including the State of Natural Resources Report (SoNaRR) published by Natural Resources Wales (2016), The Environment (Wales) Act Section 7 lists of habitats and species of principal importance in Wales, and relevant Area Statements to be prepared by Natural Resources Wales under Section 11 of the Act.

Welsh Government guidance on the Section 6 duty states that in promoting resilience of ecosystems, public authorities must take into account the key characteristics of a resilient ecosystem. These characteristics which include condition, diversity, extent, connectivity and adaptability, will assist public authorities in identifying any actions that may need to be taken.

The Nature Recovery Plan for Wales will provide the Nature Recovery Framework to guide compliance with the duty by providing objectives, outcomes and actions that Public Authorities can take responsibility for and contribute to.

Monmouthshire County Council will also take into consideration the work that individual service areas undertake which could have an impact on Biodiversity & Ecosystem Resilience and the work of other key organisations with whom MCC can collaborate with to maximise delivery under the Act.

### 4.1 State of Natural Resources Report (SoNaRR)<sup>1</sup>

Natural Resources Wales reported in September 2016 on the state and condition of the habitats and species within marine, terrestrial and freshwater environments in Wales, as required by The Environment (Wales) Act 2016.

The economic and social benefits that a fully functioning environment can provide to human society include agricultural production, forestry, building materials, tourism and leisure, energy generation, flood prevention, pollination services for crops, clean water, clean air and healthy soils. The report spells out the major threats facing the proper functioning of ecosystems in Wales, which if not addressed will contribute to further declines in biodiversity, and prevent us from gaining the full economic and social benefits of all that the environment can provide. These threats include:

- Climate change
- Land Use Change
- Over exploitation of natural resources

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<sup>1</sup> State of Natural Resources Report (SoNaRR) is available on the NRW Website <https://naturalresources.wales/our-evidence-and-reports/the-state-of-natural-resources-report-assessment-of-the-sustainable-management-of-natural-resources/?lang=en>



- Nutrient enrichment and pollution

- Invasive non-native and introduced pests and diseases

These direct drivers of change are often linked and in general, the extent and scale of their impact is increasing. The focus for action needs to be where the resilience of ecosystems and the benefits we get from them are at greatest risk due to unsustainable management. The objective is not to remove all pressures, however we do need to better understand how to manage them in more sustainable ways so that risks and opportunities are recognised and utilised so that future generations can continue to benefit from all that ecosystems can provide.

On a Monmouthshire scale the following biodiversity and ecosystem resilience issues, raised in the SoNaRR report, are of relevance:



Figure 4 Wye Valley Woodland

K Stinchcombe

- Outside the Welsh Government estate (i.e. managed by Natural Resources Wales) less than 25% of woodlands in Wales are being actively managed, so their full potential is not being realised. Many of Monmouthshire's ancient woodlands are very small and not connected to other areas of similar habitat. Uncontrolled populations of wild deer and grey squirrel damage the value of local woodlands, while Invasive non-native species and introduced diseases continue to be threats.
- Approximately 90% of the fish species in the SACs (e.g. Rivers Usk, Wye and Severn) are in unfavourable condition. There has been a marked reduction in salmon abundance in rivers, caused by poor river conditions and increased mortality at sea.
- Pollution from agriculture, sewerage and soil run off is affecting the ecological status of our rivers. Much of Monmouthshire's drinking water also originates from our rivers.
- The extent of unimproved neutral grassland (traditional wildflower meadows) has declined dramatically, with only 1600 ha remaining in the whole of Wales. Monmouthshire has approximately 700ha of this habitat, important for flowering plants, fungi, rare pollinators and a range of insects, designated as

Sites of Importance for Nature Conservation or Sites of Special Scientific Interest. Despite the designations, this is a vulnerable habitat, easily damaged by unsympathetic management, soil enrichment, neglect and fragmentation.

- 78% of hedgerows in Wales are in unfavourable condition, with a decline forecast to continue. Ash die-back (chalara) will have a large impact on Monmouthshire's landscape as ash an important hedgerow species including many mature specimens.
- The area covered by traditional orchards is estimated to have decreased by 94% between 1958 and 1992. Historically Monmouthshire was an important apple and pear producing County, and old orchard trees in particular support a wide variety of wildlife. Some local groups such as Transition Towns have enthusiastically planted community orchards in their localities, and Gwent Wildlife Trust ran a project from 2010 to 2012 surveying 740 sites, and working with volunteers to encourage management of them.
- 73% of Welsh urban areas show a decline in tree cover. Less affluent areas have less tree cover, important for reducing flood run off, providing shade, reducing summer temperatures, filtering dust and pollution, as well as increasing biodiversity. Transition Monmouth have planted 1000 trees around the town during the winter of 2016 to improve the townscape and reduce flood run off.
- The intertidal area between high and low tide is one of the few habitats that is considered to be in good condition, although sand banks are declining in the short and long term. This habitat is represented in Monmouthshire along the Severn Estuary, supporting a range of wildlife species.

## 4.2 The Section 7 list of Habitats and Species of Principle Importance for Wales

At the time of writing this forward plan, the Section 7 lists<sup>2</sup> comprise those habitats and species previously identified as of Principal Importance in Wales under Section 42 of the Natural Environment and Rural Communities Act 2006.

Unfortunately, little up to date spatial data is available for Section 7 habitats in the County with the exception of Phase 1 habitat survey for the Wye Valley AONB. A list of the habitat types that occur in the forward plan area is included in Appendix 1.

Section 7 species in Monmouthshire are included in Appendix 2 of the forward plan. These include species across most priority taxa

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<sup>2</sup> The Section 6 guidance and Section 7 lists are available on the Wales Biodiversity Partnership website <https://www.biodiversitywales.org.uk/Environment-Wales-act>

including mammals, birds, fish, invertebrates, reptiles & amphibians, vascular plants, lichen communities, mosses & liverworts, fungi, and marine species.

Considerations for Section 7 Habitats and Species will be incorporated into the Monmouthshire County Council objectives for delivery of the Biodiversity and Resilience of Ecosystems duty (page 14) and specific actions to maintain and enhance Section 7 habitats and species will be incorporated into individual service area action plans which will follow the publication of this plan.

### 4.3 Area Statements

At the time of writing this forward plan, Area Statements are not available for consideration however, Monmouthshire County Council will continue to contribute to the development of the Area Statements which are currently being developed by Natural Resources Wales and incorporate changes to the forward plan as appropriate.

### 4.4 Service Area interviews and reviews

As part of the process undertaken to develop the forward plan, Monmouthshire County Council have undertaken an internal review of key service areas to identify potential risks and opportunities for Section 6 delivery and to develop specific actions. Service areas included in the review were those that are considered to have a potentially negative impact on Biodiversity and Ecosystem Resilience and those that could deliver positive change and maximise delivery under other legislation such as the Well-being of Future Generations Act 2015. Service areas we have met to date include: Building Control, Development Management, Planning Policy, Rural Development Programme, Grounds Maintenance and Waste, Estates including County Farms, Licensing and Events. We also hope to review works undertaken by Property Services, Education, Outdoor education and Highways in the coming months. A summary of risks and opportunities identified are included in Figure 5.

The reviews already undertaken have raised awareness of the Environment (Wales) Act 2016, particularly the Section 6 duty and allowed the development of specific Biodiversity & Ecosystem Resilience Action Plans. These plans, which will be published before May 2017 identify actions that can be incorporated into service area business plans to integrate delivery of the duty.



Figure 5 Table 1 Summary of Risks and Opportunities identified in the Service Area review

Risks	Opportunities
<ul style="list-style-type: none"> <li>❖ Decision making at all levels</li> <li>❖ Consents, licences, certificates</li> <li>❖ Land management practices</li> <li>❖ Timescales for consideration of biodiversity</li> <li>❖ Missed opportunities for raising awareness and education</li> </ul>	<ul style="list-style-type: none"> <li>❖ Raising awareness and training</li> <li>❖ Environmental education</li> <li>❖ Net gain for biodiversity secured in consents granted</li> <li>❖ Green infrastructure approach</li> <li>❖ Better land management practices</li> <li>❖ Wider consultation with biodiversity and ecology officers</li> </ul>

## 4.5 Collaboration with other organisations

It was also considered important to review what other organisations are currently doing to deliver for Biodiversity and Ecosystem Resilience to allow future collaborative work to take place to maximise the benefits for Biodiversity. Organisations considered include Natural Resources Wales, Brecon Beacons National Park Authority, Gwent Wildlife Trust, Bee Friendly Monmouthshire, Monmouthshire Meadows Group, Botanical Society for the British Isles, Gwent Ornithological Society, Wye Valley Area of Outstanding Natural Beauty Unit, Canal and Rivers Trust, RSPB (Living Levels Project), Farming Connect (Glastir), Wye and Usk Foundation and Monnow Rivers Association. These organisations have highlighted areas of concern in relation to biodiversity and ecosystem resilience relevant to Monmouthshire and identified projects and programmes with which they are currently engaged. The organisations have also made suggestions of areas where Monmouthshire County Council could have the biggest positive impact on Biodiversity and Ecosystem Resilience and the most popular of these are listed in Figure 7 (below).

A summary of the findings of the interviews are included in Appendix 3. A record of the projects and programmes being undertaken in the County has been compiled and is available in Appendix 4.



Figure 6 Hay making with Friends of Monmouth Cemetery

D McCarty



Figure 7 Stakeholder suggestions for Monmouthshire County Council action

- ❖ Improve management of Council owned land including County Farms for Biodiversity and Ecosystem Resilience
- ❖ Reduce pesticide use across the County
- ❖ Educating and influencing the public by using the “Nature Isn’t Neat” message
- ❖ Planning decisions should ensure sustainable development and include Green Infrastructure to provide connectivity
- ❖ A Monmouthshire Local Nature Partnership / Network for sharing of best practice and collaborative working

It was not possible to fully engage with all organisations delivering biodiversity action in the County in the timescale available however, there is scope to continue this process and meet with more grass roots groups to develop collaborative work where possible such as the town Transition groups, and species specialists such as the Monmouthshire Moth and Butterfly Group.

The Environment Partnership Board\* has an important role in steering the development of the forward plan and delivery of action. The board will help establish priorities and identify opportunities for partnership working.

\*The Environment Partnership Board (Monmouthshire County Council, Brecon Beacons National Park, Gwent Association of Voluntary Organisations, Gwent Wildlife Trust, Monmouthshire Housing Association, Natural Resources Wales, Wye Valley AONB Unit, Keep Wales Tidy)

## 4.6 Nature Recovery Plan Objectives

Current guidance suggests that the six objectives can be used to develop actions to comply with the biodiversity and resilience of ecosystems duty.

Figure 8 Table 2 Nature Recovery Plan Objectives

1	Engage and support participation and understanding to embed biodiversity throughout decision making at all levels
2	Safeguard species and habitats of principal importance and improve their management
3	Increase the resilience of our natural environments by restoring degraded habitats and habitat creation
4	Tackle key pressures on species and habitats
5	Improve our evidence, understanding and monitoring
6	Put in place a framework of governance and support for delivery

A number of actions have been included in the Nature Recovery Plan for Public Authorities including those relating to embedding biodiversity into the decision making process, raising awareness, restoration and creation of habitats and the implementation of the Section 6 duty.

## 5. Biodiversity and Resilience of Ecosystems Duty Objectives

In order to meet the Section 6 duty, Monmouthshire County Council shall undertake work and change current procedures to achieve the following objectives, so long as is consistent with the proper exercise of Monmouthshire County Council's functions as a Local Authority. The objectives have been developed to maintain and increase the resilience of our ecosystems by increasing scale and extent, connectivity, condition, diversity, and ability of ecosystems to adapt.

All objectives apply to both marine and terrestrial habitats as required by the Act.

Objective 1 : Embed biodiversity throughout decision making at all levels

Objective 2 : Provide environmental education to raise awareness and encourage action

Objective 3 : Undertake land management for biodiversity and promote ecosystem resilience

Objective 4 : Influence land management to improve ecosystem resilience

Objective 5 : Tackle key pressures on species and habitats

Objective 6 : Support landscape scale projects and partnerships to maximise delivery

Objective 7 : Monitor the effectiveness of the plan and review

### Objective 1 : Embed biodiversity throughout decision making at all levels

High level decision making such as policy and plan adoption and future spatial planning including the development plan process are key areas where embedding biodiversity will be vital to meet the Section 6 duty.

Objective 1 will particularly apply to all types of consents that Monmouthshire County Council issues including planning permission and other consents that may not currently consider biodiversity. It will also apply to decisions taken in relation to procurement, contracts, licences, asset management and wider land management policies such as road verge management.

The objective will be achieved by embedding biodiversity and resilience of ecosystems into business planning by service area. This will require service areas to understand what potential impacts work streams can have on biodiversity and development of a programme of delivery. Internal awareness raising and training will have an important role in meeting the objective.

Section 6 also applies to biodiversity in a global sense and requires Monmouthshire County Council to consider the effect of decisions taken or activities carried out within Wales but also in relation to biodiversity outside of Wales for example in the procurement of sustainable products from other parts of the world. It is also a pertinent point for Monmouthshire where cross boundary considerations for biodiversity and ecosystem resilience, particularly relating to Gloucestershire and Herefordshire, are relevant.

This objective contributes to the Nature Recovery Plan for Wales Objective 1.

## Objective 2 : Provide environmental education to raise awareness and encourage action

An improved understanding and awareness of biodiversity and ecosystems leads to behavioural change and encourages everyone to act. Environmental education has developed over several decades and it is now threatened by funding cuts however, to make real progress towards better understanding and appreciation of the value of biodiversity and ecosystems, it is vital to maintain actions to meet this objective.

Environmental education provision by Monmouthshire County Council as the Local Education Authority and through service areas such as Countryside & Green Infrastructure, Waste & Recycling, Outdoor Education, Monmouthshire Youth Service and the role of the Rural Development Programme can deliver this objective which will require sufficient resource to be put in place.

Alignment with the work of external partners will be vital and the use of networks such as the Outdoor Learning Wales: Monmouthshire Cluster Group can facilitate this. Key external partners include: Keep Wales Tidy, Gwent Wildlife Trust, Welsh Water, Wye Valley Area of Outstanding Natural Beauty Unit, Brecon Beacons National Park Authority, RSPB and others. Making use of existing educational resources e.g. Green Infrastructure Action Plan for Pollinators leaflets and Urban buzz advice and guidance, can allow MCC and partners to efficiently engage with schools and community groups. Volunteers, including those at Monmouthshire County Council, also provide vital support in this delivery.

There are opportunities to engage staff at Monmouthshire County Council with the use of resources such as the Incredible Edible pollinator garden at County Hall Usk and Caldicot Castle Country Park.

The connection between benefits to the environment and well-being benefits of people is an important target area for many partner organisations. As well as encouraging action, this work shall contribute to the physical and mental health and wellbeing of those involved.

This objective contributes to the Nature Recovery Plan for Wales Objective 1.

### Objective 3 : Undertake land management for biodiversity and promote ecosystem resilience

The rationale for land management methods by Monmouthshire County Council shall be reviewed to identify opportunities to improve sites for Biodiversity so long as is consistent with commitments under other legislation such as those relating to Health and Safety and Heritage. A Green Infrastructure approach to this management shall ensure multiple benefits for communities.

Changes shall be made with the aim of restoring habitats to a natural and resilient state and in particular to safeguard Section 7 habitats and species. To achieve this objective Monmouthshire County Council will need to have a better understanding of where and how we influence these habitats and species. Conservation management skills, machinery and processes may need to be developed to enable a shift from a 'neat and tidy' rationale to a management of habitats approach. Reviewing pesticide use and other practices will deliver more benefits.

Working in partnership with other organisations and volunteers such as Keep Wales Tidy and Friend's Groups will increase the specialist expertise available and establish 'buy-in' of local communities. Tools such as the Green Infrastructure Action Plan for Pollinators in South Wales can provide framework for delivery. Monmouthshire County Council has a close connection to the Bee Friendly Initiative is working to achieve a Bee Friendly status which shall aid in meeting this objective.

Monmouthshire County Council shall seek to enhance the capacity of natural resources on sites it owns to provide essential ecosystem services such as water management, climate regulation and crop pollination as well as enhancing the environment.

This objective contributes towards Nature Recovery Plan Objectives 2 & 3.

### Objective 4 : Influence land management to improve ecosystem resilience

Positively influencing management undertaken by others can increase the impact Monmouthshire County Council has on improving ecosystem resilience across the region and beyond. Continuing to work with external partners and supporting landscape scale projects such as Living Levels, Wye Catchment Partnership and the Long Forest project can increase the scale of the impact.

Development Management shall continue to deliver this through promoting a Green Infrastructure approach to design, development and subsequent management of sites under the Green Infrastructure Policy and Supplementary Planning Guidance. The Rural Development Programme shall do this through projects such as those promoting action for pollinating insects.

There is also scope for land owned by Monmouthshire County Council which is subject to tenancies and licences to be influenced by using clauses and conditions which will reduce negative impacts and promote positive actions e.g. protecting high value sites, tree



planting or hedgerow management. There are opportunities to play an important role in tackling climate change and its negative effects.

Monmouthshire County Council shall continue to be an exemplar of best practice for management and encourage other Public Authorities to make changes.

This objective contributes towards Nature Recovery Plan Objectives 1, 2 & 3.

### Objective 5 : Tackle key pressures on species and habitats

Pollution, invasive non-native species (INNS), and inappropriate land management are pressures on species and habitats that need to be tackled. Monmouthshire County Council has statutory duties relating to pollution and INNS under other relevant legislation however, by working in partnerships with other organisations for example Living Levels and Wye Catchment Partnership, Keep Wales Tidy and The Deer Initiative, more significant impacts can be achieved.

By adopting a Green Infrastructure approach to site management and in using nature based solutions to make improvements e.g. to improve water quality, we can take steps towards achieving the objective. A Green Infrastructure approach to development management can reduce the impacts of development on biodiversity and conserve, integrate and improve ecosystem services to deliver multifunctional benefits.

This objective contributes towards Nature Recovery Plan Objective 4

### Objective 6 : Support landscape scale projects and partnerships to maximise delivery

Monmouthshire County Council's continued role in supporting and contributing to landscape scale projects is important to maximise delivery for biodiversity and ecosystems. Key projects for Monmouthshire County Council will be Living Levels, Wye Valley Catchment Partnership and any forthcoming Sustainable Management Schemes or HLF projects where Monmouthshire County Council has a remit particularly in the National Park and Wye Valley AONB. These projects often require cross-boundary working to take place with neighbouring authorities and organisations.

The role of the Environment Partnership Board in steering this work shall continue to bring together key organisations and provide direction for the Local Authority in delivery of the Environment (Wales) Act 2016 and Well-being of Future Generations Act 2015. As

identified through consultation with external partners, there is a need for a Local Nature Partnership on a Monmouthshire level to provide an information sharing network and identify opportunities for collaborative works with partners, community groups and volunteers.

This objective contributes towards Nature Recovery Plan Objective 1, 2, 3 & 4.

### Objective 7 : Monitor the effectiveness of the plan and review

Action carried out by Monmouthshire County Council shall be monitored to establish its effectiveness. Individual service areas shall undertake monitoring and evaluation. Partnership working including working with volunteers will be vital to establish the effectiveness of action such as the Rural Development Programme. It is a requirement that the plan is reported on to Welsh Government in 2019 and every three years subsequently. Monmouthshire County Council commits to this and to learning from the results of monitoring and evaluation. The forward plan and service area action plans shall be reviewed accordingly.

This objective contributes towards Nature Recovery Plan Objective 5

## 6. The Next Steps in Delivery

Work has already commenced to develop Service Area Action Plans to embed and deliver the action required. The first priorities for 2017-18 are to:

- ❖ Continue assessing and reviewing how service areas and work streams impact biodiversity and ecosystem resilience and identify opportunities to meet the Section 6 duty.
- ❖ Develop actions with measurable targets for delivery by work stream for each service area.
- ❖ Use business plans to embed the consideration of biodiversity and ecosystems into policies, plans, programmes, projects and day to day activities.
- ❖ Using the Green Infrastructure approach as a means of delivering multiple benefits.
- ❖ Reporting on implementation of the forward plan as required by Welsh Government.
- ❖ Establish governance with the Environment Partnership Board as the steering group and work in partnership with other organisations to maximise delivery for biodiversity.
- ❖ Identifying how this work delivers Monmouthshire County Council's duties under the Wellbeing of Future Generations Act 2016.

Each service area will have responsibility for delivery and monitoring of the forward plan however the Green Infrastructure & Countryside Team shall lead and facilitate the process.

## 7. Glossary of terms

**Biodiversity** is defined in the Environment (Wales) Act as *the diversity of living organisms, whether at the genetic, species or ecosystem level*. Biodiversity drives the functioning and resilience of our ecosystems.

**Green infrastructure** is defined in Monmouthshire County Council's Supplementary Planning Guidance as *the network of natural and semi-natural features, green spaces rivers and lake that intersperse and connect villages, towns and cities*. When appropriately planned, designed and managed, green infrastructure has the potential to deliver a wide range of benefits for people and wildlife.

**Ecosystems** are defined by the UN Convention on Biological Diversity (CBD) as "a dynamic complex of plant, animal and micro-organisms and their non-living environment interacting as a functional unit."

**Ecosystem approach** is defined by the CBD as "a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way." This is widely recognised as international best practice for addressing the decline in biodiversity.

**Ecosystem services** are the conditions and processes through which natural ecosystems, and the species that make them up, sustain and fulfil human life. They maintain biodiversity and the production of ecosystem goods (Daily, 1997). They are split into four categories:

**Supporting services**– underpins all other services and includes nutrient cycling, soil formation and primary production

**Provisioning services**- all our food, fresh water, wood and fibre, fuel

**Regulating**- cleaning air and water, flood control, carbon sequestration

**Cultural**- aesthetic, spiritual, educational, recreational

**Natural resources are defined in the Environment Act as:**

- a) Animals, plants and other organisms
- b) Air, water and soil



- c) Minerals
- d) Geological features and processes
- e) Physiographical features
- f) Climatic features and processes

These individual components defined in the Act combine and work together in many ways and at many scales, from which humans use and obtain benefits. These components and processes work together and are referred to as ecosystems.

**Resilience**- Ecosystems are considered to be **resilient** if they are able to cope with disturbance or change so that they maintain their functioning and ability to deliver benefits. The Environment Act recognises a number of attributes of ecosystems that support resilience, including their scale and extent, connectedness, condition, diversity, and ability to adapt.

## 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 Section 42 list of the NERC Act (2006). It is currently under review in consultation with NRW.

<b>Habitats</b>	<b>Cynefin</b>	<b>Priority Habitats</b>	<b>Cynefin sy'n Flaenoriaeth</b>
<b>Terrestrial, coastal &amp; freshwater</b>	<b>Daearol, arfordirol a dŵr croyw</b>		
<b>Broadleaved, mixed and yew woodland</b>	<b>Coedwig lydanddail, gymysg ac ywen</b>	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
<b>Boundary and linear features</b>	<b>Nodweddion llinellol a therfynau</b>	Hedgerows	Gwrychoedd
<b>Arable and horticultural</b>	<b>Tir âr a garddwriaethol</b>	Arable field margins	Ymylon caeau ŷd
<b>Improved grassland</b>	<b>Glaswelltir wedi ei wella</b>	Coastal and floodplain grazing marsh	Tir pori corslyd ar forfa arfordirol a gorlifdir
<b>Neutral grassland</b>	<b>Glaswelltir niwtral</b>	Lowland meadows	Gweirgloddiau yr iseldir
<b>Calcareous grassland</b>	<b>Glaswelltir calchaid</b>	Lowland calcareous grassland	Glaswelltir calchaid yr iseldir

		Upland calcareous grassland	Glaswelltir calchaid tir uchel
<b>Acid grassland</b>	<b>Glaswelltir asidaidd</b>	Lowland dry acid grassland	Glaswelltir asidaidd sych yr iseldir
<b>Dwarf shrub heath</b>	<b>Gweundir o gorlwyni</b>	Lowland heathland	Gweundir yr iseldir
		Upland heathland	Gweundir yr ucheldir
<b>Fen, marsh and swamp</b>	<b>Ffen, cors a chors siglennaidd</b>	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
<b>Bogs</b>	<b>Corsydd</b>	Blanket bog	Gorgors
<b>Rivers and Streams</b>	<b>Afonydd a nentydd</b>	Rivers	Afonydd
<b>Standing open waters and canals</b>	<b>Dŵr llonydd agored a chamlesi</b>	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

<b>Inland rock</b>	<b>Craig fewndirol</b>	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
<b>Supralittoral rock</b>	<b>Craig uwch-lanw</b>	Maritime cliff and slopes	Clogwyni a llethrau arforol
<b>Marine</b>	<b>Morol</b>		
<b>Littoral Rock</b>	<b>Craig o fewn cylchfa'r llanw</b>	<i>Sabellaria alveolata</i> reefs	Riffiau <i>Sabellaria alveolata</i>
		Estuarine rocky habitats	Cynefinoedd creigiog aberol
		Coastal saltmarsh	Morfa heli
<b>Littoral sediment</b>	<b>Gwaddodion o fewn cylchfa'r llanw</b>	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 llanw
<b>Sublittoral rock</b>	<b>Craig is-lanw</b>	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 compiled 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.

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

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



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

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

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

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

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

<i>Agrochola lychnidis</i>	Beaded chestnut	Castan leiniog	P
<i>Allophyes oxyacanthae</i>	Green Brindled crescent	Cilgant brych	P
<i>Amphipoea oculaea</i>	Ear moth	Clustwyfyn llygeidiog	P
<i>Amphipyra tragopoginis</i>	Mouse moth	Ôl-adain lyglwyd	P
<i>Anania funebris</i>	A Pyralid moth	Gwyfyn o deulu'r Pyralidiau	H (1974)
<i>Apamea remissa</i>	Dusky brocade	Brithyn llwydolau	P
<i>Arctia caja</i>	Garden tiger	Teigr yr ardd	P
<i>Argynnis adippe</i>	High brown fritillary†	Britheg frown	P
<i>Asilus crabroniformis</i>	Hornet robber fly†	Pryf llofrudd	P
<i>Asteroscopus sphinx</i>	The sprawler	Cwckill bwaog	P
<i>Atethmia centrigo</i>	Centre-barred sawfly	Melyn yr onnen	P
<i>Austropotamobius pallipes</i>	White-clawed freshwater crayfish†	Cimwch dŵr croyw	P
<i>Bembidion quadripustulatum</i>	A ground beetle	Chwilen ddaear	P
<i>Bembidion testaceum</i>	A ground beetle†	Chwilen ddaear	P
<i>Boloria euphrosyne</i>	Pearl-bordered fritillary†	Britheg berlog	P
<i>Boloria selene</i>	Small pearl-bordered fritillary	Britheg berlog fach	P
<i>Bombus humilis</i>	Brown-banded carder-bee†	Cardwenynen lwydfrown	P
<i>Bombus muscorum</i>	Moss carder-bee	Cardwenynen y mwsogl	P
<i>Bombus ruderarius</i>	Red-shanked carder-bee	Cardwenynen goesgoch	P
<i>Bombus sylvarum</i>	Shrill carder-bee†	Cardwenynen feinlais	P
<i>Brachylomia viminalis</i>	Minor shoulder-knot	Gwargwlwm bach	P
<i>Brachyptera putata</i>	Northern February red†	Coch y mis bach (math o bryf cerrig)	P
<i>Calosoma inquisitor</i>	A ground beetle	Chwilen ddaear	P

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



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

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

<i>Trichiura crataegi</i>	Pale eggar	Wylun gwelw	P
<i>Tyria jacobaeae</i>	The cinnabar	Teigr y benfelen	P
<i>Watsonalla binaria</i>	Oak Hook-tip	Bachadain y derw	P
<i>Xanthorhoe ferrugata</i>	Dark-barred twin-spot carpet	Brychan deusmotiog tywyll	P
<i>Xestia agathina</i>	Heath rustic	Clai'r rhos	P
<i>Xestia castanea</i>	Neglected rustic	Clai'r waun	P
<i>Xylena exsoleta</i>	Sword-grass†	Cleddwyfyn cyffredin	H (1892)

<b>Vascular plants / Planhigion fasgwlaidd (26 species / rhywogaeth)</b>			
<i>Asplenium trichomanes subsp. pachyrachis</i>	A maidenhair spleenwortΨ	Duegredynen gwallt y forwyn	P
<i>Bupleurum tenuissimum</i>	Slender Hare`s-ear	Paladr trwyddo eiddilddail	P
<i>Campanula patula</i>	Spreading bellflower†	Clychlys ymledol	P
<i>Centaurea cyanus</i>	Cornflower	Glas yr yd	P
<i>Cephalanthera longifolia</i>	Narrow-leaved Helleborine	Caldrist gulddail	LA
<i>Clinopodium acinos</i>	Basil thyme	Brenhinllys y maes	P
<i>Dianthus armeria</i>	Deptford pink†	Penigan y porfeydd	P
<i>Fumaria purpurea</i>	Purple ramping-fumitory†	Mwg y ddaear glasgoch	P
<i>Galeopsis angustifolia</i>	Red hemp-nettle†	Y Benboeth gulddail	LA
<i>Hypopitys monotropa</i>	Yellow bird`s-nest	Cytwf	P
<i>Hypopitys monotropa subsp hypophegea</i>	A bird`s-nest	Cytwf	P
<i>Hypopitys monotropa subsp monotropa</i>	A bird`s-nest	Cytwf	P
<i>Lycopodium clavatum</i>	Stag`s-horn clubmossΨ	Cnwp-fwsogl corn carw	P
<i>Melittis melissophyllum</i>	Bastard balm	gwenynog	H (1977)

<i>Mentha pulegium</i>	Pennyroyal†	Brymllys	LA
<i>Oenanthe fistulosa</i>	Tubular water-dropwort	Cegiden bibellaidd	P
<i>Ophrys insectifera</i>	Fly orchid	Tegeirian y clêr	H (1979)
<i>Platanthera bifolia</i>	Lesser butterfly-orchid	Tegeirian llydanwyrdd bach	P
<i>Ranunculus arvensis</i>	Corn buttercup	Blodyn-ymenyn yr yd	LA
<i>Scleranthus annuus</i>	Annual knawel	Dinodd unflwydd	LA
<i>Sorbus eminens</i>	A whitebeam	Cerddinen Mynwy	P
<i>Sorbus leptophylla</i>	A whitebeam	Cerddinen Gymreig	P
<i>Trollius europaeus</i>	Globe-flowerΨ	Cronnell	P

<b>Lichens /Cen (information to follow)</b>	
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<b>Mosses and liverworts / Mwsoglau a Llysiâu'r Afu (3 species)</b>	
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<i>Anomodon longifolius</i>	Long-leaved tail-moss†	Cynffon-fwsogl hirddail	P
<i>Weissia multicapsularis</i>	Many-fruited Beardless-moss†		P
<i>Weissia squarrosa</i>	Spreading-leaved beardless-moss	Mwsogl minfoel dail atblyg	P

<b>Fungi / Ffyngau (4 species / rhywogaeth)</b>	
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<i>Clavaria zollingeri</i>	A fairy club/violet coral†Ψ	Ffwng cwrel dulas	P
<i>Entoloma bloxamii</i>	Big blue pinkgill	Tagell binc las fawr	P
<i>Microglossum olivaceum</i>	Olive earthtongue†	Tafod daear bach melynwyrdd	P
<i>Piptoporus quercinus</i>	Oak polypore	Ysgwydd y derw	P

<b>Marine/Morol (3 species / rhywogaeth)</b>			
<i>Gadus morhua</i>	Cod†	Penfras	P
<i>Phocoena phocoena</i>	Harbour porpoise†	Llamhidydd	P
<i>Tursiops truncatus</i>	Bottlenose dolphin†	Dolffin trwyn potel	P



### Appendix 3 : Summary of findings of internal interviews

<b>Who</b>	<b>Activities directly supporting biodiversity</b>	<b>Activities indirectly supporting biodiversity</b>	<b>Activities having a negative impact on biodiversity</b>	<b>Opportunities for change</b>	<b>Problems</b>
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?
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.

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

		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 have a higher impact.	direct impact on biodiversity.		
<b>Who</b>	<b>Activities directly supporting biodiversity</b>	<b>Activities indirectly supporting biodiversity</b>	<b>Activities having a negative impact on biodiversity</b>	<b>Opportunities for change</b>	<b>Problems/Threats</b>
Licensing	Licensing activities that prevent harm to biodiversity – litter, fumes, noise, storage of poisons and pollutants,		Activities that could cause harm to biodiversity are being 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	
Estates - County Farms	Ownership of 31 farm holdings and land. MCC manages the infrastructure – eg drainage and buildings,		Watercourse pollution incidents.	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

	<p>but farmers are left to manage their own businesses.</p> <p>2800 acres total, mostly grade 2 and 3 agricultural land (good to moderate quality).</p> <p>Church Land Trust land has recently been leased to GWT and Mon Meadows Group to manage for its conservation value (Wet Meadow, Trellech), and this could be positive in beginning a dialogue.</p>			<p>represented on the farms.</p> <p>Providing tenant farmers with information about wildlife friendly agriculture and access to funding.</p> <p>Opportunity for landscape scale projects in some places, eg Caldicot, Leechpool, Caerwent area.</p> <p>County farms have worked with ADAS to provide advice and information about various aspects of land management.</p> <p>Potential to connect fragmented habitats, or to prevent fragmentation.</p>	<p>agriculture for young people is not being fulfilled.</p> <p>County Farms unit have a hands off approach to managing the farms. There are no policies to ensure that agricultural practices are wildlife friendly.</p> <p>Lack of knowledge in County farms team of wildlife and conservation legislation, and of the ecological resources that the farms represent.</p> <p>Concern that biodiversity interests will prevent some uses of land and depress land value.</p> <p>Conflict between a land bank for development and biodiversity interests</p>
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<b>Who</b>	<b>Activities directly supporting biodiversity</b>	<b>Activities indirectly supporting biodiversity</b>	<b>Activities having a negative impact on biodiversity</b>	<b>Opportunities for change</b>	<b>Problems/Threats</b>
Estates - Energy	Hedges and orchard tree planting in association with PV farm development.	<p>Managing utility contracts and monitoring use of energy and water throughout MCC estate. We report on carbon emissions as a PI.</p> <p>Installation of PV farm on County Farm estate at Crick.</p>		<p>Wood fuel purchasing for Council estate is done by a consortium, but could in future be linked to local woodland management and production of chip/pellets more locally.</p> <p>Opportunities with the solar PV farm to investigate potential for further energy reductions – eg hydrogen fuel production, battery storage etc.</p> <p>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.</p>	
<b>Who</b>	<b>Activities directly supporting biodiversity</b>	<b>Activities indirectly supporting biodiversity</b>	<b>Activities having a negative impact on biodiversity</b>	<b>Opportunities for change</b>	<b>Problems/Threats</b>
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



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

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

## 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 reed 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

<b>Project details</b>	<b>Partners</b>	<b>Social benefit</b>	<b>Economic benefit</b>	<b>Environmental benefit</b>
<b>SAC Woodlands</b> (runs until Dec 2017, funded by NRW, private landowners, Leader, SDF, volunteer labour)	GWT (lead) NRW, WVAONB, Woodland Trust, Deer Initiative	Access improvements at Piercefield, viewpoint improvements, improved interpretation of landscape, volunteer involvement	Tourism, venison production associated with landscape management	Deer management, control of INNS, coppicing
<b>Venison project</b> (project in development, funding bids to Leader, SDF)	Deer Initiative, Wye Valley AONB, NRW, Woodland Trust, GWT	Linking food production to protected landscape and need for management	Exploring local market for venison and skills in butchery, marketing, storage, supply chain	Deer management in woodlands
<b>Wye Catchment Partnership</b> , nutrient management	NRW, WVAONB, landowners, MCC, Wye and Usk Foundation, Monnow Rivers Association	Drinking water quality, improved understanding of the issues on a catchment basis	Improvements to agricultural practices, soil protection	Water quality
<b>Control of INNS and agricultural pollution on the Monnow</b>	Monnow Rivers Association, NRW, Wye and Usk Foundation	Local skills, local understanding of the issues	Angling, agriculture	Control of INNS (mink and Himalayan balsam), biodiversity benefits. INNS reduce biodiversity
<b>Gavenny Project</b>	Wye and Usk Foundation, farmers and landowners, Abergavenny Civic Society	Greater understanding and awareness of the importance of the river and how to protect it.	Assistance to farmers, angling	Water quality improvements, nutrients, phosphates, sediment, minor problem with pesticides, soil conservation
<b>Living Levels</b> , history, biodiversity, agriculture,	RSPB, GWT, MCC, NCC, Gwent Archives, Cardiff	Appreciation of shared heritage, training and	Tourism, destination management, agricultural	Biodiversity benefits from ree 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
<b>Trothy project</b>	GWT, NRW, Woodland Trust	Natural flood management	Angling, help for farmers	Habitat creation and management. Tree planting
<b>Olway project</b>	GWT, NRW		Angling, help for farmers	Habitat creation and management. Tree planting
<b>Llanthony Valley project</b>	GWT, NRW, Woodland Trust	Natural flood management	Angling, help for farmers	Habitat creation and management. Tree planting
<b>Natural Assets Project</b>	GWT, MCC, NRW		Assistance to farmers and landowners	Habitat management and maintenance
<b>Water vole reintroduction</b>	GWT, NRW	Volunteer involvement opportunities	Tourism	Biodiversity, natural management
<b>Charcoal making at Croes Robert Wood</b>	GWT SSSI	Volunteer involvement, traditional skills	Economic opportunity from habitat management	Biodiversity
<b>Glastir Advanced</b>	Farming Connect, farmers			Habitat management, fencing, tree planting, nutrient management
<b>Wildlife Prospectus for all Welsh waterways, based on the Wildcru model, with specific information about each</b>	Canal and Rivers Trust	Awareness raising	Tourism	Identifying opportunities for improvements, preventing damage to biodiversity assets



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

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

## Appendix 6 Evidence base:

<b>Who</b>	<b>What</b>	<b>Where</b>	<b>When</b>
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