FOREST OF DEAN BIOSPHERE

Forest of Dean
DISTRICT COUNCIL

Draft Application form

Man & Biosphere Committee Review

30th April 2026

Part 11

Sections 13 - 18

This document is a draft and has not been subject to proof reading or edits. This nomination form will be subject to further changes and updates as a result of ongoing engagement and feedback prior to formal submission in September 2026.

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13. MAIN OBJECTIVES FOR THE BIOSPHERE RESERVE'S DESIGNATION:

13.1 Describe the main objectives of the proposed biosphere reserve, integrating the three functions (conservation, development and logistic), presented below (sections 14 to 16), including components of biological and cultural diversity. Please specify the indirect pressures and/or organizational issues.

The Forest of Dean Candidate Biosphere is a distinctive landscape where rich natural heritage, vibrant communities, and a long tradition of working with the land come together. The overarching objective of the proposed biosphere reserve is to demonstrate how people and nature can coexist in balance within a living, working landscape, integrating the three interconnected UNESCO biosphere functions of conservation, sustainable development, and learning.

Conservation of biodiversity
The biosphere will protect and encourage the recovery of natural habitats and the species they support, including the ancient woodland, wetlands, heathland and grasslands that form a rich mosaic across the district. The Forest of Dean is a nationally important area for biodiversity conservation, supporting internationally significant populations of greater and lesser horseshoe bats (the largest colonies in Europe) alongside the successful reintroduction of the pine marten, a native species absent from England for nearly 200 years and now confirmed as breeding in the wild. Conservation objectives include halting the loss of species and promoting species recovery, supporting the recovery of soils and water systems in the River Severn and River Wye catchments, and encouraging regenerative land management practices. These objectives are underpinned by the Local Nature Recovery Strategy and supported through partnerships with Forestry England, RSPB, Gloucestershire Local Nature Partnership, Gloucestershire Wildlife Trust, the Severn Estuary Partnership, Forest to Sea and the National Landscapes partnerships.

Sustainable development
The biosphere will create conditions for long-term economic development that does not negatively impact the social, environmental, or cultural fabric of the community. Objectives include promoting stewardship of the natural environment for future generations, encouraging slow and regenerative tourism and fostering responsible business practices that link corporate goals with community and conservation objectives. The Forest of Dean's economy is supported by tourism, agriculture and small businesses, and the biosphere framework will align these sectors with sustainability goals through partnership with the Forest Economic Partnership, Visit Dean Wye, and local enterprises.

Logistic support (research, monitoring, education and training)
The biosphere will raise awareness about environmental issues and threats to the local environment in schools and the wider community, promote research into species, habitats, and sustainable development, and create collaboration between local higher education institutions and community organisations. Regular reporting on the state of the natural environment will disseminate observations and trends to influence change. The biosphere will seek to coordinate research outputs and make them accessible to partners and the wider community, supporting evidence-based decision-making across the three biosphere functions.

Biological and cultural diversity

The Forest of Dean's unique geology, historical land use, and location between the Rivers Wye and Severn has shaped a landscape of exceptional ecological value, with existing conservation protections including Sites of Special Scientific Interest (SSSI) and Ramsar sites. Culturally, the area possesses a distinctive identity rooted in the traditions of Verderers, Freeminers, and Commoners, a living local dialect and a rich heritage of creative practice spanning visual arts, writing, and music. The biosphere will actively celebrate and protect this cultural patrimony as integral to the area's character such as through the Dean Heritage Centre Displays.

Indirect pressures and organisational issues
Key pressures include increasing tourism demand leading to habitat disturbance, congestion and erosion; continued environmental degradation including river pollution, loss of species, and pressure from leisure activities; development and housing pressure creating habitat loss and landscape fragmentation; and the accelerating impacts of climate change including flooding and woodland stress. At present, specific development pressures risk compromising the character of the area, and a clearer understanding of how these can be assessed and managed is needed. The biosphere's overarching framework should enable this by providing a coherent context within which the significance of the area's character can be articulated and weighed. The critical question is how much weight the various authorities, both central and local, give to the biosphere framework when assessing development strategies and individual proposals. Community involvement through the biosphere's governance model will add weight from an informed and representative source. Organisational challenges include securing sustained funding, managing administrative complexity across a multi-partner governance structure, ensuring economic benefits are distributed equitably across communities and addressing perceptions that biosphere designation may impose land-use restrictions. Clear communication that biosphere status adds no statutory controls, alongside dedicated governance and coordination arrangements, will be essential to managing these pressures. This has already commenced in a series of public consultations seeking to answer concerns, which in turn has shaped the content of a biosphere website with an FAQs section that reflects local questions.

13.2 Describe the sustainable development objectives of the biosphere reserve.

(If appropriate, please refer to Agenda 21, Rio+20 and SDG post 2015).

The sustainable development objectives of the Forest of Dean Biosphere are aligned with the UN Sustainable Development Goals (SDGs) and the 2030 Agenda for Sustainable Development. The biosphere strategy identifies five interconnected thematic areas — Community Participation and Cultural Heritage; Sustainable Development; Knowledge Sharing and Education; Conservation of Ecosystems and Biodiversity; and Climate Action and Building Resilience — which together address the economic, social, and environmental dimensions of sustainability.

The biosphere's sustainable development objectives are:

- To create conditions for economic sustainability that provides long-term growth without negatively impacting social, environmental, and cultural aspects of the community (contributing to SDG 8: Decent Work and Economic Growth; SDG 12: Responsible Consumption and Production).

- To promote practice that supports the stewardship of the natural environment for future generations (SDG 15: Life on Land; SDG 14: Life Below Water).
- To promote slow and regenerative tourism that respects the carrying capacity of the landscape and benefits local communities (SDG 11: Sustainable Cities and Communities; SDG 12).
- To promote responsible business practices linking corporate goals with community and conservation objectives (SDG 17: Partnerships for the Goals; SDG 12).
- To place local communities at the heart of decision-making, ensuring grassroots governance and inclusive participation (SDG 16: Peace, Justice and Strong Institutions; SDG 10: Reduced Inequalities).
- To promote and encourage use of the Forest to support health and wellbeing and connect people with nature (SDG 3: Good Health and Wellbeing).
- To celebrate and protect the unique heritage and culture of the Forest of Dean, including the traditions of Verderers, Freeminers, and Commoners (SDG 11).
- To work across all parts of the community to strive towards carbon net zero and to prepare for a changing climate (SDG 13: Climate Action; SDG 7: Affordable and Clean Energy).
- To measure progress through a set of eight Prosperity Indicators developed specifically for the biosphere, covering household prosperity, cost of living and access to essentials, work and skills, local wealth retention, housing and living conditions, natural capital and species stewardship, tourism and carrying capacity, and community strength and participation. Each indicator is mapped to primary and secondary biosphere objectives and aligned to specific SDGs, ensuring that economic performance is assessed in relation to its social and environmental consequences (contributing across SDGs 1, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16 and 17).

These objectives are supported by a framework of 10-year targets, headline metrics, and key performance indicators, with progress reviewed in line with the UK MAB decadal review cycle. Existing local strategies and plans (including the Local Nature Recovery Strategy, the Forest of Dean District Council Plan, the Sustainable Economy Strategy, and the Visit Dean Wye Destination Marketing Plan) form the policy foundation for delivery.

13.3 Indicate the main stakeholders involved in the management of the biosphere reserve.

The Forest of Dean Biosphere will be managed through a broad partnership of statutory, community, and voluntary sector stakeholders. The main stakeholders involved are:

- Forest Economic Partnership (FEP) — the parent Community Interest Company under which the Biosphere operates as a sub-group, providing strategic alignment with economic and place-based initiatives.
- Forest of Dean District Council — the local authority providing institutional support, employing the dedicated Biosphere officer, and integrating biosphere aims into planning policy.
- Forestry England — the principal land manager of the statutory Forest, responsible for woodland management, recreation, and habitat restoration.

- Our Forest and the Forest Voluntary Action Forum (FVAF) — community organisations ensuring grassroots participation and local representation.
- Conservation bodies including RSPB, Gloucestershire Wildlife Trust (GWT), Gloucestershire Local Nature Partnership (GLNP), Severn Estuary Partnership (SEP), Forest to Sea, and the National Landscapes partnerships (Wye Valley and Malvern Hills).
- Visit Dean Wye — the destination management organisation promoting sustainable and regenerative tourism.
- NHS/Integrated Care Board and social prescribing partners — supporting the health and wellbeing function of the biosphere.
- Local schools, universities (including Hartpury University and College), and research institutions — delivering the education, research, and monitoring function.
- Town and Parish Councils — providing local governance input and community resilience capacity.
- Traditional rights-holders and cultural bodies including the Verderers, Freeminers, Commoners, Dean Heritage Centre, and local brass bands and creative networks.
- Forest of Dean Climate Action Partnership (FODCAP) — coordinating community-level climate action.
- Local businesses and landowners — contributing to sustainable economic objectives and regenerative land management.
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These stakeholders will be organised through a proposed governance structure that is currently being finalised (described further in section 13.5 below).

13.4 What consultation procedure was used for designing the biosphere reserve?

The Forest of Dean Biosphere nomination has been developed through an extensive and ongoing process of public and stakeholder consultation, reflecting the community-led ethos at the heart of the proposal. The Biosphere Steering Group established in 2018 has played a pivotal role in this.

The biosphere strategy, including its vision, targets, and governance arrangements, was developed collaboratively with local stakeholders. Public consultations were held to gather community views on the proposed designation, its objectives and the priorities for the area. These consultations generated widespread community support for the nomination.

The nomination received formal institutional backing from Forest of Dean District Council, which voted unanimously to proceed with the biosphere bid. A broad partnership of councils, conservation bodies, community groups and academic institutions has contributed to and supported the development of the proposal throughout. This was further then supported by Gloucestershire County Council.

The Forests Future Story
The Forests Future Story was an engagement piece consulting with local people and groups including youth groups and LGTBQ+ to find out more about what people want for the future of the Forest of Dean.

The Forest of Dean engagement project ran from January –March 2026 and was designed to gather community perspectives in support of a potential UNESCO Biosphere application. Led by local organisations and commissioned by the district council, the process focused on participatory conversations, beginning with people's personal connections to the Forest. The aim was not only to assess support for Biosphere status but also to strengthen shared care for the area amid upcoming challenges such as housing growth, economic change, and environmental pressures.

Across all groups, participants expressed deep pride in the Forest's identity: its natural beauty, strong sense of community, independence, and long standing of customary rights. People described the Forest as resilient, resourceful, and deeply connected to land and tradition. However, there is also caution rooted in historical struggles about external control or changes that might threaten local freedoms such as sheep Commoning.

A shared vision for the future emerged, centred on "stewardship." This includes strengthening local food systems, supporting small-scale and land-based employment, promoting biodiversity, and developing a circular, self-sufficient local economy. Young people emphasised the need for better job opportunities, skills training, and a stronger voice in decision-making. There were also aspirations for improved infrastructure, more sustainable tourism, expanded education linked to nature, and revitalised arts and culture.

Despite concerns such as housing pressures, transport issues, and fears of over-commercialisation there is a strong sense of opportunity. Many see the Forest as capable of becoming a national model for sustainable living, community resilience, and nature-based regeneration. Overall, engagement showed cautious optimism toward the Biosphere idea, alongside a clear message: continued dialogue, transparency, and community involvement will be essential to building trust and shaping the Forest's future.

13.5 How will stakeholder involvement in implementing and managing the biosphere reserve be fostered?

Stakeholder involvement is embedded in the governance design of the Forest of Dean Biosphere. A proposed governance architecture has been developed that is rooted in the Forest's own constitutional history of self-governance and geared towards broad participation, ensuring the biosphere would be run "by Foresters for Foresters". While the details of the governance structure are currently being finalised, the core design combines broad community participation with local delivery expertise within an institutional framework that reflects identifiable patterns of distributed authority sustained across several centuries in the Forest of Dean.

A three-body governance architecture rooted in Forest tradition
The proposed governance model comprises three core bodies and one complementary representative role, each rooted in an identifiable strand of the Forest's constitutional history:

- A Stewardship Assembly, drawing on the Forest's traditions of parish governance, collective commoner voice, and civic mobilisation. The Assembly is the deliberative body of the biosphere, setting strategic priorities and reviewing performance. It combines randomly selected residents from a volunteer pool with parish, enterprise, youth, and voluntary sector representatives, using Citizens' Assembly methodology to ensure that direction-setting is

participatory and representative rather than confined to institutional actors. Its recommendations carry formal weight: the Delivery Partnership is required to publish a written response to each.

- A Biosphere Delivery Partnership, drawing on the Forest's tradition of locally organised economic self-management through the freemining system, mining lodges, and cooperative mutual societies. The Partnership is the operational body, coordinating action across conservation, sustainable development, and community wellbeing through a Partnership Board and four thematic Domain Circles (Land Stewardship and Natural Capital; Enterprise and Local Economy; Visitor Economy and Access; Community Wellbeing and Social Capital). It aligns the work of existing organisations around biosphere priorities using consent-based decision-making principles drawn from sociocratic practice, reflecting the Forest's long tradition of domain-specific authority grounded in skill and place.

- A Custodians and Monitoring Panel, drawing on the constitutional guardianship tradition of the Court of Verderers. The Panel provides independent oversight, monitoring ecological, economic, and social indicators, publishing annual public reports, reviewing the Delivery Partnership's response to Assembly recommendations, and preparing the evidence base for UNESCO's ten-year periodic review. A Verderer representative sits on the Panel, providing custodial continuity. The Panel's authority is reputational and evidential, focused on transparency, scrutiny and proper application of principles determined by the Stewardship Assembly.

- A Biosphere Champion (or Envoy), drawing on the historic role of the Warden of the Forest as the representative of Forest interests to the Crown and external authority. The Champion is the public face of the biosphere in dealings beyond the Forest (representation at events, advocating to government and funders, and raising external profile) but holds no executive, deliberative or oversight powers within the governance structure.

Self-governance as structural principle

The three-body separation reflects the recognition that genuine self-governance requires the power to set direction, the capacity to deliver, and the authority to hold delivery to account to be held in different hands. The Forest of Dean has practised forms of this separation for centuries: the commoner and parish traditions represent collective deliberation, the freemining system and mutual societies represent locally organised execution, and the Court of Verderers represents custodial oversight independent of operational interests. The proposed model formalises and strengthens this inherited pattern, demonstrating that the biosphere designation is not being done to the Forest but by the Forest, on its own terms.

Feasibility and community capacity

The governance model is considered feasible given the exceptional level of community engagement and associational activity that characterises the Forest of Dean. The area sustains a dense network of voluntary organisations, community groups, parish councils, and locally rooted partnerships. Existing institutions, including the Forest Economic Partnership, the Forest Voluntary Action Forum, the Forest of Dean Climate Action Partnership and the Court of Verderers, provide established organisational capacity that the governance model draws into a coordination framework

rather than duplicating. The model is designed to be lean and capable of operating within existing institutional capacity, avoiding the creation of new statutory authority and working with the organisations the Forest already has.

Operational support
Day-to-day coordination will be provided by a small Biosphere Secretariat, initially comprising a dedicated Biosphere Coordinator (full-time) supported by a Monitoring and Data Officer. Although operationally hosted by the Delivery Partnership, the Secretariat serves all governance bodies impartially. The Stewardship Assembly's facilitation is managed by an independent external provider, protecting the Assembly's deliberative integrity.

Ongoing stakeholder involvement
Beyond the governance structure, stakeholder involvement will be fostered through active involvement of local stakeholders in Domain Circle working groups, annual public sessions of the Custodians Panel open to all residents, regular monitoring and reporting against agreed targets and key performance indicators, celebration of cultural heritage and traditional practices as a means of maintaining community connection, and the Biosphere Champion's external engagement programme connecting the Forest to the wider World Network of Biosphere Reserves.

13.6 What are the expected main sources of resources (financial, material and human) to implement the objectives of the biosphere reserve and projects within it?
(Please provide formal commitments and engagements.)

The Forest of Dean Biosphere will draw on a combination of public sector commitment, partnership contributions, and external funding to deliver its objectives.

Human resources
Forest of Dean District Council has committed to funding a dedicated Biosphere Coordinator to provide day-to-day coordination, administration, and governance support, supplemented by a Monitoring and Data Officer. These posts will be supported by the professional capacity of partner organisations including Forestry England, the conservation bodies, the Forest Economic Partnership, and academic institutions contributing research and monitoring expertise.

Financial resources
The biosphere strategy identifies the need to secure multiple funding sources to mitigate the risk of funding shortfalls. Expected sources include local authority funding through Forest of Dean District Council, partnership contributions from statutory and non-statutory bodies, external grant funding from national and regional programmes relevant to nature recovery, sustainable development, tourism, and climate action, and potential contributions from the private sector aligned with corporate social responsibility objectives. The biosphere risk register identifies funding shortfalls as a high-impact risk, and phased implementation is identified as a key mitigation measure. Gloucestershire County Council has already contributed financially towards the nomination. Forest Economic Partnership, Gloucestershire Wildlife Trust, FVAF and Wylderne have contributed in kind to help with completing the nomination form, administrative support, engagement with local residents as well as supporting key stakeholder events.

Material resources

The biosphere will benefit from the existing physical and institutional infrastructure of the Forest of Dean, including the managed woodlands and habitats under Forestry England's stewardship, the tourism and visitor infrastructure coordinated through Visit Dean Wye, the community facilities and networks maintained by Town and Parish Councils and voluntary organisations and the research capacity of university partners.

14. CONSERVATION FUNCTION:

14.1. At the level of landscapes and ecosystems (including soils, water and climate):

14.1.1 Describe and give the location of ecosystems and/or land cover types of the biosphere reserve.

Figure 39 below. Habitats and landcover from the Gloucestershire Habitat inventory. Habitats are classified using the UK Habitats Classification System v2. Habitat data in the inventory originates from a range of on the ground surveying, national inventories and remote sensing, therefore the data accuracy is variable.

Breakdown by UKHab level 2 Broad habitats	ha	%	UKHab Level 3 (and above)	ha	%
Cropland c*	11241	20.0			
Wetland f*	24	0.0			
Grassland g*	21504	38.3	Acid grassland g1*	415	0.7
			Calcareous grassland g2*	38	0.1
			Neutral grassland g3*	4226	7.5
			Modified grassland g4*	15263	27.2
			Unclassified grassland g	1557	2.8
Shrub and heath h*	212	0.4	Dwarf shrub heath h1*	71.5	0.1
Rivers and lakes r*	1057	1.9			
Inland rock (and scree) t*	157	0.3			
Littoral rock (and sediments) s*	2991	5.3			
Urban u*	5307	9.4			
Woodland w*	13693	24.4	Broadleaved woodland w1* (excluding w1h6)	7635	13.6
			Coniferous woodland w2* (including w1h6)	4921	8.8
			Unclassified woodland w	1137	2.0
Total FoD area calc from OS boundryline district_borough_unitary_region	**56186**	100			
Traditional orchard	744	1.3			
Wood pasture and parkland	190	0.3			
Ancient semi-natural woodland	2776	4.9			

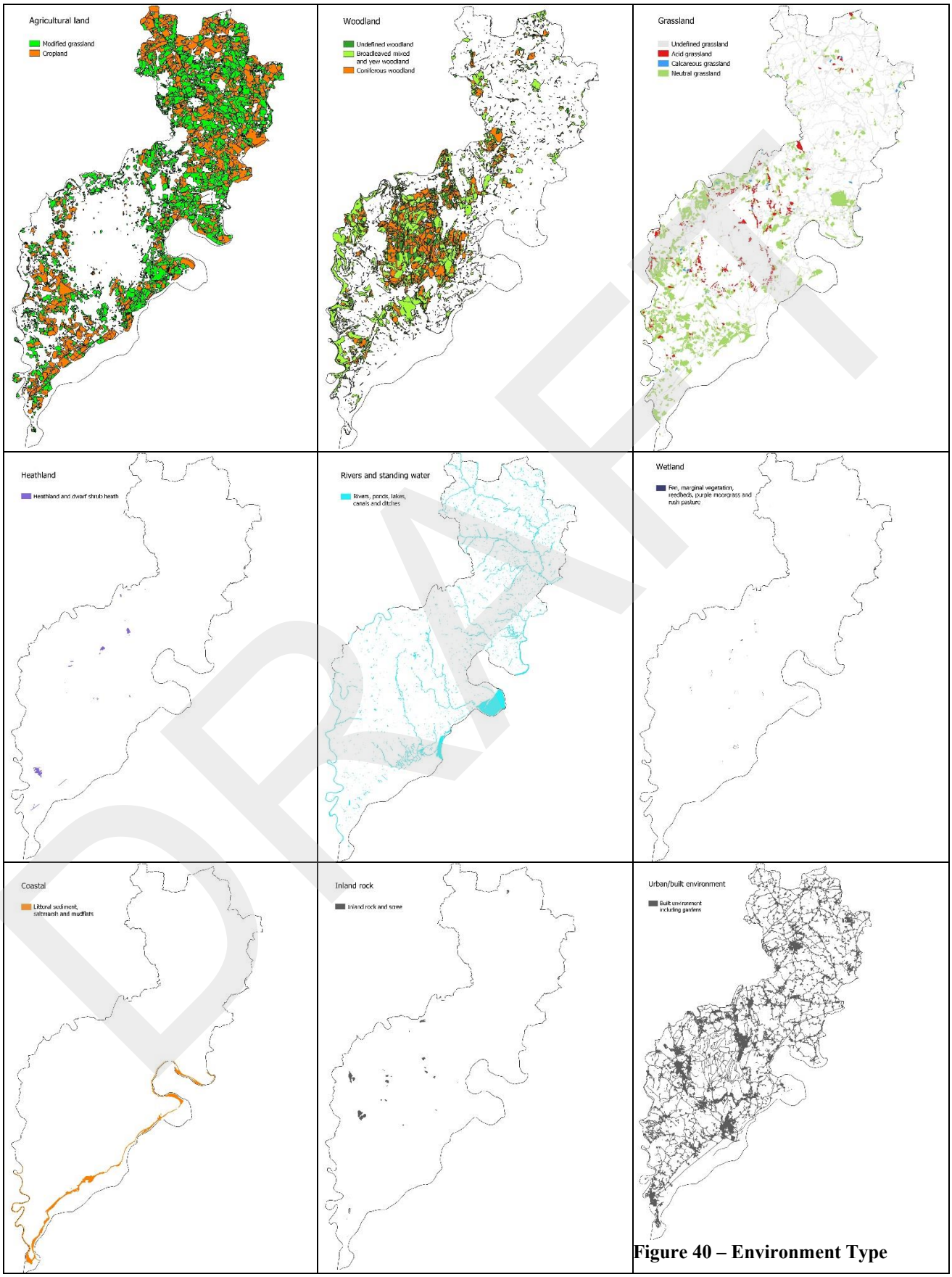

Figure 40 – Environment Type

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Agricultural land (cropland and modified grassland)
47.2% of the area is classed as agricultural land consisting of cropland (20%) and modified grassland (improved pasture) (27.2%). This is concentrated in the more fertile soils of the Leadon Vale, along the gentle slopes and floodplain of the Severn Vale, and a narrow strip between the Wye Valley woodlands and the Statutory forest.
Traditional orchard and wood pasture and parkland cross over between Agricultural, Woodland and Grassland ecosystems.

Woodland
After agricultural land, woodlands dominate the biosphere area, covering 24.4%. Of this, 13.6% is broadleaved woodland which ranges from the old plantation oaks of the Statutory Forest, to the old growth semi-natural woodlands of the Wye Valley. 4.9% is classed as Ancient Semi-Natural Woodland. Together, the Wye Valley and Forest of Dean woodlands (Statutory Forest) form one of the largest remaining areas of broadleaf semi-natural woodland in the country.

Wetland
Due to the geology, topography and land drainage due to forestry and farming, only 24ha, <0.1% of the area is wetland. This area will increase due to further rewetting project for fen and bog within the Forest, and proposed saltmarsh creation at Awre peninsula. Due to climate change, some managed realignment may be necessary in the future along the Severn Estuary.

Grassland (neutral, calcareous and acid)
The underlying geology dictates the distribution of neutral, calcareous and acid grassland across the area. Calcareous is the least prevalent at 38ha <0.1%, being limited to the thinner soils on the band of carboniferous limestone that forms the edge of the bowl that holds the coal measures. Much of the shallow soiled limestone area is covered by semi-natural woodland, further restricting the area available for calcareous grassland habitat. Acid grassland is found on the Forest wastes and as part of the matrix on the heathland and heathland restoration sites of the sandstone at Tidenham or the Statutory Forest coal measures. It is also found at May Hill where the steeper topography has limited the farming intensity, and at the southern tip of the Malvern Hills. Neutral grassland, at 7.5% of the area, is focussed in the band between the Wye Valley and Statutory Forest, and some less intensively farmed patches along the Severn Vale, together forming a ring outside the acidic grassland of the central coal measures. There is very little neutral grassland in the Leadon Vale as the rich soils here are dominated by modified grassland and crops.

Dwarf shrub heath
71.5 ha, 0.1% of the area is classified as dwarf shrub heath and only a very small part of this at Woorgreens nature reserve and Poor's Allotment SSSI are actually classed as lowland heathland (section 41 priority habitat) under the UK habitats classification. Old Ordnance Survey maps (1888-1913), do show that there were once much larger areas of furze, rough uncultivated ground with gorse, that could well have been heathland, including land adjacent to the existing heath at Poor's Allotment. Areas of bilberry and heather ground flora can be found under some of the woodland canopies on the acidic soils.

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Rivers and standing water
Rivers, streams, lakes, ponds, ditches and canals cover around 1.9% of the area. Most of the Severn and Wye are not included in this calculation as they are either classes as littoral habitat or are outside of the boundary (district boundary below low water). The main Rivers are the Wye Tow the West, Leadon, cutting west to east across the northern section of the area, and the Severn to the southeast side. Smaller brooks and streams run from the Forest plateau down to the Severn or Wye Or drain the Leadon Vale into the Leadon. Small farms ponds are scattered. A few larger manmade waterbodies remain from the past industry of the Forest and parts of the derelict Herefordshire Gloucestershire canal run from Ledbury to Gloucester through Newent in the north of the area.

Inland rock (and scree)
Inland rock and scree is a combination of the natural exposures of the Wye Gorge, and the various limestone and sandstone quarries across the area. These cover 0.3% of the area.

Coastal (littoral rock and sediments)
Most of the coastal littoral habitat is associated with the edge of the area that runs along the Severn Estuary. A further small amount of saltmarsh exists in patches along the edge of the tidal Wye. Due to the large areas of Severn mudflats, it covers a total of 5.3% of the area.

Urban
9.4% of the area is covered by the built environment (buildings, roads and hard standings) including gardens. The largest urban settlements are Coleford, Cinderford and Lydney just outside the statutory Forest, and Newent in the North of the area. At the southern tip, the once separate villages of Woodcroft, Tutshill, Sedbury and Beachley are becoming consolidated with each other and with Chepstow, just across the Welsh border. The town of Coleford is also becoming merged with surrounding villages. Lydney has seen a very rapid expansion in size over the past 5 years and will continue to be a focus for new development.

14.1.2 Describe the state and trends of the ecosystems and/or land cover types described above and the natural and human drivers of the trends.

Agricultural land (cropland and modified grassland)
State
DEFRA's 2024 farming census records 661 farm holding within the Forest of Dean District, which has held generally stable since 2007, totalling 34076 ha. Of this area, 15.9% is recorded as being under cereals, 13.6% is arable excluding cereals, 1.5% fruit and vegetables and 58.8% is grassland. Livestock numbers in 2024 were dominated by poultry at 894435 (though they are focussed on a small number of holdings) followed by more widespread sheep and lambs at 68002, with cattle at 36654 and pigs at 10933.
Trends
Cropping - Though there are slight differences in areas under each crop/grassland between years, between 2007 and 2024 there has been no statistically significant change in the usage.
Livestock – Numbers of Sheep and lambs have seen a statistically significant decrease since 2007, particularly in the last 10 years. Pig numbers have seen a steady significant increase since 2007.
Drivers

Changes relate to shifts in the economic drivers including produce market value and changes to agri-environment schemes. For example, pig profitability has jumped hugely since 2021/22. Sheep numbers declining, reflects the national trend due to lack of profitability.
As the loss of the farm Basic Payment Scheme bites there will likely be a change in holdings in the Forest of Dean as an average farm size of only 50 hectares does not work unless some second jobs to finance them.

Traditional orchard

State

In the Forest of Dean District (FoD), there are 707 ha of traditional orchard recorded in the National Priority Habitat Inventory and 744 ha recorded in the FoD District in the Gloucestershire habitat inventory. Both inventories contain an element of satellite interpretation hence the discrepancy. The protection of traditional orchards through statutory or local designations is poor. None are designated as SSSIs as traditional orchards are very poorly represented in the England SSSI series (in a 2007 report it was estimated that <200ha protected by SSSIs and TPOs across England[1] and this will have increase little since then, if at all). Only four orchards are listed on the Local Wildlife Site schedule: Glasshouse Orchard LWS, Mantley Chase Orchard LWS, Gwent and Vera's Fields LWS, are primarily listed for their semi-natural grassland and plant interest (wild daffodil sites), their orchard features are only considered as secondary features if at all. Flaxley Flushes Orchard LWS and Little London Orchard LWS are listed for their invertebrate importance including noble chafer.
The PHI does not record relict orchards (those with less than 5 trees in) however, the Peoples Trust for Endangered Species does hold data on this, as does the Gloucestershire inventory where they have been recently surveyed, as these individual or small clusters of veteran orchard trees provide important stepping stones and need new trees to be planted close to them. Re-standing dead wood or using bird boxes, and beetle boxes packed with wood shaving mulch may provide dead wood analogous habitat as a temporary gap filler in the dead wood habitat creation timeline.

Trends

Rapid decline. Nationally about 75% of traditional orchards have been lost since the mid 20th century. The data for the Forest of Dean District closely mirrors this, with the area of traditional orchards (as recoded on the National Priority Habitat Inventory) having reduced by 77% compared with the area shown as orchard on the 1888-1913 Ordnance Survey maps.
Little London Orchard LWS has lost a significant number of it's trees since 2009 (see Google earth time series). While Flaxley Flushes LWS has undergone restoration work with new trees being planted.

Drivers

Loss of traditional orchard habitat continues due to development, despite the theoretical protection provided through national planning policy. This may be because of a lack of knowledge or understanding of veteran fruit trees as irreplaceable habitat.

[1] JNCC (2007) Report on the Species and Habitat Review, https://data.jncc.gov.uk/data/bdd8ad64-c247-4b69-ab33-19c2e0d63736/UKBAP-Species-HabitatsReview-2007.pdf

The Local Nature Recovery Strategy and partnership projects are working with landholders to retain, manage and restore traditional orchards, but lack of profitable markets mean that many landowners are not interested in orchard retention or restoration, or do it for the connection with their own family heritage rather than as part of a profitable farm business.
There is a poor understanding of the value to dead wood as a habitat, therefore dead trees or dead wood tends to be removed and burned, removing a highly important habitat component.

Wood pasture and parkland (and veteran and ancient trees)
State
The national Wood Pasture and Parkland PHI is not particularly accurate and needs ground truthing. For example, Lydney Park (Lydney Park Estate), one of the Forest of Dean's larger parkland estates is missing from the inventory. As is much of Oaklands Park, Parklands and Park meadow at The Haie (Newnham), Tibberton Court, the area around Glynch Farm (north of Hethelpit Cross) and others.
There are no wood pasture and parkland inventory sites covered by SSSI designation within the Forest of Dean District, or LWSs event though the current LWS Criteria (2015) list 'H2 Pasture Woodland and Mature Timber habitat' including 'H2.1 – All sites with 10 or more over-mature trees; H2.2 – All sites with an Alexander Index of saproxylic beetles of 10 or more; H2.3 – All parkland sites as meeting the criteria for selection.
Trends
Veteran and ancient trees are being lost due to disease, extreme weather (high winds, drought, waterlogging), intensive farming (ploughing up to the root plate, or compaction due to high numbers of livestock using them as shelter) and development.
Drivers
There is a poor understanding of the value to dead wood as a habitat, therefore dead trees or dead wood tends to be removed and burned, removing a highly important habitat component.
Health and safety and dangerous trees - The understanding of the risk, or not, of trees falling due to heart rot fungi often means that veteran trees are felled for heath and safety when they actually didn't need to be, resulting in a deficit in the veteran tree habitat timeline. Heartrot fungi that just hollow the tree do not tend to reduce the trunk's structural integrity. The most ancient of trees tend to be completely hollow and this can enhance their longevity because a hollow cylinder is incredibly strong and able to flex in strong winds rather than snap.
Economics: Development and changes in land ownership structure – increased development pressure and changes in land ownership structure, e.g. the selling off of large estates due to inheritance tax debt, is resulting in the loss of veteran and ancient trees, again often quoted as due to health and safety reasons. Future veterans are not provided the level of protection that private deer parks once provided therefore it is likely that we will see an overall decline in the number of ancient trees in the landscape.
Economics: Intensive agriculture – ploughing over the root plates to gain every cm of cultivatable land (e.g. for maise) has significant negative impacts on the root plates and therefore the life span of ancient and veteran trees. Or intensive grazing beneath ancient trees has similar detrimental impact.

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Woodland

State

Some of the Wye Valley woodland SSSIs (Astridge, Highbury, Lower Wye Gorge, Shorncliff & Caswell, The Hudnalls, Brooks Head Grove) are listed as in favourable condition, though SSSI condition monitoring has not been undertaken on some for over 10 years. The majority of woodlands are now high forest due to the lack of active management and loss of coppicing. Tree recruitment is challenging due to deer numbers and squirrel damage; therefore structural diversity is not optimal. Canopies tend towards being too dense and open space is lacking in some.

Others are in unfavourable condition e.g., Bigswier Woods assessed in the last year as needing laurel management, further thinning and a wider deer management plan required. Swanpool Wood and Furnace Grove where deer browsing levels prevented understory and tree regeneration levels of standing and fallen dead wood were too low, and sycamore was an issue. Upper Wye gorge which has a mixture of favourable and unfavourable units due to deer browsing pressure and lack of regeneration. Dingle Wood, lacking understory and declining ground flora.

In the Statutory Forest, Nagshead woodland condition is unfavourable due to deer pressure. While further north, away from the Statutory Forest, Dymock Woods was assessed in 2013 as unfavourable due to lack of age structure, lack of veteran trees and scarce deadwood and limited open space and Collinpark wood, a mixture of high forest and overgrown lime coppice was assessed as favourable by 2024 remote assessment.

Deer grazing and squirrel pressure are a general problem across all woodlands in the area, preventing the regeneration of trees and leading to reduced age structure of the woodlands. Deer are also negatively impacting groundflora. The Forestry Commission control both deer and boar numbers on their estate, but wider control across the whole area has not been successfully established.

Trends

Increase in planted coniferous area with the Statutory Forest and Wye Valley immediately following WWII. More recently, expansion has been small plantings and partnership projects have promoted the planting of largely native deciduous woodlands. Partnership projects are also focussing on improving woodland network connectivity through increasing quality and quantity of hedgerows, and other forms of tree planting.

Woodland condition in private woodland largely continues to deteriorate due to lack of active management.

Forestry Commission Forest Plans are incorporating a greater proportion of ecologically targeted work including the broadening of the range of native species and management to increase the ecological and structural diversity of the broadleaved areas of woodland.

Drivers

Decline in active management due to lack of economic profitability. No markets for small scale wood products and lack of availability of woodland management grants. Local firewood markets may increase, but coppicing tends only to be practiced by conservation organisations.

Deer populations are too high resulting in over browsing of saplings, ground flora and the understory, resulting in a change in species mix. Grey squirrel also kill young trees adding to the regeneration paucity. The impact of feral wild boar is mixed depending on boar population density.

Tree diseases such as ash-die back, sudden oak death, Dutch elm disease, red needle blight and *Phytophthora*, as well as invertebrate pests have resulted in large scale deaths or necessity of disease control, early fellings and continue to threaten the health of our woodlands. New pests and diseases are likely to become additional problems, particularly in the light of climate change.

Drought stress from climate change is also impacting particular species such as beech and is likely to impact species survival and therefor the species mix of these woodland in the future.

Wetland

State

There are few wetlands across the Forest of Dean area due to drainage and land improvement for crops including timber. Only Walmore Common has wetland features designated as SSSI, last physically surveyed in 2013 as unfavourable recovering, but there are 28 LWS with wetland features. The current condition of those LWS (with the exception of GWT nature reserves) is unknown as the LWS system has only been revived in the last 6 months following almost 10 years without an officer to run it due to lack of funding. Many small areas of wetland remain unmapped.

Trends

Numbers of small ponds and areas of wetland have hugely declined over the last 100 years. Extracting the symbology for ponds and wetlands from the 1888-1914 OS map, well over 1000 have been lost across the Forest of Dean District.

There has been a small amount of wetland creation and restoration on nature reserves in the Statutory Forest.

Drivers

Loss of ponds and wetlands in farmland was driven by farm intensification during the last century. While afforestation after WWII resulted in draining of boggy areas within the Statutory Forest. Nature's recovery and flood alleviation: there is a drive to increase wetland on nature reserves to slow the flow of water and to increase habitat complexity and restore lost species such as carnivorous plants. Beaver reintroduction is hoped to be permitted within the next few years to help alleviate some of the flash flood risk in the steep valleys that descend from the Dean plateau. This should result in the creation of wetter areas in which wetland habitat could develop.

Grassland (neutral, calcareous and acid)

State

There are eight SSSIs within the area that cite semi-natural unimproved grassland within their features. Four are neutral lowland meadow, three contain lowland dry acid grassland (and heathland, plus Poor's allotment also has a small element of lowland calcareous grassland. While one is lowland calcareous grassland. Only three of these were considered to be in favourable condition at their last site assessment (mostly over 10 years ago). The remaining were unfavourable or unfavourable recovering due to lack of grazing or hay cut. Bracken encroachment being identified as a particular problem. Nutrification through agricultural runoff/poor water quality was identified as an issue at Walmore Common.

Of the LWS, 109 include semi-natural grassland as part of the interest. The current condition of those LWS (with the exception of GWT nature reserves) is unknown as the LWS system has only been revived in the last 6 months following almost 10 years without an officer to run it due to lack of funding.

Trends

Following the almost total loss of livestock grazing from the forest following foot and mouth disease in 2001, the once open spaces of forest waste which were largely semi-natural acid grassland, have become covered in dense scrub, thick bracken and tree regeneration. Once bracken has taken hold, it is very difficult to restore the grassland due to its lack of palatability to grazing animals.

Many of the smaller lowland meadows were historically managed as hay meadows, but their small size makes it difficult to access with modern equipment. Lack of graziers willing to graze small

meadows and the difficulties with stock movement restrictions means that many meadows have lost their traditional hay cut and aftermath grazing management, resulting in declining condition.

Drivers

Farm economics – move from grazed pasture to intensive dairy using improved grassland and multiple silage cuts. Species rich grassland not considered a valuable food source for livestock. Increase in field sized and scale of machinery preventing management of smaller meadows. Arable crops of greater value that pasture, particularly species rich pasture.

Disease – livestock movement restrictions due to disease controls reduced the availability and flexibility of grazing stock.

Dwarf shrub heath and lowland heathland

State

Only Poor's Allotment SSSI is designated for its lowland heathland feature, which was last assessed by Natural England in 2013 as unfavourable recovering. However, Poor's Allotment SSSI and GWT nature reserve, and the adjacent nature reserve, The Park (heathland restoration from conifer plantation) are both now managed through conservation grazing together with additional mechanical management. As a result, more recent GWT reserve condition monitoring has shown improvements in the state of the heathland which has expanded in area. Woorgreens, Wigpool and Edgehills nature reserves also contain areas of heathland restoration managed through both conservation grazing and mechanical means. The extent and condition of the heathland is improving at these sites too.

Trends

Heathland and furze was once much more widespread across the acid geology of the Forest of Dean. Improvement of pasture and afforestation resulted in the loss of almost all of it with only Poor's Allotment and a few other tiny fragments remaining until the 2000s when partnership working between the Forestry Commission and GWT began the restoration of heathland at the sites mentioned above.

Drivers

Economic: loss of heathland was due to economic drivers such as the need for more good quality pastureland and more timber following WWII.

Nature's recovery is the current driver for restoration of heathland, together with flood mitigation as most of these sites correspond with wetter areas where more water could also be held and slowed.

Fragmentation: recovery of the full suite of heathland species is impacted by the high level of fragmentation and the small size of these heathland sites.

Rivers and standing water

State

Under the Water Framework Directive's ecological health measure, the water quality of the Severn, Wye and Leadon within the Forest of Dean District are either moderate or poor. Of the tributaries, only two lengths: from Drybrook to Blakeney and from Lea to Ross-on-Wye were considered to be in good ecological status (2019). The River Wye SSSI assessment has downgraded the state of the SSSI to unfavourable declining in a 2023 review of data and evidence from the Environment Agency.

Soudley Ponds SSSI is currently in unfavourable condition due to an outbreak of crayfish plague in 2021.

There are 24 LWS with ponds, lakes, reservoirs or canals included within their citation, associated with species features from plants to dragonfly assemblages, aquatic invertebrates or amphibians including great crested newts. The current condition of those LWS (with the exception of GWT

nature reserves) is unknown as the LWS system has only been revived in the last 6 months following almost 10 years without an officer to run it due to lack of funding.

Trends

River health continues to decline in some reaches.

Numbers of small ponds and areas of wetland have hugely declined over the last 100 years. Extracting the symbology for ponds and wetlands from the 1888-1914 OS map, well over 1000 have been lost across the Forest of Dean District.

Drivers

River health: the results of changing agricultural and industrial practices, climate change, urbanisation and a growing population over the last decades, much of it upstream from the Forest of Dean District, has caused a decline in the ecological health of the River Wye.

Climate change: increased heavy rain may see an increase in outpouring of contaminated water from old mines. Heavy rainfall also results in more raw sewage overflow incidents.

Development: increased housing numbers are putting greater pressure on the sewage system which results in more overflow incidents that cause river and groundwater pollution

Farm modernisation and intensification resulted in the loss of many farm ponds which were no longer needed to water livestock.

Inland rock (and scree)

State

There are no sites with either national or local designations purely for their inland rock and scree ecological habitat. Most designations cover the geological interest of the Wye Gorge or quarry exposures. The Lower Wye gorge Woodland SSSI notes the cliff dwelling sorbus species and the use by nesting raven and peregrine.

There is a very small area of limestone pavement, recorded as LWS, on Tidenham chase. Management is keeping trees from scrubbing over the site.

Trends

Rock exposures are at risk from being covered by scrub including nonnative species such as cotoneaster and buddleia which reduce the availability of niches for native species.

Drivers

Victorian plant collectors bringing back non-native species which then escaped from collections. Ongoing growth of such species in gardens continues the seed supply. Lack of funding for specialist management to clear invasive plants from rock faces (need rope workers).

Coastal (littoral rock and sediments)

State

This ecosystem is largely covered by the Severn Estuary SSSI designation. The mudflats are recorded as in favourable condition, but some of narrow saltmarsh areas are unfavourable due to coastal squeeze with the containment of the flood bank, and overgrazing (last assessed 2010-2014). Breaches in flood defences (2010 and 2013) at Alvington as part of an EA compensatory habitat creation project for the SAC are judged to have relieved the impact of coastal squeeze on eroding units within the upper estuary. Previously constrained SSSI saltmarsh can now evolve naturally landward.

Trends

The existence of the tidal flood defences on their current line has the effect that internationally important habitat is being lost as the sea level rises. Compensatory habitat creation is an essential element in the future of sustainable flood risk management in the Severn Estuary. Over 20 years,

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from 2013, the Environment Agency predicted that between 300 and 600 hectares of inter-tidal habitat would be lost due to coastal squeeze depending on the amount of sea level rise that occurred[2].

Drivers

Commitments to European legislation (RAMSAR, SAC, SPA)
Economics and social need: hold the line verses managed realignment.

Urban

State

The urban environment within the Forest of Dean District has expanded significantly over the last 25 years and will continue to expand more rapidly if Government new house building target are to be met.

Trends

Largescale expansion has been focussed around Lydney and Tutshill/Sedbury due to their strategic transport links (proximity to railway stations). As well as the physical isolation caused by limited crossing points (and aging bridge infrastructure) over the two major esturine rivers, there are also many ecological constraint that limit the area of suitable development locations within the Forest of Dean District.

Drivers

Economics and social need: house builders drive for profits verses the housing type that is actually needed to fill societal gaps.
Corporate social responsibility: some house builders are more aware and willing to incorporate the needs of nature that others
Legislation: Biodiversity Net Gain regulations
Climate change: urban heat island effect needs to be considered within the design of new developments as does increased flood risk from surface water and watercourses.

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[2] Severn Estuary Shoreline Management 12 Month Review - Considered at the Overview and Scrutiny Management Committee Meeting – April 2013, https://glostext.gloucestershire.gov.uk/documents/s17884/Severn%20Estuary%20Shoreline%20Management%2012%20Month%20Update%20April%202013.pdf

14.1.3 What kind of protection regimes (including customary and traditional) exist for the core area(s) and the buffer zone(s)?

Core areas – these are all SSSIs and in some cases also European sites (RAMSAR, SPA and SAC) meaning that they are protected under the legislation of The Wildlife and Countryside Act 1981 and the Conservation of Habitats and Species Regulations 2017 (Habitats Regulations). These regulations should ensure that Local Plan (development) policies are written, and development is designed in a way to avoid and mitigate impacts (and for European sites, compensate for unavoidable impacts as a last resort).
Buffer – The buffer area is protected through crown land/Forestry Commission ownership and management plans, national and local planning policy including local wildlife sites policy and incorporation of Local Nature Recover Strategy into the Local Plan, National Landscape (AONB) protections and management plans and, conservation ownership including eNGOs and public bodies (National Nature Reserves).

In terms of strategic policies within the Local Plan, policies for the environment sit within national and international legislation and their protection has to follow this. There is an overriding principle of sustainable development and its importance to the Forest of Dean District and its wider context. The creation or maintenance of a healthy environment in which to live is the overall aim. Development should seek to preserve, restore and re-create priority habitats, ecological networks and the protection and recovery of priority species. Many areas enjoy statutory protection which the Local Plan will respect but the key to delivering the protection required is to view the whole as a series of interlinked spaces and to accommodate change in a manner that will leave the natural environment in a measurably better state after development than beforehand.

14.1.4 Which indicators or data are used to assess the efficiency of the actions/strategy used?

Condition assessments of statutory designations (SSSI) by Natural England on a rolling basis (though in the last 10 -15 years this has fallen behind the 6-year rolling program of JNCC common standards monitoring for designated sites). SSSIs in positive condition or recovering
National Landscapes – assessment by the National Landscape Board against delivery plans.
National Nature Reserves – assessment by Natural England against management plans.
Total area of Forestry Commission Crown Estate land.

Assessment by Forestry Commission of their delivery against Forestry Commission Forest Plans. A forest plan review is carried out every 5 years and evaluates the effectiveness of the Forest Plan and the implementation of the interventions. The review assesses delivery, over the previous period, towards the stated objectives within the Forest Plan, analyses monitoring data against targets and makes recommendations as required. Each plan has different objectives and therefore will have different methods of measuring success and different success criteria. If SSSIs or SACs appear within the Forest Plan area, then their individual objectives from their management plans are reviewed against the SSSI measures of success.

Planning policy implementation – measure of areas lost to development. Monitoring delivery of BNG. Number of enforcement actions, use of planning conditions and discharge of conditions for monitoring of species and habitats e.g. LEMPs, CEMPs

Conservation ownership National Trust, Gloucestershire Wildlife Trust, Woodland Trust – Area of ownership; delivery against management plans; condition assessment if carried out, such as GWT nature reserve condition assessments programme.
SACs, SPAs & Ramsar – success of management assessed against the conservation objectives, including through national monitoring schemes such as National bat monitoring scheme and WEBS counts for the SPA.

14.2 At the level of species and ecosystem diversity:

14.2.1 Identify main groups of species or species of particular interest for the conservation objectives, especially those that are endemic to this biosphere reserve, and provide a brief description of the communities in which they occur.

Farmland - Agricultural land (cropland and modified grassland) and Grassland (neutral, calcareous and acid):
The UK red listed linnet is found across the grassland and cropland of the biosphere, as is the stonechat. Turtle dove has recently lost its status a as breeding species in the biosphere (2014 last male singing); however, some good news is that in 2025 grasshopper warbler bred here for first time in 40 years in.

Woodland and trees including ancient and veteran trees and traditional orchards:
Rare plants – A substantial population of Sword leaved helleborine (*Cephalanthera longifolia*) listed as **Vulnerable** on the GB Red List and considered **Endangered** in both England and Wales is found within the biosphere.

Saproxylic invertebrates – users of dead wood and ancient and veteran trees in the Wye gorge woodlands, such as Cosnard's net winged beetle, and Traditional orchards particularly around Longhope and Blakeney, such as noble chafer beetle.

Red listed Lesser spotted woodpecker are also associated with the traditional orchards and woodland of the biosphere.

Dung beetles - which provide a key food source for the greater horseshoe bats.

Wood ants - less widespread across the woodland than expected, given the habitat. This may be a result of habitat fragmentation.

Feral wild boar were illegally released the Statutory Forest in the 1990s and 2000s.

Woodland birds - including the very rare Willow tit which until very recently was recorded breeding in the Forest, possibly still breeding somewhere in the biosphere but no record since 2022. Other red list or declining bird species associated with the woodland are: hawfinch, wood warbler, tree pipit. Crossbill utilise the extensive conifer plantations, while goshawk have seen a recovery and are now reestablished in the biosphere woodlands. Honey buzzard previously bred and may be breeding currently (however, no proven breeding in recent decades). The Nagshead reserve is a key location to see many of these species.

European Pine Marten (*martes martes):* protected under the Wildlife and Countryside Act 1981, once common throughout the UK, pine martens have undergone an extensive decline during the last two hundred years due to habitat loss and fragmentation, hunting and extensive predator control. Through the collaboration of the Gloucestershire Wildlife Trust, Vincent Wildlife Trust, Forestry England and Forest Research and with support from Woodland Trust and Forest Holidays, pine martens were reintroduced to the Forest of Dean between 2019 and 2021 to establish a resilient pine marten population in the south-west of England. As of 2022, the population is thought to be approximately over 40 animals. Pine martens are solitary, territorial and hold relatively large home ranges, preferring woodlands with diverse and complex habitats. If there is a scarcity of natural sites, pine martens may use both inhabited and uninhabited buildings as dens. The total area of woodland and high proportion of broadleaved woodland in the Forest of Dean provides favourable habitats for the species.

Hazel dormouse (*Muscardinus avellanrius):* listed as a European Protected Species under Annex IV of the European Habitats Directive, this species is assessed as 'vulnerable' to extinction in Britain under IUCN Red List criteria. Typically, active from mid-April to late October, the species' optimal habitat includes early successional woodland, a mix of new growth and established trees, which coppiced or traditionally managed woodland mimics. Other suitable habitats include scrub, coniferous plantations, hedgerows, and roadside and railway verges. The Forest of Dean is a key site for ongoing population monitoring.

Water and Wetland:

Great Crested Newt (*Triturus Cristatus):* listed as European Protected Species under Annex IV of the European Habitats Directive, Great Crested Newts are the largest of the UK's native newt species and are found in breeding ponds during spring and in woodland, hedgerow, marshes and tussocky grassland the rest of the year across the biosphere's landscape. In winter Great Crested Newts shelter underground, under rocks, in old stone walls or in compost heaps. The pond-scape at Woorgreens Lake Nature Reserve in the Forest of Dean (a former industrial site) is especially diverse. The site provides a range of habitats, including wet heath, scrub, woodland and wetland (predominantly a network of ditches and lake), and is known to be locally important for Great Crested Newts, as well as reptiles, butterflies and birds.

The pond complex at Woorgreens Lake Nature Reserve in the Forest of Dean supports two Near Threatened plant species; marsh pennywort (*Hydrocotyle vulgaris)* and marsh St John's wort (*Hypericum elodes)* and one Vulnerable plant species; lesser spearwort (*Ranunculus flammula).* In 2023, translucent stonewort (*Nitella translucens)* was recorded, the first time this species has been recorded in Gloucestershire. The largest pond is the most botanically diverse of all 170 Newt Conservation Partnership ponds that have been surveyed to date with 39 wetland plant species recorded.

Three sundew species were historically recorded in the wetlands of the Forest. English Sundew or Great Sundew (*Drosera Anglica* Red List Near Threatened), Intermediate Sundew (*D. intermedia,* Least Concern) and Round-leaved Sundew (*Drosera rotundifolia,* Least Concern). All were extinct in the biosphere by 1966, however reintroduction efforts are being considered following the restoration of areas of wet heath and bog/fen.

European Beaver (*Castor fiber):* native to the UK and was once widerspread, the European Beaver is a large semi-aquatic mammal, and in England is listed in Schedule 2 of the Conservation of Habtiats and Species Regulations 2017. Efforts to reintroduce beavers to the Forest of Dean in enclosures have taken place since 2018 at Greathough Brook and Perry Hay which have proven successful. Opportunities for the licenced wild release of Beavers are being investigated. The species is known as an 'ecosystem engineer', felling trees and building dams, leading to the establishment of wetland habitats and helping to reduce flood risk in these areas. Beavers live in small family groups and thought to mate for life, with females giving birth in spring/early summer. Woodland and heathland butterflies - areas of acid grassland and bracken habitat are particularly important for woodland and grassland butterflies such as the small pearl-bordered fritillary, wood white, wall and small heath. The Forest of Dean area holds recent records for seven of the butterflies listed under Section 41 (NERC Act 2006) Species of Principle Importance. Local extinction of S41 priority butterflies from the Dean has occurred in recent history. The high brown and pearl-bordered fritillaries are two of Britain's most rapidly declining butterflies and many colonies have been lost due to changes in woodland management practice, such as the abandonment of coppicing[3]. The last records of the high brown in the Dean were at Cannop Valley in the 1950s, it is becoming regionally extinct in the 1960's followed by the pearl-bordered Fritillary becoming extinct from the Dean in the 1990's[4].

The nearest breeding colony of the Pearl-bordered Fritillary is now at Coppet Hill just into Herefordshire opposite Symonds Yat, the last recorded sightings of single Pearl-bordered Fritillary butterflies at Brierley in 2006 and 2009 are through to be wanderers from the Coppet Hill colony[6]. The Small Pearl-bordered (SPB) Fritillary has also suffered rapid population decline from 42 known colonies in the 1980s to just 3 current breeding sites within the Dean and is an urgent priority for conservation within the Dean to prevent its local extinction[6].

Dwarf shrub heath:
Nightjar, once widespread across the Forest of Dean and the Cotswolds of Gloucestershire are now found only in small numbers nesting on the Forest of Dean heathland reserves and have been lost from the Cotswolds. While their UK conservation status is not assessed, their dramatic reduction in breeding effort in the UK is linked to habitat loss (post WWII afforestation of heathland, lack of coppice management and more recent changes from clearfell forestry to continuous cover). The woodlark returned to the Forest of Dean heathlands in 2013 after 50-year absence then went locally extinct again in 2019, but high hopes remain of a return.

The heathland sites together with some areas of more open woodland and forest waste provide habitat for 4 of the UKs 6 reptile species, the adder, grass snake, common lizard and slow worm.

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[3] *Factsheet - Bracken for Butterflies.* **Butterfly Conservation.** 2005.

[4] **Simon Glover Butterfly Conservation 2015.** *Personal Communication* .

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Rivers:
Migratory fish: Eel, lamprey, salmon, twait shad, allis shad. The River Wye SAC is recognised for its international importance for species including white-clawed crayfish (*Austropotamobius pallipes*), otter (*Lutra lutra*), salmon (*Salmo salar*), twaite shad (*Alosa fallax*) and allis shad (*Alosa alosa*). White-clawed crayfish was also present at Soudley ponds on the Soudley book, but a recent outbreak of crayfish plague in the brook has put this crayfish population at risk. The Severn Estuary SAC includes internationally important populations of waterfowl; and large populations of migratory fish, including sea lamprey *Petromyzon marinus*, river lamprey (*Lampetra fluviatilis*) (both of which spawn in freshwater but complete part of their life cycle in the sea), twaite shad (*Alosa fallax*) and the nationally rare and endangered allis shad *Alosa alosa*). Both the Severn and Wye and their tributaries and floodplain wetlands are important for European eel (*Anguilla anguilla*).

Inland rock (and scree) Peregrine falcon and ravens' nest at several site along the cliffs of the Wye gorge. Endemic sorbus species are found both in the Wye Woodlands and clinging to the cliffs of the gorge. True service tree (*Sorbus domestica*) is a particular rarity, with only 1 known individual in the Wye Valley (other nearest populations are a small number of individuals in Wyre Forest and Vale of Glamorgan).

Urban:
The biosphere is not densely urban, containing market towns, villages and small dispersed settlement. This lends itself to enabling some species to utilise the buildings and settlements to their advantage. In particular, the greater and lesser horseshoe bats make use of the roof spaces, often (though not exclusively), of older buildings. The larger of these maternity roosts are included in the SAC designation, however many buildings contain satellite roosts.

Hedgehog (*Erinaceus europaeus*), near threatened, though declining, is found in gardens across the biosphere.

Older (Victorian and Georgian) houses that retain wooden facia and soffit boards (rather than UPVC) with gaps and holes provide nesting sites for swifts, while the combination of housing and riverine/estuarine mud enables a substantial colony of house martins to breed in the biosphere.

Horseshoe bats (Greater Horseshoe *Rhinolophus ferrumequinum* and Lesser Horseshoe *Rhinolophus hipposideros):* listed as European Protected Species under Annex II of the European Habitats Directive. The Wye Valley and Forest of Dean support significant proportions of both greater and lesser horseshoe bats (approximately 6% and 26% respectively of the national population) with the greatest concentration of lesser horseshoe bats in the UK. The network of caves, disused mines, tunnels and old buildings that provides substantial roosting opportunities make the Forest of Dean a stronghold for horseshoe bats. A number of buildings in everyday use (mainly roof spaces) are used by the bats for breeding and a series of mines used by bats for hibernation. Eleven large maternity and hibernation roosts are notified as Sites of Special Scientific Interest (SSSIs). Collectively these make up the Wye Valley and Forest of Dean Bat Sites Special Area of Conservation (SAC). Many other smaller roosts (including hibernation, maternity, satellite, transitional and night roosts) also existing in the biosphere landscape that are functionally linked to the Bat SAC. Other features within the Forest of Dean that have no designation but regularly contain high numbers of horseshoe bats old iron ore mines, caves, adits, scowles and disused railway tunnels. The extensive mosaic of

deciduous and coniferous woodland, together with extensively grazed habitats linked by hedgerows, stone walls and strips of riparian woodland provide a major feeding resource for both species. The topography of the Forest of Dean allows sheltered feeding under different wind directions and conditions.

At least 13 of the 18 species of bat in the UK, are found in the biosphere, due to the mix of woodland water and open habitats together with a wide range of roosts and hibernacula.
14.2.2 What are the pressures on key species? In other words: what are the threats (example unsustainable management of forest), their immediate causes (drivers of change like forest change or habitat change), their underlying causes (example overgrazing, fire, pollution), and the main driving forces (example: economic, political, social, external, etc.) and the area(s) concerned?

Urban development (economic/political/social)

- Increase in housing number allocation by UK Government – direct loss of habitat, and fragmentation. Lighting impact on bats and loss of roosts, flightlines, feeding grounds and access to water sources.
- More people and more dogs - Recreational pressure on estuary, woodland and ground nesting birds
- Changes in building practices - removing nesting/roosting opportunities for bats and swifts.
- Within roosts, bats are vulnerable to disturbance at critical times and from structural alteration and changes in the characteristic ventilation patterns.
- Pine Marten, hedgehog and many other species are vulnerable to road traffic accidents, the risk from which is increased due to increasing human population/car use.

Intensive agriculture (economic/political/social)

- Intensive dairy – ryegrass monocultures (no resources for biodiversity) impacting soil condition, no pollinator resource, impacting landscape permeability
- Silage cuts – creating modified grassland with no flowering species as cut too early for seed set (no resources for biodiversity).
- Energy crops – monoculture (no resources for biodiversity) and poor soil condition, impacting landscape connectivity. No in field tree or hedge buffers negatively impacting growth/survival of those features.
- Chicken farming – nutrient input to watercourses due to run off from waste spreading.
- Ivermectins – residual in dung so negative impact on invertebrate food sources (dung inverts) for horseshoe bat food.
- Loss of field margins due to economic drivers and changes to agri environment scheme budgets – reducing landscape connectivity/permeability for biodiversity.
- Changes in grazing regimes/loss of grazing animals – reduced food availability for horseshoe bats, particularly greater horseshoes which feed on dung invertebrates.

Disease and invasive non-native species (social/climate change/other)

- Tree species loss such as elm and ash – habitat loss for dependant species
- Loss of grazing in the Forest after Foot and Mouth disease – open habitats scrubbed over or bracken taken over due to lack of grazing.
- Invasive species resulting in out competing for resources, or transfer of disease - Loss of red squirrel population from the Forest of Dean during the 20th century. Grey squirrels reached the Forest in 1936 when at the time there was a good red squirrel population. Signal crayfish and cray fish plague impacting native, white-clawed crayfish. Americal mink eradicating water vole populations.

Woodland management (economic)

- No woodland management – not economically viable, no markets for products
- Management changes e.g. change from clearfell to continuous cover or no coppicing, lack of ride management – impacting species that like woodland clearings like nightjar and woodland butterflies
- Failure to control deer or grey squirrel number sufficiently – impacting tree regeneration, woodland structure and coppice regrowth for species such as Hazel dormouse.

Perception of tidiness/Health and safety (social)

- Over clipped hedges – resulting in no fruit or flower feeding resource, and poor nesting opportunities.
- Removal of deadwood – habitat loss and loss of spatial and temporal connectivity for dead wood utilising species.
- Felling of trees showing signs of fungus without considering whether true safety risk, or no looking at alternative options such as fencing off – loss of veteran/ancient tree continuity.
- Too frequent grass cutting – loss of flowering species as not able to set seed, loss of pollen, nectar and seed resource as food.

Hedgerow removal (economic)

- More land for planting high value crops – destruction of habitat, food source and connectivity.
- Modernisation, large size of modern agricultural equipment designed for large farms and large fields and for running by contractors resulting in desire for bigger fields as easier for them to work.

Poor weather (climate change)

- Due to their very low body mass and small fat reserves, lesser horseshoe bats are particularly vulnerable to starvation in spring, autumn and in summer during poor weather.

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14.2.3 What kind of measures and indicators are currently used, or planned to be used to assess both species groups and the pressures on them? Who undertakes this work, or will do so in the future?

GCER the Gloucestershire Centre for Environmental Records, hold species records data for the county. A state of nature report could be produced every 3-5 years and is being considered by the Local Nature Partnership to report on particular key indicator species

Horseshoe bats roosts are monitored by the Gloucestershire Bat Group, some as part of the national bat monitoring scheme. Records are also sent to GCER where trend data is analysed. SAC condition assessment assesses the pressures on the roosts.
National monitoring schemes for bats, birds, butterflies and dormice. Work largely undertaken by volunteers, facilitated by NGO organisations.

Gloucestershire Naturalists Society and other local volunteers that gather species records and provide them to GCER.

GWT monitoring on the heathland restoration Nature Reserves to assess condition and stage of restoration.

NatureSpace monitoring programme for Great crested newt mitigation sites – eDNA and population size class assessments to determine occupancy levels at each restored/created pond site to determine occupancy levels. This is done alongside conducting surveys on the quality of compensation site with use of the Habitat Suitability Index (HSI), viability assessments and general overviews of the extent and qualify to habitat types. These sites are then monitored for at least 25 years, with each compensation site monitoring annually to assess whether they have been colonized by the species and are contributing towards a positive conservation status at a landscape-scale.
GWT Pine Marten Mitigation Strategy

14.2.4 What actions are currently undertaken to reduce these pressures?

GCN and District Licencing in partnership with NatureSpace - NatureSpace run a Natural England approved assessment alternative to the standard licensing system which developers can contribute to financially to compensate lost or degraded great crested newt habitat. Habitat compensation is delivered by the Newt Conservation Partnership, increasing the number of high-quality clean water ponds connected by suitable terrestrial habitat are increased, creating a network of favourable habitats where newt populations can thrive. For every pond occupied by great crested newts that is lost through development, NatureSpace create or restore at least four high quality ponds, ensuring suitable surrounding terrestrial habitat is in place.

Horseshoe bats – Any proposed changes which are likely to have an impact on the bat populations within the breeding roosts will be discussed with the relevant owners and occupiers. Where appropriate to any populations potentially damaging works will be addressed through appropriate planning regulation, management agreements and monitoring of individual roosts, with regular liaison with site-owners. The human use of the mine system (continued mineral working and recreational caving/research) is regulated by Forest Enterprise in consultation with Natural England where appropriate. Site Management Statements have been agreed with the owners of working mines to secure conservation of the populations alongside continued working.

Partnership projects that are working with landowners and manager to improve habitat and integrate sustainable farming methods.

14.2.5 What actions do you intend to take to reduce these pressures?

Hazel dormouse (*Muscardinus avellanrius):* The Forest of Dean is a key site for ongoing population monitoring. Restoration of coppiced woodland, thinning and ride/glade enhancements creating increase age structures of woodland increasing food sources, and erecting dormouse nest boxes to continue the monitoring of dormice populations can help halt the decline in suitable habitat and allow for larger populations to flourish, becoming more resilient to future challenges. More comprehensive monitoring using multiple techniques where possible and identifying null records from surveys is needed.

Horseshoe bats - the preparation of Cave Conservation Plans will be promoted to maintain and enhance the underground environment for bats. Retention and positive management of flight paths between roosts and productive foraging areas, with a landscape scale approach will support the statutory designation to secure more favourable conditions for survival of important horseshoe bat populations. Ongoing use and update of local authority Wye Valley and Forest of Dean Bat Strategy Use of Severn Estuary SAC/SPA mitigation strategy which collects a contribution from development to secure mitigation for recreational impacts on the European protected sites. Careful design and implementation of planning policy including a target of 20% biodiversity net gain.

Continuation and future development of partnership projects that work with landowners and land managers to improve habitat and integrate sustainable farming methods.

14.3. At the level of genetic diversity:

14.3.1 Indicate species or varieties that are of importance (e.g. for conservation, medicine, food production, agrobiodiversity, cultural practices etc).

Local heritage fruit varieties are a valuable genetic resource such as Streaked Blakeney apple, Blaisdon red plum and the Blakeney red pear.- The National Fruit Collection[5], has around 200 varieties listed in its archive and holds a fruit gene pool that can be used for breeding commercially viable cultivars but there may still be other, as yet, uncollated fruit varieties within the Forest of Dean orchards.

[5] https://www.nationalfruitcollection.org.uk/

We don't know as the genetic study hasn't been done, but the isolated Noble chafer populations within the Forest of dean, and three counties more widely, may be genetically distinct from each other and/or from the small populations in Kent and the New Forest, and the European population. The true service tree is found in very few locations across Britain, therefore even a single tree is important to the ongoing survival of the species.

The biosphere supports around 26% of the UK lesser horseshoe bat population, making it critical to the success of this species.
Wye valley woodlands is, in places, reminiscent of wildwood and therefore has a collection of rare and threatened species associate with them.

14.3.2 What ecological, economic or social pressures or changes may threaten these species or varieties?

Local heritage fruit varieties and traditional orchard habitat:
Habitat loss and traditional orchard removal or decline as traditional orchards and traditional varieties are often not seen as commercially valuable, therefor it is not considered as a useful productive land use by many farmers/landowners. Old traditional orchards also continue to be lost to development.

Noble chafer and other saproxylic species are threatened by habitat fragmentation of traditional orchards and suitable dead wood/veteran trees. Noble chafer is a particularly poor disperser (as are other large saproxylic beetles) and fragmentation very quickly results in isolation of populations. The loss of temporal connectivity of habitat is also a problem, i.e., no trees of suitable veteran character stages, or future veterans, due to removal of dead/dying trees).

The true service tree is threatened by the fact that it is just one individual, plus it is at risk from being smothered by invasive non-native species, both cotoneaster and holme oak are a problem in the gorge, seeding in from properties at the top of the cliffs and both being able to cope with growth in the limestone cliff faces.

Lesser (and greater) horseshoe bats are threatened by pressure from housing expansion through the removal of habitat both physically and in terms of suitability. Horseshoe bats are particularly sensitive to light spill, therefor lighting from the built environment can exclude areas from use by horseshoes. The new roofing membrane used in modern housing or re-roofing is not as suitable for roosting bats as bitumen felt was, as their feet can get trapped in the fibres. Therefore, new building materials such as this can reduce the suitability and availability of roosts in roof spaces. The closing up of or lack of access holes due to UPVC roof facia and soffit boards is also reducing roof space availability. Some agricultural practices are also a problem, such as the use of insecticides either broadly on crops, or as animal treatment, which reduces invertebrate food availability for the bats. Reduction in livestock farms is also potentially reducing food availability due to reduced dung and associated invertebrates.

The Wye valley woodlands and the species that depend upon them are threatened by many issues including: reduced regeneration due to high deer numbers, lack of woodland management meaning

less structural diversity, invasive non-native species such as home oak, cotoneaster, perrywinkle etc., atmospheric nitrogen deposition, tree disease and climate impact and recreational disturbance.

14.3.3 What indicators, at the level of the species, are used, or will be used, to assess the evolution of population status and associated use?

Natural Capital, Regenerative Economy & Species Stewardship
Primary Sources:

- Local Environmental Records Centre (LERC) species records
- Partner monitoring programmes (e.g. bat surveys, mammal records)
- National species distribution datasets where relevant
- Data within IUCN Red List
- Scientific papers

Community and partnership inputs:

- Validated citizen science schemes
- Land-manager and conservation partner reporting

14.3.4 What measures will be used to conserve genetic diversity and practices associated with their conservation?

Local fruit varieties - A new "mother" orchard of all known Gloucestershire apple varieties has recently been planted on Forestry England land within the biosphere. This together with other local sources will provide grafting material in the future for use in local plantings.

Both Gloucestershire Wildlife Trust and the Wye Valley National Landscape are working with partners to develop projects to better understand noble chafer populations and their genetics in the biosphere and across the UK populations.

Propagation of the True service tree should be planned and carried out, the genetic diversity of the existing trees within and outside the biosphere should be tested to enable planned translocations to increase resilience of the species.

The local planning authority will continue to fully consider the impacts of development on the horseshoe bat population, while further avenues for mitigation will be sought by the partnership. The biosphere partnership will better enable the key partners with the Wye Valley Woodlands: The Wye Valley National Landscape, Forestry England, Woodland Trust and Gloucestershire Wildlife trust and Natural England, to work together to protect and future proof the woodland in its diverse structure and variety of species.

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15. DEVELOPMENT FUNCTION:

15.1. Potential for fostering economic and human development which is socio-culturally and ecologically sustainable:

The Forest of Dean has substantial and demonstrable potential to foster economic and human development that is socio-culturally and ecologically sustainable. This potential rests on three reinforcing foundations: a distinctive economic structure anchored in place; a living tradition of collective stewardship and community governance; and a policy and evidence framework that explicitly integrates social, economic and environmental outcomes.

The Forest's economy is characterised by a high proportion of SMEs and microbusinesses, strong self-employment, sectoral strengths in manufacturing, engineering, construction, agri-food and land-based industries, and a visitor economy closely linked to landscape, heritage and outdoor activity. This structure has coexisted with the Forest's ecological significance for centuries, demonstrating that economic viability and environmental stewardship are already integrated in practice rather than in tension. The district's traditions of common rights, freemining, commoning, parish governance and voluntary collective action represent a continuously operating system of social and economic organisation that shapes how enterprise functions, how services are sustained and how land is managed. These are active economic assets, not heritage curiosities.

The Forest of Dean District Council's Sustainable Economy Strategy (2024–2028) embeds Doughnut Economics as the governing framework for economic decision-making, balancing ecological boundaries with social foundations. This is operationalised through a prosperity indicators framework comprising nine interdependent indicator domains, covering cost of living and access to essentials, household prosperity and in-work poverty, work and skills, local wealth retention and community economy, tourism and carrying capacity, community strength and participation, housing and living conditions, natural capital and species stewardship, and the overarching systems logic that connects them. The indicators are grounded in nationally recognised evidence including the Index of Multiple Deprivation 2025, Census 2021, ONS labour market and commuting data, and Inform Gloucestershire, and are designed to distinguish between regenerative prosperity, where economic activity strengthens local resilience and operates within ecological limits, and extractive prosperity, where output increases while value leaks and pressures intensify.

The Forest's business community is an active participant in this sustainable development approach. The Forest Economic Partnership, a business-led body representing enterprises across the district, has established a Forest Business Climate Charter through which local firms voluntarily commit to taking action on climate change and working collaboratively toward net zero by 2030, ahead of the UK government's 2050 target. The Charter is free to join and operates through a signed pledge rather than legal compulsion, recognising that in a district of 4,400 active businesses, overwhelmingly micro-enterprises, collective voluntary commitment is more effective than top-down regulation. The FEP provides practical support including access to carbon footprint tools, fully funded carbon audits, funding and grant guidance, and strategies to reduce emissions and costs. The Charter's explicit aim is to remove barriers to climate action and build a community of local businesses working collectively toward a thriving circular economy. This is significant for the biosphere proposition because it demonstrates that sustainability in the Forest of Dean is not a council-imposed agenda but a shared commitment emerging from the business community itself. The same instinct that sustained common rights, freemining customs and parish-level cooperation across centuries now finds expression in a business community that understands its long-term viability as inseparable from the condition of the landscape and communities it operates within.

Community-led delivery is already operating at scale with the Forest Voluntary Action Forum coordinates over 1,000 volunteers into care, transport, youth support and community service roles. The Dean Forest Food Hub and Forest Community Transport address cost of living and access

pressures through place-appropriate provision. Community-owned assets such as the Dean Heritage Centre retain value locally over decades. These are existing mechanisms that biosphere designation would strengthen and coordinate, not replace.

The Forest's natural capital functions as core economic infrastructure. Woodland, soils, water systems and landscape connectivity underpin climate regulation, flood attenuation, productive outputs and resident wellbeing. Long-established practices including continuous cover forestry, coppicing, rotational management, common grazing and selective timber harvesting maintain ecological function while producing repeatable economic outputs. Species stewardship, including the reintroduction and management of wild boar and pine marten, demonstrates adaptive governance capacity in the face of ecological complexity.

Biosphere designation would provide the coordinating framework that connects these elements. It enables the Forest to govern economic and human development through a structured, place-specific evidence base; to monitor whether activity strengthens social foundations and respects ecological limits over time; and to demonstrate, at a working landscape scale, how cultural continuity, enterprise viability and environmental stewardship can be sustained together.

15.1.1 Describe how and why the area has potential to serve as a site of excellence/model region for promoting sustainable development.

The Forest of Dean has significant potential to serve as a model region for sustainable development due to its unique blend of natural assets, strong community engagement, progressive policy frameworks, and emerging economy. The Forest of Dean is a biodiversity hotspot, home to rare species such as Greater and Lesser Horseshoe Bats, Pine Martens, Beavers, and Wild Boar. Its mosaic of woodlands, heathlands, and rivers provides critical habitats. These species are not only nationally recognised but also species of international importance. Forestry England manages the area with sustainability at its core, supplying FSC and PEFC-certified timber and restoring ecosystems through rewilding and species reintroduction. Due to the area's international significance, it is essential that we manage this unique landscape alongside the sustainable development of the local community to safeguard its future. The Forest of Dean District has a strong identity and pride of place: The Forest's cultural heritage and community cohesion support long-term sustainability.

The Forest of Dean District Council's Sustainable Economy Strategy (2024–2028) integrates Doughnut Economics to balance ecological boundaries with social foundations. This approach promotes regenerative and distributive economic practices. The Council Plan commits to becoming carbon neutral by 2030, with strategies for renewable energy, circular economy, nature recovery, and community empowerment.

The Centre for Sustainable Energy partnered with the Council to support local organisations in developing bespoke climate action plans. These plans include energy efficiency upgrades, sustainable procurement, transport emission reductions, and community engagement. Initiatives like FVAF's sustainable café and Citizens Advice's green advice services show how grassroots efforts are driving change.

The Forest of Dean District has strong potential for renewable energy generation. Research suggests that onshore wind and solar farms in the area could power nearly 200,000 homes. The Council is

actively encouraging investment in solar, wind, and battery storage, aiming for energy self-sufficiency and supporting retrofitting and electrification of transport.

The district is investing in green skills training, digital literacy, and support for sustainable businesses. This includes partnerships with colleges and funding through the UK Shared Prosperity Fund. The Forest Economic Partnership fosters collaboration between businesses, government, and communities to drive inclusive growth.

A place-based prosperity framework: economic resilience as sustainable development
Alongside its environmental assets and policy commitments, the Forest of Dean has developed a comprehensive prosperity indicators framework that provides a structured, place-specific evidence base for understanding how economic activity, social wellbeing and environmental stewardship interact in a working landscape. This framework demonstrates the Forest's potential as a model region not through aspirational targets alone, but through a rigorous, systems-based account of the conditions that produce (or undermine) lasting local prosperity.
The framework treats prosperity as a place-shaped outcome. In the Forest of Dean, economic data drawn from the Inform Gloucestershire (2023) district profile shows an economy characterised by a high proportion of SMEs and microbusinesses, comparatively high levels of self-employment and locally rooted enterprise, sectoral strengths in manufacturing, engineering, construction, agri-food and land-based industries, and a visitor economy closely linked to landscape, heritage and outdoor activity. This economic structure coexists with two persistent challenges that conventional metrics fail to capture: external ownership in key sectors, which allows economic activity to take place within the district without commensurate local value capture; and weak workplace containment, which sees a significant proportion of higher-paid employment located outside the district, reducing the proportion of earned income retained locally and weakening multiplier effects.

These structural characteristics are not unusual in rural and post-industrial districts, but the Forest's response to them is distinctive. Drawing on regional resilience and endogenous development literature, local multiplier analysis and the Doughnut Economics framework already embedded in the Council's Sustainable Economy Strategy, the prosperity indicators make visible the upstream conditions that determine whether economic activity strengthens local resilience, retains value, supports enterprise and workforce stability, and operates within environmental limits. They focus on conditions, local interdependencies and adaptive capacity rather than short-term performance measures, providing a governance tool that distinguishes between regenerative prosperity: where value circulates locally, strengthens community capacity and operates within ecological limits and extractive prosperity, where output can rise while value leaks out and local pressures increase.

Structural economic evidence
The framework is grounded in nationally recognised evidence. The Index of Multiple Deprivation (IMD) 2025 shows that while the Forest of Dean does not rank among the most deprived districts overall, specific neighbourhoods experience persistent disadvantage across income, employment, health, housing and access domains. The district contains the most deprived Lower Super Output Area in Gloucestershire on the Barriers to Housing and Services domain, with the Dymock LSOA ranked 91st of 33,755 LSOAs in England. This confirms that geography and service accessibility are active drivers of cost and vulnerability in parts of the Forest. Fuel poverty data reinforces this picture: a historic baseline of 11.6% of households in fuel poverty (4,181 households, DECC 2013), with more recent National Energy Action estimates at 15.6%, and the Council's Warm and Well service recording a 25% increase in households supported during 2022/23.

Census 2021 data reveal high levels of car dependency across the district, reflecting limited public transport coverage and the distance between settlements and service centres. ONS commuting data consistently show that a significant proportion of Forest residents travel out of the district for work, with areas of higher out-commuting overlapping with income-constrained neighbourhoods. These patterns confirm that commuting is often a necessity driven by limited local opportunity at appropriate skill and pay levels, rather than a lifestyle choice. Equally, the current dependence on external economies means a larger supply chain which increases freight traffic throughout the Forest, a key issue currently being addressed by the Forest Economic Partnership and its Climate Charter.

The following paragraphs highlight the indicators that would be applied under a Biosphere Designation, and how they apply to the Forest of Dean's particular economic strengths and challenges while aligning with long-standing sustainability principles and practices.

Cultural resilience as an economic asset
A defining feature of the Forest's sustainable development model is the persistence of cultural continuity alongside economic adaptation. The district's history of common rights, parish governance, freemining, commoning, volunteering and cooperative practices represents a living tradition of collective stewardship that is recognised and valued by residents. These practices are active economic assets that reduce transaction costs for firms, strengthen labour-market attachment, enable informal coordination during disruption and reduce dependency on centralised or external provision. Economic research on social and cultural capital demonstrates that places with these characteristics experience greater adaptive capacity and resilience, particularly in rural and post-industrial contexts where informal networks substitute for thin markets and missing infrastructure.

The Forest Voluntary Action Forum coordinates over 1,000 volunteers into roles including befriending, volunteer driving, youth support and community service delivery, demonstrating the scale at which voluntary action substitutes for and supplements formal provision. The Forest Compass directory connects residents to local groups, services and activities, reducing isolation and improving access to informal care and social connection. Organisations such as Wylderne deliver community-led nature-based wellbeing provision, reaching individuals who are isolated or underserved by statutory services, while simultaneously reinforcing community participation and stewardship. These represent existing social infrastructure that a biosphere framework would strengthen and coordinate.

Natural capital as economic infrastructure
The Forest's natural systems function as long-term productive assets. Woodland, soils, water systems, species and landscape connectivity directly underpin prosperity through climate regulation, flood attenuation, water quality, productive outputs (sustainable timber, charcoal, firewood, pasture), and everyday access to nature for resident health and wellbeing. Long-established practices such as coppicing, rotational management, selective timber harvesting, common grazing and hedgerow maintenance actively maintain ecological function while producing repeatable economic outputs. Applied research and advisory practice linked to the local Hartpury University already inform soil health, grazing systems and nutrient management used by Forest land managers. Species stewardship further demonstrates governance maturity. The Forest's management of wild boar and pine marten illustrates its capacity for adaptive governance in the face of ecological complexity, managing species that generate both ecological value and social challenge through

monitoring, coordination and public engagement. Sentinel species outcomes function as hard indicators of system health, linking biodiversity to the effectiveness of natural capital management.

Local wealth retention and the community economy

The Forest's potential as a model region is further demonstrated through its approach to local wealth retention and community economic development. The Forest Economic Partnership, established as a business-led partnership, works to strengthen the Forest's internal economy by improving local supply-chain connectivity, collaboration and investment readiness. Its economic case for biosphere designation identifies weak local value capture as a structural constraint on prosperity and positions business-to-business collaboration and place-anchored growth as core solutions.

Community ownership provides a parallel wealth-retention mechanism. The Dean Heritage Centre, managed as an independent charitable trust, retains income generated through admissions, events, retail and education within the local economy, reinvesting surplus into employment, site maintenance, volunteering and heritage interpretation. This model has sustained operations over decades while adapting to changing funding and visitor conditions, demonstrating institutional longevity and delivery capability. Community enterprises more broadly play a disproportionate role in the Forest economy relative to their size, particularly in sectors where market provision is fragile, including local services, food, energy, heritage and visitor infrastructure.

Tourism governed through carrying capacity, not volume

The Forest's approach to tourism demonstrates a sustainable development model that prioritises carrying capacity, value per visit and resident wellbeing over visitor volume. Tourism value is shaped less by total visitor numbers than by how long visitors stay and where they spend. A tourism profile dominated by short day visits generates high footfall with relatively low local economic return, particularly where food, accommodation or booking platforms are externally owned. Longer stays are more likely to support locally owned accommodation, independent retail, food producers and activity providers, increasing local value retention and spreading benefit across the Forest's SME-dominated economy.

This framing is already being delivered in practice. Small-scale wellbeing and retreat-based tourism providers, such as Wilde Earth Journeys, offer residential retreats and nature-connection experiences rooted in the Forest's landscape, with extended stays, small group sizes and low environmental impact. Beechenhurst Visitor Centre operates as a managed gateway, concentrating high visitor volumes at an equipped site while limiting dispersed pressure on sensitive woodland areas and surrounding communities. These existing approaches demonstrate that the Forest can accommodate significant visitor numbers while protecting ecological integrity and resident amenity, using spatial design and information rather than restriction alone.

Housing, living conditions and workforce stability

Housing outcomes in the Forest are integral to the sustainable development case. A high proportion of older housing stock, including solid-wall properties that are expensive to insulate, combined with significant off-gas-grid exposure, creates structural energy cost burdens that contribute to fuel poverty, health impacts and higher living costs. Housing stress manifests through affordability pressure, concealed overcrowding, delayed household formation and out-migration of younger and lower-income households, weakening community cohesion and labour market stability.

Retrofit programmes delivered through the Social Housing Decarbonisation Fund have demonstrated consistent improvements in EPC ratings, reduced energy demand and improved thermal comfort, particularly in older, hard-to-treat housing stock. Delivery in the Forest has

required bespoke, fabric-first solutions reflecting solid-wall construction, dispersed settlements and landscape constraints. The Council's Housing Options service delivers prevention-led homelessness support adapted to Forest-specific conditions, maintaining community continuity and workforce stability. These interventions demonstrate that improving housing conditions can simultaneously reduce fuel poverty, lower environmental impact and strengthen local economic capacity.

Cost of living as a sustainability challenge

The Forest demonstrates a sophisticated understanding of cost of living as a place-shaped prosperity outcome. The rural premium, driven by dispersed settlement, landscape-constrained transport infrastructure, distance to services, off-gas-grid energy systems and visitor economy interactions with resident access, is treated as a neutral background characteristic but as a sustainability challenge requiring coordinated governance. Community-led delivery mechanisms are already addressing these pressures: the Dean Forest Food Hub coordinates local producers and volunteers to improve access to affordable food, reducing reliance on long-distance travel to retail centres. Forest Community Transport provides demand-responsive community mobility across dispersed settlements, reducing the financial and time costs associated with car dependency.

These interventions distinguish what the prosperity framework terms regenerative cost reduction, where everyday living becomes more affordable because systems are better designed, from extractive affordability, where costs are displaced onto households or the environment. This distinction is central to the Forest's model: managing cost of living pressures within a protected working landscape requires solutions that reduce structural access costs while reinforcing long-term social and environmental resilience.

Work, skills and local opportunity

The Forest's sustainable development potential depends on whether residents can access secure, meaningful work locally. IMD 2025 shows that deprivation is not driven primarily by unemployment but by income constraints, underemployment and barriers to accessing suitable work at appropriate skill and pay levels. The prosperity framework identifies a skills misalignment rather than a skills deficit: the resident workforce possesses diverse and transferable skills, but many commute out for work that better matches their qualifications, pointing to a structural gap between skills supply and the composition of local opportunity.

A biosphere framework directly addresses this by repositioning forestry, conservation, regenerative land use and nature-based tourism as skilled, long-term employment pathways and by linking apprenticeships and training to land-based management, environmental stewardship and locally rooted visitor economy roles. This embeds skills development within the Forest's economic structure rather than allowing investment in training to benefit external labour markets.

Research

Research is being conducted to help us work towards a more sustainable future. A research partnership between Hartpury and UWE is exploring an integrated field and earth observation-based approach to soil monitoring. This includes development and validation of a low-cost embedded soil-gas sensing platform for real-time monitoring of agricultural soil processes. In addition, Hartpury University has three PhD projects exploring the interaction between land management and soil carbon. This research programme is developing novel approaches to landscape monitoring for landowners. Funded by Douglas Bomford Trust, TETFUND and in collaboration with UWE Bristol.

Summary

The Forest of Dean's potential as a site of excellence for sustainable development rests on a combination that is genuinely unusual: internationally significant biodiversity and landscape assets; a living tradition of collective stewardship, common rights and parish-level governance; a progressive policy framework embedding Doughnut Economics and place-based prosperity indicators; a business-led economic partnership actively working to strengthen internal value circulation; and a suite of community-led delivery mechanisms already operating at scale across food access, transport, energy, wellbeing, heritage and housing. The prosperity indicators framework provides the evidential architecture that connects these elements into a coherent, monitorable system, demonstrating not only aspiration but existing capacity to govern sustainable development as an integrated practice across economic, social, cultural and environmental domains.

The designation would enable greater understanding of the Forest's distinctive character, should increase community support for its protection, and provide greater resilience. This matters because the Forest of Dean has in some respects not benefited from past actions or recognition, or where these have been attempted they have not been well fitted to the area's unique qualities. The biosphere model is well suited to recognising the Forest in a manner that should provide a coherent context for a sustainable future with broad community support, embracing the natural, cultural, social and economic character of the area and able to protect both designated sites and the more subtle facets of place that are presently falling through the net.

15.1.2 How do you assess changes and successes (which objectives and by which indicator)?

Changes and successes will be assessed through a prosperity indicators framework comprising nine interdependent indicator domains, designed to be read as an integrated system rather than as isolated metrics. The framework is grounded in Doughnut Economics, which structures assessment around two interdependent boundaries: a social foundation (the minimum conditions required for a functioning local economy and stable communities) and an ecological ceiling (the environmental constraints and dependencies that shape long-term economic viability). Each indicator applies this framing as a governance test, asking whether economic and policy decisions move the Forest closer to a safe and just operating space, or whether they increase activity without improving lived outcomes.

The nine prosperity indicator domains

1. Cost of Living and Access to Essentials. Assesses whether residents can access essential goods, services and opportunities at a cost that is reasonable, predictable and compatible with everyday life in a rural working landscape. Tracks transport costs and the rural premium, access to essential services and everyday goods, energy and utility cost exposure, food access and local provision, and visitor economy pressure on resident access. Success is measured through reduced structural access costs and improved service proximity without increased environmental pressure. Key data monitoring sources: IMD 2025 Barriers to Housing and Services domain, Census 2021 car ownership and travel data, Inform Gloucestershire spatial access indicators, Landscape Character Assessment.

2. Household Prosperity and In-Work Poverty. Assesses whether the Forest's economy delivers basic household security and dignity. Tracks income adequacy and low pay, fuel poverty and energy cost burden, transport and access cost pressures, and housing-linked vulnerability. Success is measured through improved household conditions (warmth, stability, manageable costs) achieved

through lower-carbon infrastructure and stewardship-aligned local systems rather than higher consumption. Key data monitoring sources: Nomis/ONS earnings series, government fuel poverty datasets, EPC distributions, Warm and Well operational reporting, Census 2021.

3. Work, Skills and Local Opportunity. Assesses whether people can access secure, meaningful work locally and whether the economy makes effective use of resident skills. Tracks employment quality and underemployment, workplace containment and out-commuting, skills alignment and mismatch, and apprenticeship retention. Success is measured through improved workplace containment and stronger alignment between skills supply and local opportunity, particularly in land-based, environmental and place-specific sectors. Key data monitoring sources: ONS/Nomis employment and commuting data, IMD 2025 employment and income domains, local authority skills evidence.

4. Local Wealth Retention and Community Economy. Assesses whether economic activity generates lasting local benefit through retained and circulating wealth. Tracks local procurement and value circulation, local ownership and SME resilience, community enterprise presence, and visitor economy spend retention. Success is measured through increased local value retention per pound of economic activity and improved SME survival and reinvestment. Key data monitoring sources: local authority procurement and social value reporting, Nomis/ONS business demography, Forest Economic Partnership evidence, community enterprise registers.

5. Tourism, Wellbeing and Carrying Capacity. Assesses whether tourism contributes to long-term local prosperity without undermining the environmental, social and infrastructural conditions on which that prosperity depends. Tracks visitor pressure relative to carrying capacity, length of stay and spend per visitor, seasonality and employment stability, and visitor management effectiveness. Success is measured through increased value per visit, reduced peak pressure, improved seasonal distribution and stronger locally retained visitor spend, not through increased visitor volume. Key data monitoring sources: Forest Economic Partnership tourism evidence, local authority transport and parking data, Forestry England site-level monitoring, Inform Gloucestershire.

6. Community Strength, Safety and Participation. Assesses whether communities are sufficiently strong, connected and empowered to sustain safety, wellbeing and shared prosperity. Tracks civic participation and local decision-making, volunteerism and social infrastructure, community asset ownership, rural safety and informal guardianship, and access to care and everyday support. Success is measured through increased community capability, reduced vulnerability and improved access to everyday support across dispersed settlements. Key data monitoring sources: IMD 2025 access and health domains, Inform Gloucestershire community and wellbeing indicators, voluntary sector and parish-level evidence.

7. Housing, Land and Living Conditions. Assesses whether people have access to secure, affordable, warm and appropriate homes. Tracks affordable housing delivery relative to need, housing quality and energy efficiency, off-gas-grid exposure and living costs, and housing insecurity including concealed need. Success is measured through improved housing conditions, reduced fuel poverty and maintained community stability, achieved through place-appropriate delivery that respects landscape character. Key data monitoring sources: local authority housing delivery and homelessness data, EPC datasets, IMD 2025 housing and living environment domains, Inform Gloucestershire.

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8. Natural Capital, Regenerative Economy and Species Stewardship. Assesses whether the Forest's natural systems are functioning as long-term productive assets within ecological limits. Tracks ecosystem asset base and connectivity, condition and ecological functionality, ecosystem services underpinning prosperity, stewardship economy and regenerative livelihoods, and species stewardship as a signal of system health. Success is measured through maintained or improved ecosystem function, viable land-based livelihoods and stable sentinel species populations. Key data monitoring sources: local habitat and land-use mapping, Environment Agency water quality data, Forestry England woodland management records, LERC species records, ELM scheme participation data, applied research from Hartpury University.

Reading the indicators as a system

The indicators are designed to be read as an interdependent system, reflecting the way economic resilience is produced in practice. Workforce stability depends on access to care, housing, transport and community support. Business continuity depends on service resilience, informal coordination and environmental reliability. Sectoral strengths depend on stewardship of land, skills retention and cultural attachment to place. No single indicator is sufficient on its own. Taken together, they provide a holistic, evidence-based account of cultural and economic resilience, grounded in observed economic structure, established theory and measurable outcomes.

This systems approach means that success is not assessed through improvement in any single domain, but through the coherence and direction of change across domains. An intervention that improves employment figures while increasing transport dependency and visitor pressure would register as mixed rather than successful. An intervention that improves housing conditions, reduces energy costs and strengthens local supply chains simultaneously would register as regenerative across multiple indicator domains.

The Doughnut Economics governance test

Each indicator applies Doughnut Economics as a practical governance test structured around two questions. First, does the action strengthen the social foundation: can people access essential services, secure work, afford decent housing, participate in community life and sustain stable livelihoods? Second, does the action respect the ecological ceiling: does it operate within the carrying capacity of the Forest's landscapes, habitats, infrastructure and communities, or does it increase pressure without improving long-term wellbeing?

This framing enables a consistent distinction across all indicator domains between regenerative outcomes, where economic activity strengthens place, livelihoods and stewardship within environmental limits, and extractive outcomes, where activity or output increases while value leaks, costs are displaced onto households or the environment, and local pressures intensify. Progress is assessed through observable changes in lived conditions and local value retention, not through growth metrics alone.

Spatial governance through MAB zonation

Each indicator is mapped to the three MAB zones (core, buffer and transition), reflecting the way different components of prosperity interact with the biosphere's spatial governance. Core areas define ecological limits and system thresholds. Buffer zones test whether economic and social activity is compatible with landscape character and ecological function. Transition areas are where the primary delivery of economic, housing, service and community outcomes takes place, and where the governance test of whether activity improves lived conditions without breaching ecological

limits is most directly applied. This mapping ensures that monitoring and assessment are spatially differentiated, enabling targeted intervention and adaptive management across different parts of the biosphere.

Monitoring approach
The monitoring framework is designed to be sustainable, repeatable and proportionate. It prioritises existing nationally recognised datasets (IMD, Census, ONS/Nomis, Inform Gloucestershire, Environment Agency) supplemented by local authority administrative data, voluntary sector reporting, site-level monitoring and structured qualitative evidence where national datasets do not capture rural-specific conditions such as concealed housing need, volunteer capacity, skills mismatch and community asset sustainability. The emphasis is on distribution rather than averages, trends rather than snapshots, and leading indicators that identify upstream conditions before capacity is eroded. Monitoring is designed to support adaptive governance and UNESCO periodic review requirements without creating new reporting burdens.

Objectives and success criteria
The overarching objective is to demonstrate that the Forest of Dean functions as a living biosphere in which economic viability, cultural continuity and environmental stewardship are mutually reinforcing, and in which designation enhances coordination, learning and long-term adaptive capacity rather than imposing a new economic model. Success is assessed through whether the Forest is moving toward a safe and just operating space across all nine indicator domains: whether social foundations are being strengthened, ecological limits are being respected, and the relationship between economic activity and local prosperity is becoming more regenerative and less extractive over time.

15.2. If tourism is a major activity:

15.2.1 Describe the type(s) of tourism and the touristic facilities available. Summarize the main touristic attractions in the proposed biosphere reserve and their location(s).

Tourism in the Forest of Dean is non extractive by character. The landscape's value to visitors, its ancient woodland, dark skies, river valleys and working forest culture, depends on its ecological and cultural intactness. The Forest's tourism economy has grown out of the place itself. Supply chains are kept short by independent business because the producers are neighbours. Accommodation providers source hamper items, dairy, meat and baked goods from within the district, often within 20 miles. Guest feedback consistently describes a pattern of arriving with activity plans and choosing to slow down, spending time walking, reading and eating locally sourced food. Repeat booking rates at some accommodation providers run at 30%.

Three national trends identified by VisitBritain, Mintel, Nationwide and Hotelogix directly favour this model: the rise of nature and slow travel, the shift from material to experiential spending and the growing outperformance of regional escapes over city breaks. VisitBritain's 2025 research found that 69% of UK holidaymakers want a holiday to make them feel relaxed, 55% want to feel refreshed and 36% want to feel comforted. These align closely with the experience that Forest of Dean visitors describe.

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The proposed biosphere area contains a distinctive mix of heritage, ecological and recreational attractions. These include:

Symonds Yat Rock
From this Iron Age Hillfort you can admire the picturesque views first recognised in Gilpin's 'Observations on the River Wye'. This was effectively the first tour guide for the Wye Valley and the birth of British Tourism. It is an internationally famous viewpoint where you can admire the winding River Wye, watch peregrine falcons dive and then enjoy a visit to the log cabin cafe.

Clearwell Caves
Discover the 'Wonder of Under', see the hidden world deep beneath the Forest of Dean. An unfathomable natural cave system for you to explore, with impressive caverns, that tell the story of iron and ochre mined here for over 4,000 years. An unbroken culture that continues here today.

Dean Heritage Centre
Found in Soudley, the Dean Heritage Centre protects and preserves the unique history and heritage of the Forest of Dean. There is a wide range of things to explore and discover with five galleries exploring the history of the forest, including a Victorian cottage, a charcoal burners camp, a waterwheel, a beam engine and much more.

Puzzlewood
This is a unique and atmospheric ancient woodland that conjures up thoughts of magic, dragons and unicorns - one of the reasons why it's such a popular film location. You will see rock formations called scowles, formed by a combination of erosion and iron mining, which, combined with the beautiful range of trees and plants create a magical environment for film productions such as Star Wars, Dr Who and The Secret Garden.

Darkhill Ironworks
Modern steel was invented at Darkhill Ironworks and Titanic Steelworks here at Ellwood through the pioneering work of the metallurgist David Mushet and his son, Robert Forester Mushet. Download the free 'Coleford's Hidden Heritage' app, to find out more and explore the area.

The Speech House Hotel
Originally built in 1669, and open to the public to stay, Speech House Hotel lies at the heart of the forest and houses the Verderers Court. There are four elected Verderers who are responsible for the vert and venison (the greenery and wildlife) of the Forest of Dean.

Forest of Dean Cycle Centre
Based at what was Cannop Colliery, this is the ideal place to start your cycling adventure offering a range of trails, from the award winning blue Verderers trail to challenging downhill tracks, with an uplift service to get back to the top of the hill. Pedalabikeaway also provide bike hire, a shop and cafe on site. The Family Cycle Trail starts here, and is also the route for the free 'Hidden Heritage of the Dean' app.

Mallards Pike
The lake is a beautiful and tranquil setting, formed from a former open cast mining site. It is a great place to get active with running trails and walking routes, the Go Ape Tree Top Challenge, the more leisurely easy-access lakeside path or just sitting and admiring the view from the cafe.

Woorgreens Nature Reserve
This is the biggest nature reserve within the forest at nearly 60 hectares and has been created from the old site of an open cast mine. Woorgreens lake is one of the largest found in the Forest of Dean.

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Species of dragonfly, reptiles, amphibians and ground nesting birds value this important landscape and open habitat that is maintained by Gloucestershire Wildlife Trust with conservation grazing livestock, including Highland cattle.

Dean Forest Railway
Based at Norchard Station, Dean Forest Railway near Lydney offers a 4½ mile steam train journey from Parkend to Lydney. With five stations along the way, you can explore the local area, taking in woodland walks and country pubs or venturing down to the Severn estuary to explore Lydney Harbour with its fantastic views across the River Severn. At the main site there is a museum, shop and cafe.

New Fancy View
One of the highest points in the forest where you can see trees in all directions, standing on the top of this old mine 'spoil' tip. There is also a 'Geomap' at the site, which represents all the mines in the forest with their interconnecting railways, using the appropriate rock to show the geology.

Soudley Ponds
Surrounded by impressive Douglas fir trees that provide a stunning backdrop to the ponds, you can walk on a range of surfaced paths or, for those wanting more of a challenge, a steep walk up the ridge to Blaize Bailey will be rewarded with beautiful views over the River Severn.

Worcester Walk
This small site is managed to improve the habitat for a variety of wildlife. Local volunteers also care for the old oaks, hedgerows, pond and wildflower meadows, in an area originally associated with a Forest Lodge.

Scarr Bandstand
A natural amphitheatre in the forest, renovated by volunteers with National Lottery Heritage funding. It hosts several events in the summer, including plays and brass band concerts. Brass bands have a long history in the forest, their origins traced back to specific mines and villages with musicians continuing through the generations.

Walking Trails
Bream Heritage Walk
A 6.5 mile walk around the villages of Bream and Whitecroft and the hamlets of Saunders Green and Brockhollands, highlighting 'hidden heritage' in this area.

Devil's Pulpit & Offa's Dyke Footpath
Devil's Pulpit is a small pinnacle of rock, high on the valley ridgeline, where legend has it that the devil danced and tried to lure the monks away from their duties in Tintern Abbey far below. The Offa's Dyke path follows the ridge at this point, tracing its path roughly along the English-Welsh border.

The Forest of Dean Sculpture Trail
Starting at Beechenhurst, this is a 4.5-mile route featuring sculptures created by artists interpreting the forest environment and the history of this very unusual landscape."
Alongside these visitor attractions sits a growing network of locally embedded tourism enterprises. Independent accommodation providers, food producers, breweries and cafés form an active and self organising business community characterised by short supply chains, genuine relationships and a shared orientation towards quality over volume. Businesses such as Nut Hatch and Roost Retreats are proactive in seeking out local suppliers, attending community meetings and building relationships through the Tourism Association, the Forest Food Forum, the Forest Food Showcase and local business networking events. These relationships develop over time through repeated contact, regular coffees with suppliers, visits to farms, shared accounts with cooperatives, producing a pattern of economic interdependence across the local tourism sector.

Key supply chain nodes have emerged organically from this activity. Plump Hill Farm (rare breed livestock and Gloucester Old Spot pork) and Forest Bakehouse are cited independently by multiple tourism businesses as suppliers, demonstrating a naturally forming local supply infrastructure. Other significant local enterprises include Forest Milkmaid (dairy), Suma cooperative, Bespoke Brewery, Little Dean Tap, Hips Café and The Globe. Accommodation providers such as Nut Hatch and Roost Retreats operate responsible guest charters, source locally as a default, provide EV charging infrastructure and guide visitors towards active travel and local spend.

This model of nature immersion and slow tourism operates across an affordability spectrum. Providers like Nut Hatch and Roost Retreats offer high quality, comfortable retreats with thoughtful design, local sourcing and attention to detail. Enterprises like Barefoot and Bower on May Hill offer low impact camping around a natural swimming lake with composting toilets and group bookings, providing a similar experience of slowing down and connecting with the landscape at lower cost. The common factor is that the Forest's natural environment provides the restorative value, making the wellbeing benefits of the area's tourism accessible across income levels.

This restorative value has a growing evidence base. Research consistently demonstrates that exposure to woodland environments reduces cortisol levels, lowers blood pressure and heart rate, and enhances immune function through increased natural killer cell activity (Li, 2022; Antonelli et al., 2019). Birdsong specifically has been shown to reduce anxiety and promote emotional stability, with effects lasting up to eight hours after exposure (Stobbe et al., 2022; Hammoud et al., 2022). Proximity to rivers and other blue space activates the parasympathetic nervous system and promotes cognitive restoration (White et al., 2020). The Forest of Dean offers all three in ancient woodland, exceptionally rich birdlife and the River Wye in close proximity, making it a landscape whose biological capacity to support human wellbeing is unusually concentrated.

The biosphere will actively encourage slow tourism as the more sustainable model for the area. Slow tourism means longer stays, deeper local spend, lower transport impact and a visitor experience that depends on the landscape remaining intact. Closely linked to this is the growing role of wellness tourism across the Forest's offer. Established venues such as the Speech House Hotel (built in 1669 and the heart of the Forest’s history of self governance) now host yoga and wellbeing programming alongside their traditional hospitality, extending this orientation well beyond newer enterprises. Across the sector, from heritage attractions and outdoor recreation through to purpose built retreats and affordable nature immersion, the Forest's tourism economy is converging around an offer grounded in restoration, slowness and connection to the landscape. The biosphere provides a framework to support and coordinate that development.

This convergence has emerged through difficult conditions. The Forest's tourism and hospitality sector has weathered a series of structural shocks, the Covid pandemic, the cost of living crisis and ongoing economic uncertainty, that have tested businesses across the country. In the Forest of Dean, businesses have recognised these pressures have become structural and have drawn closer together in mutual support, collectively choosing to promote the Forest as a place of wellness and retreat. The shared focus is on the reciprocal, nature grounded experience that the area offers, where the value to the visitor depends on the care given to the landscape. This represents a deliberate orientation towards longer stays, deeper local spend and landscape stewardship, distinct from the high volume day trip model that characterises more commercialised rural destinations.

The sustainability of the Forest of Dean as a tourism landscape rests on a principle of reciprocity between the visitor and the place. The Forest's capacity to support human wellbeing through its natural assets is a direct function of its ecological condition. These responses depend on the health of the ecosystem that produces them. A landscape subject to high volume, short stay visitor pressure (concentrated traffic, localised degradation, litter, noise and habitat disturbance) progressively loses its capacity to deliver these benefits. The tourism model that the Forest's business community has collectively chosen to pursue recognises this dependency, orienting around the same principle: longer stays, local spend, active travel, short supply chains and responsible guest behaviour that

maintain the ecological integrity on which the visitor experience depends. This orientation has strengthened through the structural shocks of recent years, as businesses have drawn together in mutual support around a shared model of wellness and retreat tourism. The national data confirms that the market is moving towards what the Forest already offers.

In return for the care given to it, the landscape continues to provide the restorative environment that generates and sustains that demand. This reciprocal relationship is both the organising principle of what would be the biosphere's approach to sustainable tourism, and the practices and approach already in place. The designation therefore provides the framework to formalise, monitor and sustain it over time

15.2.2 How many visitors come to the proposed biosphere reserve each year? (Distinguish between single-day visitors and overnight guests, visitors only visiting the proposed biosphere reserve or only passing on the way to another place). Is there an upward or downward trend, or a particular target?

In 2023, Visit Dean Wye recorded 5.1-million-day visits and 2.6 million overnight stays from UK and international visitors to the Forest of Dean and Wye Valley. At Forestry England's four principal sites (Beechenhurst, Symonds Yat Rock, Mallards Pike and the Forest of Dean Cycle Centre) almost 1 million visitors were welcomed in 2024/25. These figures do not include visits to smaller Forestry England sites or visitors arriving on foot, by bicycle or via alternative transport, meaning the true total is likely higher.

Broader national data indicates an upward trend. VisitBritain forecasts 45.5 million inbound visits to the UK in 2026, representing 4% growth in visits and 7% growth in spend compared with 2025. Premier Cottages reported a 23% year on year increase in property bookings, and Google searches for UK holiday cottages rose by 260%. Global travel uncertainty is contributing to sustained growth in UK ‘staycation’ demand, with short breaks, nature led escapes and family stays continuing to rise in 2026 and UK regions seeing stronger demand than major urban centres (Hotelogix, 2025).

Within the Forest specifically, accommodation providers report strong repeat booking rates (30% at some sites), growth in word-of-mouth referrals and emerging demand from new demographics including millennials seeking nature based digital detox breaks and a growing trend towards "runcations", i.e. running holidays combined with rural retreat. The proportion of guests arriving with electric vehicles has reached 35–40% at some providers, with EV charging infrastructure being expanded in response.

The target is to ensure that growing demand is met by a tourism model that retains value locally, supports ecological function and maintains the landscape character that generates the demand.

15.2.3 How are tourism activities currently managed?

Tourism in the proposed biosphere area is currently managed through a combination of public bodies, landowner strategies and local partnerships.

Forestry England is the largest single land manager within the Forest of Dean, responsible for approximately 10,000 hectares of publicly accessible land. Forestry England manages visitor infrastructure at its principal sites (Beechenhurst, Symonds Yat Rock, Mallards Pike and the Forest of Dean Cycle Centre), including car parking, trail networks, cycling infrastructure, café provision

and event programming. Forestry England is currently developing a long-term visitor strategy for the Forest of Dean, with the final document expected towards the end of 2027. This strategy aims to set a sustainable direction for leisure and tourism that balances enjoyment with environmental and financial viability. A public consultation (conducted by Phoenix MRC Ltd) ran until March 2026 as part of this process.

Visit Dean Wye operates as the destination management organisation for the Forest of Dean and Wye Valley, providing marketing, visitor information and business networking for tourism enterprises across the area. Visit Dean Wye collects and publishes visitor data (including the 5.1-million-day visit and 2.6 million overnight stay figures for 2023) and convenes an annual Tourism AGM.

Forest of Dean District Council exercises planning authority over tourism development within the district and has adopted Doughnut Economics principles within its strategy, providing a policy framework that aligns with the biosphere's emphasis on keeping economic value within ecological and social boundaries.

The Forest Economic Partnership brings together public, private and voluntary sector organisations to support the local economy, including tourism related activity.

Local tourism businesses self-organise through informal networks, the Tourism Association and events such as the Forest Food Forum and Forest Food Showcase. These networks have produced organically forming supply chains and cross referral relationships between accommodation providers, food producers, breweries and cafés. This self-organising capacity is a distinctive feature of the area's tourism economy and a foundation on which the biosphere can build.

15.2.4 Indicate possible positive and/or negative impacts of tourism at present or foreseen and how they will be assessed (linked to section 14)?

Positive impacts (current)

The Forest of Dean's tourism economy generates significant positive impacts for the local economy and the wider community. Tourism supports a network of locally owned and operated enterprises — accommodation providers, food producers, breweries, cafés and activity providers — that retain economic value within the district through short supply chains, typically sourcing within 20 miles. This directly counteracts the pattern of economic leakage that affects the Forest in other sectors, where externally headquartered businesses extract productivity value from the area without proportionate local benefit.

Tourism reinforces the economic case for landscape stewardship. Because the area's tourism value depends on the intactness of its woodland, river valleys, dark skies and working forest culture, the sector has a direct stake in ecological conservation. Accommodation providers operating responsible guest charters, sourcing from local rare breed farms and promoting active travel are reflecting the conditions under which their businesses function.

Tourism also supports cultural continuity. Visitor attractions such as the Dean Heritage Centre, Clearwell Caves, the Sculpture Trail and the Dean Forest Railway interpret and sustain the Forest's distinctive industrial, social and ecological heritage. The Forest's folklore, Foresters' culture, local

crafts and community run attractions offer visitors an experience drawn from the identity of the place.

Negative impacts (current and foreseen)

Growing visitor numbers bring pressures that are already visible and will intensify without a coordinating framework:

Traffic and parking. The Forest's road network was not designed for current visitor volumes. Congestion at peak times affects both residents and the visitor experience, and concentrated car use at popular sites creates localised environmental pressure.

Limited public transport. Poor bus connectivity and the absence of ride hailing services create a high dependency on private car use. While this contributes to the slower pace that some visitors value, it also limits access for those without cars and concentrates arrivals at sites with parking.

User conflicts. Tensions between different recreational users, particularly between walkers, cyclists and mountain bikers, are a recognised issue. Mountain biking in particular attracts criticism as a high impact day trip activity that can degrade trails and habitats without contributing proportionate economic value to the local area.

Ecological and heritage impacts. Visitor pressure on sensitive habitats, ground nesting bird sites, archaeological features and heritage assets is a concern that will grow with increased footfall. The 10,000 hectares of publicly accessible land has remained largely unchanged since the 19th century and must continue as such to support both people and nature.

Risk of extractive tourism models. As the Forest's profile rises, there is a risk that external commercial interests develop tourism products that extract value from the landscape without contributing to its maintenance or to the local economy. The biosphere framework provides a basis for managing this risk.

These will be assessed through the biosphere's monitoring framework, including prosperity indicators grounded in Doughnut Economics principles. Specific tourism related indicators will track local economic retention, visitor volume and distribution, transport mode share, habitat condition at high pressure sites and guest behaviour patterns (length of stay, local spend, repeat visits). This monitoring will inform the coordinated response of the bodies listed above, ensuring that tourism management is evidence led and adaptive over time.

15.2.5 How will these impacts be managed, and by whom?

Tourism impacts within the proposed biosphere area will be managed through the coordinated action of existing institutions, guided by the biosphere's overarching framework.

Forestry England will continue to manage visitor infrastructure and access on public forest land. Its forthcoming visitor strategy (expected late 2027) will set the operational direction for sustainable visitor management across its estate. The biosphere designation provides a strategic context within which that strategy can sit, aligning site level management with landscape scale objectives.

Forest of Dean District Council (and its successor unitary authority following local government reorganisation) will continue to exercise planning authority over tourism development, guided by adopted Doughnut Economics principles and the biosphere's sustainability framework.

Visit Dean Wye will continue to provide destination management, marketing and business support, with the biosphere offering an internationally recognised quality mark that reinforces the area's positioning around nature, slowness and local quality.

The Forest Economic Partnership and local business networks (including the Tourism Association and Forest Food Forum) will continue to support the development of short supply chains and cross referral networks that characterise the Forest's tourism economy.

The biosphere governance structure — once established — will provide a coordinating framework across these bodies, ensuring alignment between visitor management, economic development and ecological stewardship at the landscape scale, and providing a monitoring and reporting framework (linked to Section 14) through which tourism impacts are tracked and responded to over time.

The fundamental management principle is that tourism in the Forest of Dean should remain non extractive: its value generated by the intactness of the landscape, retained through locally embedded enterprise and governed through the collaborative structures that the biosphere designation formalises.

15.3. Agricultural (including grazing) and other activities (including traditional and customary):

15.3.1 Describe the type of agricultural (including grazing) and other activities, area concerned and people involved (including men and women).

"The Forest of Dean District hosts a diverse range of agricultural, grazing, and community-led activities, shaped by its unique landscape, cultural heritage, and growing emphasis on sustainability.

Farmed Areas
The district’s total area is 52,629 ha, it's reasonable to estimate that between 40% to 60% of the district is used for agriculture. This would suggest a total agricultural land area of approximately: 21,000 to 31,500 hectares. This includes pasture and grazing land, arable fields, orchards and smallholdings and conservation grazing areas.

The district features small to medium-sized farmsteads, often with loose courtyard layouts and historic barns. These are typically used for mixed farming, including livestock and crop production. Cider and perry-making is a long-standing tradition, especially in areas like Blakeney, known for the Blakeney Red perry pear. Smallholdings and common grazing lands are prevalent, reflecting the area's history of dispersed rural settlement and community farming.

Crops

The main crops found in the Forest of Dean are cereals: Winter wheat and barley are commonly grown, especially in areas with Grade 2 and 3a agricultural land. Oilseed Rape is grown in moderate-yield areas, contributing to local oil production. Potatoes and Sugar Beet are found in more versatile soils, though limited by wetness and slope in some locations. Horticultural and specialty crops include brassicas: Including cabbage and kale, grown in areas like Owen Farm. Orchard Fruits such as apples and perry pears (e.g., Blakeney Red) are traditional crops, supporting cider and perry production. Soft fruits including strawberries, blackberries, and wild garlic are foraged or cultivated in smaller plots. Organic and permaculture produce farms like Crooked End Farm grow a variety of organic vegetables and fruits, including root crops, leafy greens, and seasonal produce.

Livestock
Livestock in the Forest of Dean includes traditional and heritage breeds such as the Gloucestershire Old Spot Pigs: A heritage breed known for its quality meat, raised ethically at farms like Plump Hill Farm. Shropshire Sheep: Another heritage breed, valued for its tender lamb and conservation grazing potential. Mixed livestock farms like Crooked End raise sheep, pigs, and hens, contributing to local meat, eggs, and organic produce markets.

Conservation Grazing
Conservation grazing is actively practiced to restore and maintain heathland and open habitats. Livestock such as Highland cattle, Exmoor ponies, Hebridean and Herdwick sheep are used to manage vegetation and promote biodiversity. Around 80 hectares of land are managed for conservation grazing across reserves like Wigpool, Woodgreen, and Edgehills. Gloucestershire Wildlife Trust have an ongoing project introducing conservation grazing and currently have 8 Exmoor Ponies at Snows Farm nature reserve, 4 Highland Cattle at The Park nature reserve, 2 Highland Cattle at Wigpool nature reserve, 4 Highland Cattle at Edgehills nature reserve, 9 Highland Cattle at Woodgreen nature reserve, 23 Hebridean sheep at Simpsons Meadow nature reserve and10 Herdwick sheep at Vell Mill nature reserve.

Other information
Both men and women are actively involved in farming, conservation, and food initiatives. Women play key roles in food education, gleaning projects, and community-supported agriculture. Volunteer stock checkers, including women, help monitor livestock welfare in conservation grazing projects. Initiatives like “Grow With Us!” promote Community Supported Agriculture models where local residents invest in farms and share in the produce, risks, and rewards. This strengthens local food networks and ensures a guaranteed market for farmers.

The Forest Food Hub connects producers with consumers and businesses, supporting local procurement and reducing food waste. Community shops and directories help link growers with buyers, fostering a circular local economy. Events like the Food and Farming Climathon bring together stakeholders to co-create solutions for sustainable agriculture, food resilience, and climate adaptation. Educational programs in schools and colleges promote awareness of food systems and sustainability.

Activities attract a wide demographic, from older residents involved in traditional practices to younger people engaged through education and innovation. Training is provided for volunteers, ensuring accessibility and skill development across genders and age groups."

15.3.2 Indicate the possible positive and/or negative impacts of these activities on biosphere reserve objectives (section 14).

Biosphere Reserve Objective 1: Conservation of Biodiversity and Ecosystems

Objective 1 of the Biosphere Reserve: Conservation of Biodiversity and Ecosystems is supported through a range of linked activities that promote ecological resilience and habitat preservation. Conservation grazing using heritage breeds such as Highland cattle, Exmoor ponies, and Hebridean sheep helps maintain open habitats, control invasive species, and support native flora and fauna. Traditional orchards, including varieties like the Blakeney Red perry pear, play a vital role in preserving genetic diversity while providing habitat and food sources for pollinators and wildlife. Organic and permaculture farming practices, exemplified by sites like Crooked End Farm, reduce chemical inputs and enhance soil health, contributing to overall biodiversity. However, these efforts must be balanced with careful monitoring of potential negative impacts, including risks from intensive crop production such as soil degradation, runoff, and biodiversity loss; overgrazing and soil compaction from poorly managed livestock; and erosion risks associated with wet conditions and sloped terrain.

Objective 2: Sustainable Development of Local Communities

Objective 2 focuses on empowering local communities through sustainable practices that enhance resilience, reduce environmental impact, and preserve cultural heritage. Key initiatives include Community Supported Agriculture (CSA) and the “Grow With Us!” program, which strengthen local food systems by minimizing food miles and supporting farmer livelihoods. The Forest Food Hub and Local Procurement efforts foster circular economies and help reduce waste through localized supply chains. Additionally, the promotion of heritage livestock breeds, such as Gloucestershire Old Spot pigs, supports ethical farming, niche market development, and reinforces local identity. However, it is essential to monitor potential negative impacts, including land use conflicts between agriculture and conservation areas, economic viability challenges for small-scale farms, and pressure on common grazing lands in the absence of coordinated management strategies.

Objective 3: Support for Research, Education, and Monitoring

Objective 3 focuses on fostering awareness, inclusivity, and innovation through a range of linked activities. Educational programs in schools and colleges aim to build awareness of sustainable food systems, while volunteer involvement particularly across diverse age groups and among women promotes inclusivity, skill development, and community engagement. Events such as Climathon further support this objective by encouraging innovation, collaboration, and the development of climate adaptation strategies. However, it is important to monitor potential negative impacts, including the sustainability of initiatives that rely heavily on volunteers and the limitations of funding, which may affect the long-term viability of monitoring and educational efforts."

15.3.3 Which indicators are, or will be used to assess the state and its trends?

DEFRA annual farming census data for the Forest of Dean District, tracking holdings, livestock numbers, cropping areas and land use change over time. These figures provide the primary longitudinal dataset for agricultural trends (as referenced in Section 14.1.2).

Livestock grazing levels on the Statutory Forest, including sheep numbers relative to pre foot and mouth baselines. The foot and mouth cull of approximately 10,000 sheep around 2001 resulted in a collapse of grazing on the forest wastes, and bracken encroachment on formerly open ground continues as a measurable indicator of under grazing.

Conservation grazing hectarage and livestock numbers managed by Gloucestershire Wildlife Trust across nature reserves including Woorgreens, Wigpool, Edgehills, Woodgreen, Simpsons Meadow, Vell Mill and Snows Farm.

Condition assessments of SSSIs and Local Wildlife Sites with grassland and heathland features, measuring bracken cover, species richness and grazing condition (linked to Section 14.1.2 and 14.1.4).

Forestry Commission target figures for deer and wild boar populations, with annual cull data used to assess whether populations are being maintained at levels compatible with woodland regeneration and open habitat condition. The current boar target is understood to be approximately 400 animals.

Environment Agency water quality monitoring data for the Wye, Severn, Leadon and tributaries, tracking nutrient levels linked to agricultural runoff, particularly from intensive poultry farming and associated manure spreading upstream in Herefordshire and Shropshire.

Agri environment scheme participation rates across the district, tracking uptake of Environmental Land Management schemes and the transition from the Basic Payment Scheme.

Grey squirrel baseline survey data collected as part of the pine marten reintroduction programme, with repeat monitoring planned to assess any population level impacts over time.

15.3.4 What actions are currently undertaken, and which measures will be applied to strengthen positive impacts or reduce negative impacts on the biosphere reserve objectives?

Conservation grazing programme: Gloucestershire Wildlife Trust delivers conservation grazing across multiple nature reserves within the Statutory Forest and surrounding area, using Highland cattle, Exmoor ponies, Hebridean sheep and Herdwick sheep. This programme was established in part because the commoners were unable to deliver the grazing commitments within the Foresters' Forest programme, and the Wildlife Trust took on delivery directly on its reserves. The programme addresses the under grazing that followed the foot and mouth cull and the resulting bracken encroachment and loss of open habitat on the forest wastes.

Exploration of expanded grazing: Discussions are underway between Gloucestershire Wildlife Trust and the Forestry Commission about the potential to extend conservation grazing from the reserves into adjacent woodland using GPS no fence collar technology on cattle. Road safety and public awareness are recognised constraints, particularly in comparison with the New Forest where free ranging livestock is an established and expected feature. There is a potential to use already

established practices such as Commoning to improve local conservation through conservation grazing for example.

Wild boar management: The Forestry Commission sets annual population targets for wild boar (understood to be approximately 400) and carries out culling to maintain numbers at levels where boar rooting activity contributes positively to habitat diversity (breaking up bracken stands, turning soil, increasing structural diversity) without exceeding the tipping point at which damage to the ecosystem outweighs the benefits. Annual reports on cull figures and population estimates are produced.

Deer management: The Forestry Commission manages deer numbers on its estate through annual culling programmes, with targets set through Forest Plans. Deer browsing pressure remains a significant constraint on woodland regeneration, understory development and ground flora condition across the area. Wider landscape scale deer management beyond the Forestry Commission estate has not yet been successfully established.

Pine marten reintroduction: The reintroduction of pine martens between 2019 and 2021 is expected to contribute to grey squirrel population control over time. Baseline grey squirrel surveys have been completed and repeat monitoring is planned to measure impact. This represents a nature-based approach to reducing squirrel damage to young trees and improving woodland regeneration prospects.

Beaver reintroduction: Beavers are currently held in enclosures at Greathough Brook and Perry Hay. A feasibility study for free roaming beaver release has been completed, and the next stage is preparation of a licence application for wild release. Free roaming beavers are expected to create wetland habitat, slow water flow and reduce flash flood risk in the steep valleys descending from the Dean plateau.

Dog management and awareness: Forestry England has undertaken social media campaigns encouraging dog owners to keep dogs on leads, particularly during ground nesting bird season on heathland reserves where nightjar are breeding. The messaging approach recognises that framing the risk to the dog (from adders, boar or cattle) is more effective than framing the risk to wildlife. Signage at sensitive sites is deployed seasonally. On farmland and reserves, conflict between dogs and grazing livestock remains a recognised issue, with cattle potentially charging people who are walking dogs.

Heathland restoration: Active restoration of lowland heathland on GWT reserves including Woorgreens, Wigpool, Edgehills, The Park and Poor's Allotment, using a combination of conservation grazing and mechanical management. These sites address the near total loss of heathland from the Forest due to agricultural improvement and post war afforestation, and provide habitat for nightjar, woodlark, reptiles and heathland butterflies.

Water quality advocacy: While the primary drivers of river pollution (intensive poultry farming upstream, agricultural runoff, sewage overflow and inadequate sustainable urban drainage from new housing developments) originate largely outside the district boundary, the biosphere partnership will work to raise awareness, coordinate evidence and advocate for upstream action. Within the district, monitoring of new housing development compliance with sustainable drainage requirements is a priority, given evidence that some attenuation features built by developers are not functioning as designed.

The biosphere will seek to include within its governance a commitment to addressing the legacy of under grazing on the forest wastes caused by the foot and mouth cull, working with commoners, the Forestry Commission and conservation partners to increase appropriate grazing levels and restore open habitat where bracken has taken hold.

15.4 Other types of activities positively or negatively contributing to local sustainable development, including impact/influence of the biosphere reserve outside its boundaries.

15.4.1 Describe the type of activities, area concerned and people involved (including men and women).

Positive Activities

The Foresters' Forest Programme is a wide-reaching initiative focused on education, outreach, and conservation throughout the Forest of Dean. Key activities include litter picking, wildlife surveys, and youth education programmes. These efforts foster a sense of community stewardship and raise environmental awareness among residents and visitors alike.

Coppicing and Sustainable Forestry practices are being revived to support biodiversity and provide sustainable timber resources. Traditional woodland management techniques such as coppicing are employed, alongside youth employment schemes like the New Leaf initiative. These activities contribute to forest health, promote sustainable land use, and help develop valuable skills among young people.

Efforts in Wildlife Reintroduction and Management aim to enhance biodiversity in remote forest areas. Notable activities include the reintroduction of pine martens and the management of wild boar populations. These projects are carried out in collaboration with conservationists, researchers, and NGOs such as the Vincent Wildlife Trust. The work helps control invasive species and maintain ecological balance across the forest ecosystem.

Community Health and Wellbeing Initiatives are also a vital part of the forest's social landscape. With over 300 participants weekly particularly older adults and women these programmes offer exercise and rehabilitation classes across 15 venues. The initiatives promote active ageing, reduce health inequalities, and foster social inclusion through accessible and supportive activities.

Negative or Challenging Activities

The Forest of Dean faces challenges stemming from Historic Resource Exploitation, including a legacy of mining and deforestation. These activities have led to habitat fragmentation and biodiversity loss. In response, ongoing restoration efforts and sustainable planning are being implemented to mitigate these impacts and restore ecological integrity.

Use of trails and areas by local people and tourists presents another challenge, with overuse of trails and natural sites contributing to pollution and habitat degradation. To address this, zoning and visitor management strategies are being developed to balance recreational use with environmental protection.

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Mountain Biking has become a source of environmental concern due to trail erosion, sedimentation, vegetation damage, the spread of invasive species, wildlife disturbance, and soil compaction. Management of these impacts is led by Dean Trail Volunteers (DTV) in partnership with Forestry England. With over 2,800 volunteer hours annually, their work focuses on trail maintenance, hygiene, and rider education. Notably, this initiative is funded by donations rather than Forestry England, highlighting the community's commitment to sustainable recreation."

15.4.2 Indicate the possible positive and/or negative impacts of these activities on biosphere reserve objectives (section 14). Have some results already been achieved?

Positive Activities

The Foresters' Forest Programme

The Foresters' Forest Programme is an initiative focused on education, outreach, and conservation across the entire Forest of Dean. It actively involves local schools, volunteers, and conservationists, engaging both men and women in meaningful environmental efforts. The programme has made a significant impact by promoting public engagement through activities such as litter picking and wildlife surveys, while also fostering youth education on forest ecology. Ultimately, it strengthens community stewardship of the Forest of Dean's natural resources, encouraging a deeper connection between people and their environment.

Coppicing and Sustainable Forestry

Coppicing and sustainable forestry represent a traditional yet vital approach to woodland management, particularly within designated managed forest zones. This activity not only supports sustainable timber harvesting practices but also plays a key role in preserving biodiversity. It involves the participation of forestry workers and youth employment initiatives such as New Leaf, offering valuable opportunities for young people to gain employment and develop practical skills. Through careful management rooted in both ecological and geographical principles, coppicing contributes to long-term forest health while fostering community engagement and environmental stewardship.

Wildlife Reintroduction and Management

Wildlife reintroduction and management efforts in remote forest zones focus on conservation and enhancing biodiversity. These initiatives involve conservationists, researchers, and NGOs such as the Vincent Wildlife Trust. A key aspect of this work includes the reintroduction of pine martens, which play a vital role in controlling invasive grey squirrel populations. Additionally, the management of wild boar is undertaken to mitigate their environmental impact, helping to preserve the ecological balance of these sensitive habitats.

Community Health and Wellbeing Initiatives

Community health and wellbeing initiatives across 15 venues in the district aim to promote public health and inclusive development. Led by the local council and supported by health professionals, these programs engage residents particularly older adults and women in regular exercise and rehabilitation classes. With over 300 participants attending weekly, the initiatives play a crucial role in reducing health inequalities and fostering active ageing, contributing to a healthier and more connected community.

Negative or Challenging Activities

Water Supply
In the Forest of Dean, excessive abstraction of water particularly from the River Wye and underlying aquifers can pose a threat to sensitive wetland habitats, especially during prolonged dry periods. These ecosystems, including ancient woodland flushes and valley mires, rely on consistent groundwater and rainfall inputs. Water metering and public awareness campaigns have helped reduce per capita water use, but sustainable abstraction remains a key concern during drought conditions.

Waste Management
Household waste collection and disposal in the Forest of Dean is generally well managed, with kerbside recycling and waste transfer stations in place. The environmental impact is relatively low and localised, although rural fly-tipping remains an issue in some woodland areas. Sewage treatment is largely inland, with treated effluent discharged into local watercourses. While modern treatment works are more efficient and energy-recovering, the energy required to pump wastewater across the district especially in hilly terrain remains significant.

Transport
Vehicle emissions are the primary source of air pollution in the Forest of Dean, particularly in towns like Cinderford and Lydney. This affects not only human health but also sensitive habitats such as heathlands and ancient woodlands, which can be impacted by nitrogen deposition. Limited public transport options in rural areas contribute to car dependency, increasing the environmental footprint of local travel.

Built Development
New development in the Forest of Dean can impact biodiversity, especially when it encroaches on or fragments habitats such as ancient woodland, species-rich grasslands, or bat foraging corridors. However, green infrastructure like green roofs, sustainable drainage systems (SuDS), and wildlife-friendly landscaping offers opportunities to enhance ecological connectivity and improve environmental quality in both urban and rural settings. The informal built character of many Forest settlements, including the unplanned edges where settlement meets forest, the open green spaces within communities, and heritage structures such as chapels, welfare halls and memorial halls, is particularly vulnerable to incremental development pressure. These features are not always captured by existing designations. The biosphere framework provides a basis for recognising their importance and incorporating them into planning and design guidance.

Energy Production
While the Forest of Dean has limited large-scale energy infrastructure, fossil fuel use particularly for heating and transport remains a major contributor to local carbon emissions. Renewable energy projects, such as small-scale solar and community-led schemes, are growing but face planning and landscape sensitivity challenges. Industrial structures, where present, can affect the visual character of the area, especially in or near the Wye Valley Area of Outstanding Natural Beauty.

Historic Resource Exploitation
Historic resource exploitation in former industrial zones has left a legacy of ecological degradation. Activities such as mining and deforestation have significantly disrupted natural systems, leading to long-term environmental damage. These impacts include the loss of biodiversity and fragmentation

of habitats, which continue to affect the resilience and health of local ecosystems today. Work is being completed to restore these areas and work in a sustainable way for the future.

Tourism Pressure
Visitor pressure on popular trails and natural sites is a real and growing issue, and the Forest's tourism sector takes it seriously because the landscape is the product. Increased visitor numbers, if poorly distributed, can erode trails, disturb wildlife, congest village roads and degrade the habitats that visitors come for in the first place. Forest of Dean tourism businesses have organised themselves around a different model longer stays, local spend, active travel, short supply chains, and responsible guest behaviour, because those are the conditions under which the sector continues to function. Coordinated visitor management, shared between Forestry England, Forest of Dean & Wye Valley Tourism (Visit Dean Wye), the destination management organisation, the Dean Trail Volunteers is how the sector keeps that promise. The biosphere designation does not impose a new model on tourism. It formalises the model the sector has already chosen.

Mountain Biking
Mountain biking is one of the Forest of Dean's signature outdoor activities. It supports jobs, attracts visitors year-round, sustains accommodation bookings and food-and-drink spend across the district, and brings young people into a working forest landscape they might otherwise never know. The Forest of Dean Cycle Centre at Cannop, the bike hire and uplift services, and the network of cross-country and downhill trails together form one of the most established mountain biking destinations in southern England.

Like every form of intensive recreation in a working landscape, mountain biking carries real impacts. Trail erosion on steep slopes, soil compaction, sediment runoff into watercourses, and localised wildlife disturbance are documented effects, particularly where riders venture off designated trails. These impacts are not hidden by the sector they are the reason a substantial volunteer stewardship operation exists alongside it.

Mountain bike trail management in the Forest is led by the Dean Trail Volunteers (DTV), an independent rider-led group established in 2009. DTV works in close partnership with Forestry England to design, build, inspect, maintain and renew the official cross-country and downhill trail network. In a single year, DTV volunteers contributed over 2,800 hours of trail stewardship building drainage to prevent erosion, repairing wear at pinch points, monitoring habitat impacts and educating riders on responsible use. The group is not directly funded by Forestry England; it sustains itself through donations, community support and partnership with the wider cycling industry. Its work has been nationally recognised through awards for trail stewardship and volunteer service.

DTV's environmental practice includes biosecurity protocols to prevent the spread of tree pests and pathogens, encouraging riders to clean bikes and equipment between sites, and a rider code that discourages off-trail riding. The result is a model in which the activity that creates the impact is also the activity that funds, organises and delivers the response. The biosphere designation does not change this model. It formalises it, gives it a coordinating framework alongside Forestry England's recreation management, and provides the monitoring evidence base through which trail condition, habitat impact and rider behaviour can be tracked over time.

15.4.3 What indicators are, or will be used to assess the state and its trends?

Forestry Commission Forest Plan reviews, carried out every five years, assessing delivery against ecological objectives including species diversity, structural diversity and the balance between broadleaved and coniferous woodland management.

Deer and wild boar population estimates and annual cull figures against target populations, reported by the Forestry Commission.

Mountain bike trail condition assessments and volunteer hours recorded by Dean Trail Volunteers in partnership with Forestry England, tracking trail erosion, vegetation recovery and the extent of unauthorised trail building by local users.

Forestry England visitor numbers at principal sites (Beechenhurst, Symonds Yat Rock, Mallards Pike, Forest of Dean Cycle Centre), with monitoring of visitor distribution, parking pressure and seasonal patterns.

Species monitoring data for reintroduced and managed species: pine marten population estimates (currently approximately 40 animals as of 2022), grey squirrel baseline and repeat surveys, beaver enclosure monitoring and (following any licensed release) free roaming beaver population and habitat impact assessments.

Ground nesting bird survey data, particularly nightjar breeding pairs on heathland reserves, and woodlark presence or absence (last recorded breeding 2019, locally extinct since but with ongoing monitoring for return).

Heathland restoration condition monitoring on GWT reserves, measuring heathland extent, species composition and stage of restoration.

Environment Agency water quality data under the Water Framework Directive for rivers, tributaries and standing water within the district.

SSSI and Local Wildlife Site condition assessments (linked to Section 14.1.4), with the LWS system now being revived following nearly ten years without a dedicated officer.

Community health and wellbeing programme participation data, including referral numbers, repeat participation and demographic reach.

Sewage overflow incident data and compliance monitoring for sustainable urban drainage systems on new housing developments.

15.4.4 What actions are currently undertaken, and which measures will be applied to strengthen positive impacts or reducing negative ones on the biosphere reserve objectives?

Coppicing and sustainable forestry: Forestry Commission Forest Plans increasingly incorporate ecologically targeted management, broadening the range of native species, increasing structural and age diversity in broadleaved woodland, and creating open space. Partnership projects promote native deciduous woodland planting and hedgerow connectivity. Conservation organisations continue to practice coppicing, which remains the primary mechanism for maintaining early successional woodland habitat required by species including hazel dormouse and woodland butterflies.

Wildlife reintroduction and adaptive management: The pine marten reintroduction programme (2019 to 2021) has established a population of approximately 40 animals. Ongoing monitoring tracks population growth, range expansion and any emerging impact on grey squirrel numbers. The beaver programme is progressing from enclosed sites towards a licence application for free roaming release. Wild boar management continues through annual Forestry Commission culling to maintain populations at levels where ecological benefits (rooting, bracken disturbance, soil turnover) are realised without exceeding the carrying capacity of the habitat. At low to moderate densities boar contribute positively to habitat diversity; above the tipping point they cause more damage than the ecosystem can absorb.

Mountain biking management: Dean Trail Volunteers maintain official cross country and downhill trails in partnership with Forestry England, contributing over 2,800 volunteer hours annually. A recognised challenge is unauthorised trail building by residents who create informal trails from their homes into the forest, which causes more dispersed and less manageable environmental impact than the contained tourist trail network. Rider education, hygiene protocols to prevent the spread of tree pests and diseases, and trail design that directs use away from sensitive habitats are ongoing priorities.

Dog and recreation management on sensitive sites: Seasonal signage and social media campaigns target dog walkers on heathland reserves during ground nesting bird breeding season, particularly for nightjar. The messaging approach emphasises risk to dogs (from adders, boar and cattle) as the most effective behavioural lever. On farmland and reserves, awareness raising about responsible dog walking near grazing livestock addresses both wildlife disturbance and human safety risks. Forestry England's forthcoming visitor strategy (expected late 2027) will set a longer-term framework for managing recreational pressure across the public forest estate.

Water quality and development compliance: The biosphere partnership will advocate for stronger enforcement of water quality standards, particularly in relation to upstream agricultural pollution affecting the River Wye. Within the district, monitoring of sustainable urban drainage compliance on new housing developments is a priority. Evidence from within the sector suggests that some attenuation ponds constructed by developers are not built to function as designed, allowing unfiltered runoff into watercourses. The biosphere framework provides a basis for coordinating pressure on the responsible regulatory bodies.

Community health and wellbeing: Programmes such as those delivered by Wilde Earth Journeys connect conservation objectives with public health outcomes, using the forest landscape as the therapeutic setting. The continuation and expansion of clinical referral pathways, community wellbeing walks and accessible programming ensures that the positive relationship between ecological condition and human health is maintained and strengthened.

Transport and access: The biosphere will support efforts to improve public transport connectivity and reduce car dependency for both residents and visitors. The current absence of ride hailing services and limited bus networks forces reliance on private vehicles, concentrating environmental pressure at car parks and popular sites. The Forest of Dean Forest Action Transport Group is a community-focused organization that works to improve transport options and accessibility within the Forest of Dean area. The group advocates for better public transport services, safer walking and cycling routes, and more sustainable travel choices to reduce reliance on cars. They collaborate with local authorities, residents, and other stakeholders to identify transport challenges and propose

practical solutions, aiming to connect communities more effectively while also supporting environmental goals. Their work often includes campaigning, research, and community engagement to ensure that transport developments meet the needs of local people.

Habitat restoration at former industrial sites: Several of the Forest's most important nature sites, including Woorgreens Lake Nature Reserve and Mallards Pike, have been created from former open cast mining and industrial sites. Continued investment in restoration of degraded land, including wetland creation, heathland restoration and native woodland planting on former conifer plantations, strengthens both biodiversity outcomes and the quality of the visitor and resident experience.

15.5 Benefits of economic activities to local people:

15.5.1 For the activities described above, what income or benefits do local communities (including men and women) derive directly from the site proposed as a biosphere reserve and how?

The proposed biosphere area generates direct economic income, measurable household benefits and broader community value for residents. These benefits are understood through the prosperity indicators framework set out in Section 15.1.2, which distinguishes between regenerative prosperity, where economic activity retains value locally and strengthens community capacity within ecological limits, and extractive prosperity, where output increases while value leaks and local pressures intensify.

Tourism and visitor economy income: The 5.1-million-day visits and 2.6 million overnight stays recorded in 2023 support a network of locally owned enterprises across accommodation, food production, brewing, cafés and activity provision. Short supply chains, typically sourcing within 20 miles, mean that a significant proportion of visitor spend circulates within the district rather than leaking to external owners or platforms. Accommodation businesses source hamper items, dairy, meat and baked goods from local producers including Plump Hill Farm, Forest Bakehouse, Forest Milkmaid and Bespoke Brewery. Repeat booking rates of 30% at some providers indicate a stable and growing revenue base. This pattern directly addresses the structural constraint identified in the prosperity framework: weak local value capture in an economy where external ownership in key sectors allows economic activity to take place within the district without commensurate local benefit.

Farm income and land-based livelihoods: The 661 farm holdings in the district (DEFRA 2024), with an average size of approximately 50 hectares, provide direct income through livestock, crops, orchard fruit and dairy production. Heritage breed producers such as Plump Hill Farm access premium local and niche markets. Cider and perry production from traditional orchards provides supplementary farm income. Conservation grazing on nature reserves provides contracted income to graziers and employment for stock checkers. However, as the loss of the Basic Payment Scheme takes effect, the viability of holdings at this average size is under pressure unless supplemented by diversified or off farm income, a trend the prosperity framework tracks through the household prosperity and work and skills indicator domains.

Forestry and woodland enterprise: Forestry England's management of the Statutory Forest sustains direct employment in forest management, timber production and visitor infrastructure. FSC and

PEFC certified timber provides sustainable commercial output. Coppicing and small-scale woodland products support conservation employment and youth training through schemes such as New Leaf. Firewood markets provide supplementary income to woodland managers and smallholders. These activities contribute to the local wealth retention indicator domain by keeping productive value within the district and supporting skilled, place specific employment.

Local wealth retention and the community economy: The Forest's economic structure is characterised by a high proportion of SMEs and microbusinesses (4,400 active businesses, overwhelmingly micro enterprises), comparatively high self-employment and locally rooted enterprise. Community owned assets such as the Dean Heritage Centre retain income from admissions, events, retail and education within the local economy over decades. The Forest Economic Partnership works to strengthen local supply chain connectivity, business to business collaboration and investment readiness. The prosperity framework tracks local procurement, SME survival and reinvestment, community enterprise presence and visitor economy spend retention as indicators of whether economic activity generates lasting local benefit.

Household prosperity and cost of living: Benefits to local households are shaped by the structural cost pressures identified in the prosperity framework. The rural premium, driven by dispersed settlement, limited public transport, off gas grid energy exposure and distance to services, means that access costs are a significant factor in household prosperity. Community led delivery mechanisms directly address these pressures: the Dean Forest Food Hub improves access to affordable food, Forest Community Transport provides demand responsive mobility across dispersed settlements, and the Council's Warm and Well service supports fuel poor households. Retrofit programmes delivered through the Social Housing Decarbonisation Fund have improved EPC ratings and reduced energy demand in older housing stock. The IMD 2025 shows that deprivation in parts of the Forest is driven not primarily by unemployment but by income constraints, underemployment and barriers to accessing suitable work at appropriate skill and pay levels, confirming that benefits to local people depend on the quality and accessibility of opportunity rather than aggregate economic output alone.

Work, skills and local opportunity: ONS commuting data show that a significant proportion of residents travel out of the district for higher paid employment, reflecting a structural gap between skills supply and the composition of local opportunity. The biosphere framework positions forestry, conservation, regenerative land use and nature-based tourism as skilled, long term employment pathways and links apprenticeships and training to land based management, environmental stewardship and locally rooted visitor economy roles, embedding skills development within the Forest's economic structure rather than allowing investment in training to benefit external labour markets.

Community health and reduced public service costs: Nature based health programmes provide direct health benefits through clinical referral pathways, reducing demand on GP and mental health services. Over 300 participants attend weekly exercise and rehabilitation classes across 15 venues, reaching older adults, people with dementia, veterans, children in pastoral care and disengaged young people. These programmes generate social value that reduces downstream costs to health and social care systems.

Volunteering and social infrastructure: Over 1,000 volunteers coordinated by the Forest Voluntary Action Forum contribute to care, transport, youth support and community services. The Foresters'

Forest programme generated over 37,000 volunteer hours. Dean Trail Volunteers contribute over 2,800 hours annually. These activities develop skills, strengthen social networks and provide pathways into employment. The prosperity framework recognises this voluntary and informal capacity as a core economic asset that reduces transaction costs, strengthens labour market attachment and substitutes for missing formal provision in a rural district.

Ecosystem services as direct household benefit: The Forest's woodland, soils, water systems and wetlands provide flood attenuation, water quality regulation, carbon sequestration and climate regulation that benefit all residents and reduce infrastructure costs. Over 10,000 hectares of publicly accessible forest land provide free daily access to walking, cycling, wildlife observation and quiet recreation. Research demonstrates that woodland exposure reduces cortisol, lowers blood pressure and enhances immune function. These ecosystem services function as direct household benefits, reducing healthcare costs, flood damage and energy demand while supporting the everyday quality of life that underpins workforce stability and community resilience.

Historical contributions to nature as contemporary economic assets: The Forest's industrial history has left ecological legacies that now function as conservation and economic assets. The network of mines, caves, adits and disused railway tunnels created by centuries of mining provides the roosting and hibernation habitat that supports approximately 26% of the UK's lesser horseshoe bat population. Acid heathlands created as a byproduct of mining activity now host some of the area's rarest habitats and species. The commoners' grazing tradition, where practised at appropriate levels, maintains the open habitats on which multiple priority species depend. These ecological assets underpin the tourism, wellbeing and scientific research value that generates income and employment across the district.

15.5.2 What indicators are used to measure such income or other benefits?

Income and benefits are measured through the nine prosperity indicator domains set out in Section 15.1.2, read as an interdependent system rather than as isolated metrics. Each domain applies the Doughnut Economics governance test: whether activity strengthens social foundations and respects ecological limits, or whether output increases while value leaks and pressures intensify.

Cost of living and access to essentials: IMD 2025 Barriers to Housing and Services domain scores (including the Dymock LSOA ranked 91st most deprived of 33,755 in England on this domain). Census 2021 car ownership and travel data. Inform Gloucestershire spatial access indicators. Fuel poverty rates (historic baseline 11.6%, National Energy Action estimate 15.6%). Warm and Well service uptake and year on year trends (25% increase in households supported during 2022/23). Food hub usage and community transport journey data.

Household prosperity and in work poverty: ONS and Nomis earnings series for the district. Government fuel poverty datasets. EPC rating distributions and improvement trends from retrofit programmes. Census 2021 housing and household composition data.

Work, skills and local opportunity: ONS and Nomis employment, earnings and commuting data. IMD 2025 employment and income domain scores at LSOA level. Workplace containment ratios

(proportion of residents working within the district). Apprenticeship starts and retention in land based, environmental and visitor economy sectors. Local authority skills evidence.

Local wealth retention and community economy: Local authority procurement and social value reporting. Nomis and ONS business demography (business births, deaths, survival rates). Forest Economic Partnership evidence on local supply chain connectivity. Community enterprise registers. Visitor economy spend retention estimates derived from supply chain mapping.

Tourism, wellbeing and carrying capacity: Visit Dean Wye visitor volume data (day visits and overnight stays). Accommodation booking, occupancy and repeat booking rates. Average length of stay and estimated spend per visitor. Forestry England site level visitor monitoring. Seasonal distribution of visits. Transport mode share at principal sites. Habitat condition assessments at high pressure locations.

Community strength, safety and participation: IMD 2025 access and health domain scores. Inform Gloucestershire community and wellbeing indicators. Volunteer hours recorded by Forest Voluntary Action Forum, Dean Trail Volunteers and conservation partners. Number of active volunteers and demographic profile. Community asset ownership registers. Parish and neighbourhood level participation data.

Housing, land and living conditions: Local authority housing delivery and homelessness prevention data. EPC datasets and retrofit programme outcomes. IMD 2025 housing and living environment domain scores. Off gas grid exposure mapping. Housing affordability ratios and concealed need indicators.

Natural capital, regenerative economy and species stewardship: Local habitat and land use mapping. Environment Agency water quality data for rivers, tributaries and standing water. Forestry England woodland management records and Forest Plan review outcomes. LERC species records and trend analysis. ELM scheme participation data. Applied research outputs from Hartpury University. SSSI and LWS condition assessments. Sentinel species population data (horseshoe bats, nightjar, pine marten, dormouse, beaver) as signals of overall system health. Hectarage under positive conservation management. Deer and wild boar population data against management targets. Grey squirrel monitoring data from the pine marten programme.

Farm and land-based economy: DEFRA annual farming census data for the Forest of Dean District (holdings, livestock numbers, cropping areas, land use change). Agri environment scheme participation and payment data. Farm gate sales and local market revenues for heritage produce. Conservation grazing contract values and hectarage.

Forestry output: Forestry England timber production volumes and certification status. Employment figures in forest management and visitor services. Revenue from Forestry England managed visitor sites.

Cultural and heritage economy: The Forest of Dean's cultural and heritage economy is unusually rich for a district of its size and is one of the district’s most distinctive contributions to the wider tourism offer. It runs across three layers: tangible heritage attractions, living cultural practice, and intangible cultural heritage including dialect and oral tradition.

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Tangible heritage attractions include the Dean Heritage Centre, the centre of local-history interpretation in the District; Clearwell Caves, a working ochre mine drawing on 4,500 years of continuous extraction and a named interpretive home of the Freeminers' story; the Dean Forest Railway, a 4¼-mile volunteer-operated heritage steam and diesel line between Lydney and Parkend; Hopewell Colliery, a working freeminer colliery offering visitor access; the Forest of Dean Sculpture Trail; and the Speech House, the seventeenth-century hunting lodge that is still the seat of the Verderers' Court of Forest Law. Living cultural practice includes the Verderers' Court itself (continuous since the Norman period), the active practice of Freemining and Commoning, the seasonal cycle of community events organised through parish councils, the Forest Food Forum and Forest Food Showcase, and traditional perry- and cider-making in Blakeney and the surrounding villages. Intangible cultural heritage -including the distinctive Forest of Dean dialect and an active oral history tradition -is sustained through programmes including the Foresters' Forest landscape partnership (38 projects, 2018–2023, funded by the National Lottery Heritage Fund and delivering oral history collection, archaeological digs, heritage skills training and community events), school-based heritage education, and the work of the Dean Heritage Centre's collections.

Indicators in this domain track visitor numbers and revenue at the named attractions, attendance at community cultural events, and the number and reach of active heritage, dialect and oral history preservation programmes. Where attraction-level data is not publicly reported, indicators are populated through the Forest Economic Partnership and Visit Dean Wye's Economic Impact Reports.

These indicators are monitored using existing nationally recognised datasets (IMD, Census, ONS/Nomis, Inform Gloucestershire, Environment Agency) supplemented by local authority administrative data, voluntary sector reporting, site level ecological monitoring and structured qualitative evidence. The emphasis is on distribution rather than averages, trends rather than snapshots, and leading indicators that identify upstream conditions before capacity is eroded. Monitoring is spatially differentiated across MAB zones and designed to support adaptive governance and UNESCO periodic review without creating new reporting burdens.

15.6 Spiritual and cultural values and customary practices:
(Provide an overview of values and practices, including cultural diversity).

15.6.1 Describe any cultural and spiritual values and customary practices including languages, rituals, and traditional livelihoods. Are any of these endangered or declining?

The Forest of Dean is rich in cultural, spiritual and customary traditions, many of which are deeply connected to its landscape, history and community identity. Several of these practices are endangered or declining due to modernisation and demographic shifts, though others are being actively renewed in forms that connect ancient precedent to contemporary need.

Free Mining Tradition
The Free Mining Charter of 1838 allows locals born within the Hundred of St Briavels to register as Free Miners, a right passed down through generations. This practice symbolises independence and a deep connection to the land and its resources. Though still recognised, the number of active Free Miners is dwindling and the tradition is at risk of fading.

Forest Law and Verderers' Court
The Verderers' Court, also known as the Speech Court, is a remnant of Norman Forest Law. Locally elected Verderers still meet quarterly at the Speech House, maintaining ceremonial oversight of forest governance. While largely symbolic today, it reflects centuries of land stewardship and community justice. Some of the Verderers play a significant role in the local community and help to protect the cultural heritage and identity of the Forest of Dean.

Languages and Dialects
There is a local dialect known as Forest Dialect or "Forest English", containing remnants of West Country inflections and Anglo-Saxon roots. It reflects the Forest's isolation and unique settlement patterns. A recent project catalogued oral histories and transcriptions to preserve the dialect, which is now endangered with only a few fluent speakers remaining. Efforts are underway to preserve this ancient dialect.

Customary Practices and Traditional Livelihoods
Commoning and grazing rights such as pannage (grazing pigs on acorns) and agistment (grazing livestock for a fee) date back to the 1217 Charter of the Forest. These practices shaped land use and community relations. Today, these rights are largely symbolic or regulated and traditional grazing is less common.

Sheep badgering is a local term for managing sheep grazing across unfenced forest land. It is a practice tied to community cooperation and land stewardship, now rare and mostly ceremonial. Sheep badgering continues today with some active badgers commoning land with sheep for decades.

Folklore and Oral Tradition
The Forest is steeped in folklore including tales connected to King Arthur, the Beast of Dean (a mysterious creature said to roam the woods), and the many ghost stories associated with sites across the district. Littledean Hall is reputedly one of England's most haunted houses. Folklore and oral traditions are at risk due to generational shifts and urbanisation, though active documentation and community storytelling are working to counter this decline.

Literary Heritage
The Forest has a significant literary heritage, centred on the Dean Heritage Centre's archive work. The Dennis Potter archive is held there under conditions specified by the Potter estate: researchers from anywhere in the world must arrange to visit in person to access the material. The Heritage Centre's literary programme represents an ongoing effort to document and make accessible the Forest's written and oral literary traditions.

Continuity of Spiritual and Healing Practice
The Forest of Dean has an unusually deep and coherent relationship between its landscape, its spiritual traditions and its healing practices. What is distinctive is that the same principles of engagement with the landscape, the recognition of thresholds, the therapeutic use of the natural environment, gathering at high points, self-organised spiritual practice outside institutional frameworks, can be traced from the pre-Roman period to the present day. The following sections set out this continuity through paired examples of ancient and contemporary practice.

Healing & Wellness

The Roman temple at Lydney Park was dedicated to Nodens, a healing deity associated with mines, the sea and dreams. The temple complex included an incubation dormitory where people came to sleep in the precinct and receive healing through dreams. It sits on a bluff above the Severn estuary, built over an iron mine, and contained imagery spanning the underworld and the sea. Cursed tablets found at the site attest to active spiritual practice. The site's position at the meeting point of fresh and salt water, surface and underground, land and estuary, appears to have been central to its function as a place of healing.
Today, nature based health programmes in the Forest operate on the same underlying principle: the landscape itself is the therapeutic agent. Wilde Earth Journeys, a Community Interest Company based in Cinderford, delivers an eight week programme for mild to moderate mental health issues with referrals from GP surgeries and primary care networks. A six week mindful gardening programme delivered in partnership with Forest Green Primary Care Network is now in its second iteration and has a waiting list, with referrals made directly by local surgeries. The referral pathway is clinical rather than devotional, but the core practice, bringing people into a specific landscape to support recovery, represents a direct continuity.

Liminal Space Practice
Entry into the sacred precinct at Lydney involved crossing a defined boundary marking the transition from ordinary space into the space where the god's healing power was active.
The same structure is present in contemporary forest wellbeing practice. On every community walk and therapeutic session, Wilde Earth Journeys begins by identifying and crossing a threshold, a gateway, a gap between trees or a boundary marker, into what practitioners describe as liminal space, where participants are invited to set aside habitual modes of perception and engage with the forest through all available senses.

The Severn
The River Severn has been recognised as a living presence across recorded history. Sabrina, the goddess of the tidal Severn, appears in Geoffrey of Monmouth's Historia Regum Britanniae and in Milton's Comus. Archaeological investigation at Little Dean Hall has uncovered a Roman temple to Sabrina, with evidence that the site was used for worship across at least three generations before the Roman period. A statue of Sabrina recovered from the river sands at White Cliff, Westbury, is believed to be held at Westbury Court Gardens (National Trust). The Severn bore, a tidal surge that moves upstream against the current, has historically marked the river as a threshold space.
The Severn remains central to Forester identity. The geographical containment it provides was one of the conditions that allowed the Hundred of St Briavels to maintain its distinctive autonomy, and this sense of the Forest as a boundary as the land between two rivers, self-governing space persists in how residents relate to their landscape.

Self-Organised Spiritual Practice
Churches were not permitted to be built within the forest boundary during the medieval period. They could ring the boundary but not build inside it. The practical consequence was that the Forest's inhabitants were left largely outside the governing oversight of the established church, producing a culture of spiritual self-determination that remains a recognisable feature of Forester identity.
Contemporary spiritual and seasonal practice in the Forest follows this same pattern. It is self-organised, community led and largely informal. Pan Tod, the highest point in the Forest of Dean, and May Hill are the traditional, informal gathering points for solstice and equinox celebrations. People gather organically rather than through commercial or institutional channels. The Forest and

Wye Conscious Community, a local network, connects practitioners informally. Larger gatherings also take place: Sandara, a yoga community based in Westbury on Severn, has been running for approximately five years and draws participants from across the country. An annual alternative gathering takes place near Westbury.
This practice is significantly undercounted in formal data. Census returns for the Forest of Dean record very small numbers of self-declared pagans or practitioners of nature based spirituality, but this reflects the framing of the question (religious self-identification) rather than the reality of participation. A survey asking "did you attend a seasonal celebration?" rather than requesting a formal declaration of religious belief would capture a more accurate picture.
The informality of these practices is itself significant. Unlike major heritage sites elsewhere in the UK where seasonal gatherings have become large scale public events, the Forest's practices remain small, local and uncommercialised. This is consistent with the broader pattern of Forester culture: practice that persists because it is sourced in the relationship between community and landscape rather than in institutional structures.
The Asha Centre, located in the Forest of Dean, is an educational charity dedicated to personal development, sustainability, and global citizenship. It provides residential courses and workshops for young people and educators, focusing on themes such as leadership, cultural understanding, and environmental responsibility. Set in a peaceful woodland environment, the centre encourages reflection and connection with nature while promoting values of cooperation and social change.

Trees in Folklore
The Forest's oral tradition attributes specific qualities to its tree species. Beech is associated with wisdom and the written word (its root word, bok, is the etymological origin of "book"). Holly's shift from smooth leaves to defensive spines in response to browsing is used in contemporary therapeutic practice as a metaphor for human defensive responses. Oak trees that grew towards the light on field edges, creating naturally curved forms suitable for shipbuilding, were historically marked on Ordnance Survey maps as compass trees. The oak trees targeted for shipbuilding by the British Establishment were a key factor in the rebellion of Foresters' protecting their access to Forest land. These traditions encoded an understanding of trees as active agents with specific properties. Contemporary biochemistry supports this. The dominant terpene in Scots pine, alpha-pinene, exists in two mirror-image molecular forms (enantiomers), and European pines predominantly produce the form with different biological properties from the form common in North American pines. The biochemist Diana Beresford-Kroeger has documented the medicinal properties of pine terpenes extensively, describing pines as sources of antiviral and antibacterial compounds. A study at the University of Gloucestershire examined the impact of birdsong on dementia. The Forest's tree density and species diversity mean that these health benefits are a direct function of the ecosystem's integrity.

Gathering at High Points
The Staunton Longstone represents Bronze Age sacred presence. Iron Age hillforts at Welshbury and Symonds Yat attest to communities who used elevated sites for social, defensive and ceremonial purposes.
Today, Pan Tod and May Hill serve as gathering points for seasonal celebrations. These gatherings are not organised events but organic community practice, consistent with a pattern of marking transitions at high points that extends back into prehistory.

Incoming Contemplative Traditions
The Forest has recently attracted formal contemplative institutions. Friends of Plum Village, part of the worldwide community founded by Thich Nhat Hanh, have purchased Church Farm (previously the Asha Centre) and are establishing a retreat centre. This represents an international contemplative tradition establishing itself within the Forest, complementing rather than displacing existing community led practice.

Summary
The continuity demonstrated above suggests a spiritual and healing culture that is generated by the landscape itself rather than maintained by institutions. The same patterns of practice, healing at environmental thresholds, crossing into defined sacred or therapeutic space, gathering at high points, self-organised community observance, engagement with trees as active agents, recur across periods separated by thousands of years, without institutional continuity between them.
This has practical implications for a biosphere designation. The Forest's spiritual and wellbeing culture depends on the integrity of the landscape conditions that produce it: the tree cover, the biodiversity, the tidal estuary, the accessible high ground and the contained geography. Protecting these conditions is the most effective way to ensure that the practices they generate continue.
It also explains why the Forest's contemporary wellbeing practices are inclusive in ways that commercial wellness provision often is not. Wilde Earth Journeys deliberately moved away from the term "forest bathing" to "community walks" or "wellbeing walks" after finding that the original label attracted a narrow demographic and deterred local people. By grounding their practice in local tree folklore, history, poetry and storytelling, they have built genuinely accessible programmes that reconnect residents with their own landscape. The organisation's work extends across age groups and communities: children in primary pastoral care, disengaged secondary school students (Year 9 to 11, using the ASDAN vocational framework), veterans, people living with dementia through the Forest of Dean's Dementia Action Alliance, and blind and partially sighted residents through Forest Sensory Services. The organisation has recently established a charitable arm, the Wild and Wealth Foundation, to sustain and expand this delivery.
Accessibility is a central concern. Wilde Earth Journeys is producing video social stories showing wheelchair users and people with disability scooters navigating forest sites, including parking, surfaces, accessible toilets and route conditions. An accessible garden has been designed and built for the mindful gardening programme, and an accessible gardening checklist has been developed through the Dementia Action Alliance. These measures ensure that the landscape's therapeutic quality is available regardless of physical ability.

15.6.2 Indicate activities aimed at identifying, safeguarding, promoting and/or revitalising such values and practices.

The Forest of Dean has undertaken a wide range of activities to identify, safeguard, promote and revitalise its cultural, spiritual and traditional heritage. These efforts span oral history, dialect preservation, folklore documentation, heritage education, community engagement and nature based wellbeing practice.

Foresters' Forest Landscape Partnership Programme
Funded by the National Lottery Heritage Fund, this comprehensive initiative included 38 projects across five themes:

1. **Revealing Our Past:** Documented oral histories, catalogued the Forest dialect and revived heritage craft skills.
2. **Celebrating Our Forest:** Hosted community events, supported local literature and brass bands, and promoted traditional foraging.
3. **Securing Our Future:** Engaged schools and youth groups to embed forest heritage into education. Lydbrook Primary School rewrote its curriculum around forest heritage.
4. **Built Heritage Conservation:** Restored historic buildings and structures at risk of collapse.
5. **Volunteer Engagement:** Over 1,000 volunteers contributed 37,000+ hours.

Forest Dialect Preservation Project
Led by the Dean Heritage Centre and supported by over 26 organisations, this project digitised and catalogued 20 oral histories and 20 dialect transcriptions, produced educational materials for schools and libraries, trained volunteers in transcription and archive preservation, and created a dedicated Forest Dialect website to share resources.

Oral History Programme
Recorded and archived 200+ oral histories spanning the 20th century. Involved local organisations and community groups to raise awareness and participation. Connected stories to landscape, geology and traditional practices.

Cultural Heritage Strategy by Forestry England
Aims to preserve traditions like freemining and sheep badgering. Envisions the Forest as a "distinctive and cherished landscape" where stories and customs are traceable and celebrated.

Folklore and Myth Documentation
Local initiatives and tourism platforms have documented legends including the Bleeding Stone of Staunton, the Beast of Dean, the Last Witch of Gloucestershire, the Roman Temple of Nodens and its cursed tablets, and the Goddess Sabrina of the River Severn. These stories are shared through blogs, guided tours and educational materials.

Community Led Nature Based Wellbeing
Wilde Earth Journeys delivers programmes that connect the Forest's spiritual and wellbeing traditions to contemporary community need:

Community wellbeing walks run weekly on a self-referral basis, using forest bathing principles, poetry, mythology and storytelling. These walks serve people living with dementia, carers and self-referring community members. Participants from the clinical programme (below) continue into the community walks, creating a pathway from therapeutic intervention to sustained engagement.

An eight week programme for mild to moderate mental health is delivered with referrals from GP surgeries and primary care networks. A further programme has been funded by Cllr Chris McFarling in Sudbury.

A six week mindful gardening programme is delivered in partnership with Forest Green Primary Care Network, with direct surgery referrals. The programme is in its second iteration with a waiting

list. Two further programmes are booked. The accessible garden was designed and built by Wilde Earth Journeys.

Accessibility work includes video social stories for forest site navigation and an accessible gardening checklist developed through the Forest of Dean's Dementia Action Alliance.

Work with children and young people includes primary school pastoral care and nature based programmes for disengaged Year 9 to 11 students using the Asdan vocational framework.

Volunteer development enables community members to lead activities independently. A volunteer will run accessible forest bathing experiences on the Glade Trail at Beechenhurst on 18 April in partnership with Forestry England.

A weekly community gathering at a cafe and microbrewery in Little Dean provides informal social infrastructure supporting all of the above.

Community Led Cultural Sustainability
Forest Voluntary Action Forum (FVAF) supports heritage volunteering. Local history societies and schools collaborate on storytelling, dialect and crafts. New initiatives like "Our Forest" aim to continue the legacy of Foresters' Forest by supporting education and community engagement.

15.6.3 How should cultural values be integrated in the development process: elements of identity, traditional knowledge, social organizations, etc.?
Integrating cultural values into the development process in the Forest of Dean means ensuring that growth is inclusive, place based and sustainable. This requires embedding elements of identity, traditional knowledge, social organisation and spiritual heritage into planning, policy and community initiatives.

Recognise and Embed Local Identity
Forest Dialect and oral histories should be used in signage, education and tourism materials to reinforce local identity. Free Mining, sheep badgering and the Verderers' Court should be celebrated as living heritage in planning documents and public spaces. Local storytelling and folklore should be supported through festivals, trails and digital media.
The continuity between the Forest's ancient sacred landscape and its contemporary wellbeing practices should be recognised as an asset of significance, and the biosphere provides a framework within which this recognition can be sustained.

Development integration: Include cultural heritage assessments in planning applications. Require cultural impact statements for major developments. Promote architectural styles and materials that reflect local traditions.

Revitalise Traditional Knowledge and Livelihoods
Support community supported agriculture and heritage breeds like Gloucestershire Old Spot pigs. Promote forest based crafts, foraging and cider/perry making as viable economic activities. Encourage intergenerational learning through apprenticeships and school partnerships.

Development integration: Provide grants and incentives for traditional land use and crafts. Include traditional knowledge in climate adaptation and biodiversity strategies. Create local food hubs and markets that prioritise heritage produce.

Strengthen Social Organisations and Customary Practices

Empower groups like the Forest Voluntary Action Forum (FVAF) and local history societies to lead cultural initiatives. Recognise customary rights (commoning, pannage) in land management and conservation plans. Support community governance models that reflect local traditions, such as the Verderers' Court.

Development integration: Include community representatives in decision making bodies. Use participatory planning methods that respect local customs. Protect access to common lands and spiritual sites.

Safeguard Spiritual, Contemplative and Wellbeing Values

Protect and interpret sites of ancient sacred significance including Lydney Park Roman Temple, the Little Dean archaeological site, the Staunton Longstone and the Severn estuary. Recognise Pan Tod and May Hill as sites of ongoing seasonal celebration and ensure they remain accessible.

Support nature based wellbeing practice as a means of reconnecting communities with the landscape. The model demonstrated by Wilde Earth Journeys, where clinical referral pathways, community walks, accessibility work and volunteer development form a self-sustaining ecosystem of engagement, offers a practical template for integrating wellbeing values into public health and community development.

Recognise incoming contemplative institutions such as Friends of Plum Village at Church Farm as part of the Forest's evolving landscape while ensuring that such developments complement community led practice.

Development integration: Map and protect intangible heritage in local plans. Integrate wellbeing values into nature recovery strategies. Ensure that wellness tourism development supports rather than prices out community access to the same practices and places.

Monitor and Adapt

Establish a Cultural Sustainability Index to track the vitality of traditions, dialects and practices. Use community feedback loops to adapt development strategies based on cultural impact. Partner with universities and heritage bodies to research and document endangered practices

15.6.4 Specify whether any indicators are used to evaluate these activities. If yes, which ones and give details.

(Examples of indicators: presence and number of formal and non-formal education programmes that transmit these values and practices, number of revitalisation programmes in place, number of speakers of an endangered or minority language).

"There are key indicators and activities aimed at identifying, safeguarding, promoting, and revitalising cultural values and practices in the Forest of Dean, with examples across education, language, traditional knowledge, and community engagement:

Education Programmes Transmitting Cultural Values

The Dean Heritage Centre offers a wide range of workshops and school programmes focused on local history, mining, Anglo-Saxon life, and nature-based learning. Loan boxes and classroom sessions allow schools to integrate Forest heritage into the curriculum. The Foresters' Forest supported educational outreach through oral history, dialect, and heritage craft projects involving over 26 organisations.

Revitalisation Programmes in Place
Foresters' Forest Landscape Partnership funded 38 projects over five years with £2.5 million investment. This included: New Leaf Social Forestry Project: Revived traditional woodland management and crafts, Heritage Craft Skills which were workshops in green woodworking, blacksmithing, willow weaving, and organic tanning and Edible Forest which included foraging, permaculture, and heritage orchard restoration.

Forest Dialect Project
This project digitised 20 oral histories and 20 dialect transcriptions, trained 11 volunteers in cataloguing and preservation, produced educational materials and online resources. Number of Speakers of Endangered Language. The Forest Dialect is critically endangered, with only a few fluent speakers remaining. Preservation efforts include online catalogues and linguistic descriptions, school collaborations and community outreach, distribution of booklets to libraries and tourist centres.

Community Cultural Sustainability Initiatives
Forest of Dean District Council Plan (2024–2028) promotes community empowerment, cultural inclusion, and education. Supports local food production, biodiversity enhancement, and heritage conservation. Social Forestry and Safe Spaces includes Kensley Shed served as a hub for disadvantaged groups to learn traditional skills in a supportive environment. "

16. LOGISTIC SUPPORT FUNCTION:

16.1 Research and monitoring:

16.1.1 Describe existing and planned research programmes and projects as well as monitoring activities and the area(s) in which they are (will be) undertaken in order to address specific questions related to biosphere reserve management and for the implementation of the management plan (please refer to variables in Annex I).

A range of research and monitoring programmes actively support biosphere management in the Forest of Dean, integrating cultural, ecological, and community-based approaches. The Forest of Dean Writers Collection Project, developed through the "Reading the Forest" initiative, has contributed to understanding cultural relationships with the landscape, with its archive maintained at the Dean Heritage Centre and accompanied by an online resource that continues to support educators and community engagement. Although dedicated staffing for outreach is ending, the potential for volunteer involvement remains, ensuring continued informal knowledge exchange, there is also the opportunity to seek further funding to continue this excellent project.

Environmental and social research is further advanced through initiatives led by the Gloucestershire Wildlife Trust, such as "Nature Nurtures," a green social prescribing programme that connects young people with nature to address low-level mental health needs. This project incorporates

monitoring of wellbeing outcomes, demonstrating the links between ecosystem health and human wellbeing. Complementing this, the Countryside and Community Research Institute at the University of Gloucestershire undertakes applied research on community engagement in nature recovery, citizen science approaches to water quality, governance of long-term land management agreements, and climate change adaptation and mitigation. Tools such as the Climathon toolkit and the SATOCONN project contribute to developing innovative governance and management models for culturally rich landscapes.

Hartpury University, a formal partner in the biosphere network, contributes education, research and knowledge exchange across conservation, environmental science and agriculture. Many of its learning programmes are mapped against the Sustainable Development Goals and delivered in partnership with local communities and industry stakeholders within the proposed biosphere zones. Field courses in the Forest of Dean train students in species recording, tracking and biodiversity monitoring, and a number of student research projects have explored ecological health, biodiversity and human-wildlife coexistence challenges in the area. The University's Digital Innovation Farm and Agri-tech Centre develop solutions for the future of UK agriculture through an accelerator programme that brings students and staff together with industry partners and the wider agri-food supply chain, supporting local farming businesses and rural communities. The Agri-tech Centre also hosts activities related to regenerative farming, sustainability and local industry events, and contributes regularly to local business forums and rural business groups. A recent workshop co-hosted with Stroud District Council brought together leading voices in regenerative and sustainable farming to share strategies for resilience, profitability and nature recovery. Hartpury staff serve as local climate ambassadors, delivering outreach to schools and designing programmes that sensitise children to sustainability, climate action and environmental education. The University participates in the Nature Friendly Grounds initiative and the Big Farmland Bird Count, hosting bioblitz surveys that bring together experts and local schoolchildren to monitor biodiversity. Planned activities include contributing to Mammal Week and the University Campus Challenge in September 2026, feeding into the Recovery Plan for Gloucestershire, and developing "Accessibility to Nature" projects in partnership with Star College, a local education provider for people with disabilities and acquired brain injuries, combining expertise in wildlife ecology, human-animal interaction and behaviour change to improve nature access for underserved communities.

At the local governance level, the Forest of Dean District Council is facilitating knowledge exchange and capacity-building through initiatives such as a district-wide Climate Action in Schools event, which will promote climate literacy, Eco-Schools participation, and peer learning, alongside workshops such as Climate Fresk sessions for young people that incorporate biosphere principles. These activities help embed research insights into education and community practice.

Site-specific monitoring and research are exemplified by Wylderne at the Wilderness Centre, where land use and land cover are managed across 30 acres to maximise biodiversity through an ecosystem-based approach. This work treats the site as an interconnected system nested within the wider Forest landscape. The centre is developing sustainability indicators across key value-adding processes and combines qualitative assessments such as human–nature connection and community development with quantitative ecological surveys of flora and fauna. Plans to introduce citizen science training and participatory monitoring will further strengthen local engagement in data collection and environmental stewardship.

Together, these programmes demonstrate a coherent and evolving framework for research and monitoring that supports adaptive management, community participation, and the integration of cultural and ecological knowledge within the biosphere.

Below is a list of Past Research

Wildlife Monitoring and Management

Wild Boar and Deer Surveys: Since 2013, annual monitoring of feral wild boar and deer populations (roe, fallow, and muntjac) has been conducted to inform public awareness and management strategies. The Forest of Dean hosts the largest wild boar population in England. A Hartpury University academic (Ben Klinkenberg) has recently completed his PhD research on the 'conflicts surrounding the establishment of wild boar (Sus scrofa) in the Forest of Dean'. This research has now evolved to include testing the effects of lynx urine on visitation and browsing behaviour of wild boar. Pine Marten Reintroduction: Between 2019 and 2021, 35 pine martens were reintroduced to the Forest of Dean to support biodiversity. The project, led by Gloucestershire Wildlife Trust and partners, has transitioned into a monitoring phase, with the population now estimated at over 40 individuals. There has been extensive research into the local Lesser and Greater Horseshoe Bat populations. There has been radio tracking of bats at NE Dean Hall. There has also been research conducted by both Bristol and Gloucestershire Universities. Habitat Restoration: Forestry England has worked to restore habitats for species like the small pearl-bordered fritillary butterfly and manages populations of deer and wild boar. The Forest is also home to Europe's largest colonies of Greater and Lesser Horseshoe Bats.

Landscape and Habitat Planning

Our Shared Forest Land Management Plan (2019): This long-term strategy by Forestry England aims to reshape land management in the Forest of Dean. It includes habitat mapping and principles for wildlife conservation, cultural heritage, and community engagement. The plan builds on lessons from the Foresters' Forest programme and sets a vision for the next 100 years.

Research and Monitoring of Orchards in the Forest of Dean

The Foresters' Forest Programme (2017–2022), funded by the National Lottery Heritage Fund and led by Forestry England, was a significant initiative aimed at preserving and enhancing the natural and cultural heritage of the Forest of Dean. Although the programme did not focus exclusively on orchards, it supported a range of biodiversity and heritage projects that likely included traditional orchard conservation. These efforts contributed to long-term monitoring and evaluation of the landscape, helping to safeguard its ecological and historical value.

The Forest of Dean Local History Society has also played a key role in documenting the region's agricultural heritage. Through its journal The New Regard, the society has published research that may include insights into traditional orchards and fruit-growing practices. Their work helps preserve knowledge of local land use and supports community awareness of historical cultivation methods.

Local Fruit Species and Biodiversity Studies

The Gloucestershire Centre for Environmental Records (GCER) serves as the county's primary biodiversity data hub, including coverage of the Forest of Dean. With over two million records, GCER supports conservation monitoring, biodiversity research, and nature recovery mapping. Their data infrastructure is essential for understanding the distribution and health of local fruit species and other flora. The community group Friends of the Forest has highlighted significant gaps in biodiversity data specific to the Forest of Dean. Their advocacy suggests a need for more targeted studies on local plant species, which could include fruit-bearing trees and shrubs. This points to an opportunity for further research and community science initiatives. Finally, Forestry England's wildlife initiatives have contributed to habitat restoration and species reintroductions, such as beavers and pine martens. While their focus is broader, these efforts help create conditions that support native fruit species and pollinators. Their management of wild boar and deer populations also plays a role in maintaining ecological balance, which indirectly benefits orchard and fruit tree health.

Deputy Surveys Report

Kevin Stannard, the Deputy Surveyor for the Forest of Dean and Forest Management Director of the West England Forest District, plays a pivotal role in advancing social and environmental outcomes through collaborative partnerships with environmental organisations. His leadership supports long-term forest planning, sustainable timber production, climate change mitigation, and community engagement, including volunteering and educational initiatives. While specific research outputs are not documented, broader monitoring efforts in the Forest of Dean include the 2018 Residents and Visitors Survey, conducted under the Foresters' Forest HLF Landscape Partnership, which gathered public perceptions and contributed to evaluating the social impact of forest projects through 780 completed questionnaires. Additionally, the Authorities Monitoring Report (2021–2022) highlights ongoing ecological benchmarking and wildlife population monitoring projects, aimed at enhancing data collection and environmental management across the district.

Heritage and Community Research

Foresters' Forest Programme (2017–2022): A National Lottery Heritage Fund Landscape Partnership initiative involving 38 projects focused on built, natural, and cultural heritage. Monitoring and evaluation were conducted by the Countryside and Community Research Institute (CCRI), using stakeholder interviews, community surveys, and baseline assessments to measure impact. The evaluation reports documented changes in heritage awareness, community engagement, and environmental conditions, contributing to long-term planning and policy.

Historic Land Use & General History

Many books have been research and written over the years these include; The Forest of Dean: An Historical and Descriptive Account by H.G. Nicholls. A classic 19th-century account covering the geography, iron industry, customs, and early land use of the Forest. Tradition, Reformation and Reaction in the Forest of Dean, 1450–1603 published by Lightmoor Press, this book explores the religious and social transformations in the Forest during the Tudor period. The Verderers and Forest Laws of Dean by Dr. Cyril Hart A definitive work on the legal and administrative history of the Forest, including land rights and forest governance. The Commoners of Dean Forest and The Free Miners of the Royal Forest of Dean also by Dr. Cyril Hart, these books delve into the rights and roles of local communities in land use and resource extraction.

Social History

Many books have also been published on social history such as Blood on Coal a detailed account of the Forest Coalfield during the 1926 General Strike, highlighting class struggle and community resilience. The Forest of Dean Miners' Riot of 1831a pamphlet exploring the causes and consequences of the 1831 uprising. Pity the Poor Buttyman: The Butty System in the Forest of Dean 1820–1938 examines labor relations and mining practices in the Forest. The Story of the Forest (Children's History) and Forest at War

Current Research and Monitoring

Dog Walkers and Wildlife Interaction

Research led by Hartpury University has explored the interactions between dog walkers and wild boar in the Forest of Dean. Findings show that 45% of participants reported negative experiences, often while walking dogs. These interactions have influenced perceptions of safety and media narratives, with local media tending to portray wild boar negatively. The study recommends community-based management and education to reduce conflict and promote coexistence.

Pond Conservation Network

The Newt Conservation Partnership, supported by Amphibian and Reptile Conservation and Freshwater Habitats Trust, has created and restored ponds across the Forest of Dean. These efforts have led to great crested newts successfully colonising over 84% of sites. The project uses eDNA monitoring and traditional surveys, and emphasises landscape-scale conservation to support amphibians and rare aquatic plants.

Pine Marten Monitoring – VWT & Hartpury

The Vincent Wildlife Trust (VWT) is running the Martens on the Move project, which includes a National Pine Marten Monitoring Programme. Volunteers, including a lecturer from Hartpury, use trail cameras and thermal imagers to monitor den boxes and bait stations. Data is shared via a GIS-based system to track pine marten recovery across Britain.

Noble Charter Research – Wildlife Trust

At Woorgreens Nature Reserve, managed by Gloucestershire Wildlife Trust, conservation efforts focus on heathland restoration through grazing by Highland cattle and other livestock. The site supports species like great crested newts, dragonflies, and wild boar, and is part of a broader initiative to protect threatened habitats in the Forest of Dean.

Local Nature Recovery Strategy (LNRS)

The LNRS framework is being developed to guide habitat restoration and biodiversity enhancement across Gloucestershire, including the Forest of Dean. It involves collaboration between local authorities, landowners, and conservation groups to identify priority areas and actions for nature recovery.

Wetland Bird Survey (WeBS) Counts

The British Trust for Ornithology (BTO) provides detailed bird count data through the WeBS programme. This includes monthly and annual peak counts for waterbirds in the Forest of Dean, supporting conservation planning and ecological research.

Nature Reserve Forestry Data

Sites like Woorgreens and Nagshead are monitored for biodiversity and habitat health. These reserves host species such as stonechats, cuckoos, and adders, and are managed through partnerships between Forestry England, RSPB, and Gloucestershire Wildlife Trust.

Forest Historic Group App

The Hidden Heritage of the Dean app, developed by Foresters' Forest, allows users to explore the Forest's industrial and cultural history via a GPS-guided trail. It features 27 points of interest with historical imagery and interactive content.

Local History Society Groups

The Forest of Dean Local History Society, one of the oldest in Gloucestershire, runs talks, walks, and publishes research through its journal The New Regard. It plays a key role in preserving and sharing the region's rich heritage."

16.1.2 Summarize past research and monitoring activities related to biosphere reserve management (please refer to variables in Annex I).

"There are many research and monitoring projects collectively which support the biosphere objective of conserving biodiversity and ecosystems by actively monitoring, restoring, and enhancing habitats and species populations. Initiatives such as wild boar and deer surveys, bat tracking, and pine marten reintroduction help maintain ecological balance and protect key native species. Habitat restoration efforts, including pond creation and heathland management, improve conditions for rare flora and fauna like great crested newts and fritillary butterflies. Strategic frameworks like the Local Nature Recovery Strategy and data hubs like GCER guide targeted conservation actions, while ongoing research and monitoring such as wetland bird counts and forestry biodiversity assessments ensure informed, adaptive management. Together, these efforts foster resilient ecosystems and promote long-term biodiversity recovery across the region.

There are many research and monitoring projects which support the biosphere objective of fostering sustainable development by integrating ecological conservation with responsible land use, cultural heritage, and community engagement. Research into dog walkers and wildlife interactions promotes coexistence through education and local stewardship, while grazing practices and orchard conservation demonstrate sustainable land management rooted in tradition. Collaborative planning efforts like the LNRS and Our Shared Forest strategy bring together stakeholders to guide long-term, balanced use of natural resources. Initiatives such as the Foresters' Forest programme and app enhance public awareness and cultural tourism, linking heritage with environmental sustainability. Wildlife management and timber production are approached with ecological sensitivity, ensuring that development supports both biodiversity and community wellbeing.

There are many research and monitoring projects which support the biosphere objective of research, monitoring, and education by generating valuable ecological data, fostering academic inquiry, and engaging communities in knowledge-sharing. University-led studies on wild boar and bats deepen scientific understanding and inform conflict resolution, while CCRI evaluations assess the impact of environmental initiatives. Platforms like the GCER Biodiversity Records and citizen science efforts such as Friends of the Forest and Pine Marten Monitoring enable widespread data collection and public involvement. Educational tools like the Forest Historic Group app and publications from local history societies enrich cultural and environmental literacy. Together, these initiatives build a robust foundation for informed conservation, public awareness, and long-term ecological stewardship."

16.1.3 Indicate what research infrastructure is available in the proposed biosphere reserve, and what role the biosphere reserve will play in supporting such infrastructure.

"The Forest of Dean is envisioned as a hub for environmental research, education, and sustainable development. While detailed documentation on existing research infrastructure is limited in the public domain, several key elements and roles have been identified.

The Wilderness Centre a key site near Mitcheldean, poised to become a focal point for environmental learning. Operated by Wylderne Ltd, it is being developed into an outdoor learning hub showcasing rewilding practices, green industries and cultural heritage Supported by philanthropic funding (e.g. NoVo Foundation, Rockefeller Philanthropy Advisors) to enhance its educational and research capacity. The Wilderness Centre is a key partner of the Forest of Dean Biosphere Partnership.

The Forest of Dean District Council has committed funding (£45,000) to retain a dedicated research officer until April 2027. This role supports coordination of research, stakeholder engagement, and development of sustainability initiatives. The co-ordinator has organised conferences bringing together all local universities and NGOs to help co-ordinate all of the research and monitoring being conducted in the district. The conference was attended by Forestry England, The University of

Gloucestershire, The University of West of England, Hartpury University as well as key NGOs such as the Gloucestershire Wildlife Trust and the RSPB.

Living Laboratory for Nature-Based Solutions, the biosphere will act as a "living lab" for testing and showcasing nature-based solutions, climate resilience strategies, community-led conservation. "

16.2 Education for sustainable development and public awareness:

16.2.1 Describe existing and planned activities, indicating the target group(s) and numbers of people involved (as "teachers" and "students") and the area concerned.

Response: Education, Engagement, and Climate Action in the Forest of Dean

A wide range of organisations across the Forest of Dean are delivering impactful, inclusive, and innovative work to inspire environmental awareness, build climate resilience, and connect communities with nature. This work spans early years through to higher education, community engagement, and systemic climate action.

Early Years, Children and Schools Engagement

Organisations such as **Gloucestershire Wildlife Trust** play a key role in fostering early connections to nature. Their programmes include:

- **Forest Explorers (ages 4–13):** Encouraging children to understand and engage with their local natural environment through hands-on activities.
- **Nature Tots (ages 0–5):** Supporting very young children and parents to build early relationships with nature.
- **Primary school trips:** Providing curriculum-linked outdoor learning experiences.
- **A primary school quiz** which has been running for over 50 years which local schools take part in.

These initiatives are complemented by broader district efforts to embed sustainability in education:

- Funding for **10 schools** to participate in the **Eco-Schools programme**, with multiple schools achieving **Green Flag accreditation**, demonstrating strong environmental leadership.
- Outdoor learning initiatives ("Our Forest") that use the forest as a classroom, improving:
    - Student wellbeing
    - Engagement and curiosity
    - Resilience and teamwork
- Teacher training and support to ensure outdoor learning becomes a **sustainable, embedded practice**.

Additionally, youth engagement has been strengthened through:

- Environmental awards (e.g. Scouts, youth clubs, cadets)
- Hands-on activities such as **Project Bloom** (tree planting, pollinator habitats, litter picking)
- Workshops and talks for students (e.g. Hartpury College sessions on climate co-benefits)

Community Climate Action and Public Engagement

The **Forest of Dean District Council (FoDDC)** has delivered an extensive programme of climate engagement and capacity building:

Communication and Awareness

- A **bi-monthly Nature and Climate Action newsletter** (450+ subscribers, ~50% open rate)
- Local media engagement, including:
    - **Dean Radio** climate shows
    - Planned **nature and climate podcast**
- Public-facing events such as food festivals and awareness stands

Climate Participation and Co-creation

- Delivery of **three Climathons** (Energy, Food, Transport), including a major food systems event at Hartpury
- Follow-up **Net Zero Governance event** with partners
- Participation in national policy discussions (e.g. roundtable at Birmingham City Hall)

Citizen Engagement and Inclusion

- A **Citizen Visioning Project** (with Involve, funded by Innovate UK), producing:
    - A shared climate vision
    - 9 recommendations focused on fairness, happiness, and climate response
- A **community climate action plan with the LGBTQIA+ community**, including:
    - Survey insights
    - A creative "zine" imagining a 2035 future
    - Safe, inclusive engagement spaces

Capacity Building

- Climate action support sessions (3-month programme for individuals and organisations)
- Delivery of **Climate Fresk workshops**

DRAFT

- Collaboration events highlighting **co-benefits of climate action** (health, community resilience, etc.)

Partnership Working and Collaboration

Strong partnerships underpin this work:

- Collaboration with **CCRI**, **FVAF**, and local networks
- Engagement with businesses via the **Forest Business Climate Charter**
- Work with **Hartpury College** and **University of the West of England (UWE)**:
    - Student research supporting a **UNESCO Biosphere nomination**
    - Use of GIS to map biodiversity, heritage, and ecosystems

The district has also received recognition, including:

- **Highly Commended (CIHT South West Awards 2025)** for a collaborative active travel initiative

Sustainable Infrastructure and Behaviour Change

Significant practical initiatives support behaviour change and emissions reduction:

- **Active travel Strategy** indicating a prioritisation list of routes to maximise co-benefits, including access to nature, health and well being and reducing stress and air pollution.
- Community grant funding embedding **climate and co-benefits criteria**
- Participation in **Digital Clean-up Day**
- Water-focused engagement during **Our Earth Week**, including:
    - Radio broadcasts
    - Youth sessions
    - Business engagement (e.g. water efficiency initiatives)

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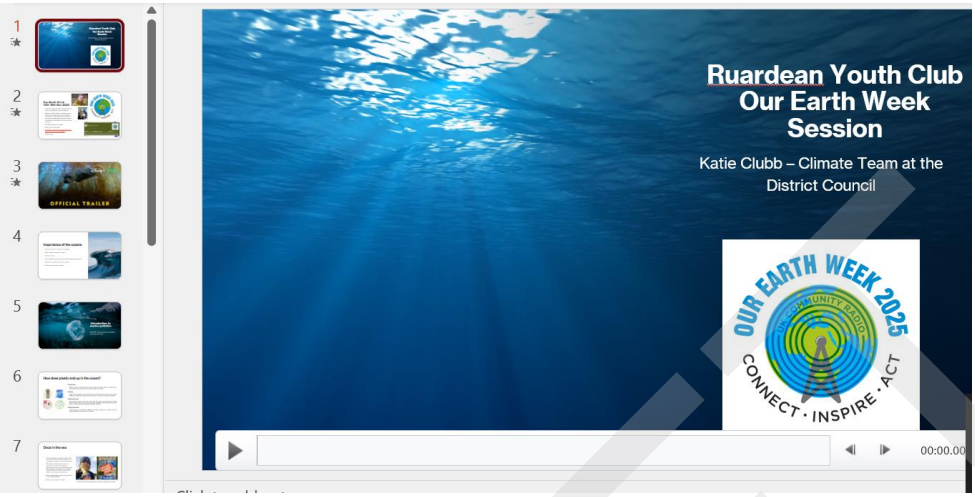

Figure 41 – Our Earth Week Presentation

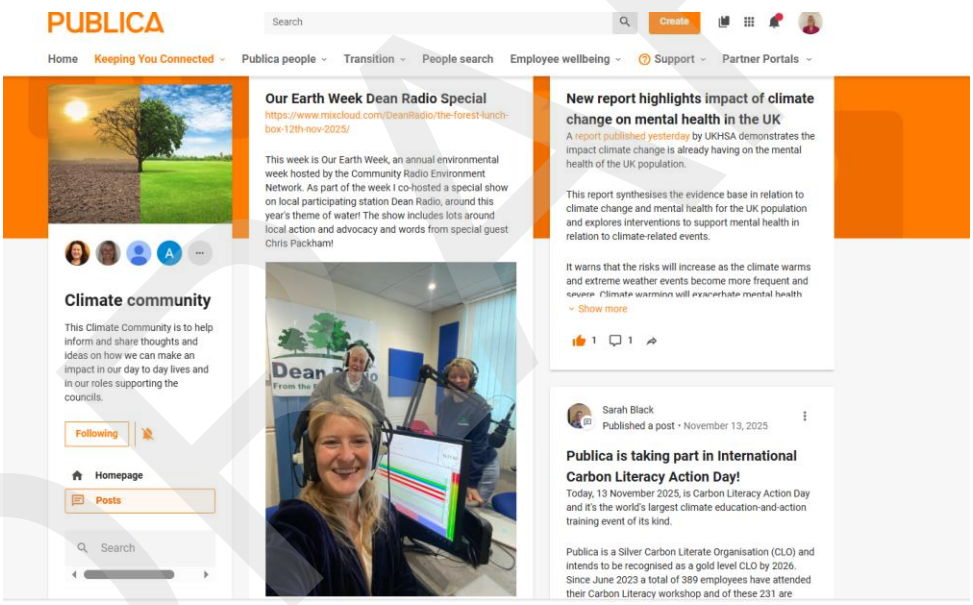

Figure 42 – Internal Bulletin to raise awareness

Energy and Innovation (Aurora Project)

The **Aurora Project** has driven community energy innovation:

- Establishment of **Forest Community Energy (CBS)**
- Development of **community-owned solar projects** (e.g. Sling Community Hub, Lydney Leisure Centre)
- Workshops on:
    - Solar energy

    - Home energy efficiency
- Launch of a **thermal imaging camera loan scheme** to help residents reduce heat loss

Nature Connection, Skills and Wellbeing (Wylderne)

Wylderne provides a holistic, systems-based approach to nature engagement:

- **Education:** Nature connection programmes tailored to diverse audiences
- **Capacity building:** Supporting personal growth, agency, and ecological understanding
- **Health and wellbeing:** Linking diet, physical activity, and mental health to nature
- **Traditional skills:** Coppicing, foraging, hedge-laying, conservation grazing
- **Inclusion and green skills:** Engaging young people, including underrepresented groups, in land-based and construction skills

Overall Impact

Across the Forest of Dean, these combined efforts demonstrate:

- A **whole-system approach** linking education, community action, and infrastructure
- Strong emphasis on **inclusion and co-creation**, particularly with young people and marginalised communities
- Integration of **climate action with wider co-benefits**:
    - Health and wellbeing
    - Community resilience
    - Skills and employment pathways
- Growing momentum toward long-term goals such as **net zero**, **biodiversity recovery**, and **UNESCO Biosphere status**

16.2.2 What facilities and financial resources are (or will be) available for these activities?

A range of facilities and financial resources are already available, with further opportunities expected to support the delivery of activities within the Forest of Dean Biosphere. Local infrastructure is strengthened through partnerships with organisations such as Gloucestershire Wildlife Trust, which provides access to land, expertise, and established community programmes that support environmental education, conservation, and engagement activities.
Health-related funding streams also contribute to the delivery of biosphere objectives. NHS Integrated Care Board (ICB) green social prescribing initiatives offer financial and practical support

for projects that connect people with nature to improve wellbeing. These programmes enable the use of natural spaces as a resource for both community health and environmental outcomes, aligning closely with biosphere goals.

Additional financial support is available through local government and community-based funding mechanisms. Councillor-led funding, including schemes such as Build Back Better, provides flexible resources that can be directed toward community resilience, sustainability, and environmental initiatives. Commissioning funds accessed through Family Hubs and Youth Services further expand opportunities to engage younger audiences and families, supporting inclusive participation in biosphere-related activities.

Forest of Dean District Council has already demonstrated its commitment through targeted funding, including support for Eco-Schools registration and the provision of small grants for educational resources. This enables schools to actively participate in sustainability initiatives and fosters early engagement with biosphere principles.

Academic institutions also play a key role in supporting the biosphere through both financial investment and technical expertise. Universities, including the University of the West of England, have funded and delivered projects such as the geographical information systems (GIS) biosphere project. These collaborations enhance research capacity, data analysis, and evidence-based decision-making, ensuring that biosphere activities are underpinned by robust scientific knowledge. Together, these diverse funding streams and facilities provide a strong and adaptable foundation for delivering biosphere activities, with ongoing opportunities to expand resources through partnership working and future funding bids.

16.3 Contribution to the World Network of Biosphere Reserves:

16.3.1 How will the proposed biosphere reserve contribute to the World Network of Biosphere Reserves, its Regional and Thematic Networks?

The proposed Forest of Dean Biosphere will make a distinctive and valuable contribution to the World Network of Biospheres by acting as a model for integrated landscape management in a historically industrialised yet ecologically rich setting. Its combination of ancient woodland, working forest, common land traditions, river systems, and post-industrial heritage offers a unique case study in balancing conservation, sustainable resource use, and community wellbeing.

At the international level, the proposed Biosphere will contribute knowledge and practice on the restoration and management of temperate broadleaf woodlands, particularly those shaped by centuries of human use. The Forest of Dean's long history of mining, forestry, and commoning provides an opportunity to share lessons on transitioning from extractive economies to regenerative, nature-based and circular approaches an area of growing relevance across the Network.

Within regional and thematic networks, the site will actively engage in knowledge exchange around key themes including:

- Nature recovery and climate resilience, through large-scale habitat connectivity, species reintroduction, and ecosystem-based adaptation.

- Sustainable forestry and land use, drawing on the Forest's status as a working landscape managed for multiple benefits.

- Cultural landscapes and community governance, particularly the role of commoning rights, local identity, and participatory decision-making.

- Health and wellbeing, demonstrating how accessible natural landscapes contribute to physical and mental health outcomes.

- Just transitions, sharing experience of rural economic diversification following industrial decline.

The proposed Biosphere will collaborate with other UK and European Biosphere Reserves to strengthen the EuroMAB Network, contributing case studies, joint research, and pilot projects. It will also support UNESCO priorities such as the Man and the Biosphere Programme (MAB), the Sustainable Development Goals, and global biodiversity and climate targets.

Through partnerships with academic institutions, local communities, land managers, and policymakers, the Forest of Dean Biosphere will function as a "living laboratory" for innovation, monitoring, and learning. Its findings will be shared widely across the Network through collaborative platforms, exchanges, and applied research, strengthening collective capacity to address global environmental and societal challenges.

These connections have already been made through the preparation for the nomination form and close working relationships which have formed throughout the process, a strong example of this is the close working relationship with Andy Bell from the North Devon Biosphere.

16.3.2 What are the expected benefits of international cooperation for the biosphere reserve?

International cooperation will significantly strengthen the proposed Forest of Dean Biosphere by enhancing knowledge exchange, capacity building, and collaborative action to address shared environmental and socio-economic challenges.

Through participation in the UNESCO Man and the Biosphere (MAB) network, the biosphere will benefit from access to global best practices in sustainable land management, biodiversity conservation, climate change adaptation, and community engagement. Learning from other biosphere reserves facing similar challenges such as post-industrial landscape restoration, woodland management, control of wild boar and deer numbers and balancing tourism with conservation will support more effective and innovative local strategies.

Collaboration with international partners will enable joint research initiatives, data sharing, and monitoring approaches, improving the evidence base for decision-making. It will also create opportunities for academic partnerships, student exchanges, and applied research that can inform both local and global sustainability agendas.

International cooperation will support the development of sustainable economic opportunities by promoting the Forest of Dean as part of a globally recognised network. This can enhance eco-tourism, attract investment, and strengthen local supply chains aligned with sustainable practices.

Cultural exchange and networking will foster a stronger sense of global citizenship among local communities, encouraging the sharing of cultural heritage, traditional knowledge, and community-led approaches to stewardship.

Finally, engagement in international frameworks will raise the profile of the Forest of Dean, helping to secure funding opportunities, influence policy development, and contribute to global targets such as the Sustainable Development Goals (SDGs), particularly those related to climate action, life on land, and sustainable communities.

Overall, international cooperation will enhance the proposed biospheres capacity to act as a living laboratory for sustainable development, delivering benefits locally while contributing to global environmental solutions.

16.4 Internal and external communication channels and media used by the biosphere reserve:

16.4.1 Is (will) there (be) a biosphere reserve website? If yes, what is its URL?

The Forest of Dean District Council currently hosts the proposed biospheres website with the aim of establishing a separate independent website in the event that the nomination is successful. The website can be accessed via the URL below.

https://www.fdean.gov.uk/forest-of-dean-s-unesco-biosphere-bid/

16.4.2 Is (will) there (be) an electronic newsletter? If yes, how often will it be published?

In the process of application we have been utilising an already established council led newsletter to send messaging out and share up to date news on the biosphere. This will be reviewed should the nomination be successful as to whether an independent newsletter would be a better option. You can register for the Nature and Climate Newsletter via the biosphere website using the URL below.

https://www.fdean.gov.uk/forest-of-dean-s-unesco-biosphere-bid/your-biosphere-get-involved/

16.4.3 Does (will) the biosphere reserve belong to a social network (Facebook, Twitter, etc.)?

The Forest of Dean Biosphere currently does not operate its own social media but has posts which are sent out via the District Councils socials, in the event of the success of the nomination biosphere specific social media would be established to help promote the biosphere independently from the District Council. In the meantime, the Council led social media has an excellent following and helps to successfully spread the messaging to the local community. The social media outlets below are the ones used by the Forest of Dean District Council.

- Facebook.com/foddc
- Twitter.com/foddc
- instagram.com/forestofdeandc
- LinkedIn - forest of dean district council

17. GOVERNANCE, BIOSPHERE RESERVE MANAGEMENT AND COORDINATION:

[Describe the following characteristics in the prospective that the site is being designated.]

17.1 Management and coordination structure:

17.1.1 What is the legal status of the biosphere reserve?

17.1.1 What is the legal status of the biosphere reserve?

UNESCO Man and the Biosphere designation carries no statutory legal status in UK law. It does not create a new regulatory authority, alter existing planning designations or confer additional statutory powers on any body. The designation is an international recognition under UNESCO's Intergovernmental Scientific Programme, placing the Forest of Dean within the World Network of Biosphere Reserves.

The biosphere's governance and coordination functions will be hosted through the Forest Economic Partnership (FEP), a Community Interest Company registered in England and Wales. The FEP currently serves as the interim governance body for the biosphere application and provides the institutional base for the Biosphere Delivery Partnership described in Section 17.1.8. The CIC structure ensures that assets and activities are held for community benefit, with a statutory asset lock preventing private extraction.

The biosphere operates alongside and within the existing democratic and statutory framework. Forest of Dean District Council, Gloucestershire County Council, Forestry England, Natural England and the Environment Agency retain their full statutory responsibilities. The biosphere provides a coordination framework within which those responsibilities can be aligned toward shared conservation, sustainable development and logistic support objectives.

17.1.2 What is the legal status of the core area(s) and the buffer zone(s)?

There are eleven core sites allocated across the district, totalling 628.03 hectares. All core zones are designated as Sites of Special Scientific Interest (SSSIs), which carry full statutory protection under the Wildlife and Countryside Act 1981 and are overseen by Natural England on behalf of DEFRA. Six of the eleven core areas also carry designation as Special Areas of Conservation (SACs) under the Conservation of Habitats and Species Regulations 2017. Seven of the core zones lie within the Wye Valley Area of Outstanding Natural Beauty (National Landscape). Two core sites lie within the statutory forest managed by Forestry England. One core site (Dymock Wood) is a Countryside and Rights of Way Act 2000 (CROW) designated area. Key core sites include the Wye Valley and Forest of Dean Bat Sites SAC, designated for internationally important greater and lesser horseshoe bat populations, the Wye Valley Woodlands SAC, recognised for ancient semi-natural woodland, and multiple SSSIs supporting priority habitats including mixed deciduous woodland, heathland, species-rich grassland, river corridors and geological formations.

There are twenty-two buffer zones allocated, totalling 17,946.66 hectares (of which 14,262.68 hectares are terrestrial and 3,683.98 hectares are marine). All buffer zones contain areas designated

as SSSIs, except Collinpark Wood which is classified as a SSSI impact risk zone. Within the buffer area, ten sites are designated as SACs, two sites along the Severn Estuary are allocated as flood zones, five buffer zones lie within the AONB, two lie within the statutory forest, and two are RAMSAR sites containing wetlands of international importance (the Severn Estuary and Walmore Common). The buffer zone is also extended to encompass the foraging and commuting habitat of the greater and lesser horseshoe bat populations protected under the SAC designation.

All designations within the core and buffer zones carry their existing statutory protections under UK law. The biosphere designation does not alter, weaken or add to these protections. It provides a coordination framework through which the bodies responsible for these designations can work together within a shared strategic direction set by the Stewardship Assembly.

17.1.3 Which administrative authorities have competence for each zone of the biosphere reserve (core area(s), buffer zone(s), transition area(s))?

Figure 43 – Zone and Administration

Zone	Administrative Authorities	Key Statutory Responsibilities
Core areas (628.03 ha, 11 sites)	Natural England Forestry England (2 core sites within statutory forest) Wye Valley National Landscape (7 core sites within AONB) Environment Agency (riverine core areas)	SSSI and SAC condition monitoring, consent and enforcement (Natural England) Woodland management within statutory forest (Forestry England) Landscape conservation and management plan (National Landscape) Water quality regulation and flood risk (Environment Agency)
Buffer zones (17,946.66 ha, 22 zones)	Natural England (SSSIs and SACs) Forestry England (2 buffer zones within statutory forest) Wye Valley National Landscape (5 buffer zones within AONB) Environment Agency (RAMSAR sites, flood zones, water regulation) Severn Estuary Partnership	SSSI, SAC and RAMSAR condition monitoring and enforcement (Natural England) Statutory forest management and recreation (Forestry England) AONB management plan implementation (National Landscape) Flood risk management, water quality, fisheries (Environment

	(estuary coordination) Natural Resources Wales (cross-border Wye liaison)	Agency) Integrated estuary management (Severn Estuary Partnership) Welsh regulatory functions for the Wye (NRW)
Transition area (56,142.99 ha)	Forest of Dean District Council Gloucestershire County Council Parish and town councils (Lydney, Cinderford, Coleford, Newent and others) Environment Agency Natural Resources Wales (cross-border Wye liaison)	Planning, housing, economic development, environmental health, licensing (District Council) Transport, education, social care, highways, public health (County Council) Third tier local government, community planning (parish and town councils) Flood risk management, water quality, river regulation (Environment Agency) Cross-border regulatory liaison for Welsh sections of the Wye (NRW)

17.1.4. Clarify the respective competence of each of these authorities. Make a distinction between each zone if necessary and mention any decentralized authority.

Forest of Dean District Council is the local planning authority for the district. It exercises statutory functions in planning, housing, environmental health, economic development, licensing and waste collection. The district was the first council in England to declare a climate emergency (December 2018). The council has adopted a Rights of Rivers charter (January 2026) recognising the rivers Wye, Leadon and Severn, along with their tributaries in the district, as a living system with fundamental rights, including the right to be free from pollution, to sustain biodiversity, to regenerate to a healthy state and to flow freely. This charter provides an existing policy foundation for the biosphere's approach to river governance and aligns with the Rights of Nature principles embedded in the proposed Forest Charter.

Gloucestershire County Council exercises upper tier statutory functions including transport, highways, education, social care, public health and strategic planning. The county council is a statutory partner on the Biosphere Delivery Partnership Board.

Forestry England (Forest of Dean) is the principal land manager within the statutory forest, managing approximately 10,000 hectares of publicly accessible land, including two core sites and two buffer zones. It exercises functions in woodland management, timber production, biodiversity conservation and public recreation. Forestry England has managed the Forest since its designation as

the first National Forest Park in 1938. It participates in the Delivery Partnership Board and in the Land Stewardship and Visitor Economy Domain Circles.

Natural England is the government's statutory adviser on the natural environment in England. It has regulatory responsibility for the 49 SSSIs (whole or part) within the biosphere area, together with the SACs, SPAs and RAMSAR sites. It undertakes a six-year rolling monitoring programme of SSSI condition. Natural England provides conservation advisory input to the Delivery Partnership Board and the Land Stewardship Domain Circle.

The Environment Agency exercises statutory responsibility for flood risk management, water quality regulation, fisheries management and environmental permitting. It is responsible for catchment management across the biosphere area, including the tributaries draining the Forest plateau into the Severn and the management of the Severn Estuary's cross-border RAMSAR obligations alongside Natural Resources Wales. It participates in the Delivery Partnership Board and co-leads the Water, Rivers and Estuary Domain Circle.

The Wye Valley National Landscape (AONB) is a cross-border landscape partnership covering approximately 30% of the biosphere area. Seven core sites and five buffer zones lie within this designation. Its management plan, adopted under Section 89 of the Countryside and Rights of Way Act 2000, is a material consideration in planning decisions. The National Landscape Manager or nominee sits on the Delivery Partnership Board and participates in the Land Stewardship and Water, Rivers and Estuary Domain Circles.

Natural Resources Wales exercises regulatory and advisory functions for the Welsh sections of the River Wye, providing cross-border liaison through observer status on the Water, Rivers and Estuary Domain Circle.

The Court of Verderers of the Forest of Dean exercises constitutional guardianship functions within the Forest, safeguarding common rights and forest law. A Verderer representative sits on the Custodians and Monitoring Panel, providing continuity with the Forest's historic custodial tradition.

The Severn Estuary Partnership plays a coordinating and advisory role, bringing together government bodies, local authorities, conservation groups and community organisations to promote integrated and sustainable management of the estuary. It participates in the Delivery Partnership Board or the Water, Rivers and Estuary Domain Circle.

Parish and town councils form the third tier of local government across the district. They provide nominees to the Stewardship Assembly and, in the case of the principal town councils (Lydney, Cinderford, Coleford and Newent), participate in the Visitor Economy and Access Domain Circle.

17.1.5 Indicate the main land tenure (ownership) for each zone.

Core areas: The eleven core sites are predominantly Crown land managed by Forestry England (two sites within the statutory forest), with the remainder held by a mix of public and private landholders. Core sites include two National Nature Reserves (Highbury Wood and The Hudnalls), the RSPB reserve at Nagshead, and Gloucestershire Wildlife Trust nature reserves. SSSIs on private land remain subject to Natural England's consent regime. The Severn Estuary's intertidal core areas are Crown foreshore.

Buffer zones: The twenty-two buffer zones comprise a mix of Crown land managed by Forestry England (two zones within the statutory forest), land within the Wye Valley National Landscape managed by a combination of private owners, conservation bodies and Forestry England, common land subject to registered commoning rights, and RAMSAR-designated wetland (Severn Estuary

and Walmore Common) managed through coordinated partnerships involving Natural England, Natural Resources Wales and the Environment Agency. Private agricultural and forestry land forms a significant proportion of the buffer, particularly in the Wye Valley and the Severn fringe.

Transition area: The transition area encompasses the remainder of the Forest of Dean district (55,442.80 hectares terrestrial, 700.19 hectares marine). Land tenure is mixed: private freehold and leasehold (residential, agricultural, commercial); common land with registered commoning rights; Crown land managed by Forestry England; land held by Forest of Dean District Council and Gloucestershire County Council; land held by registered social landlords; and land managed by conservation bodies including Gloucestershire Wildlife Trust, RSPB, the Woodland Trust and the National Trust (May Hill). Agricultural land, including both arable cropland (20% of biosphere area) and modified grassland (27.2%), is predominantly in private ownership. Woodland covers 24.4% of the biosphere area (13,693 hectares), with the statutory forest managed by Forestry England and private woodland in a mix of managed and unmanaged holdings. Urban land (9.4%) includes the principal settlements of Cinderford, Coleford, Lydney and Newent.

Across all zones, the biosphere governance structure does not alter existing land ownership, tenure or rights. Commoning rights, freemining rights and all other customary and statutory entitlements remain unaffected by the designation.

17.1.6 Is there a single manager/coordinator of the biosphere reserve or are several people in charge of managing it? If one manager/coordinator, who designates and employs him/her (national authorities, environmental administrative agency, local authorities)?

A Biosphere Coordinator will serve as the single point of coordination for the biosphere. This is a full-time post, operationally hosted by the Biosphere Delivery Partnership (through the Forest Economic Partnership CIC) but serving all governance bodies impartially. The Coordinator is supported by a Monitoring and Data Officer (part-time or shared with existing council or FEP resource).

The Coordinator is responsible for managing the logistics of all governance meetings across the three bodies; coordinating the sortition processes for the Stewardship Assembly and Charter Assembly (working with an independent facilitation provider); compiling and distributing indicator data to the Custodians and Monitoring Panel, including river health data from the Environment Agency and citizen science networks; maintaining the public record of Assembly recommendations, Partnership responses and Panel reports; managing the biosphere's public communications; and supporting the Biosphere Champion's external engagement programme.

Although hosted by the Delivery Partnership, the Coordinator has a duty to serve all governance bodies equally. The Custodians and Monitoring Panel has the right to request data, commission analysis and access records independently of the Partnership Board. The Stewardship Assembly's deliberative process is managed by an external facilitation provider, ensuring that the Coordinator does not control the process through which strategic direction is set.

17.1.7 Are there consultative advisory or decision-making bodies (e.g., scientific council, general assembly of inhabitants of the reserve) for each zone or for the whole biosphere reserve?

- If yes, describe their composition, role and competence, and the frequency of their meetings.

The biosphere governance model comprises a foundational charter, three core bodies and one complementary representative role, each operating across the whole biosphere territory rather than being confined to individual zones. The structure is designed to reflect the Forest of Dean's deep tradition of distributed, self-governing authority, in which custodial guardianship, operational coordination, civic voice and external representation have been differentiated and maintained across several centuries.

The Forest Charter

The Forest Charter is the constitutive document of the biosphere. It declares the rights of the Forest's living system, encompassing woodland and water, naming the Severn and the Wye alongside the forest as entities whose health the governance structure exists to protect. It establishes the principles from which the three governance bodies derive their mandate and provides the normative anchor that holds the architecture together: the thing all three bodies serve and none of them own.

The Charter draws on a tradition of rights-making that spans eight centuries of Forest and regional history. The Charter of the Forest (1217) re-established rights of access eroded since the Norman Conquest; its special courts, including the Verderers' court, still function in the Forest of Dean. The Dean Forest (Mines) Act 1838 formalised the customary rights of freeminers through statutory registration. In the same year and within the same political ferment, the People's Charter was published, connecting the defence of customary rights in the Forest to the national demand for political representation. The Chartist National Land Company acquired 268 acres at Snig's End in Corse, Gloucestershire, building 85 cottages: a practical act of reclaiming land for working people that mirrored the resistance of Forest of Dean communities against enclosure. This shared history of defending common rights against concentrated power provides a unifying thread for communities across the whole district, including those in the north who may feel closer to Tewkesbury than to the statutory forest interior.

The Forest Charter builds on this lineage by extending the scope of rights-making to the living system itself: from the rights of commoners (1217), to economic rights (1838), to political rights (Chartism), to public ownership (the successful 2010 defence against forest sell-off), to the rights of the Forest's ecology. The Charter incorporates the Rights of Nature doctrine and aligns with the Rights of Rivers charter adopted by Forest of Dean District Council in January 2026, which already recognises the rivers Wye, Leadon and Severn as a living system with fundamental rights.

The Charter is adopted through a dedicated Charter Assembly: a one-off constitutive process convened before or at the point of designation. Total participation: approximately 50 to 60 members. Composition: randomly selected residents (30 to 36, via civic lottery stratified by ward, age, gender and employment status, with geographic stratification ensuring representation from river, estuary and valley communities alongside the forest interior); parish and town council nominees (4 to 6, including at least one from a river or estuary parish); constitutional heritage representatives (3 to 4, including a Verderer, a freeminer and a representative of surviving river fishing heritage where possible); commoner representatives (1 to 2, nominated through commoners' associations); ecological and academic expertise (3 to 4, with at least one member with river ecology expertise); SME and enterprise representatives (2 to 3, nominated by the Forest Economic Partnership); young people aged 16 to 25 (2 to 3); and voluntary and community sector (1 to 2, nominated by the Forest Voluntary Action Forum). The Charter Assembly convenes over three to four days, comprising structured briefings, facilitated small-group deliberation and plenary synthesis leading to formal

adoption by consensus. The Charter is reviewed through a reconvened Charter Assembly aligned with the UNESCO ten-year periodic review cycle.

The Stewardship Assembly (deliberative direction-setting)

The Stewardship Assembly is the deliberative body of the biosphere. It sets strategic priorities, reviews performance against indicators and surfaces trade-offs between economic development and ecological integrity. Its recommendations carry formal weight: the Delivery Partnership is required to publish a written response to each recommendation, and the Custodians and Monitoring Panel reviews the adequacy of those responses.

Total membership: approximately 40 to 50 participants. The Assembly combines randomly selected residents (24 to 30, via civic lottery managed by an independent facilitation provider, stratified by ward, age, gender and employment status) with representatives drawn from existing Forest institutions: parish and town council nominees (4 to 6, rotated annually across parishes); SME and enterprise representatives (2 to 3, nominated by the Forest Economic Partnership); young people aged 16 to 25 (2 to 3, recruited through Hartpury University and College, the Forest of Dean Youth Association via FVAF, local secondary schools and connections to the UK Youth Man and Biosphere network); commoner and land-based representatives (1 to 2, nominated through commoners' associations and grazing networks); river and estuary heritage representatives (1 to 2, nominated through traditional fishery associations, river heritage groups or estuary community organisations); and voluntary and community sector (1 to 2, nominated by FVAF). Recreational river and water users, including anglers, wild swimmers and water sports participants, are represented through the sortition pool, through nominated seats where their organisations are affiliated to FVAF or the Forest Economic Partnership, and through the Visitor Economy and Access Domain Circle described below.

The Assembly meets on a biennial full assembly cycle (two to three days) with an annual plenary in the intervening year. Recommendations are developed through facilitated deliberation using Citizens' Assembly methodology: structured learning phases, small-group discussion, plenary synthesis and iterative drafting. The Assembly has no executive power; its authority is deliberative.

The Biosphere Delivery Partnership (operational coordination)

The Delivery Partnership is the operational body of the biosphere. It coordinates action across conservation, sustainable development and community wellbeing, aligning the work of existing organisations around priorities set by the Stewardship Assembly. It does not replace existing statutory functions. It provides a coordination framework within which those functions can be directed toward biosphere objectives.

The Partnership is organised in two tiers. A Partnership Board meets quarterly and includes: Forest of Dean District Council; Gloucestershire County Council; Forestry England; the Forest Economic Partnership (FEP); Wye Valley National Landscape; Natural England; Gloucestershire Wildlife Trust; Hartpury University and College; Forest Voluntary Action Forum (FVAF); Forest of Dean Climate Action Partnership (FoDCAP); a health and wellbeing sector representative (NHS Gloucestershire ICB or Forest community health lead); the Environment Agency; the Severn Estuary Partnership or a river heritage representative; and the chairs of the five Domain Circles. The FEP's existing role as the proposed interim governance body for the biosphere application provides a natural transition; the Partnership Board builds on and expands FEP's convening function.

Operational delivery is organised through five Domain Circles meeting monthly: Land Stewardship and Natural Capital (woodland, biodiversity, habitat connectivity, water quality, agricultural land, species monitoring); Enterprise and Local Economy (SME support, local supply chains, manufacturing, social enterprise, skills and employment); Visitor Economy and Access (tourism, recreation, transport, cultural heritage, visitor management, including engagement with anglers, wild swimmers and water sports groups through visitor management planning); Community Wellbeing and Social Capital (health, housing, social inclusion, community resilience, youth, climate adaptation); and Water, Rivers and Estuary (river health, water quality, flood management, fisheries heritage, cross-border Wye coordination, estuary ecology, tidal and coastal management). Each Circle elects a Chair for a two-year term; Chairs sit on the Partnership Board.

Decision-making within Domain Circles is consent-based: proposals are adopted unless a member raises a principled objection. At Partnership Board level, consent-based decision-making applies for operational matters; cross-cutting decisions involving competing priorities are resolved by simple majority vote. The Partnership Board implements direction set by the Stewardship Assembly. Where the Board considers a recommendation undeliverable, it must explain this in its formal published response rather than disregard it.

The Custodians and Monitoring Panel (oversight and adaptive review)

The Custodians and Monitoring Panel provides independent oversight of biosphere performance. It monitors ecological, economic and social indicators, reviews whether delivery aligns with strategic direction, publishes transparent public reports and prepares the evidence base for UNESCO's ten-year periodic review. The Panel holds no executive authority; its power is reputational and evidential.

Total membership: 7 to 9. Composition: ecological science (1 to 2, appointed by the Stewardship Assembly on recommendation of Hartpury University or the University of Gloucestershire); freshwater and river ecology (1, appointed on recommendation of the Environment Agency, Hartpury University and/or the Wye Valley National Landscape); economic resilience (1, appointed on recommendation of the Forest Economic Partnership); social and health data (1); a Verderer representative (nominated by the Court of Verderers, serving for as long as the Court considers appropriate); a river heritage representative (drawn from traditional fishery associations, river conservation groups or estuary heritage communities); a data and monitoring lead (responsible for maintaining the Six Capitals and Doughnut Economics indicator frameworks); and two community oversight members (selected from previous Stewardship Assembly participants). Panel members serve staggered three-year terms, reappointed once.

The Panel meets quarterly, with one meeting each year held as an open public session at the Speech House or another venue with historical resonance. Outputs include a quarterly monitoring bulletin, an annual biosphere condition report (covering Six Capitals condition, Doughnut boundaries assessment, review of Delivery Partnership performance against Assembly recommendations and identified risks) and the ten-year periodic review evidence base for UNESCO submission.

The Biosphere Champion (external representation)

The Biosphere Champion is the public face of the biosphere in dealings beyond the Forest. The role is ambassadorial: it carries no executive, deliberative or oversight authority within the governance structure. The Champion represents the biosphere at UNESCO and MAB events; advocates for the

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Forest in dealings with central government, DEFRA, Natural England and regional bodies; raises the external profile of the biosphere; and attends Stewardship Assembly plenaries and Custodians Panel public sessions as an ex officio participant with speaking rights but no decision-making role. The Champion is appointed by the Stewardship Assembly on the recommendation of the Delivery Partnership Board for a four-year term, renewable once. The role draws on the historical precedent of the Warden of the Forest, who served as the Forest's recognised representative in its dealings with the Crown and external authority.

17.1.8 Has a coordination structure been established specifically for the biosphere reserve?

- If yes, describe in detail its functioning, composition and the relative proportion of each group in this structure, its role and competence.
- Is this coordination structure autonomous or is it under the authority of local or central government, or of the manager/coordinator of the biosphere reserve?

Yes. The coordination structure described in Section 17.1.7 has been designed specifically for the biosphere. It is not repurposed from any existing single body but draws existing Forest of Dean organisations into a purpose-built architecture of three interdependent governance bodies, a foundational charter and a complementary representative role.

Functioning

Direction flows from the Forest Charter (as foundational mandate) through the Stewardship Assembly to the Delivery Partnership through formal recommendations. Accountability flows back through the Partnership's published responses and annual delivery report. The Custodians and Monitoring Panel reviews both, providing independent assessment including assessment against Charter rights. The Biosphere Champion reports externally on behalf of all three bodies but is accountable to the Assembly for that representation.

Cross-attendance arrangements maintain coherence without blurring roles: the Custodians Panel Chair attends Partnership Board quarterly meetings as an observer with speaking rights; the Partnership Board Chair attends Panel quarterly meetings on the same basis; the Champion attends Assembly plenaries and Panel public sessions ex officio; and the Biosphere Coordinator attends all governance meetings in an administrative support capacity.

The annual governance calendar runs on a quarterly cycle: Q1 (January to March) focuses on indicator review and condition report drafting by the Panel; Q2 (April to June) sees the Partnership Board prepare its annual delivery report and the Panel finalise and publicly present its condition report; Q3 (July to September) convenes the Stewardship Assembly, which receives both reports and issues recommendations; Q4 (October to December) sees the Partnership Board publish its formal response to Assembly recommendations and the Panel review the adequacy of that response. Domain Circles meet monthly throughout the year.

Composition and relative proportion

The Stewardship Assembly (40 to 50 members) is the largest body. Approximately 60% of its membership is randomly selected residents, ensuring that civic voice forms the majority. The remainder comprises institutional and sectoral nominees, including parish councils, enterprise, youth, commoners, river heritage and the voluntary sector. The Delivery Partnership Board (approximately 18 to 20 members) draws primarily from institutional partners with operational responsibility: councils, land managers, enterprise networks, conservation bodies, health sector and Domain Circle chairs. The Custodians and Monitoring Panel (7 to 9 members) is deliberately small and expert-led, with community oversight through two former Assembly participants. The Charter Assembly (50 to 60 members) is a one-off constitutive body with a similar composition to the Stewardship Assembly but includes additional constitutional heritage representation and commoner representation.

Autonomy

The coordination structure is autonomous. It is not under the authority of local or central government. The Delivery Partnership is operationally hosted through the Forest Economic Partnership CIC, which provides administrative and legal infrastructure, but the governance bodies set their own direction and are not subject to direction by the District Council, the County Council or any government department. The Stewardship Assembly's deliberative process is managed by an independent facilitation provider. The Custodians and Monitoring Panel's independence is structurally protected through its separation from the Delivery Partnership and its right to access data and commission analysis independently. The Forest Charter provides the foundational mandate from which all three bodies derive their authority, ensuring that governance is anchored in principles adopted by the community rather than imposed by any external body.

17.1.9 How is the management/coordination adapted to the local situation?

The governance architecture is not imported from an external model. It emerges from the Forest of Dean's own constitutional history and is designed to formalise governance patterns the Forest has sustained for centuries.

The Forest of Dean's institutional development over several centuries produced a durable pattern of distributed authority in which three functions were differentiated and maintained in negotiated tension: custodial guardianship of rights and ecological balance (the Court of Verderers, river and fishery conservators); operational delivery through embedded local expertise and collective self-organisation (the freemining system, mining lodges, cooperative societies, fishing families and estuary traditions); and civic voice through collective deliberation and negotiated settlement (parish governance, commoner practice, civic mobilisation). Alongside these, a fourth function provided external representation of the Forest's interests through the Warden and Deputy Warden.

The three-body governance model maps directly onto these inherited patterns. The Stewardship Assembly carries forward the tradition of civic deliberation. The Delivery Partnership carries forward the tradition of locally organised, domain-specific execution. The Custodians and Monitoring Panel carries forward the tradition of guardianship separated from operational management. The Biosphere Champion carries forward the representative function of the Warden. The Forest Charter extends the Forest's eight-century tradition of rights-making: from the Charter of the Forest (1217), through the formalisation of freemining rights (1838), through the Chartist movement's demand for political rights in the same period, to the successful community defence of the Forest against sell-off in 2010, to the present declaration of the rights of the Forest's living

system. The Chartist vision of reclaiming land for working people finds its parallel in the Forest's own history of resistance against enclosure, and the Forest Charter consciously draws these threads together to provide a unifying narrative for communities across the whole district.

The governance structure is adapted to the Forest's specific institutional landscape. It does not create new statutory authority but works through existing organisations. The Forest Economic Partnership's CIC structure, its convening role and its stakeholder network provide the institutional base for the Delivery Partnership. The Domain Circle structure reflects the Forest's existing organisational ecology: land stewardship, enterprise, visitor economy, community wellbeing and water. The inclusion of the Water, Rivers and Estuary Domain Circle, together with river and estuary representation in the Stewardship Assembly, Charter Assembly and Custodians Panel, reflects the recognition that the Forest of Dean district is defined by water as much as by trees. The rivers Severn and Wye, together with the Leadon, form the boundaries and arteries of the territory, and their communities, traditions and recreational users, from traditional fishing families to anglers, wild swimmers and water sports participants, are integral to the biosphere's identity.

The governance model also reflects the Forest's demonstrated sensitivity to perceived external imposition. The historical record shows that governance arrangements in the Forest destabilise when they proceed without recognised local legitimacy (the 1831 riots, enclosure conflicts, the 2010 sell-off threat). The three-body structure distributes authority precisely to prevent the concentration that the Forest has historically resisted. The use of Citizens' Assembly methodology in the Stewardship Assembly ensures that direction-setting draws on the wider population rather than institutional insiders alone. The consent-based decision-making within Domain Circles draws on sociocratic principles that echo the Forest's own tradition of peer-recognised competence and collective self-management. The Forest Charter's adoption through a dedicated Assembly ensures that the foundational principles are community-authored rather than administratively imposed.

The district council's Rights of Rivers charter, adopted in January 2026, provides an existing policy commitment that the biosphere governance is designed to carry forward and embed within a broader framework of ecological and social stewardship. The biosphere does not introduce a new approach to river rights; it builds on one already adopted by the elected authority.

17.1.10 Is there a procedure for evaluating and monitoring the effectiveness of the management?

Yes. Evaluation and monitoring are structurally embedded in the governance architecture through the Custodians and Monitoring Panel, which exists specifically to provide independent oversight of biosphere performance, separated from the bodies responsible for setting direction and delivering activity.

Ongoing monitoring

The Custodians and Monitoring Panel meets quarterly to review indicator data and delivery reports. It maintains the Six Capitals and Doughnut Economics indicator frameworks, tracking ecological ceilings and social foundations across the biosphere territory. River health data from the Environment Agency, citizen science networks and other sources is compiled and distributed by the Biosphere Coordinator. The Panel publishes a quarterly monitoring bulletin summarising key indicator movements, distributed to all governance participants. The panel will also have the flexible scope to set out monitoring priorities and issue them as live briefs for University education partners to undertake. This will facilitate responsive and timely monitoring exercises in response to any priorities.

Annual assessment

The Panel publishes an annual biosphere condition report, made available to the public. This report covers: Six Capitals condition across all zones; Doughnut Economics boundaries assessment; review of Delivery Partnership performance against Stewardship Assembly recommendations; and identified risks or areas of drift. One quarterly meeting each year is held as an open public session at the Speech House or another venue of historical resonance, at which the Panel presents its assessment and invites questions from residents.

Accountability loop

The Stewardship Assembly receives both the Panel's annual condition report and the Delivery Partnership's annual delivery report. It uses these to assess progress, surface trade-offs and issue recommendations for the next period. The Delivery Partnership is required to publish a formal written response to each Assembly recommendation. The Custodians Panel then reviews the adequacy of those responses. This creates a continuous feedback loop in which direction, delivery and oversight are connected but structurally separated, preventing self-assessment.

Governance review

The governance structure itself is subject to review. The Custodians Panel assesses governance effectiveness as part of its annual condition report, with specific attention to whether the three-body separation is functioning as intended; whether the Assembly's recommendations are receiving substantive responses; whether the Forest Charter's rights are being upheld; whether Domain Circles are achieving coordination without duplicating effort; whether river and estuary communities feel adequately represented; and whether administrative capacity is adequate.

A full governance review will take place two years after designation, consistent with the Forest Economic Partnership's stated intention to reassess governance arrangements post-designation. Subsequent reviews will align with the ten-year UNESCO periodic review cycle. The Forest Charter itself is reviewed through a reconvened Charter Assembly at each periodic review, ensuring that the foundational document evolves alongside the governance structure it underpins.

The governance structure is treated as a living framework, capable of adaptation: consistent with the Forest's long history of institutional evolution and with UNESCO's emphasis on adaptive management.

17.2 Conflicts within the biosphere reserve:

17.2.1 Describe any important conflicts regarding the access or the use of natural resources in the area considered (and precise period if accurate). If the biosphere reserve has contributed to preventing or resolving some of these conflicts, explain what has been resolved or prevented, and how this was achieved for each zone.

Agriculture conflicting with wildlife and local people

- Economics of agriculture, society not valuing their food enough, cheap food and lots of food wasted, expecting cheap food and not paying enough for food production so that farmers don't have to use every cm of land for intensive production.
- The expansion of Intensive Poultry Units and the poo they produce which is phosphate rich. This is then over applied to farming land and leaches into river catchments increasing eutrophication.

- The increase in anaerobic digestion and the risk of spillage of the digestate is an increasing pollution threat.
- The increase in Forever chemicals in the environment and in our own bodies. The proportion of forever chemicals that form the toxic sludge that is spread onto farmers' fields is ubiquitous at every sewage treatment plant in the district.
- Need for food production land area conflicting with area needed for semi natural habitats and other land uses. Regenerative farming not yet seen as acceptable by general farming community.
- Water quality – soil erosion and nutrient runoff polluting the rivers. Significant damage been seen to Wye in particular in recent years.
- Public access – conflict between landowners and locals over where they can walk. Increase in dog ownership since covid and lack of responsibility over dogs (around animals and picking up after them) means conflict exacerbated.
- Pesticides – impact of invertebrate populations and knock on effect on other wildlife in the food chain particularly seen in birds and bats
- Habitat loss (e.g. seminatural grasslands, traditional orchards, ancient and veteran trees and dead wood)
- Land drainage – few ponds and wetlands left
- Watercourse straightening – causing faster water flow and loss of meanders and subtleties of different riverine habitats
- Loss of naturally functioning floodplain (started by the Romans with first built floodwall to hold back the Severn)
- Loss of field margins and permeability of farmed landscape to wildlife – become even worse recently due to reduction in agri-environmental subsidies
- Over management of hedgerows – historic artifact of farming community
- Removal of hedgerows – bigger fields easier to manage with large agricultural machinery, plant more area of high value crops.
- Commoners and access to land to maintain their ancient rights.

Urban expansion and recreational impacts

- Area with many protected wildlife sites, National Landscapes and Crown land that can't be built on, plus areas of grade 1 and 2 agricultural land in the vales. National government not fully taken this into account when re-calculating housing figures in 2025. New housing target is not achievable without causing significant detriment to habitats and species across the biosphere.
- Increased recreational damage due to housing numbers and tourism, e.g. bird disturbance by dogs, nutrification by dogs, erosion of watercourse and pond banks by dogs. Erosion by mountain bikers and illegal path building.
- Wildlife road kill due to increasing number of vehicles on the roads.
- Implication of light spill on bats.

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- Lack of capacity of enforcement of planning conditions therefore non conformity by previous owner taken as excuse by new owners and ends up with creep on conditions and greater negative impacts.

Climate change mitigation verses ecological emergency (should not be to the detriment of biodiversity)

- Wood burners used to heat homes locally, but people don't want to pay high cost for wood when surrounded by woodland. Some houses come with permit to collect fallen wood for the Forest, but general lack of understanding that collection of wood without permission is theft. Both result in lack of dead wood habitat over time, impacting dependant species.
- Biodigester development was approved as it provides green energy, but the result has been a change of farming practice in the vale. Now it has become more profitable to grow maise and rye to ultimately feed the biodigester, resulting in loss of field margins and hedges to squeeze more land area out and change to very intensive farming system in the Severn Vale area. Land now of little biodiversity value and very impermeable to wildlife. Under increase heavy rainfall, subsequent runoff from maise fields causes flooding and blockage of major A road.
- Solar development on agricultural land in some cases are potentially increasing biodiversity value, but conflict in particular with ground nesting birds where nesting areas are taken – how many times can birds be moved on to a other mitigation area before they give up - and waterbirds and water dependant invertebrates that may mistake the reflectance for water surface (anti glare coating only lasts for a small number of years, not the lifetime of the panels) – needs review of up to date research, and commissioning of research or evaluation of planning application constraints monitoring and updating of local planning policy.
- Wind turbines – conflict if located on bat flightlines or feeding grounds and bird flight pathways, particularly in the Severn Vale where they may interfere with overwintering and migrating bird movements – needs review of up to date research, and commissioning of research or evaluation of planning application constraints monitoring and updating of local planning policy

Protection of designated area verses supporting/functionally linked land

- The international and SSSI designations in the Forest of Dean biosphere are quite old and Natural England has not had the capacity to review them. There has been talk from NE in the past about, extending the Bat SAC to include key flightlines and feeding areas, rather than just roost curtilage. And also about designating a larger contiguous areas of woodland down the Wye Valley rather than just the existing chunks, but reductions in NE's workforce and budget means that reviewing or carrying out new designations is not a priority.

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17.2.2 If there are any conflicts in competence among the different administrative authorities in the management of the biosphere reserve, describe these.

The Biosphere falls within a three tier local governance area, with a County Council, (Gloucestershire), District Council (Forest of Dean District Council) and 42 town and Parish Councils. All three tiers have elected councillors (sometimes co-opted in parish and town councils) to represent and support their areas.

Both Gloucestershire and Forest of Dean District Council are full partners of the Forest of Dean Biosphere partnership having, severally, discussed and voted to support a Biosphere application for the Forest of Dean.
Parish councils operate in very resource constrained context, predominantly voluntary organisations often covering sparce populations with a focus on addressing local issues. Whilst the biosphere steering group has written to every Parish/Town Council and held target workshops for the group, engagement from the sector is not widespread and it continues to be an important area of work.

17.2.3 Explain the means used to resolve these conflicts, and their effectiveness.

In 2028 Gloucestershire will be moving from a two-tier administrative structure (County Council & District Council) to a single tier, unitary authority structure. At a Gloucestershire level, proposals are well underway and the process will create both opportunities and challenges for the FoD Biosphere. Unitary councils will have distinct 'neighbourhood partnerships' to reflect local priorities and values. This structure creates an ideal opportunity for FoD Biosphere to be a cornerstone of this new approach in establishing a 'neighbourhood' for the Forest of Dean area within the new administration. Within the new structure the FoD Biosphere will have a distinct prominence to its objectives, ambition and values.
While the new neighbourhood partnership models are currently in the process of development in close partnership between Gloucestershire County Council and the district councils of the county; it is our intention to ensure that the Biosphere Governance Model is utilised to ensure the continuation of the distinct and historic relationship between community and nature within the Forest of Dean District. The governance model's protection of the heritage of self-governance embedded in the Forest of Dean's culture is intended as a means of resolution in itself.

17.3 Representation, participation and consultation of local communities:

17.3.1 At what stages in the existence of a biosphere reserve have local people been involved: design of the biosphere reserve, drawing up of the management/cooperation plan, implementation of the plan, day to day management of the biosphere reserve? Give some specific examples.

Local people have been involved at every stage of the biosphere's development, from the earliest exploration of designation through to the ongoing shaping of the governance framework. The governance approach draws on the Forest's own historic and community-based practices, and the

process of socialising and refining it with communities across the district is continuing. It has deepened in scope and reach over time.

Exploration and feasibility (2019–2021)

The Forest Economic Partnership (FEP) was presented in 2019 with an Office for National Statistics report setting out an economic case for biosphere designation. Between October and December 2021, FEP conducted a public survey entitled "The Forest We Want" (now known as "Our Forest") to gather feedback on the idea of becoming a biosphere. Over 600 individuals and 40 businesses responded. This initial engagement established that there was broad public interest in the concept and identified early themes around protecting the Forest's character, supporting local enterprise and strengthening community voice.

Candidate status and institutional engagement (2024)

Council officers presented the proposal to the UNESCO UK Man and Biosphere (MAB) Committee, which subsequently granted candidate status to the Forest of Dean. A unanimous vote at Forest of Dean District Council finalised the decision to support an application, followed by support from Gloucestershire County Council. A business survey was conducted to understand enterprise perspectives. Officers briefed the Verderers' Court and visited the Freeminers at Hopewell Colliery to discuss how freemining heritage and commoning traditions would sit within the nomination. These meetings confirmed that the Forest's constitutional heritage groups would be integral to the governance design.

Broad community engagement and governance design (2025–2026)

Engagement widened significantly from 2025. A stakeholder conference at the Wilderness Centre in Mitcheldean brought partners from across the country, with presentations from Biosffer Dyfi Biosphere and North Devon UNESCO Biosphere sharing practical experience of how communities have benefited from designation. A primary school poster competition engaged younger children, with Tibberton Primary School selected as the winner and using their £500 prize for a biodiversity project. Young Planners attended a presentation by council officers exploring how planning intersects with environmental protection and tourism management.

The Forest Voluntary Action Forum (FVAF) and Wylderne (the community business that operates the Wilderness Centre) were commissioned to lead a dedicated community engagement programme. Since late January 2026, they have visited drop-in centres, youth groups and community hubs across the district, including sessions in Newent, Coleford, Blakeney, Lydney, Staunton and Corse, Ruardean, Cinderford, Sedbury and an LGBTQ+ workshop in Coleford. These sessions reached a range of ages and demographics, from 11 to 13, 13 to 15, 15 to 17 and up to 21, as well as older adults. Participants described the Forest's distinct qualities as freedom, easy access to nature, resilience, resistance, self-reliance, knowledge of healing plants and ancient customs. They identified its enduring culture as arising from being a "working Forest." Visions for the future included greater self-sufficiency in food production, reviving traditional forest skills and establishing a circular economy.

An online engagement platform (Polis) was used to collect opinions from across the district. Out of 69 submitted statements, participants voted to agree, disagree or pass, with the platform's algorithm identifying areas of common ground alongside division of opinion. Video chat rooms were also

trialled, though uptake was limited. An A5 information leaflet was delivered to every household in the district during March 2026, directing residents to the biosphere website.

Town and parish council engagement has been extensive. A dedicated workshop for town and parish councillors was held at the Wilderness Centre in February 2026. Officers have attended bespoke meetings at West Dean Parish Council, Cinderford Town Council, Westbury on Severn Parish Council and the Visit Dean Wye AGM, each at the request of those bodies. A presentation was given to the Local History Society AGM. The biosphere featured on BBC Radio Gloucestershire, and a collaboration was established with the University of the West of England, where undergraduate students are using GIS expertise to support the nomination process.

The governance framework has grown out of the Forest's own historic and community-based practices rather than being designed from above. The three-body structure reflects patterns of distributed authority that the Forest has sustained for centuries: civic deliberation, locally organised delivery and custodial guardianship separated from operational management. Professor Chris Short of the University of Gloucestershire's Countryside and Community Research Institute has supported the process, working alongside the Senior Sustainable Development Analyst and the FVAF engagement programme. The framework, including the Forest Charter concept and the proposed compositions of the Stewardship Assembly and Charter Assembly, has been presented to and discussed with community groups, parish councils, the Verderers, the Freeminers and the Commoners as an evolving proposal that communities are invited to shape. This socialisation process is ongoing: feedback so far has already led to the inclusion of commoner representation in the Charter Assembly, the emphasis on river and estuary communities alongside the forest interior, and the strengthened connection between the Charter tradition and northern district communities through the Chartist heritage. The framework will continue to be refined through conversation as it is taken to further groups across the district.

Day-to-day management (post-designation)

Post-designation, local people will remain at the centre of the biosphere's governance through the framework described in Section 17.1.7, which is itself intended to evolve through use. The Stewardship Assembly, with approximately 60% of its membership drawn by civic lottery from the resident population, provides the primary mechanism for ongoing community direction-setting. The Charter Assembly, which will adopt the foundational Forest Charter, is similarly majority-composed of randomly selected residents. Parish and town council nominees, commoner representatives, young people, river heritage representatives and voluntary sector nominees ensure that specific community interests are represented. The annual public session of the Custodians and Monitoring Panel, held at the Speech House or another venue with historical resonance, provides a regular opportunity for any resident to engage directly with the oversight body. A full governance review two years after designation will assess how well the framework is working in practice and adapt it in response to community experience.

17.3.2 Describe how the local people (including women and indigenous communities) have been, and/or are represented in the planning and management of the biosphere reserve (e.g., assembly of representatives, consultative groups).

Local people are represented in the planning and management of the biosphere through multiple channels, designed to reach beyond institutional representatives to the wider population.

The Stewardship Assembly is the primary mechanism for community representation. It combines randomly selected residents (24 to 30 members drawn by civic lottery, stratified by ward, age, gender and employment status) with nominees from parish and town councils, enterprise, youth, commoners, river heritage communities and the voluntary sector. The sortition process is designed by an independent facilitation provider and ensures demographic breadth, including gender balance, across the Assembly. Sortition participants serve for a single assembly cycle and are not eligible for immediate re-selection, preventing capture by any group.

The Charter Assembly, which will adopt the Forest Charter, includes similar sortition-based representation alongside constitutional heritage representatives (Verderers, Freeminers, representatives of surviving river fishing heritage), commoner representatives, ecological and academic expertise, enterprise representatives, young people and the voluntary sector.

Women's participation is supported through the stratified sortition process, which ensures gender balance within the randomly selected membership of both Assemblies. The appointment of the first female Verderer, Sue Middelton, who remains in post, represents a significant shift in the Forest's constitutional heritage institutions. The governance structure does not impose quotas on nominated seats beyond the sortition stratification, but the diversity of nominating bodies (FVAF, FEP, parish councils, youth organisations, river heritage groups) draws from a range of community networks in which women are active participants and leaders.

The Forest of Dean does not have indigenous communities in the sense used by the UN Declaration on the Rights of Indigenous Peoples. However, the Forest has distinct customary communities whose rights and traditions are analogous in their place-based depth: the Commoners, the Freeminers, and the Verderers. These groups have been consulted throughout the process and are structurally represented within the governance model. Commoners are represented in the Charter Assembly and the Stewardship Assembly. The Verderers have a nominated representative on the Custodians and Monitoring Panel. The Freeminers were briefed at Hopewell Colliery and their heritage is embedded in the governance rationale. Since 2010, following a legal challenge, the Freeminer register has been open to women, though uptake remains minimal (one registered female freeminer as of the latest data).

During the pre-designation phase, the FVAF and Wylderne engagement programme has deliberately targeted a wide demographic reach, visiting youth groups, family centres, community hubs and drop-in centres across the district. The Polis platform captured opinion from participants who might not attend formal meetings. The household leaflet drop in March 2026 ensured that every resident in the district received basic information about the biosphere and how to engage.

17.3.3 Describe the specific situation of young people in the proposed biosphere reserve (e.g., potential impacts of the biosphere reserve on youth, consideration of their interests and needs, incentives to encourage them to participate actively in the governance system of the biosphere reserve).

Young people in the Forest of Dean face a combination of opportunity and constraint. The district has higher than average employment in elementary and operative occupations, and youth unemployment, while currently low, has historically fluctuated. Access to further and higher education within the district is being strengthened through the Hartpury University satellite site at Five Acres and the Flagship University Innovation, Careers and Enterprise Learning Centre, both supported by Levelling Up funding. The AccXel Construction School in Cinderford, rated Outstanding by Ofsted, provides apprenticeship pathways. However, many young people still leave the district for education and employment, and the biosphere provides a framework for connecting local skills development to place-based enterprise and environmental stewardship.

The biosphere governance structure includes specific provision for young people at multiple levels. The Stewardship Assembly reserves 2 to 3 seats for young people aged 16 to 25, recruited through Hartpury University and College, the Forest of Dean Youth Association (via FVAF), local secondary schools and connections to the UK Youth Man and Biosphere network. The Charter Assembly similarly includes 2 to 3 young people. The UK MAB network has an active Youth Man and Biosphere group with representatives who feed into national and international forums; the Forest of Dean biosphere would connect local young people to this network, providing a pathway from local participation to international engagement.

The community engagement programme has included dedicated youth sessions at the Chill Out Zone (Newent), Café Sixteen (Coleford), youth workshops in Blakeney, Ruardean and Newent, and an LGBTQ+ workshop in Coleford. Feedback from these sessions revealed that young people's priorities differ by age group: younger participants (11 to 13) expressed strong connection to nature and the value of outdoor access, while older groups (15 to 21) included wider concerns around local amenities, employment and identity. This diversity of perspective reinforces the importance of not treating young people as a homogeneous group within the governance structure.

How best to involve young people meaningfully is an active conversation within the governance process. Community partners, particularly FVAF and colleagues working with youth groups, have emphasised that placing isolated young people on boards dominated by adults can be intimidating and tokenistic. The emerging approach provides for youth seats within the Assemblies (where facilitated deliberation creates a more equal setting), connection to the UK Youth MAB network (which provides peer support and a sense of belonging to a wider movement), potential links to school and sixth form college programmes (where teacher representatives can provide support and the experience can count toward university applications or citizenship curriculum requirements), and upskilling mechanisms so that young people understand the decisions they are being asked to engage with. Schools such as Five Acres and Wyedean have been identified as potentially willing partners, and FVAF's existing connections with youth clubs and family centres across the Forest provide established recruitment channels. The detail of these arrangements will continue to be shaped by the young people and youth workers involved.

The primary school poster competition (won by Tibberton Primary School in April 2025) and the Young Planners presentation demonstrate that engagement with younger age groups is already underway. The University of the West of England collaboration, in which undergraduate students are contributing GIS mapping to the nomination, illustrates how the biosphere can create practical educational and career development opportunities for young people in the region.

17.3.4 What form does this representation take (e.g., companies, associations, environmental associations, trade unions)?

Representation within the biosphere governance structure takes multiple forms, reflecting the diversity of the Forest's organisational landscape.

Community Interest Company: the Forest Economic Partnership (FEP), a CIC, provides the institutional host for the Biosphere Delivery Partnership. FEP's quarterly stakeholder group is open to anyone who lives, works, studies or has an interest in the Forest of Dean district, with over 300 participating organisations and individuals.

Voluntary and community sector: the Forest Voluntary Action Forum (FVAF) is the voluntary sector infrastructure body for the Forest of Dean. It nominates representatives to the Stewardship Assembly and Charter Assembly, and participates in the Delivery Partnership Board and the Community Wellbeing Domain Circle. FVAF's networks encompass youth clubs, family centres, community hubs and a wide range of voluntary organisations.

Conservation and environmental organisations: Gloucestershire Wildlife Trust, RSPB, the Woodland Trust, the National Trust, the Dean Green Team, Common Nature, the Countryside Charity Gloucestershire (CPRE Gloucestershire) and the Forest of Dean Climate Action Partnership (FoDCAP) are all represented within the governance structure through the Delivery Partnership Board and relevant Domain Circles. Letters of support have been received from all of these organisations.

Statutory bodies: Forest of Dean District Council, Gloucestershire County Council, Forestry England, Natural England, the Environment Agency, the Wye Valley National Landscape and the Severn Estuary Partnership are represented on the Delivery Partnership Board.

Educational and research institutions: Hartpury University and College sit on both the Delivery Partnership Board and nominates ecological expertise for the Custodians and Monitoring Panel. The University of Gloucestershire's Countryside and Community Research Institute has supported the governance design process. The University of the West of England has contributed GIS work to the nomination.

Constitutional heritage bodies: the Court of Verderers nominates a representative to the Custodians and Monitoring Panel. The Commoners' associations nominate representatives to the Stewardship Assembly and Charter Assembly. The Freeminers have been consulted, and their heritage is embedded in the governance rationale.

Parish and town councils: the Gloucestershire Association of Parish and Town Councils (Forest of Dean area) nominates representatives to the Stewardship Assembly, rotated annually across parishes. The principal town councils (Lydney, Cinderford, Coleford, Newent) participate in the Visitor Economy and Access Domain Circle.

Individual residents: the sortition process for the Stewardship Assembly and Charter Assembly draws randomly selected residents from across the district, stratified by ward, age, gender and employment status. This ensures that individual residents who are not affiliated with any organisation have an equal opportunity to participate.

17.3.5 Are there procedures for integrating the representative body of local communities (e.g., financial, election of representatives, traditional authorities)?

Yes. The governance framework, which continues to be refined through community engagement, includes the following procedures for integrating community representation.

Sortition (civic lottery): the primary mechanism for integrating the wider community. For both the Stewardship Assembly and the Charter Assembly, randomly selected residents are drawn from a volunteer pool managed by an independent facilitation provider. The pool is stratified by ward, age, gender and employment status, with geographic stratification ensuring representation from river, estuary and valley communities alongside the forest interior. The independent facilitation provider manages the selection process, designs the deliberation programme and facilitates the Assembly sessions, ensuring that the process is not controlled by any governance body or the District Council.

Nomination by existing institutions: parish and town council nominees are selected through the Gloucestershire Association of Local Councils (Forest of Dean area) and rotated annually across parishes. Enterprise representatives are nominated by Forest Economic Partnership from its stakeholder membership. Youth representatives are recruited through Hartpury University and College, the Forest of Dean Youth Association (via FVAF) and local secondary schools. Commoner and land-based representatives are nominated through commoners' associations and grazing networks. River and estuary heritage representatives are nominated through traditional fishery associations, river heritage groups or estuary community organisations. Voluntary and community sector nominees are selected by FVAF.

Constitutional heritage appointment: the Verderer representative on the Custodians and Monitoring Panel is nominated by the Court of Verderers and serves for as long as the Court considers appropriate, recognising the life tenure of Verderers. This reflects the Forest's distinct tradition of custodial guardianship.

Expert appointment: ecological, river, economic and social data expertise on the Custodians Panel is appointed by the Stewardship Assembly on the recommendation of relevant institutions (Hartpury University, Environment Agency, FEP). This ensures that expert oversight is ultimately accountable to the deliberative body rather than to the institutions that nominate the expertise.

The Biosphere Champion is appointed by the Stewardship Assembly on the recommendation of the Delivery Partnership Board, ensuring that the representative role carries legitimacy from the deliberative body while reflecting operational judgement about who can be most effective.

Financial arrangements for the governance structure are hosted through the Forest Economic Partnership CIC. The Secretariat (Biosphere Coordinator and Monitoring and Data Officer) is operationally funded through the Delivery Partnership. Assembly participants receive support for participation costs (travel, childcare, lost earnings) to remove financial barriers to involvement, consistent with Citizens' Assembly best practice.

17.3.6 How long-lived are consultation mechanisms (permanent assembly, consultation on specific projects)? Make a complete description of this consultation. What are the roles of involved stakeholders compared to the role of the biosphere reserve?

The biosphere governance structure establishes permanent, cyclical consultation mechanisms designed to operate for the full duration of the designation and beyond.

The Stewardship Assembly operates on a permanent biennial cycle: a full assembly every two years (two to three days of structured deliberation) with an annual plenary in the intervening year. This cycle is embedded in the governance calendar and will continue for as long as the biosphere designation is maintained. Sortition membership rotates with each cycle, ensuring that the Assembly's composition refreshes while the institution itself endures.

The Charter Assembly is convened as a one-off constitutive process before or at the point of designation and reconvened at each ten-year UNESCO periodic review. It is therefore a periodic mechanism aligned to the designation cycle.

The Custodians and Monitoring Panel's annual public session is a permanent mechanism, held each year at the Speech House or another venue of historical resonance, at which the Panel presents its assessment of biosphere condition and invites questions from residents. This provides a standing annual opportunity for any resident to engage directly with the oversight body.

The Delivery Partnership's five Domain Circles meet monthly on a permanent basis. Their membership is drawn from organisations with operational responsibility, but the meetings are a standing feature of the governance calendar and provide ongoing channels for stakeholder input into specific areas of biosphere activity.

The quarterly progress summaries published by the Partnership Board and the quarterly monitoring bulletins published by the Custodians Panel are permanent communication mechanisms, circulated to all governance participants and available to the public. These ensure that the community receives regular, structured information about biosphere performance.

The governance review process is itself cyclical: the Custodians Panel assesses governance effectiveness annually, a full governance review takes place two years after designation, and subsequent reviews align with the ten-year UNESCO periodic review cycle. The Forest Charter is reviewed through a reconvened Charter Assembly at each periodic review.

In terms of decision-making impact, the consultation mechanisms are designed to be decisional rather than merely informative. The Stewardship Assembly's recommendations carry formal weight:

the Delivery Partnership is required to publish a written response to each recommendation, and the Custodians Panel reviews the adequacy of those responses. The Assembly does not merely advise; it sets direction, and the governance architecture requires public accountability for how that direction is received and acted upon. The Charter Assembly's adoption of the Forest Charter is a constitutive act that establishes the foundational mandate for all three governance bodies. The annual public session of the Custodians Panel is consultative in character, providing a forum for public scrutiny, questions and feedback that informs the Panel's subsequent monitoring and assessment work.

17.3.7 What consultation mechanisms have been used, and who has been involved? Are they for specific purposes or long-term? What impacts have they had on decision-making processes (decisional, consultative or merely to inform the population)?

The following consultation mechanisms have been used during the pre-designation phase, alongside the permanent governance mechanisms described in Section 17.3.6 which will operate post-designation.

Public survey ("The Forest We Want" / "Our Forest," 2021): conducted by the Forest Economic Partnership. Over 600 individuals and 40 businesses responded. Purpose: to gauge public appetite for biosphere designation and identify priorities. Impact: decisional — the survey results informed the decision to proceed with the application and shaped the thematic priorities carried into the governance design.

Stakeholder conference (2025): held at the Wilderness Centre, Mitcheldean, bringing together partners from across the country. Presentations from Biosffer Dyfi and North Devon Biospheres. Letters of support awarded. Purpose: to build institutional backing and share practical experience. Impact: decisional — letters of support from 16 organisations secured; conference themes fed into governance and management design.

Institutional briefings (2024–2026): Verderers' Court briefing; Freeminers visit at Hopewell Colliery; Commoners' engagement; presentations to West Dean Parish Council, Cinderford Town Council, Westbury Parish Council, Local History Society AGM, Visit Dean Wye AGM. Purpose: to ensure the Forest's constitutional heritage groups and parish-level governance were consulted and their concerns addressed. Impact: decisional — community feedback shaped the inclusion of commoner representation in the Charter Assembly, the emphasis on the iterative nature of the governance design, and the strengthened Chartist/enclosure narrative for northern communities.

FVAF and Wylderne community engagement programme (January 2026 onwards): drop-in sessions at community hubs, youth groups and family centres across the district (Newent, Coleford, Blakeney, Lydney, Staunton and Corse, Ruardean, Cinderford, Sedbury). Dedicated youth sessions for age groups 11 to 13, 13 to 15, 15 to 17 and up to 21. LGBTQ+ workshop in Coleford. Purpose: to reach a wide demographic range and capture the views of people who would not attend formal consultation events. Impact: consultative and informative — feedback on the Forest's distinct qualities and visions for the future has been incorporated into the narrative framing of the application and governance design. Questions raised about zonation, commoners' rights and financing have informed the communication strategy.

Polis digital engagement platform (2026): AI-powered opinion-gathering tool collecting agree/disagree/pass votes on 69 community-submitted statements. Moderated for duplicates. Purpose: to capture the widest possible range of views, including from people who prefer digital participation. Impact: consultative — the platform identified areas of common ground and division across the community, informing the governance design's emphasis on iterative socialisation and message discipline.

Household leaflet drop (March 2026): A5 leaflet delivered to every household in the district, directing residents to the biosphere website. Purpose: to ensure universal awareness. Impact: informative.

BBC Radio Gloucestershire feature (2026): biosphere nomination discussed on air. Purpose: to reach a broader audience. Impact: informative.

Town and Parish Councillor workshop (February 2026): held at the Wilderness Centre. Purpose: to engage third-tier local government in the biosphere design. Impact: consultative — discussions drew out different perspectives and reinforced the importance of the Forest's constitutional heritage groups being at the heart of the governance structure.

University collaborations: the University of Gloucestershire's Countryside and Community Research Institute (Professor Chris Short) has supported the governance process and evaluated the Foresters' Forest programme. The University of the West of England contributed GIS mapping. Hartpury University contributed through the Climathon and sustainability initiatives. Purpose: to ground the governance and nomination in academic rigour and provide practical research support. Impact: decisional — academic collaboration has helped to articulate the governance principles already embedded in the Forest's historic and community practices, ensuring the framework is grounded in both local tradition and procedural rigour.

Business survey (2025): conducted to understand enterprise perspectives on the biosphere. Purpose: to ensure the business community's voice informed the application. Impact: consultative — results fed into the economic case and the design of the Enterprise and Local Economy Domain Circle.

Nature and Climate Strategy workshop (2026): run jointly by Forest of Dean District Council and FoDCAP, covering climate adaptation, nature recovery, biodiversity, sustainable economy and governance themes. Attended by representatives from many local organisations. Purpose: to align the biosphere with the council's emerging Nature and Climate Strategy. Impact: consultative — workshop outputs informed the alignment between biosphere objectives and council strategy.

17.3.8 Do women participate in community organizations and decision-making processes? Are their interests and needs given equal consideration? What incentives or programmes are in place to encourage their representation and participation (e.g.: was(were) a "gender impact assessment(s)" carried out)?

Women participate actively in community organisations and decision-making processes across the Forest of Dean, and the biosphere governance structure is designed to ensure that this participation is structurally supported.

Within the governance architecture, the sortition process for the Stewardship Assembly and Charter Assembly is stratified by gender, ensuring that women form an equitable proportion of the randomly selected membership. This is the most direct mechanism for ensuring women's participation in biosphere direction-setting, as it bypasses the institutional gatekeeping that can limit women's access to nominated seats. All members of both Assemblies participate in equal standing, with no distinction in speaking or deliberative rights.

Women hold prominent roles in the Forest's existing governance and community organisations. The appointment of Sue Middelton as the first female Verderer represents a significant shift in an institution with centuries of exclusively male incumbency. Women lead or hold senior positions within FVAF, FoDCAP, conservation organisations, parish councils and the District Council. The FVAF and Wylderne engagement programme that has driven the community consultation process has been led and delivered by women.

The biosphere's engagement programme has included dedicated sessions designed to reach women who might not attend formal consultation events, including family centres (such as the Hilltop Families Centre in Cinderford) and community drop-in hubs. The LGBTQ+ workshop in Coleford also provided a space for perspectives that might otherwise be underrepresented.

No standalone gender impact assessment has been carried out for this application. All Partnership members are bound by the Equality Act 2010, which requires that strategic decision-making gives proper consideration to reducing socio-economic disadvantage, preventing discrimination, and advancing equality of opportunity. The governance structure's use of stratified sortition provides a procedural guarantee of gender balance within the Assemblies that goes beyond the minimum required by equalities legislation.

Research drawn from the application form's gender analysis (Section 9.4) identifies that women in and around the Forest are more likely than men to engage with forest resources for spiritual, ritual and restorative purposes, including gathering herbs and plants for traditional remedies, observing seasonal cycles and using forest spaces for wellbeing activity. Women's literary contributions to the Forest's cultural identity, from Winifred Foley's memoir to Catherine Drew's poetry and Joanne Rush's contemporary writing, represent an alternative form of access and control that interprets and transmits the Forest's significance. These forms of engagement are recognised within the governance framework through the Community Wellbeing and Social Capital Domain Circle, which includes health, social inclusion and community resilience within its scope, and through the Stewardship Assembly's capacity to surface and address the full range of community perspectives on the Forest's value.

The freemining tradition, historically exclusively male, was opened to women in 2010 following a legal challenge. Uptake remains minimal (one registered female freeminer), reflecting the depth of cultural patterns rather than any formal barrier. The biosphere governance structure does not replicate this exclusion; it draws on the functional governance principles embedded in the freemining tradition (domain-specific expertise, peer recognition, collective self-organisation) while

ensuring that the bodies carrying those principles forward are open to all residents regardless of gender.

17.4. The management/cooperation plan/policy:

17.4.1 Is there a management/cooperation plan/policy for the biosphere reserve as a whole?

A detailed biosphere strategy will be developed following formal designation. This is a deliberate choice rather than an omission. The governance framework described in Section 17.1 has emerged from the Forest's own historic and community-based practices, and it is being socialised with communities across the district through an iterative process that is still underway. Producing a fixed management plan before that process has matured would undermine the participatory principles on which the governance is built. The strategy needs to be shaped by the Stewardship Assembly once it is convened, not presented to it as a finished product.

In the interim, the biosphere operates within a robust framework of existing plans, strategies and management arrangements that already cover the territory. These include the Forest of Dean District Council's emerging Sustainable Economic Strategy, which embeds Doughnut Economics principles in decision-making; the council's emerging Nature and Climate Strategy; the Wye Valley AONB Management Plan (adopted under Section 89 of the Countryside and Rights of Way Act 2000, currently being replaced); Forestry England's forest management plans for the statutory forest; the Environment Agency's catchment management plans; SSSI and SAC management plans overseen by Natural England; the Local Nature Recovery Strategy being developed across Gloucestershire; and a set of Prosperity Indicators developed and agreed through the Forest Economic Partnership. The biosphere governance framework provides the coordinating architecture within which these existing plans can be aligned toward shared biosphere objectives.

The Forest of Dean District Council's Rights of Rivers charter (January 2026) and climate emergency declaration (December 2018) provide additional policy commitments that the biosphere strategy will carry forward.

17.4.2 Which actors are involved in preparing the management/cooperation plan? How are they involved?

The biosphere strategy will be prepared through the governance framework described in Section 17.1, ensuring that it is a product of the community rather than of any single institution.

The Stewardship Assembly will set the strategic priorities that the strategy must address. Its membership, drawn approximately 60% from randomly selected residents and the remainder from parish councils, enterprise, youth, commoners, river heritage and voluntary sector nominees, ensures that the strategy reflects the priorities of the wider population rather than institutional insiders alone.

The Biosphere Delivery Partnership, through its Partnership Board and five Domain Circles (Land Stewardship and Natural Capital; Enterprise and Local Economy; Visitor Economy and Access;

Community Wellbeing and Social Capital; Water, Rivers and Estuary), will translate the Assembly's strategic priorities into practical implementation. The Domain Circles bring together organisations with direct operational responsibility in each area: Forestry England, Natural England, the Environment Agency, Gloucestershire Wildlife Trust, the Forest Economic Partnership, FVAF, FoDCAP, Hartpury University, Visit Dean Wye, the Wye Valley National Landscape, the Severn Estuary Partnership, town councils, NHS Gloucestershire ICB and others. Their monthly meetings provide the venue for detailed planning and coordination.

The Custodians and Monitoring Panel will provide the evidence base against which the strategy is assessed, drawing on the Six Capitals and Doughnut Economics indicator frameworks. Its annual condition report will identify where the strategy is succeeding, where it is drifting, and where adaptation is needed.

Professor Chris Short of the University of Gloucestershire's Countryside and Community Research Institute has supported the governance process as the strategy is developed. Hartpury University contributes research and monitoring capacity. The University of the West of England has contributed GIS expertise to the nomination and may continue to support spatial analysis.

The Forest's constitutional heritage groups, the Verderers, Freeminers and Commoners, will continue to be involved in strategy preparation through their representation in the Charter Assembly, Stewardship Assembly and Custodians Panel.

17.4.3 Do local authorities formally adopt the management/cooperation plan? Are local authorities making reference to it in other policies and/or plans? If so, please provide details.

Forest of Dean District Council voted unanimously to support the biosphere application and will be a statutory partner on the Biosphere Delivery Partnership Board. Gloucestershire County Council has also formally expressed support. Both authorities are expected to adopt the biosphere strategy once developed and to reference it within their own policy frameworks.

The district council's Sustainable Economic Strategy, currently in development, already embeds Doughnut Economics principles and references the biosphere concept within economic development planning. The council's emerging Nature and Climate Strategy has been developed in parallel with the biosphere process, with a joint workshop held in 2026 covering climate adaptation, nature recovery, biodiversity, sustainable economy and governance themes. The biosphere strategy will dovetail with both.

The Wye Valley AONB Management Plan, adopted under Section 89 of the Countryside and Rights of Way Act 2000, is a material consideration in planning decisions for the constituent local authorities. The biosphere strategy will complement rather than replace this plan, with the Wye Valley National Landscape Manager sitting on the Delivery Partnership Board to ensure alignment.

The Local Nature Recovery Strategy being developed across Gloucestershire involves collaboration between local authorities, landowners and conservation groups. The biosphere strategy will align with and draw upon this framework for habitat restoration and biodiversity priorities within the district.

17.4.4 What is the duration of the management/cooperation plan? How often is it revised or renegotiated?

The biosphere strategy will be developed following designation and will align with the governance cycles described in Section 17.1. It will be a living document, subject to continuous review through the following mechanisms.

The Stewardship Assembly meets on a biennial full assembly cycle with an annual plenary in the intervening year. Each cycle produces formal recommendations on strategic priorities, to which the Delivery Partnership must publish a formal response. This creates a rolling two-year rhythm of strategic review and adaptation.

The Custodians and Monitoring Panel publishes an annual condition report assessing biosphere performance against the Six Capitals and Doughnut Economics indicator frameworks. This annual assessment provides the evidence base for strategy revision.

A full governance review will take place two years after designation, consistent with the Forest Economic Partnership's stated intention to reassess governance arrangements post-designation. This review will also assess the effectiveness of the strategy and recommend adjustments.

The strategy will be comprehensively revised at the ten-year UNESCO periodic review, at which point the Forest Charter will also be reviewed through a reconvened Charter Assembly. This ensures that both the foundational principles and the operational strategy evolve together.

17.4.5 Describe the contents of the management/cooperation plan. Does it consist of detailed measures or detailed guidelines? Give some examples of measures or guidelines advocated by the plan? (Enclose a copy).
The detailed biosphere strategy will be developed following designation through the process described in Section 17.4.2. It will set out practical implementation priorities according to the distinct objectives, geographical environments and biosphere zones, working in partnership with key decision-makers and stakeholders across the Forest of Dean district.

Based on the governance framework and existing policy commitments, the strategy is expected to address the following areas, organised around the five Domain Circles of the Delivery Partnership.

Land Stewardship and Natural Capital: priorities for woodland management, biodiversity recovery, habitat connectivity, species monitoring, agricultural land management and water quality

improvement. Measures will be guided by Natural England's SSSI condition assessments, the Local Nature Recovery Strategy, Forestry England's management plans and the Custodians Panel's Six Capitals monitoring. Specific areas of focus are likely to include heathland restoration, horseshoe bat habitat connectivity, ancient woodland management and the reintroduction of conservation grazing.

Enterprise and Local Economy: priorities for SME support, local supply chain development, skills and employment, social enterprise and the local economic multiplier. Measures will be guided by the Forest Economic Partnership's stakeholder network, the district council's Sustainable Economic Strategy and the Prosperity Indicators framework. The Doughnut Economics principles adopted by the council will provide the evaluative framework for assessing whether economic activity is operating within ecological ceilings and above social foundations.

Visitor Economy and Access: priorities for sustainable tourism, recreation management, transport, cultural heritage interpretation and visitor infrastructure. Measures will be coordinated with Visit Dean Wye, Forestry England's recreation strategy, town council regeneration plans and the Wye Valley National Landscape management plan. Engagement with anglers, wild swimmers, water sports participants and mountain bikers will be integrated through visitor management planning.

Community Wellbeing and Social Capital: priorities for health, housing, social inclusion, community resilience, youth engagement, equity and climate adaptation. Measures will draw on FVAF's community networks, FoDCAP's climate action planning, NHS Gloucestershire ICB's health and wellbeing strategies and the Centre for Sustainable Energy's community climate action work.

Water, Rivers and Estuary: priorities for river health, water quality, flood management, fisheries heritage, cross-border Wye coordination, estuary ecology and tidal management. Measures will be coordinated with the Environment Agency's catchment management plans, the Severn Estuary Partnership, the Wye and Usk Foundation, Natural Resources Wales and the district council's Rights of Rivers charter. The ongoing crisis on the River Wye, where salmon catches have declined by approximately 95% from historical peak, will be a central concern.

Across all domains, the strategy will include specific measures, targets and timescales where appropriate, alongside broader guidelines that recognise the iterative and adaptive nature of biosphere management. The Forest Charter, once adopted by the Charter Assembly, will provide the overarching normative framework within which specific measures are set.

17.4.6 Indicate how this management/cooperation addresses the objectives of the proposed biosphere reserve (as described in section 13.1).

The biosphere strategy, once developed, will address the three core functions required by the UNESCO MAB framework through the governance architecture and Domain Circle structure.

Conservation: the Land Stewardship and Natural Capital Domain Circle and the Water, Rivers and Estuary Domain Circle coordinate action across the core and buffer zones, aligning the work of Forestry England, Natural England, the Environment Agency, Gloucestershire Wildlife Trust, the

Wye Valley National Landscape and commoner representatives. The Custodians and Monitoring Panel provides independent oversight of ecological condition through the Six Capitals indicator framework. The Forest Charter declares the rights of the living system, providing a normative anchor for conservation objectives that is community-authored rather than administratively imposed.

Sustainable development: the Enterprise and Local Economy Domain Circle, the Visitor Economy and Access Domain Circle and the Community Wellbeing and Social Capital Domain Circle coordinate action across the transition area, aligning the work of the Forest Economic Partnership, Visit Dean Wye, FVAF, FoDCAP, town councils and the health sector. The Doughnut Economics framework provides the evaluative lens, assessing whether development is operating within ecological ceilings and above social foundations. The Stewardship Assembly surfaces trade-offs between economic development and ecological integrity, ensuring that these are resolved through deliberation rather than administrative default.

Logistic support (learning, monitoring and adaptation): the Custodians and Monitoring Panel provides the structured monitoring and adaptive review that UNESCO's periodic review process requires. Hartpury University and the University of Gloucestershire contribute research capacity. The Biosphere Coordinator compiles and distributes indicator data. The annual condition report, the quarterly monitoring bulletins and the ten-year periodic review evidence base ensure that learning is formalised and publicly available. The governance structure's continuous feedback loop, in which the Assembly sets direction, the Partnership delivers, and the Panel evaluates, institutionalises adaptive management.

17.4.7 Is the plan binding? Is it based on a consensus?
The biosphere strategy will not be legally binding. UNESCO biosphere designation carries no statutory legal status in UK law and cannot impose enforceable obligations on landowners, businesses or public bodies. The strategy's authority is deliberative, reputational and coordinating rather than regulatory.

However, the governance architecture creates mechanisms that give the strategy practical weight. The Stewardship Assembly's recommendations are developed through facilitated deliberation using Citizens' Assembly methodology, producing reasoned positions that reflect structured community consensus rather than reactive opinion. The Delivery Partnership is required to publish a formal written response to each recommendation, creating a public accountability mechanism. The Custodians Panel reviews the adequacy of those responses, adding independent scrutiny. Where the Partnership considers a recommendation undeliverable, it must explain why publicly rather than simply disregard it.

The Forest Charter, once adopted by the Charter Assembly through consensus, provides the foundational mandate from which all three governance bodies derive their authority. It is not legally enforceable, but it establishes a set of community-authored principles against which governance performance is assessed. The Rights of Rivers charter adopted by Forest of Dean District Council in January 2026 demonstrates how non-binding charters can nonetheless shape public policy and create a rallying point for collective action.

The strategy is therefore based on consensus at multiple levels: the Charter Assembly's adoption of foundational principles; the Stewardship Assembly's deliberative recommendations; and the Delivery Partnership's consent-based operational decision-making within Domain Circles. This layered consensus model reflects the Forest's own governance tradition, in which authority has historically derived from community recognition rather than external imposition.

17.4.8 Which authorities are in charge of the implementation of the plan, especially in the buffer zone(s) and the transition area(s)? Please provide evidence of the role of these authorities.

Implementation of the biosphere strategy is the responsibility of the Biosphere Delivery Partnership, coordinated through its Partnership Board and five Domain Circles. The Partnership does not replace existing statutory authorities; it provides the coordinating framework within which they align their work toward biosphere objectives.

Buffer zones: implementation within the buffer zones is led by the statutory and conservation bodies responsible for the protected designations: Natural England (SSSI and SAC condition, consent and enforcement); Forestry England (woodland management within the statutory forest); the Wye Valley National Landscape (AONB management plan implementation); and the Environment Agency (water quality, flood risk, fisheries management for RAMSAR sites and river corridors). These bodies participate in the Delivery Partnership Board and relevant Domain Circles, ensuring that their statutory activities are coordinated with the wider biosphere strategy. The Severn Estuary Partnership provides coordinating and advisory support for the estuary's cross-border management.

Transition area: implementation within the transition area is coordinated through all five Domain Circles, drawing on the operational capacity of Forest of Dean District Council (planning, housing, economic development, environmental health); Gloucestershire County Council (transport, education, public health); the Forest Economic Partnership (enterprise coordination, stakeholder engagement); FVAF (voluntary and community sector, youth); FoDCAP (climate action); Visit Dean Wye (tourism); Hartpury University (research and education); NHS Gloucestershire ICB (health and wellbeing); and the town councils of Lydney, Cinderford, Coleford and Newent (local regeneration and visitor management). Parish and town councils across the district contribute through their representation in the Stewardship Assembly and their direct engagement with Domain Circle activities.

Evidence of the role of these authorities is provided through the letters of support received from 16 organisations (listed in Section 4.6.1), the unanimous vote of Forest of Dean District Council to support the application, the formal support of Gloucestershire County Council, the Verderers' Court briefing, and the ongoing engagement with the Freeminers and Commoners.

17.4.9 Which factors impede or help its implementation (e.g.: reluctance of local people, conflicts between different levels of decision-making).

Factors that help implementation

The Forest of Dean has an exceptionally strong tradition of community self-organisation and associational activity. The Verderers, Freeminers and Commoners represent living constitutional heritage groups whose participation lends the biosphere a depth of local legitimacy that few UK designations can match. The Forest Economic Partnership's stakeholder network of over 300 participating organisations and individuals provides an established platform for coordination. The district council's early adoption of Doughnut Economics principles, its Rights of Rivers charter and its climate emergency declaration demonstrate institutional commitment to the sustainability agenda that the biosphere formalises. Six years of consultation and engagement, from the initial "Forest We Want" survey through to the current FVAF and Wylderne programme, have built a base of public awareness and support. The stakeholder conference, letters of support from 16 organisations and the biosphere's candidate status with UK MAB all demonstrate broad institutional backing.

The governance framework's roots in the Forest's own historic and community-based practices help to counter the perception that the biosphere is externally imposed. The iterative approach to socialising the governance, working through trusted gatekeepers and respected community figures, building the framework through conversation rather than presenting it as a finished product, is designed to earn the same kind of negotiated legitimacy that the Forest's governance has historically required.

Factors that impede implementation

The Forest's strong sense of place and deep attachment to customary rights - Freemining, Commoning, the Verderers' Court -are central to its identity, and shape how every proposal affecting the Forest is received. The biosphere proposal has been no different.

Concerns have been raised by some residents and community organisations through public meetings, written submissions, the local press and a public petition. They include questions about land ownership and access, about whether biosphere designation could enable carbon credit schemes or external financial mechanisms, about the future of customary rights, about consultation, and about the relationship between local decision-making and external bodies. Some of these concerns reflect misunderstandings of the legal framework, which UNESCO biosphere designation does not change in any of these respects: it carries no statutory planning powers, no land ownership authority, no role in carbon credit creation or trading, and no power to alter or override Freemining, Commoning or the Verderers' Court. Other concerns reflect legitimate questions about how a biosphere governance framework will operate in practice, and the Biosphere team has worked to engage with both kinds.

Direct engagement with the Forest of Dean Commoners' Association -convened through the Association's leadership -began in February 2026, with subsequent meetings in March 2026 and detailed written responses to the Association's questions provided on 11 April 2026. That written exchange is appended to this application. Engagement with the Verderers' Court and the Freeminers, both of whom have been involved in the proposal since 2024, is also continuing.

The Forest's history shows clearly that governance arrangements which proceed without recognised local legitimacy do not endure. The biosphere governance has been designed with that lesson in mind, and the application is being shaped by the engagement that has taken place.

The concurrent development of the local plan has created a context in which some residents feel overwhelmed by planning and policy activity, making it harder to secure attention for the biosphere

on its own terms. Media coverage has at times been poorly informed, leading with sensationalist framing rather than reflecting the consultation that has taken place.

Administrative capacity is a practical constraint. The governance model requires a Biosphere Coordinator and a Monitoring and Data Officer. Securing sustainable funding for these posts, and for the facilitation of the Stewardship Assembly and Charter Assembly, is essential to the framework's viability. Without adequate administrative support, the governance bodies risk becoming unfunded committee structures.

Business engagement remains an area requiring further work. While the Forest Economic Partnership provides the institutional platform, some businesses have been cautious about publicly backing the biosphere while the local plan consultation is ongoing and while misinformation circulates. Building visible business support will be important for demonstrating that the biosphere serves the economic interests of the district as well as its ecological ones.

17.4.10 Is the biosphere reserve integrated in regional/national strategies? Vice versa, how are the local/municipal plans integrated in the planning of the biosphere reserve?
The biosphere is integrated with regional and national strategies at multiple levels.

National level: the biosphere aligns with the UK government's 25 Year Environment Plan and the Environment Act 2021, particularly the duty on public authorities to conserve and enhance biodiversity and the requirement for Local Nature Recovery Strategies. Natural England's management of SSSIs and SACs within the biosphere area is governed by the Wildlife and Countryside Act 1981 and the Conservation of Habitats and Species Regulations 2017. The biosphere's emphasis on adaptive management and structured monitoring is consistent with DEFRA's approach to environmental governance. The Glover Review of National Landscapes specifically referenced the Forest of Dean, noting "considerable local support that national designation would be good" and highlighting the Foresters' Forest programme as "an excellent jumping-off point for a new designation."

Regional level: the Gloucestershire Local Nature Recovery Strategy, being developed collaboratively between local authorities, landowners and conservation groups, provides the regional framework for habitat restoration and biodiversity priorities. The biosphere strategy will align with and draw upon this framework. Gloucestershire County Council's participation in the Delivery Partnership Board ensures that county-level strategies on transport, infrastructure, health and education are coordinated with biosphere objectives.

Local level: the biosphere is closely integrated with Forest of Dean District Council's policy framework. The Sustainable Economic Strategy embeds Doughnut Economics principles and references the biosphere concept. The Nature and Climate Strategy has been developed in parallel with the biosphere process. The council's climate emergency declaration (December 2018) established the institutional context for the biosphere's sustainability objectives. The council's Local Development Framework and planning policies operate alongside the biosphere, with designation carrying no statutory planning weight but providing a framework for aligning planning decisions with sustainability objectives.

Cross-border: the Wye Valley National Landscape's management plan spans both England and Wales, and the National Landscape Manager's participation in the Delivery Partnership Board ensures alignment. Natural Resources Wales provides cross-border liaison for the Welsh sections of the Wye through observer status on the Water, Rivers and Estuary Domain Circle. The Severn Estuary Partnership coordinates estuary management across both countries.

Integration of local plans into the biosphere: the biosphere strategy will not replace existing local plans but will provide the coordinating framework within which they are aligned. Implementation will primarily utilise existing mechanisms: Local Authority plans and strategies; the AONB management plan; Forestry England's forest management plans; Environment Agency catchment and water management plans; SSSI and nature reserve management plans; community-led initiatives such as neighbourhood plans and local sustainability projects; and regional partnerships supporting nature recovery, green infrastructure and sustainable enterprise. Key partners will be encouraged to align their own organisational plans with biosphere objectives, building coherence across the district without imposing a single centralised plan.

17.4.11 Indicate the main source of the funding and the estimated yearly budget.

The biosphere would be funded through four principal income streams: the local authority (Forest of Dean District Council), lead partner contributions, other partner contributions, and grants, research and commercialisation income.

The projected annual budget for biosphere coordination, communications and programme delivery is estimated at £50-80 in the first year of operation (2026/27), rising to £100,000 by 2029/30. The local authority contribution would remain steady at £60,000 per year across the period, providing a stable institutional anchor. Lead partner contributions would form the largest single income stream in the early years (£20,000–£40,000), tapering as grants, research and commercialisation income grows from £10,000 to £60,000. Other partner contributions would rise from £5,000 to £15,000 over the same period. This trajectory reflects a deliberate shift from institutional start up funding toward earned and leveraged income as the biosphere matures and its programmes generate independent value.

These projections represent a conservative operational baseline. An independent economic case prepared in 2019 by the Forest Economic Partnership, supported by a voluntary team of government economists from the Office for National Statistics, assessed the likely returns from biosphere designation using HM Treasury Green Book methodology. That analysis, which applied a 40% optimism bias to both costs and benefits and confined itself to a deliberately limited subset of quantifiable gains (forestry and agricultural GVA uplift, carbon sequestration value, biosphere branding effects and local multiplier effects), projected a benefit to cost ratio of 3.89:1 over a 30 year period. Tourism, health, wellbeing and consumer behaviour benefits were identified as likely but were not quantified, meaning the true return would be expected to exceed this ratio. This evidence base provides a credible foundation for anticipating that the coordination investment described above would generate economic and environmental returns substantially greater than the direct budget, and that the funding model is both proportionate and sustainable.

17.5 Conclusions:

17.5.1 In your opinion, what will ensure that both the functioning of the biosphere reserve and the structures in place will be satisfactory? Explain why and how, especially regarding the fulfillment of the three functions of biosphere reserves (conservation, development, logistic) and the participation of local communities.

The strongest grounds for confidence in this biosphere are not found in the governance documents. They are found in the Forest itself. The Forest of Dean has practised distributed, self-governing authority for centuries. It has differentiated between custodial guardianship, operational delivery, civic voice and external representation without ever using those terms, and it has sustained those distinctions through periods of industrial transformation, enclosure, institutional conflict and economic decline. What the biosphere governance framework does is give that inherited capacity a formal shape. It does not import a model. It names what the Forest already does and creates the procedures through which it can be held accountable to UNESCO's expectations.

This distinction matters because it addresses the most significant risk to any biosphere: that its governance becomes an administrative layer that sits above and apart from the communities it is supposed to serve. In the Forest of Dean, the historical record is unambiguous on this point. Governance arrangements that proceed without recognised local legitimacy destabilise. The 1831 riots followed enclosure and restriction of customary rights. The 2010 mobilisation against forest sell-off invoked the Charter of the Forest by name. The contemporary resistance to the biosphere from a small minority follows the same pattern: anxiety that something is being done to the Forest rather than by it. The governance framework is designed to prevent exactly that, by distributing authority across three bodies each rooted in an identifiable Forest tradition, by grounding the whole structure in a community-authored Forest Charter, and by ensuring that the process of building and refining the framework is itself iterative, carried out through conversation with the people whose traditions it draws on.

Conservation

The biosphere's conservation function rests on an extensive foundation of existing statutory protection: 49 SSSIs, parts of four SACs, two SPAs, two RAMSAR sites and two National Nature Reserves, overseen by Natural England, Forestry England and the Environment Agency. What the biosphere adds is coordination. The Land Stewardship and Natural Capital Domain Circle and the Water, Rivers and Estuary Domain Circle bring together bodies that already manage these designations but have lacked a shared operational framework for doing so across the whole district. The Custodians and Monitoring Panel provides the independent oversight that prevents conservation performance from being self-assessed by those responsible for delivery. Its authority is reputational and evidential rather than executive, which mirrors the role of the Verderers: guardians whose power lies in their standing and their independence, not in operational control. The Forest Charter, once adopted, will declare the rights of the living system, encompassing woodland and water, providing a normative anchor that connects conservation to the Forest's own constitutional tradition rather than presenting it as an externally imposed obligation. The district council's Rights of Rivers charter, adopted in January 2026, already demonstrates that this approach has institutional traction.

Sustainable development

The biosphere's development function is grounded in the Forest's existing economic character: a predominantly rural mixed economy with strong SME and micro-enterprise activity, deep traditions

of local self-organisation and a district council that has committed to Doughnut Economics principles in its decision-making. The Forest Economic Partnership's stakeholder network of over 300 participating organisations and individuals provides the platform. The Enterprise and Local Economy, Visitor Economy and Access, and Community Wellbeing and Social Capital Domain Circles create the operational structure. The Stewardship Assembly's role in surfacing trade-offs between economic development and ecological integrity is critical: it ensures that these tensions are resolved through structured community deliberation rather than by administrative default or by whichever interest shouts loudest. The Assembly's composition, with approximately 60% randomly selected residents, protects against capture by any single group and maintains a direct connection between the biosphere's direction and the wider population.

The Forest's own economic history reinforces confidence in this function. Economic life in the Forest has historically been organised through embedded, place-based institutions: the freemining system, mining lodges, cooperative societies, friendly societies. These were not administered from outside. They were locally organised, domain-specific and grounded in peer-recognised competence. The Delivery Partnership's Domain Circle structure, with its consent-based decision-making and elected Circle Chairs, carries forward this tradition within a contemporary framework. The biosphere's development function is therefore not a new imposition. It is a formalisation of how the Forest has always organised productive activity: locally, collectively and with a strong sense that economic rights and ecological stewardship are not separable.

Logistic support (learning, monitoring and adaptation)

The logistic function is where the governance architecture's structural separation is most consequential. Most UK biospheres operate through a single partnership board that deliberates, delivers and monitors its own performance. The Forest of Dean separates these functions. The Custodians and Monitoring Panel monitors ecological, economic and social indicators independently of the Delivery Partnership. Its annual condition report, quarterly monitoring bulletins and ten-year periodic review evidence base create a public record against which the biosphere's claims can be tested. Hartpury University and the University of Gloucestershire provide research capacity. The Six Capitals and Doughnut Economics indicator frameworks provide the analytical tools. The continuous feedback loop, in which the Assembly sets direction, the Partnership delivers and the Panel evaluates, institutionalises adaptive management in a way that a single board cannot.

The historical logic here is again instructive. The Forest has always needed its guardians to be separate from its managers. The Verderers were not the Warden. The Court was not the Commission. When guardianship and management were conflated, or when guardianship was weakened, the Forest's ecological and social fabric suffered. The Custodians Panel extends this principle to the full range of indicators relevant to the biosphere. It does not replicate the Verderers' specific statutory remit, but it draws on the same constitutional logic: oversight separated from delivery, with transparency as its instrument.

Community participation

Community participation is not a separate function bolted onto the governance structure. It is the condition on which all three functions depend. The Stewardship Assembly, grounded in Citizens' Assembly methodology and civic lottery, ensures that the biosphere's strategic direction is set by the wider population rather than by institutional representatives alone. The Charter Assembly ensures

that the foundational principles are community-authored. The Domain Circles ensure that operational delivery draws on the organisations and individuals who have direct knowledge of and responsibility for each area. The sortition process ensures demographic breadth, including gender balance and geographic representation across river, estuary, valley and forest interior communities. The annual public session of the Custodians Panel ensures that oversight is transparent and accessible.

The governance framework's iterative development, worked through conversation with the Verderers, Freeminers, Commoners, parish councils, youth groups, community hubs and the wider public, is itself evidence of the participatory culture on which the biosphere depends. The framework has been shaped by the feedback it has received: commoner representation in the Charter Assembly, the strengthened Chartist narrative for northern communities, the emphasis on river and estuary inclusion, the approach to youth participation. It will continue to be shaped. The two-year post-designation governance review and the ten-year Charter review ensure that the structure adapts to community experience rather than ossifying.

What makes this biosphere distinctive is not its governance innovation, though the three-body separation and the Forest Charter are unusual within the UK context. It is that the governance reflects something the Forest already is. The patterns of authority it formalises are the same patterns the Forest has sustained through centuries of change. The traditions it draws on are living traditions, carried by people who are part of the governance process. The Charter it proposes extends a lineage of rights-making that the Forest has practised since 1217. The biosphere designation does not ask the Forest of Dean to become something new. It asks it to do, with the recognition and accountability that UNESCO provides, what it has always done: govern itself, steward its landscape and adapt.

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18. SPECIAL DESIGNATIONS:

[Special designations recognize the importance of particular sites in carrying out the functions important in a biosphere reserve, such as conservation, monitoring, experimental research, and environmental education. These designations can help strengthen these functions where they exist or provide opportunities for developing them. Special designations may apply to an entire proposed biosphere reserve or to a site included within. They are therefore complementary and reinforcing of the designation as a biosphere reserve. Check each designation that applies to the proposed biosphere reserve and indicate its name]

Name:

( ) UNESCO World Heritage Site

( ) RAMSAR Wetland Convention Site

( ) Other international/regional conservation conventions/directives (specify)

( ) Long term monitoring site (specify)

() Long Term Ecological Research (LTER site)

( ) Other (specify)

19. SUPPORTING DOCUMENTS (to be submitted with nomination form):

(1) Location and zonation map with coordinates
[Provide the biosphere reserve's standard geographical coordinates (all projected under WGS 84).
Provide a map on a topographic layer of the precise location and delimitation of the three zones of the biosphere reserve (Map(s) shall be provided in both paper and electronic copies). Shapefiles (also in WGS 84 projection system) used to produce the map must also be attached to the electronic copy of the form. If applicable, also provide a link to access this map on the internet (e.g. Google map, website).]

(2) Vegetation map or land cover map
[A vegetation map or land cover map showing the principal habitats and land cover types of the proposed biosphere reserve should be provided, if available].

(3) List of legal documents (if possible with English, French or Spanish synthesis of its contents and a translation of its most relevant provisions)
[List the principal legal documents authorizing the establishment and governing use and management of the proposed biosphere reserve and any administrative area(s) they contain. Provide a copy of these documents.

(4) List of land use and management/cooperation plans
[List existing land use and management/cooperation plans (with dates and reference numbers) for the administrative area(s) included within the proposed biosphere reserve. Provide a copy of these documents. It is recommended to produce English, French or Spanish synthesis of its contents and a translation of its most relevant provisions]

(5) Species list (to be annexed)
[Provide a list of important species occurring within the proposed biosphere reserve, including common names, wherever possible.]

(6) List of main bibliographic references (to be annexed)
[Provide a list of the main publications and articles of relevance to the proposed biosphere reserve over the past 5-10 years].

(7) Original Endorsement letters according to paragraph 5

(8) Further supporting documents.

20. ADDRESSES:

20.1 Contact address of the proposed biosphere reserve:
[Government agency, organization, or other entity (entities) to serve as the main contact and to whom all correspondence within the World Network of Biosphere Reserves should be addressed.]

Name: _____

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Street or P.O. Box: _____
City with postal code: _____
Country: _____
Telephone: _____
E-mail: _____
Web site: _____

20.2. Administering entity of the core area(s):

Name: _____
Street or P.O. Box: _____
City with postal code: _____
Country: _____
Telephone: _____
E-mail: _____
Web site: _____

20.3. Administering entity of the buffer zone(s):

Name: _____
Street or P.O. Box: _____
City with postal code: _____
Country: _____
Telephone: _____
E-mail: _____
Web site: _____

20.4. Administering entity of the transition area(s):

Name: _____
Street or P.O. Box: _____
City with postal code: _____
Country: _____
Telephone: _____

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E-mail: _____

Web site: _____

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Annex I to the Biosphere Reserve Nomination Form, January 2013

MABnet Directory of Biosphere Reserves

Biosphere Reserve Description[6]

Administrative details

Country:
Name of BR:
Year designated: (*to be completed by MAB Secretariat)*
Administrative authorities: (17.1.3)
Name Contact: (20.1)
Contact address: *(Including phone number, postal and email adresses)* (20.1)

[6] To be posted on the MABnet once the nomination has been approved. The numbers refer to the relevant sections of the nomination form.

Related links: *(web sites)*
Social networks**: (16.4.3)**

Description

General description: *(Site characteristics in 11.1; human population in 10)*

Approximately 25 lines

Major ecosystem type: (14.1)
Major habitats & land cover types: (11.6)
Bioclimatic zone (11.5)
Location (latitude & longitude): (6.1)
Total Area (ha): (7)
Core area*(s):* (7)
Buffer zone*(s):* (7)
Transition area*(s) :* (7)

Different existing zonation: (7.4)
Altitudinal range *(*metres above sea level): (11.2)
Zonation map(s): (6.2)

Main objectives of the biosphere reserve

Brief description (13.1)

Approximately 5 lines

Research

Brief description (16.1.1)

Approximately 5 lines

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Monitoring

Brief description (16.1.1)

Approximately 5 lines

Specific variables (fill in the table below and tick the relevant parameters)

Abiotic		Biodiversity	
Abiotic factors		Afforestation/Reforestation	
Acidic deposition/Atmospheric factors		Algae	
Air quality		Alien and/or invasive species	
Air temperature		Amphibians	
Climate, climatology		Arid and semi-arid systems	
Contaminants		Autoecology	
Drought		Beach/soft bottom systems	
Erosion		Benthos	
Geology		Biodiversity aspects	
Geomorphology		Biogeography	
Geophysics		Biology	
Glaciology		Biotechnology	
Global change		Birds	
Groundwater		Boreal forest systems	
Habitat issues		Breeding	
Heavy metals		Coastal/marine systems	
Hydrology		Community studies	
Indicators		Conservation	
Meteorology		Coral reefs	
Modeling		Degraded areas	

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Monitoring/methodologies		Desertification	
Nutrients		Dune systems	
Physical oceanography		Ecology	
Pollution, pollutants		Ecosystem assessment	
Siltation/sedimentation		Ecosystem functioning/structure	
Soil		Ecosystem services	
Speleology		Ecotones	
Topography		Endemic species	
Toxicology		Ethology	
UV radiation		Evapotranspiration	
		Evolutionary studies/Palaeoecology	
		Fauna	
		Fires/fire ecology	
		Fishes	
		Flora	
		Forest systems	
		Freshwater systems	
		Fungi	
		Genetic resources	
		Genetically modified organisms	
		Home gardens	
		Indicators	
		Invertebrates	
		Island systems/studies	
		Lagoon systems	
		Lichens	
		Mammals	
		Mangrove systems	
		Mediterranean type systems	
		Microorganisms	
		Migrating populations	
		Modeling	
		Monitoring/methodologies	
		Mountain and highland systems	
		Natural and other resources	
		Natural medicinal products	
		Perturbations and resilience	
		Pests/Diseases	
		Phenology	
		Phytosociology/Succession	
		Plankton	
		Plants	
		Polar systems	
		Pollination	
		Population genetics/dynamics	
		Productivity	
		Rare/Endangered species	
		Reptiles	

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		Restoration/Rehabilitation	
		Species (re) introduction	
		Species inventorying	
		Sub-tropical and temperate rainforest	
		Taxonomy	
		Temperate forest systems	
		Temperate grassland systems	
		Tropical dry forest systems	
		Tropical grassland and savannah systems	
		Tropical humid forest systems	
		Tundra systems	
		Vegetation studies	
		Volcanic/Geothermal systems	
		Wetland systems	
		Wildlife	

Socio-economic		Integrated monitoring	
Agriculture/Other production systems		Biogeochemical studies	
Agroforestry		Carrying capacity	
Anthropological studies		Climate change	
Aquaculture		Conflict analysis/resolution	
Archaeology		Ecosystem approach	
Bioprospecting		Education and public awareness	
Capacity building		Environmental changes	
Cottage (home-based) industry		Geographic Information System (GIS)	
Cultural aspects		Impact and risk studies	
Demography		Indicators	
Economic studies		Indicators of environmental quality	
Economically important species		Infrastructure development	
Energy production systems		Institutional and legal aspects	
Ethnology/traditional practices/knowledge		Integrated studies	
Firewood cutting		Interdisciplinary studies	
Fishery		Land tenure	
Forestry		Land use/Land cover	
Human health		Landscape inventorying/monitoring	
Human migration		Management issues	
Hunting		Mapping	
Indicators		Modelling	

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Indicators of sustainability		Monitoring/methodologies	
Indigenous people's issues		Planning and zoning measures	
Industry		Policy issues	
Livelihood measures		Remote sensing	
Livestock and related impacts		Rural systems	
Local participation		Sustainable development/use	
Micro-credits		Transboundary issues/measures	
Mining		Urban systems	
Modelling		Watershed studies/monitoring	
Monitoring/methodologies			
Natural hazards			
Non-timber forest products			
Pastoralism			
People-Nature relations			
Poverty			
Quality economies/marketing			
Recreation			
Resource use			
Role of women			
Sacred sites			
Small business initiatives			
Social/Socio-economic aspects			
Stakeholders' interests			
Tourism			
Transports			

Annex II to the Biosphere Reserve Nomination Form, January 2013
Promotion and Communication Materials
For the Proposed Biosphere Reserve

Provide some promotional material regarding the proposed site, notably high quality photos, and/or short videos on the site so as to allow the Secretariat to prepare appropriate files for press events. To this end, a selection of photographs in high resolution (300 dpi), with photo credits and captions and video footage (rushes), without any comments or sub-titles, of professional quality – DV CAM or BETA only, will be needed.

In addition, return a signed copy of the following Agreement on Non-Exclusive Rights. A maximum of ten (10) minutes on each biosphere reserve will then be assembled in the audiovisual section of UNESCO and the final product, called a B-roll, will be sent to the press.

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United Nations
Educational, Scientific and
Cultural Organization

Organisation
des Nations Unies
pour l'éducation,
la science et la culture

Organización
de las Naciones Unidas
para la Educación,
la Ciencia y la Cultura

Организация
Объединенных Наций по
вопросам образования,
науки и культуры

منظمة الأمم المتحدة
للتربية والعلم والثقافة

联合国教育、
科学及文化组织

UNESCO Photo Library
Bureau of Public Information

Photothèque de l'UNESCO
Bureau de l'Information du Public

AGREEMENT GRANTING NON-EXCLUSIVE RIGHTS

Reference:

1. a) I the undersigned, copyright-holder of the above mentioned photo(s) hereby grant to UNESCO free of charge the non-exclusive right to exploit, publish, reproduce, diffuse, communicate to the public in any form and on any support, including digital, all or part of the photograph(s) and to licence these rights to third parties on the basis of the rights herein vested in UNESCO

b) These rights are granted to UNESCO for the legal term of copyright throughout the world.

c) The name of the photographer will be cited alongside UNESCO's whenever his/her work is used in any form.

2. I certify that:

a) I am the sole copyright holder of the photo(s) and am the owner of the rights granted by virtue of this agreement and other rights conferred to me by national legislation and pertinent international conventions on copyright and that I have full rights to enter into this agreement.

b) The photo(s) is/are in no way whatever a violation or an infringement of any existing copyright or licence, and contain(s) nothing obscene, libellous or defamatory.

Name and Address :
Date :

Signature :

(sign, return to UNESCO two copies of the Agreement and retain the original for yourself)

DRAFT

Mailing address: 7 Place Fontenoy, 75352 Paris 07 SP, Direct Telephone: 00331 – 45681687
Direct Fax: 00331 – 45685655; e-mail: photobank@unesco.org;
m.ravassard@unesco.org

United Nations Educational, Scientific and Cultural Organization
Organisation des Nations Unies pour l'éducation, la science et la culture
Organización de las Naciones Unidas para la Educación, la Ciencia y la Cultura
Организация Объединенных Наций по вопросам образования, науки и культуры
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Reference:

1. a) I the undersigned, copyright-holder of the above mentioned video(s) hereby grant to UNESCO free of charge the non-exclusive right to exploit, publish, reproduce, diffuse, communicate to the public in any form and on any support, including digital, all or part of the video(s) and to licence these rights to third parties on the basis of the rights herein vested in UNESCO

   b) These rights are granted to UNESCO for the legal term of copyright throughout the world.

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