

## Technical Annex B – Consideration of Specific Actions and Costs (via Wales Environment Link)

Data from report by Wales Environment Link on Pathways to 2030: 10 key areas for investment in nature’s recovery across Wales (Wales Environment Link, 2023). This details the cost of a premium suite of targets and actions and is here for added context and evidence and is not used for the cost benefit analysis itself. The actions in this section are spread over varying time frames. The cost highlighted in the heading for each action is the total cost of each action annually considering any mitigating circumstances, and will need to be extended along the length of each project should it be considered.

### **Area by Area Breakdown of Annual Costs**

#### ***Access and Public Participation:***

**a. Invest in new urban green spaces: £39.3 million:**

Wales needs substantial investment in green spaces, especially in disadvantaged urban areas. A 2020 report (Vivid Economics and Barton Willmore, 2020) suggested roughly £278 million in capital and £14 million in annual operating costs, averaging £39.3 million annually from 2023 to 2030, to achieve these improvements.

**b. Increase urban tree cover to 20%: £4.3 million:**

To achieve a 20% urban tree cover in Wales by 2030, about 3,169 hectares need tree planting, costing approximately £34.2 million. This averages £4.3 million per year from 2023 to 2030, with a focus on areas currently below the 20% tree cover target. (Wales Environment Link, 2023)

**c. Network of green space champions: £2.2 million:**

To promote green spaces in Wales, a network of champions is proposed. This includes a national champion and 30 local champions to enhance local green spaces. The annual cost is estimated at £2.2 million, covering staff and communication expenses. (Wales Environment Link, 2023)

**d. Pilot community empowerment projects: £0.2 million:**

Using the Sustainable Farming Scheme (SFS) to encourage landowner collaboration for Nature Based Solutions is a priority. Project Skyline recommends three pilot projects in South Wales Valleys at an annual cost of £240,000, with potential for wider implementation in Wales. (Blake, 2019)

**e. Environmental standards body: £2.2 million:**

Wales needs an independent body to oversee environmental law, provide access to environmental justice, and maintain standards. A suggested model is one akin to Environmental Standards Scotland, requiring 24 staff and an annual budget of £2.2 million as a minimum. (Wales Environment Link, 2023)

***TOTAL FOR ACCESS AND PUBLIC PARTICIPATION: £48.2  
MILLION***

#### ***Farmland:***

**f. Enforce pollution regulations: £12.0 million:**

Immediate action is needed to prevent habitat loss and pollution on farmed land. This includes better targeting, monitoring, and enforcing regulations, especially for water and air pollution. To fully enforce existing legislation, an additional 60 to 200 staff are needed, costing around £12 million annually. (NRW, 2021) (afonydd cymru, 2022)

**g. Support nature-friendly food system: £273.0 million (can be met by existing SFS Budget and is as such not included):**

Wales urgently needs a sustainable food system. To achieve this, we require an annual budget of £273 million for environmental land management, which can be reallocated from the existing £300 million agriculture budget to support the Sustainable Farming Scheme. (Rayment, 2019)

***TOTAL FOR FARMLAND: £12.0 MILLION***

**Coasts:**

**h. Seagrass project: £0.4 million:**

Immediate action is needed to protect coastal habitats, including seagrass. This involves regulating activities and improving water quality, with a proposed £3.2 million investment by the Welsh Government over eight years, or £0.4 million annually. (WWF UK)

**i. Measures to reduce plastics litter: £1.6 million:**

Wales will join a UK-wide packaging waste EPR scheme. Key actions against plastic pollution include a Deposit Return Scheme and industry-funded litter payments extension. Additional funding priorities are volunteer coordinators in coastal areas, a Wales-wide awareness program, and litter monitoring, totalling £1.615 million annually from 2023 to 2030. (Wales Environment Link, 2023)

**j. Creation of coastal habitats: £8.2 million:**

To achieve a 15% increase in coastal priority habitats in line with CBD commitments, Wales needs to create specific areas: 575 ha of maritime cliff and slope, 17 ha of coastal vegetated shingle, 1215 ha of coastal sand dunes, and 1102 ha of saltmarsh. This would cost approximately £8.2 million per year for 10 years, totalling £81.6 million. (Wales Environment Link, 2023)

**k. Intertidal habitat recreation to offset climate losses: £1.6 million:**

The RSPB's Sustainable Shores report indicates that to maintain current Natura 2000 intertidal habitat in Wales (excluding the Severn estuary), 19 hectares per year should be recreated for 30 years. This would cost approximately £1.6 million annually, assuming an average cost of £84,000 per hectare based on recent intertidal habitat projects. (Miles & Richardson, 2018)

***TOTAL FOR COASTS: £11.8 MILLION***

**Seas:**

**l. Fisheries assessments and management plans: £0.4 million:**

The 2020 SoNaRR report identifies gaps in understanding fish stocks in Welsh inshore waters. To address this, the Welsh Government and NRW are working together but face delays in management plans. To meet legal obligations, an additional NRW officer costing £60,000 annually is required. Delays in introducing fishing regulations are due to capacity issues, highlighting the need for six fisheries science specialists at an annual cost of £360,000. (NRW, 2020)

**m. Marine development plan: £0.5 million:**

A Marine Development Plan is essential to guide activities in Welsh seas. It will be based on comprehensive evidence and stakeholder input, defining priorities for development, resource use, and conservation over 20 years. Developing the plan will cost £510,000 per year for five years, with similar resources needed for implementation oversight. (Wales Environment Link, 2023)

**n. Designate offshore MCZs: £0.4 million**

The Welsh Government should aim to designate offshore Marine Conservation Zones (MCZs) by 2023 and enhance sea protections. To achieve this, additional resources are needed, including four staff members at an annual cost of £240,000, plus budgets of £100,000 for evidence and £100,000 for communications for 2-3 years. Similar resources will be required for ongoing implementation and monitoring. (Wales Environment Link, 2023)

***TOTAL FOR SEAS: £1.3 MILLION***

***Peat:***

**o. Peatland Policy Unit: £0.1 million:**

To protect peatlands in Wales, actions include ending peat soil burning and tree planting on peatlands, banning horticultural peat use, and ceasing peat use by public bodies. A Peatland Policy Unit with two staff members costing £120,000 annually, including overheads and expenses, would oversee these efforts and develop necessary regulations and guidance. (Wales Environment Link, 2023)

**p. Peatland restoration programme: £2.9 million:**

There is a need to accelerate peatland restoration in Wales to reach 45,000 hectares by 2050. The National Peatland Action Programme plans to restore 2,500 hectares annually by 2040, costing £5 million per year. This includes £2.1 million for priority habitat bog restoration, with additional costs of £2.9 million. Private finance may contribute over time to achieve net-zero goals. (Wales Environment Link, 2023)

***TOTAL FOR PEAT: £3.0 MILLION***

***Grasslands:***

**q. Ancient meadows mapping and guidance: £0.1 million:**

Protection of ancient meadows and woodlands through legal recognition and planning system improvements. This three-year project, costing £840,000, includes mapping habitats and developing guidance with three staff, along with budgets for evidence, IT, events, and communications. (Wales Environment Link, 2023)

**r. Champion Integrated Pest Management: £0.3 million:**

A reduction to pesticide risk by 50% by 2030 through the adoption of Integrated Pest Management (IPM). IPM offers cost savings for farmers and environmental benefits. To promote IPM, a team of three champions, with an annual budget of £300,000, will provide guidance and raise awareness among farmers and local authorities. (Wales Environment Link, 2023)

**s. Pollinator Champions: £0.4 million**

A team of 5 champions and advisors would work with local authorities to address challenges in planning, logistics, timing, and equipment. This initiative, costing £400,000 annually, aims to raise awareness, provide guidance, and enhance management practices. (Wales Environment Link, 2023)

**t. Grassland restoration, creation, maintenance: £65.5 million \*NOT INCLUDED IN ADDITIONAL COSTS AS IT IS ALREADY COVERED IN FARMLAND COSTINGS\***

The Welsh Government should fund a program to restore grassland habitats and manage roadside verges and public green spaces for wild plant diversity. This would cost £65 million annually, already included in previous farmland costings, and include wider use of conservation grazing to enhance habitats. (Wales Environment Link, 2023)

***Total for Grasslands: £0.8 million***

***Protected Sites:***

**u. Monitoring and implementation: £5.0 million:**

To meet the 30% protection target for land and water by 2030, it's crucial to allocate more resources and staff to Natural Resources Wales (NRW). The 2020 evaluation showed insufficient evidence for half of the features on Protected Sites, with only 20% in good condition. Doubling NRW's current staff (around 60 people) would cost £3.6 million annually, with an additional £5 million needed for equipment and services. NRW will work with stakeholders to develop an action plan to address these issues. (Wales Environment Link, 2023)

**v. Site restoration and maintenance: £26.0 million:**

To achieve favourable ecological conditions for all Protected Sites in Wales by 2030, significant investment is required. The estimated cost for restoration and maintenance of these sites is approximately £52 million annually from 2023 to 2030. This investment aims to enhance ecological networks and resilience across Wales. (NRW, 2015) (Wales Environment Link, 2023). It is estimated that only 50% of this cost is additional and therefore the estimated additional annual costs for Wales is £26 million per annum.

**w. New site designation: £9.6 million:**

To reach the 30% protection target for Wales by 2030, new Sites of Special Scientific Interest (SSSIs) must be designated. This will require an estimated one-time cost of £76.6 million over eight years (2023-2030), with an annual cost of approximately £9.6 million during this period. These investments are essential to ensure effective management and monitoring, aiming for good or improving conditions in protected areas by 2030. (Wales Environment Link, 2023)

***Total for Protected Sites: £40.6 million***

***Rivers and Wetlands:***

**x. Migratory fish: £3.1 million:**

Immediate action is crucial to remove barriers for migratory fish in Wales. Salmon and sea trout populations are in serious decline, impacting the fishing industry and rural communities. To address this, around £25 million is required over eight years, averaging £3.1 million annually to resolve migratory fish barriers on Welsh rivers. (Wales Environment Link, 2023)

**y. Nature bases solutions: £7.1 million \*NOT INCLUDED IN ADDITIONAL COSTING AS FUNDING TAKEN FROM EXISTING HARD FLOOD DEFENCE INVESTMENTS\*:**

Investment is required for wetland habitat restoration using nature-based flood management and pollution control solutions. While the Welsh Government allocates £214 million over three years for flood defence, only a small portion supports natural flood management. Allocating 10% of this budget, approximately £7 million annually, can fund habitat restoration and reduce the need for traditional defences.

***Total for rivers and wetlands: £3.1 million***

***Woodland and trees:***

**a. Veteran trees: £3.9 million:**

Protecting veteran trees is crucial. About 9,000 are recorded in Wales, but there could be up to 2 million in the UK. Actions include improving the Ancient Tree Inventory, assessing risks, advising farmers, and fencing ancient hedgerows. The total annual cost is £3.9 million from 2023 to 2030, in addition to farm advisory actions costed in Section 2.

**b. Expanding open habitats in forests: £0.3 million:**

To enhance woodland biodiversity in Wales, diversify conifer forests' composition, create open-space habitats, and improve management. Managing an additional 10% of coniferous woodland would cost £2.7 million over seven years. These changes can be made without extra costs, benefiting biodiversity and forest resilience.

**c. Woodland restoration: £24.5 million \*NOT INCLUDED IN ADDITIONAL COSTS AS IS COVERED BY CURRENT FUNDING MENTIONED IN SECTION 2\*:**

Investment of £196 million over 8 years (2023-2030) is needed to restore approximately 53,600 hectares of ancient woodlands in Wales (NRW, 2020), including Ancient Semi-Natural Woodlands (ASNW) and Plantations on Ancient Woodland Sites (PAWS). This is part of a broader effort to protect and restore ancient woodlands in Wales.

***Total for woodland and trees: £4.2 million***

***Species:***

**a. Tackling INNS:**

More resources are needed to manage and reduce invasive non-native species (INNS) in Wales, covering both aquatic and terrestrial environments, along with implementing biosecurity measures to prevent their further spread.

**i. Actions to control INNS: £20.7 million:**

A report by Wildlife and Countryside Link (Davies) recommends investing in staff to manage invasive species strategically. Scaling up the Local Action Group network across Wales would cost £20.7 million per year, including hiring 340 staff, supporting 75,000 volunteers, and contracting 2,000 workers.

**ii. Increase biosecurity measures to combat INNS: £0.4 million:**

The WCL report (Davies) estimated that additional annual costs of £5 million are needed in the UK for biosecurity measures and the employment of a national labour force for controlling invasive non-

native species (INNS). Based on Wales's share of land area, this would amount to £425,000 annually in Wales.

**b. Species protection: £0.1 million:**

Investment is needed to raise awareness and enforce measures against the persecution, disturbance, habitat damage, and other threats to wildlife species in Wales. Current efforts are coordinated by a Rural & Wildlife Police Crime Coordinator, but additional funding of £100,000 annually is required for awareness campaigns, training, publications, and administrative support to address these issues effectively.

**c. Species recovery:**

Investment is essential for a fully funded, long-term national species recovery program in Wales. This program aims to reverse the decline of wildlife populations by restoring habitats, managing farmland for species, and implementing dedicated recovery efforts for threatened species. These efforts involve research, surveys, monitoring, advice, policy development, and targeted site management actions.

**i. A programme to recover threatened species: £8.6 million:**

A report for the Green Finance Institute estimated that a program to prevent the extinction of red-listed species in Wales would cost £86 million over ten years (2022-2031), averaging £8.6 million per year.

**ii. Replacement LIFE Nature Fund for Wales: £3.2 million:**

An evaluation by ICF (2019) found the EU LIFE Nature Fund provided substantial funding for species recovery and habitat restoration projects in Wales, contributing about £2.8 million annually (or £3.2 million at 2021 prices) out of a total UK funding of £23 million per year between 2014 and 2017.

**iii. Farmland actions for species abundance: £41.0 million \*NOT INCLUDED IN ADDITIONAL COSTS AS IS COVERED BY CURRENT FUNDING MENTIONED IN SECTION 2\*:**

The cost of agri-environment actions to maintain the abundance of more widespread species is estimated at £41 million annually, as per the Rayment (2019) scale of need work, which is included in Section 2.

***Total for Species: £33.0 million***

## Summary of total costs of nature recovery actions

Table 2: Summary of total costs of nature recovery actions (£m p.a.)				
Theme		Action	£m	Total (£m)
1. Access and public participation	Wildlife rich green spaces	Invest in new urban green spaces	39.3	48.2
		Increase urban tree cover to 20%	4.3	
		Network of green space champions	2.2	
	Co-operative action	Pilot community empowerment projects	0.2	
	Environmental justice	Environmental standards body	2.2	
2. Farmland	Regulatory enforcement	Enforce pollution regulations	12.0	285.0
	Environmental land management	Support nature friendly food system	273.0	
3. Coasts	Habitat protection	Seagrass project	0.4	11.8
	Reducing plastic pollution	Measures to reduce plastics litter	1.6	
	Habitat restoration	Creation of coastal habitats	8.2	
		Intertidal habitat recreation to offset climate losses	1.6	
4. Seas	Sustainable fisheries	Fisheries assessments and management plans	0.4	1.3
	Conflict avoidance	Marine development plan	0.5	
	Marine conservation	Designate offshore MCZs	0.4	
5. Peat	Peatland protection	Peatland Policy Unit	0.1	5.1
	Peatland restoration	Peatland restoration programme	5.0	
6. Grasslands	Habitat protection	Ancient meadows mapping and guidance	0.1	66.3
	Pesticide reduction	Champion Integrated Pest Management	0.3	
	Pollinators	Pollinator Champions	0.4	
	Grassland restoration	Grassland restoration, creation, maintenance	65.5	
7. Protected sites	Monitoring and implementation	Additional staff and resources for SSSI monitoring and management programme	5.0	66.6
	Site restoration and maintenance	SSSI restoration and maintenance	52.0	
	New site designation	Designate new protected areas by 2030	9.6	
8. Rivers and wetlands	Migratory fish	Resolve barriers on rivers	3.1	10.2
	Nature based solutions	Implement NBS through flood management budget	7.1	
9. Woodlands and trees	Veteran trees	Map and protect ancient trees	3.9	28.7
	Forest restructuring	Expand management of open ground habitats in coniferous woodland	0.3	
	Woodland restoration	Restoration of ASNW and PAWS	24.5	
10. Species	Species protection	Awareness and enforcement measures	0.1	74.0
	Tackling IAS	Actions to control IAS	20.7	
		Increase biosecurity measures to combat IAS	0.4	
	Species recovery	Threatened species recovery programme	8.6	
		Replacement LIFE Nature Fund for Wales	3.2	
		Farmland actions for species abundance	41.0	

## Summary of net additional funding needs of nature recovery actions after deducting current spending and double counting

<b>Table 3: Summary of net additional funding needs of nature recovery actions, after deducting current spending and double counting (£m p.a.)</b>				
<b>Theme</b>		<b>Action</b>	<b>£m</b>	<b>Total (£m)</b>
<b>1. Access and public participation</b>	<b>Wildlife rich green spaces</b>	Invest in new urban green spaces	39.3	<b>48.2</b>
		Increase urban tree cover to 20%	4.3	
		Network of green space champions	2.2	
	<b>Co-operative action</b>	Pilot community empowerment projects	0.2	
	<b>Environmental justice</b>	Environmental standards body	2.2	
<b>2. Farmland</b>	<b>Regulatory enforcement</b>	Enforce pollution regulations	12.0	<b>12.0</b>
<b>3. Coasts</b>	<b>Habitat protection</b>	Seagrass project	0.4	<b>11.8</b>
	<b>Reducing plastic pollution</b>	Measures to reduce plastics litter	1.6	
	<b>Habitat restoration</b>	Creation of coastal habitats	8.2	
		Intertidal habitat recreation to offset climate losses	1.6	
<b>4. Seas</b>	<b>Sustainable fisheries</b>	Fisheries assessments and management plans	0.4	<b>1.3</b>
	<b>Conflict avoidance</b>	Marine development plan	0.5	
	<b>Marine conservation</b>	Designate offshore MCZs	0.4	
<b>5. Peat</b>	<b>Peatland protection</b>	Peatland Policy Unit	0.1	<b>3.0</b>
	<b>Peatland restoration</b>	Peatland restoration programme	2.9	
<b>6. Grasslands</b>	<b>Habitat protection</b>	Ancient meadows mapping and guidance	0.1	<b>0.8</b>
	<b>Pesticide reduction</b>	Champion Integrated Pest Management	0.3	
	<b>Pollinators</b>	Pollinator Champions	0.4	
<b>7. Protected sites</b>	<b>Monitoring and implementation</b>	Additional staff and resources for SSSI monitoring and management programme	5.0	<b>40.6</b>
	<b>Site restoration and maintenance</b>	SSSI restoration and maintenance	26.0	
	<b>New site designation</b>	Designate new protected areas by 2030	9.6	
<b>8. Rivers and wetlands</b>	<b>Migratory fish</b>	Resolve barriers on rivers	3.1	<b>3.1</b>
<b>9. Woodlands and trees</b>	<b>Veteran trees</b>	Map and protect ancient trees	3.9	<b>4.2</b>
	<b>Forest restructuring</b>	Expand management of open ground habitats in coniferous woodland	0.3	
<b>10. Species</b>	<b>Species protection</b>	Awareness and enforcement measures	0.1	<b>33.0</b>
	<b>Tackling IAS</b>	Actions to control IAS	20.7	
		Increase biosecurity measures to combat IAS	0.4	
	<b>Species recovery</b>	Threatened species recovery programme	8.6	
		Replacement LIFE Nature Fund for Wales	3.2	
<b>Total additional funding needs (£m p.a.)</b>				<b>158.0</b>



## **Total annual Cost of WEL Actions**

The total annual cost of WEL actions is given as £158.0m. This, again, is for additional evidence and context for future work once the targets are agreed upon and the required actions need costing.

***Total Annual cost for All Target Areas Outlined by WEL:  
£158.0 million***