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**Wildlife**  
Trusts

# For farming, nature and climate

Investing in the UK's natural  
infrastructure to achieve Net Zero  
and nature's recovery on land



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# A report for the RSPB, National Trust and The Wildlife Trusts

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# Foreword

Our natural world is in crisis. The consequences of climate change are now playing out across the four countries of the UK with significant impacts for our health, our ability to produce food, and our capacity to withstand floods, drought, and heat. Nature is in freefall, with last year's State of Nature report revealing catastrophic declines in wildlife with 1 in 6 species at risk of extinction in Britain. This dual crisis must be tackled together, as the problems created by climate change are intensified by degraded habitats, poor soils, and declines in insect populations. The UK's 2021 Food Security Report also found climate change and biodiversity loss as the two greatest threats to UK food security<sup>[ii]</sup>.

The new Westminster Government must take urgent action to succeed on the environment – not simply because it has a legal responsibility to reverse nature's decline by 2030 and meet Net Zero by 2050, but because it makes good economic sense.

The decline in nature is predicted to result in a 12% loss of UK GDP in the coming years<sup>[iii]</sup> – more than the impact of both the 2008 financial crisis and the Covid-19 pandemic. Unmitigated climate change is set to cost the UK billions each year<sup>[iii]</sup>. With the majority of experts predicting the climate to heat dramatically<sup>[iv]</sup>, these economic impacts are only set to increase and will more than likely exceed current estimates.

The new Westminster Government will face significant pressures on public finances, but properly investing in action to restore nature and combat climate change must be seen as a critical investment to ensure longer term cost savings, and an opportunity to reinvigorate nature-depleted rural communities and support the generation of vibrant and nature-rich local economies.

Increasing the budget for nature and climate friendly farming and land management is a cost-effective way to meet the legally binding nature and climate targets set across the four UK countries, as well as ensuring the resilience of our food production into the future. Analysis has shown that for every £1 spent on nature restoration, the return will be at least three times that investment.

**This independent economic study, commissioned by the RSPB, National Trust and The Wildlife Trusts, is the best evidence yet for how much investment is needed and how it needs to be spent. The analysis shows an annual investment of up to £5.9 billion will be required for at least the next ten years, demonstrating a costed pathway to deliver legally binding nature and climate targets, and ultimately help secure the future of British farming.**

Farming and environment policies are defined by the Scottish, Welsh and Westminster Governments and the Northern Ireland Assembly, but the agriculture budget is set by the UK Treasury. This study estimates the level of investment required in all four UK countries, reflecting the variation in vital natural assets and farming systems.

The UK's agriculture budget from the previous Government is just £3.5 billion, falling far short of the investment required, which has not been sufficient to 'pump-prime' the role of private sector funding. In England, the budget has been inefficiently spent on actions that do not go far enough. The UK budget has remained unchanged since 2013, and significant inflation since then means today's budget is a real-terms funding cut. Proper investment in the UK's natural infrastructure will help to restore soil health, reduce carbon emissions, and recover nature which will, in turn, pay dividends for the UK economy and be vital for our ability to produce food into the future.

Of course, investment in nature and climate friendly farming must be underpinned by an effective and enforced set of regulations in each of the four UK countries to protect natural assets and create a level playing field. This is vital to maximise the return on investment, build a resilient sector and deliver against fundamental needs for clean air, water and healthy soils and nature.

It is imperative that the UK Government takes this opportunity to invest in the natural infrastructure which is critical to address the nature and climate crisis. But this means real action. Now. The more we delay, the bigger the bill to fix things will become.



**Beccy Speight**  
RSPB



**Hilary McGrady**  
National Trust



**Craig Bennett**  
The Wildlife Trusts



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# Executive summary

Around 70% of the UK is farmed, this land and the farmers that manage it are not just critical for producing food, they play a vital role in meeting legally binding targets and commitments to restore nature and tackle climate change. The prices people pay for food at the till do not currently account for the cost of meeting these environmental commitments. Instead, investment in environmental land management is largely dependent on publicly funded agri-environment schemes, and to a lesser extent emerging private markets for ecosystem services including carbon storage. Consequently, getting the design and the funding of these government schemes right is essential to reward farmers for the contribution they make to meeting environmental targets.

The “Scale of Need” model originally developed for the RSPB, National Trust, and The Wildlife Trusts in 2017, and further iterated in 2019 and 2023, estimates the financial costs of land management needs to meet a range of objectives for biodiversity, climate change, landscape, the historic environment, water quality, and soil protection set by the four UK governments. The model does not cost actions required to improve farm productivity, such as precision equipment or any necessary upgrades to farm infrastructure including slurry storage.

The model uses the best available data to estimate the scale of activity required across a wide range of land management actions. The model then estimates the cost of delivering these by applying equations, which calculate the income forgone and cost incurred for each action, based on a “typical farm”, the approach used by publicly funded agri-environment schemes in the EU and UK.

Yet, this approach does not account for variations in the type, size, characteristics, farming methods and profitability of farms across the UK. Consequently, the model is likely to underestimate the overall financial scale of need, particularly given the need to achieve high or even universal uptake of some actions to meet key environmental priorities.

This study provides an analysis of how gross margins (used to estimate income forgone) and costs of undertaking agri-environmental actions vary between farms and examines the implications of this on the overall financial costs at national level, based on the Scale of Need model.

This analysis finds that there is an upward sloping supply curve for the costs of delivering environmental land management actions. Consequently, payments based on a “typical farm” may not be sufficient to secure the level of uptake required to meet the nature and climate targets set by the four UK governments.

Yet, because the data suggest a large increase in costs for the small proportion of highest cost farms, land management options that require universal uptake are likely to increase costs substantially, and potentially lead to overcompensation of more typical farms. In particular, it is likely to be costly to achieve significant uptake of environmental land management options in the dairy, pigs and poultry and horticulture sectors, for which gross margins are highest and engagement in agri-environment schemes has historically tended to be lower than other farm types.

The analysis applied two scenarios to assess how the estimated gross margin curves and cost curves may lead to potential variation in the income forgone for each action in the Scale of Need model, and the consequences for the overall costs. The first scenario used calculated the mean income foregone and costs across all centiles in the cost curve; the second identified a target centile for each action based on the level of uptake required. For example, the model assumes 70% of arable and grassland farms need to manage 10% of land under biodiversity actions in line with the best available evidence.

**Estimated overall costs of meeting environmental land management priorities in the UK  
(£m per annum over 10 years)**

<b>Scenario</b>	<b>England</b>	<b>Northern Ireland</b>	<b>Scotland</b>	<b>Wales</b>	<b>UK</b>
<b>Base scenario: typical costs and income foregone)</b>	2,594	347	1,234	519	4,693
<b>Scenario 1: assuming equal uptake across farm types</b>	3,117	380	1,481	547	5,524
<b>Scenario 2: Cost for the target/marginal farm, applying cost for target centile</b>	3,156	414	1,793	595	5,958

The approach presented is novel and the resulting cost estimates should be seen as illustrative, rather than definitive. Data gaps mean that it has been necessary to apply a range of assumptions and simplifications to estimate cost curves for income foregone and costs incurred. Consequently, further discussion and research could help to inform refinements of the approach and improve the rigour of the cost estimates.

Nonetheless, significant investment is required to fund the necessary land management actions to meet the legally binding nature and climate targets set by the four UK governments. This study suggests that this could be in the region of £5.5-5.9 billion a year for at least the next 10 years, which is between 17-27% greater than estimates based on typical costs. It is between 57-68% greater than the current UK agriculture budget, which stands at £3.5 billion. The study also provides an interesting insight into the levels of investment required in each of the four UK countries and a disparity with the current funding allocation.

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# 1. Introduction

## 1.1 This report

The “Scale of Need” model was first developed for the RSPB, National Trust and The Wildlife Trusts in 2017<sup>1</sup>, and further iterated in 2019<sup>2</sup> and 2023<sup>3</sup> estimates the financial costs of meeting priorities for environmental land management in the UK.

The model estimates the scale of activity required across a wide range of land management actions required to meet a range of environmental and landscape objectives defined by the four UK governments. It estimates the cost of delivering these by applying equations which calculate the income forgone and cost incurred for each action. Based on conventional methodology, the cost equations are based on the changes for a “typical farm” assumed to undertake each action.

It is understood that farms across the UK vary widely in their type, size, characteristics, farming methods and profitability. Therefore, the actual income forgone and costs incurred are likely to vary widely between farms. As a result, we can expect an upward sloping supply curve for environmental land management activities, such that the payment required per hectare increases in line with the number of farms enrolled in the scheme. Understanding how income forgone and costs incurred vary between farms is therefore important in assessing the required payment rates and therefore costs of achieving an overall level of scheme uptake.

This report provides an analysis of how gross margins (used to estimate income forgone) and costs of undertaking agri-environmental actions vary between farms and examines the implications for the assessment of environmental land management costs at national level, based on the Scale of Need model.

## 1.2 Findings from previous studies

The work builds on a previous report (Rayment, 2023b)<sup>4</sup> which included an analysis of the factors underpinning variations in environmental land management costs. This included an analysis of the components of the cost equations for different land management activities (from the Scale of Need Model). It also examined how these cost drivers vary between different types of farm.

The 2023 report found that:

- Income forgone dominates the cost equations for most arable options;
- Grassland and historic environment options involve a more even balance between costs incurred and income forgone;
- Costs incurred dominate the cost equations for options to maintain, restore or create field boundaries;
- Actions for habitats involve a range of costs incurred and income forgone (for habitat management and expansion) as well as capital costs for habitat expansion and restoration.

The analysis found wide variations in gross margins and costs between farm types and between low, medium and high performing farms. Dairy farms tend to have the highest gross margins and highest costs per hectare, while higher performing farms tend to have lower costs than low and medium performers.

The report noted that because the “Scale of Need” model uses fixed estimates of per hectare unit costs, based on the income forgone and costs incurred for a typical farm, it is likely to underestimate the overall financial scale of need for environmental land management at national scale. For example, achieving wide scale environmental land management on dairy farms could greatly increase overall cost rates compared to action on grazing livestock farms. This means that the £4.4 billion cost of meeting UK environmental land management priorities estimated in the earlier Rayment (2023a)<sup>5</sup> report is likely to be an underestimate, implying that the funding gap for environmental land management could be larger than previously estimated.

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## 1.3 Method

The current study involved:

1. Updating the Scale of Need model to take account of latest agri-environment rates, including recent Countryside Stewardship payment rate increases in England and updates in other countries.
2. Estimating the area of crops and grassland on different farm types (Cereals, General Cropping, Dairy, LFA Livestock, Lowland Livestock, Mixed) in each country, from Agricultural Census data.
3. Analysis of farm accounts data in each country to assess variations in gross margins and costs for different farm types and performance bands.
4. Ranking farm types in each country by gross margins and agri-environment costs, and, by incorporating estimates of the area of crops and grass for each, organising them into centiles of the population.
5. Recalculating the cost equations in Scale of Need model to account for variations in costs and income forgone.
6. Analysing the implications for overall costs in the Scale of Need model, based on different scenarios for agri-environment uptake.
7. Presenting the findings and conclusions in this report.

**Available data do not permit a precise or robust assessment of the actual costs of different farms in engaging in environmental land management activities, so it is necessary to use various proxies and assumptions. The work is therefore exploratory, and the findings are indicative rather than permitting precise assessment of costs at national scale.**

## 1.4 Report structure

The report is structured as follows:

- Section 2 presents an analysis of farm gross margins and how they vary between farms;
- Section 3 presents an analysis of agri-environment costs and how they vary between farms;
- Section 4 assesses the implications for costs in the Scale of Need model; and
- Section 5 presents overall conclusions from the analysis.

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<sup>1</sup> Rayment M (2017) Assessing the costs of Environmental Land Management in the UK. Final Report for the RSPB, National Trust and The Wildlife Trusts.

<sup>2</sup> Rayment (2019) Paying for public goods from land management: How much will it cost and how might we pay? Final Report for the RSPB, National Trust and The Wildlife Trusts.

<sup>3</sup> Rayment (2023a) An assessment of the financial resources needed for environmental land management in the UK. Final Report for the RSPB, National Trust and The Wildlife Trusts.

<sup>4</sup> Rayment (2023b) Costs and income forgone in calculating environmental land management payments. Issues and challenges for a payment strategy. A report for the RSPB, National Trust and The Wildlife Trusts.

<sup>5</sup> Rayment (2023b) Updated estimates of the financial resources needed for environmental land management in the UK. A report for the RSPB, National Trust and The Wildlife Trusts.

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## 2. Assessing variations in gross margins between farms

Farm gross margins (output minus variable costs) per hectare are used by the authorities to estimate changes in income forgone from adopting environmental land management actions. They are included in the cost equations for each action in the “Scale of Need” model.

Farm accounts data for each of the four countries enable estimation of average gross margin per hectare for different farm types (cereals, general cropping, dairy, lowland livestock, LFA livestock, pigs, poultry, mixed and horticulture farms). Furthermore, the farm accounts data for England present data for low, middle and high performing farms of each type, while data for Scotland and Wales split the main farm types into further sub-categories.

The analysis calculated and ranked the gross margin per hectare for different farm types and performance bands for each country.

Agricultural Census data were used to estimate the overall area of crops and grassland in each farm type in each country.

Combining these data on gross margin per hectare and area in each category enabled the estimation of a gross margin curve for crops and improved grassland for each country. This involved dividing the area of crops and grassland into ten equal centiles, ranking these by gross margin per hectare and estimating the mean gross margin per hectare in each centile.

The resulting gross margin curves for arable crops are presented in Figure 2.1.

Note that the gross margin per hectare calculations are for the farm category as a whole, which are then arranged by the area of crops in each category. The farm accounts data do not permit calculation of gross margins for arable land specifically, because of interrelationships between different land uses and enterprises on each farm.

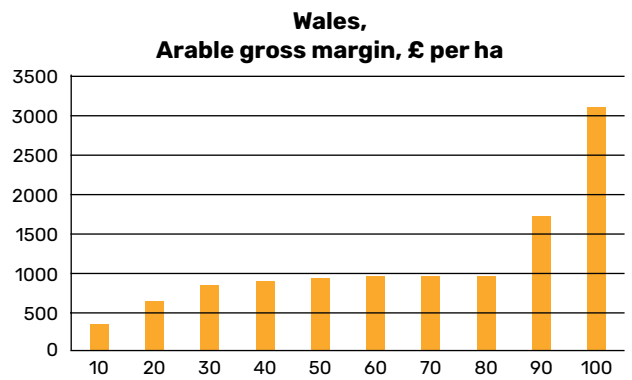
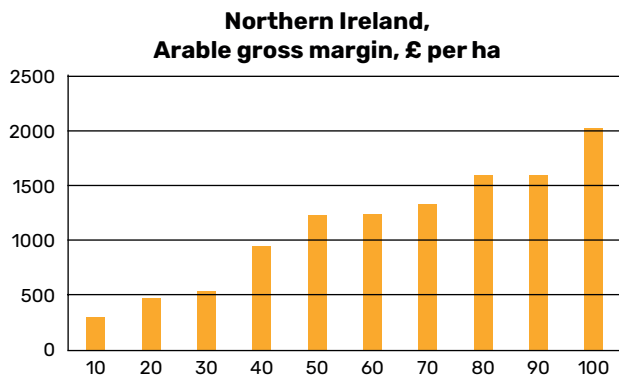
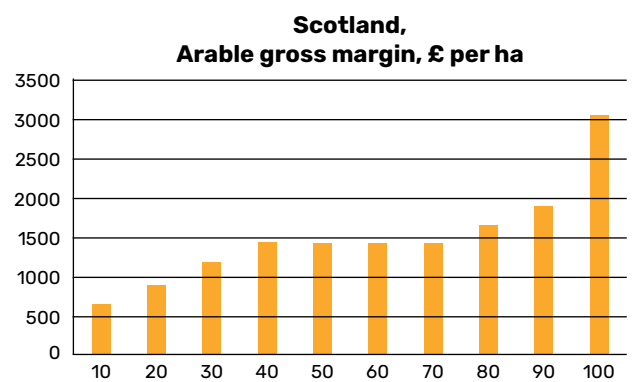
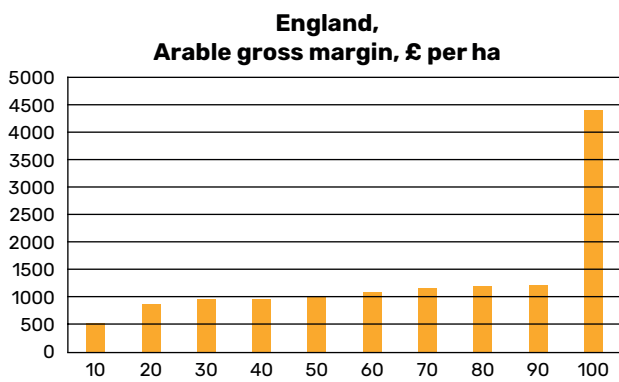
The curves vary somewhat in shape between countries. For example, for England, the curve is relatively flat but with a pronounced uplift for the farms in the highest centile. This is because a large proportion of arable land is concentrated among cereals (and to a lesser extent general cropping) farms with relatively similar per hectare gross margins, even across performance bands. However, a small proportion is on dairy, pigs and poultry and horticulture farms with much higher gross margin per hectare. In the other UK countries, there are many fewer specialist cereals farms, so there is a wider spread of crops on different farm types with varying gross margins per hectare.

Similar results for improved grassland are presented in Figure 2.2. Again, for England, there is a sharper rise for the top performing centile than in the other countries.

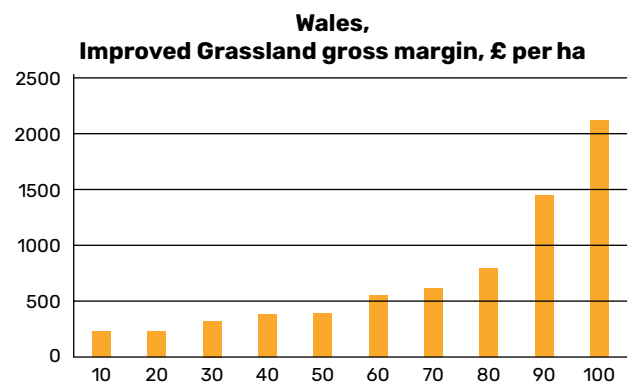
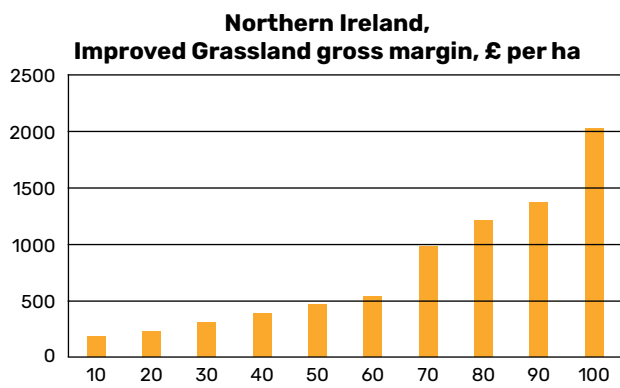
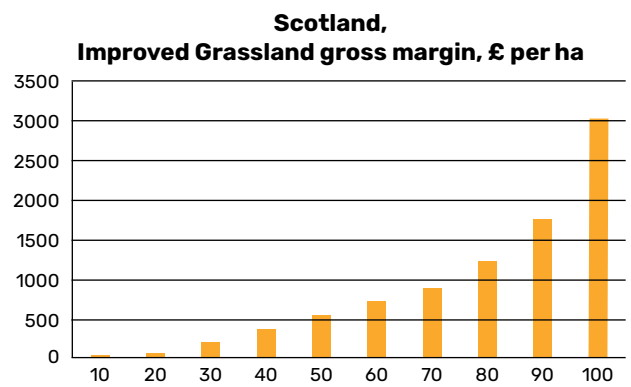
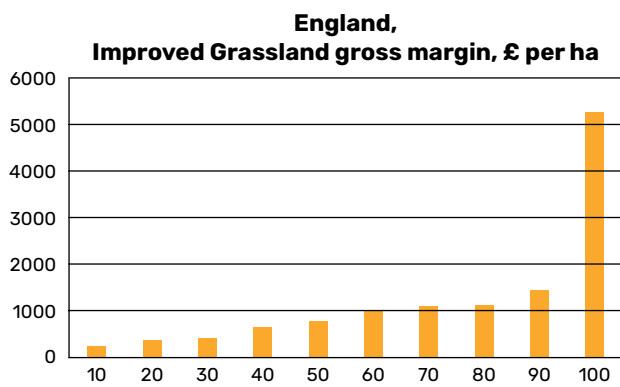
Note that the gross margin per hectare figures are based on overall farm size, and are therefore likely to be depressed on farms with large areas of rough grazing land (especially in Scotland).



**Figure 2.1: Estimated gross margin curves for Arable Crops, with different types of farms arranged by centiles**



**Figure 2.2: Estimated gross margin curves for improved grassland, with different types of farms arranged by centiles**



# 3. Assessing variations in agri-environment costs

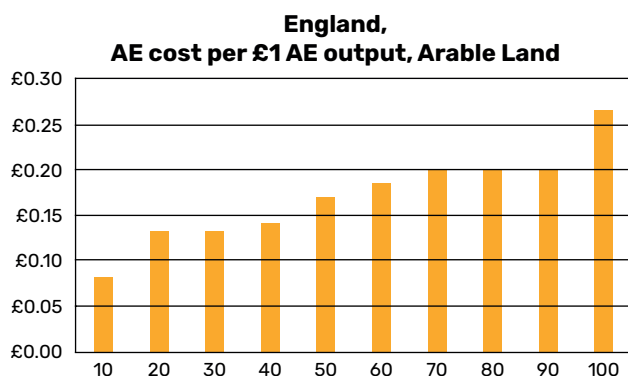
The analysis applied a similar approach to estimate cost curves for agri-environment costs incurred.

The Farm Accounts data for England provide estimates of the value of agri-environment output and the costs incurred in delivering that output for each farm type and performance band.

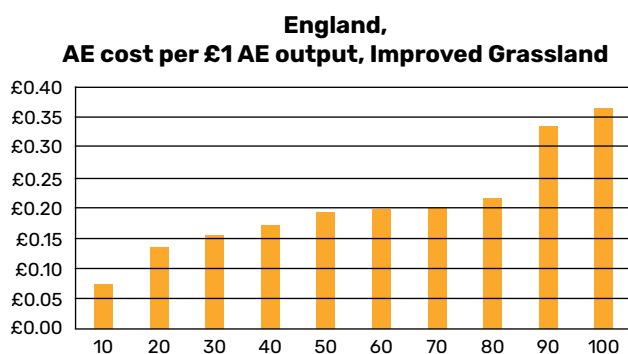
Agri-environment cost curves were constructed for arable crops and improved grassland by estimating the costs incurred per £1 of agri-environment output for each farm type and performance band, ranking these and arranging them by centile, with the ten centiles each including an equal area of crops or grassland.

The resulting estimated cost curves are presented in Figure 2.3 and 2.4.

**Figure 2.3: Estimated agri-environment cost curve for arable land, England, with different types of farms arranged by centiles**



**Figure 2.3: Estimated agri-environment cost curve for improved grassland, England, with different types of farms arranged by centiles**



The data indicate a median cost per £1 of agri-environment output of £0.16 for cropped land and £0.19 for grassland. This suggests that costs incurred represent a minor portion of agri-environment payments, with the remainder made up of compensation for income forgone as well as profit earned from the payments.

However, comparison of these data with those in the Scale of Need model indicate that they are likely to underestimate the true costs incurred in undertaking agri-environment actions. For example, the cost equations for grassland options in the model give a weighted average cost incurred of £0.42 per £1 agri-environment output, compared to a median value of £0.19 in the curve above. This may be explained by the figures in the farm accounts including the costs of paid labour only, and not the value of work undertaken by the farmer and family. For this reason, the cost curves were recalibrated to align with the average costs incurred in the model – i.e. the curve was used to model variations in costs around the cost for a typical/median farm.

The analysis also explored the potential to incorporate cost curves for specific cost categories, particularly labour and machinery. However, this was found to be unworkable, principally because the farm business accounts include estimates of paid labour costs only, rather than total (paid + unpaid) labour. The share of paid and unpaid labour is likely to vary significantly by type and size of farm, making construction of cost curves based on paid labour only misleading.

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# 4. Implications for costs in the Scale of Need Model

## 4.1 Method

The assessment applied the estimated gross margin curves and cost curves to assess potential variations in costs and income forgone for each action in the Scale of Need model.

The estimated cost curves for arable, grassland, landscape and historic environment features, and priority habitats and net zero have been included as new worksheets 33-36 in the Scale of Need model. The analysis applied two scenarios:

- 1. Cost of even uptake of each option across farm types.**

This was estimated by calculating the mean income forgone or cost across centiles. The variation from the income forgone or cost estimate applied in the model was then calculated and applied.
- 2. Cost for the marginal, target farm.**

This was estimated by identifying the target centile for each agri-environment action and applying the relevant centile income forgone or cost estimate. For example, the model assumes 70% of farms need to take up agri-environment options for arable and grassland to deliver against biodiversity targets. The estimated income forgone or costs for the 70th centile farm were therefore applied for these options. Other actions (e.g. habitat and hedgerow management) are assumed to require universal uptake, suggesting applying costs at the 100th centile. However, this is unlikely to be realistic given the influence of a small number of extraordinarily intensive farms in this centile, so a more conservative approach of applying the 90th centile estimate was applied in these cases.

The assumed target centiles for different types of agri-environment action are given in Table 4.1.

**Table 4.1: Estimated agri-environment cost curve for arable land, England, with different types of farms arranged by centiles**

Type of action	Assumed target centile
Arable actions	70th
Grassland actions	70th
<b>Landscape and historic environment actions</b>	
Hedgerow management	90th
Hedgerow planting	50th
Hedgerow/ wall restoration	70th
Arable reversion for historic features	50th
Minimum tillage for historic features	90th
Scrub clearance on grass	70th
Sympathetic management of grassland with historic features	90th
<b>Habitat and net zero actions</b>	
Habitat maintenance	90th
Habitat creation	50th
Habitat restoration	50th

Based on these assumptions, the analysis calculated unit cost estimates for each environmental land management action and for each country, for each of the two scenarios defined above.

By multiplying these unit costs by the estimated extent of each action required, the assessment calculated the overall costs of each action at country level.

## 4.2 Results

Indicative estimates of the overall financial scale of need for the two alternative costings scenarios are presented in Tables 4.3 and 4.4, for comparison with the current best estimate of costs for the typical farm (Table 4.2, from Rayment, 2023a).

The estimated baseline costs at UK level in the Scale of Need model amount to £4.7 billion per annum. This is based on the cost equations for the typical farm.

These cost estimates increase to £5.5 billion (Scenario 1, assuming an even uptake of each option across farm types/ centiles) and £5.9 billion (Scenario 2, applying cost estimates for the target farm centile). These represent increases of 17% and 27% respectively on the baseline estimates presented previously.

The largest increases are for priority habitats, and particularly for management of existing habitats, because of the large area of existing habitat involved and the high rate of uptake required (costs applied at 90th centile level).

**Table 4.2: Estimated overall costs of meeting environmental land management priorities in the UK (£m per annum over 10 years)**

**Base estimate in Scale of Need model, for typical farm**

Land management costs	England	Northern Ireland	Scotland	Wales	UK
Priority habitats	426	44	477	114	<b>1,061</b>
Net zero land use change	645	106	301	146	<b>1,198</b>
Boundary features	445	93	113	79	<b>729</b>
Historic environment	75	6	56	12	<b>148</b>
Arable land	537	8	85	13	<b>643</b>
Grassland	313	72	127	104	<b>617</b>
Organic	56	0	9	3	<b>69</b>
<b>Total land management</b>	<b>2,497</b>	<b>329</b>	<b>1,168</b>	<b>470</b>	<b>4,465</b>
<b>Additional elements</b>					
Environmental land management advice	34	2	22	5	<b>63</b>
Securing vulnerable high nature value farming supplement	58	15	40	42	<b>155</b>
Business advice to vulnerable HNV farms	3	0	1	1	<b>6</b>
Securing long term changes in land use	3	0	2	1	<b>5</b>
<b>Sub-total: Additional cost elements</b>	<b>97</b>	<b>18</b>	<b>66</b>	<b>48</b>	<b>229</b>
<b>Total</b>	<b>2,594</b>	<b>347</b>	<b>1,234</b>	<b>519</b>	<b>4,693</b>

**Table 4.3: Estimated overall costs of meeting environmental land management priorities in the UK (£m per annum over 10 years)**

**Assuming equal uptake across farm types, applying mean cost across centiles**

Land management costs	England	Northern Ireland	Scotland	Wales	UK
Priority habitats	600	51	604	128	<b>1,384</b>
Net zero land use change	680	109	351	136	<b>1,276</b>
Boundary features	466	98	119	82	<b>764</b>
Historic environment	89	6	65	12	<b>172</b>
Arable land	610	8	103	14	<b>735</b>
Grassland	518	90	164	123	894
Organic	56	0	9	3	<b>69</b>
<b>Total land management</b>	<b>3,020</b>	<b>362</b>	<b>1,415</b>	<b>498</b>	<b>5,296</b>
<b>Additional elements</b>					
Environmental land management advice	34	2	22	5	<b>63</b>
Securing vulnerable high nature value farming supplement	58	15	40	42	<b>155</b>
Business advice to vulnerable HNV farms	3	0	1	1	<b>6</b>
Securing long term changes in land use	3	0	2	1	<b>5</b>
<b>Sub-total: Additional cost elements</b>	<b>97</b>	<b>18</b>	<b>66</b>	<b>48</b>	<b>229</b>
<b>Total</b>	<b>3,117</b>	<b>380</b>	<b>1,481</b>	<b>547</b>	<b>5,524</b>

**Table 4.4: Estimated overall costs of meeting environmental land management priorities in the UK (£m per annum over 10 years)**

**Cost for the target/marginal farm, applying cost for target centile**

Land management costs	England	Northern Ireland	Scotland	Wales	UK
Priority habitats	747	73	916	192	<b>1,929</b>
Net zero land use change	630	104	332	126	<b>1,192</b>
Boundary features	473	99	122	84	<b>777</b>
Historic environment	80	7	77	15	<b>179</b>
Arable land	599	10	108	14	<b>730</b>
Grassland	474	103	164	113	<b>853</b>
Organic	56	0	9	3	<b>69</b>
<b>Total land management</b>	<b>3,059</b>	<b>397</b>	<b>1,727</b>	<b>547</b>	<b>5,729</b>
<b>Additional elements</b>					
Environmental land management advice	34	2	22	5	<b>63</b>
Securing vulnerable high nature value farming supplement	58	15	40	42	<b>155</b>
Business advice to vulnerable HNV farms	3	0	1	1	<b>6</b>
Securing long term changes in land use	3	0	2	1	<b>5</b>
<b>Sub-total: Additional cost elements</b>	<b>97</b>	<b>18</b>	<b>66</b>	<b>48</b>	<b>229</b>
<b>Total</b>	<b>3,156</b>	<b>414</b>	<b>1,793</b>	<b>595</b>	<b>5,958</b>



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# 5. Conclusions

The analysis supports the suggestion in previous reports that differences in income forgone and costs between farms mean there is an upward sloping supply curve for environmental land management. Therefore, cost estimates applying a single unit cost for a typical farm are likely to be underestimates of national scale costs if high rates of uptake are required.

Because the data suggest a large increase in costs for the small proportion of highest cost farms, land management options that require universal uptake are likely to increase costs substantially, and potentially lead to overcompensation of more typical farms. In particular, it is likely to be costly to achieve significant uptake of environmental land management options in the dairy, pigs and poultry and horticulture sectors, for which gross margins are highest.

The approach presented is somewhat exploratory and the resulting cost estimates should be seen as illustrative only. Data gaps mean that it has been necessary to apply a range of assumptions and simplifications to estimate cost curves for income forgone and costs incurred. Further discussion and research could help to inform refinements of the approach. This could include, for example, further exploration of the potential to:

- Refine gross margin curves by incorporating data on variations in actual crop and livestock gross margins, rather than overall gross margin by farm type;
- Refine the methods for accounting for farm land area, especially the distinction between improved grassland and rough grazing;
- Further explore data on labour costs, with a view to developing a labour cost curve that incorporates paid and unpaid labour, and factoring this into cost equations.

Nonetheless, significant investment is required to fund the necessary land management actions to meet the legally binding nature and climate targets set by the four UK governments. The scale of investment is likely to exceed the current allocated agricultural budget.

## Annex A: Estimated environmental land management needs

	Assumed needs	Extent of annual need
<b>Priority habitats</b>		
Maintenance	All land assumed to require annual maintenance	5,430,547 ha
Restoration	Restoration targets according to Environment Act target to create or restore 500,000 ha of priority habitat in England over 20 years, with equal split assumed between creation and restoration, and scaled to other countries based on habitat area. Largest areas are for blanket bog and native woodland, based on area in unfavourable condition.	37,224 ha
Expansion	Creation of new habitat equivalent to 0.7% of existing area annually over 10 years. Two thirds of this is native woodland.	37,224 ha
<b>Net zero land use change</b>		
<i>Restoration:</i> Blanket bog Lowland raised bog	Bog restoration needs, in addition to priority habitats targets, in accordance with Land Use Scenarios Project (Finch et al, in press).	40,324 ha 1,593 ha
<i>Creation:</i> Broadleaved woodland Coniferous woodland Fen Paludiculture: arable Paludiculture: grassland Saltmarsh Semi-natural grassland Silvoarable forestry Silvopastoral forestry Semi natural wood pasture	Habitat creation needs, in addition to priority habitats targets, in accordance with Land Use Scenarios Project (Finch et al, 2023).	30,500 ha 34,428 ha 11,545 ha 3,386 ha 1,243 ha 347 ha 4,114 ha 12,218 ha 27,772 ha 16,690 ha
<b>Boundary features</b>		
Maintenance of hedgerow	All hedges require annual maintenance	590,648 km
Restoration of hedgerows and wooded linear features	50% of hedgerow not in good structural condition, and 50% of unmanaged woody linear features, are assumed to require restoration over a 10-year period	25,870 km
Creation of hedgerow	Expansion of hedgerows by 1.6% annually	9,628 km
Restoration of stone walls	Stone walls not in good structural condition are restored over a 10-year period	4,650 km
<b>Historic environment</b>		
Historic features on grassland	Sympathetic grassland management; one third of area assumed to require scrub clearance	610,084 ha
Historic features on arable land	Reversion to grassland (50%); minimum tillage (50%)	151,156 ha
<b>Arable land</b>		
Nature friendly farming practices	10% of cultivated area on 70% of arable farms, with enhanced rates for skylark plots and winter stubbles	1,982,000 ha
Water quality	Riparian buffer strips on arable land	25,516 ha
Prevention of diffuse pollution	85% of arable farmland managed to prevent diffuse pollution (cover crops, winter tramlines, buffer strips, field corners, stubbles)	5,170,600 ha
<b>Improved grassland</b>		
Nature friendly farming practices	10% of area on 70% of improved grassland	435,000 ha
Water quality	Riparian buffer strips on grassland	28,162 ha
Prevention of diffuse pollution	85% of improved grassland managed to prevent diffuse pollution (legume and herb rich swards, buffer strips, field corners, nutrient management, integrated pest management)	5,282,000 ha
<b>Rough grazing</b>		
Rough grazing (non- priority habitats)	Proportion of rough grazing managed with low inputs and mixed grazing	35%
<b>Organic farming</b>		
Organic management	Maintain current area of organic management	464,300 ha
Organic conversion	50% increase in rate of organic conversion	62,900 ha

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### About the RSPB

The RSPB is the UK's largest nature conservation charity, protecting habitats, saving species, and helping to end the nature and climate emergency. For over a century we've acted for nature through practical conservation and powerful partnerships, campaigning and influence, and inspiring and empowering millions of people, including almost 1.2 million members. Our network of over 200 nature reserves sits at the heart of our world-leading science and conservation delivery. Nature is in crisis, but together we can save it.

[www.rspb.org.uk](http://www.rspb.org.uk)

### About the National Trust

The National Trust is a conservation charity founded in 1895 by three people who saw the importance of our nation's heritage and open spaces and wanted to preserve them for everyone to enjoy. More than 120 years later, these values are still at the heart of everything the charity does. Entirely independent of Government, the National Trust looks after more than 250,000 hectares of countryside, 778 miles of coastline and hundreds of special places across England, Wales and Northern Ireland. Almost 27 million people visit every year, and together with nearly 6 million members, and over 65,000 volunteers, they help to support the charity in its work to care for special places for ever, for everyone.

[www.nationaltrust.org.uk](http://www.nationaltrust.org.uk)

### About The Wildlife Trusts

The Wildlife Trusts are making the world wilder and helping to ensure that nature is part of everyone's lives. We are a grassroots movement of 46 charities with more than 900,000 members and 38,000 volunteers. No matter where you are in Britain, there is a Wildlife Trust inspiring people and saving, protecting and standing up for the natural world. With the support of our members, we care for and restore special places for nature on land and run marine conservation projects and collect vital data on the state of our seas. Every Wildlife Trust works within its local community to inspire people to create a wilder future – from advising thousands of landowners on how to manage their land to benefit wildlife, to connecting hundreds of thousands of school children with nature every year.

[www.wildlifetrusts.org](http://www.wildlifetrusts.org)



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**A report for the RSPB,  
National Trust and  
The Wildlife Trusts**

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