# Appendix D: Cost Calculation of Habitat Creation

This table shows estimated costs of creating, maintaining and restoring semi-natural habitats over 30 years. The values used to calculate the costs of Nature Recovery for this analysis are the mean value from the different estimates of the costs per ha of creating a new semi-natural habitat and maintaining this for 30 years. Restoration costs, i.e. for enhancing the ecological condition of an existing semi-natural habitats, are included here for comparison, but were not used in estimating the cost of Nature Recovery. Broad habitat type is shown in column one, with the specific habitat cost estimates detailed under these.

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| **Broad**  **Habitat Type** | **Creation costs** | **Restoration Costs** | **Maintenance costs** |
| Heathland | ‘**Heathland’**  Current Area = 5822.9 hectares  20% Uplift Area:  5,822.9 × 0.20 = 1,164.58 hectares  Total Area after Uplift: 6,987.48 hectares  Creation Costs per Hectare = £6,500  Land Purchase cost = £20,000  **Creation Costs:**  **Land Purchase:**  1,164.58 × £20,000 = £23,291,600  **Habitat Creation:**  1,164.58 × £10,000 = £11,645,800  **Total Creation Cost:**  £23,291,600 + £11,645,800 = **£34,937,400**   |  | | --- | |  | | ‘**Heathland’**  Restoration Costs per Hectare = £4,000    **Total Restoration Costs:**  6,987.48 × £4,000 = **£27,949,920** | ‘**Heathland’**  Maintenance Costs per Hectare per year = £400  **Total Maintenance Costs till 2030:**  6,987.48 × £400 × 6 × 2.2% = **£16,769,952** |
| Calcareous Grassland | ‘**Calcareous Grassland’**  Current Area = 924.4 hectares  20% Uplift Area: 184.88 hectares  Total Area after Uplift: 1,109.28 hectares  Creation Costs per Hectare = £5,000  Land Purchase cost = £20,000   |  | | --- | |  |   **Creation Costs:**  **Land Purchase:**  184.88 × £20,000 = £3,697,600 **Habitat Creation:**  184.88 × £5,000 = £924,400  **Total Creation Cost:**  **£4,622,000** | ‘**Calcareous Grassland’**  Restoration Costs per Hectare = £3,250    **Total Restoration Costs:**  1,109.28 × £3,250 = £3,604,160 | ‘**Calcareous Grassland’**  Maintenance Costs per Hectare per year = £300  **Total Maintenance Costs for 6 years:**  1,109.28 × £300 × 6 × 2.2% = **£437715.648** |
| Lowland Meadows | **‘Lowland Meadows’**  Current Area = 611 hectares  20% Uplift Area = 122.2 hectares  Total Area after Uplift = 733.2 hectares  Creation Costs per Hectare = £4,500  Land Purchase cost = £20,000   |  | | --- | |  |   **Creation Costs:**  **Land Purchase:**  122.2 × £20,000 = £2,444,000  **Habitat Creation:**  122.2 × £4,500 = **£549,900**  **Total Creation Cost:**  **£2,993,900** | **‘Lowland Meadows’**  Restoration Costs per Hectare = £3,250    **Total Restoration Costs:**  733.2 × £3,250 = **£2,379,900** | **‘Lowland Meadows’**  Maintenance Costs per Hectare per year = £300  **Total Maintenance Costs for 6 years:**  733.2 × £300 × 6 × 2.2% **= £289349.76** |
| Ponds and Small Water Bodies | ‘**Ponds and Small Water Bodies’**  Current Area = 1,532 hectares  20% Uplift Area = 306.4 hectares  Total Area after Uplift = 1,838.4 hectares  Creation Costs per Hectare = £10,000  Land Purchase cost = £20,000  **Creation Costs:**  **Land Purchase:**  306.4 × £20,000 = £6,128,000  **Habitat Creation:**  1,164.58 × £10,000 = £11,645,800  **Total Creation Cost:**  £23,291,600 + £11,645,800 = **£34,937,400**   |  | | --- | |  | | ‘**Ponds and Small Water Bodies’**  Restoration Costs per Hectare = £15,000  **Total Restoration Costs:**  1,838.4 × £15,000 = **£27,576,000** | ‘**Ponds and Small Water Bodies’**  Maintenance Costs per Hectare per year = £600  **Total Maintenance Costs for 6 years:**  1,838.4 × £600 × 6 × 2.2% = **£1,45,645.44** | |
| Woodland (Deciduous) | **‘Woodland (Deciduous)’**  Current Area = 23,182 hectares  20% Uplift Area = 4,636.4 hectares Total Area after Uplift = 27,818.4 hectares Creation Costs per Hectare = £10,000  Land Purchase cost = £20,000   |  | | --- | |  |   **Creation Costs:**  **Land Purchase:**  4,636.4 × £20,000 = **£92,728,000**  **Habitat Creation:**  4,636.4 × £10,000 = **£46,364,000**  **Total Creation Cost:**  **£139,092,000** | **‘Woodland (Deciduous)’**  Restoration Costs per Hectare = £5,500    **Total Restoration Costs:**  27,818.4 × £5,500 = **£152,001,200** | **‘Woodland (Deciduous)’**  Maintenance Costs per Hectare per year = £200  **Total Maintenance Costs for 6 years:**  27,818.4 × £200 × 6 × 2.2% = **£733619.68** | |
| Urban Green Spaces | **‘Urban Green Spaces’**  Current Area = 777 hectares  20% Uplift Area = 155.4 hectares  Total Area after Uplift = 932.4 hectares  Creation Costs per Hectare = £7,500  Land Purchase cost = £20,000   |  | | --- | |  |   **Creation Costs:**  **Land Purchase:**  155.4 × £20,000 = £3,108,000  **Habitat Creation:**  155.4 × £7,500 = £1,165,500  **Total Creation Cost:**  **£4,273,500** | **‘Urban Green Spaces’**  Restoration Costs per Hectare = £5,500    **Total Restoration Costs:**  932.4 × £5500 = **£5,128,200** | **‘Urban Green Spaces’**  Maintenance Costs per Hectare per year = £500  **Total Maintenance Costs for 6 years:**  932.4 × £500 × 6 × 2.2% = **£616,362.88** | |
| Wetland Reedbeds | **‘Wetland Reedbeds’**  Current Area = 159 hectares  20% Uplift Area = 31.8 hectares  Total Area after Uplift = 190.8 hectares  Creation Costs per Hectare = £17,500  Land Purchase cost = £20,000   |  | | --- | |  |   **Creation Costs:**  **Land Purchase:**  31.8 × £20,000 = £6,36,000  **Habitat Creation:**  31.8 × £17,500 = £5,56,500  **Total Creation Cost:**  **£1192500** | **‘Wetland Reedbeds’**  Restoration Costs per Hectare = £5,500    **Total Restoration Costs:**  190.8 × £14,000 = **£2,671,200** | **‘Wetland Reedbeds’**  Maintenance Costs per Hectare per year = £500  **Total Maintenance Costs for 6 years:**  190.8 × £600 ×6 × 2.2% = **£15,123.84** | |
| Orchards | **‘Orchards’**  Current Area = 677 hectares  20% Uplift Area = 135.4 hectares  Total Area after Uplift = 812.4 hectares  Creation Costs per Hectare = £8,500  Land Purchase cost = £20,000   |  | | --- | |  |   **Creation Costs:**  **Land Purchase:**  135.4 × £20,000 = £2,708,000  **Habitat Creation:**  135.4 × £8,500 = £1,150,900  **Total Creation Cost:**  **£3,858,900** | **‘Orchards’**  Restoration Costs per Hectare = £6,500    **Total Restoration Costs:**  812.4 × £6,500 = **£5,280,600** | **‘Orchards’**  Maintenance Costs per Hectare per year = £500  **Total Maintenance Costs for 6 years:**  812.4 × £400 × 6 × 2.2% = **£42,921.12** | |
| Chalk Rivers | **‘Chalk Rivers’**  Current Area = 490 hectares  20% Uplift Area = 98 hectares  Total Area after Uplift = 588 hectares  Creation Costs per Hectare = £22,500  Land Purchase cost = £1,000,000   |  | | --- | |  |   **Creation Costs:**  **Land Purchase:**  98 × £1,000,000 = £98,000,000  **Habitat Creation:**  98 × £22,500 = £2,205,000  **Total Creation Cost:**  **£100,205,000** | **‘Chalk Rivers’**  Restoration Costs per Hectare = £15,000  **Total Restoration Costs:**  588 × £15,000 = **£8,820,000** | **‘Chalk Rivers’**  Maintenance Costs per Hectare per year = £600  **Total Maintenance Costs for 6 years:**  588 × £600 × 6 × 2.2% = **£46,430.88** | |

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| Floodplain Grazing Marsh | **‘Floodplain Grazing Marsh’**  Current Area = 281hectares  20% Uplift Area = 56.2 hectares  Total Area after Uplift = 337.2 hectares  Creation Costs per Hectare = £15,000  Land Purchase cost = £20,000   |  | | --- | |  |   **Creation Costs:**  **Land Purchase:**  56.2 × £20,000 = £1,124,000  **Habitat Creation:**  56.2 × £15,000 = £8,43,000  **Total Creation Cost:**  **£1,967,000** | **‘Floodplain Grazing Marsh’**  Restoration Costs per Hectare = £12,000    **Total Restoration Costs:**  337.2 × £12,000 = **£4,046,400** | **‘Floodplain Grazing Marsh’**  Maintenance Costs per Hectare per year = £400  **Total Maintenance Costs for 6 years:**  337.2 × £400 × 6 × 2.2% = **£17,814.24** |
| Fen | **‘Fen’**  Current Area = 662.8hectares  20% Uplift Area = 132.56 hectares  Total Area after Uplift = 795.36 hectares  Creation Costs per Hectare = £20,000  Land Purchase cost = £20,000   |  | | --- | |  |   **Creation Costs:**  **Land Purchase:**  132.56 × £20,000 = **£2,651,200**  **Habitat Creation:**  32.56 × £20,000 = **£2,651,200**  **Total Creation Cost:**  **£5,302,400** | **‘Fen’**  Restoration Costs per Hectare = £17,500  **Total Restoration Costs:**  795.36 × £17,500 = **£13,918,800** | **‘Fen’**  Maintenance Costs per Hectare per year = £500  **Total Maintenance Costs for 6 years:**  795.36 × £500 × 6 × 2.2% = **£52,593.36** |

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| Wood Pasture & Parkland | **‘Wood Pasture & Parkland’**  Current Area = 60,179hectares  20% Uplift Area = 12,035.8 hectares  Total Area after Uplift = 72,214.8 hectares  Creation Costs per Hectare = £8,000  Land Purchase cost = £20,000   |  | | --- | |  |   **Creation Costs:**  **Land Purchase:**  12,035.8 × £20,000 = £240,716,000  **Habitat Creation:**  12,035.8 × £8,000 = £96,286,400  **Total Creation Cost:**  **£337,002,400** | **‘Wood Pasture & Parkland’**  Restoration Costs per Hectare = £6,000    **Total Restoration Costs:**  72,214.8 × £6,000 = **£433,288,800** | **‘Wood Pasture & Parkland’**  Maintenance Costs per Hectare per year = £350  **Total Maintenance Costs for 6 years:**  72,214.8 × £350 × 6 × 2.2% = **£332,288.32** |
| Acid Grassland | **‘Acid Grassland’**  Current Area = 11hectares  20% Uplift Area = 2.2 hectares  Total Area after Uplift = 13.2 hectares  Creation Costs per Hectare = £5,000  Land Purchase cost = £20,000   |  | | --- | |  |   **Creation Costs:**  **Land Purchase:**  2.2 × £20,000 = £44,000  **Habitat Creation:**  2.2 × £5,000 = £11,000  **Total Creation Cost:**  **£55,000** | **‘Acid Grassland’**  Restoration Costs per Hectare = £3,500  **Total Restoration Costs:**  13.2 × £3,500 = £46,200 | **‘Acid Grassland’**  Maintenance Costs per Hectare per year = £300  **Total Maintenance Costs for 6 years:**  13.2 × £300 × 6 × 2.2% = £522.72 |

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| Wet Woodland | **‘Wet Woodland’**  Current Area = 2,549hectares  20% Uplift Area = 509.8 hectares  Total Area after Uplift = 3,058.8 hectares  Creation Costs per Hectare = £14,000  Land Purchase cost = £20,000   |  | | --- | |  |   **Creation Costs:**  **Land Purchase:**  509.8 × £20,000 = £10,196,000  **Habitat Creation:**  509.8 × £14,000 = £7,137,200  **Total Creation Cost:**  **£17,333,200** | **‘Wet Woodland’**  Restoration Costs per Hectare = £11,000    **Total Restoration Costs:**  3,058.8 × £11,000 = **£33,646,800** | **‘Wet Woodland’**  Maintenance Costs per Hectare per year = £500  **Total Maintenance Costs for 6 years:**  3058.8 × £500 × 6 ×2.2% = **£201,878.88** |
| Beech & Yew Woodland | **‘Beech & Yew Woodland’**  Current Area = 3,477hectares  20% Uplift Area = 2.2 hectares  Total Area after Uplift = 4,172.4 hectares  Creation Costs per Hectare = £12,000  Land Purchase cost = £20,000   |  | | --- | |  |   **Creation Costs:**  **Land Purchase:**  695.4 × £20,000 = £13,908,000  **Habitat Creation:**  695.4 × £12,000 = £8,344,800  **Total Creation Cost:**  **£22,252,800** | **‘Beech & Yew Woodland’**  Restoration Costs per Hectare = £9,000  **Total Restoration Costs:**  4,172.4 × £9,000 = **£37,551,600** | **‘Beech & Yew Woodland’**  Maintenance Costs per Hectare per year = £400  **Total Maintenance Costs for 6 years:**  4,172.4 × £400 × 6 × 2.2% = **£220,838.88** |

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| Standing Open Water | **‘Standing Open Water’**  Current Area = 1,319hectares  20% Uplift Area = 263.8 hectares  Total Area after Uplift = 1,582.8 hectares  Creation Costs per Hectare = £22,500  Land Purchase cost = £20,000   |  | | --- | |  |   **Creation Costs:**  **Land Purchase:**  263.8 × £20,000 = £5,276,000  **Habitat Creation:**  263.8 × £22,500 = £5,935,500  **Total Creation Cost:**  **£11,211,500** | **‘Standing Open Water’**  Restoration Costs per Hectare = £6,000    **Total Restoration Costs:**  1,582.8 × £6,000 = **£23,742,000** | **‘Standing Open Water’**  Maintenance Costs per Hectare per year = £600  **Total Maintenance Costs for 6 years:**  1,582.8 × £600 × 6 × 2.2% = **£125,370.24** |
| Hedgerow | **‘Hedgerow’**  Current Area = 8,044hectares  20% Uplift Area = 1.608.8 hectares  Total Area after Uplift = 9,652.8 hectares  Creation Costs per Hectare = £100,000  Land Purchase cost = £20,000   |  | | --- | |  |   **Creation Costs:**  **Land Purchase:**  1,608.8 × £20,000 = £32,176,000  **Habitat Creation:**  1,608.8 × £100,000 = £160,880,000  **Total Creation Cost:**  **£193,056,000** | **‘Hedgerow’**  Restoration Costs per Hectare = £75,000  **Total Restoration Costs:**  9,652.8 × £75,000 = **£723,960,000** | **‘Hedgerow’**  Maintenance Costs per Hectare per year = £1,500  **Total Maintenance Costs for 6 years:**  9,652.8 × £1,500 × 6 × 2.2% = **£1,912,972.64** |

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| Rivers (Including River Restoration) | **‘Rivers’**  Current Area = 490hectares  20% Uplift Area = 98 hectares  Total Area after Uplift = 588 hectares  Creation Costs per Hectare = £2,000,000  Land Purchase cost = £1,000,000   |  | | --- | |  |   **Creation Costs:**  **Land Purchase:**  98 × £1,000,000 = £98,000,000  **Habitat Creation:**  98 × £2,000,000 = £196,000,000  **Total Creation Cost:**  **£294,000,000** | **‘Rivers’**  Restoration Costs per Hectare = £1,500,000  **Total Restoration Costs:**  588 × £1,500,000 = **£882,000,000** | **‘Rivers’**  Maintenance Costs per Hectare per year = £150,000  **Total Maintenance Costs for 6 years:**  588 × £150,000 × 6 × 2.2% = **£11,612,160** |