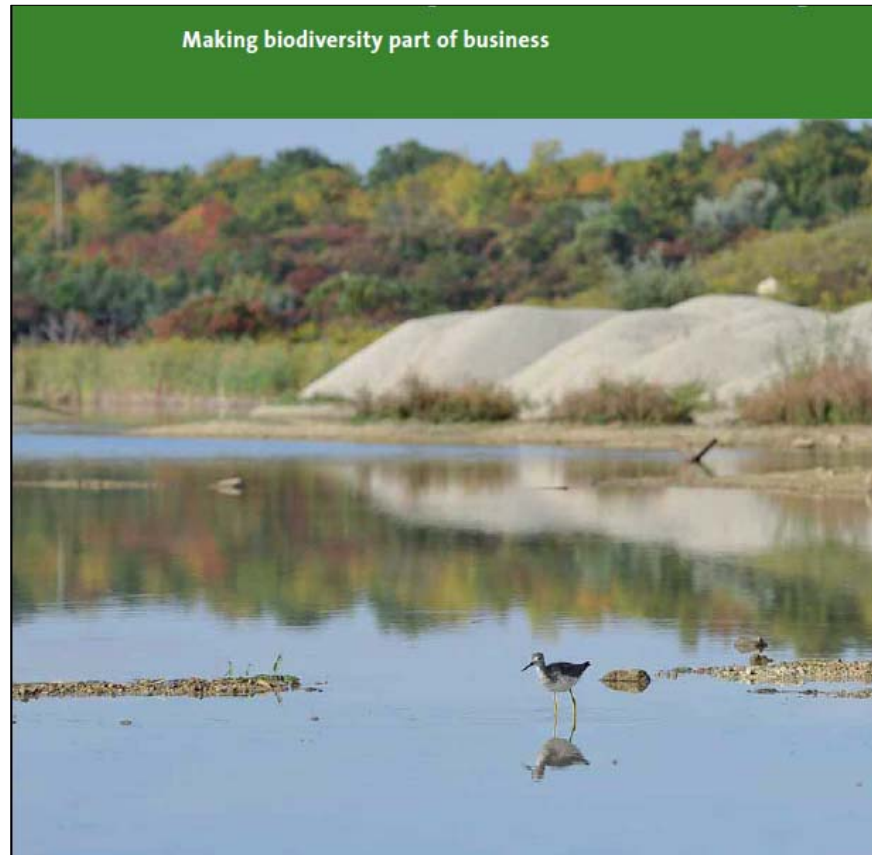




# Biodiversity Management At Holcim



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# Topics

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- About Holcim
- Global Partnership for biodiversity
- Ecosystem Valuation Road Test





## About Holcim

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Holcim is one of the world's leading suppliers of cement and aggregates (crushed stone, gravel and sand) as well as further activities such as ready-mix concrete and asphalt including services

The Group holds majority and minority interests in more than 70 countries on all continents





## Why Biodiversity Matters to Holcim

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- Healthy business relies on healthy ecosystems
- Holcim is a resource intensive business that depend on long term access to raw materials
- Resource conservation is part of our Sustainable Development commitment which includes biodiversity
- Our collaboration with IUCN has helped us improve our biodiversity management



# IUCN helps Holcim improve its biodiversity management



## Results so far

- Integrated **Biodiversity Management System**
- Biodiversity Based **Micro-Enterprise Development** Guidance
- Complementary **local engagements**

## A new agreement signed

- Biodiversity Management System **Implementation**
- Work with **policy makers** to enable the sector to deliver better biodiversity conservation outcomes
- Influence development of **sector-wide standards**
- Strengthen Holcim **Water Management Approach**



## Biodiversity Management System

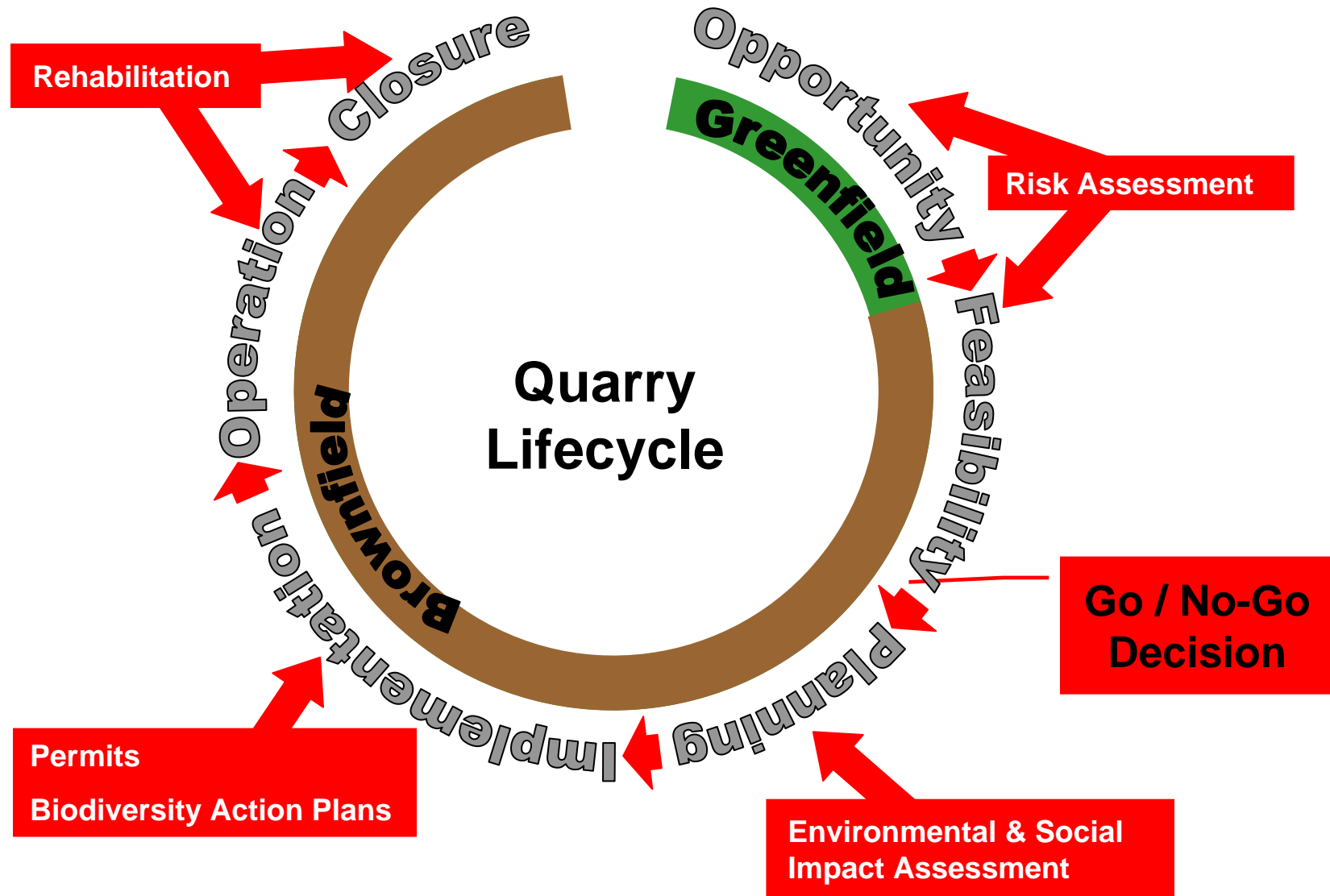
Proposal for the integrated management of biodiversity at Holcim Sites  
Prepared by IUCN-Holcim Independent Expert Panel: Christoph Imboden, Daniel Gross,  
Peter-John Meynell, David Richards, Marc Stalmans

October 2010





# Biodiversity Management to be considered throughout entire site lifecycle





# Risk based approach to biodiversity management

- Identify level of risk
- Manage accordingly
- Where needed, work with expert partners



| Biodiversity Importance | Impact to Biodiversity from Operations |         |        |       |
|-------------------------|--|---------|--------|-------|
|                         | Very High                              | High    | Medium | Low   |
| Global                  | Red                                    | Magenta | Pink   | White |
| National                | Red                                    | Magenta | Pink   | White |
| Local                   | Pink                                   | Pink    | White  | White |
| Low                     | White                                  | White   | White  | White |

Sensitive sites, which require Biodiversity Action Plans

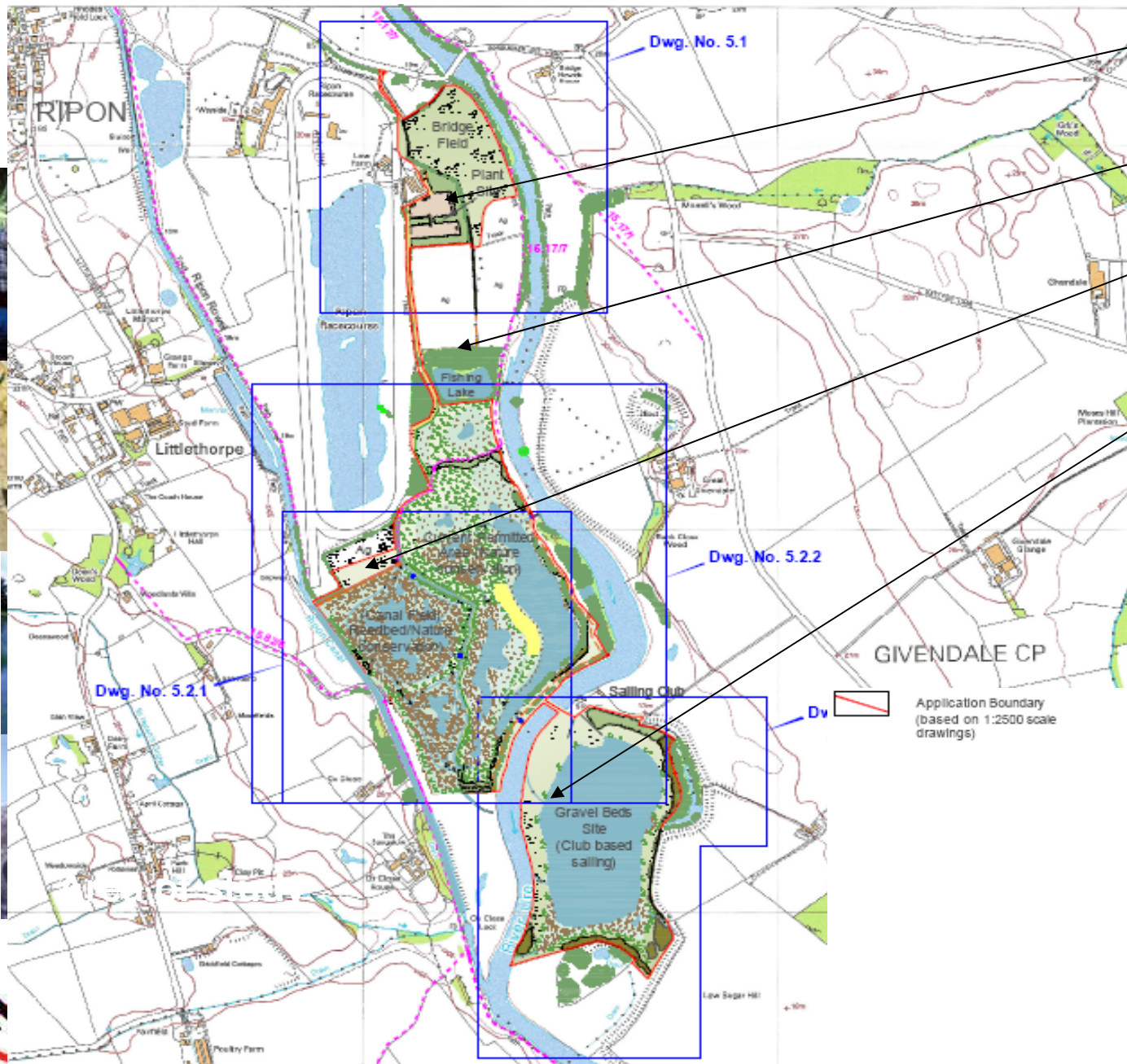




# Ecosystem Valuation Road Test Aggregate Industries UK

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Processing plant

Exhausted extraction area

Proposed reedbed

Recreational lake

-  Existing Woodland
-  Proposed Woodland and riparian tree planting
-  Proposed Wet Woodland
-  Agricultural Land (restored)
-  Open Water
-  Extensive Reed Bed Area
-  Marshland
-  Neutral (species rich) Grassland
-  Footpath (PRoW)
-  Proposed new footpath link
-  Retained (haul) road link through plant site car park to management area
-  Little rided plover breeding habitat area





## Objectives of study

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- To investigate the value of restoration to wet meadows vs. reedbed and the distribution of benefits between stakeholders
- To quantify and value significant change in biodiversity and ecosystem services following mineral extraction on the site
- To be able to negotiate appropriate levels of restoration and level and duration of aftercare/management costs
- To value the contribution of the site to additional flood control in the landscape and region
- To gain experience in anticipation of future planning requirements



## Methodology – valuing ecosystem benefits

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**Biodiversity** – Willingness to Pay of local population for conversion of agricultural land to wetlands for wildlife habitat (£/household)



**Recreation**- use WTP of individuals for additional boating opportunities (£/household)



**Flood control** – average value of avoided damage estimates (£/hectare)



**Carbon storage** – estimates of carbon sequestered in newly established wetlands (tons CO<sub>2</sub>e/hectare) \* £/ton CO<sub>2</sub>e



## Methodology – estimating costs

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### Restoration costs

- Labour, material, survival rates



### Aftercare costs

- Based on annual returns from £200,000 fund provided up-front



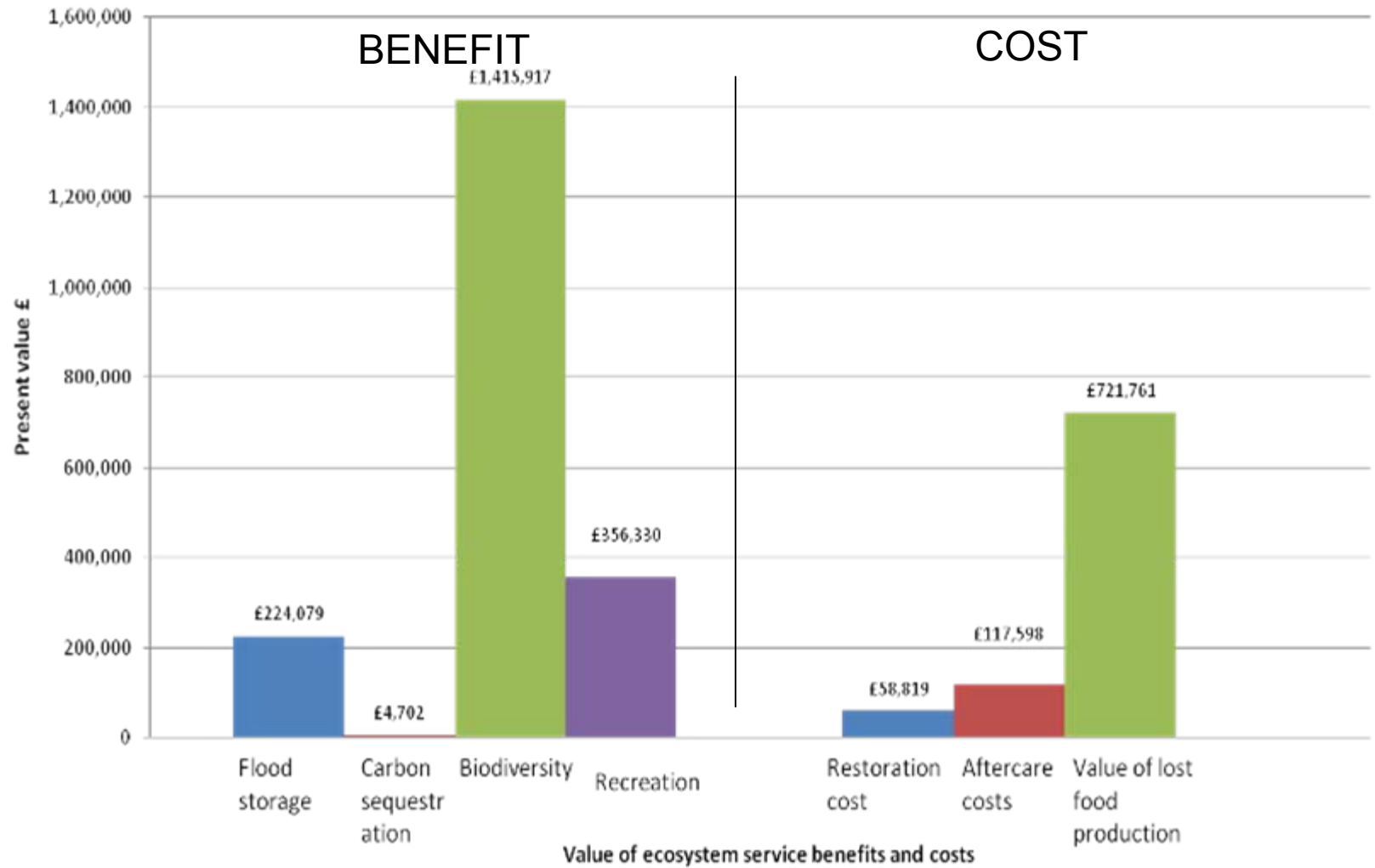
### Opportunity costs

- Value of foregone agricultural and livestock production



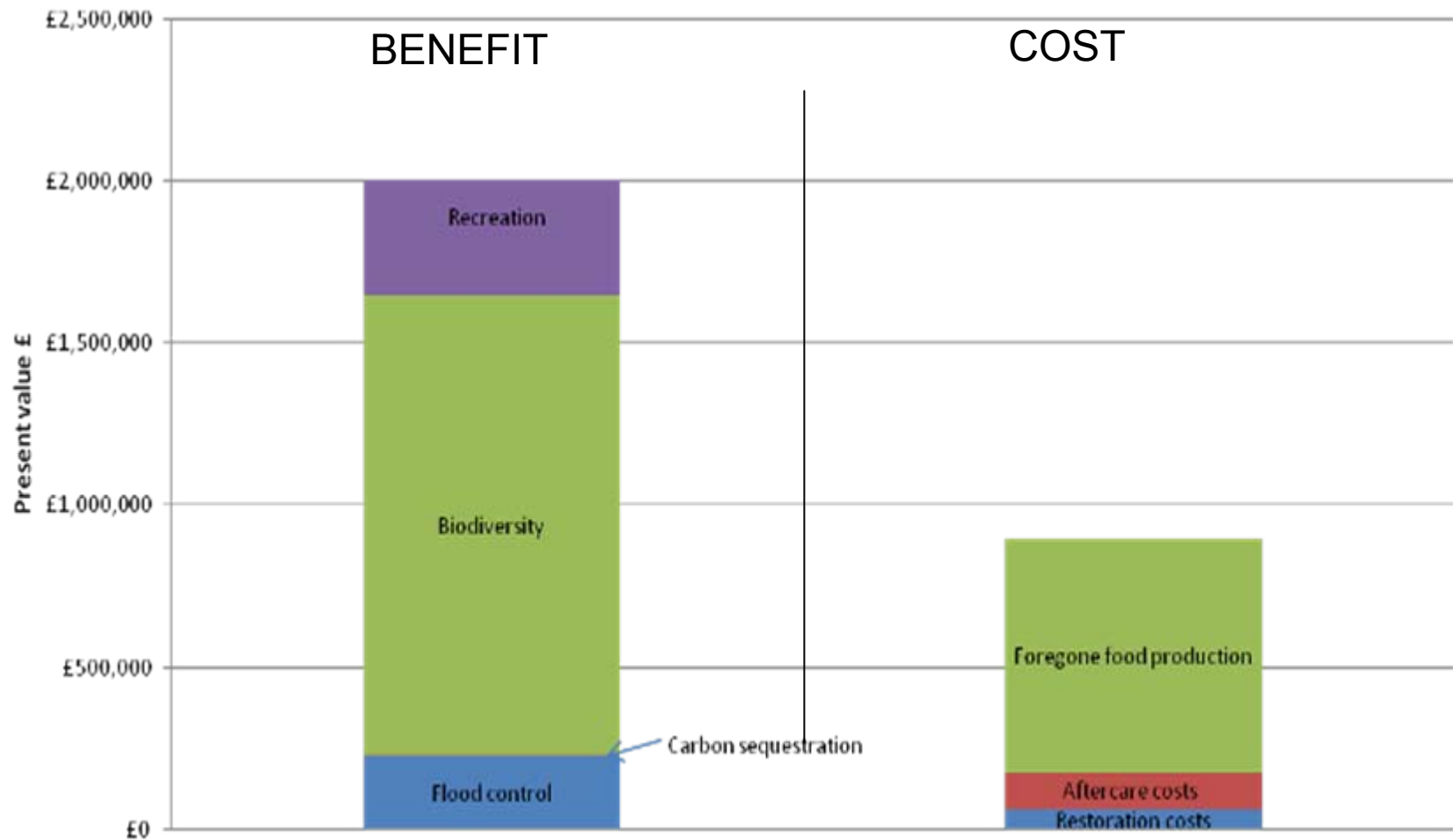


# Value of ecosystem service - benefits and costs of supply





# Present value of ecosystem service benefits and costs of supply



Types of ecosystem service benefits and costs





## Key findings

Significant benefits due to wetland restoration and creation of lake (£1.1m)

- habitat (£1.4 million)
- recreational (£350,000)
- flood control (£224,000)
- carbon (£4,700)



Costs of restoration and aftercare relatively small and do not affect financial bottom line

Compensation for environmental damage can deliver improvements in ES at modest expense

Economic gains much greater on marginal land due to opportunity cost



## How to use results?

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### Internal audience:

- To improve decision-making
- To assess costs of legal responsibilities



### External audience

- To develop restoration and aftercare plans in application process
- To ensure future access to minerals by demonstrating net benefits to society and net biodiversity gain
- for planning restoration based on uses with greatest benefits





## Key Messages

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- Partnership with IUCN provided needed expertise to develop global policy and standards
- Ecosystem Valuation tools complement biodiversity management and rehabilitation efforts