North West Wetlands Network

Final Report

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Jacobs Babtie Fairbairn House, Ashton Lane, Sale, Manchester
Tel 0161 962 1214 Fax 0161 905 5855

Environment Agency, English Nature and Northwest Regional Development Agency
North West Wetlands Network
Final Report

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Section 1

Summary

The aim of the North West Wetlands Network project is "*to produce a programme of wetland development projects that will deliver significant socio-economic, environmental and image benefits to the region*". This Final Report builds on the findings of Stages 1 and 2 of the project, which identified five networks of potentially feasible wetland projects, then undertook feasibility studies on them.

The feasibility studies developed visions for the networks, assessed how these could be implemented over the next ten years, considered outline costs and measured these against potential socio-economic and environmental benefits, and identified potential funding sources and risks. In this Final Report the information collected for the feasibility studies is used to analyse the combined current value of the sites and networks. This provides a baseline against which to assess the benefits of the developments proposed in Stage 2. A sensitivity analysis has also been undertaken to assess the effects of making changes to the main economic indicators (the number of day visitors and the average visitor spend) on the overall calculated benefits. In addition, assessments have been undertaken of the effects of introducing overnight-stayers on overall benefits. This work suggests that the greatest impact on the level of benefits is caused by an increase in the number of overnight-stayers.

The environmental and socio-economic outputs predicted to result from the proposed developments have been assessed against a number of economic criteria used by different funding bodies. This evaluates the alignment of each proposed development with regional priorities, and the value for money they represent, in terms of number of jobs created, or, the amount of investment required to create each new job. The project as a whole is found to align closely with a number sub-regional and local strategies, and the supporting of 145 new jobs is a significant employment outcome. The project would also impact positively in terms of sustainability, health inequality and rural recovery criteria.

Although an average of £169,000 investment is required to create each new job, a true measure of value for money should also take into account environmental, socio-economic, health, educational, etc. benefits, and also consider fit with key plans and strategies. For instance, the environmental benefits resulting from the project as a whole will contribute significantly towards meeting the regional biodiversity action plan targets for lowland raised bog (13%), floodplain grazing marsh (46%) and reedbed (79%). The project will also help deliver four key activities within the North West Regional Economic Strategy.

When all of these factors are considered, the Mersey Corridor Wigan network is the best performing network.

Following this assessment a number of amendments have been suggested to some of the projects, with the aim of improving value for money, strategic fit and environmental and socio-economic benefits. The most common changes are:

- proposals to set up management agreements under the Environmental Stewardship Scheme, instead of land purchase, in order to bring additional land under favourable management;
- bringing larger areas of land under favourable management;
- improving public access to and interpretation of wetland areas;
- creation of larger areas of BAP habitats;
- cross-marketing the wetlands with other attractions, restaurants and hotels, etc.

The result of these amendments is the reduction in the overall capital cost of the project from almost £23m, to £16m, leading to a reduction in the average cost of creation of each job to £122,000, and improvements in the nature and extent of environmental and socio-economic benefits.

If these changes are introduced the network with the lowest outputs (in comparison to other networks in the study) is found to be West Lancashire Plain (due to the high capital cost of developments at Martin Mere), whilst the best performing is North and West Cumbria (due largely to the lack of capital investment). The outputs for East Morecambe Bay and Mersey Corridor Wigan are also relatively good. It is anticipated that Mersey Corridor Wigan will yield the greatest overall returns of any of the networks in terms of non-quantifiable economic benefits, and display the closest fit with project funding criteria and other strategies.

A framework for the development of a strategy for marketing the North West Wetlands Network is suggested, which has a key aim of delivering the increases in visitor numbers required to achieve the projected socio-economic benefits. A weakness of the project at present is that it does not identify how the large predicted increases in visitor numbers will be achieved. The main recommendations are:

- Formation of an umbrella organisation to promote wetlands in the region.
- Work with tourism destination management organisations to market the project nationally through the 'winning themes' countryside initiative.
- Development of a website, with links to other sites and tourism organisations.
- Development of special-interest breaks in the region, which include visits to the wetlands.
- Cross-marketing of groups of attractions, e.g. Arnside and Silverdale AONB, Hadrian's Wall, etc.
- Use of separate visions in promotion of each network, to ensure they are not seen as having the same offer.

Gaps in current knowledge have been identified, which are required to be addressed in order to develop business plans for the projects. The actions include:

- Formation of strong partnerships between bodies who have interests in sites to develop a co-ordinated programme of site acquisition and enhancement.
- Inclusion of tourist organisations, including Lancashire and Blackpool and Cumbria Tourist Boards, into marketing partnerships. The wetlands should be seen as one of a number of attractions in the areas.
- Development of business cases for the wetland projects which identify the need, what would or would not happen if the projects did not go ahead, and how the proposals are supported by regional and local plans.
- Development of proposals in more detail, with costings, income and expenditure profiles and phasing.
- Exploration of potential funding options available from relevant funding bodies, in particular Heritage Lottery Fund Landscape Partnerships, Rural Regeneration Cumbria, English Nature Reserves Enhancement and Capital Grants Schemes. The potential for Environmental Stewardship Scheme funding for work on existing agricultural land, and grants from Defra for the implementation of water level management plans in Cumbria, should also be investigated.
- Development of funding proposals which identify eligible expenditure, and the compilation of applications.
- Preparation of marketing plans.

Based on an assessment of the cost effectiveness and completeness of the current proposals at each site and network a ten year development programme is suggested for the whole project. This envisages that the Mersey Corridor Wigan, North and West Cumbria and East Morecambe Bay networks should progress earlier and at a quicker rate than the West Lancashire Plain and South Lakes Coast networks, and the Gowy Meadows site. The former should aim to complete the construction stage, and begin operation, by the end of year 5, whilst the latter require more work to be done on such as business plans, with construction being completed at the end of year 10.

The study concludes that there is clear potential for some sites and networks to become regional tourism attractions. However, due to the lack of any ambitious, large-scale wetland creation projects, the proposals as they stand do not represent a step change improvement in biodiversity in the region. This is perceived to be due to regional level constraints, such as funding, complex acquisitions and other influencing processes.

Other means of achieving the overall vision of creating links between nature conservation and economic growth, and realising the potential of the current ecologically diverse sites, are suggested. These should be progressed at the regional level via political means, such as through changes in funding priorities and establishment of mechanisms to facilitate large scale land-use changes, in parallel to this ten year project. However, the individual projects must lead the way through innovation in visitor management and monitoring to provide robust data to convince funding bodies.

Finally, the following recommendations are made:

1. The Natural Economy Steering Group to set up and support a North West Wetlands Network development group to devise a programme, bring projects forward, provide the regional vision and to be responsible for developing business and marketing plans and strategies. It is important that this umbrella group has representatives from the tourist agencies, as well as environmental organisations, to provide advice and support on visitor marketing.
2. Working Groups to be set up for individual networks to develop more detailed business plans and to further develop project funding, planning and design.
3. Development of a marketing strategy for the networks as a whole and individual networks, to identify how the increases in visitor numbers can be achieved. The increase in visitors projected by the partners do appear in some cases optimistic and there will need to be a reality check of these forecasts.
4. Development of business plans for individual networks, with Mersey Corridor Wigan, East Morecambe Bay and North and West Cumbria to be taken forward in the next ten years. Priority to be given to the Mersey Corridor Wigan as the network with the best chance of success in the shorter term, as it fits well with regional and local strategies for regeneration, has a range of funding options available and is supported by the local authority as well as environmental bodies.
5. Further work is carried out to complete business plans for West Lancashire Plain, South Lakes Coast and Gowy Meadows, to try to improve benefits, before taking forward later in the programme.
6. The sponsors and partners to take every opportunity to influence policies when commenting on regional and local plans and strategies with the aim of making wetlands more of a policy priority.

1 Introduction

The overall aim of the North West Wetlands Network project is to identify the likely image, economic and environmental benefits to the North West of developing a network of valuable wetland nature reserves. These reserves will attract overnight visitors from outside the region and provide day trip and educational facilities to those in the region. Attractive wetland habitats will be used to promote a green and pleasant image of the North West that will help to attract further investment. The project is sponsored by the Environment Agency (EA), English Nature (EN) and Northwest Regional Development Agency (NWDA), and is supported by the Royal Society for the Protection of Birds (RSPB), Cheshire, Lancashire and Cumbria Wildlife Trusts, the Wildfowl and Wetlands Trust (WWT) and Groundwork Wigan.

Wetlands are an important wildlife asset for the North West, but their full economic potential in terms of attracting visitors to the region has not been realised. To achieve this potential the existing assets need to be developed and restored, as well as new ones created. This will result in a wealth of wetland nature reserves that can be marketed within and outside the region. Realistically, this can only be achieved through a co-ordinated partnership approach, and at the landscape scale. A programme of wetland development projects fits well with the region's priorities, which include sustainable tourism, as set out in the Regional Economic Strategy and in the Regional Tourism Strategy.

There are examples across the country of where wetlands are delivering socio-economic, environmental and image benefits. The Wildfowl and Wetlands Trust (WWT) London Wetland Centre demonstrates that ecologically valuable wetlands can be created on brownfield sites, and that these wetlands can generate significant visitor interest within a short period of time following inauguration. Slimbridge, another WWT reserve, shows that careful ecological management of agricultural areas can lead to the development of a wetland that is both internationally renowned for its wildfowl, and economically viable. Lakeside, a new commercial and residential development in Doncaster, includes a 50 acre lake, with the associated areas of housing commanding a significant price premium over average house prices in Doncaster, which can be attributed to the wetland location.

Existing wetland sites within the North West have significant environmental value, including 2211ha of raised bog, 160ha of semi-improved grassland, 40ha of unimproved grassland, 55ha of marshy grassland, 179ha of reedswamp and 229ha of open water. The sites contain significant areas of National and Local Biodiversity Action Plan (BAP) target habitats and over 3000ha are protected as Sites of Special Scientific Interest (SSSIs) or Special Areas of Conservation (SACs). Around 800,000 visitors generate a spend of approximately £6.4m in the region, and support 221 jobs (71 directly and 131 indirectly in the local economy).

Stage 1 of the project identified five networks of potentially feasible wetland projects based on an analysis of a long list of 77 suggested sites, in terms of ecology, access and land-use. The location of these networks is presented as Figure 1. Stage 2 of the study was the preparation of feasibility studies for these shortlisted sites. The purpose of the feasibility studies was to develop visions for the networks and to assess how the visions could be translated into proposals for the development of the network over the next ten years. It considered outline capital and revenue costs, and measured these against potential socio-economic and environmental benefits. It also identified potential funding sources and risks. The Summary sections of the Stages 1 and 2 reports are presented in Appendix 1 to provide more detail and history about the project.

This Final Report pulls together the findings from the individual feasibility studies. Section 1 presents:

- summaries of the costs and benefits of proposed developments at each site and within the networks, and across all networks considered by this project as a whole;
- a sensitivity analysis of the economic benefits accrued by the developments, to counter uncertainties in the number of potential visitors, their spend, and whether they are likely to stay overnight in the region;
- an assessment of the total proposals against key economic criteria, strategic fit, impacts on other non-quantifiable socio-economic criteria and image;
- the basis of a potential marketing and development strategy for the project, and;
- an identification of the additional work required to augment or fill in the gaps of what has already been completed, together with suggestions as to the future shape of organisations and partnerships to take them forward.

Section 2 comprises chapters on each individual network, and presents:

- a summary of the present value of the network in terms of environmental and socio-economic benefits;
- an analysis of the fit of the proposed developments against key strategies and policies;
- an assessment of the likely environmental and socio-economic benefits of the proposals;
- an analysis of the variability of the socio-economic benefits, depending on variations in the numbers of visitors, their average spend, and whether a proportion become overnight-stayers;
- the costs of the proposals;
- an assessment of potential funding sources to ascertain the likelihood of obtaining external funding for the proposals;
- the potential risks and uncertainties associated with the proposals;
- an assessment of the financial value for money represented by the proposals, and;
- suggestions as to how the proposals could be amended to improve the resultant costs, benefits and strategic fit.

Finally, in Section 3 the report presents a proposed programme for development of each network, and a summary of the findings, and the conclusions and recommendations for the project.

2 Network and Regional Summaries

2.1 Introduction

This section presents a summary of the benefits and costs associated with the proposed developments at both the network and regional scale. The final part of the section comprises a summary the sensitivity analysis which was completed to test the assumptions made in the economic assessment. The full analysis is presented in Appendix 2.

2.2 Summary of Benefits and Costs

This section summarises the benefits and costs predicted to accrue as a result of the proposed developments at these networks and sites:

North and West Cumbria: Bowness Common, Wedholme Flow, Drumburgh Moss, Glasson Moss
South Lakes Coast: Foulshaw Moss, Meathop Moss, Roudsea and Ellerside Mosses, Lyth Valley
East Morecambe Bay: Leighton Moss, Silverdale Moss
West Lancashire Plain: Martin Mere, Mere Sands Wood
Mersey Corridor Wigan: Wigan Flashes, Pennington Flash
Gowy Meadows

Table 1 presents a summary of the benefits and costs of individual sites and their collective networks, and Tables 2 and 3 collate this information into a summary of the costs and benefits of the North West Wetlands Network project as a whole. The colour-coding used in Table 1 provides a quick rating guide to the networks indicating a range of overall benefits, from best to least well performing (when compared to each other).

Table 1: Summary of Benefits and Costs of Proposed Developments

Network/ site	Summary of development	Benefits					Costs	
		Environmental	Socio-Economic				Capital	Operational
			Additional visitors/yr	Additional spend/yr	Job creation	Non-quantifiable		
North and West Cumbria (total)		rehab of 84ha cut-over bog (1.2% of National BAP target, 8.4% of regional BAP target) creation of 13ha open water habitats around perimeter	36,000	£287K	20 FTE jobs (9 direct, 11 indirect jobs)	moderate amenity/ recreation low to moderate education low health.	£2.119m	£69.5K/ annum

Network/ site	Summary of development	Benefits					Costs	
		Environmental	Socio-Economic				Capital	Operational
			Additional visitors/yr	Additional spend/yr	Job creation	Non-quantifiable		
		enhanced control of water levels over 1354ha of existing bog contribution to other national BAP targets						
Bowness Common	Acquisition of 32 ha land Improved info and interp Additional car parking Redevelopment of farm to provide visitor centre, with low key facilities Improved access around site Provision of hides One additional staff member	rehab of 32ha cut-over bog (0.46% of National BAP target, 3.2% of regional BAP target) enhanced control of water levels over 459ha of existing bog contribution to other national BAP targets	12,000	£96K	8 FTE jobs (3 direct, 5 indirect jobs)	moderate amenity/ recreation moderate education low health	£863K	£26K/ annum
Wedholme Flow	Acquisition of 38 ha land Improved access, viewing and info	rehab of 38ha cut-over bog (0.54% of National BAP target, 3.8% of regional BAP target) enhanced control of water levels over 550ha of existing bog contribution to other national BAP targets	8,000	£64K	4 FTE jobs (2 direct, 2 indirect jobs)	low/ moderate amenity/ recreation low education low health	£301K	£17K/ annum
Drumburgh Moss	Acquisition of 14 ha land Improved access, viewing and info Additional car parking	rehab of 14ha cut-over bog (0.2% of National BAP target, 1.4% of regional BAP target) enhanced control of water levels over 120ha of existing bog contribution to other national BAP targets	8,000	£64K	4 FTE jobs (2 direct, 2 indirect jobs)	low/ moderate amenity/ recreation low education low health	£550K	£15K/ annum
Glasson Moss	Acquisition of 13 ha land Improved access, viewing and info Additional car parking	Creation of 13ha open water habitats enhanced control of water levels over 225ha of existing bog contribution to other national BAP targets	8,000	£64K	4 FTE jobs (2 direct, 2 indirect jobs)	low/ moderate amenity/ recreation low education low health	£405K	£14K/ annum
South Lakes Coast (total)		Creation of 54ha open water habitats rehab of 40ha of cut-over bog (0.57% of National BAP target, 4% of regional BAP target) creation of 100ha mixed wetland habitats (reedswamp (5% of National BAP target,	89,000	£712K	26 FTE jobs (4 direct, 22 indirect jobs)	low/ moderate amenity/ recreation low education low health	£2.168m	91.5K/ annum

Network/ site	Summary of development	Benefits					Costs	
		Environmental	Socio-Economic				Capital	Operational
			Additional visitors/yr	Additional spend/yr	Job creation	Non-quantifiable		
		40% of regional BAP target), marshy grassland, fen) enhanced control of water levels over 527ha existing lowland raised bogs contribution to other national BAP targets						
Foulshaw Moss	Acquisition of 12 ha land Improved access and info Additional car parking Feasibility study into large new visitor centre	Creation of 29ha open water habitats enhanced control of water levels over 350ha of existing bog contribution to other national BAP targets	18,000	£144K	4 FTE jobs (1 direct, 3 indirect jobs)	Low/ moderate amenity/ recreation low/ moderate education low health	£423K	£17.5K/ annum
Meathop Moss	Acquisition of 25.5 ha land Improved access and info Additional car parking	Creation of 25ha open water habitats Creation of 0.5ha woodland enhanced control of water levels over 64ha of existing bog contribution to other national BAP targets	8000	£64K	3 FTE jobs (1 direct, 2 indirect jobs)	Low/ moderate amenity/ recreation low education low health	£324K	£15K/ annum
Roudsea and Ellerside Mosses	Acquisition of 40 ha land Improved access and info Additional car parking Feasibility study into creation of new visitor centre	Rehab of 40ha cut-over bog (0.57% of National BAP target, 4% of regional BAP target) enhanced control of water levels over 113ha of existing bog contribution to other national BAP targets	13,000	£104K	5 FTE jobs (1 direct, 4 indirect jobs)	Low/ moderate amenity/ recreation low education low health	£521K	£25K/ annum
Lyth Valley	Acquisition of 100ha land Provision of info and access Detailed plans for wetland creation, tourism infrastructure, future land acquisition	Creation of 20ha open water habitats, 60ha reedswamp (5% of National BAP target, 40% of regional BAP target), 10ha marshy grassland, 10ha fen	50,000	£400K	14 FTE jobs (1 direct, 13 indirect jobs)	Low/ moderate amenity/ recreation low education low health	£900K	£34K/ annum
East Morecambe Bay (total)		Creation of 34ha reedbed (2.84% of National, 113% of Lancs BAP target, 22% of regional BAP target) enhancement of opportunities for bittern enhanced control of water levels over 195.5ha of existing	108,000	£864K	9 FTE jobs (1 direct, 8 indirect jobs)	moderate/ high amenity/ recreation moderate education moderate health	£1.4m	£300.4K/ annum

Network/ site	Summary of development	Benefits					Costs	
		Environmental	Socio-Economic				Capital	Operational
			Additional visitors/yr	Additional spend/yr	Job creation	Non-quantifiable		
		mixed wetlands Contribution to other national BAP features						
Leighton Moss	Improve access, info and interpretation Redevelop visitor centre Improve car parking Acquisition of 20ha land	Creation of 20ha reedbed, enhancing conditions for bittern (1.67% of National, 66% of Lancs BAP target, 13.3% of regional BAP target) Enhanced control over water levels over existing site Enhancement of habitat size and complexity	103,000	£824K	6 FTE jobs (6 indirect jobs)	moderate/ high amenity/ recreation moderate education moderate health	£1.13m	£270K/ annum
Silverdale Moss	Acquisition of 14ha land Improve access, info and interpretation 0.5 FTE staff	Creation of 14ha reedbed (1.17% of National BAP, 47% of Lancs BAP target), enhancing conditions for bittern Enhanced control over water levels over existing site Enhancement of habitat size and complexity	5000	£40K	3 FTE jobs (1 direct, 2 indirect jobs)	low amenity/ recreation low education low health	£192K	£30.4K/ annum
West Lancs Plain (total)		Creation of 4ha reedbed (0.33% of National BAP target), 9ha open water habitats, 9ha marshy grassland, 14ha semi-improved grassland enhanced control of water levels over 220ha of existing mixed wetlands Contribution to other national BAP features	115,000	£920K	15 FTE jobs (6 direct, 9 indirect jobs)	Moderate/ high amenity/ recreation moderate education moderate health	£7.7m	£831K
Martin Mere	Redevelopment of central reserve attractions Acquisition of 41.5ha land Improvements to existing visitor centre Improved access, info, interp Improved children's play area 6 extra staff	Creation of 4ha reedbed (0.33% of National BAP target), 9ha open water habitats, 9ha marshy grassland, 14ha semi-improved grassland enhanced control of water levels over 220ha of existing mixed wetlands Contribution to other national BAP features	90,000	£720K	8 FTE jobs (6 direct, 2 indirect jobs)	High amenity/ recreation high education moderate health	£7.6m	£691K/ annum
Mere Sands Wood	Redevelop existing visitor centre Improved signage from public highway	No ecological works proposed by this project	25,000	£200K	7 FTE jobs (7 indirect jobs)	Moderate amenity/ recreation low	£109.5K	£140K/ annum

Network/ site	Summary of development	Benefits					Costs	
		Environmental	Socio-Economic				Capital	Operational
			Additional visitors/yr	Additional spend/yr	Job creation	Non-quantifiable		
	0.5 staff					education moderate/ low health		
Mersey Corridor Wigan (total)		Creation of 80ha open water, 25ha reedbed (2.09% of National BAP target, 16.6% of regional BAP target), 33ha marshy grassland, 10ha fen enhanced hydrological regime over 447ha of existing sites enhancement of habitat size and complexity contribution to other national BAP features	553,000	£4.424m	48 FTE jobs (10 direct, 37 indirect jobs)	Moderate amenity/ recreation low education high health	£7.48m	£482K/ annum
Wigan Flashes	Construction of visitor centre Provision of car parking Improved access, info, interp Construction of 2 bridges over canal Improved signage from public highway Acquisition of 100ha land	Creation of 60ha open water, 20ha reedbed (1.67% of National BAP target, 13.3% of regional BAP target), 10ha marshy grassland, 10ha fen Enhanced control over water levels over 111ha of existing site enhancement of habitat size and complexity contribution to other national BAP features	153,000	£1.224m	16 FTE jobs (5 direct, 11 indirect jobs)	High amenity/ recreation low education high health	£3.75m	£192K/ annum
Pennington Flash	Redevelopment of visitor info point into full scale visitor centre Improved access, info, interp Additional car parking Redevelopment of children's play area Wetting-up of additional land Additional 5.5 FTE staff	Creation of 20ha open water, 5ha reedbed (0.42% of National BAP target) Enhanced control of water levels over 170ha of existing site contribution to other national BAP features	400,000	£3.2m	32 FTE jobs (6 direct, 26 indirect jobs)	High amenity/ recreation low education high health	£3.73m	£290K/ annum
Gowy Meadows	Acquisition of 23ha land Conversion of adjacent church into visitor centre Provision of access, info, interp Provision of car parking Construction of	Creation of 23ha grazing marsh (0.23% of National BAP target) Creation of features complementary to existing Enhanced control over water levels over 166ha of existing site contribution to other	245,000	£1.96m	26 FTE jobs (4 direct, 22 indirect jobs)	Moderate amenity/ recreation high education moderate health	£1.9m	£157K/ annum

Network/ site	Summary of development	Benefits					Costs	
		Environmental	Socio-Economic				Capital	Operational
			Additional visitors/yr	Additional spend/yr	Job creation	Non-quantifiable		
	children's play area Signage from public highway Additional 5 FTE staff	national BAP features						

Key to colour-coding in Table 1:

	= Best benefit/cost =1st priority
	= 2nd priority
	= 3rd priority
	= 4th priority
	= 5th priority
	= Least benefit/cost = 6th priority

Table 2: Summary of Total Benefits and Costs Associated with Proposed developments

Benefits					Costs	
Environmental	**Socio-Economic**				**Capital**	**Operational**
	Additional visitors/yr	**Additional spend/yr**	**Job creation**	**Non-quantifiable**		
• rehabilitation of 124ha of cut-over bog (1.77% of National BAP target) • creation of 67ha of open water habitats around perimeter of mosses • creation of 109ha of other open water habitats • creation of 52ha marshy grassland • creation of 20ha fen • creation of 23ha of grazing marsh (0.23% of National BAP target) • creation of 119ha of reedbed (10.26% of National BAP target, 113% of Lancs BAP target), enhancing opportunities for bittern • creation of 0.5ha of additional woodland, providing opportunities for movement of species between individual sites, enhancing ecological connectivity • enhanced hydrological regime over 1881ha of existing lowland raised bogs (national and local BAP habitat) • enhanced control over 862.5ha of other existing open water, marshy grassland and grazing marsh habitats • enhancement of habitat sizes and complexities, resulting in increased numbers and diversity of wildlife. In some cases, added value to adjacent sites as creation of wetland areas improves ecological links • could contribute to national BAP features for great crested newt, otter, bittern, water vole, diving beetle, barn owl, variable damselfly, white faced darter, reed beds and wet woodland.	1,145,900	£9,167,200	145	Moderate amenity/ recreation Low/ moderate education Moderate health	£22.767m	£1,931,400/ annum

Table 3: Summary of Contribution to Regional Biodiversity Targets

Habitat	Regional target	Contribution of NW Wetland Network to target (%)
Lowland Raised bog	Improve the condition of degraded raised bog (1000ha by 2015)	12.4
Reedbeds	Create new reedbed habitat in blocks of > 20ha. (150 ha by 2010)	78.6
Coastal and floodplain grazing marsh	Re-establish new areas of grazing marsh (50ha by 2010)	62.6

2.3 Sensitivity Analysis

The wetlands provide economic benefits to the northwest economy. It is estimated that the existing sites attract just over 800,000 visitors each year who spend around £6.4 million per year. This spending supports 71 direct jobs and 131 indirect jobs – a total of 202.

Under proposals to enhance and develop wetlands sites in the northwest, it is estimated that 145 new jobs would be created at the sites and in the local economy from additional visitor expenditure. The proposals for the wetlands aim to increase visitor numbers by over 1.1 million, to 1.96 million. This would lead to an additional £9.17 million of visitor expenditure. Spending by visitors in the local area and by the purchase of local goods and services by the wetlands sites would support another 114 jobs.

These estimates are likely to be sensitive to a number of factors, which include:

- Visitor profile: in the absence of visitor data, the assumption has been made that all visitors to the wetlands are day visitors. In reality, it is likely that some visitors to the wetlands are overnight visitors that generally have a higher level of average spending. A 6.9% (high) and 4.6% (low) scenario of total visitors are assessed.
- Visitor numbers: the number of additional visitors generated by the proposed developments have been estimated by site promoters, and these have been used as the basis for estimating employment under a 'reference case'. It is likely that these visitor numbers will not be realised. Visitor numbers will be either higher or lower than these targets. Calculations of the impact of an increase or decrease of 20% have been made
- Visitor spend: an average spend per visit of £8 has been assumed, but it is likely that this will vary by site. A further scenario of £10 average spend per visitor has also bee calculated.

On the basis of these assumptions the following estimates emerge:

- A 20% change in visitor to the wetlands produces a change of 392,000 (plus or minus) in the number of visitors. This would lead to a £3.1 million change in spending, which supports 46 FTEs. In the high growth scenario this would lead to a total income of £18.7 million sustaining 393 FTE jobs, and in the low scenario spending would reach £12.6 million supporting 301 FTE jobs.
- Varying the profile of visitors would lead to an additional 154 jobs above the reference case based on a low prediction of overnight stays. In the higher forecast it is expected that 239 additional jobs would be created. Total visitor expenditure would rise to £20.1 million in the low overnight-staying scenario, which would support 501 FTE jobs. In the high-staying scenario, visitor spending would increase by £22.3 million, which would support 586 FTE jobs.
- If the average spending of each day visitor was £10 instead of £8, this would lead to an additional £1.4 million in spending which would support 90 jobs more than under the base case.

2.4 Conclusions of Sensitivity Analysis

Taking the region as a whole, if all the networks were developed as proposed the economic benefits are estimated to be an additional £9.17m in visitor expenditure per year, and the creation of 145 new jobs. An analysis of the sensitivity of changes to visitor numbers, overnight stays and average visitor spend has shown that the key changes in economic impact within the networks arise from changes to visitor spend and to changes in the number of overnight visitors rather than increases to visitor numbers. However, for overnight visitors it will be the local economy or even the regional economy that benefits, more than individual sites.

3 Assessment of Proposals against Economic Criteria

3.1 Introduction

This section presents an assessment of the predicted socio-economic, environmental and image benefits of the proposed wetland networks against key economic criteria. These criteria include sustainability, alignment with a range of plans and strategies, project outputs (such as job creation, image improvements, tourism infrastructure development, habitat provision and improvement, health and recreational benefits, agricultural diversification), as well as an outline assessment of the value for money represented by the developments.

3.2 Sustainability

The aim of the North West Wetlands Network project is to deliver a programme of wetland development projects that will realise significant and sustainable environmental, economic and social benefits to the region. A key aspect of this will be the long-term protection, enhancement and expansion of wetlands. As part of this, the wetlands project will deliver sustainable economic activity linked to these sites, either through land-based activities or sustainable tourism. In some cases, this will also involve the conversion of agricultural land into wetlands, which will create new habitat for some species.

3.3 Strategic Fit

This section presents an analysis of the proposed developments at each site against national and regional-scale strategies and policies. Analysis against sub-regional and local strategies is presented in the previous network-level chapters.

3.3.1 Regional Economic Strategy

The proposed development of the wetlands is closely aligned with the Regional Economic Strategy (RES)[1]. This strategy provides the economic development framework for the region, with a vision of transforming the region through sustainable economic development. Development of the wetland networks as proposed under this project could contribute to key RES activities, outlined in Table 3 below.

[1] This document is currently under review

Table 4: Comparison between Project Outcomes and RES Criteria

Key Activity Ref:	Key Activity	How does it help to deliver the key activities	Link with RES[2]
5.1	Implement the Regional Rural Recovery Plan through County Action Plans for Cumbria, Lancashire and Cheshire.	The projects will deliver direct and indirect employment to a number of rural locations. In some instances, projects will help with the diversification of agricultural land. The projects will also promote sustainable tourism.	Strong
5.2	Implement the Regional Rural Recovery Plan through regional initiatives, e.g. Planning Facilitation Service, Northwest Farm Tourism Initiative, Northwest Speciality Foods, and sustainable land use practices.	The projects will deliver direct and indirect employment to a number of rural locations. In some instances, projects help with the diversification of agricultural land. The projects will also promote sustainable tourism.	Strong
1.1	Accelerate business cluster network development in those sectors with potential for growth.	The projects will deliver a set of wetland sites that will develop their existing visitor base. 'Natural' tourism is a rapidly expanding sector, and the network approach of the project will lead to close links between sites, other nearby attraction, accommodation businesses, etc.	Moderate
1.2	Initiate major business cluster strengthening projects.	Tourism is a key cluster in the North West and the projects will deliver a set of wetland sites that strengthen the cluster.	Moderate

The development of the wetland sites will assist in the delivery of some key objectives underpinning these priorities, which include:

- Helping to strengthen the visitor economy, which is one of the region's 16 growth sectors. In addition, the wetlands will assist in the diversification of the rural economy, away from the existing agriculture-based use. This growth in the visitor sector will help create a more balanced economy and also offset some the losses in employment from the decline in the agriculture sector.
- Given the concentration of the wetlands in rural areas, their development will help achieve rural, and to lesser extent urban, regeneration objectives.
- They will create learning opportunities for local people, which will help to promote social inclusion.

[2] Links with RES are identified as either 'strong' or 'moderate'.

- Finally they will assist in promoting and reinforcing positive images of the region by developing the region's environment and natural assets.

3.3.2 Other National and Regional Plans and Strategies

The wetland networks under consideration are closely aligned with a number of other national and regional strategies. These are discussed below.

A Biodiversity Strategy for England

This Strategy sets out a vision of a "country – its landscapes and water bodies, coasts and seas, towns and cities – where wild species and habitats are part of healthy functioning ecosystems; where we nurture, treasure and enhance our biodiversity, and where biodiversity is a natural consideration of policies and decisions, and in society as a whole".

The Strategy identifies a series of actions that will be undertaken by the Government and its partners to make biodiversity a fundamental consideration in:

- agriculture;
- water, through wise sustainable use of water and wetlands;
- woodland, through the management and extension of woodland to promote biodiversity;
- marine and coastal management; and
- sustainable urban areas.

Various features of the proposed developments address the protection and promotion of biodiversity:

- bringing agricultural land under favourable wetland management;
- raising water levels on sites acts as a buffer against 'flashy' rainfall episodes, preventing quick movement of water to rivers and sea;
- certain of the developments include the promotion of wet woodland or provision of other woodland for protection of certain species (e.g. red squirrels);
- the location of some sites on urban fringes adds to the diversity of the area, providing a range of activities not usually available in these areas and associated health and welfare benefits.

UK Action Plan for Biodiversity

The wetland networks will assist in the achievement of the goals of the above Plan, launched in 1994 following the UK Government's commitment to the principles of the Rio declaration. The overall goal of the UK Action Plan is to:

'Conserve and enhance biological diversity within the UK and to contribute to the conservation of global biodiversity through all appropriate mechanisms'.

In accordance with the plan a Biodiversity Steering Group was set up, which has prepared a detailed programme of action. This includes the following components:

- developing targets for our most threatened and declining species and habitats;
- establishing an effective system for handling the necessary biological data at both local and national level;
- promoting increased public awareness of the importance of biodiversity, and broadening public involvement; and,
- promoting local Biodiversity Action Plans (BAPs) as a means of implementing the national plan.

The implications of these plans are that any regional policies and proposals are required to ensure that natural conservation developments within the region (from Regional Planning Guidance No. 13)[3]:

- afford the highest level of protection and management to those resources which are important and irreplaceable within practical timescales;
- ensure that there is no net loss in the value of other natural resources in the Region, and;
- return key biological resources to viable levels by promoting the restoration and re-establishment of habitats and populations of species in accordance with the targets set out in the UK and Local BAPs.

Regional and Local Biodiversity Action Plans

The Regional Planning Guidance (RPG) sets out biodiversity targets for the North West (derived from the UK BAP) and sets targets for the maintenance, restoration and expansion of priority habitats. The North West Regional Biodiversity Targets are indicative and are subject to a process of regular monitoring and review.

The target categories are defined below and ranked in order of their importance. Targets for maintenance take precedence over those for restoration and expansion:

- Maintenance of habitat extent – through ensuring that there is no further loss of current habitat resource and that physical processes required to maintain habitats are operating;
- Maintenance of habitat quality – through the protection of remaining areas of habitat still in good condition;
- Restoration of habitat quality – restoring degraded areas of habitat to good condition through positive management, or the cessation of damaging practices, and;

[3] RPG 13, p.38

- Expansion of habitat extent – increasing the area of habitat beyond its current extent, including the creation of lost habitat in areas where it formerly occurred.

Many of the proposed developments considered in this project include the incorporation into existing reserves of current agricultural land. In some cases reserves and surrounding land are lowland raised mire habitats, which are nationally important and enjoy protection through designation, and the aim is that the additional land be restored and in time gain the same designation. Bringing such land under favourable management often allows greater control over water levels, contributing to the long-term survival and recovery of the habitat.

In other cases the proposals involve the creation of areas of reedbeds. For both of these habitats national and regional BAP targets have been set for the creation of new habitats or restoration of existing degraded habitats. Outputs from the project will contribute significantly to targets for lowland raised bog (13%of regional target), floodplain grazing marsh (46%) and reedbed (79%).

Action for Sustainability

This is part of a family of documents that support the delivery of sustainable development in the North West. It outlines a programme for achieving a set of long-term goals and a vision for the North West by 2020. Its primary aim is to ensure that sustainable development principles are embedded in the delivery of existing regional strategies and objectives.

Action for Sustainability outlines a number of priorities to achieve its objectives. The key priority directly relevant to the wetland projects is 'biodiversity and landscape'. This sets out to recognise the value of these natural assets in themselves and their contribution to the regional economy. Key actions of relevance under this priority include:

- Implementing the North West Biodiversity Strategy and local action plans;
- Taking forward recommendations of the ERVNE study;
- Promoting the maintenance, restoration and creation of key landscape features.

The wetlands project fits well with these activities and will help to deliver the objectives of the strategy.

Securing the Future: Delivering UK Sustainable Development Strategy

This document sets out the UK's sustainable development strategy. Key among its priorities are the protection of natural resources and enhancement of the environment. The strategy sets out the UK policy framework for achieving this priority, of which the Biodiversity Strategy for England, Regional Spatial Strategies and Regional Biodiversity Partnerships are relevant to the wetland sites.

Strategy for Tourism in England's Northwest[4]

An element of this strategy includes developing 'winning themes' that make the region unique and special. One of these themes is the countryside, and the strategy aims to promote the region as 'green', with world class countryside and a quality environment. The wetland projects fit well with the idea of promoting a green region and enhancing the tourism role of the region's waterbodies.

Regional Planning Guidance (RPG)

This provides the spatial and environmental framework for the region, with the key aim of promoting sustainable patterns of development and change through the integration of economic, social and environmental issues. The development of wetland areas would be in accordance with the key aim of "Securing appropriate conservation, enhancement and use of the Region's significant natural and cultural resources, its landscape, woodland, access land, built heritage, agricultural land, minerals, biodiversity, water and energy".

Two of the RPG's objectives are particularly relevant to the creation of the wetland networks, these are: to sustain and revive the Region's rural communities and the rural economy, and; to ensure active management of the Region's environmental and cultural assets.

The RPG recognises that tourism has the potential to be a major economic driver within the North West. In particular, it encourages local authorities to work in partnership to effectively manage existing and new opportunities and promote investment that encourages the creation of tourist facilities around appropriate attraction and activities to:

- improve the quality of the visitor experience;
- increase access to tourism for all; and
- maintain and improve local distinctiveness.

The RPG notes that innovative schemes will be essential to improve access to tourist attractions and at the same time manage the capacity of transport and other infrastructure; this has been identified as a particular requirement of the proposed developments at certain sites.

North West Rural Renaissance: The Regional Rural Recovery Plan

This Plan sets out a framework for promoting sustainable recovery of rural economies, providing a set of strategic objectives aimed at broadening the economic base through diversification, and assisting in the restructuring of agriculture by promoting recreation and tourism.

[4] The Strategy for Tourism in England's Northwest, Northwest Regional Development Agency, June 2003

The wetlands projects fit well with these aims. Of particular relevance to the Plan is the aim of supporting high quality wildlife habitats, which improve the landscape and tourism product and raise the profile of eco-tourism. The diversification of the rural economy is another area where the proposed projects align closely with the Plan.

Sub-regionally the counties of Cheshire, Cumbria and Lancashire have developed their own plans based on the vision, strategic objectives and actions set out in Rural Renaissance. The Lancashire Rural Recovery Action Plan sets out seven objectives for managing and delivering rural recovery in the area. Progress will be made towards these objectives by: creating jobs in rural locations; assisting in the restructuring of agriculture; renewing and strengthening the recreational and tourism offer by developing attractions, and; sustaining the environmental inheritance of the area by developing wetlands. Areas where the proposed wetland developments align with the objectives of 'New Landscapes', Rural Regeneration Cumbria's strategy for delivering sustainable economic growth, are:

- projections of increased numbers of visitors fit very well with objectives to expand the tourism offer in the area;
- aims of developing the natural environment of the wetland sites;
- management of the transition of agriculture through the review of the Common Agricultural Policy. The proposed wetland projects will assist with this aspect of the strategy as they will contribute to the diversification of the rural economy.

Regional Parks

Regional Parks, which are major environmental initiatives, aim to build on the region's heritage and history, as well as the natural environment, helping to improve its image and attract new business, create new jobs and increase tourism. A number of initiatives are planned within the region, the funding and principle of which are supported by the NWDA. Of particular relevance to this project are the proposed Northwest Coastal Trail, the Ribble Estuary, and the Greenheart Regional Park, based in Wigan and its surrounds.

As there is significant convergence between the aims of Regional Parks and the wetlands, this will be an advantage in seeking regional funding for the implementation of a marketing strategy for the wetlands. If marketed as a regional network, the wetlands have the potential to be a significant contributor to the wider image enhancement objective and thereby benefit inward economic investment.

3.4 Project Outputs and Outcomes

The developments proposed within this project have the potential to deliver economic, social and environmental outputs that meet a range of funding criteria. Key benefits include:

- significant increases in visitors and spend within each network;
- significant increases in the jobs supported by the projects, both on-site and in the local and regional economy;
- good alignment with key plans and strategies concerned with the conservation of species and habitats, sustainability, health, the expansion of the tourism offer, economic growth, diversification of the rural economy, and public access and educational improvements;
- biodiversity, sustainability, health and educational improvements;
- some flood management improvements.

Some key benefits are discussed in more detail below.

3.4.1 Direct Employment

In terms of direct employment, it is estimated that 145 jobs will be created as a result of developing the wetland sites. A key feature of these jobs is that they tend to be in rural locations. Another key output of the projects will be the creation of visitor centres at a number of the sites.

There is a high level of additionality[5] associated with these outputs. There is some deadweight[6] associated with the project development but it is unlikely that the wetlands would sustain this level of employment without significant investment.

It is unlikely that leakage[7] of direct employment will be an issue, although there will certainly be some leakage of indirect employment from localities. Considering the region as a whole, however, these will be very small. It is unlikely that there will be any significant displacement or substitution effects arising from these projects. The multiplier effects could be significantly enhanced if sites bought their goods and services locally.

3.4.2 Impact on Ill-Health Inequalities

One potential outcome from this project is a positive effect on the health of the region's residents. A number of studies point to this likely impact:

- Studies highlight the health benefits from outdoor activities such as visits to wetlands. For instance a RSPB study[8] indicates that there are health benefits from greenspaces, which are greatest when greenspace is located in or close to urban

[5] The extent to which an activity is undertaken on a larger scale, takes place at all, or earlier, or within a given geographical area as a result of the project.

[6] Output that would have occurred without the project.

[7] The proportion of outputs that benefit those outside of the project's target area or group.

[8] Bird, W. (2004) Natural Fit: Can Greenspace and Biodiversity increase levels of physical inactivity. Report to the RSPB.

areas. Other international studies[9] find that that living near greenspace results in fewer health complaints and better mental and physical health than living in an urban environment without close greenspace.

- As the proposed projects seek to attract a large number of visitors to enjoy the wetlands, it is likely that their effects will also be large. Based on a recent UK study[10] which shows that the majority of day visitors travel a short distance to their destination, then it is likely that most of these visitors will be from the North West, suggesting that the health benefits will be mainly enjoyed by its residents.

3.4.3 Rural Impact

The location of many of the wetlands means that their development will have a significantly positive rural impact. Table 4 below links project outputs and outcomes to the delivery of some of the Regional Rural Recovery Plan's (RRRP) strategic aims.

Table 5: Link between Project Outputs and Outcomes and RRRP Strategic Aims

Strategic Aim	Contribution of Wetlands to delivery of objectives
SO1: Broadening the Economic Base of Rural Areas	By helping the diversification of land toward tourism and supporting sustainable land-based activities linked to wetlands.
SO2: Renew and Strengthen Sustainable Recreation and Tourism	Promotion of sustainable tourism and the extension and enhancement of environmental assets.
SO3: Assisting the Restructuring of Agriculture	By helping the diversification of land toward tourism and supporting sustainable land-based activities linked to wetlands. The promotion of initiatives similar to the Environmental Stewardship Scheme.
SO6: Development and Promotion of Countryside Products	Wetland sites will actively pursue options for purchasing goods and services locally.
SO7: Sustaining the Environmental Inheritance	Promotion of environmentally sustainable land-based activities. Use of Environmental Stewardship Schemes. Protection of environment linked to economic activity.

[9] De Vries, S., Verheij, R., and Groenewegen, P. (2002) Nature and health: the relation between health and green space in people's living environment. Euro Leisure Conference, Netherlands, and Takano, T., Nakamura, K. and Watanabe, M. (2002) Urban residential environments and senior citizens longevity in megacity areas: the importance of walkable greenspaces. Journal of Epidemiology and Community Health, 56, 913-18.

[10] 'Leisure Day Visits', Report of the 2002-3 GB Day Visits Survey, 2004

3.5 Key Value for Money Criteria

There are a number of ways to assess the value for money of a particular project. The project's cost per job is one of these criteria. However, an overall assessment of value for money should also consider other criteria such as funding leverage, other output deliverables, geographical location, project type and wider environmental, health, education and image benefits of the project.

Table 5 below presents a summary of the proposed investment in developments at each site and network, and for the project as a whole. By factoring in the number of jobs expected to be created as a result of increases in the number of visitors, a calculation can be made of the level of investment required to create each job.

Table 6: Cost per Job Created

Network/site	Total cost per job created
North and West Cumbria (combined)	£104,000
Bowness Common	£111,000
Wedholme Flow	£80,000
Drumburgh Moss	£141,000
Glasson Moss	£105,000
South Lakes Coast (combined)	£81,000
Foulshaw Moss	£88,000
Meathop Moss	£113,000
Roudsea and Ellerside Mosses	£109,000
Lyth Valley	£67,000
East Morecambe Bay (combined)	£189,000
Leighton Moss	£233,000
Silverdale Moss	£74,000
West Lancs Plain (combined)	£569,000
Martin Mere	£1,036,000
Mere Sands Wood	£36,000
Mersey Corridor Wigan (combined)	£169,000
Wigan Flashes	£246,000
Pennington Flash	£126,000
Gowy Meadows	£79,000
All	£169,000

Some individual projects and networks offer better value for money than others, in terms of the cost of jobs created. A study by SQW (2003) for Advantage West Midlands attempted to identify a benchmark unit cost, and came up with a broad range: £7,700 to £32,400 – the sample average was £17,200 (gross cost per gross job). This indicator has been used in the assessment of value for money. The analysis for each network is given in the previous network chapters.

Based on an analysis of the costs of jobs created, the developments proposed at each site and network across the region would not accrue significant economic benefits. The picture across the different networks varies, however. It would cost an average of £169,000 of capital investment and operational expenditure to create each job, which does not represent good value for money.

However, the proposed developments would create jobs in the rural economy and therefore represent good alignment with regional and sub-regional strategies aimed at developing the rural economy. The networks would also deliver other benefits, such as biodiversity, health and education, which are much more difficult to measure but which are nevertheless positive. The objectives of the project were to look at the feasibility of projects that could deliver both biodiversity and economic gain. The networks should be seen therefore in the context of their dual objectives and not necessarily on purely economic outputs.

3.6 Conclusions

The proposed developments score well against a number of criteria. They display a good fit with a number of regional, sub-regional and local strategies concerned with the conservation of species and habitats, sustainability, health, the expansion of the tourism offer, economic growth, diversification of the rural economy, and public access and educational improvements. They are also likely to provide environmental, health and educational benefits to their locality and the wider region.

In economic terms the project would attract a large number of additional visitors and spend, resulting in the support of 145 new jobs, which is a significant employment outcome. The network would have other significant economic outcomes, particularly in terms of broadening the economic base of the rural economy and helping to manage the restructuring of agriculture. The network would also accrue positive benefits in terms of sustainability, biodiversity, ill-health inequality and rural recovery criteria. In addition, the project would assist in the strengthening of the visitor economy, and would in one case aid in flood management.

However, when measuring the whole network against a strict cost per job created comparison it does not represent good value and it is predicted to cost on average £169,000 to create each job. There are significant variations across individual networks, but using the benchmark of between £7,700 – £32,400, as indicating value for money,

none can be said to offer a good return on investment purely in terms of the costs of new jobs.

4 Towards a Marketing Strategy

4.1 Introduction

This section considers the following aspects which would build towards a marketing strategy for the North West Wetlands Network:

- the market for the natural environment in the North West;
- how the proposals for the wetland networks fit with regional strategies and plans, and also for tourism and recreation;
- an analysis of the strengths, weaknesses and opportunities of the North West wetland visitor market.

It provides an analysis of the market at the regional and local level and sets out the issues on strategy which should be further developed by the project partners.

4.1.1 The 'Natural Environment' Market in the North West

The natural environment market in the North West generates £2.5 billion for the regional economy and provides 13,000 jobs. This includes the primary sectors of fishing, forestry, agriculture and outdoor sports businesses together with businesses which provide direct environmental goods and services such as waste management, renewable energy and environmental technologies.

Tourism, which depends on the region's natural assets as a stand alone sector, employs 200,000, and it is estimated that visits to environmental attractions contributes £4.38 billion to the economy, which represents around 33 million day visits a year.

Set within this wider natural environment market the existing wetland networks considered within this study already contribute a visitor spend of £6.4m from 800,000 visitors, and with the developments proposed it is predicted that this will increase to a spend of £15.7m and almost 2m visitors over the next 10 years.

NWDA have recently commissioned a study of marketing the natural environment[11] which should help guide the development of a marketing strategy for the wetlands.

Recent trends in tourism show a rise in the number of short break holidays, together with a rise in the 'grey market' (55-64 age groups and above) who have higher disposable incomes and are seeking self improvement and educational experiences from their

[11] 'Natures Edge', Northwest Regional Development Agency, June 2005

leisure, in addition to traditional holidays. These are trends which the wetland network should take note of and steer their marketing strategies.

4.2 Fit of Wetland Networks with North West Tourism Plans and Strategies

The wetlands networks as described in the Stage 1 report can be seen to be closely aligned with the region's intention to further develop the potential of tourism. Tourism has the potential to be a major economic driver particularly in rural communities. The wetland network presents an opportunity to assist with this.

4.2.1 North West Tourism Strategy[12]

This strategy recognises that the region's natural resources are outstanding and unique and aims to position them at the forefront of any marketing. The strategy involves launching thematic marketing campaigns to play more strongly to niche markets. As described in paragraph 9.3.2 above the development of the wetland networks fits well within this strategy, in particular with the development of the 'winning theme' of the countryside, of so called 'signature projects' and 'regional gems', (such as Hadrians Wall within the North and West Cumbria network, Southport, close to the West Lancashire Plain network, and Grange-over-Sands, within the South Lakes network). These projects will have increased focus and support from regional tourism investment budgets, which is likely to mean that associated projects such as the wetlands could benefit.

Regional Parks aim to build on the region's heritage and history, as well as the natural environment, helping to improve image and attract new business, create new jobs and increase tourism. The NWDA supports the planning of the parks and the funding of specific projects for The Northwest Coastal Trail, which will tie in with the North and West Cumbria network and the Ribble Estuary, which will include the West Lancashire Plain wetland network. Wigan MBC is also developing a Regional Park ('Greenheart'), which is to be centred around a large, mainly green swathe of former mining areas and old industrial uses, including the wetland sites of Wigan Flashes and Pennington Flash.

As the purpose of the Regional Parks fits well with the objectives of the wetlands as visitor attractions, which aim to enhance the region's image, this will be an advantage in seeking regional funding for the implementation of a marketing strategy. The wetlands, if marketed as a regional network, have the potential to be a significant contributor to the wider image enhancement objective and thereby benefit inward economic investment.

4.3 Strengths and Weaknesses of the North West Wetlands Visitor Market

Strengths:

[12] Northwest Regional Development Agency (June 2003)

- Existing visitor numbers of 1.2 million, with main attractions being Pennington Flash, Wigan Flashes, Martin Mere and Leighton Moss;
- Well known national brands of Martin Mere and Leighton Moss;
- Bitterns and Leighton Moss;
- Number and scale of wetlands;
- Good transport links to most wetland networks from national motorway network;
- Proximity to major centres of population around Manchester and Liverpool in central and southern part of network;
- Proximity to major tourist attractions along Lancashire coast and the Lake District.

Weaknesses:

- Large number and fragmented nature of sites, making them difficult to manage;
- Large number of promoters with different purposes, but mostly with similar aim of nature conservation, with visitors and tourism a lower priority;
- Poor environmental image of the North West in general and some networks and sites in particular – for example, Mersey Corridor and Gowy Meadows;
- Large number of organisations involved, making it difficult to agree on overall strategy;
- The quality of tourism offer/attractions generally, when compared with competing attractions;
- Competition for knowledgeable bird watching visitors from established attractions in other parts of the country, e.g. Suffolk and Norfolk;
- Poor range of accommodation and facilities around most sites;
- Too many sites offering a similar visitor experience – insufficient differentiation;
- Whilst promoters are enthusiastic about their planned developments and the increase in visitor numbers, there has been little development of strategies to indicate how this significant growth will be generated.

4.4 Towards a Marketing and Development Strategy

The following proposals and actions will help resolve the weaknesses identified and assist in the development of a strategy which will help in delivering the planned increases in visitor numbers:

- Formation of an umbrella organisation to promote wetlands in the North West, bring projects forward, provide the regional vision and to develop and monitor a programme of wetland development. An option would be to support and operate this under the existing Natural Economy Steering Group. Whilst this may be seen as yet another ‘partnership’, of which there are many in this sector, it would serve to focus attention on the development of a marketing strategy. This group would be the main link with other related initiatives, such as the Regional Parks, and existing partnerships such as the Peatlands for People project in North and West Cumbria and the Cumbria Wetland Bird Recovery Programme in South Lakes Coast.

- With a large number of organisations trying to promote a similar product, there is benefit to be gained from combining the strengths of all in a coordinated strategy that is supported by NWDA. The formation of such an organisation fits well with the NWDA's objectives for the natural economy and tourism.
- Work with the tourism destination management organisations to market the North West Wetlands Network nationally through the 'winning themes' countryside initiative. This will aim to attract visitors from the rest of the country, and from within the North West region itself.
- Development of a North West Wetlands Network website and marketing material, which will seek to attract new visitors to the region's wetlands, with links to individual sites and linked into other tourist/visitor websites in the region. Ideas for marketing materials include developing a wetlands 'brand', preparing a regional wetlands leaflet, and the provision of information on other network sites to be provided at each location.
- The development of 'special-interest' breaks, which combine visits to the wetlands with visits to other attractions, e.g. Bowness and Hadrians Wall.
- The cross-marketing and grouping of sites and attractions in a particular area to encourage visitors to move from one attraction to another, e.g. linking of Leighton Moss with other attractions in Arnside and Silverdale AONB. It would be important, however, to show how those sites were sufficiently different to ensure a significant number of the visitors wanted to go to both. As well as cross-marketing considering the promotion of key sites to the main key population centres within 60 minutes drive.
- In promoting the wetlands use the separate 'visions' of each network to develop different 'brands', to make sure that they are not seen as offering the same attraction. This will be particularly important for sites such as Wigan Flashes and Pennington Flash, and Martin Mere and Mere Sands Wood, which are in close proximity to one another.

5 Further Business Plan Development

5.1 Introduction

This study has identified five wetland networks across the North West which together have the potential to deliver significant environmental socio-economic and image benefits to the region. Outline feasibility studies have been prepared which go some way to defining costs, benefits and potential funding sources, but further work will be required to develop business plans.

This section identifies the additional work that will be required to augment or fill in the gaps of what has already been completed, together with suggestions as to the future shape of organisations and partnerships to take them forward. These are the next steps for the project. Matters relating to the whole regional network are identified first, followed by individual networks.

5.2 Network-Wide

Enough work has been completed to confirm that taken as a single initiative the wetlands network is likely to generate significant benefits to the region. The next steps at a regional level are seen as:

- Development of an overall business case for the wetlands using the outputs from this study. This will need to address the following points:
  - aims and objectives;
  - why the project is needed;
  - how it will provide added value;
  - how it fits with national, regional and local strategies, policies and plans and initiatives;
  - the organisational structure of the partnership promoting the initiative. The Natural Economy Steering Group may be the most appropriate body to lead on this, but it will require the involvement of tourist organisations and bodies;
  - proposals for the wetland networks together with a programme for the development of individual projects. Projects will need to be packaged properly if they are going to be successful. Individual projects approaching the same funders for money to do similar work are unlikely to be successful. The proposals need to be linked and cross-referred in bids to funders;
  - a strategy for approaching funders.
- Preparation of an overall marketing and development strategy for the whole regional network, together with more detailed plans for each of the networks.

The major challenge for the initiative is the achievement of a 64% increase in visitor numbers, to 2m in 10 years. Whilst in many projects considered by this study the promoters and partners have a relatively well-defined idea about what they want to achieve and the associated costs, less effort has been put into identifying how these visitors will be attracted. As described in Chapter 7, the marketing strategy needs to define more precisely the types of visitors to be targeted, the attractions and tourism offer, the cross-marketing of a range of different attractions in the same area, the use of web-based marketing, etc.

5.2.1 North and West Cumbria

The proposals for North and West Cumbria are shared by an existing partnership of RSPB, English Nature and Cumbria Wildlife Trust. They are aimed at improving the existing poor visitor facilities with better parking, site access and interpretation, including a low key visitor centre at Bowness Common, as well as the acquisition of land surrounding the existing sites to gain more control over water levels.

The proposals are considered unlikely to generate regionally significant benefits, although the relatively small capital investments means that the network represents reasonable value for money in terms of new jobs created. Whilst the proposals for the next ten years are modest in terms of capital works, the projected increase in visitor numbers of 680% (from 8000 to 55,000) is very ambitious, and will require a detailed marketing strategy to achieve. In terms of business plan development, the following areas will require attention:

- Agreement between the existing RSPB, EN and Cumbria Wildlife Trust Partnership (Peatlands for People project) on a coordinated development plan.
- Inclusion of tourist organisations, including Cumbria Tourist Board, Carlisle City Council and English Heritage (Hadrians Wall), into a marketing partnership. The wetlands should be seen as one of a number of attractions in the area.
- Developed of a business case for the wetland project which identifies the need, what would or would not happen if the project did not go ahead, and how the proposals are supported by regional and local plans.
- Development of proposals in more detail, with costings, income and expenditure profiles and phasing.
- Explore potential funding options available from relevant funding bodies, in particular the Heritage Lottery Fund Landscape Partnerships, Rural Regeneration Cumbria, English Nature Reserves Enhancement and Capital Grants Schemes. The potential for Environmental Stewardship funding for work on existing agricultural land should also be investigated, as well as grants available from Defra for the implementation of water level management plans in Cumbria.
- Development of funding proposals which identify eligible expenditure, and the compilation of applications.

- Vehicular access to the network, and Bowness Common in particular, is an issue which may need further consideration when trying to satisfy planners over proposals for visitor centres at North Plains Farm and Rogersceugh Farm.
- Preparation of a marketing plan.

5.2.2 South Lakes Coast

The proposals for the South Lakes Coast network involve low key improvements to visitor facilities, with the emphasis on wetland enhancement and creation. On its own this network will not generate significant socio-economic benefits over the ten year North West Wetlands Network timescale, although the small capital investments proposed at the sites means that the network offers relatively good value for money in terms of costs of jobs created.

The network is well located in relation to the existing Cumbrian tourist market and the eastern sites are easily accessible from the M6. . It is also close to the East Morecambe Bay network and should be seen as part of this network in terms of marketing. In the longer-term the network has great potential to develop as a larger visitor attraction. The business plan for this network will need to address the following issues:

- Formation of a strong partnership between English Nature, Cumbrian Wildlife Trust and RSPB (perhaps building on the work of the existing Cumbrian Wetland Bird Recovery Programme) to develop a co-ordinated programme of site acquisition and enhancement.
- Development of a business case for the wetland project, which sets out the need, what would or would not happen if the project did not go ahead, and identifies how the proposals are supported by regional and local plans, strategies and initiatives. This should look to the next ten years and beyond.
- Development of the proposals in more detail, with costings and expenditure profiles and phasing.
- Explore potential funding options available from relevant funding bodies, in particular HLF Landscape Partnerships and Heritage Grants, Rural Regeneration Cumbria, the EN Reserves Enhancement and Capital Grants Schemes and the EU Life Nature Programme. Grants may also be available from Defra for the implementation of water level management plans. In addition The Environmental Stewardship scheme may also be a mechanism for acquiring or bringing under favourable management areas of existing farmland such as the Lyth Valley. The securing of regional funding for this network on its own is considered unlikely.
- Preparation of a marketing plan. Promotion of the network for the first ten years using Leighton Moss as the key site.

5.2.3 East Morecambe Bay

Leighton Moss is already a significant visitor attraction, being of national importance for the bittern. It forms one of the main centres for visitors in the Arnside and Silverdale Area

of Outstanding Natural Beauty (AONB). The proposals for the further development of Leighton Moss include upgrading of the visitor centre and investment into increasing the conservation value of the site, which is in danger of declining.

A predicted doubling of visitors will generate significant economic benefits to the region, particularly in terms of the number of jobs created. Some work has been undertaken by the site owners and promoters, RSPB, but the following areas will require attention before a business plan can be finalised:

- Development of a business case which sets out the need, what would or would not happen if the project did not go ahead, and how the development of the network fits in with and complements proposals for tourism development in the wider Arnside and Silverdale AONB, supported by the different organisations forming part of the AONB Executive Committee. The wetland network should be sold as part of a wider outdoor experience and a hub for the whole of the AONB.
- Development of the proposals in more detail, with costings, income and expenditure profiles and phasing.
- Existing deficiencies in vehicular access is a key issue which can only be solved by working with others on the AONB Executive Committee, as well as other tourist operators. A 'Green Transport' plan is likely to be required, which sets out how a modal shift in transport from the car to rail, bus and other more sustainable means of transport can be achieved.
- Explore potential funding options available from relevant funding bodies, in particular the Heritage Lottery Fund for both their Landscape Partnerships and Heritage Grants, the EU Life Nature Programme and the Lancashire Rural Tourism Initiative.
- Development of funding proposals, which identify eligible expenditure, and putting together applications. Consideration should be given to preparing joint submissions for a number of attractions, as this could potentially improve the chances of any application being successful, e.g. the HLF Landscape Partnerships scheme.
- Preparation of a marketing plan.

5.2.4 West Lancashire Plain

The proposals for Martin Mere will involve significant capital investment, which together with more modest proposals for Mere Sands Wood, will potentially deliver significant economic benefits to the region. These benefits could be even greater if Nucks Wood is included, but this site is in the process of being sold and any new owner will want to consider their own proposals. However, Martin Mere is not considered to represent good value for money in terms of investment required to create or safeguard jobs.

The following are areas that will require attention before a business plan can be completed:

- WWT and Lancashire Wildlife Trust should consider forming an alliance to forward both Martin Mere and Mere Sands Ward as a single project for funding purposes.

- Development of a business case for the wetland project, which sets out the need, what would or would not happen if the project did not go ahead, and how the proposals are supported by regional and local plans, strategies and initiatives, e.g. Ribble Regional Park.
- Development of proposals in more detail, with costings, income and expenditure profiles and phasing.
- Explore potential funding options available from relevant funding bodies, in particular the HLF, the Lancashire Rural Tourism Initiative, the Lancashire Rural Recovery Action Plan and the EU Life programme.
- Develop of funding proposals which identify eligible expenditure, and compilation of applications.
- Development of complimentary, not competing or overlapping attractions.
- Development of links with the new owners of Nucks Wood, and inclusion of the site within the wider network project.
- Preparation of a marketing plan

5.2.5 Mersey Corridor

This network exhibits amongst the greatest potential benefits to the whole region of any of the networks under consideration in this study, and is also considered to represent reasonable value for money in terms of jobs created. It is being actively promoted by Wigan Borough Council, Lancashire Wildlife Trust, Wigan Leisure and Culture Trust, and Groundwork Wigan. The following are areas that will require attention before a business plan can be completed:

- Setting up of a working group to develop the proposals and formulate a funding strategy under the direction of Wigan Borough Council. The group recently set up to prepare an application to the Big Lottery Fund for the Greenheart Regional Park bid could be the start of this.
- Development of a business case for the wetland project which outlines the need, what would or would not happen if the project did not go ahead, and how the development of Wigan Flashes and Pennington Flash fits in to the proposals for the Regional Park and Bickershaw, etc.
- Development of more detailed proposals which include costings, income and expenditure profiles and phasing. The proposals for Bickershaw, and in particular the relocation of the golf course, needs to be confirmed.
- Outline proposals explaining how Wigan Flashes and Pennington Flash will offer different attractions to different markets, and how they will complement one another. Developments at both sites should be promoted as a single project.
- Explore potential funding options available from relevant funding bodies, in particular NWDA about Single Pot funding, HLF and the Big Lottery Fund, to ascertain views on prospects and timing (an approach to the Big Lottery fund is already being taken forward by Wigan Council).
- Development of funding proposals which identify eligible expenditure, and the preparation of applications.

- Development of proposals for site management, i.e. will the LCT take over the management of both sites? etc.
- Preparation of a marketing plan.

5.2.6 Gowy Meadows

The Cheshire Wildlife Trust (ChWT) sees the development of visitor facilities at Gowy Meadows as being key to the ability to generate funds for the acquisition of additional land, with the aim of improving the conservation status of the area. An extremely optimistic target of a 500 fold increase in visitor numbers over the next ten years, from the current 5000 to 250,000, is projected by ChWT, partly through the development of a state of the art visitor centre located in a disused church.

A significant investment of £1.9m is a considerable challenge for a voluntary organisation, and potential funders will need to be convinced about its feasibility through the business plan. Regional socio-economic benefits are likely to be low. The following areas will require attention to allow the completion of a business plan:

- Development of a business case for the site which identifies the need, what would or would not happen if the project did not go ahead, and how the proposals are supported by regional and local plans, strategies and initiatives, etc
- CuWT should explore the possibility of entering into a partnering arrangement with Shell to co-fund the proposals.
- Development of more detailed proposals, which include costings, income and expenditure profiles and phasing.
- Visitor projections should be reviewed, and if necessary amended to be more realistic. This should be linked to the marketing plan for the site.
- A transport impact assessment may be required as part of the proposals, to show that any increase in traffic created by the new development can be accommodated by the existing road network.
- Explore potential funding options available from relevant funding bodies, in particular the Heritage Lottery Fund Heritage Grants. If the site is within the Mersey Waterfront Regional Park additional funding may be available through this avenue.
- Development of funding proposals which identify eligible expenditure, and preparation of applications.
- Preparation of a marketing plan.

Section 2

6 North and West Cumbria

6.1 Current Value of Network

This section presents a summary of the current benefits of each site and network to their local area and the region as a whole. This comprises a consideration of the existing environmental and any socio-economic and other non quantifiable benefits displayed by each site. This summarises the analyses undertaken in Stages 1 and 2 of the project.

This information represents a baseline against which the environmental, socio-economic and image benefits of the developments proposed during Stage 2 of the project can be assessed. A drawing of the network is presented as Figure 2.

6.1.1 Environmental Benefits

The ecological importance of the South Solway mosses, which comprises Bowness Common, Wedholme Flow, Drumburgh Moss and Glasson Moss, is recognised nationally and internationally through individual designations as SSSIs and collective designation as an SAC. They are of particularly high ecological value because large areas still support active peat growth, with high potential for growth over additional areas.

Bowness Common

At 759ha Bowness Common is one of the largest active raised bogs remaining in the UK. Although affected by past drainage and peat-cutting, much of the site still supports typical bog vegetation. Much of the area within the SSSI is owned by the RSPB, or owned and leased by English Nature. To the north of the site the RSPB have established a nature reserve, Campfield Marsh.

Significant areas of active bog growth remains on the site, with some areas wet enough for sphagnum species to predominate. In other areas the bog surface has been modified by peat-cutting, drainage and burning. On the drier parts of the site, especially around the edges of the SSSI, are areas of birch wood and patches of purple moor grass or bracken-dominated vegetation. Approximately 40% of the SSSI is considered to be in a favourable condition. Those areas that are currently in an unfavourable condition have been affected primarily by inappropriate ditch management.

Areas of the moss that are not in English Nature's or the RSPB's ownership are in agricultural use, or continue to be subject to peat extraction and drainage, leading to further degradation of the site.

Wedholme Flow

This is an extensive lowland raised mire, 780ha in size, of which approximately 550ha are currently in the ownership of, or under management agreements with, English Nature. The site is the largest area of this habitat left in Great Britain without significant loss or damage. However, commercial peat workings have resulted in much of the SSSI being assessed as being in an unfavourable condition, although English Nature have instigated management policies to maintain and restore active mire vegetation. The cutting and draining of the central area, along with subsequent slumping and wastage, has reduced the height of the original peat dome by around 3-5m.

The non-worked areas of primary active raised mire to the north and south display original surface patterning, and are the best examples of this habitat in the Cumbrian Solway area. The site is home to a range of breeding birds, such as curlew, snipe, redshank, reed bunting and grasshopper warbler, and is noted for a colony of the uncommon large heath butterfly.

Drumburgh Moss

This site, which is owned by CuWT, is less affected by artificial drainage or peat cutting than the other Solway Mosses. The outer margins of the mire reflect modifications made by small scale peat cutting, drainage, burning and agricultural reclamation. The water table of the mire is reduced by old drains which run across and out from the centre of the mire. These factors have increased the hydrological gradient and have allowed the encroachment of scrub.

The water table is much higher near the centre of the moss, where active raised mire remains, with typical surface features, such as hummocks, hollows and small pools. Approximately 96% of the SSSI is currently assessed as being in an unfavourable condition but of this, 40% is considered to be recovering; a management plan is currently in place for the moss to restore the features. Some of the areas outwith CuWT's ownership continue to be subject to peat extraction and drainage.

Glasson Moss

Approximately 35% of this site, which is 60% owned by English Nature, is considered to be in a favourable condition. Those areas that are currently in an unfavourable condition have been modified by peat cutting, fires and drainage. Much of the site drainage has been blocked by English Nature, to help water retention on the bog and reduce surface run-off.

The centre of the moss has a high water table and a well-developed complex of small pools, hollows and hummocks. At the northern boundary of the moss a ridge of agricultural land on a small drumlin extends into the site. Habitats within the site include various mosses, heathland, broad-leaved woodland, scrub and acid grassland.

The southern half of the moss is much drier than the north and is dominated by heather, cotton-grass and birch scrub. The northern section of the moss is modified to a much lesser extent and exhibits natural transition to 'lagg' communities. This diversity of habitats favours a varied breeding bird community and the site is also important for the large heath butterfly.

6.1.2 Socio-Economic Benefits

The North and West Cumbria network attracts around 8,000 visitors each year, who spend a total of approximately £65,000 per annum in the local area and region. The sites currently support a total of three FTE jobs, two of which are directly employed and one is through multiplier effects. In terms of non-quantifiable benefits the network is considered to currently realise low amenity/recreational, educational and health benefits.

Bowness Common

Visitor numbers and income generation: 8,000 visitors per year, estimated to spend approximately £65,000 in the local and regional economy.

Employment and training generation: two FTE jobs at the site and one job due to multiplier effects in the local economy.

Non-quantifiable economic impacts: low amenity/recreational, educational and health benefits.

Wedholme Flow

Visitor numbers and income generation: no current visitors, therefore estimated to be no income to the local or regional economy associated with the site.

Employment and training generation: no current employment generation.

Non-quantifiable economic impacts: low amenity/recreational, educational and health benefits.

Drumburgh Moss

Visitor numbers and income generation: 100 visitors per year, estimated to spend approximately £800 in the local and regional economy.

Employment and training generation: no current employment generation.

Non-quantifiable economic impacts: low amenity/recreational, educational and health benefits.

Glasson Moss

Visitor numbers and income generation: no current visitors, therefore estimated to be no income to the local or regional economy associated with the site.

Employment and training generation: no current employment generation.

Non-quantifiable economic impacts: low amenity/recreational, educational and health benefits.

6.2 Value of Proposed Developments

This section presents a summary of the environmental and socio-economic benefits and costs, together with the potential sources of funding available, main risks, and strategic fit associated with the developments proposed in Stage 2 of the project. These network-scale benefits and costs are then compared, allowing an assessment of which of the proposed developments would be expected to provide the greatest economic and environmental benefits for the projected expenditure, i.e. offers the best 'value for money'. Table 1 presents a summary of the benefits and costs associated with the proposed developments.

A sensitivity analysis of the economic impacts of the proposed developments is also presented. This analysis will allow an assessment of effects of changes in visitor numbers on economic benefits (the economic benefits of the wetland networks depend on their ability to attract visitors). The analysis is presented in full in Appendix 2.

6.2.1 Summary of Developments

The vision for this network essentially entails the restoration of the internationally important degraded lowland raised bogs, so that they are once more an active part of the region's natural and cultural landscape. The proposals for the key site, **Bowness Common** involve the improvement of visitor facilities through the conversion of existing farm buildings, construction of new hides, improvement of infrastructure and interpretive facilities, and purchase of additional land. Proposals for the network sites, **Wedholme Flow, Drumburgh Moss** and **Glasson Moss** involve peatland rehabilitation, increasing water levels and seeking opportunities to purchase additional surrounding land which is currently not in favourable ownership or management. Over the next ten years the respective promoters, owners and managers wish to improve visitor facilities, including parking provision, site access and interpretation.

6.2.2 Strategic Fit

This section presents an assessment of the fit of the proposed developments with sub-regional and local strategies and plans considered to be of particular relevance.

Cumbria's BAP is a strategic document which outlines priorities for the conservation of species and habitats in the county. It contains several references to the need to improve and expand the existing network of nature reserves, with particular reference to enhancing public access to, knowledge of, and contact with, natural environments. The document includes proposals to restore and/or create wetland habitats, such as purple moorgrass and rush pasture, reedbed and wet woodland.

'New Landscapes' is a strategy for delivering successful and sustainable economic growth in rural Cumbria. The key areas where proposed wetland developments align with the objectives of the strategy are:

- projections of increased numbers of visitors fit very well with objectives to expand the tourism offer in the area;
- aims of developing the natural environment of the wetland sites;
- management of the transition of agriculture through the review of the Common Agricultural Policy. The proposed wetland projects will assist with this aspect of the strategy as they will contribute to the diversification of the rural economy.

The Allerdale Local Plan sets out detailed policies and site specific proposals for the development and use of land. The document discusses the environmental significance of the Upperflats and Marshes of the Solway Coast, largely because of their birdlife. The raised bogs, mires and mosses of the Solway Plain are identified as being "perhaps the most important SSSIs in the Borough". The Plan's objectives include increasing tourism opportunities sustainably in the Solway Coast area, by capitalising on the quality of nature reserves in the area.

The Plan also recognises the importance of these areas in providing business opportunities. Estuary and marsh habitats are seen as being important to the image of the Borough and the well-being of inhabitants. However, although these habitats will therefore be protected from development, the Plan does not give priority to increasing the number or quality of sites. Overall, the Plan gives good consideration to wetland-type habitats, and recognises their importance for tourism, business and the health of the District generally.

The Allerdale Cultural Strategy identifies how cultural and leisure activities and facilities such as the arts, sport, recreation, heritage, parks, open spaces and the countryside, all contribute to making the area a better place to live, work and visit. The Strategy recognises the role that natural areas can play in cultural well-being, specifically through improving mental and physical well-being, acting as an inspiration for other cultural activities, providing learning opportunities, and providing tourism and economic

development opportunities. On the whole, the Strategy focuses on 'man-made' cultural assets (museums, theatres, galleries, sport centres, etc.) rather than natural areas.

However, the role that natural areas can play is made particularly strongly in the case of tourism opportunities. The Strategy mentions explicitly the Solway Coast AONB in terms of its importance as a tourist attraction, and notes that this resource can be promoted for tourism while still maintaining conservation objectives. However, the Strategy notes that the area is currently under-utilised in terms of tourism. It does, however, note the potential for developing 'green tourism' in the form of walking and bird watching holidays, and tourism in 'niche markets' in the Borough.

Rural Regeneration Cumbria's 'New Landscapes' is a strategy for delivering successful and sustainable economic growth in rural Cumbria. The key areas where proposed wetland developments align with the objectives of the strategy are:

- projections of increased numbers of visitors fit very well with objectives to expand the tourism offer in the area;
- aims of developing the natural environment of the wetland sites;
- management of the transition of agriculture through the review of the Common Agricultural Policy. The proposed wetland projects will assist with this aspect of the strategy as they will contribute to the diversification of the rural economy.

6.2.3 Environmental Benefits

Habitat gain: rehabilitation of 84ha of cut-over bog (national and local BAP habitat), and creation of 13ha of open water habitats around perimeter of moss.

Habitat enhancement: enhanced hydrological regime over 1354ha of existing lowland raised bogs.

- contribution of 1.2% towards National BAP target of "achieving favourable condition of those areas which have been damaged but still retain nature conservation interest (c 7000ha) by 2015";
- contribution towards Cumbria BAP objectives of "achieving favourable condition for all active/potentially active sites" and, "seeking to bring all hydrologically important land surrounding lowland raised bogs into favourable management, including raising water levels, by 2015";
- contribute to national BAP features for great crested newt, water vole, diving beetle, barn owl, reed beds and wet woodland.

6.2.4 Socio-Economic Benefits

Visitor numbers and income generation: projected 36,000 additional visitors per year, projected to spend approximately £287,000, mainly in the local and regional economy. There will be some site income at Bowness Common, but this will not be significant.

Employment and training generation: additional 20 FTE jobs, nine on-site, 11 as a result of multiplier effects.

Non-quantifiable economic impacts: moderate amenity/recreational benefits, low to moderate education benefits, low health benefits.

Sensitivity Analysis

If the average spend of a day visitor increased by 25%, from £8 to £10, North and West Cumbria could expect to see six additional jobs to those projected under the reference case scenario. Under the low overnight visitor scenario seven more jobs would be created, with 10 more under the high scenario. Employment would be impacted under different visitor number growth scenarios, with an increase or decrease of six jobs, depending on whether the growth is higher or lower than the reference case.

6.2.5 Costs

Capital: £2,119,500.

Operational: £69,500 per annum.

6.2.6 Potential Funding

Potential funding sources include:

- Tourism strand of Objective 2;
- Funding from Rural Regeneration Cumbria;
- Heritage Grants;
- English Nature's Reserves Enhancement Scheme and Land Purchase Grants;
- Defra funding for implementation of Water Level Management Plans;
- SITA Trust 'Enriching Nature Programme' funding;
- 'Your Heritage Grant';
- CLA Charitable Trust.

6.2.7 Risks and Uncertainties

- Failure of negotiation to acquire additional land either due to landowners not wishing to sell or the price being uneconomic. The stated ecological benefits will in this case not be realised.
- Unknown impact of reform of CAP ('Single Farm Payment') on capital costs of land purchase and subsequent management (e.g. grazing rights, etc.); this could have a negative or positive impact on the projects.

- Inability to gain control of complete hydrological unit when acquiring additional land, requiring installation of extensive and elaborate earthworks to isolate from surrounding land; significant consequent capital costs.
- Inability to generate sufficient funding for purchase of new land and capital works.
- Failure to attract increase in visitor numbers envisaged, leading to lower economic benefits.

6.3 Value for Money of Proposed Developments

There are a number of ways to assess the value for money represented by the developments proposed at each site and network. This assessment uses the criteria of the amount of investment required to create each job. This section presents an analysis of the cost required to create a job at each site in this network; an overview is presented in Chapter 9.

Overall the North and West Cumbria network is expected to produce 20 jobs as a result of the proposed developments at the sites. This is a modest increase in jobs in the local economy but it aligns well with regional and sub-regional policy on the rural economy. Nevertheless, the total investment required to create each job is over £100,000, which represents very poor value for money. There are other benefits associated with the developments, including biodiversity, health, education and sustainability, although on balance the high cost of developing these jobs suggest that the proposed wetlands network do not represent value for money.

Bowness Common
The high cost of creating jobs at this site represents poor value for money. The strong alignment with regional objectives on rural recovery and sustainability is not sufficient to compensate for the cost per job.

Wedholme Flow
This wetland site has the lowest cost per job of any site in the North and West Cumbria network, but still represents a poor return on investment.

Drumburgh Moss
Despite creating a small number of jobs and displaying a good fit with regional policy around rural recovery and diversity, the development of this site represents a poor return on investment. The average cost per job is £141,000 at this site.

Glasson Moss
The small number of jobs created, and the relatively significant capital costs of developing the site, mean that the development of this wetland would not represent good value for money. A strong fit with regional and sub-regional objectives, in particular biodiversity, rural recovery and recreation, does not offset these high costs.

6.4 Maximising Benefits

On the basis of the above assessments this section provides suggestions about how the proposed developments could be amended in order to improve the degree of environmental, social and economic benefits offered by the proposals at each network and the project as a whole.

6.4.1 Strategic Fit

Alignment of the proposed developments in the North and West Cumbria network with Cumbria's BAP could be increased through further improving public access onto and interpretation of the sites, through the provision of footpaths and boardwalks, and information points and leaflets. The Plan also contains objectives to restore wetlands and expand the existing network of nature reserves, which would be addressed to a greater degree if larger areas of existing agricultural land were targeted for management agreements or acquisition. Contributions could also be made towards National BAP habitats targets for purple moorgrass and rush pasture, reedbeds and wet woodland by the raising of water levels on land adjacent to bogs.

Progress could be made towards the objectives set out in the Allerdale Local Plan and 'New Landscapes', the strategy for delivering sustainable economic growth in rural Cumbria, through the attraction of greater numbers of visitors to the area. This would be best achieved through effective marketing and the provision of more extensive visitor facilities than currently being proposed, thereby capitalising on the quality of nature reserves in the area. This would serve to raise the profile of the natural attractions in the area, impacting on the image of the wider region. Increasing the amount of agricultural land under wetland management and attracting more visitors will further help in the diversification of the rural economy, thereby reducing reliance on the Common Agricultural Policy.

An area where the partners involved in the proposed wetland developments should try to influence policies in the Local Plan is in increasing the number and quality of natural attractions, and in particular wetland sites, in the area. Over the long-term, as well as protecting ecologically important areas from inappropriate development, this would help partners in promoting the extension of the network of wetlands to areas with potential but considered more marginal in Stage 2 of this project.

Similarly, project partners should seek to improve the status of wetland sites in terms of their cultural importance to the area. Currently the Allerdale Cultural Strategy focuses more on 'man-made' cultural assets (museums, theatres, galleries, sport centres, etc.) rather than natural areas. Redressing this balance would serve to raise the profile of natural areas such as wetlands through inclusion in local policies, thereby reducing the likelihood of loss through inappropriate development or neglect. The Cultural Strategy should encourage initiatives such as English Nature's 'Art of Conservation', which aims to

connect people with the natural environment through seeing and interpreting nature in different ways.

6.4.2 Environmental Benefits

As proposals for habitat enhancement and creation are broadly similar for all of the sites in this network, the following suggestions for improving the degree of environmental benefits are considered relevant to all of them.

Current proposals include the rehabilitation of areas of cut-over bog outwith existing land-holdings. The contribution towards National and Cumbria BAP targets for achieving favourable condition of such areas could be increased by seeking to acquire, or otherwise bring under favourable management, further areas of degraded bog to that proposed. As discussed in Section 2.2.6 above Defra funding for the implementation of Water Level Management Plans may be available for undertaking works to increase water levels.

The raising of water levels across the bog and development of areas of open water adjacent to it provides opportunities for creating National BAP target habitats such as reedbeds, wet woodland, grazing marsh, purple moor grass and rush pastures, in turn providing opportunities for National BAP species such as great crested newt, water vole, diving beetle, and barn owls, etc.

6.4.3 Socio-Economic Benefits

Bowness Common
The highest capital cost item from the proposed developments at this site is the installation of 3km of boardwalks, at a total of £450,000. This boardwalk is proposed to comprise recycled plastic, which has a lower lifetime cost than timber. The unit cost was calculated at £150/m, based on case study evidence[13]. Further evidence[14] suggests that this cost can be reduced to approximately £60/m if local volunteers are used in installation. This would reduce the cost to approximately £180,000.

Another significant cost is the purchase of 32ha of land around the perimeter of the existing reserve, estimated to total approximately £176,000. An alternative approach could be to bring the land under favourable management through the setting up of Environmental Stewardship Scheme (ESS) management agreements. However, whilst this will allow the undertaking of environmentally beneficial works, the 10 year timescale of the agreements will mean that the permanence of any works cannot be guaranteed.

[13] Buying Recycled in Estates Management, Case Study: Recycled Plastic Boardwalk, RSPB Ham Wall Reserve, Environmental Resources Management (ERM), June 2004

[14] Buying Recycled in Estates Management, Case Study: Recycled Plastic Boardwalk, Leicester City Council, Aylestone Meadows, Environmental Resources Management (ERM), June 2004

The total reduction in capital investment suggested at this site is £446,000, resulting in a total of £417,000. The amendments therefore result in a reduction in the cost per job created of £59,000, to £52,000.

Wedholme Flow

The highest capital cost item from the proposed developments at this site is the purchase of 38ha of land surrounding the current holding, estimated to total approximately £209,000. If the aim of bringing this land under favourable management were achieved through the setting up of ESS agreements, this would result in a total capital investment for the site of £92,000. However, it would again mean that the long-term future of the ecological works could not be guaranteed.

The above amendment results in a total cost per job created of £27,000.

Drumburgh Moss

The highest capital cost item at this site is the installation of 3km of boardwalks, at a total of £450,000. As for Bowness Common above this boardwalk is proposed to comprise recycled plastic, at a unit cost of £150/m. If this was reduced to approximately £60/m, it would reduce the cost to approximately £180,000.

Another significant cost is the purchase of 14ha of land around the perimeter of the existing reserve, estimated to total approximately £77,000. This could be avoided by bringing this land under favourable management through the setting up of ESS agreements. As above, however, it would mean that the long-term future of the ecological works could not be guaranteed.

The total reduction in capital investment suggested at this site is £347,000, resulting in a total of £203,000. The amendments therefore result in a reduction in the cost per job created to £54,500.

Glasson Moss

The highest capital cost item at this site is the installation of 2.1km of boardwalks, at a total of £315,000. If the unit cost of this was reduced from £150/m to £60/m, it would reduce the total cost to approximately £126,000. If the aim of bringing the proposed additional land under favourable management were achieved through the setting up of ESS agreements, this would reduce the total investment required by £71,500 (but reducing certainty in the long-term future of the ecological works).

The total reduction in capital investment suggested at this site is £260,500, resulting in a total of £144,500. The amendments therefore result in a reduction in the cost per job created to £40,000.

6.5 Network Summary

This network currently comprises a nationally and internationally important and protected series of lowland raised bogs, which are of particularly high value due to the large areas of active peat growth which remain. Significant areas of all of the sites are under the ownership of conservation bodies, with further areas leased. The network attracts approximately 8,000 visitors per year who spend around £56,000 in the local and regional economy. This supports a total of three FTE jobs, but non-quantifiable benefits are relatively low.

The vision for this network is for the restoration of the sites through raising of water levels across the bogs and the wider, hydrologically connected area. Proposals for the Key site, Bowness Common, involve the acquisition or otherwise bringing under favourable management of surrounding areas of land, and development of more intensive visitor facilities. Proposals for environmental improvements are similar for all the network sites, but with the visitor facilities being more low-key in nature. The proposed habitat enhancements would contribute significantly towards National and Local BAP targets for the protection and restoration of lowland raised bogs.

Overall the proposals are expected to lead to an increase in visitors to the network of around 36,000 people per year, projected to spend an additional £287,000 mainly in the local and regional economy, which would support an additional 20 FTE jobs. This number could vary by an additional six to ten jobs, depending on variations in visitor spending, the introduction of a certain number of overnight-staying visitors, or whether the growth in visitor numbers is higher or lower than the reference scenario. The costs of these proposals are quite modest, with the majority of capital expenditure being towards land acquisition.

The proposals align well with plans and strategies concerned with conservation of species and habitats, and to a lesser degree with public access and education. The relatively large percentage increase in the numbers of visitors expected to visit the sites means that fit is also good with policies aimed at expansions in the tourism offer and economic growth, and the expansion of sites should assist with diversification of the rural economy.

In terms of the expected return on investment represented by the proposals, the modest increase in the number of jobs created means that the total cost required to create each job is over £100,000, which represents poor value for money in economic terms. However, the developments do yield benefits such as biodiversity and sustainability, and to a lesser degree, health and education.

Improvements to the returns on investment could be made by: bringing larger areas of land under favourable management (including creating more nature reserves), perhaps by way of management agreements rather than acquisition; creation of other BAP target habitats; attraction of larger numbers of visitors; using cheaper materials and voluntary

labour; further increasing public access onto and interpretation of sites, and; raising the profile of the natural environment in the local community.

In purely financial terms, as a result of the amendments the average cost of creating a new job through investments in wetland sites falls to approximately £44,000, which is a much better return on investment.

6.6 Conclusions

Development proposals in the North and West Cumbria network involve relatively low capital costs, but also have relatively low socio-economic benefits. The current proposals do not provide for a significant new wetland visitor attraction and represent poor value for money. However the predicted returns on investment are the best of any of the networks, overall strategic fit is good and the nature and extent of environmental benefits are significant.

7 South Lakes Coast

7.1 Current Value of Network

This section presents a summary of the current benefits of each site and network to their local area and the region as a whole. This comprises a consideration of the existing environmental and any socio-economic and other non quantifiable benefits displayed by each site. This summarises the analyses undertaken in Stages 1 and 2 of the project.

This information represents a baseline against which the environmental, socio-economic and image benefits of the developments proposed during Stage 2 of the project can be assessed. A drawing of the network is presented as Figure 3.

7.1.1 Environmental Benefits

The South Lakes Coast network is characterised by parallel valleys emanating from the uplands of the Lake District National Park ending in estuaries and peninsulas with associated wetland habitats of raised mires and grazing marshes, with some fens and swamps. The area has many designated sites, including a number of SAC/SSSI lowland raised bog sites, such as Foulshaw Moss, Meathop Moss, and Roudsea and Ellerside Mosses. These sites represent the most important moss sites in Southern Cumbria.

Foulshaw Moss

Foulshaw Moss SSSI, owned by the Cumbria Wildlife Trust (CuWT), is the largest remaining single body of peat in South Cumbria, although it has been subjected to drainage and the planting of coniferous trees which have resulted in changes in hydrology and the loss of, and changes to, the bog habitat. In areas where trees were not planted, or growth was inhibited by the ground conditions, typical plant communities capable of peat formation, are still present. The edges of the mire are bounded by drains, which border adjacent agriculturally-improved grassland.

Meathop Moss

This site, owned by CuWT, is a SSSI and a constituent part of the Witherslack Mosses SAC. It is considered to be one of the two best examples of raised peat bog in South Cumbria. The site comprises a large open peat bog surrounded by woodland, dominated by Scots pine and birch. The dome of peat currently rises around 5 metres higher than the surrounding agricultural land, although all of these fields were once deep peat and part of the mire. They have been drained, ploughed, re-seeded and fertilised.

Although there has been no systematic attempt to drain the moss itself, the deep drains that surround the moss have resulted in it being drier than it would naturally have been. The moss is known for its invertebrate fauna, with over 200 species of butterflies and moths recorded, including the large heath butterfly. It is thought likely that skylark, cuckoo and stonechat breed on the site, and it is frequented by teal and wigeon. The reserve supports populations of red squirrel, red and roe deer, whilst the drier edges of the mire have a number of badger setts.

Roudsea and Ellerside Mosses

The Roudsea and Ellerside Mosses, leased by English Nature, consists of an extensive estuarine lowland raised mire system, with diverse woodland and estuarine saltmarsh habitats. The site actually comprises two distinct areas of fragmented mossland, separated by a band of intensively drained and cultivated agricultural land. Together the site is the largest area of this habitat in South Cumbria. The mosses are designated as a SSSI and a SAC. The total area of peat at Roudsea is 383 ha, which represents 1% of the total in England, while at 35ha, the area of active primary raised mire is 7.5% of that in England.

Although the mosses have been damaged in the past by peat cutting and drainage, resulting in desiccation of the peat and scrub encroachment, much of the original peat dome has remained intact. Restoration of an active raised peat bog habitat has been undertaken by English Nature through careful management of the water table and ongoing scrub control. However, the separation of the two distinct sections of Roudsea and Ellerside mosses limits the degree to which the water table can be manipulated.

Past peat-cutting and drainage has led to a general drying out of the mosses, with consequent invasions of birch and rhododendron. However, there are still large areas which still support actively growing bog communities.

Lyth Valley

This site, which is currently under private ownership, comprises an extensive flat bottomed valley, approximately 1300ha in size, situated to the north of Foulshaw and Meathop Mosses. The valley is dominated by improved grassland with many areas remaining marshy. The agricultural productivity of the area is supported by pumped-drainage, although many areas remain marginal due to problems with waterlogging. A number of fragments of once widespread raised bogs remain.

7.1.2 Socio-Economic Benefits

The South Lakes Coast network attracts around 11,000 visitors each year, who spend a total of approximately £88,000 per annum in the local and regional economy. The sites currently support a total of four FTE jobs, two of which are directly employed on the sites

and two in the local area through multiplier effects. In terms of non-quantifiable benefits the network is considered to currently realise low amenity/recreational, educational and health benefits.

Foulshaw Moss

Visitor numbers and income generation: 2,000 visitors per year, estimated to spend approximately £16,000 in the local and regional economy.

Employment and training generation: one FTE job is supported off-site due to multiplier effects.

Non-quantifiable economic impacts: low amenity/recreational, educational and health benefits.

Meathop Moss

Visitor numbers and income generation: 2,000 visitors per year, estimated to spend approximately £16,000 in the local and regional economy.

Employment and training generation: no current employment generation.

Non-quantifiable economic impacts: low amenity/recreational, educational and health benefits.

Roudsea and Ellerside Mosses

Visitor numbers and income generation: 7,000 visitors per year, estimated to spend approximately £56,000 in the local and regional economy.

Employment and training generation: two FTE jobs at the site and one job as a result of multiplier effects in the local economy.

Non-quantifiable economic impacts: low amenity/recreational, educational and health benefits.

Lyth Valley

Visitor numbers and income generation: no current visitors, therefore estimated to be no income to the local or regional economy associated with the site.

Employment and training generation: no current employment generation.

Non-quantifiable economic impacts: low amenity/recreational, educational and health benefits.

7.2 Value of Proposed Developments

This section presents a summary of the environmental and socio-economic benefits and costs, together with the potential sources of funding available, main risks, and strategic fit associated with the developments proposed in Stage 2 of the project. These network-scale benefits and costs are then compared, allowing an assessment of which of the proposed developments would be expected to provide the greatest economic and environmental benefits for the projected expenditure, i.e. offers the best 'value for money'. Table 1 presents a summary of the benefits and costs associated with the proposed developments.

A sensitivity analysis of the economic impacts of the proposed developments is also presented. This analysis will allow an assessment of effects of changes in visitor numbers on economic benefits (the economic benefits of the wetland networks depend on their ability to attract visitors). The analysis is presented in full in Appendix 2.

7.2.1 Summary of Developments

The vision for this network is to create a much more naturally functioning mosaic of habitats in the area, recalling the historical landscape. The raised bogs would be enhanced to allow active bog growth through water management and creation of adjacent wetland habitats. There will be a step change in the number of people visiting, enjoying and learning from the sites.

The proposals for the key site, **Foulshaw Moss** include the creation of buffer areas of open water adjacent to the moss, on land already owned and through acquisition, and the long-term development of large-scale visitor facilities. Proposals for the network sites, **Meathop Moss, Roudsea and Ellerside Mosses** and **Lyth Valley** involve the improvement of visitor facilities, including parking provision, access and interpretation.

7.2.2 Strategic Fit

This section presents an assessment of the fit of the proposed developments with sub-regional and local strategies and plans considered to be of particular relevance.

The Cumbria BAP is a strategic document which outlines priorities for the conservation of species and habitats. The Plan contains several references to the need to improve and expand the existing network of nature reserves, with particular reference to enhancing public access to, knowledge of, and contact with, natural environments. The document includes proposals to restore and/or create wetland habitats such as purple moorgrass and rush pasture, reedbed and wet woodland. The BAP also includes an objective to

'create at least 270ha of new wet reedbed in Cumbria', and to 'restore and recreate 380ha of wet woodland in Cumbria by 2020'.

The South Lakeland Community Strategy provides a framework for promoting and improving the economic, social and environmental well-being of the area, with a strong emphasis on the natural environment. South Lakeland's natural assets are seen as a key component in driving business opportunities and the tourist and leisure economy. Priorities include creating new sites where people can experience nature, promoting business opportunities based on the biodiversity of the area, and promoting the benefits of a good quality environment for tourism, which is identified as a priority sector. The proposed developments are considered to align closely with these aims.

The South Lakeland Cultural Strategy identifies how cultural and leisure activities and facilities such as the arts, sport, recreation, heritage, parks, open spaces and the countryside, all contribute to making the area a better place to live, work and visit. The Strategy aims to increase cultural tourism, particularly through walking and cycling, and to increase participation in schemes which protect the environment and enhance biodiversity. The Strategy also identifies natural heritage as one of South Lakeland's key cultural assets. The wetlands project will build on these assets and contribute to some of the key priorities of the Strategy.

Rural Regeneration Cumbria's 'New Landscapes' is a strategy for delivering successful and sustainable economic growth in rural Cumbria. The key areas where proposed wetland developments align with the objectives of the strategy are:

- projections of increased numbers of visitors fit very well with objectives to expand the tourism offer in the area;
- aims of developing the natural environment of the wetland sites;
- management of the transition of agriculture through the review of the Common Agricultural Policy. The proposed wetland projects will assist with this aspect of the strategy as they will contribute to the diversification of the rural economy.

The Local Plan for the Lake District National Park sets out detailed policies to guide development and land use. The development of wetland sites aligns with the Plan's policy objectives. In particular, the proposal for the wetland sites complements the objective of developing the tourist industry in a manner that accords with other objectives of the National Park, specifically, its environment and conservation ethos. The wetlands proposals are also consistent with the objective of creating employment opportunities for local people and conserving environmental assets.

7.2.3 Environmental Benefits

Habitat gain: creation of 54ha of open water habitats around perimeter of moss; rehabilitation of 40ha of cut-over bog (national and local BAP habitat); creation of 100ha of mixed wetland habitats, such as open water, reedswamp, marshy grassland and fen.

Habitat enhancement: enhanced hydrological regime over 527ha of existing lowland raised bogs (national and local BAP habitat).

- contribution of 0.57% towards National BAP target of "achieving favourable condition of those areas which have been damaged but still retain nature conservation interest (c 7000ha) by 2015";
- contribution of 5% towards National BAP target of "creating 1200ha of new reedbed on land of low nature conservation interest by 2010";
- contribution towards Cumbria BAP objectives of "achieving favourable condition for all active/potentially active sites" and, "seeking to bring all hydrologically important land surrounding lowland raised bogs into favourable management, including raising water levels, by 2015";
- contribution to national BAP features for great crested newt, water vole, diving beetle, barn owl, reed beds and wet woodland.

7.2.4 Socio-Economic Benefits

Visitor numbers and income generation: projected 89,000 additional visitors per year, projected to spend approximately £712,000 in the local and regional economy.

Employment and training generation: additional 26 net FTE jobs, four on-site, 22 as a result of multiplier effects in the local economy.

Non-quantifiable economic impacts: low to moderate amenity/recreational benefits, low education benefits, low health benefits.

Sensitivity Analysis

If the average spend of a day visitor increased by £2 above the reference case £8 a day spend, the South Lakes Coast could expect to see five additional jobs to those projected under the reference case scenario. Under the low overnight visitor scenario seven more jobs would be created, with 11 more under the high scenario. Employment would be impacted under different visitor number growth scenarios, with an increase or decrease of five jobs, depending on whether the growth is higher or lower than the reference case.

7.2.5 Other

Long-term proposals for Lyth Valley may involve a reduction in drainage pumping activity, which will lead to large areas of existing agricultural land becoming permanently waterlogged or inundated. The reduction or cessation of pumping activity (which is understood to cost the Environment Agency in the region of £200,000 per annum[15]) will result in an economic benefit in terms of financial savings to EA, environmental benefits

[15] Personal communication between P Shaw, JB, and D Harpley, CuWT, 26 March 2004

in terms of a restoration of natural water levels throughout the Valley, and perhaps most significantly, flood alleviation and managed coastal realignment benefits.

7.2.6 Costs

Capital: £2,168,000.

Operational: £91,500 per annum.

7.2.7 Potential Funding

Potential funding sources include:

- Heritage Grants;
- Landfill Tax Credits (e.g. GrantScape, SITA Trust);
- English Nature's Reserves Enhancement Scheme and Land Purchase Grants;
- Defra grants for implementing Water Level Management Plans;
- CLA Charitable Trust;
- Rural Regeneration Cumbria.

7.2.8 Risks and Uncertainties

- Failure of negotiation to acquire additional land either due to landowners not wishing to sell or the price being uneconomic; stated ecological benefits would in this case be lower than stated.
- failure to agree extension to lease agreement on Roudsea and Ellerside Mosses site.
- The unknown impact of reform of CAP ('Single Farm Payment') on capital costs of land purchase and subsequent management (e.g. grazing rights, etc.); this could have a negative or positive impact on the projects.
- Inability to gain control of complete hydrological unit when acquiring additional land, requiring installation of extensive and elaborate earthworks to isolate from surrounding land; significant consequent capital costs.
- Inability to generate sufficient funding for purchase of new land and capital works.
- Failure to attract increase in visitor numbers envisaged, leading to lower income generation and other economic benefits.
- Requirement to address nutrient enrichment in large quantities of topsoil from surrounding agricultural land brought under wetland management, incurring significant costs.
- Failure to gain planning permission for new visitor facilities at or near Foulshaw Moss, due to location of the site in the Lake District National Park, or the impact on highways of large numbers of additional visitors.

7.3 Value for Money of Proposed Developments

There are a number of ways to assess the value for money represented by the developments proposed at each site and network. This assessment uses the criteria of the amount of investment required to create each job. This section presents an analysis of the cost required to create a job at each site in this network; an overview is presented in Chapter 9.

Based on the cost of creating jobs, the South Lakes Coast represents one of the lowest cost per job ratios of any of the networks but is still poor value for money at £81,000 per job. The network does display strong alignment with regional objectives on rural recovery, sustainability, health and biodiversity. It is likely to produce significant non-economic benefits in the form of educational and health outputs.

Foulshaw Moss
The site represents poor value for money on a costs per job basis. However there are likely to be some positive associated biodiversity, educational and health outcomes, the latter two particularly over the longer-term following development of more extensive visitor facilities, and its fit with other regional objectives is quite strong.

Meathop Moss
The currently proposed developments at this site result in a relatively high cost per job created. The average cost for creating a new job is £113,000. Although the site displays a good fit with regional objectives such as biodiversity and rural diversification, it is unlikely to produce significant non-economic outcomes.

Roudsea and Ellerside Mosses
The proposed developments at this site also involve a high cost per job created. However the investment is likely to produce some positive educational and health outcomes, and the fit with other regional objectives, such as biodiversity, health, diversification, etc., is quite strong.

Lyth Valley
This site is likely to produce significant educational and health benefits and whilst still expensive in terms of the cost per job created it is lower than others in the network. In addition, the proposed developments will provide good alignment with regional objectives around rural recovery, rural diversification, biodiversity, sustainability and health.

7.4 Maximising Benefits

On the basis of the above assessments this section provides suggestions about how the proposed developments could be amended in order to improve the degree of environmental, social and economic benefits offered by the proposals at each network and the project as a whole.

7.4.1 Strategic Fit

Alignment of the proposed developments in the South Lakes Coast network with Cumbria's BAP could be increased through further improving public access onto and interpretation of the sites, through the provision of footpaths and boardwalks, and information points and leaflets. The Plan also contains objectives to restore wetlands and expand the existing network of nature reserves, which would be addressed to a greater degree if larger areas of existing agricultural land were targeted for management agreements or acquisition. Contributions could also be made towards National and Cumbria BAP habitats targets for purple moorgrass and rush pasture, reedbeds and wet woodland by the raising of water levels on land adjacent to bogs.

The South Lakeland Community Strategy sets out priorities of creating new sites where people can experience nature, promoting business opportunities based on the biodiversity of the area, and promoting the benefits of a good quality environment for tourism. Whilst the proposed developments already contribute towards these priorities, this could be enhanced in a number of ways. These include: making even more provision for access to and interpretation of the sites through footpaths and boardwalks and information points; emphasising the quality and importance of the area's natural assets through effective marketing; aiming to attract a greater number of visitors, again through effective marketing.

The South Lakeland Cultural Strategy has aims of increasing cultural tourism (particularly through walking and cycling) and increasing participation in schemes which protect the environment and enhance biodiversity. All of the sites in this network lie adjacent to the Cumbria Cycle Way and Coastal Pathway, and efforts should be made on the part of the project partners to encourage links with these modes of transport. This could be in the form of publicising wetland sites along the route or encouraging visitors to the sites to cycle or walk to others. Other initiatives could include encouraging local people to undertake voluntary conservation work at the sites, which would strengthen links with the local community and reduce costs for the partners.

The aims of 'New Landscapes', RRC's strategy for delivering sustainable economic growth in rural Cumbria, and the Lake District National Park Local Plan, could be furthered through the attraction of greater numbers of visitors to the area, and/or from increasing the amount of money spent by each visitor. This could be achieved through measures such as effective marketing and the provision of more extensive visitor facilities than currently being proposed, thereby capitalising on the quality of nature reserves in the area, and cross-marketing the wetlands with other attractions, restaurants, hotels, etc. This would serve to raise the profile of the natural attractions in the area, impacting on the image of the wider area. Increasing the amount of agricultural land under wetland management and attracting more visitors will further help in the diversification of the rural economy.

7.4.2 Environmental Benefits

Proposals for habitat enhancement and creation differ somewhat between sites in this network. Where it is proposed to raise water levels or create new areas of open water, opportunities should be taken to create National BAP target habitats such as reedbeds, wet woodland, grazing marsh, purple moor grass and rush pastures. This will in turn provide opportunities for National BAP species such as great crested newt, water vole, diving beetle, and barn owls, etc.

In the case of Roudsea Mosses, which is currently managed by English Nature under lease, and Lyth Valley, where initial wetland creation work will probably be on private land subject to management agreements, the degree of anticipated environmental benefits would be greater if the land was wholly acquired by project partners. This is because investment in supporting works, such as the construction of water-retaining structures, can be undertaken in the future.

7.4.3 Socio-Economic Benefits

Foulshaw Moss
Although some reductions in the amount of investment required to create new jobs may be possible, it is understood that the site has recently received a large amount of grant money, which is thought to be sufficient to cover the suggested developments for the next ten years. No amendments to the proposals have therefore been explored.

Meathop Moss
The highest capital cost item at this site is the purchase of land adjacent to the current holding. If the aim of bringing this additional land under favourable management was achieved through the setting up of ESS agreements, this would reduce the total investment required by £215,000 (but reducing certainty in the long-term future of the ecological works). The installation of 1km of boardwalks, using timbers felled at the site is projected to cost approximately £60,000. It may be possible to reduce this to £30/m with the use of volunteers, resulting in a reduction in cost of £30,000.

The total reduction in capital investment suggested at this site is £245,000, resulting in a total of £79,000. The amendments therefore result in a reduction in the cost per job created to £31,000.

Roudsea and Ellerside Mosses
The highest capital cost item from associated with the proposed developments at this site is the purchase of 40ha of land adjacent to current holding, estimated to total approximately £344,000. This expense could be avoided if the aim of bringing this land under favourable management were achieved through the setting up of ESS agreements. However, it would mean that the permanence of the ecological works could not be guaranteed.

Another significant cost is the installation of pathways and boardwalks, at an estimated £120,000. If volunteer labour were used it could reduce this to £75,000. The above amendments would reduce the capital investment required at the site to £132,000. This results in a total cost per job created of £31,000.

Lyth Valley
By far the greatest proportion of the investment proposed at this site is in the acquisition of land, at £860,000. However, the consequent socio-economic benefits are based on a significant number of visitors to a new wildlife reserve; the creation of a new reserve is only considered achievable on land that is wholly under the ownership of a conservation organisation.

It is therefore considered that the projected investment cannot be reduced from that proposed.

7.5 Network Summary

This network currently contains many designated sites, including nationally and internationally important and protected lowland raised bogs, and also including grazing marshes and fens. Two of the sites are wholly owned by conservation bodies, one is under lease, with one wholly privately owned, which comprises an area of land upon which a number of organisations have aspirations. The network attracts approximately 11,000 visitors per year who spend around £88,000 in the local and regional economy. This supports a total of four FTE jobs, but non-quantifiable benefits are relatively low.

The vision for this network is for the creation of a more naturally functioning mosaic of habitats, including the enhancement of conditions necessary for active bog growth, and creation of adjacent wetlands. Proposals for the Key site, Foulshaw Moss, involve the acquisition or otherwise bringing under favourable management of surrounding areas of land, the creation of adjacent areas of open water, and the development of low-key visitor facilities in the short-term, and more intensive facilities in the longer-term. CuWT have now attracted the funding which will allow these proposals to be taken forward.

Proposals for the network sites involve the improvement of visitor facilities, including parking provision, access and interpretation. The proposed habitat enhancements would contribute moderately towards National and Local BAP targets for the protection and restoration of lowland raised bogs, and significantly towards a National BAP target for reedbed creation. Proposals for Lyth Valley would also involve a reduction in the costs of pumped drainage, with associated environmental benefits.

Overall the proposals are expected to lead to an increase in visitors to the network of around 89,000 people per year, projected to spend an additional £712,000 mainly in the local and regional economy, which would support an additional 26 FTE jobs. This number could vary by an additional five to 11 jobs, depending on variations in visitor spending, the introduction of a certain number of overnight-staying visitors, or whether

the growth in visitor numbers is higher or lower than the reference scenario. The costs of these proposals are quite modest, with the vast majority of capital expenditure being towards land acquisition.

The proposals align well with plans and strategies concerned with conservation of species and habitats, and to a lesser degree with public access and education. The relatively large percentage increase in the numbers of visitors expected to visit the sites means that fit is also good with policies aimed at the expansion of tourism and economic growth, and the expansion of sites should assist with diversification of the rural economy.

In terms of the expected return on investment, the proposals represent one of the lowest cost per job ratios of any network, at £81,000. This is still considered poor value for money in economic terms. However, the developments do yield benefits such as biodiversity and sustainability, and to a lesser degree, health and education.

Improvements in overall value for money could be made by: bringing larger areas of land under favourable management perhaps by way of management agreements as well as by acquisition; the acquisition of other land currently leased; creation of other BAP target habitats; attraction of larger numbers of visitors; using cheaper materials and voluntary labour; further increasing public access onto and interpretation of sites; raising the profile of the natural environment in the local community, and; developing the use of sustainable modes of transport such as walking and cycling.

In purely financial terms, as a result of these amendments the average cost of creating a new job through investments in wetland sites falls to approximately £58,000, which is a much better return on investment, but still considered poor value for money.

7.6 Conclusions

Development proposals in the South Lakes Coast network involve relatively low capital costs, but also have relatively low socio-economic benefits. CuWT have already been successful in raising funds for their ten year programme for the site. However the current proposals do not provide a significant new wetland visitor attraction within this programme and this network will not function in the same way as others within the region, with a key site and a number of network sites. With the proximity of the South Lakes Coast to Leighton Moss, the key site for East Morecambe Bay, it is considered that until Foulshaw develops as a larger visitor attraction that Leighton Moss effectively acts as the key site for both networks.

Overall the South Lakes Coast proposals represent poor value for money, but predicted returns are better than all networks except the North and West Cumbria. Overall strategic fit for the network is good and the nature and extent of environmental benefits are significant.

8 East Morecambe Bay

8.1 Current Value of Network

This section presents a summary of the current benefits of each site and network to their local area and the region as a whole. This comprises a consideration of the existing environmental and any socio-economic and other non quantifiable benefits displayed by each site. This summarises the analyses undertaken in Stages 1 and 2 of the project.

This information represents a baseline against which the environmental, socio-economic and image benefits of the developments proposed during Stage 2 of the project can be assessed. A drawing of the network is presented as Figure 4.

8.1.1 Environmental Benefits

The East Morecambe Bay area has SPA, SAC, RAMSAR and SSSI designated sites at Morecambe Bay and Leighton Moss, as well as a number of other designations for limestone habitats, woodlands, etc. The network lies within the Arnside and Silverdale AONB. The wetlands of the network are of national importance for reedbeds and their associated species as well as for standing waters, grazing marshes and wet woodlands.

Leighton Moss

Leighton Moss, owned by the RSPB, is predominantly wetland. It is located within the Arnside and Silverdale AONB and is managed as a nature reserve, with a central aim of bittern preservation. The site constitutes the largest reed bed in the northwest of England, and it also maintains areas of open water, willow scrub and mixed fen vegetation. It supports a wide range of bird species, with bittern and bearded tit being of particular note. The site is designated as a SSSI, SPA and Ramsar site.

Site conservation status is currently considered to be unfavourable. This is due to poor water quality and the status of the reedbeds, which are exhibiting signs of late succession. To deal with these issues RSPB have instigated a management regime to open up ditches and lower the litter layer, with the intention of setting back succession to the early stages of reedbed development.

Silverdale Moss

This drained mossland site currently comprises improved grassland, an area of swamp vegetation and a small flight pond. It was purchased by the RSPB for the purpose of

rewetting, and creating habitat suitable for breeding bittern. It is currently undergoing considerable change from agricultural management through reedbed creation. The agricultural habitats were of low interest and the new habitats have yet to develop.

8.1.2 Socio-Economic Benefits

The East Morecambe Bay network attracts around 97,000 visitors each year, who spend a total of approximately £776,000 per annum at Leighton Moss and in the local area. The sites currently support a total of 29 FTE jobs, 21 of which are directly employed and eight are through multiplier effects. In terms of non-quantifiable benefits the network is considered to currently realise low to moderate amenity/recreational and educational benefits, and low health benefits.

Leighton Moss

Visitor numbers and income generation: 97,000 visitors per year, estimated to spend a total of approximately £776,000 per annum (£320,000 at the site, £456,000 in the local and regional economy[16]).

Employment and training generation: a total of 21 FTE jobs at the site and eight FTE jobs as a result of multiplier effects.

Non-quantifiable economic impacts: low to moderate amenity/recreational and educational benefits, and low health benefits.

Silverdale Moss

Visitor numbers and income generation: no current visitors, therefore estimated to be no income to the local or regional economy associated with the site.

Employment and training generation: no current employment generation.

Non-quantifiable economic impacts: low amenity/recreational, educational and health benefits.

8.2 Value of Proposed Developments

This section presents a summary of the environmental and socio-economic benefits and costs, together with the potential sources of funding available, main risks, and strategic fit associated with the developments proposed in Stage 2 of the project. These network-scale benefits and costs are then compared, allowing an assessment of which of the proposed developments would be expected to provide the greatest economic and

[16] Based on site expenditure of approx £3.30 per person reported by WWT at Martin Mere.

environmental benefits for the projected expenditure, i.e. offers the best 'value for money'. Table 1 presents a summary of the benefits and costs associated with the proposed developments.

A sensitivity analysis of the economic impacts of the proposed developments is also presented. This analysis will allow an assessment of effects of changes in visitor numbers on economic benefits (the economic benefits of the wetland networks depend on their ability to attract visitors). The analysis is presented in full in Appendix 2.

8.2.1 Summary of Developments

The vision for the network is the creation of a mosaic of wetlands, set within a landscape of limestone hills, woodland, pastures and coastal scenery, which will become a destination for both birdwatchers and those looking for a wider 'outdoor' experience. The bittern will continue to provide the 'wow' factor and be the main draw for visitors. However, improved facilities and sustainable transport links will enhance the existing experience and encourage people to explore not just the wetlands, but the combined attractions of the whole Arnside and Silverdale AONB.

The proposals for the key site, **Leighton Moss** include extending the existing visitor centre, reconfiguring car parking, providing a new 'tower' hide and improving existing hides, updating and extending existing interpretation facilities, improving non-car derived visitor access and acquisition of additional land. Proposals for the network site, **Silverdale Moss,** are for the creation of further reedbeds, the purchase of and wetting-up of additional land, and increased control over water levels. Improvements to the pathway link between Leighton and Silverdale Mosses are also proposed, with some improved signage.

8.2.2 Strategic Fit

This section presents an assessment of the fit of the proposed developments with sub-regional and local strategies and plans considered to be of particular relevance.

The Lancashire BAP is a strategic document which outlines priorities for the conservation of species and habitats. The Plan recognises that Leighton Moss, one of the sites under consideration, is of national and international importance; it is designated a 'Special Protection Area' under the EC Birds Directive and a 'Wetland of International Importance'. The Plan seeks to identify, assess, protect and, if necessary, improve reedbed, mossland and other wetland habitats within moorland and fell areas, whilst at the same time raising public awareness and understanding of these habitats.

The Lancaster Community Strategy provides a framework for promoting and improving economic, social and environmental well-being. The wetlands project contributes significantly to two of the ten 'Visions' introduced by the Strategy – 'protecting and enhancing wildlife', and 'economy and work'. Contribution to the wildlife vision will be

enhanced by creating more opportunities for people to experience wildlife and landscapes, especially in some of Lancaster's key habitats, including saltmarshes and mud flats. Contribution to the economy vision will be assisted by linking tourism and the environment.

The Lancaster Regeneration Strategy is divided into three geographical themes: the core city of Lancaster; the coastal resort of Morecambe; and the rural hinterland. The objectives for Morecambe are to increase visitor numbers, in particular staying visitor numbers. The Strategy notes the need to "play to Morecambe's natural strengths" by, for example, appealing to bird watchers, but at the same time diversifying its appeal, and also by "linking visits" to other attractions, notably Areas of Outstanding Natural Beauty (AONBs) and Lancaster. An action which requires addressing is to "further exploit the natural resources of the bay and to link with Leighton Moss and RSPB activity".

The Joint Lancashire Structure Plan sets out strategic policies and proposals for the development, use and conservation of land in Lancashire, and for the management of traffic. It recognises the importance of maintaining and creating networks of sites and features that are of importance from a heritage and biodiversity point of view. However, the emphasis within the plan is on increasing native woodland and maintaining hedgerows, for which there are specific targets. There are no specific targets relating to wetlands, except in relation to ponds where there is a target to "create two ponds for every pond lost through development, 2001-2016".

The Lancashire Rural Recovery Action Plan sets out seven objectives for managing and delivering rural recovery in the area. A number of these objectives align closely with the aims of the wetlands projects. The proposed wetlands will helps to create jobs in rural locations and assist in the restructuring of agriculture, which will also broaden the area's economic base. At the same time, they will also help to renew and strengthen the recreation and tourism offer by developing attractions which already generate a significant number of visitors. The wetland proposals will also sustain the environmental inheritance of the area by developing, and in some instances extending, the wetlands.

8.2.3 Environmental Benefits

Habitat gain: creation of 34ha of reedbed (national and local BAP habitat), enhancing opportunities for bittern (national BAP species).

Habitat enhancement: enhanced hydrological regime over 195.5ha of existing lowland mixed wetland sites.

- contribution of 2.84% towards National BAP target of "creating 1200ha of new reedbed on land of low nature conservation interest by 2010";
- contribution to the National BAP broad objective of "rehabilitating reedbed on sites that have degraded reedbed habitats";

- increased control over water levels and enhancement of overall habitat size and complexity, resulting in increased numbers and diversity of wildlife, in particular bitterns;
- contribution to National BAP targets for otter, water vole, diving beetle, barn owl, variable damselfly and white faced darter.

8.2.4 Socio-Economic Benefits

Visitor numbers and income generation: projected 108,000 additional visitors per year, projected to spend approximately £864,000 (£356,400 at Leighton Moss and £507,600 in the local and regional economy).

Employment and training generation: additional nine net FTE jobs.

Non-quantifiable economic impacts: moderate to high amenity/recreational benefits, moderate education benefits, moderate health benefits.

Sensitivity Analysis

If the average spend of a day visitor increase by 25%, from £8 to £10, East Morecambe Bay could expect to see 21 additional jobs to those projected under the reference case scenario. Under the low overnight visitor scenario 18 more jobs would be created, with 26 more under the high scenario. Employment would be impacted under different visitor number growth scenarios, with an increase or decrease of three jobs, depending on whether the growth is higher or lower than the reference case.

8.2.5 Costs

Capital: £1.4m.

Operational: £300,400 per annum.

8.2.6 Potential Funding

Potential funding sources include:

- Lancashire Rural Tourism Initiative (LRTi);
- Heritage Grants;
- English Nature's Reserves Enhancement Scheme and Land Purchase Grants;
- EU LIFE Programme;
- Lancashire Rural Recovery Action Plan;
- SITA Trust;
- Individual donors.

8.2.7 Risks and Uncertainties

- Opposition from the AONB or site neighbours to proposed increases in visitor numbers, particularly at Leighton Moss. An increase would probably be opposed if it resulted in a significant increase in road traffic, so a more sustainable strategy must be developed.
- An inability to achieve an increase in visitor numbers would mean that improvements to site facilities would probably not be required or receive funding.
- Unknown impact of reform of CAP ('Single Farm Payment') on capital costs of land purchase and subsequent management (e.g. grazing rights, etc.); this could have a negative or positive impact on the projects.
- Inability to gain control of complete hydrological unit when acquiring additional land, requiring installation of extensive and elaborate earthworks to isolate from surrounding land; significant consequent capital costs.
- Requirement to remove or treat significant amounts of topsoil to remove agriculture-derived nutrient loading; significant consequent capital costs.
- Failure of negotiation to acquire additional land either due to landowners not wishing to sell or the price being uneconomic.
- Failure at Leighton Moss to halt conservation value decline through poor water quality and decline in status of reeds leading to decline in bittern population;
- Existing difficulties in controlling ground and surface water levels across the site, meaning that fish stocks (food for birds) are difficult to establish;
- Inability to generate sufficient funding for purchase of new land and operational costs.

8.3 Value for Money of Proposed Developments

There are a number of ways to assess the value for money represented by the developments proposed at each site and network. This assessment uses the criteria of the amount of investment required to create each job. This section presents an analysis of the cost required to create a job at each site in this network; an overview is presented in Chapter 9.

Whilst still uneconomic in terms of the criteria used in this analysis, in terms of the number of jobs created the network represents the fourth lowest costs of any under consideration. In addition, the network displays good alignment with regional and sub-regional criteria, such as biodiversity, rural recovery, sustainable tourism and public access. The network is likely to attract a large number of visitors, which will produce significant educational and health benefits.

Leighton Moss
Whilst Leighton Moss exhibits a very high cost per job created, this is because under current proposals there are no plans to increase the number of people directly employed on site. It also displays a strong fit with regional objectives such as biodiversity, rural

regeneration and sustainable tourism, and is likely to produce non-economic benefits around education and health.

Silverdale Moss
The value for money assessment for this site, in terms of costs required to create jobs is relatively good. The average cost per job created is £74,000, and the site displays reasonably good fit with regional objectives.

8.4 Maximising Benefits

On the basis of the above assessments this section provides suggestions about how the proposed developments could be amended in order to improve the degree of environmental, social and economic benefits offered by the proposals at each network and the project as a whole.

8.4.1 Strategic Fit

Alignment of the proposed developments in the East Morecambe Bay network with Lancashire's BAP could be increased through the acquisition of greater areas of land surrounding the sites than is currently proposed, with creation of target habitats such as reedbeds. This will in turn enhance opportunities for BAP target species such as bittern, otter, water vole, diving beetle, barn owl, variable damselfly, white faced darter, etc.

The aims of the Lancashire BAP and the Lancaster Community Strategy, of creating opportunities for people to experience wildlife and landscapes, raising public awareness and understanding of the target habitats, would be further addressed if proposals for Silverdale Moss envisaged greater numbers of visitors. However, a careful balance should be struck between greater access and the requirements of sensitive features.

The Lancaster Community Strategy and Rural Recovery Action Plan have a vision to improve the economic well-being of the area, and particularly delivering rural recovery. Whilst increasing the numbers of visitors above that already proposed would probably not be feasible, or acceptable, opportunities for increasing the amount of income from those visitors should be investigated. This could be achieved by linking, for example through cross-marketing, the wetland attractions with other facilities in the AONB, such as hotels, restaurants, etc. Although this would not realise additional income directly to the sites, the benefits to the wider economy through multiplier effects, would probably constitute a more sustainable model of economic growth.

8.4.2 Environmental Benefits

Proposals for land acquisition and habitat creation are similar for both of these sites. The focus of conservation works is on the creation of areas of reedbed, which is a National and Local BAP target habitat. The acquisition of further areas of land to that currently

proposed will allow the creation of more reedbed, thereby contributing even more to BAP targets. This will in turn contribute to the cause of the bittern, a National BAP target species.

As well as the creation of scrapes in which to plant reedbeds, opportunities should be taken to generally raise water levels in the surrounding area; this could allow the creation of other National BAP target habitats such as, wet woodland, grazing marsh, purple moor grass and rush pastures. This will in turn provide opportunities for National BAP species such as great crested newt, water vole, diving beetle, and barn owls, etc.

8.4.3 Socio-Economic Benefits

Leighton Moss
The most significant cost items associated with the proposed developments at Leighton Moss are the purchasing of additional land (£172,000), construction of a tower hide (£250,000), reconfiguration of the existing visitor centre (£308,000), and development of audio-visual links between the centre and the site. The latter three of these are considered essential if the aim of doubling the current visitor base to around 200,000 is to be achieved, and should therefore not be omitted.

However, it is considered that the bringing of surrounding land under favourable management could be achieved through the setting up of ESS management agreements. The consequent avoidance of cost would result in an overall reduction in the capital cost to £958,000. This results in the total cost per job created being reduced from £233,000 to £205,000 which is still very high.

Silverdale Moss
The proposed developments at this site include purchase of additional land, at approximately £120,000. If the aim of bringing this land under favourable management could be achieved through ESS agreements, the total capital cost of the project would be reduced to £63,000.

8.5 Network Summary

This network has SPA, SAC, RAMSAR and SSSI designated sites at Morecambe Bay and Leighton Moss, as well as a number of other designations for limestone habitats, woodlands, etc. The wetlands of the network are of national importance for reedbeds and their associated species as well as for standing waters, grazing marshes and wet woodlands. Both sites are wholly owned by the RSPB. The network attracts approximately 97,000 visitors per year who spend around £776,000 on-site, and in the local and regional economy. This supports a total of 29 FTE jobs, but non-quantifiable benefits are relatively low.

The vision for this network is for the creation of a mosaic of wetlands which will become a destination for both birdwatchers and those looking for a wider 'outdoor' experience, with the bittern continuing to be a major draw. Visitor facilities and sustainable transport links will be enhanced. Proposals for the Key site, Leighton Moss, involve the acquisition or otherwise bringing under favourable management of surrounding areas of land, with creation of more areas of reedbed. The visitor centre will be reconfigured and other site facilities upgraded.

Proposals for the network site are the purchase and wetting up of adjacent land and creation of reedbeds. Footpath links will be improved but facilities will remain very low-key. The proposed habitat enhancements would contribute significantly towards National and Local BAP targets for reedbed creation.

Overall the proposals are expected to lead to an increase in visitors to the network of around 108,000 people per year, projected to spend an additional £864,000, mainly on-site, which would support an additional nine FTE jobs in the local economy. This number could vary by three less jobs or up to 21 more, depending on variations in visitor spending, the introduction of a certain number of overnight-staying visitors, or whether the growth in visitor numbers is higher or lower than the reference scenario. The costs of these proposals are the lowest of any of the networks with the capital expenditure being on land acquisition, visitor centre building works and general improvements in facilities.

The proposals align well with plans and strategies concerned with conservation of species and habitats, due in particular to plans to create reedbeds and improve opportunities for bittern. The fit is less good with public access and education policies, due in part to the low forecasted numbers of visitors to Silverdale Moss. Alignment is also only moderately good with aims to improve the economic well-being of the area, due to the relatively small number of jobs projected to be created.

In terms of overall value for money, the proposals represent the second highest cost per job ratios of any network, at £189,000. This is very poor value for money in economic terms. However, the developments do yield benefits such as biodiversity, sustainable tourism, rural recovery, public access, health and education.

Improvements to the returns on investment could be made by: bringing larger areas of land under favourable management perhaps by way of management agreements as well as by acquisition; creation of greater areas of BAP target habitats; increasing spending by visitors; cross-marketing with other attractions; further increasing public access onto and interpretation of sites; raising the profile of the natural environment in the local community, and; developing links with sustainable modes of transport such as walking and cycling.

In purely financial terms, as a result of these amendments the average cost of creating a new job through investments in wetland sites falls to approximately £147,000, which is still only the fourth best return on investment, and still considered poor value for money.

8.6 Conclusions

Development proposals in the East Morecambe Bay network involve relatively low capital costs, and have relatively high non-quantifiable socio-economic benefits. However there are only two sites in the network and the key site, Leighton Moss, serves as a centre for attractions within the whole Arnside and Silverdale area. As mentioned above in the section on the South Lakes Coast, Leighton Moss can also serve as the key site for this adjacent wetland network until longer term proposals for visitor facilities are brought forward.

In pure economic terms the proposals represent poor value for money, as predicted returns are worse than all but the Mersey Corridor and West Lancashire Plain networks. Overall however, strategic fit is good and the nature and extent of environmental benefits are significant, due in large part to the prominence of reedbeds and the unique draw of the bittern. East Morecambe Bay also has significant opportunities for growth in tourist numbers in association with the other attractions in the area.

9 West Lancashire Plain

As a result of the analyses undertaken in the Stage 2 Feasibility Studies, the Nuck's Wood and Low Meadows and Croston and Mawdesley Mosses sites are not considered in this stage of the project

9.1 Current Value of Network

This section presents a summary of the current benefits of each site and network to their local area and the region as a whole. This comprises a consideration of the existing environmental and any socio-economic and other non quantifiable benefits displayed by each site. This summarises the analyses undertaken in Stages 1 and 2 of the project.

This information represents a baseline against which the environmental, socio-economic and image benefits of the developments proposed during Stage 2 of the project can be assessed. A drawing of the network is presented as Figure 5.

9.1.1 Environmental Benefits

The sites considered within the network are situated within the boundary of a formerly extensive lake and lowland raised mire, known as Martin Mere. The sites are collectively situated in a shallow, flat-bottomed valley, which is dominated by arable farmland. This agricultural activity is sustained by constant pumped-drainage effort, although a number of wet areas occur, which include the sites included in this network.

Martin Mere

This site occupies part of a former lake and mire that extended over some 1,300 ha of the Lancashire Coastal Plain during the 17th century. The wider reserve comprises open water, seasonally flooded marsh and damp, neutral hay meadows overlying deep peat. It includes a wildfowl refuge of international importance (SPA, Ramsar and SSSI), with a large and diverse wintering, passage and breeding bird community. Many of the overwintering bird species, such as pink-footed geese, utilise surrounding areas of farmland for feeding.

Mere Sands Wood

This site comprises a former sand extraction site of approximately 42.4 ha in size. It is designated a County Biological Heritage Site for ecological features, and a Site of Special Scientific Interest (SSSI) for geological interest. The site consists of a series of man-

made lakes formed from extraction activities, with margins of developing reedbed, set within mature woodland.

The reserve holds nationally important populations of wildfowl and dragonflies. Open habitats between the lakes include rush-marsh, rough meadow and heath communities. The surviving woodland which covers a significant proportion of the site features large stands of rhododendron.

9.1.2 Socio-Economic Benefits

The West Lancashire Plain network attracts around 185,000 visitors each year, who spend a total of approximately £1,480,000 per annum. The sites currently support a total of 47 FTE jobs, 34 of which are directly employed and 13 employed locally through multiplier effects. In terms of non-quantifiable benefits the network is considered to currently realise low to moderate amenity/recreational and educational benefits, and low health benefits.

Martin Mere

Visitor numbers and income generation: 160,000 visitors per year, estimated to spend approximately £1,280,000 per annum (£528,000 at the site and £752,000 in the local and regional economy[17]).

Employment and training generation: a total of 40 FTE jobs, 29 of which are directly employed and 11 are through multiplier effects.

Non-quantifiable economic impacts: low to moderate amenity/recreational and educational benefits, and low health benefits.

Mere Sands Wood

Visitor numbers and income generation: 25,000 current visitors per year estimated to spend £200,000 per annum (£27,500 at the site and £172,500 in the local and regional economy[18]).

Employment and training generation: five FTE jobs directly employed and two through multiplier effects.

[17] Based on site expenditure of approx £3.30 per person reported by WWT at Martin Mere.

[18] £18,750 from donation box in car park (25,000 visitors, 2 per car = 12,500 cars, £2 donation, 75% 'honesty' rate), £8750 from hot drink vending machine in visitor centre (75p per cup, 50% visitors purchase, 5p per cup machine rental).

Non-quantifiable economic impacts: low amenity/recreational, educational and health benefits.

9.2 Value of Proposed Developments

This section presents a summary of the environmental and socio-economic benefits and costs, together with the potential sources of funding available, main risks, and strategic fit associated with the developments proposed in Stage 2 of the project. These network-scale benefits and costs are then compared, allowing an assessment of which of the proposed developments would be expected to provide the greatest economic and environmental benefits for the projected expenditure, i.e. offers the best 'value for money'. Table 1 presents a summary of the benefits and costs associated with the proposed developments.

A sensitivity analysis of the economic impacts of the proposed developments is also presented. This analysis will allow an assessment of effects of changes in visitor numbers on economic benefits (the economic benefits of the wetland networks depend on their ability to attract visitors). The analysis is presented in full in Appendix 2.

9.2.1 Summary of Developments

The ultimate vision for this area is the restoration of the largest mere in England, and the re-creation of the ancient Lancashire landscape. Using the strong brand of Martin Mere and the extension of the wetland area the network could become the 'Norfolk Coast of Lancashire' and a focus for ornithologists, particularly if bittern can be attracted with the development of larger areas of reedbeds. The vision also includes the linking of the wetlands with the surrounding 'tamed countryside' of drainage ditches and the arable farmed landscape, both physically by pathways, and as a strong interpretive theme.

The proposals for the key site, **Martin Mere**, involve the redevelopment of the existing features. The main proposals are to acquire more land to extend the wetland, to provide new hides and interpretation, and to improve visitor facilities in the existing centre. Proposals for the network site, **Mere Sands Wood,** involves the expansion and improvement of visitor facilities to encourage more visitors and to generate income, and development of low key visitor facilities, including car parking, boardwalks, hides and signs, respectively.

9.2.2 Strategic Fit

This section presents an assessment of the fit of the proposed developments with sub-regional and local strategies and plans considered to be of particular relevance.

The Local Plan for West Lancashire sets out detailed policies and site specific proposals for the development and use of land. Parts of the Plan suggest that the District Council would support projects that will create a network of sites of conservation interest, possibly

combined with recreation and tourism opportunities. Wetland sites are amongst those habitats that the Council wishes to protect. The Plan aims to protect and enhance habitat networks, and to provide a network of recreational facilities. Similarly, the Replacement Local Plan also aims to enhance relationships between environmental assets and development of wildlife corridors. The wetlands concept fits closely with these polices.

The Lancashire Rural Recovery Action Plan sets out seven objectives for managing and delivering rural recovery in the area. A number of these objectives align closely with the aims of the wetlands projects. The proposed wetlands will help to create jobs in rural locations and assist in the restructuring of agriculture, which will also broaden the area's economic base. At the same time, they will also help to renew and strengthen the recreation and tourism offer by developing attractions which already generate a significant number of visitors. The wetland proposals will also sustain the environmental inheritance of the area by developing, and in some instances extending, the wetlands.

The Lancashire BAP is a strategic document which outlines priorities for the conservation of species and habitats in the local area. It seeks to identify, assess, protect and, if necessary, improve reedbed, mossland and wetland habitats within moorland and fell areas, whilst at the same time raising public awareness and understanding of these habitats.

In the case of moorland and fell habitats information will be disseminated via a range of means, including tourism and recreational literature, which suggests an interest in promoting wetlands as selling points. In terms of creating networks of wetlands, there is an objective to maintain and enhance links between concentrations of blanket bog and heathland, giving priority to the key 'stepping stone' sites of Browsholme Moor/Easington Fell, Pendle Hill, White Moor (Barnoldswick) and Longridge Fell.

The West Lancashire Community Strategy 2003-6 provides a framework for promoting and improving the economic, social and environmental well-being of the area. It makes relatively few references to the role that environmental assets may contribute to creating jobs or improving health, although under the environment theme, Martin Mere and the Ribble Estuary are specifically mentioned. The Strategy also includes priorities aimed at increasing public access to the countryside and greenspaces, and to maintain and enhance wildlife, wild spaces and landscapes. In this respect, the wetlands project fits well with the aims of this strategy.

The RPG and RES both indicate the need to develop the Regional Park concept in the North West. At the time of writing the Ribble Regional Park is in the process of being developed, and it is understood that the sites being considered in this network are within the proposed boundary.

9.2.3 Environmental Benefits

Habitat gain: creation of 9ha of open water, 9ha of marshy grassland, 4ha of reedswamp and 14ha of grazing marsh (priority habitat under local and national BAPs).

Habitat enhancement: increased control of hydrological regime over 220ha of open water, marshy grassland and grazing marsh habitats, enhancement of habitat size and complexity.

- contribution of 0.33% towards National BAP target of "creating 1200ha of new reedbed on land of low nature conservation interest by 2010";
- contribution of 0.14% towards National BAP target of "rehabilitating 10,000ha of grazing marsh habitat which is intensively managed by 2000" (target currently under review);
- contribution of 13% towards Lancashire BAP target of "creating 30ha of new reedbed by 2010";
- contribution to National BAP targets for otter, bittern, water vole, diving beetle, barn owl, variable damselfly, white faced darter, reed beds and wet woodland.

9.2.4 Socio-Economic Benefits

Visitor numbers and income generation: projected 115,000 additional visitors per year, projected to spend approximately £920,000 (£462,000[19] at the sites and £540,500 in the local and regional economy).

Employment and training generation: additional 15 net FTE jobs.

Non-quantifiable economic impacts: moderate to high amenity/recreational benefits, moderate educational benefits, moderate health benefits.

Sensitivity Analysis

If the average spend of a day visitor increase by 25%, West Lancashire Plain could expect to see 19 additional jobs to those projected under the reference case scenario. Under the low overnight visitor scenario 25 more jobs would be created, with 37 more under the high scenario. Employment would be impacted under different visitor number growth scenarios, with an increase or decrease of one job, depending on whether the growth is higher or lower than the reference case.

9.2.5 Costs

Capital: £7,700,000.

[19] Based on site expenditure at Martin Mere and Mere Sands Wood of approx £3.30 per person reported by WWT at Martin Mere

Operational: £831,000 per annum.

9.2.6 Potential Funding

Potential funding sources include:

- Lancashire Rural Tourism Initiative (LRTi);
- Heritage Grants;
- Lancashire Rural Recovery Action Plan;
- HLF Local Heritage Initiative funding;
- English Nature's Reserves Enhancement Scheme and Land Purchase Grants;
- EU Life Programme;
- SITA Trust;
- Funding which could be associated with being located in Ribble Regional Park.

9.2.7 Risks and Uncertainties

- Unknown impact of reform of CAP ('Single Farm Payment') on capital costs of land purchase and subsequent management (e.g. grazing rights, etc.); this could have a negative or positive impact on the projects.
- Inability to gain control of complete hydrological unit when acquiring additional land, requiring installation of extensive and elaborate earthworks to isolate from surrounding land; significant consequent capital costs.
- Requirement at Martin Mere to remove or treat significant amounts of topsoil to remove agriculture-derived nutrient loading; significant consequent capital costs.
- Failure at Martin Mere of negotiation to acquire additional land either due to landowners not wishing to sell or the price being uneconomic.
- Failure to generate funding.
- Failure to gain planning permission; objections by e.g. Highway Authority to proposed developments at Martin Mere.
- Lack of appropriate management due to a lack of funding. The long term succession of open water habitats, if not managed, will result in progressive drying out, ultimately resulting in dry woodland.
- Conflicts between different uses of sites, e.g. features of ecological and geological significance at Mere Sands Wood.
- Lack of funding to support the operation of Mere Sands Wood visitor centre, which may not be self-supporting.

9.3 Value for Money of Proposed Developments

There are a number of ways to assess the value for money represented by the developments proposed at each site and network. This assessment uses the criteria of the amount of investment required to create each job. This section presents an analysis

of the cost required to create a job at each site in this network; an overview is presented in Chapter 9.

This network represents poor value for money when considering the costs associated with creating jobs. It does however display good fit with regional objectives such as sustainability, development of the tourism cluster, health and biodiversity.

Martin Mere
The cost associated with the creation of each job at this site suggests that it does not represent good value for money. Each new job would cost an average of over £1 million to create. The site displays good fit with regional objectives, although the likelihood of non-economic benefits such as health and education does not compensate for this site's current poor value for money. However, the capital costs for the proposed developments, at £7.6m, are the highest of all the sites being considered by this study. This may have skewed this assessment.

Mere Sands Wood
The site represents the best value for money of all the wetland sites, with an average cost per job of around £36,000. The site displays good fit with regional objectives.

9.4 Maximising Benefits

On the basis of the above assessments this section provides suggestions about how the proposed developments could be amended in order to improve the degree of environmental, social and economic benefits offered by the proposals at each network and the project as a whole.

9.4.1 Strategic Fit

Alignment of the proposed developments in the West Lancashire Plain network with the Lancashire BAP could be increased through further improving public access onto and interpretation of the sites, through the provision of footpaths and boardwalks, and information points and leaflets. Contributions could also be made towards National BAP habitats targets for purple moorgrass and rush pasture, reedbeds and wet woodland by the raising of water levels on adjacent land.

Progress could be made towards the objectives set out in the Lancashire Rural Recovery Action Plan through the attraction of greater numbers of visitors to the area than currently proposed or increasing the amount of money spent by those visitors. This would be best achieved through effective marketing and by linking, for example through cross-marketing, the wetland attractions with other facilities in the area, such as hotels, restaurants, etc. Bringing a larger area under wetland management than is currently proposed would further help in the diversification of the rural economy, thereby reducing reliance on the Common Agricultural Policy also aid in broadening the economic base.

An area where the partners involved in the proposed wetland developments should try to influence policies in the West Lancashire Community Strategy 2003-6 is in emphasising the contribution to the economic, social and environmental well-being of the area of its natural assets. Raising the profile of such features in the minds of the local community will help in their protection, reducing the likelihood of loss through inappropriate development or neglect. Over the long-term, as well as protecting ecologically important areas from inappropriate development, this would help partners in extending the network of wetlands to areas with potential but considered more marginal in Stage 2 of this project.

9.4.2 Environmental Benefits

The proposals for habitat creation involve the acquisition or otherwise bringing under favourable management of current agricultural land. Further contributions to National and Local BAP targets would be possible if more land than is currently proposed is brought under favourable management.

The raising of water levels across new areas of formerly agricultural land could provide opportunities for creating other National BAP target habitats such as wet woodland, grazing marsh, purple moor grass and rush pastures, in turn providing opportunities for National BAP species such as bittern, great crested newt, water vole, diving beetle, and barn owls, etc.

9.4.3 Socio-Economic Benefits

Martin Mere
Development proposals for this site involve the most significant capital investment of any of the sites under consideration in this project. However, it is considered that this is required if the goal of increasing the number of visitors to the site, from the current 160,000 to 250,000, is to be achieved. The largest outlay is for the redevelopment of the central attractions, estimated to cost approximately £12.5m over 20 years, or £6.25m over the 10 years considered by this project.

Rather than removing this item from the proposed works it may be possible to improve the value for money calculation by proposing that the development is financed by mechanisms other than the external funding sources considered by this project. The aim should be to raise around 50% of the total cost of the development through internal fundraising, membership contributions, etc.

If the aim of bringing additional land under favourable management could be achieved through ESS agreements, the total capital cost of the project would be reduced by £361,000, although there could be issues regarding the long-term future of any ecological improvements due to the probable requirement for extensive earthworks to hydrologically isolate this land from the surroundings.

These amendments would reduce the overall capital costs for the site by almost £3.5m, to £4.1m. This results in a reduction of the total cost per job created from just over £1m to approximately £600,000.

Mere Sands Wood

No amendments are proposed for this site as, according to information recently received, much of the development proposed in Stage 2 has already been undertaken. The only significant residual cost is for the redevelopment of the visitor centre, which is considered necessary to attract additional visitors.

9.5 Network Summary

This network includes a wildlife refuge of international importance with a large wintering, passage and breeding bird community, and a wildlife reserve created on a former sand extraction site, which is nationally designated for geological features and locally important for ecological features. Both sites are wholly owned by conservation bodies. The network attracts approximately 185,000 visitors per year who spend around £1,480,000 on-site, and in the local and regional economy. This supports a total of 47 FTE jobs, and yields low to moderate non-quantifiable benefits.

The vision for this network is for the restoration of the largest mere in England, and the recreation of the ancient Lancashire landscape. Long-term proposals for the Key site involve the complete redevelopment of the existing features of interest, acquisition or otherwise bringing under favourable management of surrounding areas of land, with creation of more areas of mixed wetland. Facilities within the existing visitor centre will be improved. Proposals for the network site involve the expansion and improvement of visitor facilities to encourage more visitors and to generate income.

The proposed habitat enhancements would contribute moderately towards National and Local BAP targets for reedbed creation and rehabilitation of grazing marsh.

Overall the proposals are expected to lead to an increase in visitors to the network of around 115,000 people per year, projected to spend an additional £920,000, mainly on-site, which would support an additional 15 FTE jobs in the local economy. This number could vary by one less up to 25 more jobs, depending on variations in visitor spending, the introduction of a certain number of overnight-staying visitors, or whether the growth in visitor numbers is higher or lower than the reference scenario. The costs of these proposals are very high, with the bulk of the capital expenditure being on reserve development at Martin Mere.

The proposals align well with plans and strategies concerned with conservation of species and habitats, and also with public access and education policies. Alignment is only moderately good with aims to improve the economic well-being of the area, due to the relatively small number of jobs projected to be created.

In terms of the expected return on investment, the proposals represent by far the highest cost per job ratios of any network, at £569,000. This is extremely poor value for money in economic terms. However, the developments do yield benefits such as sustainability, development of the tourism cluster, health and biodiversity.

Improvements to the returns on investment could be made by: bringing larger areas of land under favourable management perhaps by way of management agreements as well as by acquisition; creation of greater areas of BAP target habitats; increasing numbers of visitors and spending; cross-marketing with other attractions; further increasing public access onto and interpretation of sites, and; raising the profile of the natural environment in the local community.

In purely financial terms, as a result of these amendments the average cost of creating a new job through investments in wetland sites falls to approximately £281,000, which is still the lowest return on investment of any of the networks, and still poor value for money.

9.6 Conclusions

Development proposals in the West Lancashire Plain network involve very high capital costs, but yield relatively low non-quantifiable socio-economic benefits. The proposals represent very poor value for money, being the lowest return on investment of any of the networks. Overall strategic fit is good, although the nature and extent of environmental benefits are only moderate, given the relatively small areas of wetland creation proposed.

10 Mersey Corridor - Wigan

10.1 Current Value of Network

This section presents a summary of the current benefits of each site and network to their local area and the region as a whole. This comprises a consideration of the existing environmental and any socio-economic and other non quantifiable benefits displayed by each site. This summarises the analyses undertaken in Stages 1 and 2 of the project.

This information represents a baseline against which the environmental, socio-economic and image benefits of the developments proposed during Stage 2 of the project can be assessed. A drawing of the network is presented as Figure 6.

10.1.1 Environmental Benefits

This network comprises two sites located within Wigan Borough. The area in which they are situated can be seen as Wigan's 'green lung' within the proposed Greenheart Regional Park. The wetlands were formed by the subsidence of historical mine workings and are considered to be of high quality, supporting a wide range of wildlife, including important numbers and species of birds, botanical and invertebrate interest. Between them the sites include one SSSI and eight Sites of Biological Importance (SBIs).

There are opportunities to link the sites through acquisition of land and setting up of management agreements on land between the sites, along the Leeds and Liverpool canal, to create a mosaic of wetland habitats. This land includes a SSSI and four SBIs.

Wigan Flashes

Although industrial use constitutes a significant part of the history of the Wigan Flashes, many features of nature conservation interest have been restored through appropriate management. The site is now home to a wide variety of plant, bird and other wildlife, but it is also widely used for public amenity. Wigan Council formally recognised the site as a local nature reserve in 2002.

The Flashes contain a Site of Special Scientific Interest (SSSI) and seven SBIs. They are known to support over 200 species of bird, a wide range of botanical interest, including five species of orchid, and extensive and important reedbed communities, which are one of the habitats that support the 15 species of dragonfly found on the site. The reedbeds also provide over-wintering habitat for the nationally rare bittern.

Pennington Flash

This site constitutes a 70 ha lake, formed through the subsidence of mine workings, within a 200 ha country park. The site lies within the wider 'Heybrook Corridor', which comprises largely agricultural land to the north and west of Pennington Flash, Amberswood Common, a series of small lakes, ponds and wetlands, and other areas of open water such as Abram Flashes.

Pennington Flash constitutes a mosaic of open water, reed beds, scrub and woodland, providing habitats for a wide array of wildlife; over 230 species of birds, including local and national rarities, 20 species of butterfly and 16 species of dragonfly have all been recorded in recent years. The site enjoys local protection through designation as a Site of Biological Importance (SBI), which is understood to be for its importance for birds

10.1.2 Socio-Economic Benefits

The Mersey Corridor wetland network attracts around 497,000 visitors each year, who spend a total of approximately £3,976,000 per annum in the local and regional economy. The sites currently support a total of 117 FTE jobs, 11 of which are directly employed and 106 are through visitor spending off-site and multiplier effects. In terms of non-quantifiable benefits the network is considered to currently realise low to moderate amenity/recreational benefits, and low educational and health benefits.

Wigan Flashes

Visitor numbers and income generation: 97,000 visitors per year, estimated to spend approximately £776,000 in the local and regional economy.

Employment and training generation: three FTE jobs at the site and 24 FTE jobs as a result of off-site spending by visitors and multiplier effects.

Non-quantifiable economic impacts: low to moderate amenity/recreational benefits and low educational and health benefits.

Pennington Flash

Visitor numbers and income generation: 400,000 visitors per year, estimated to spend approximately £3,200,000 (£140,000 at the site and £3,060,000 in the local and regional economy[20]).

Employment and training generation: eight FTE jobs at the site and 82 FTE jobs as a result of off-site spending by visitors and multiplier effects.

[20] Based on 280,000 cars/annum recorded at Pennington Flash car park, £1 parking charge. 50% of car park use assumed to be associated with wetland use.

Non-quantifiable economic impacts: moderate amenity/recreational benefits and low educational and health benefits.

10.2 Value of Proposed Developments

This section presents a summary of the environmental and socio-economic benefits and costs, together with the potential sources of funding available, main risks, and strategic fit associated with the developments proposed in Stage 2 of the project. These network-scale benefits and costs are then compared, allowing an assessment of which of the proposed developments would be expected to provide the greatest economic and environmental benefits for the projected expenditure, i.e. offers the best 'value for money'. Table 1 presents a summary of the benefits and costs associated with the proposed developments.

A sensitivity analysis of the economic impacts of the proposed developments is also presented. This analysis will allow an assessment of effects of changes in visitor numbers on economic benefits (the economic benefits of the wetland networks depend on their ability to attract visitors). The analysis is presented in full in Appendix 2.

10.2.1 Summary of Developments

The vision for this network is of the creation of a mosaic of internationally important wetland habitats, comprising fens, grazing marsh, reedbeds and wet woodlands, which have the capacity to enhance the negative, run-down image of the area, and to improve the lives of local people by providing more and better opportunities for informal recreational activity. Set within the framework of the Greenheart Regional Park, Wigan Flashes and Pennington Flash will provide linked and complementary attractions, with its wider range of environmental and recreational facilities. With the high quality of the existing wetland and the associated wildlife, and the opportunity for large new areas of new wetland, the network can offer viable alternatives to better known sites in the North West, with the added attraction of a unique industrial heritage.

The proposals for the sites involve the extension of the area of land under wetland or related management and development of new visitor facilities, and, at Pennington Flash the redevelopment of the Park information point into a full-scale visitor centre, extension of the wetland and upgrading of infrastructure across the site.

10.2.2 Strategic Fit

This section presents an assessment of the fit of the proposed developments with sub-regional and local strategies and plans considered to be of particular relevance.

The Wigan UDP sets out the long-term planning strategy for the area, as well as detailing local proposals for how land should be used and developed. The Plan is committed to

placing 'environmental quality at the heart of tourism development'. The importance of environmental tourism, the kind that could be encouraged by the wetlands network, is recognised in the plan. More specifically, priority will be given to developing tourism potential in areas that already contain leisure and tourism attractions and/or where tourism can contribute to regeneration.

The wetlands network could meet both of these criteria – it could contribute to regeneration, and it includes Wigan Flashes, recognised in the UDP as an existing tourist attraction. The emphasis of the tourism policies is upon sustaining and adding quality, rather than merely increasing the number of attractions, which again fits with the wetlands concept.

The Wigan Community Plan provides a framework for promoting and improving the economic, social and environmental well-being of the area. The wetlands project could contribute to a number of the Plan's aims, by for example: investing in learning (by providing the local community with the opportunity to learn more about their surrounding environment and biodiversity and providing an invaluable resource for local schools); growing the economy (by providing jobs for local people and attracting tourists), and; creating a better environment.

The Heritage Strategy for Wigan provides a framework and action plans for the identification, preservation and development of the area's heritage. The Strategy sees the Borough's landscape, particularly its unique post industrial landscape heritage, much of which is underused and has current or potential ecological value, as something that it is important to protect and enhance.

Wigan Flashes is part of this post-industrial heritage, and work that has so far taken place to maintain and enhance the site is held up as an exemplar in the Strategy of the sort of project that should be encouraged. The Strategy also recognises that much of the underused land in the Borough has potential value as an ecological resource; the wetlands project has the potential to contribute to the realisation of this goal.

The Greater Manchester BAP is a strategic document which outlines priorities for the conservation of species and habitats. It aims to involve the public in its plans to maintain and expand marshy and lowland raised bog and mossland habitats. In relation to the latter two habitats, Greater Manchester wishes to establish 'a strategic approach to conserving and managing lowland raised bogs by seeking to link isolated sites together. Habitat creation schemes to provide a diversity of complementary habitats should be encouraged within identified corridors to link mossland sites'. This objective is significant as it demonstrates a wish to develop a network of linked wetland sites, which fits closely with the wetland proposals.

10.2.3 Environmental Benefits

Habitat gain: creation of 148ha of wetland similar in composition to existing site from improved grassland and a golf course; 80ha open water, 25ha reedbed, 33ha marshy grassland and 10ha of fen, which are national and local BAP 'priority habitats'.

Habitat enhancement: enhanced hydrological regime over 447ha of existing sites, enhancement of overall habitat size and complexity, resulting in increased numbers and diversity of wildlife.

- contribution of 2.09% towards National BAP target of "creating 1200ha of new reedbed on land of low nature conservation interest by 2010";
- contribution to National BAP targets for great crested newt, water vole, diving beetle, barn owl, reed bunting, otter, reedbeds and wet woodland.

Added environmental benefits could be gained by improving ecological links between Pennington Flash and Wigan Flashes.

10.2.4 Socio-Economic Benefits

Visitor numbers and income generation: projected 553,000 additional visitors per year, projected to spend approximately £4,427,000 (£1,824,900[21] at the site and £2,599,100 in the local economy).

Employment and training generation: additional 48 net FTE jobs.

Non-quantifiable economic impacts: moderate amenity/recreational benefits, low educational benefits, high health benefits.

Sensitivity Analysis

If the average spend of a day visitor increased by 25%, from £8 to £10, Mersey Corridor could expect to see 66 additional jobs to those projected under the reference case scenario. Under the low overnight visitor scenario 77 more jobs would be created, with 123 more under the high scenario. Employment would be impacted under different visitor number growth scenarios, with an increase or decrease of 27 jobs, depending on whether the growth is higher or lower than the reference case.

10.2.5 Costs

Capital: £7,480,000.

[21] Based on site expenditure at Wigan Flashes and Pennington Flash of approx £3.30 per person reported by WWT at Martin Mere

Operational: £482,000 per annum.

10.2.6 Potential Funding

Potential funding sources include:

- NWDA Single Pot:
- Tourism strand of Objective 2;
- Heritage Lottery Fund;
- Big Lottery Fund;
- Local Heritage Initiative;
- English Nature's Reserves Enhancement Scheme and Land Purchase Grants;
- SITA Trust;
- CLAREN Project;
- Funding which may be available by being in a proposed Regional Park.

10.2.7 Risks and Uncertainties

- Unknown impact of reform of CAP ('Single Farm Payment') on capital costs of land purchase and subsequent management (e.g. grazing rights, etc.); this could have a negative or positive impact on the projects.
- Inability to gain control of complete hydrological unit when acquiring additional land, requiring installation of extensive and elaborate earthworks to isolate from surrounding land; significant consequent capital costs.
- Requirement to remove or treat significant amounts of topsoil to remove agriculture/sports turf derived nutrient loading; significant consequent capital costs.
- Failure of negotiation to acquire additional land either due to landowners not wishing to sell or the price being uneconomic.
- Failure to generate funding.
- Failure to obtain requisite growth in visitor numbers.
- Failure to create a strong, sharing, trusting partnership between site promoters WMBC, LCT, LWT and Groundwork Wigan.
- Significant negative environmental impact of new link road on site features at Wigan Flashes; loss of amenity caused to site users.
- Inability to adequately manage existing inappropriate uses of the site; loss of amenity for legitimate site users.
- Competition for similar visitors between Wigan Flashes and Pennington Flash
- Impacts of the eventual end use for Bickershaw sites.

10.3 Value for Money of Proposed Developments

There are a number of ways to assess the value for money represented by the developments proposed at each site and network. This assessment uses the criteria of the amount of investment required to create each job. This section presents an analysis

of the cost required to create a job at each site in this network; an overview is presented in Chapter 9.

This network represents relatively poor value for money considering only new jobs created as a result of the proposed developments. The network does, however, score highly against regional objectives such as biodiversity, sustainability, health and the promotion of tourism.

Wigan Flashes
This site does not represent good value for money based on the average investment per job created. It does however display a strong fit with regional objectives and is likely to produce a number of significant outcomes around health and education, due to its proximity to large concentrations of population.

Pennington Flash
The cost of £126,000 per job created is poor value for money. The site does display a strong fit with regional objectives, however.

10.4 Maximising Benefits

On the basis of the above assessments this section provides suggestions about how the proposed developments could be amended in order to improve the degree of environmental, social and economic benefits offered by the proposals at each network and the project as a whole.

10.4.1 Strategic Fit

Alignment of the proposed developments in the Mersey Corridor network with the Greater Manchester BAP could be improved through seeking to establish links between the two existing sites with the Chat Moss complex, a few miles to the southeast of Pennington Flash. This would contribute to the aim of linking isolated sites together and providing a diversity of complementary habitats. Whilst establishing links between project partners and other interested parties could be achieved within the timescale envisaged by this project, installation of the necessary infrastructure, facilities, etc., probably could not.

Progress could be made towards the objectives set out in the Wigan Community Plan through the development of extensive and innovative educational and interpretive facilities at the sites for the local community. Whilst it is not envisaged that more visitors than currently projected could (or should) be attracted, encouraging those that do visit to spend more (through the provision of on-site facilities, but also linking or cross-marketing of the sites with local hotels or restaurants) could have significant economic and social benefits. The recognition on the part of the local community that natural areas can yield such benefits will increase the degree of connection and ‘ownership’, reducing the likelihood of loss through inappropriate development or neglect. Over the long-term, as

well as protecting ecologically important areas from inappropriate development, this would help partners in extending the network of wetlands to areas with potential but considered more marginal in Stage 2 of this project.

10.4.2 Environmental Benefits

The proposals for habitat creation involve the acquisition or otherwise bringing under favourable management of current agricultural land. Further contributions to National and Local BAP targets would be possible if more land than is currently proposed is brought under favourable management.

The raising of water levels across new areas of formerly agricultural land could provide opportunities for creating other National BAP target habitats such as wet woodland, grazing marsh, purple moor grass and rush pastures, in turn providing opportunities for National BAP species such as bittern, great crested newt, water vole, diving beetle, and barn owls, etc.

10.4.3 Socio-Economic Benefits

Wigan Flashes
Apart from the proposal to construct a new visitor centre, the most expensive cost item is the purchase of additional land, at £860,000. If this land could be brought under favourable management through the setting up of ESS agreements, this cost would be avoided. This would result in a reduced overall cost of the proposals of £2.89m, and a reduction in the cost required to create each job of £54,000, to £192,000.

Pennington Flash
It is considered that all of the developments proposed in Stage 2 will be required to attract the expected number of visitors. These proposals have therefore not been amended.

10.5 Network Summary

The sites in this network are of very high quality, supporting a wide range of wildlife, including important numbers and species of birds, botanical and invertebrate interest. Between them the sites include one SSSI and eight Sites of Biological Importance (SBIs). Both sites are wholly under sympathetic ownership. The network attracts approximately 497,000 visitors per year who spend around £3,976,000 in the local and regional economy. This supports a total of 117 FTE jobs, and yields low to moderate non-quantifiable benefits.

The vision for this network is the creation of a mosaic of internationally important wetland habitats, comprising fens, grazing marsh, reedbeds and wet woodlands, which have the capacity to enhance the negative, run-down image of the area, and to improve the lives of local people by providing more and better opportunities for informal recreational activity.

These developments will be set within the framework of the Greenheart Regional Park, and will provide linked and complementary attractions. Proposals for the sites involve extension of the area of land under wetland or related management, development of new visitor facilities, and upgrading of infrastructure across the sites.

The proposed habitat enhancements would contribute significantly towards National and Local BAP targets for reedbed creation.

Overall the proposals are expected to lead to an increase in visitors to the network of around 553,000 people per year, projected to spend an additional £4,427,000, on-site and in the local and regional economy, which would support an additional 48 FTE jobs in the local economy. This number could vary by 27 less jobs and up to 123 more, depending on variations in visitor spending, the introduction of a certain number of overnight-staying visitors, or whether the growth in visitor numbers is higher or lower than the reference scenario. The costs of these proposals are very high, with the bulk of the capital expenditure being on visitor centre construction and land acquisition.

The proposals align well with plans and strategies concerned with developing tourism potential in areas that already contain leisure and tourism attractions, those that aim to improve the economic well-being, image and public access and with education policies. Alignment is also very good with policies aimed at the conservation of species and habitats, due largely to the creation of large areas of reedbeds and the enhancement of opportunities for species such as bittern.

In terms of the expected return on investment, the proposals represent the third highest cost per job ratios of all networks, at £169,000. This is poor value for money in economic terms. The network does, however, score highly against regional objectives such as biodiversity, sustainability, health and promotion of the tourism cluster.

Improvements to the returns on investment could be made by: linking the sites with the nearby Chat Moss complex; development of extensive and innovative educational and interpretive facilities at the sites for the local community; bringing larger areas of land under favourable management perhaps by way of management agreements as well as by acquisition; creation of greater areas of BAP target habitats; increasing the spending of visitors; cross-marketing with other attractions; further increasing public access onto and interpretation of sites, and; raising the profile of the natural environment in the local community.

In purely financial terms, as a result of these amendments the average cost of creating a new job through investment in wetland sites falls to approximately £151,000, which is still the second lowest return on investment of any of the networks, and still poor value for money. This network does, however, display good fit with regional objectives such as sustainability, health and promotion of tourism.

10.6 Conclusions

Development proposals in the Mersey Corridor network involve very high capital costs, which represent poor value for money in purely financial terms. However, the resultant non-quantifiable socio-economic benefits are the highest of any of the networks, and strategic fit is particularly good. The nature and extent of environmental benefits are also pretty high, due in part to the large area of proposed reedbed creation. The opportunities for funding are also greater here than in the other networks.

11 Gowy Meadows

11.1 Current Value of Site

This section presents a summary of the current benefits of Gowy Meadows to the local area and the region as a whole. This comprises a consideration of the existing environmental and any socio-economic and other non quantifiable benefits displayed by the site. This summarises the analyses undertaken in Stages 1 and 2 of the project.

This information represents a baseline against which the environmental, socio-economic and image benefits of the developments proposed during Stage 2 of the project can be assessed. A site location plan is presented as Figure 7.

11.1.1 Environmental Benefits

This site largely comprises semi-improved, damp, rushy and tussocky permanent pasture. The area is managed as a nature reserve and maintains ditches that support a specialist and sensitive flora and fauna. The lesser silver diving beetle and water voles have been recorded on the site. A number of plant species identified as county rarities have also been recorded from these areas of the site.

To the north of the M56 and to the west of the River Gowy, the land-use is arable. The western areas have been subjected to agricultural improvement and require considerable effort, in terms of ditch management etc, to maintain agricultural productivity. The channel of the River Gowy has been heavily modified.

Areas of open water were recorded as maintaining wintering shoveler and pintail and large numbers of redwings and fieldfares were recorded throughout the study area.

Gowy Meadows is designated a Site of Biological Importance (SBI). This is due to the specialist and sensitive flora found in drainage ditches. The site managers, Cheshire Wildlife Trust, would like to enhance the degree of protection to the site through designation as a SSSI, and perhaps inclusion in the Mersey Estuary Ramsar site.

11.1.2 Socio-Economic Benefits

Visitor numbers and income generation: Gowy Meadows currently attracts around 5000 visitors each year, who spend a total of approximately £40,000 per annum in the local and regional economy.

Employment and training generation: the site currently supports one FTE job directly employed at the site and one FTE job as a result of multiplier effects.

Non-quantifiable economic impacts: low amenity/recreational educational and health benefits.

11.2 Value of Proposed Developments

This section presents a summary of the environmental and socio-economic benefits and costs, together with the potential sources of funding available, main risks, and strategic fit with policies and plans associated with the developments proposed in Stage 2 of the project. These benefits and costs are then compared, allowing an assessment of the 'value for money' of the proposed development. Table 1 presents a summary of these benefits and costs.

A sensitivity analysis of the economic impacts of the proposed development is also presented. This analysis will allow an assessment of effects of changes in visitor numbers on economic benefits (the economic benefits of the wetland networks depend on their ability to attract visitors). The analysis is presented in full in Appendix 2.

11.2.1 Summary of Development

The vision for this site has at its centre the long-term protection and enhancement of the current features of ecological importance. The site managers, Cheshire Wildlife Trust, would ideally seek to acquire the freehold of the site from the current site owners, Shell UK Ltd. This will allow long-term habitat creation works at the site, which will serve to enhance opportunities for species of conservation interest. The maintenance and enhancement of favourable conditions for these and other BAP target features will help in the attainment of SSSI designation for the site. The Trust would also like the site to become part of the Mersey Estuary Ramsar site. These designations would afford further protection to the site. Over the longer term further areas of adjacent land should be brought under similar management as the current site.

Bringing this land under favourable management will create further opportunities for the dispersal of notable species, and help to restore more natural flow conditions to the river. This will increase the degree of flood protection to Stanlow refinery, and consequently reduce the risk of pollution to the River Mersey Estuary SPA, Ramsar and SSSI beyond.

The site currently has no formal visitor facilities, and this is regarded as the main priority area for future development. A new visitor centre could be created through the conversion of a disused church adjacent to the site. Also required is improved site access, information, interpretation and opportunities for education, and construction of new hides.

11.2.2 Strategic Fit

This section presents an assessment of the fit of the proposed developments with sub-regional and local strategies and plans considered to be of particular relevance.

The Cheshire BAP outlines priorities for the conservation of species and habitats in the local area, contains objectives relating to a variety of wetland habitats, including coastal and floodplain grazing marsh, fens, limebeds, meres (the County includes eight which are designated as Wetlands of International Importance) mudflats, lowland raised bog and reedbeds. The Plan has an interest in rehabilitating and expanding all of these habitats, often with an expressed desire to involve the public in a 'hands-on' way. The plan therefore supports the objectives of developing the wetland sites.

The Cheshire County Structure Plan sets out the broad planning strategy for the County. It contains policies on the amount and general location of land for new developments and sets out measures and schemes to protect and enhance the environment, and to improve the transport network. The Plan makes a number of specific references to ponds, wetlands and grasslands, particularly in terms of the losses experienced over recent years. Because of this, these sites should be protected, particularly those parts of the Mersey and Dee Estuaries which "contain habitats of international importance for wildfowl and wading birds".

The Structure Plan also notes that "sites and features can have an important role to play as part of a network or system of heritage assets". The Plan aims to enhance footpaths, bridleways, and cycleways. Wherever possible, it notes, new routes should be sited to take advantage of attractive natural or other interesting features. The Plan aims specifically to protect wetland sites, to link sites where possible through networks, and to encourage and enhance public access to these sites. The Plan notes that by improving local recreational opportunities, residents' quality of life is likely to benefit. These aims fit very well with the objectives of the wetland project.

The Chester Local Plan sets out detailed policies and site-specific proposals for the development and use of land. The guiding principles of the document include aims to increase tourism, recreation and heritage opportunities, and to seek opportunities for habitat enhancement and creation. These are well aligned with the overall aims of the wetlands network development.

The Local Plan places much emphasis on 'greenspace networks'. It identifies four areas of strategic greenspace and states that these are important for their recreational, landscape, wildlife and/or cultural value. One of the main objectives behind the principles of greenspace networks is that of facilitating greater access to, and movement through, the landscape for the benefit of people (residents and visitors to Chester) and wildlife. The wetlands project can contribute to the aims and objectives of the greenspace developments, although wetlands are not specifically mentioned in the Plan.

The Chester City Community Plan provides a framework for promoting and improving the economic, social and environmental well-being of the area. The document, however, makes very little reference to the role that natural assets may play in achieving the objectives relating to tourism, health and well-being, economic development, sport and leisure or environment. The Plan makes some reference to protecting greenbelt, there is an objective to achieve a better balance between urban and rural tourism opportunities, and the area of some parks will be enhanced. However, explicit links to natural assets are hard to find.

The Chester Economic Development Strategy sets out a framework for maintaining and improving the economic position of the district, although it is not particularly relevant to the wetlands project. The five key themes (community safety, transport and access, marketing Chester, skills and labour market, and infrastructure) do not make reference to natural areas, focusing instead on issues such as the city's retail offer, and its tourism offer related to the historic built environment.

11.2.3 Environmental Benefits

Habitat gain: creation of 23ha of floodplain grazing marsh, which is national and local BAP 'priority habitat'.

Habitat enhancement: enhanced hydrological regime over 166ha of existing site, enhancement of overall habitat size and complexity, resulting in increased numbers and diversity of wildlife.

- contribution of 0.23% towards National BAP target of "rehabilitating 10,000ha of grazing marsh habitat which is intensively managed by 2000" (target under review);
- contribution to National BAP for great crested newt, water vole, lesser silver diving beetle, reed bunting, otter, barn owl, lapwing, variable damselfly, reedbeds and floodplain grazing marsh.

11.2.4 Socio-Economic Benefits

Visitor numbers and income generation: projected 245,000 additional visitors per year, projected to spend approximately £1,960,000 at the site and in the local and regional economy.

Employment and training generation: additional 26 net FTE jobs.

Non-quantifiable economic impacts: moderate amenity/recreational benefits, high educational benefits, moderate health benefits.

Sensitivity Analysis

If the average spend of a day visitor increased by 25%, from £8 to £10, Gowy Meadows could expect to see 19 additional jobs to those projected under the reference case scenario. Under the low overnight visitor scenario 20 more jobs would be created, with 30 more under the high scenario. Employment would be impacted under different visitor number growth scenarios, with an increase or decrease of four jobs, depending on whether the growth is higher or lower than the reference case.

11.2.5 Costs

Capital: £1.9m.

Operational: £15,000 per annum.

11.2.6 Potential Funding

Potential funding sources include:

- Heritage Lottery Fund;
- Funding associated with site being located in proposed Regional Parks;
- SITA Trust;
- Countryside Agency's 'Community Renewables Initiative';
- Funding for educational purposes/facilities from site owners.

11.2.7 Risks and Uncertainties

- Unknown impact of reform of CAP ('Single Farm Payment') on capital costs of land purchase and subsequent management (e.g. grazing rights, etc.); this could have a negative or positive impact on the projects.
- Requirement to remove or treat significant amounts of topsoil to remove agriculture derived nutrient loading; significant consequent capital costs.
- Failure of negotiation to acquire additional land either due to landowners not wishing to sell or the price being uneconomic.
- Failure to generate funding.
- Failure to obtain requisite growth in visitor numbers.
- Long-term ownership of site.
- Proximity of other features, such as motorway and major industrial facility – potential accidents and/or loss of amenity for visitors.
- Presence of features such as overhead power lines may deter large wildfowl, detracting from spectacle of site, with consequent impact on visitor numbers.

11.3 Value for Money of Proposed Developments

There are a number of ways to assess the value for money represented by the developments proposed at each site and network. This assessment uses the criteria of the amount of investment required to create each job. This section presents an analysis of the cost required to create a job at each site in this network; an overview is presented in Chapter 9 below.

The proposed development of the wetland site at Gowy Meadows would create 26 new jobs at a cost of £79,000 each, which represents poor value for money. The site does however display good alignment with regional objectives on biodiversity, sustainability, rural recovery and other non-quantifiable economic benefits such as health and education.

11.4 Maximising Benefits

On the basis of the above assessments this section provides suggestions about how the proposed developments could be amended in order to improve the degree of environmental, social and economic benefits offered by the proposals at each network and the project as a whole.

11.4.1 Strategic Fit

Alignment of the proposed developments at the Gowy Meadows site with Cheshire's BAP could be increased through the acquisition or otherwise bringing under favourable management of adjacent agricultural land and creation of larger areas of target habitats. Whilst no specific targets for creation of areas of floodplain grazing marsh are contained in the Cheshire BAP, the development proposals could be extended to contribute even further to the National target. In addition, contributions could also be made to other Cheshire BAP targets for reedbeds and fens.

The Cheshire County Structure Plan has aims to enhance footpaths, bridleways and cycleways, and to take advantage of attractive natural features where possible. ChWT should seek to include the site in any existing networks, and work with partners such as the County Council to develop further links as appropriate. Opening up the site as much as possible (and appropriate), through the creation of footpaths, bridleways and cycleways will also contribute to public access targets in the Structure Plan and Chester's Local Plan.

An area where ChWT should try to influence policies in the Chester City Community Plan and Economic Development Strategy is in emphasising the site's contribution to tourism, health and well-being, economic development, sport and leisure and environment. Raising the profile of such features in the minds of the local community will help in their protection, reducing the likelihood of loss through inappropriate development or neglect.

Over the long-term, as well as protecting ecologically important areas from inappropriate development, this would help partners in extending the network of wetland sites.

11.4.2 Environmental Benefits

Current proposals include the wetting-up of existing agricultural land to create areas of grazing marsh, which is a Local and National BAP target habitat. The acquisition or otherwise bringing under favourable management of greater areas of land than currently proposed would increase the contribution to such targets. The raising of water levels may also provide opportunities for creating other National BAP target habitats such as reedbeds, wet woodland, purple moor grass and rush pastures, in turn providing opportunities for National BAP species such as bittern, great crested newt, water vole, diving beetle, and barn owls, etc.

11.4.3 Socio-Economic Benefits

The proposed developments at this site include for the purchase of adjacent land, estimated to cost approximately £198,000. If this land could be brought under favourable management through ESS agreements, this cost would be avoided. The impact of this would be a reduction in the cost of creating each job of £7500, to £71,500.

11.5 Network Summary

This site comprises semi-improved, damp, rushy and tussocky permanent pasture, being managed as a nature reserve. It maintains ditches that support a specialist and sensitive flora and fauna, for which it is designated a Site of Biological Importance (SBI), and a number of plant species identified as county rarities have also been recorded. The site currently attracts approximately 5,000 visitors per year who spend around £40,000 in the local and regional economy. This supports one FTE job and yields low non-quantifiable benefits.

The vision for this site is the long-term protection and enhancement of the current features of ecological importance. The site managers would like to enhance the degree of protection to the site through designation as a SSSI, and perhaps inclusion in the Mersey Estuary Ramsar area. Over the longer term further areas of adjacent land should be brought under similar management as the current site. This would create further opportunities for the dispersal of notable species and help restore more natural flow conditions for the river, thereby increasing the degree of flood protection to the adjacent oil refinery, and reducing the risk of pollution to the River Mersey.

The site currently has no formal visitor facilities, and this is regarded as the main priority area for future development. Other improvements include site access, information, interpretation and opportunities for education, and construction of new hides.

The proposed habitat enhancements would contribute moderately towards National BAP targets for grazing marsh rehabilitation.

Overall the proposals are expected to lead to an increase in visitors to the network of around 245,000 people per year, projected to spend an additional £1,960,000 on-site and in the local and regional economy, which would support an additional 26 FTE jobs in the local economy. This number could vary by four less jobs and up to 30 more, depending on variations in visitor spending, the introduction of a certain number of overnight-staying visitors, or whether the growth in visitor numbers is higher or lower than the reference scenario. The costs of these proposals are relatively high, with the majority of the capital expenditure being on visitor centre construction and land acquisition.

The proposals align well with plans and strategies concerned with the conservation of species and habitats, the enhancement of links with other features of interest along sustainable networks, and to a certain degree with public access policies.

In terms of the expected return on investment, the proposals represent the lowest cost per job ratio, albeit for a single site, at £79,000. This is still regarded as poor value for money in economic terms. The site does however display good alignment with regional objectives on biodiversity, sustainability, rural recovery and other non-quantifiable economic benefits such as health and education.

Improvements to the returns on investment could be made by: development of extensive and innovative educational and interpretive facilities at the sites for the local community; bringing larger areas of land under favourable management perhaps by way of management agreements as well as by acquisition; creation of greater areas of BAP target habitats; improving links with other features of interest by way of sustainable links such as cycleways, bridleways and footpaths; increasing the spending of visitors; cross-marketing with other attractions; further increasing public access onto and interpretation of sites, and; raising the profile of the natural environment in the local community.

In purely financial terms, as a result of these amendments the average cost of creating a new job through investments in wetland sites falls to approximately £72,000, and still represents poor value for money. The site does, however display good alignment with regional objectives on sustainability, rural recovery and other non-quantifiable economic benefits such as health and education.

11.6 Conclusions

Development proposals at Gowy Meadows involve relatively high capital costs for a single site, which represent poor value for money in purely financial terms. However, the resultant non-quantifiable socio-economic benefits, and strategic fit, are relatively good. Environmental benefits are only moderate. ChWT should concentrate on developing relationships with Shell and seeking opportunities for funding and support.

Section 3

12 Programme Development: 5 – 10 Years

Ref	Task	Years										Estimated Costs £000
		1	2	3	4	5	6	7	8	9	10	
1	**Network wide**											
1.1	Overall Business case											15
1.2	Marketing and development strategy											15
1.2.1	**Network/site**											
1.2.2	Mersey Corridor											10
1.2.3	West Lancashire Plain											10
1.2.4	East Morecambe Bay											10
1.2.5	South Lakes Coast											10
1.2.6	North and West Cumbria											10
1.2.7	Gowy Meadows											10
2	**Individual Networks**											
2.1	**Mersey Corridor**											
2.1.1	Business Plan development											15
2.1.2	Land acquisition/management agreements											860
2.1.3	Funding applications/approvals											20
2.1.4	Planning applications/approvals											20
2.1.5	Detailed design											20
2.1.6	Tender and commissioning											15
2.1.7	Construction											6,636

Ref	Task	Years										Estimated Costs £000
		1	2	3	4	5	6	7	8	9	10	
2.1.8	Opening and operation											
2.2	**West Lancashire Plain**											
2.2.1	Business Plan development											20
2.2.2	Land acquisition/management agreements											360
2.2.3	Funding applications/approvals											20
2.2.4	Planning applications/approvals											20
2.2.5	Detailed design											20
2.2.6	Tender and commissioning											15
2.2.7	Construction											7,465
2.2.8	Opening and operation	Post year 10										
2.3	**East Morecambe Bay**											
2.3.1	Business Plan development											15
2.3.2	Land acquisition/management agreements											172
2.3.3	Funding applications/approvals											20
2.3.4	Planning applications/approvals											20
2.3.5	Detailed design											20
2.3.6	Tender and commissioning											15
2.3.7	Construction											1,057
2.3.8	Opening and operation											
2.4	**South Lakes Coast**											
2.4.1	Business Plan development											20
2.4.2	Land acquisition/management agreements											1,526
2.4.3	Funding applications/approvals											20
2.4.4	Planning applications/approvals											20
2.4.5	Detailed design											20

Ref	Task	Years										Estimated Costs £000
		1	2	3	4	5	6	7	8	9	10	
2.4.6	Tender and commissioning											15
2.4.7	Construction											685
2.4.8	Opening and operation	Post year 10										
2.5	**North and West Cumbria**											
2.5.1	Business Plan development											15
2.5.2	Land acquisition/management agreements											867
2.5.3	Funding applications/approvals											20
2.5.4	Planning applications/approvals											20
2.5.5	Detailed design											20
2.5.6	Tender and commissioning											15
2.5.7	Construction											1,585
2.5.8	Opening and operation											
2.6	**Gowy Meadows**											
2.6.1	Business Plan											15
2.6.2	Land acquisitions											197
2.6.3	Funding applications/approvals											15
2.6.4	Planning applications/approvals											15
2.6.5	Detailed design											15
2.6.6	Tender and commissioning											1,702
2.6.7	Construction											10
2.6.8	Opening and operation	Post year 10										

The colour-coding used in the above reflects the programme priority which should be given to development of the different wetland networks, based on the assessments undertaken in this report and the Stage 2 Feasibility Studies.

Key to colour-coding:

	= 1st priority
	= 2nd priority
	= 3rd priority
	= 4th priority
	= 5th priority
	= 6th priority

13 Summary of Findings, Conclusions and Recommendations

13.1 Summary of Findings

The existing sites within the wetlands network have significant environmental value, which includes 1295ha of raised bog, 418ha of pristine mire, 229ha of open water and 179ha of reedswamp. The sites contain significant areas of national and local BAP habitats and over 3000ha are protected as SSSIs or SACs. Around 800,000 visitors generate a spend of approximately £6.4m in the region, and support 202 jobs (71 directly on-site and 131 indirectly in the local economy).

Proposals for the wetlands would increase the areas of habitat, including 124ha of rehabilitated bog, 176ha of open water, 119ha of reedswamp and 52ha of marshy grassland. The proposals would also contribute to a number of national and regional BAP target for protected species and would deliver approximately 80% of the regional target for reedbed habitat. Overall the proposed developments would have good environmental outcomes.

The projected increase in visitor numbers of 1.15m could generate an additional spend of £9.2m in the region and 145 new jobs (36 directly on the sites and 109 indirectly in the local economy). A sensitivity analysis was undertaken into the impact of changes in the number of visitors, the introduction of overnight visitors and the average spend of visitors. This concluded that the greatest change to economic impact would happen from changes to overnight visitors and average spend, rather than from pure increases in visitor numbers. For example, if average spend per visitor was £10 rather than the £8 that has been assumed, this would generate an additional £1.4m spend and another 90 jobs.

Overall, the proposed development of the wetland networks scores well against a number of key economic criteria, and in terms of project outputs the support of 145 new jobs is a significant employment outcome. The network would also provide positive impacts against sustainability, ill-health inequality and rural recovery criteria. In addition, the project would provide environment benefits to the region, and would assist in the strengthening of the visitor economy. However, the overall cost of each job created, of £169,000, does not represent good value for money when considering this measure alone.

There are variations across individual networks, but this assessment does however depend on the validity of the numbers of predicted visitors, and the high growth predicted for Mersey Corridor Wigan (553,000 additional visitors) and Gowy Meadows (245,000 more visitors) appear optimistic.

Value for money, in terms of total cost per job created, could be improved by seeking to reduce capital costs, for example by using volunteer labour to construct boardwalks, and by seeking management agreements under the Environmental Stewardship Scheme, rather than land purchase. Our initial results indicate a reduction from £169,000 to £122,000 per job created may be achievable.

Using this measure, North and West Cumbria is the best performing network, with West Lancashire Plain having the lowest outputs when compared to other networks in the study.

Whilst the wetland networks as a whole have the potential to significantly contribute to achievement of regional tourism, a significant omission in the work so far completed is a marketing strategy which identifies how the high growth in visitor numbers will be generated. Additional work to augment or fill the gaps of what has already been completed has been identified and a 5-10 year development programme proposed.

There are a number of ways in which the benefits to the local economy from visitors can be enhanced more generally. This involves capturing a greater share of visitors' spending, through:

- charging for admission and car parking (although the benefits need to be weighed against the impact that they might have on visitor numbers);
- where appropriate, enhancing or establishing a café or shop will help to retain visitor spending in the local area and also to increase visitor spend;
- attracting more overnight visitors with a higher consequent average spend.

Measures could also be aimed at boosting each site's offer to visitors in order to increase numbers, through, for example:

- enhancing the onsite facilities to visitors through hides, interpretation facilities, and visitor centres;
- marketing the sites to schools as educational resources will help to support and grow visitor bases;
- marketing each site in key population centres within 60 minutes drive and cross-marketing with other sites.

At a local level there are also measures that can be introduced to maximise the impact of visitor spend, which will serve to boost the multiplier effect. These include:

- encouraging sites to purchase locally-produced goods and services;
- recruiting workers from the local workforce;
- encouraging local businesses to adapt their offer to wetland visitors. This might include offering accommodation for overnight visitors, catering facilities, etc.

At a wider level there are opportunities to increase visitor numbers through:

- promoting particular aspects of the wetland experience, including recreational, wildlife, educational and health features;
- linking the promotion of the wetlands with other natural environmental assets;
- focusing on attracting overnight visitors through joint marketing. As benefits will tend to accrue at the wider regional level rather than at specific sites, this will have to be done at a sub-regional or regional level.

13.2 Conclusions

The work undertaken during this study has shown that there is a clear potential to develop major tourist and leisure activities, based within 'wild' areas and urban fringes, which correlate with the wetland networks identified. However, to fully achieve the long-term stated vision of this project (for wetlands to deliver significant socio-economic, environmental and image benefits to the region), a number of large new ecologically diverse wetlands would need to be created, in order to provide the same sort of experience and regional image as established environmental tourist destinations, such as North Norfolk and the Suffolk Coast.

The current ten year plans considered during this study are essentially traditional projects (based on the nature reserve model) to add incrementally to current sites of nature conservation importance, and exploit their visitor potential to the full. No new large-scale wetland creation project has been deemed feasible, and there are therefore no large new wetlands being created as part of the first phase (ten years) of the networks, that could have a visitor infrastructure built on in the future.

Studies of the North West for English Nature by Penny Anderson and Jacobs Babtie[22] have been undertaken which aim to identify areas that are topographically, geologically and ecologically suitable for the restoration and creation of wetland habitats. The studies used various datasets and GIS to identify areas outside existing wetlands with wetland potential. This will be useful for conservation bodies to enable them to target additional land purchase/management opportunities and work towards the longer-term vision of extending wetlands across the region and maximising environmental gain.

The consequence is that there is no big step-change in biodiversity emerging at the moment because of regional level constraints, such as funding, complex acquisitions and influencing processes. Other potential ways of achieving the vision could include working with landowners on agri-environment and/or diversification solutions, flood management solutions, or development partnership solutions. The start of these processes are beginning to emerge through the partnerships that are already established in North and West Cumbria, for example, and the working groups which were set up to inform this

[22] 'Developing a Strategic Approach to Wetland Conservation in the Lowlands of the North West of England: a Pilot Study in 3 Natural Areas', Penny Anderson Associates, 2004. 'Pilot Study in Cumbria', Jacobs Babtie, 2005

project. These initiatives and others suggested in the study should be encouraged at a regional level by the partners of the wetland project to take forward this longer term vision in parallel to this ten year project.

The ten year project is still a valid approach that will help build links between nature conservation and economic growth, and pave the way for bigger, more radical steps in the future. These plans will help realise the potential of the current resource of ecologically diverse sites. However it will be difficult to demonstrate major environmental or socio-economic gains for such a big initial investment, unless this project acts as a precursor for much bigger and better things in the future. This project must be seen as a baseline, the foundations of a regional network, which will be implemented in the ten year plans; monitoring and development of a wider more radical partnership will supply the building blocks for the next phase.

There is potential for much greater habitat creation than proposed in this project. This would be possible if the regional project to develop wetlands focuses on wider policy and influencing issues in parallel to the development of sites. Policy and influencing work cannot deliver change unless the current sites show the way forward through innovation in visitor management and monitoring to provide robust data to convince funding bodies. At the same time, a site based approach cannot deliver large scale development of new wetlands because they will always lack credibility in terms of value for money in the ten year timescales likely to be funded.

If the capital cost of creating large new wetlands is taken out of the value for money analysis, many projects to encourage tourism in the region will be feasible. Developing tourism around wetlands is shown to be a valid economic development tool. However, the costs and political difficulties of changing land use on a large scale are enormous and make individual projects unfeasible on the back of economic arguments. At the same time, there are few funding sources available to promote such projects purely on a biodiversity objective. The result is a block to a radical step change in the wetland resource in the North West.

If the region wishes to promote a different image of itself through, amongst other things, wetlands, then the conditions to enable such development will need to be put in place through a partnership approach. Such a partnership would necessarily require a range of rural land organisations and businesses to agree on the benefits of large scale wetland creation. Once wetlands have been created, there are opportunities for economic development on the back of them, such as tourism, diversification, etc.

On the basis of the work that has been undertaken, and looking overall at environmental, economic and image benefits, it is considered that North and West Cumbria, East Morecambe Bay and the Mersey Corridor have the greatest potential for successful projects in the next ten years.

North and West Cumbria has the lowest costs per job created and some of the lowest capital costs, but will not provide a major regional visitor attraction. East Morecambe Bay

has the unique draw of the bittern and has significant opportunities for growth in tourist numbers in association with the other attractions in the area. Mersey Corridor Wigan, whilst proposing significant capital investment and predicting optimistic growth in visitor numbers, displays the best fit with regional regeneration priorities. In addition the associated potential to attract funding is part of a wider economic initiative, development proposals include bringing large new areas into conservation management, and the network is likely to display the highest non-quantifiable benefits.

The South Lakes Coast has the greatest potential for creating a step-change in habitat creation, with the inclusion of proposals for Lyth Valley, but this will take longer to bring forward. West Lancashire Plain, on the other hand, would benefit from further development of a business plan into the proposed capital costs, visitor numbers and income, in order to raise predicted benefits. It is recognised, however, that Martin Mere represents a major existing visitor attraction with great potential for growing visitor numbers and should not be omitted from the longer term plan. Gowy Meadows has great potential but is in the early stages of development, with big questions about funding for a major visitor facility and the projected visitor numbers.

On the basis of the previous analysis, the priority given to each network in relation to the others is indicated.

13.3 Recommendations

1) The Natural Economy Steering Group to set up and support a North West Wetlands Network development group to devise a programme, bring projects forward, provide the regional vision and to be responsible for developing business and marketing plans and strategies. It is important that this umbrella group has representatives from the tourist agencies, as well as environmental organisations, to provide advice and support on visitor marketing.
2) Working Groups to be set up for individual networks to develop more detailed business plans and to further develop project funding, planning and design.
3) Development of a marketing strategy for the networks as a whole and individual networks, to identify how the increases in visitor numbers can be achieved. The increase in visitors projected by the partners do appear in some cases optimistic and there will need to be a reality check of these forecasts.
4) Development of business plans for individual networks, with Mersey Corridor Wigan, East Morecambe Bay and North and West Cumbria to be taken forward in the next ten years. Priority to be given to the Mersey Corridor Wigan as the network with the best chance of success in the shorter term, as it fits well with regional and local strategies for regeneration, has a range of funding options available and is supported by the local authority as well as environmental bodies.
5) Further work is carried out to complete business plans for West Lancashire Plain, South Lakes Coast and Gowy Meadows, to try to improve benefits, before taking forward later in the programme.

6) The sponsors and partners to take every opportunity to influence policies when commenting on regional and local plans and strategies with the aim of making wetlands more of a policy priority.

Section 4

Figures

Environment Agency, English Nature and Northwest Regional Development Agency
North West Wetlands Network
Final Report

Appendices

Appendix 1: Summaries of Stages 1 and 2 Reports

Stage 1 Summary

The vision of the North West Wetlands Network is 'to use and improve the ecological resources of the North West's existing and potential wetlands to realise economic benefits and promote an attractive image of the region'.

The aim of the project is to develop networks of wetlands in the North West from existing wetlands or areas with good potential to form wetlands that will deliver significant socio-economic, environmental and image benefits to the region.

The project is sponsored by the Environment Agency, English Nature and Northwest Regional Development Agency (NWDA) who form a Steering Group, and is supported by partner organisations from North West wildlife groups – RSPB, Cheshire, Lancashire and Cumbrian Wildlife Trusts, the Wildfowl and Wetlands Trust and Groundwork Wigan.

Babtie Brown and Root was commissioned to carry out the study and is supported by Ecotec. An earlier study, the 'Northern England Lowland Wetland Project' (NELWP) [23], identified existing and potential wetlands in the North West, and following discussions with the Steering Group, 77 of these were chosen to form a 'long list' of possible sites for this project (refer to Figure 1and Appendix 1). Site data was gathered from the partner organisations, and following an initial analysis of ecology, socio-economic and technical issues, six core areas or 'networks' were identified – North and West Cumbria, Cumbrian Lakes and Rivers, South Lakes Coast, East Morecambe Bay, West Lancashire Plain and the Mersey Corridor. Please refer to Figure 2.

An ecological vision for each network was defined, which was based on the North West Biodiversity Action Plan targets. In addition to ecological analysis, a socio-economic study was undertaken to consider employment, earnings, deprivation and tourism, and an assessment made of the extent to which national, regional and sub-regional strategies support the development of the networks. A comparator analysis was undertaken to consider the experiences and learn lessons from established UK wetland area visitor attractions, and a review made of potential funding sources which could support the development of the wetland network.

The principle of the development of networks of wetlands was found to closely align with the North West's priorities, as outlined in such key documents as the Regional Planning Guidance and the Regional Economic Strategy, in addition to other plans that influence these strategies, such as the Action for Sustainability, and Biodiversity Action Plans and tourism strategies. These documents show that:

[23] Northern England Lowland Wetland Project. RSPB/Environment Agency/English Nature. June 2000

- The networks demonstrate good overall fit with the region's goal of sustainable economic growth, whilst conserving the region's biodiversity. In particular, the rural focus of many of the proposed networks offers an opportunity to diversify the rural economy and produce sustainable opportunities for rural communities.
- The networks are also closely aligned with the region's intention to develop the potential of the tourism industry. Tourism has the potential to be a major economic driver, especially in rural communities, and the wetland areas present an opportunity to this end.
- Closely linked to the tourism sector is the beneficial effect of the networks on the region's environmental and natural assets. The protection and improvement of the region's flora and fauna matches closely with the aims and objectives of Biodiversity Action Plans and strategies, whilst also serving to enhance the region's image. An additional benefit comes from the location of two of the networks near to urban areas, which will greatly increase the number of people with quick access to wetlands.

The good overall strategic fit of the wetlands should ensure that they receive support from key stakeholders in the region. Additionally, this fit enhances their chances of accessing funding streams for both the capital and the operational phases of network development.

The results of the comparator analysis of existing wetland sites has provided the following lessons:

- there is scope to create wetlands which produce ecological benefits and have a positive effect on property values;
- wetlands of international importance can be 'created';
- visitors are attracted by captive wildfowl and wet weather facilities;
- proximity to large populations is a key to success in attracting day visitors and providing financial viability;
- there is a limit on the number of wetland sites which could be developed as major attractions i.e. attracting over 100,000 visitors a year;
- creating a new site in a region with an existing site may simply displace visitors from one site to another.

There are a number of European, National Lottery and Regional funds potentially available for wetland projects (refer to Appendix 3), and a number of funding sources have been found to correspond well with the networks. Further work will be needed to identify funds that offer the best potential.

Baseline data on ecological, socio-economic and technical factors were assessed for each of the 77 sites using a matrix system (see Table 2.1). A shortlisting analysis was undertaken to identify those sites with the highest potential to be 'key sites'. These key sites would form the focus for visitors (with car parks, visitor centre, toilets, café, etc.), within a wider network of other 'lower key', or 'network', sites with fewer visitor facilities. The principle of the networks would be that visitors would be first attracted to the key or 'honeypot' site and from there would be directed to the other network sites.

The results of the Stage 1 study are:

1. Two key sites that could form the focus for visitor facilities, within wider networks, have been identified at:
    - Leighton Moss (East Morecambe Bay)
    - Martin Mere (West Lancashire Plain)

2. Other 'possible' key sites, which could form the focus of wider networks, have also been identified in:
    - North and West Cumbria (Glasson Moss, Drumburgh Moss and Wedholme Flow)
    - South Lakes Coast (Lyth Valley, Roudsea Moss, Ellerside Moss, Meathop Moss and Foulshaw Moss)
    - Mersey Corridor (Heybrook Corridor and Wigan Flashes)

There is no 'one size fits all' model for the development of the networks. For example, within the Cumbria Lakes and Rivers network no Key Site is recommended because, although there are potentially significant ecological gains to be made through wetland restoration and creation, it is unlikely that the socio-economic gain through increases in visitor numbers would be significant enough to justify this network being put forward, compared with the other networks proposed in this project. Whereas in the East Morecambe Bay and West Lancashire networks there are already key sites at Leighton Moss and Martin Mere, each of which currently attract over 95,000 visitors annually and have potential for further growth.

In the North and West Cumbria and South Lakeland Coast networks, whilst Glasson Moss and Lyth Valley have been identified as potential key sites, there are other options which if proved more deliverable could be brought forward ahead of these potential sites. Without further work it is not possible to be more specific about key sites in these networks.

Within the Mersey Corridor network the proposed model could be a series of sites, each associated with particular, diverse and separate, communities between Liverpool and Manchester, with no key site. However, we believe there are two sites which may represent the best opportunity of success at the current time: Heybrook Corridor and Wigan Flashes. One of these sites could act as an exemplar, which, if successful, could act as a catalyst for others to develop over time.

In Stage 2 of the project feasibility studies are recommended for the two key sites of Leighton Moss and Martin Mere, with at this stage pre-feasibility studies of the North and West Cumbria, South Lakes Coast and Mersey Corridor networks, to identify suitable key sites. However, studies of existing wetland visitor sites has shown that economic gain is generally only achievable with the attraction of upwards of 100,000 visitors annually, and it is thought unlikely that a wetland attraction of this scale can be replicated more than once in the region. The feasibility studies would therefore need to consider this scenario.

Stage 2 Summaries

North and West Cumbria

The aim of the North West Wetlands Network project is "*to produce a programme of wetland development projects that will deliver significant socio-economic, environmental and image benefits to the region*". The project is sponsored by the Environment Agency (EA), English Nature (EN) and Northwest Regional Development Agency (NWDA), and is supported by the Royal Society for the Protection of Birds (RSPB), Cheshire, Lancashire and Cumbria Wildlife Trusts, the Wildfowl and Wetlands Trust (WWT) and Groundwork Wigan.

This document comprises feasibility studies for the **North and West Cumbria** wetland network. The purpose of the studies is to develop a vision for the network and to assess how this could be translated into proposals for the development of the network over the next 10 years. It considers the outline capital and revenue costs, and measures these against potential socio-economic and environmental benefits. It also identifies potential funding sources and risks and uncertainties.

Representatives from the RSPB, English Nature, Cumbria Wildlife Trust, Environment Agency, Rural Development Service, Rural Regeneration Cumbria, Cumbria County Council and the Solway Coast AONB, as site promoters and supporters, formed a Technical Group which provided an input to the study.

The network area is situated in the lowland area between the Solway Firth and the Lake District National Park, and is within the Solway Coast AONB. It is collectively known as the South Solway Mosses Special Area of Conservation (SAC). South Solway Mosses comprises four distinct areas of peatland, at Bowness Common, Wedholme Flow, Drumburgh Moss and Glasson Moss . Extending to some 1,952 ha, this complex is the largest relatively intact area of lowland raised bog in England. Within this unique network of raised mires Bowness Common is proposed as the key site with the others forming network sites.

Bowness Common currently attracts approximately 8,000 visitors a year. The promoters, RSPB and English Nature, have plans to improve the visitor facilities through the conversion of existing farm buildings and to purchase additional land. With new hides, improved infrastructure and interpretive facilities, within ten years a further 12,000 visitors are predicted. These are projected to generate an additional £96,000 in site income and other local and regional expenditure, and the equivalent of a net increase in eight full time jobs in the local area. The capital costs of this work have been estimated at £863,000, with £26,000 in annual running costs, which includes for a part time warden.

The growth in visitor numbers, at just over 18.5% a year for ten years, is an ambitious target. This area of Cumbria is also relatively isolated and not a major tourist area, but as

it currently has a low number of visitors and low penetration of its catchment it is considered achievable. The proposed project involves bringing degraded bog surrounding the existing site into favourable management. This will contribute 0.46% towards the corresponding National BAP target.

Funding may be available for eligible expenditure from the Tourism strand of Objective 2 and HLF Heritage Grants for visitor centre improvements. Funding from Rural Regeneration Cumbria may also be forthcoming. Funding for land purchase could also be available from various national and regional sources. In addition, funding for conservation improvement works may be available from the Defra through the grants available for implementing Water Level Management Plans.

The greatest risk to the project is the failure to win funding from the identified sources and of obtaining match funding. In addition the increase in visitor numbers, whilst feasible in terms of potential market penetration, will depend upon the successful marketing of the new image of the site to people from outside the local area.

Wedholme Flow is a site which is undergoing long term peat and wetland restoration works and contains the best example of an original raised mire in the Solway area. **Drumburgh Moss** is less affected by artificial drainage or peat cutting than the other Solway Mosses and **Glasson Moss** is a site which has already undergone significant peat and wetland restoration works and approximately one third is still intact mire.

These network sites have similar development plans, which involve environmental enhancements of peatland rehabilitation, increasing water levels and seeking opportunities to purchase additional surrounding land which is currently not in favourable ownership or management. The proposed projects at the former two sites will contribute 0.54 and 0.2% respectively towards National BAP targets, whilst the latter project will contribute towards a Local BAP target.

Over the next ten years the respective promoters, owners and managers, English Nature, RSPB and Cumbria Wildlife Trust, wish to improve visitor facilities, including parking provision, site access and interpretation, and to attract around 8,000 additional visitors per year to each site.

Drumburgh Moss is the only network site with an existing visitor base, although this is only around 100 people per year. At Wedholme Flow and Glasson Moss no existing visitors are recorded. The growth rate in visitor numbers required to achieve the above target is considered ambitious, requiring an increase in the degree of market penetration, but it is nevertheless considered achievable.

The costs of capital improvements to these network sites vary from estimates of £301,000 at Wedholme Flow to £550,000 at Drumburgh Moss. Similar operational costs of around £15,000 per year will be required at all the sites and the visitor income is expected to

generate a total of 12 full time jobs in the area, with additional site and other local/regional expenditure estimated at around £64,000 per site per year.

Funding may be available from similar sources as referred to above for Bowness Common. This includes support for the improvements to accessibility, interpretation and viewing facilities which may attract funding from a 'Your Heritage Grant', and access to English Nature grants for acquisition and ecological improvements are likely to be available to Cumbria Wildlife Trust for Drumburgh Moss. However where English Nature is the promoter their own grant schemes are assumed not to apply. Defra funding for conservation work to implement Water Level Management Plans may also be available. Funding is a risk, as is the availability of land for purchase or management at favourable rates.

The proposals for the North and West Cumbria network are mainly focused on improving the ecological status of existing mires and extending the area under conservation management, which is appropriate given the importance of the Solway mosses. Environmental benefits are therefore likely to be high from the investment proposed but the promoters are only looking for low key visitor and small scale infrastructure improvements, with an increase of around 36,000 visitors across the whole network. The socio-economic benefits will therefore be correspondingly modest.

South Lakes Coast

The aim of the North West Wetlands Network project is "*to produce a programme of wetland development projects that will deliver significant socio-economic, environmental and image benefits to the region*". The project is sponsored by the Environment Agency (EA), English Nature (EN) and Northwest Regional Development Agency (NWDA), and is supported by the Royal Society for the Protection of Birds (RSPB), Cheshire, Lancashire and Cumbria Wildlife Trusts, the Wildfowl and Wetlands Trust (WWT) and Groundwork Wigan.

This document comprises feasibility studies for the **South Lakes Coast** wetland network. The purpose of the studies is to develop a vision for the network and to assess how this could be translated into proposals for the development of the network over the next 10 years. It considers the outline capital and revenue costs, and measures these against potential socio-economic and environmental benefits. It also identifies potential funding sources and risks and uncertainties.

Representatives from the RSPB, English Nature, Cumbria Wildlife Trust, Environment Agency, Rural Development Service, Rural Regeneration Cumbria and the Lake District National Park Authority, as site promoters and supporters, formed a Technical Group which provided an input to the study.

The South Lakes Coast network is situated in the coastal strip between the Lake District National Park and Morecambe Bay. It is characterised by parallel valleys emanating from the uplands of the National Park ending in estuaries and peninsulas with associated wetland habitats of raised mires and grazing marshes, with some fens and swamps. The area has many designated sites, including a number of SAC/SSSI lowland raised bog sites, such as Foulshaw Moss, Meathop Moss, and Roudsea and Ellerside Mosses. These sites represent the most important moss sites in Southern Cumbria.

Foulshaw Moss currently attracts approximately 2,000 visitors a year. The promoters, Cumbria Wildlife Trust (CuWT), have plans to create buffer areas of open water adjacent to the moss, on land already owned and through acquisition. They also plan long-term to develop large-scale visitor facilities, although this will probably not be within the ten year timescale envisaged by this project. Within ten years they hope to attract around 18,000 additional visitors. These are projected to generate an additional £144,000 in local and regional expenditure, and the equivalent of a net increase in four full time jobs in the local area. The capital costs of this work have been estimated at £453,000, with £23,000 in annual running costs, which includes for a part time warden.

The growth in visitor numbers, at just over 26% a year for ten years, is a somewhat ambitious target. However, the network currently has a low visitor number base, and a low penetration of its potential catchment, so this target is considered achievable.

Funding may be available for eligible expenditure from HLF Heritage Grants for visitor centre improvements and land acquisition or Landfill Tax Credits. Funding from Rural Regeneration Cumbria may also be forthcoming. The proposals may be also be eligible for English Nature's Reserves Enhancement Scheme or Land Purchase Grants, and from grants from Defra to implement Water Level Management Plans. Since the beginning of this study, it is understood that CuWT have received almost £0.5m in funding for site works from GrantScape, a new body set up to administer grants under the landfill tax credit scheme. This money is sufficient to implement the proposals suggested by this report.

The greatest risk to the project is the failure to acquire additional land or secure funding. This may lead to a lack of hydrological control. Reform of the CAP may have impacts on land price and/or ability to manage habitats with stock. There could also be a failure to attract the visitor numbers envisaged, and resistance to planning permission for large-scale facilities.

Meathop Moss, although having been subject to peat-cutting, fire damage and drainage, remains one of the best examples of raised bog in South Cumbria. **Roudsea and Ellerside Mosses** have been modified by drainage and peat working, but are relatively intact with considerable potential for full restoration to active raised bog, and **Lyth Valley** is subject to the development of long-term management plans and land acquisition to create new areas of wetland.

These network sites have distinct wetland enhancement and creation plans, but similar visitor facilities development plans. The proposed projects at the latter two sites would contribute 0.57% to a National BAP target for lowland raised bog, and 5% to a National BAP target for reedbed creation, respectively. Over the next ten years the respective promoters, owners and managers also seek to improve visitor facilities, including parking provision, site access and interpretation.

The costs of capital improvements to these network sites vary from estimates of £324,000 at Meathop Moss to £900,000 at Lyth Valley. Operational costs range from £15,000 at Meathop Moss to around £34,000 at Lyth Valley. These capital works are expected to lead to the creation of 26 jobs from additional site income and other local expenditure, estimated to be between £64,000 and £400,000 per year.

Funding for the improvements to accessibility, interpretation and viewing facilities may be available from Heritage Grants, Landfill Tax Credits, and access to English Nature grants for acquisition and ecological improvements are likely to be available to Meathop Moss. However as English Nature is the promoter for Roudsea and Ellerside Mosses their own grant schemes are assumed not to apply. Funding is a risk, as is the availability of land for purchase or management at favourable rates.

The proposals for the South Lakes Coast network are mainly focused on improving the ecological status of existing mires and extending the area under conservation management. Environmental benefits are therefore likely to be high from the investment

proposed but the promoters are only looking for low-key visitor and small scale infrastructure improvements, with an increase of around 90,000 visitors across the whole network. The socio-economic benefits will therefore be correspondingly modest.

East Morecambe Bay

The aim of the North West Wetlands Network project is "*to produce a programme of wetland development projects that will deliver significant socio-economic, environmental and image benefits to the region*". The project is sponsored by the Environment Agency (EA), English Nature (EN) and Northwest Regional Development Agency (NWDA), and is supported by the Royal Society for the Protection of Birds (RSPB), Cheshire, Lancashire and Cumbria Wildlife Trusts, the Wildfowl and Wetlands Trust (WWT) and Groundwork Wigan.

This document comprises feasibility studies for the **East Morecambe Bay** wetland network.

The purpose of the studies is to develop a vision for the network and to assess how this could be translated into proposals for the development of the network over the next ten years. It considers the outline capital and revenue costs, and measures these against potential socio-economic and environmental benefits. It also identifies potential funding sources and risks and uncertainties.

A Technical Group was created, comprising representatives from the RSPB, Environment Agency, English Nature, the Wildlife Trust for Lancashire, Manchester and North Merseyside (LWT), Silverdale and Arnside AONB, Lancashire County Council, Lancashire and Blackpool Tourist Board, Groundwork and Lancashire West Partnership. These site promoters and supporters provided information which has been included in this study.

The area has SPA, SAC, RAMSAR and SSSI designated sites at Morecambe Bay and Leighton Moss, as well as a number of other designations for limestone habitats, woodlands, etc. The network lies within the Arnside and Silverdale AONB. The wetlands of the network are of national importance for reedbeds and their associated species as well as for standing waters, grazing marshes and wet woodlands.

The wetland network comprises Leighton and Silverdale Mosses. There is a substantial visitor attraction and infrastructure at Leighton Moss, which is of national importance for bittern, and forms a visitor hub for other coastal bird sites and other attractions and facilities in the AONB. Silverdale Moss is adjacent to Leighton Moss and in time could form a key staging post and an alternative or additional habitat for bittern. The RSPB own and manage both Leighton and Silverdale Mosses and are also promoters for both sites.

Leighton Moss currently attracts approximately 100,000 paying visitors annually but figures have remained static over the last few years and depend very much on the appearance of the bittern for which the site is best known. The RSPB wish to attract a further 100,000 visitors over the next ten years through extending the existing visitor

centre, reconfiguring car parking, providing a new 'tower' hide and improving existing hides, updating and extending existing interpretation facilities, improving non-car derived visitor access and acquisition of additional land.

The capital costs of these proposals have been estimated at £1.13m with annual operational costs of £270,000, although no extra staff will be required. This would generate an additional £824,000 site income per year and six additional full time jobs indirectly to the local economy. This income will cover annual running costs.

If additional land is acquired this will increase control over water levels and habitat size and lead to increased numbers and diversity of wildlife. The proposed project constitutes the creation of 20ha of new reedbed, which will contribute 1.67% of the National BAP target and 67% of the Local BAP target. Through an improved tourism offer (such as access, interpretation and visitor facilities improvements), the site may attract funding from the Lancashire Rural Tourism Initiative (LRTi), Heritage Grants, NWDA Single Pot, English Nature and EU LIFE.

In terms of non-quantifiable benefits the project is likely to have high amenity/recreation and educational benefits. The significant risks and uncertainties to the project, apart from the failure to generate sufficient funding, is the risk of not obtaining planning permission because of the problems of poor highway access to the site, and if the conservation value of the site continues to decline which could threaten the bittern population.

Silverdale Moss was acquired by RSPB as a satellite to Leighton Moss and to increase habitat for the bittern, and there is no desire to develop it as a significant visitor attraction. The proposals for the site are to continue with the creation of reedbeds from farmland, which will contribute 1.17% of the National and 47% of the Local BAP targets, the purchase of additional land to increase the area of wetland habitat, and to increase control over water levels. Improvements to the pathway link between Leighton and Silverdale Mosses are proposed, with some improved signing.

Capital costs are estimated at £192,000, with £27,000 running costs. Approximately 5,000 visitors are likely to visit which could generate an estimated £40,000 in mainly non-direct site-related income. This will lead to the creation of one on-site job and two jobs in the local economy. Site income will not be sufficient to cover annual running costs. Funding for land purchase and conservation management may be available from HLF schemes but other match funding from charitable trusts and the RSPB's own reserves will be required.

Considered on its own Silverdale Moss is not considered feasible in socio-economic terms. However it is a quieter area that bird enthusiasts will be attracted to after the busier Leighton Moss, and therefore will operate well as a network site and will have environmental benefits through increased numbers and diversity of wildlife and more area of habitat under appropriate management.

A market analysis of the visitor numbers the promoters are seeking suggests that the East Morecambe Bay network would require visitor numbers to expand by 8% per annum over the next 10 years to achieve the projected target. This is considered realistic due to past growth rates of the visitor economy, and also because of the low penetration the network has within its population catchment.

An East Morecambe Bay network, comprising Leighton and Silverdale Mosses, could generate additional regional spending of approximately £860,000 and nine full time jobs, and are likely to be financially self-supporting. Capital spending of £1.3m will be required and whilst funding sources for a proportion of the sum could be available, the match funding would need to be generated by RSPB. The network is likely to generate high amenity/recreation and educational benefits.

The East Morecambe Bay network should not be seen in isolation, as it is central to the development of tourism within the Arnside and Silverdale AONB, and as such should be seen as being part of a wider economic initiative.

West Lancashire Plain

The aim of the North West Wetlands Network project is "*to produce a programme of wetland development projects that will deliver significant socio-economic, environmental and image benefits to the region*". The project is sponsored by the Environment Agency (EA), English Nature (EN) and Northwest Regional Development Agency (NWDA), and is supported by the Royal Society for the Protection of Birds (RSPB), Cheshire, Lancashire and Cumbria Wildlife Trusts, the Wildfowl and Wetlands Trust (WWT) and Groundwork Wigan.

This document comprises feasibility studies for the proposed **West Lancashire Plain** wetland network. The purpose of the studies is to develop a vision for the network and to assess how this could be translated into proposals for the development of the network over the next ten years. Feasibility is assessed in terms of technical deliverability, the capital and operational costs of proposals, and socio-economic benefits such as site income and jobs created, together with additional indirect benefits to the region. The analysis considers outline capital and revenue costs, comparing these to potential socio-economic and environmental benefits. It also identifies potential funding sources and risks and uncertainties.

The proposals and associated costs and benefits which have been considered are generalised and will require further work to enable development into projects, which could be submitted to funding bodies. They are, however, considered comprehensive enough to allow comparison with the other studies across the North West on a similar basis. This comparison will form the basis of the next stage of the project.

A Technical Group was created, comprising representatives from the Wildfowl and Wetlands Trust (WWT), RSPB, the Wildlife Trust for Lancashire, Manchester and North Merseyside (LWT), Groundwork, Environment Agency, Lancashire County Council and Lancashire and Blackpool Tourist Board. These site promoters and supporters provided input to the study.

The sites considered within the network are centred around Martin Mere, which is a key component of a network of three existing wetland sites – the others being Mere Sands Wood and Nucks Wood – which are situated within the boundary of a formerly extensive lake and lowland raised mire. In addition Low Meadows and Croston and Mawdesley Mosses lie just outside the eastern boundary of the former extensive raised mire, adjacent to the River Douglas.

The ultimate **vision** for this area is the restoration of the largest mere in England, and the recreation of the ancient Lancashire landscape. Using the strong brand of Martin Mere and the extension of the wetland area the network could become the 'Norfolk Coast of Lancashire' and a focus for ornithologists, particularly if bittern can be attracted with development of larger areas of reedbeds. The vision also includes the linking of the

wetlands with the surrounding 'tamed countryside' of drainage ditches and the arable farmed landscape, both physically by pathways, and as a strong interpretive theme.

The concept of a West Lancashire wetlands network fits very well with a number of sub-regional and local policies and plans and specific mention is made of Martin Mere in the West Lancashire Community Strategy. All the sites are within the proposed Ribble Regional Park which, if confirmed, would provide further strategic policy support for the wetland network.

Martin Mere is owned and managed by the Wildfowl and Wetlands Trust, and the site currently attracts 150,000 to 160,000 visitors per year. WWT would like to increase this to around 250,000. To achieve this they believe that it is necessary to revamp the existing site. The main proposals are to acquire more land to extend the wetland, to provide new hides and interpretation, and to improve visitor facilities in the existing centre.

The proposals have been costed at £7.6m for the capital works and £691,000 operational costs per annum. Benefits include: the creation of an additional 36ha of wetland (contributing towards National and Local BAP targets for reedbed creation and National targets for rehabilitation of grazing marsh); enhancement of conditions for BAP species over the existing site; an additional 90,000 visitors, generating an additional £720,000 site income per annum; eight new FTE jobs; and amenity/recreation and educational benefits.

In terms of potential funding sources a maximum of around £100,000 may be available from the Lancashire Rural Tourism Initiative and the Lancashire Rural Recovery Action Plan, with other possibilities being the Heritage Lottery Fund and the EU Life Programme as it is a NATURA 2000 site. If this level of capital investment is made then the project will generate a visitor spend which is likely to cover the annual running costs.

The biggest risk to the project would be the failure to generate the funding necessary for the significant capital investment, together with smaller planning and technical risks. If WWT can generate the substantial capital investment from a mix of funding streams, as well as WWT fundraising for match funding, the project is likely to be feasible and should be taken forward as the **key site** in the West Lancashire Plain network.

Mere Sand Wood, owned and managed by the LWT and currently attracts approximately 25,000 visitors annually. The LWT would like to expand visitor facilities with the addition of a tea room/café and shop to encourage more visitors and to generate income.

It is envisaged that these improvements will generate a further 25,000 visitors. The study has shown that if this is achieved it will attract £200,000 in extra site, local and regional spending and generate seven additional FTE jobs. Capital costs required are estimated at £110,000, with £140,000 operational costs per annum. Funding may be available through a Heritage Lottery Fund grant, which would require a minimum of 10% match

funding from the Trust, and small-scale funding from English Nature may also be accessible for ecological improvements.

As no land acquisition is envisaged, additional environmental benefit is low and the amenity/recreation and health benefits are moderate.

The biggest risk to the project is the failure to generate sufficient capital funds, but as the level of investment required is relatively low this risk is only moderate. Being close to Martin Mere is an advantage in terms of the wetland network and the consequent potential of attracting visitors from the key site. However, Mere Sands Wood needs to be sufficiently different in terms of visitor experience from Martin Mere if visitors are to be attracted. It should be taken forward as a network site.

Nucks Wood is currently used informally by local anglers, and the number of other visitors to the site is low. The owners, Lancashire County Council, are in the process of selling the site, with restrictions which aim to secure its nature conservation value. The feasibility of developing low key visitor facilities, including car parking, boardwalks, hides and signs has been assessed.

With a capital spend of approximately £204,000 this is likely to attract 10,000 extra visitors, who would be expected to generate an additional £80,000 in annual site and local and regional economy income, and the equivalent of one new full time job. The cost of running the facility should be covered by the income generated. Because of the small number of visitors the non-quantifiable economic impacts are low, as are the environmental benefits, as no new habitats are proposed.

Funding may be available through the HLF under the Local Heritage Initiative for the site facilities, and from the Countryside Stewardship Scheme for habitat management.

The greatest risk to the project is unsympathetic ownership, as the site is being disposed of by LCC on the open market. Any restrictive covenants on the use of the site are usually difficult to enforce.

With the site likely to be sold in the near future, and ownership therefore unknown, it is recommended not to take Nuck's Wood forward at the present time. If a sympathetic, not-for-profit, owner takes over the site then discussions should take place to establish the feasibility of Nuck's Wood being part of the wetland network.

Low Meadows and Croston and Mawdesley Mosses have the potential to provide significant environmental benefits but, due to the lack of a sympathetic owner, there is no feasible scheme for the sites at present.

A market analysis of the visitor numbers the promoters are seeking suggests that the West Lancashire Plain would require visitor numbers to expand by 5.3% per annum over the next 10 years to achieve the projected target. Given the trend in the visitor economy

over recent years, this is considered perfectly feasible. This is particularly the case when considering that the network currently has a low penetration of its market place.

A West Lancashire Plain network comprising Martin Mere, Mere Sands Wood and potentially Nuck's Wood (depending upon ownership) could generate additional site, local and regional spending of £1m and 16 full time jobs, and is likely to be self supporting. However significant capital spending of approximately £8m will be required, and whilst funding sources for a proportion of this sum could be available the match funding will need to be generated from within the promoting organisations. The network will provide some minor environmental benefit through increased areas of habitat and better management together with amenity/recreation and educational benefits.

Mersey Corridor Wigan

The aim of the North West Wetlands Network project is "*to produce a programme of wetland development projects that will deliver significant socio-economic, environmental and image benefits to the region*". The project is sponsored by the Environment Agency (EA), English Nature (EN) and Northwest Regional Development Agency (NWDA), and is supported by the Royal Society for the Protection of Birds (RSPB), Cheshire, Lancashire and Cumbria Wildlife Trusts, the Wildfowl and Wetlands Trust (WWT) and Groundwork Wigan.

This document comprises feasibility studies for the **Mersey Corridor** wetland network. The purpose of the studies is to develop a vision for the network and to assess how this could be translated into proposals for the development of the network over the next ten years. Feasibility is assessed in terms of technical deliverability, the capital and operational costs of proposals, and socio-economic benefits such as site income and jobs created, together with additional indirect benefits to the region. The analysis considers outline capital and revenue costs, comparing these to potential socio-economic and environmental benefits. It also identifies potential funding sources and risks and uncertainties.

The proposals and associated costs and benefits which have been considered are generalised and will require further work to enable development into projects, which could be submitted to funding bodies. They are, however, considered comprehensive enough to allow comparison with the other studies across the North West on a similar basis. This comparison will form the basis of the next stage of the project.

A Technical Group was created, comprising representatives from the Wildlife Trust for Lancashire Manchester and North Merseyside (LWT), Wigan Metropolitan Borough Council (WMBC), Wigan Leisure and Culture Trust (LCT) and Groundwork Wigan. These site promoters and supporters provided information which has been included in this study.

During Stage 1 of the project it became clear that the model of a wetland network comprising a 'key' site as the main visitor attraction, and a number of adjacent 'network' sites, would not be appropriate to the Mersey Corridor. The area displays great differences in habitat types, ranging from lowland raised bogs between Liverpool and Skelmersdale and around South West Manchester, flashes (habitats formed through mining subsidence) near to Wigan, and meres and associated wetlands in North Cheshire and South Lancashire.

As well as displaying differences in ecological terms the network includes areas with significant socio-economic differences, from the relatively deprived wards of Wigan to the more affluent towns of Cheshire, and covers a large geographic area. The previous studies also identified the sites in the Wigan area as having the best potential for wetland

development in terms of socio-economic benefit and environmental gain. Following consultation with the Technical Group the strategy adopted in the Mersey Corridor is of two sites, the Wigan Flashes and Pennington Flash, set within the Greenheart Regional Park, which would both be subject to development as wetland visitor attractions.

Wigan Flashes and Pennington Flash can be seen as Wigan's 'green lung', and will provide linked and complementary attractions set within the framework of the Greenheart Regional Park, with its wider range of environmental and recreational facilities. With the high quality of the existing wetland and the associated wildlife, and the opportunity for large new areas of new wetland, the network can offer viable alternatives to better known sites in the North West, with the added attraction of an interesting industrial heritage and the capacity to enhance the negative, run-down image of the area.

The redevelopment of visitor facilities and extension of wetlands at Wigan and Pennington Flashes aligns well with aims to increase environmental tourism mentioned in the Wigan UDP and Wigan's Heritage Strategy, and Wigan Flashes is specifically referred to in both documents as an example of good practice.

Wigan Flashes, with a current area of approximately 240 ha, is mostly under the ownership of WMBC. Conservation management of the site has been undertaken by LWT on behalf of WMBC for the past six years. It is assumed that WMBC will take the lead in the proposal, with the LCT taking over management of any facility. The Flashes contain a Site of Special Scientific Interest (SSSI) and seven Sites of Biological Importance. They are known to support over 200 species of bird, a wide range of botanical interest, including five species of orchid, and extensive and important reedbed communities, which support 15 species of dragonfly.

The site currently attracts approximately 97,000 visitors, despite there being no formal car parking provision and a relative lack of visitor facilities. Most access the site on foot, with provision for vehicular access being poor. The Leeds to Liverpool canal and towpath, which passes through this site and links to Pennington Flash and beyond, provides a natural movement corridor.

The key aims for the site are to extend the area of land in wetland or related management, and to develop new visitor facilities. Key to this is the construction of a new, moderately-sized visitor centre. The proposals have been costed at £3.75m for the capital works and £192,000 operational costs per annum.

Benefits include the creation of an additional 100ha of wetland, which includes 20ha of reedbed (1.67% of the National BAP target), and enhancement of conditions for BAP species; an additional 150,000 visitors per annum, generating £1.2m site and local/regional income; 16 new FTE jobs; high health, amenity/recreation and educational benefits. In terms of potential funding this may be available from NWDA's single pot, Objective 2 Tourism strand, HLF and Big Lottery funds.

The study shows that if this level of investment is made then the project should generate a visitor spend which will cover the annual running costs.

The greatest risk to the project is the failure to win funding from the identified sources and of obtaining match funding, which will primarily need to come from WMBC. In addition the increase in visitor numbers, whilst feasible in terms of potential market penetration, will depend upon the successful marketing of the new image of the site to people from outside the local area. The proximity of the site to Pennington Flash with similar facilities also means there is a danger of competing for the same visitors, and there will be a need to ensure that both sites have distinct and different offerings. There is also the issue of the forging of a strong partnership between WMBC, LWT and Groundwork Wigan which will be essential to driving the project forward.

The aims and objectives for **Pennington Flash** are closely associated with those of Wigan Flashes. Ultimately, this is to link the sites through land acquisitions to create a continuous corridor, along the Leeds to Liverpool canal, creating a mosaic of wetland habitats.

Pennington Flash is a 70ha lake set within a 200ha country park with a mosaic of open water, reed beds, scrub and woodland, which provides habitats for a wide array of wildlife; over 230 species of birds, including local and national rarities, 20 species of butterfly and 16 species of dragonfly have all been recorded in recent years.

In terms of the site requirements, the site owners and managers recognise that although the site is already very popular, with an estimated visiting audience of approximately 400,000 people a year, the facilities are considered inadequate for serving the Country Park. To this end there are advanced plans on the part of the management to redevelop the Park information point into a full-scale visitor centre, capable of accommodating the current number of visitors (also incorporating golf facilities).

Infrastructure across the rest of the site also requires upgrading, with the aim of creating a similar scale of facilities and experience to Martin Mere. Capital costs have been estimated at £3.73m, with £290,000 annual operating costs. The promoters and managers are looking to increase visitor numbers by 400,000 per year, resulting in an additional spend of £3.2m on-site and locally/regionally. This is likely to cover the operational costs.

The proposals will lead to the generation of 32 FTE jobs, as well as providing high amenity, recreation and health benefits. The potential incorporation of the adjacent golf course into the wetland site will lead to environmental gain; the proposed creation of 5ha of reedbed will contribute 0.42% towards the National BAP target.

The greatest risk to the project is the failure to win funding from the identified sources and of obtaining match funding, which will primarily need to come from WMBC. In addition the final proposals for the adjacent Bickershaw regeneration scheme could have a

significant effect on Pennington Flash. For example if a new golf course is not created then it is unlikely that the Pennington course will be converted into wetland and the environmental benefits not realised.

The proximity of the site to Wigan Flashes, with similar proposed facilities, also means there is a danger of competing for the same visitors and there will be a need to ensure that both sites have distinct and different offerings. It is essential that both sites are considered together as complimentary facilities, and with the involvement of the same organisations – WMBC, LCT and LWT – this should be possible.

A market analysis of the number of visitors the promoters are seeking to attract suggests that the Mersey Corridor would require current levels to expand by 8% per annum over the next ten years to achieve the projected target. It currently displays a high penetration of its two hour drive market, and the proposals are considered feasible.

A Mersey Corridor network, comprising the Wigan Flashes and Pennington Flash, could generate additional site, local and regional spending of £4.4m and lead to the creation of 48 full-time jobs, and is likely to be financially self supporting. However significant capital spending of approximately £7.5m will be required, and whilst funding sources for a proportion of this sum could be available, the match funding will need to be generated from within the promoting organisations.

The network will provide significant environmental benefits if additional land can be acquired for incorporation into the projects, and there is the potential for high amenity/recreation, educational and health benefits.

It is considered that the chances of attracting funding would be greatly enhanced if the two projects are developed as a single proposal, with care taken to ensure that the sites are complimentary developments. The success of the proposals depends on the creation of a strong working partnership between WMBC, LWT, LCT and Groundwork Wigan, with a strict focus on the objectives of the combined project rather than individual goals.

Gowy Meadows

The aim of the North West Wetlands Network project is "*to produce a programme of wetland development projects that will deliver significant socio-economic, environmental and image benefits to the region*". The project is sponsored by the Environment Agency (EA), English Nature (EN) and Northwest Regional Development Agency (NWDA), and is supported by the Royal Society for the Protection of Birds (RSPB), Cheshire, Lancashire and Cumbria Wildlife Trusts, the Wildfowl and Wetlands Trust (WWT) and Groundwork Wigan.

This document comprises a feasibility study for the **Gowy Meadows** wetland site.

The purpose of the study is to develop a vision for the site and to assess how this could be translated into proposals for its development over the next ten years. It considers the outline capital and revenue costs, and measures these against potential socio-economic and environmental benefits. It also identifies potential funding sources and risks and uncertainties.

A Technical Group was created, comprising representatives from Environment Agency, English Nature, Cheshire Wildlife Trust (ChWT), the Wildlife Trust for Lancashire, Manchester and North Merseyside (LWT), NWDA, Warrington Metropolitan Borough Council, East Lancashire Partnership and the Mersey Forest. These site promoters and supporters provided information which has been included in this study.

The site is currently subject to protection at the County level through designation as a Site of Biological Importance (SBI). This is due to the specialist and sensitive flora found in drainage ditches. The site managers, Cheshire Wildlife Trust, would like to enhance the degree of protection to the site through designation as a SSSI, and perhaps inclusion in the Mersey Estuary Ramsar site.

The site currently has no formal visitor facilities, and this is regarded as the main priority area for future development. Approximately 5000 people are estimated to visit the site per year, which ChWT would like to increase to at least 250,000 over the next ten years. They believe that this is achievable on the existing site through the creation of a new visitor centre in a disused church adjacent to the site, improving site access, information, interpretation and opportunities for education, and construction of new hides. Opportunities should also be investigated for extending the area of land under favourable wetland management.

A market analysis of the visitor numbers the promoters are seeking suggests that an increase of almost 50% a year over the next ten years is required to attain projected numbers. However, given the low existing baseline, and the fact that current market penetration is low, this projection is considered feasible.

If additional land is acquired this will allow for the restoration of 23ha of floodplain grazing marsh, which is 0.23% of the National BAP target, the creation of complementary features such as flood meadows, reedbeds and areas of open water, increase control over water levels and habitat size and lead to increased numbers and diversity of wildlife.

In terms of non-quantifiable benefits the project is likely to have moderate amenity/recreation and health, and high educational benefits. Significant risks and uncertainties to the project include failure to generate sufficient funding, the long-term ownership status of the site, proximity of the Stanlow oil refinery, failure to acquire additional land due to unrealistic prices, and high nutrient loading of potentially additional land.

The capital costs of these proposals have been estimated at £1.9m, with annual operational costs of £157,000. This would generate an additional £1,196,000 in income, and 26 additional full time jobs, at the site and in the local economy. This income will comfortably cover annual running costs.

Through an improved tourism offer (such as access, interpretation and visitor facilities improvements), the site may attract funding from Heritage Grants for the requisite capital costs. Funding opportunities would also be enhanced if the site became part of either of the proposed Weaver Valley or Mersey Waterfront Regional Parks. However, a significant proportion of the capital investment will need to be met by ChWT.

Appendix 2: Sensitivity Analysis of Economic Impacts

The economic benefits from the wetland networks depend on their ability to attract visitors and to capture visitor expenditure. The extent to which networks attract visitors varies considerably. As a result, employment associated with these visitors also varies. Table 1 shows current employment supported by visitors to each network and also employment for the proposed developments. It also shows the differences from the figures for changes in visitor numbers, numbers of overnight visitors and average spend for the proposed developments.

Calculations have been made about the impact of a 20% increase or decrease in visitor numbers, a 6.9% high and 4.6% low scenario for overnight visitors, and for £2 additional spend per visitor.

Table 1: Current and Potential Employment in the North West Wetlands Networks

	Current	Proposed developments ('reference case')	**Difference from reference case**				
			High	Low	Proposed plus high overnight visitors	Proposed plus low overnight visitors	Proposed plus average spend of £10
North & West Cumbria	3	23	6	-6	10	7	6
South Lakes Coast	4	30	5	-5	11	7	6
East Morecambe Bay	29	38	3	-3	26	18	21
West Lancashire Plain	46	62	1	-1	37	25	19
Mersey Corridor Wigan	117	165	27	-27	123	77	66
Gowy Meadows	2	28	4	-4	30	20	19
All networks	**201**	**346**	**46**	**-46**	**239**	**154**	**135**

Employment is largest in the Mersey Corridor Wigan network, which supports 117 jobs in the local economy and on site. By comparison, employment in the North West Cumbria network is estimated at only three, with four in the South Lakes Coast. East Morecambe Bay supports 29 jobs, West Lancashire Plain supports 46 jobs, and Gowy Meadows supports two jobs.

Under current proposals to enhance and develop wetlands sites in the North West employment is expected to increase in each network. As a result of increases in visitor numbers, 48 new jobs are projected to be created in the Mersey Corridor Wigan network, 26 in South Lakes Coast, 20 new jobs are expected in North and West Cumbria, and 16 in the West Lancashire Plain. In the East Morecambe Bay network nine new jobs will be created, with 26 new jobs created as a result of proposed developments at Gowy Meadows.

These estimates are likely to be sensitive to a number of factors, including:

- Visitor profile: in the absence of visitor data, the assumption has been made that all visitors to the wetlands are day visitors. In reality, it is likely that some visitors to the wetlands are overnight visitors that generally have a higher level of average spending.
- Visitor numbers: visitor numbers provided by the promoters of the sites have been used as the basis for estimating employment. It is likely that these visitor numbers will not be realised. Visitor numbers will either be higher or lower than these targets.
- Visitor spend: assumptions have been made about the average spend per visit, but it is likely that this will vary by site.

A number of assumptions have been made about the values of these factors in order to assess the sensitivity of employment to variations in these factors. The assumption has been made that the visitor profile changes from all day visitors to a proportion of overnight visitors. Two scenarios are assumed for overnight visitors. These are based on each network attaining a proportion of the visitor profile of established wetland attractions such as the Norfolk Broads.

A low scenario assumes that 4.6% of overnight visitors (based on the networks achieving 10% of Norfolk Broads overnight visitor profile, which is 46%) and a high scenario that assumes that 6.9% are overnight visitors (15% of Norfolk Broad overnight visitor profile). We also assume that visitor numbers are 20% higher and lower than the base 'proposed development' case. The final scenario involves increasing the average spend per visitor to £10 per day visitor from £8. Table 3 shows the impacts of allowing these factors to vary. Some key findings to note are:

- The largest impact on employment comes from changes to the visitor profile and increases in the average spend.
- If the average spend of a day visitor increase by 25%, from £8 to £10, it would lead to more jobs across all of the networks. It would lead to the creation of 66 more jobs in the Mersey Corridor Wigan network than under the reference case scenario. In the West Lancashire Plain, it would lead to 19 more jobs, in East Morecambe Bay the increase in employment would be 21 jobs, whilst the South Lakes Coast and North and West Cumbria networks could expect to see five and six additional jobs respectively. At Gowy Meadows, employment supported through visitors would increase by 19. If the average spend per day visitor rose to £12 instead of £10, the number of additional jobs would double, and if it rose to £9, the number of additional jobs would halve.
- Under the two scenarios for overnight visitors, employment is expected to be significantly higher than for the reference case. In the Mersey Corridor Wigan network it is expected to be 77 higher in the low overnight visitor scenario and 123 in the high visitor scenario. In West Lancashire Plain, 25 jobs are expected in the low overnight visitor scenario and 37 in the high visitor scenario. For East Morecambe Bay, the numbers are 18 and 26 respectively. In the South Lakes Coast, seven additional jobs would be created under the low scenario and 11 under the high scenario. Under the low scenario in the North and West Cumbria network seven

more jobs would be created, with 10 more under the high overnight visitor scenario, whilst at Gowy Meadows there would be 20 additional jobs under the low scenario and 30 under the high scenario.

The findings indicate that a simple increase or decrease in the type of visitors envisaged in the baseline proposed developments (i.e. day visitors) does not have as significant impact on employment in the wetland networks than variations in the other parameters. In the Mersey Corridor Wigan network, employment would be 27 higher under the high growth scenario compared with the base case, and 27 lower under the low growth scenario.

For the other networks the impact of lower or higher visitor numbers are even less significant. In the West Lancashire Plain, employment would rise by one under the high growth scenario and fall by one under the low growth scenario. In East Morecambe Bay, the figures are a rise of three under the high growth scenario and a fall by three in the low growth scenario. Employment in the South Lakes Coast network would rise by five under the high growth scenario and fall by five under the low growth scenario, whilst in North and West Cumbria, employment would increase by six under the high growth scenario and decrease by six in the low growth scenario. At Gowy Meadows, employment would increase by four jobs in the high growth scenario and decrease by four jobs in the low growth scenario.

Conclusions

Under current plans 47 new jobs will be created in the Mersey Corridor Wigan network, 28 in the South Lakes Coast, 21 in both of the North and West Cumbria network and at the Gowy Meadows site, and 9 in the West Lancashire Plain.

The potential for these networks to create additional employment is shown through the sensitivity analysis. This suggests that changes in the average spend of visitors, or the type of visitor (i.e. overnight stay rather than day visitors), are key drivers behind further employment creation, and that these factors should be the focus of efforts to market sites and networks.