

# **Wildlife Attraction: Visitor Expenditure Model**

Assumptions Report

December 2006



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**Approved by:** Associate Director      Date: 12th December 2006

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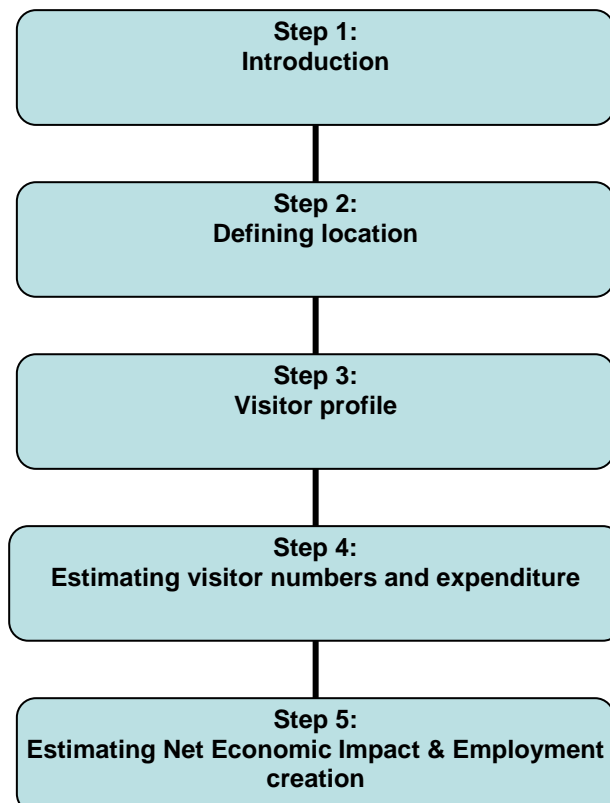
# 1: Steps 1 and 2 – Introduction and Location

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- 1.1 This paper sets out the core assumptions that underpin the Wildlife Attraction Visitor Expenditure Model<sup>1</sup>. It does not explain the use of these assumptions as these are set out in the User Guide. All of the assumptions are based upon a comprehensive review of available research and data coupled with our experience in undertaking economic impact assessments. A table of the sources used to inform our assumptions can be found in Annex A. The assumptions are discussed under the headings of the five steps of the model.

## Step 1 – Introduction

- 1.2 Step one simply introduces the model and asks for them to type the name of the visitor attraction into the space provided. The diagram below shows the steps involved in the model.



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<sup>1</sup> Available on the England Biodiversity website at: <http://www.ukbap.org.uk/ebg/library.asp>

## Step 2 – Location – understanding and applying multipliers

### Defining an attraction's locality

- 1.3 Defining the local area within which economic impact is likely to be apparent is an extremely important task. The aim of the model is to estimate the economic impact of wildlife attractions on local communities. The model assumes that the local area encompasses what is considered to be the local economy surrounding the attraction. That is, it has sufficient infrastructure for holidaymakers to stay overnight, choose from a range of things to see and do and have access to facilities such as restaurants, basic retail outlets etc. Equally however, the area should not be so big that it becomes very difficult to argue that day-trippers have been encouraged into the locality (since most would come from within this area).
- 1.4 All of the assumptions and variables that have been used to develop the model are based upon the type of locality described above. For an accurate estimate, it is vital that the locality is defined and described appropriately. Four examples are provided in the User Guide.

### Understanding and using Multipliers

- 1.5 The details about the location of the site are relevant in deciding on the multiplier values that should be used later on in the calculation process. Multipliers are ratios that are used to reflect the way in which new expenditure flows through the local economy. For example, new expenditure in a hotel will be re-spent with hotel suppliers and a proportion of the new expenditure that is made on wages will be spent by employees locally, further supporting the local economy. The proportion that is retained locally either through suppliers or through the expenditure of wages depends on the size of the economy being analysed and how self sufficient it is. Smaller rural economies will have lower multiplier values as more expenditure leaks out, while bigger, urban ones will have higher values.
- 1.6 There are very few genuine multiplier analysis studies. The Scottish Tourism Multiplier Study (STMS) despite its age is still recognised as one of the most comprehensive tourism multiplier study conducted in the UK. This study provides indirect and induced multipliers for holidaymakers and day-trippers on-site (i.e., at an attraction) and a combined indirect and induced multiplier off-site (i.e., in the wider local economy). For each of these categories, the study also distinguishes between urban, rural and remote rural areas.
- 1.7 Almost all the studies reviewed, either did not use a multiplier, or adopted multiplier values derived from the Scottish Tourism Multiplier Study (STMS). Some studies – such as '*RSPB Reserves and Local Economies*' – did estimate visitor income and employment multipliers for several reserves across the UK – but there is not sufficient data or information for their inclusion in the model.
- 1.8 We have taken the average on-site and off-site multipliers for a) holidaymakers and b) day-trippers.
- 1.9 As explained in the User Guide, the geographical location and population density of a locality influences the multiplier value that can be assigned to a given wildlife attraction. With respect to geographical location we have broken the UK into the following five areas.

Model Geographical areas	Areas included in definition (as seen in Model)
South of England	South East, South West, East of England and London
Northern England	East Midlands and West Midlands, North East England, North West England and Yorkshire and Humber
Scotland	Scotland
Wales	Wales
Northern Ireland	Northern Ireland

Source:

- 1.10 The model allows for a multiplier to be assigned to each geographical area, for both holidaymakers and day-trippers and according to whether the locality is based in a remote rural, rural or urban edge locality.

	remote		rural		Urban	
	Holiday	Day trip	Holiday	Day trip	Holiday	Day trip
South of England	0.3	0.5	0.3	0.5	0.415	0.35
North of England	0.34	0.35	0.34	0.35	0.55	0.57
Wales	0.34	0.35	0.34	0.35	0.55	0.57
Scotland	0.34	0.35	0.34	0.35	0.55	0.57
Northern Ireland	0.34	0.35	0.34	0.35	0.55	0.57

Source: The Scottish Tourism Multiplier Study is main source for multipliers at Scottish level and represent best estimates for English regions.

## 2: Visitor profile - understanding and applying attributability

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### Understanding and applying attributability

- 2.1 As explained in the User Guide, the motivations for deciding to visit a particular locality for most staying tourists are complex, interdependent and almost impossible to unravel. With the exception of a few iconic attractions there are very few that can argue to be the primary influence for visitors staying in a region.
- 2.2 Whilst there are undoubtedly enthusiasts who are willing to travel across the UK and beyond to visit specific sites in order to see particular wildlife species, the majority of staying tourists visiting wildlife attractions are doing so as part of a wider holiday experience. Indeed, even the on-site spending of visitors can be argued to be simply displacing expenditure that would have occurred elsewhere in the study region.
- 2.3 In most economic impact models, resident expenditure is simply discounted as it not deemed to be additional expenditure. That is, it is assumed that this expenditure would have been incurred in the locality on another activity if the attraction was not visited or did not exist. However, if it can be proved that if it were not for the attraction, resident expenditure would have been taken out of the locality to, say, visit an attraction elsewhere, then this can be claimed as additional.
- 2.4 Unless there is evidence to the contrary we have assumed the local resident expenditure is not additional. This will have the effect of marginally underestimating the true economic impact of the attraction. However, due to relatively low spending levels, residents usually only make up a very small proportion of overall economic impact.
- 2.5 With respect to visitor attractions there are two approaches that can be adopted to measure the attributability of day-tripper and holidaymaker expenditure:
  - **Firstly**, attributability could be taken as the amount spent by visitors on the day that they attended the attraction. This requires an assessment of displacement, i.e., the proportion of this spending that would have occurred in the locality had the attraction not been there. This can be a useful approach for attractions which incur large sums of on-site spending and particularly those that involve spending at a higher level than the average holidaymaker and/or day-tripper spend for the locality or region. This approach also has the advantage of simplicity. However, it fails to take into account the role that the attraction played in influencing the decision to stay in/visit the area.
  - **Secondly**, by assessing an attractions role in influencing the decision to stay in/visit a locality. The factors that influence the decision to stay in/visit an area are varied, interdependent and often difficult to unravel, making it hard to determine the role of one particular factor, such as a wildlife attraction. Nonetheless, for attractions that generate modest levels of on-site expenditure but at the same time play a significant part in defining the image and appeal of a locality, this is the key determinant of an

attraction's visitor economic impact. This approach is also more logical than the first approach as it assesses the role of the site in stimulating the whole trip.

- 2.6 Through assessing past surveys and impact assessments, we have adopted the latter approach. This means working with the *full trip expenditure* and attributing a proportion to the site.
- 2.7 In assessing attributability, we are trying to provide a proxy for the importance of the site in bringing new visitors and expenditure into the economy. There are a number of factors that influence this, but the two main ones are:
1. **Population density:** on average there is far less tourism infrastructure in remote rural and rural areas than there is in built up urban economies. There are so many things to see and do for tourists in urban cities and towns that it is very hard to attribute their spending to one particular activity – such as a wildlife attraction. In contrast, holidaymakers and day-trippers attracted to wildlife attractions in rural areas are far more likely to be in area because of the attraction itself. This is supported by the findings of the 1989 and 1998 RSPB Reserves Visitor Surveys which found that attributable spending by visitors varied considerably between reserves, with rural reserves, such as those on the Island of Balranald, attracting more holidaymakers and higher spend than those in more urban areas such as Sandwell Valley on the outskirts of Birmingham.
  2. **Characteristics of the attraction itself:** all wildlife attractions differ in the types of species on offer, how and when they are viewed and the types of facilities available to visitors. These characteristics influence the type of visitor that visits the attraction, the distance that visitors are prepared to travel to the attraction and the level of spending that is incurred whilst there. Again this is supported by the visitor surveys. For example, whilst the Isle of Mull offers a unique opportunity to see Sea Eagles, there is very little supporting wildlife viewing infrastructure. Only 1% of holidaymakers stated that it was the main reason for their trip to the island. This compares to Dood Wood in the Lake District where 8% of holidaymakers stated that the Osprey look-out that was the “main reason” for their stay in the area – reflecting the better infrastructure (guides, visitor centre and purpose built look outs) available at the attraction.
- 2.8 Step 3 involves answering a series of questions related to an attraction's characteristics. The questions in this step are weighted according to our assessment of their influence on attributability (Table 2.1) and broadly from the results of other impact studies reviewed as part of this work.

Table 2-1: Attributability questions and weightings

Question	Max score	
Does the attraction have at least one iconic species?	15	Iconic species will specifically attract new visitors into the locality
Which of the following best describes the uniqueness of this site as a place to see this/these species	20	The higher the level of uniqueness (to region, UK, world) the higher the propensity to attract people into the area.
How many distinct wildlife habitats within this site?	20	Number of habitats will add to the likelihood of visitors making specific trips to the area
Which of the following best describes the visitor profile	10	Enthusiasts are more likely to make a specific trip to see the species at the site compared with general tourists
Does the attraction have staff who look after visitors as part of their responsibilities	2	
Does the attraction have hides / watch points designed for prolonged viewing	2	
Does the attraction have interactive interpretation using computers, ear phones, sounds etc	2	These scores reflect the quality of the site infrastructure, which to some extent will determine its attractiveness as a destination for a trip, in its own right
Does the attraction have a café/restaurant	2	
Does the attraction have regularly (at least once a day) serviced toilets	2	
Does the attraction have a souvenir shop	2	
Does the attraction have facilities for school trips (sheltered lunch areas, work areas etc)	2	
<b>Total</b>	<b>79</b>	Maximum score

2.9 The results provide a total score that can be used to categorise the attraction in terms of its “attributability”, or how important the site is in bringing visitors and expenditure into the area. These categories reflect, high, medium and low attributability.

2.10 In some ways this mimics a typical impact visitor survey which would ask visitors whether the site was the “main reason”, “one of several reasons” or “not a reason” for their visit to the area.

2.11 Where it scores highly, we assume a higher proportion of visitors that are in the area mainly because of the site. Where there is a lower score, the attraction is less likely to have an influence on visitors’ reasons for visiting.

2.12 In practice, we have looked at a number of other impact studies and used their estimates as a guide to the proportion of visitor expenditure that can be attributed. The model uses the values for these depending on the attributability score.

2.13 The attributability values for holidaymakers and day-trippers have been estimated from survey data provided by RSPB sites across the UK. The main surveys used are listed below.

- Mull Sea Eagles Visitor Survey

- Dood Wood / Whinlatter Visitor Survey
- Freiston Shore Visitor Survey
- Cornwall Chough Visitor Survey
- Balranald Visitor Survey

2.14 What do these surveys say about the proportion that are in the area because of the site? The percentages from these studies are shown in Table 2.2 below along with some comment on characteristics.

Table 2-2: Case studies and results

Survey	Main reason	Partial reason	Comment
<b>Mull Sea Eagles Visitor survey</b>			
Holidaymaker	1%	12%	Very low 'main reason' value could be due to two factors 1) the popularity of Mull as a tourist destination meaning there are lots of reasons why people visit the Island and 2) the lack of sea eagle centre – people know the eagles are on the island but there isn't a sea eagle tourist attraction as such, just a few watch points and a local guide who offers pre-organised trips. Reasonably high holidaymaker 'partial reason' could be reflective of the fact that sea eagles are seen as a rare and iconic species.
Day-tripper	0.3%	1%	
<b>Dood Wood and Whinlatter Survey</b>			
Holidaymaker	8%	22%	Reasonably high 'main reason' and high 'partial reason' could be due to 1) the attraction offers a relatively iconic species (Ospreys) 2) it offers structured facilities such as a visitor centre, staffed watch points and video camera assisted viewing and 3) it is in a rural area meaning people are more likely to be drawn into the area for a specific reason.
Day-tripper	17%	11%	
<b>Freiston Shore Visitor Survey</b>			
Holidaymaker	8%	14%	Reasonably high 'main reason' (particularly for day-trippers) and high 'partial reason' could be due to 1) the attraction offers a range of habitats and species and 2) it is in a rural area meaning people are more likely to be drawn into the area for a specific reason.
Day-tripper	32%	22%	
<b>Cornwall Chough Visitor Survey</b>			
Holidaymaker	11%	19%	High 'main reason' and high 'partial reason' could be due to 1) the unique species which until recently had not nested in the area for 50 years making it a particularly appealing to bird enthusiasts or 2) the rural location of the attraction.
Day-tripper	19%	15%	
<b>Balranald Visitor Survey</b>			
All visitors	29%	33%	High 'main reason' and 'partial reason' could be due to 1) the attraction offers a wide range of habitats, 2) it has a full range of tourist facilities and 3) it is in a rural location.

- 2.15 Using this evidence we have built up a matrix that distinguishes between the location of the site and its characteristics. This is shown in Table 2.3 and sets out the values for high, medium and low attributability sites in rural, remote and urban settings. These values represent the proportion of visitors, their trips and their expenditure that are entirely because of the site (full attributability) and the proportion for which it is one of several reasons.
- 2.16 The visitor surveys covered above indicate typical values of around 10% reporting it as the main reason and 20% one of several reasons (excluding Sea Eagles result). These values are predominantly from rural areas and we would expect slightly lower proportions of visitors giving it as a main reason in urban areas, although more may report it as a one of several reasons. Table 2.3 shows the values increasing, the more remote the attraction and the higher the attributability score. Note from the studies that it is usual to find a higher proportion of visitors reporting that the site is one of several reasons than the main reason.

<b>Assumptions and estimates for holidaymakers</b>						
	<b>remote</b>		<b>rural</b>		<b>urban</b>	
<b>Attribution score</b>	% of trips where site is main reason	% of trips where site is one of several reasons	% of trips where site is main reason	% of trips where site is one of several reasons	% of trips where site is main reason	% of trips where site is one of several reasons
High attribution	15%	20%	10%	20%	7%	30%
Medium score	7%	15%	5%	10%	5%	15%
Low attribution	5%	10%	3%	5%	3%	10%

*Based on range of impact studies*

## Expenditure

- For both holidaymakers and day-trippers who stated that the attraction was the main reason for their holiday/day-trip we have assigned 90% of their total expenditure
  - For those that stated that it was one of the reasons for their trip we have assigned 30%.
- 2.17 Multiplying the appropriate proportion of attribution by these proportions of expenditure gives an overall ratio that is applied to the total gross expenditure.

## 3: Estimating visitor numbers and expenditure

- 3.1 Holidaymaker, day-tripper and resident spend has been taken from UKTS 2004 statistics, VisitScotland 2003 and Visit Britain 2006 and is based upon the geographical areas described in Table 3.1. We have, to date been unable to find a holidaymaker spending figure for Northern Ireland, so we have taken the average of all of the other regions as a proxy.
- 3.2 It is important to note that these figures represent the *total spending figures* for the entire trip/stay in the area, not that for the attraction itself. The User Guide explains how to override these figures if local research on holidaymaker, day-tripper and resident expenditure is known.

Table 3.1: Trip expenditure estimates

Region/area	Tourist Trip expenditure (£s)
South East	179
South West	194
London	214
East Midlands	149
West Midlands	166
North East England	180
North West England	177
Scotland	208
Wales	168
Northern Ireland	178
East of England	161
Yorkshire and Humber	158
<b>Day-Trippler</b>	<b>28</b>

Sources: VisitBritain, VisitScotland, UKTS 2004

## **4: Estimating net economic impact**

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- 4.1 Net economic impact is calculated by multiplying spending, by the appropriate multiplier and attributability value for holidaymakers, day-trippers and residents.
- 4.2 Net FTE job creation is calculated by dividing net expenditure £60,879. This is the 2004 Annual Business Inquiry (ABI) value for the level of turnover per employee averaged across the in the following sectors:
- Section H - hotels and restaurants
  - Division 52 - retail trade, except of motor vehicles and motorcycles; repair of personal and household goods (excluding paint and hardware and medical and orthopaedic goods).
- 4.3 This figure of £60,879 is considerably higher than the employment conversion factor used by STMS as the STMS figure includes the effects of income and supplier multiplier effects.

## Annex A – Surveys and impact assessments

<b>Study/document name</b>
<b>South England</b>
Working with Nature in Britain – <i>Heathland conservation in Dorset</i>
Working with Nature in Britain – <i>The Wessex coppice project</i>
Yat Rock Peregrine Project, 1999
Valuing Norfolk's Coast
Minismere RSPB Reserve and Local Economy, 2000
Evaluation of the South West and Forest Futures Projects- FC
Valuing Forest Recreation Activities – Final Phase 2 report, FC
Nature Conservation, Employment and Local Economies – A Literature Review- <i>RSPB</i>
RSPB Reserves and Local Economies – <i>Minsmere</i>
RSPB Reserves and Local Economies – <i>Otmoor</i>
RSPB Reserves and Local Economies – <i>Pulborough</i>
RSPB Reserves and Local Economies – <i>West Sedgemoor</i>
Rainham, Wennington and Aveley Marshes, Business Plan
<b>Northern England</b>
Leighton Moss RSPB Reserve , 1999
Nature Conservation, Employment and Local Economies – A Literature Review- <i>Halhead</i>
RSPB Reserves and Local Economies – <i>Geltsdale</i>
<b>N. Ireland</b>
Rathlin Island Coastal Tourism in Northern Ireland
<b>UK wide</b>
Nature Conservation, Employment and Local Economies – A Literature Review- <i>Summary Table</i>
Nature Conservation, Employment and Local Economies – A Literature Review- <i>Impact of RSPB Reserves</i>
1989 Reserves Visitor Survey
1998 Reserves Visitor Survey
<b>Scotland</b>
Whale-watching in West Scotland
Working with Nature in Britain – <i>Abernethy Forest Reserve</i> (Also in RSPB Reserves and Local Economies)
Nature Conservation, Employment and Local Economies – A Literature Review- <i>Surrey Research Group</i>
Nature Conservation, Employment and Local Economies – A Literature Review- <i>Crabtree et al</i>
Red Kites and Tourism on the Black Isle, July/August 2000
Forisnard Reserve 1997 visitor survey (Flo Country) (Also in RSPB Reserves and Local Economies)
Marine wildlife tourism, 1998 HIE
Geese and Local Economies in Scotland
RSPB/BASC, National Goose Forum report
RSPB Reserves and Local Economies – <i>Loch Gruniart</i>
RSPB Reserves and Local Economies – <i>Mesehead</i>

<b>Study/document name</b>
RSPB Reserves and Local Economies – <i>West Sedgemoor</i>
<b>Scottish Islands</b>
Working with Nature in Britain – <i>Wildlife, tourism and agriculture in the Shetland Islands</i>
Mull Visitor survey
Orkney Visitor Surveys 1989/1990
Orkney Tourist Board and System 3 in 1996 and 2000
<b>Wales</b>
Working with Nature in Britain – <i>Coed Cymru: Woodland Management in Wales</i>
Working with Nature in Britain – <i>The red kite and the economy of rural mid Wales</i>
RSPB Reserves and Local Economies – <i>Anglesey Reserves</i>
RSPB Reserves and Local Economies – <i>Lake Vyrnwy</i>