

Research Paper 20

**Quantifying the amenity value of the
Sussex Downland**

Bruce Osborne

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Geography Laboratory
Arts Building C
University of Sussex
Falmer
Brighton BN1 9QN

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Contents:	Page No.
Background.....	7
Resident population	7
Visitor population	8
Non user values	10
Economic worth of the Downland	10
Characteristics of typical Downland visitors	11
Visitor expenditure	14
Key user groups	15
Refining the user groups	20
Alternative evaluation of economic worth	21
Economic worth of user groups	22
Summary	24

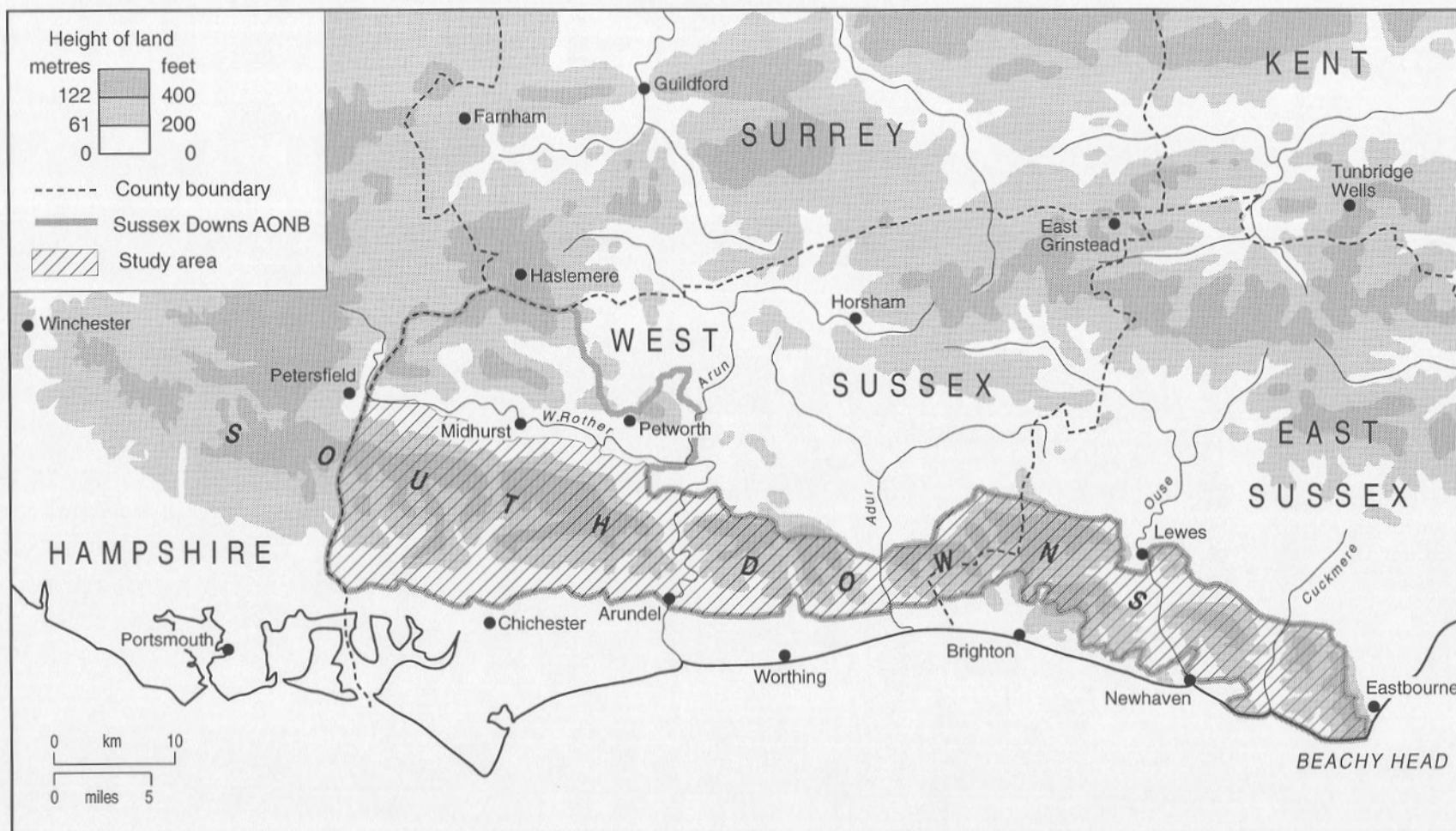
Tables:

1. Economic worth of the Downland	11
2. Ranked order of facility utilisation on the Downland	13
3. Activities participated in on the Downland	14
4. Number of visits per annum by key user activities on the Downland	15
5. Principal consumer groups on the Downland	20
6. Market segmentation by principal consumer usage on the Downland	21
7. Expenditure segmentation by type of expenditure on the Downland	22
8. Family-group expenditure by type and by principal user groups on the Downland	23
9. Expenditure by principal user groups on the Downland	23
10. Percentage volume and value by principal user groups on the Downland	24

Glossary:

AONB - Area of Outstanding Natural Beauty
CPRE - Council for the Protection of Rural England
ESA - Environmentally Sensitive Area
MAFF - Ministry of Agriculture, Fisheries and Food
SDCB - Sussex Downs Conservation Board
SPSS - Statistical Package for the Social Sciences

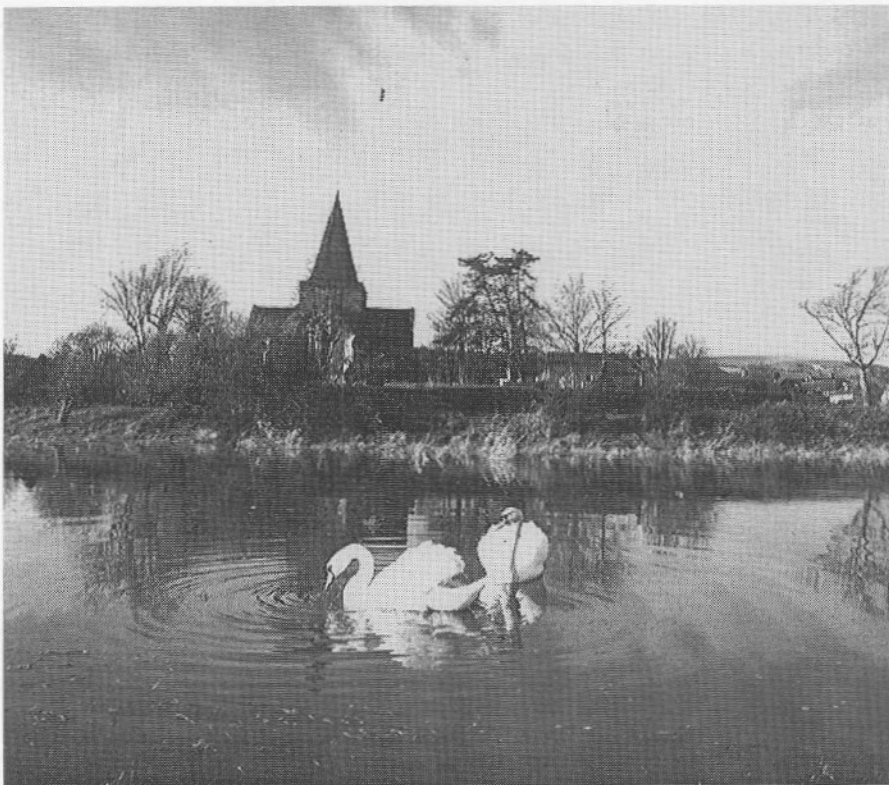
Illustrations provided by the Sussex Downs Conservation Board



Sussex Downs Area of Outstanding Natural Beauty (AONB)
and Study Area



Where the chalk Downland meets the sea at Seven Sisters.



Rolling hills interspersed with Downland villages.



Walking is a popular pastime for Downland visitors.



The scarp face of the Downland.

Background

This paper is based on the findings of two Downland studies. The first is the 1993 Downland Visitor Survey, commissioned on behalf of the Sussex Downs Conservation Board (SDCB) by the University of Sussex through the Leisure Research Unit at the University of Brighton.¹ The second is the 1993 MAFF/ESA Valuation carried out by the Centre for Rural Economy, University of Newcastle.² The contents of this paper in turn form part of a more extensive study on tourism and the Sussex Downs by this author.³

Each of these studies was initiated to provide a greater understanding of Downland usage at a time when the Sussex Downs Conservation Board was in its formative period of management planning. The Board became operative from 1st April 1992 and was the result of an agreement on countryside management between the Countryside Commission and local authorities in the Sussex Downs Area of Outstanding Natural Beauty (AONB) under section 102 of the Local Government Act 1972. Expenditure made by the Board is provided by the Countryside Commission (50 percent), East Sussex County Council (20 percent) and West Sussex County Council (30 percent). The Board has a six year life and its objectives are to protect, conserve and enhance the natural beauty of the Sussex Downs, to promote informal enjoyment of the Downs and to promote sustainable forms of economic and social development.⁴ The result is a pioneering national experiment in the managing of AONB landscapes enjoying the full support of the Department of the Environment including additional funding through the Countryside Commission.

Prior to 1993 there were no reliable estimates of the volume and worth of Downland tourism. In addition there was virtually nothing known about key user groups on the Downland and their impact on overall visitor numbers and expenditure. The Council for the Protection of Rural England estimated that the South Downs accommodated about 10 million visitors per annum.⁵ This appeared to be an unsubstantiated rough estimate. The SDCB are planning to conduct visitor number counts to provide more accurate estimates but this work has not been commissioned at the time of writing.

From the Downland Visitor Survey it is known that 47 percent of visitors come from Sussex and that 80 percent travel less than 50 miles to visit the Downs; in fact 33.9 percent travel less than 10 miles. It is therefore apparent that any Downland visitor number estimates need to include recreation by local residents, if a broad definition of Downland recreational tourism, necessary to reflect true local as well as distant usage is to apply, and a realistic evaluation of impact is to be achieved. To this end, further working of the University of Newcastle MAFF ESA research provides valuable new insights into numbers and worth based on resident population, visitor population and non user values.

Resident population

Willis *et al* (the Newcastle MAFF/ESA research) estimate the resident population of the ESA to be 13,641 households using the parish data from the Office of Population Censuses and Survey's decennial 1991 census. This figure is an approximation due to parish boundaries extending beyond the ESA but never the less provides a useable estimate of population density in a Downland landscape. The ESA approximates to 68,000 ha whereas the Sussex Downland

approximates to 76,300 ha. Proportionately adjusting, the estimated households become 15,306 for the Sussex Downs core study area.

Endorsement for this estimate of population density comes from data published by the Sussex Rural Community Council who estimate a resident population of 16,307 households (40,718 persons over 16) for the AONB, again using the census data.⁶ The source of data being parish based, would include in both instances communities such as Midhurst, but would exclude in the Willis data, villages such as Fernhurst and part of Haslemere which are some distance from the Downland. The figure of 15,306 households would appear to provide a reasonable working estimate of the population of the Sussex Downland, given the inaccuracies inherent in using the parish census data as a source, and the limited use to which these figures will be applied in this paper.

Using the rule of thumb of 2.4 persons per household, the household estimates suggest a resident population in the Sussex Downland of about $15,306 \times 2.4 = 36,734$ persons.

Visitor population

Visitor numbers are exceedingly difficult to calculate with confidence over an extended area. Although South East England Tourist Board data is available giving specific attraction numbers, most of these locations are outside the Sussex Downland. Willis et al have calculated the propensity to visit the ESA based on a random survey of catchment zones throughout the UK. From their survey it is estimated that 3,062,000 households visit the Downland ESA each year.⁷ Willis argues that this is likely an over estimate due to difficulty in determining boundaries of the ESA by respondents, too wide interpretation of what is a purposeful visit and response errors resulting from memory and prestige bias. Willis gives an adjusted lower estimate of households visiting of 2,580,117. In the same research Willis compares this with a figure of 1,304,471 for the Somerset Levels and Moors.

If it is assumed that ESA/Downland visitor frequency is similar per hectare, it is possible to calculate visitor households according to the Willis perception of what determines a visit, a point which Willis notes is debatable. Adjusting for hectareage this gives a figure of households visiting the Sussex Downland of 2,859,051 (ie $2,580,117 \times 76,300 / 68,000$).

The difficulty comes in converting this estimate to numbers of people. Willis considers it erroneous to multiply households by 2.4 as a "rule of thumb" estimate of persons per household, as this element was not considered in the context of the MAFF/ESA survey.⁸ From the Willis data it is known that at least one person from each household visits the Downland in each year but there is no available evidence from Willis to suggest that all persons in the household visit in one year. In order to gain an approximation of visitor numbers therefore it is necessary to make an assumption. The assumption is that in visiting households, a spectrum of numbers visiting will range from 1 in some households to all in others. As the average number of persons per household is 2.4 then the range is 1-2.4, the mean of which is 1.7.

From the above it is possible to make an approximation of the number of persons who visit the core study region in a year, based on developing the Willis data: $2,859,051 \times 1.7 = 4,921,587$.

Allowing for the long term growth in outdoor recreation since Willis conducted his survey in 1992/3, it can be concluded that about 5 million people visit the core study region each year using the Willis perception of a tourist. However, using the methodology described in the following arguments, which suggest that the Willis visitor numbers are 75.8 percent of the real total, the number of people who visit the Sussex Downland, based on the broader definition of tourism used in this paper, is 6,492,859. This compares with the CPRE figure of 10 millions for the South Downs overall.

The number of people who visit the Downland however is not the full picture. Willis estimates that each person in his sample, on average visits the Downland at least 5 times per year.⁹ From this it is possible to estimate the number of Downland visits based on Willis in a year as at least $4,921,587 \times 5 = 24,607,935$.

Allowing for the long term growth in outdoor recreation, it can be concluded that about 25 million visits are made to the Downland each year by visitors as identified by Willis.

This figure however is subject to the following qualifications. First, that the assumptions above are acceptable. Second, that the figure of 5 visits per annum is relevant. The Downland Visitor Survey carried out for this thesis suggests that the average visits per person per annum is 22.59.¹⁰ The MAFF and Downland Visitor Surveys were each based on a different sampling methodology. The Visitor Survey was on-site, unlike the MAFF/ESA research and this would have created a bias. The Visitor Survey included the large numbers of local casual users identified earlier as being within the broad definition of tourism for the purpose of this paper, the data from the two surveys is therefore not directly compatible without adjustment.

Is it possible to use the development of the Willis data to provide an estimate of true Downland visitor impacts based on the much broader definition of recreational tourism? Such an estimate would need to accommodate the local casual use of the Downland not apparent in the Willis data. Willis also excluded visitors originating from outside the UK.

From the regional analysis of the Willis ESA visitor sample, 69.85 percent of visitors originate from the UK other than the south east counties.¹¹ From the Downland Visitor Survey it is known that there were 2537 respondents from other than the south east counties out of a valid, useable response of 4791 (ie 52.96 percent). Willis would have expected the 2537 to be 69.85 percent of the total responses for the Downland Survey, had the Downland Visitor Survey been limited to visitors as identified by Willis. From this it is possible to calculate a theoretical total sample size, based on Willis, of 100 percent, ie 3632. By subtracting this figure from the actual sample size of the Downland Visitor Survey, it is possible to calculate the degree of local usage and foreign origin visitors to the Downland not identified in the Willis research as $4791 - 3632 = 1159$, representing 24 percent ie $(100\%) - (75.8\%) = (24.2\%)$.

It is known from the Downland Visitor Survey that foreign visitors amount to 6 percent of the total. It can be concluded therefore that local casual use of the Downland, not identified by Willis, amounts to a further 18 percent of the total.

Earlier it was calculated that, using the Willis perception of visitors, there are 24,607,935 visits to the Sussex Downland in a year. This would exclude the extensive casual local use and

foreigners and it is now possible to adjust this estimate for the broader use of the Downland applying in this thesis. We know from the above calculation that the visitors excluded by Willis account for 24.2 percent of the total, in other words Willis identifies 75.8 percent of all visitors. An estimate of total visitors on the Downland in a year can therefore be arrived at as follows: $24,607,935 \times 100 / 75.80 = 32,464,294$ (ie 32.5 Millions = 3.25×10^7).

Whilst many of the assumptions made to arrive at this figure are tenuous, it does provide a considered estimate and insight into visitor impacts in the Sussex Downland for the first time to the author's knowledge. In order to test the hypothesis, the visitors to the Sussex Downs are considered in the light of national data on visits to the countryside.

The Countryside Commission estimate that there were 1,600 million trips to the countryside in 1990 in England and Wales.¹² This figure has subsequently been qualified by the Day Visits Survey which estimates 900 million visits but excludes under 15 year olds.¹³ Using the Countryside Commission figures, the 32.5 million visits to the Sussex Downs represents 2.0 percent of the total based on the broader use of the term Downland tourism. The land area of England and Wales amounts to approximately 140,110 sq km.¹⁴ Rural land accounts for 85 percent of the total in England.¹⁵ Assuming a similar proportion of rural land in Wales, it can be calculated that the area of rural land or countryside in England and Wales is about $140,110 \times 85 \times 100 / 100 = 11,909,350$ hectares.

The Sussex Downland amounts to 76,300 ha and therefore represents 0.64 percent of the total countryside of England and Wales, yet in spite of this it hosts 2.0 percent of all countryside visits. Willis notes that the South Downs has the highest number of visits per respondent of any ESA and this, coupled with the high percentage of respondents who had visited the South Downs at all, indicates that it is the most highly visited ESA in England.¹⁶ The dangers of juxtaposing data from different research programmes are well recognised and subsequent studies will doubtless be able to refine these estimates further. This is the first known assessment of visits to the Sussex Downland and particularly underlines the importance of the Downland as a recreational resource.

Non user values

Having discussed the resident population and visitors, Willis identifies a third category of persons to whom the Downland has a value, albeit not as a result of direct use. This group particularly includes individuals who seek the landscape values and wildlife conservation implications without necessarily directly experiencing the Downland first hand.

Economic worth of the Downland

Willis et al use the three categories of beneficiary, residents, visitors and non-user values data to calculate an economic value of the Downland ESA using a willingness to pay tax quotient calculated from the research returns. Willingness to pay techniques are now being used successfully to research a value for facilities provided from the public purse.¹⁷ These estimates provide a valuable indication of the overall utility of the Downland ESA measured in sterling. (see table 1)

The £80 millions identified in Table 1 as the worth of the Downland compares with £52,637,000 for the Somerset Levels and Moors.

Table 1. Economic worth of the Downland

	£
Residents	274,000
Visitors	48,408,000
sub total	48,682,000
	31,153,000
total	79,835,000

Source: Willis *et al*¹⁸

Willis notes a number of limitations to the above calculation including the difficulty in determining precise visitor numbers. For calculating the financial figures, the downward adjusted household numbers were used. It should also be noted that Willis does not include overseas visitors in his calculation of worth.

The methodology used by Willis renders it impossible to adjust the ESA worth figures to the larger Sussex Downland. This results from a segregation of landscape preference, ie intensive agriculture versus ESA. The comparable split for Sussex Downland visitors is not known, and to estimate provides a further dimension of unnecessary uncertainty.

Due to the similarity of the Downland ESA to the Sussex Downland and the difficulties in the Willis respondents from distinguishing between the two, a figure in the region of £80 millions would appear to be a reasonable public valuation of the Downland region in general. Local residents account for only a small part of that figure in spite of the substantial use identified earlier in this paper. The Willis estimates of worth are understated in this respect therefore. Non users contribute approximately 40 percent of the total, which illustrates the extent to which support can be forthcoming for a "below the horizon" worthwhile cause.

Willis compares the £80m economic valuation with the costs of the ESA landscape which are identified as follows:

ESA payments to farmers:	£4.32m
Public exchequer costs	
adjusted for EC contributions:	£1.94m

Arguably not all of the costs involved in sustaining the Downland as a special place are reflected by Willis.

In conclusion, it can be seen that the public valuation of the Downland far exceeds those estimated costs identified by Willis *et al*. In addition the extrapolation of visitor numbers of the Sussex Downland suggests a resource of far greater recreational value than previous estimates suggest. Using the 1993 Visitor Survey data it is now possible to gain an appreciation of the typical Downland visitor.

Characteristics of typical Downland visitors

Three in four visitors were on a day trip, with the balance staying away from home overnight. About one third of all visitors were in couples, a further third were in family groups. Organised

parties only accounted for just over 5 percent of the total. The balance was evenly split between those visiting on their own and those with others who were not family or friends. One explanation for the low percentage of parties may be the timing of the surveys, with 70 percent of all questionnaires being completed at weekends. This would have reduced the likelihood of school parties but in turn would be offset by the likelihood of other groups at weekends such as scouts or guides. Standeven calculates the average group size to be in the range 2.73-3.81 and suggests that the average group comprised two adults and a child.¹⁹ The range gives a median of 3.27 persons.

Of all visitors, 55 percent were male and 45 percent female. Within this, distinct age clustering is apparent, with 44.5 percent of respondents being aged 25-44 years and 32.6 percent 45-64 years. Aggregated, this suggests that the Downland is a particularly popular venue for those in the 25-64 age bands with three quarters of all adult visitors falling in this range. There is also a strong bias towards the visitor being in the more affluent social scale categories. Over 40 percent of respondents were in senior management/middle management grouping compared with the average for the population at large of 17 percent. Allowing for misrepresentation by respondents, which is difficult to measure, there is still likely to be a strong leaning towards managerial occupations and away from the semi-skilled manual category, which accounted for only 3 percent of respondents. Standeven suggests that this may in part be due to lack of access to a car.²⁰

Seven percent of visitor groups included a person registered disabled or who had a handicap. Five percent of groups included a wheelchair user.

Asked how the visitor found out about the interview location, 54 percent said that they had always known about the venue and a further 16 percent indicated word of mouth. These figures indicate how deeply the Sussex Downs is ingrained into the culture and awareness, with the promotional media performing only a minor role overall in attracting visitors.

Downland visitor catchment and travel: Forty seven percent, nearly half of all visitors, came from Sussex and 77 percent had come from home. This confirms that the Downland is an important local recreational facility. In addition a further 24.1 percent of visitors came from the adjacent counties of Kent, Surrey or Hampshire. On the Downland an aggregated 71 percent of visitors came from the local south east counties.

The high percentage of all visitors emanating from Sussex is endorsed by the data on distance travelled. Eighty percent of all visitors travelled, in the day, 50 miles or less, suggesting a place of origin at least within 25 miles of the Downland interview venue. Standeven calculates an average distance per visit of 34 miles. Very few visitors (6.8 percent) travelled more than 100 miles, confirming the Downland as a local recreation facility rather than a traditional tourist resort area. It comes as no surprise that 84.2 percent of all visitors travelled by car with only minimal percentages using any other form of transport, including public conveyance or walking.

Frequency of visit: Nearly half of the respondents were frequent visitors to the Downland, visiting it once a month or more. A further 35 percent had used the Downland before but less than once a month and 17 percent had not used the Downland previously. In spite of the large proportion of frequent users, the Downland for many is not the place to spend a full day. Sixty percent expected their visit to be less than 3 hours in duration. Only 10 percent expected their visit to exceed 6 hours. The further a visitor had travelled the longer was the likely stay, an aspect identified as a result of further analysis by Standeven.

Utilisation of facilities: The extent to which specific facilities are used is ranked in Table 2. In view of the high incidence of car travel identified earlier, the importance placed on car parks, comes as little surprise .

Table 2. Ranked order of facility utilisation in the Downland

Facility	Percentage of respondents using
Car parks	81.6
Toilets	57.2
Footpath/bridleway	41.8
Refreshment facilities	32.6
Public house	18.7
Area specially for outdoor rec.	17.6
Museum/historic home	15.7
Visitor/countryside centre	15.1
Downland village	14.0
Information board	13.6
Souvenir store/s	12.1
Restaurant	below 10 percent
Church/cathedral/castle	"
Other retail outlet	"
Amusement/theme park	"
None of the listed facilities	"
Horse race track	"
Disabled facilities	"

Car parks, toilets, paths/bridleways/places for outdoor recreation and refreshment facilities are the principal infrastructure requirements of Downland visitors. The strategic siting and availability of car parks are a key determinant in the distribution of visitors. They clearly provide a powerful management tool. Roads, paths and bridleways provide the communication between Downland sites. The provision of refreshment facilities is a key determinant in the establishment of visitor honeypots, particularly if linked with places set aside for outdoor recreation.

Having established the key infrastructure requirements of present Downland visitors it is notable that the vast majority of visitors (97 percent) were satisfied with the general standards of facilities. Investigating this further, Standeven ascertained that in West Sussex, the generally high levels of satisfaction were unrelated to any entry fees incurred.²¹

The type of enjoyment derived from the Downland can be gauged from the ranking of the activities participated in, see Table 3.

From the large group of activities participated in by less than 10 percent of visitors, it is apparent that these are not central to the Downland experience. This is not to say that such activities are of low impact. Off-road cycling has a significant environmental impact both on other users of bridleways and on surface soil erosion. The principal users of the Downland are concerned with the first 11 activities in Table 3. In order to explore this aspect further each activity will be evaluated as a sub-sample analysis, thereby providing a detailed understanding of the principal user groups.

Table 3. Activities participated in on the Downland
(ranked by percentage)

Activity	Percentage of visitors participating
Enjoying the view	50.9
Walking less than 2 miles	35.5
Casually sightseeing	33.9
Picnic	30.2
Walking more than 2 miles	29.9
Outdoor recreation	26.6
Visiting specific attractions	18.9
Visiting stately home/ historic site/church	14.2
Exercising dog	12.8
Reading	10.3
Natural history/wildlife study	10.3
Visiting nature reserve	below 10 percent
Informal games	"
Off-road cycling	"
Kite flying	"
Watching organised sport	"
Road cycling	"
Organised outdoor event not to do with sport	"
Activity sport	"
Painting or sketching	"
Swimming	"
Horse-riding	"
Angling	"
Coach excursion	"
Metal detector treasure hunting	"

Visitor expenditure

The average daily overall expenditure per visitor²² was £15.98 although all individual expenditure will later be reconsidered in the light of group expenditure.

Food and Drink: Food and Drink is the area where the highest expenditure is anticipated by the visitor with transport the second.

On average the typical Downland visitor spends £5.4 on food and drink. Twenty percent expect to spend nothing and a further 59 percent expect to spend less than £8. Although the percentage of visitors with expenditure above £8 is small, the higher expenditure per capita results in gross revenue increasing for the higher value category. This suggests that "high spend, low volume" offers better returns than "low spend, high volume". This marketing consideration particularly applies in the £20+ value category but only in the Food and Drink sector.

Travel: Eighteen percent of all visitors expect to pay nothing in travel costs with a further 67 percent paying less than £8. The percentages for the higher value categories reduced

dramatically and this can be interpreted as £10 being about the maximum that the majority would be expecting to have to spend on travel. The average is £4.60.

Entry Fees: These are without doubt not considered part of the Downland experience by many. The average is £3.50 but 46.6 percent expect to pay nothing at all.

Other: Little or no other expenditure is anticipated by 85 percent of visitors who would not expect to pay more than £5. Fifty seven percent of the total expect to pay nothing. The average is £2.60.

Care needs to be exercised in applying these expenditure figures. They would not for example apply to children and likely reflects the expenditure of the group leader rather than each individual in the group, depending on the nature of the group. The data does give important relative relationships between different types of expenditure. The economic implications are debated later.

Key user groups

Having established the characteristics of the typical Downland user, the Visitor Survey also enables distinct user groups to be identified as sub-samples. This in turn provide the means for a clearer understanding of how the Downland is being consumed, and to what extent, by the key user groups. These user groups become the basis for the market sector analysis and in turn enable specific markets to be targeted as part of a management strategy for the education of the Downland as a recreational amenity.

Table 4. Number of visits per annum by key user activities on the Downland (ranked by magnitude)

Activity	Percentage of visitors participating	Number of visits (millions)
00 All activities	100.0	32.50
01 Enjoying the view	50.9	16.54
02 Walking less than 2 miles	35.5	11.54
03 Casually sightseeing	33.9	11.02
04 Picnic	30.2	9.82
05 Walking more than 2 miles	29.9	9.72
06 Outdoor recreation	26.6	8.65
07 Visiting specific attractions	18.9	6.15
08 Visiting stately home/historic site/church	14.2	4.62
09 Exercising dog	12.8	4.16
10 Reading	10.3	3.35
11 Natural history/wildlife study	10.3	3.35
Total of all usage aggregated		88.92
Resulting overlap factor (percent)		274%

From Willis et al, it is possible to suggest the number of visits, for all purposes, that are made to the Downland in any one year. The estimates given suggest a total of 32.5 millions. Also it has been demonstrated that a substantial percentage are local users, rather than tourists in a more traditional sense.

Table 3 provides a ranked list of the 11 principal activities undertaken by visitors. Using the overall number of visits calculation, estimates of the number of visits in a year that include a specific activity can be formulated. These are reproduced in table 4.

Using the sub-samples from the Visitor Survey it is now possible to identify, and comment on, the specific characteristics of each of the principal user groups; in particular those characteristics which differ noticeably from the typical Downland user. The overlap factor of 274 percent quantifies the degree whereby individual user groups encroach on other groups. It should be noted that the overlap figure excludes other minority uses which are considered later. The aggregated number of total visits of 88.92 millions indicates that many visits have a multi purpose role to arrive at 32.5 million actual visits in a year.

1. Enjoying the view - the "landscape enthusiast"

Sixteen and a half million visits are made to the Downs in a year, where the view is acknowledged as an meaningful part of the experience. This underlines the importance of the visual landscape to visitors on the Downs.

There is an slight inclination for this group to be more involved in walking and outdoor recreation including casually sightseeing than the typical Downland visitor. They are also more inclined to spend 3-6 hours on the Downland and less inclined to spend larger amounts on Food and Drink.

The large percentage of visits where the view is an important consideration suggests that "landscape enthusiast" is a term that could be applied to one in two visitors regardless of their particular pursuits. This is born out by the research which indicates that the characteristics of the "landscape enthusiast" are, by and large, similar to the typical Downland visitor. The "landscape enthusiast" is not therefore seen as a distinct consumer sector but as an characteristic commonly occurring in all other groups.

2. Walking less than 2 miles - the "short walkers"

This is the largest of the consumer groupings identified in the Visitor Survey. In many respects this group is similar to the typical Downland visitor. Eleven and a half million visits per annum are made by this market sector to the Downland. Of those who stay overnight, they are more likely to be on a short break and staying with friends and relatives than the typical Downland visitor. They are more likely to be in a family group and for some inexplicable reason, more likely to visit souvenir shops. Their visit is more likely to be between 1 and 2 hours and they are more inclined to pay small amounts for food and drink. They are average spenders except in the "other" category where they have an inclination to spend above average. They are more inclined to visit less than once a month and will more likely be casually sightseeing. They are more likely to be aged in the 25-44 range and of middle management or of retired/unemployed/student status.

3. *Casually sightseeing* - the "facility seekers"

Eleven million visits are made to the Downs each year for casual sightseeing. This is the market sector that seeks facilities and organised attractions. They are more likely to be staying away overnight, either on a short break or one weeks holiday. They are more inclined to use a touring caravan or hotel and to have travelled between 11 and 50 miles a day as part of their leisure activity.

They are influenced by brochures more than the typical Downland user and are also more inclined to use facilities of all types. This is reflected in the greater preparedness to pay for all areas of expenditure researched, particularly in the middle value bands. They are more likely to spend between 3 and 6 hours on the Downland and the landscape/view is of particular importance as a backcloth to their activities.

This market sector is a prime target for commercial recreation undertakings on the Downland.

4. *Picnic participants* - the "picnickers".

There is a higher preponderance of skilled manual workers in this sector. They are less likely to be staying away overnight and those that do are less likely to use formal accommodation, preferring a tent or similar. They are more likely to be in a party and to have journeyed between 51 and 100 miles. Ten million visits take place to the Downland each year by people who consider picnicking an integral part of the experience.

They are more inclined to visit specific locations and make great use of toilets during their visit, which is more likely to exceed 3 and even 6 hours, compared with the typical Downland visitor. They are more prepared to pay for all areas of expenditure except food which they doubtless bring with them. This preparedness manifests itself in the middle value bands. This applies particularly to entry fees, reflecting their desire to visit formal locations such as museums and castles.

The "picnickers" are less likely to be regular visitors, being more inclined to visit once a month or less or even never before. When on the Downland they are more inclined to participate in informal activities such as kite flying and games and seek a specific area for this. Walking and general outdoor recreation is more significant to this group than to the typical Downland visitor and the landscape is an identifiably important part of the experience.

5. *Walking more than 2 miles* - the "keen walkers"

Subtle differences are identifiable from the Visitor Survey data relating to the characteristics of the "keen walker", compared with the typical Downland visitor. Ten million visits per annum are made by people who consider walking over 2 miles a key part of the experience. Although there is no marked tendency to stay overnight more than the typical user, those that do are more inclined to stay for two nights and use bed and breakfast or a guest house or possibly a touring caravan. They are also more likely to be a couple and in the 45-64 age range. Above average numbers will have travelled less than 5 miles.

"Keen walkers" will more likely always have known about the Downs and/or refer to leaflets. Footpaths and bridleways are of particular importance, as would be expected but so are public houses, Downland villages and information boards compared with the typical user. The "keen walker" is likely to spend longer on the Downland with visits of 3 hours or more. On expenditure, they have a greater expectation of paying nothing for everything except travel where there is an expectation of higher than average expenditure in the £1-£8 ranges. Reading (possibly maps and guides?), exercising the dog, picnicking, visiting nature reserves and natural history/wildlife study all score above average expectation.

6. *Outdoor recreation* - the "general recreationalists"

The lack of clear distinction in this group suggests that it is an amalgamation of other sectors. It appears to especially reflect the "picnickers" and the "keen walkers". Eight and a half million visits to the Downland result from visitors who see outdoor recreation as important, but the general nature of the term means that it is only a vaguely discernable market sector.

Toilets, footpaths and bridleways and areas specifically set aside for recreation are of above average importance to this group who subscribe to a whole host of outdoor activities to a greater extent than the typical visitor. They are more likely to be in the 25-44 age range but have few other distinguishing characteristics.

7. *Visiting specific attractions* - the "wealthy tourist"

This market sector is the commercial opportunity for Downland enterprise. Six million visits per annum are made by this group who have a greater expectation of spending more, in all the areas researched, than the typical visitor. This group are likely to have come greater distances. They are more likely to be on an overnight short break, in formal, commercial accommodation or staying with friends and relatives, and more likely to have found out about the Downs by word of mouth or leaflets. As would be expected they are more likely to use the full range of organised facilities and in doing so spend 3 or more hours on the Downs.

They appear to use the Downs as a convenient recreation facility between the more formal location visits. In doing so they are more likely to enjoy the view, picnic and walk a short distance.

The "wealthy tourist" is more inclined to be in the 45-64 age range, in the middle or senior management category, and female! They may well be accompanied by family however although they are less likely to be frequent Downland visitors.

8. *Visiting stately home/historic site/church* - as in 7.

This group replicates those in 7. above, almost exactly and is therefore not a separate sector in it's own right.

9. *Exercising dog* - the "dog walkers"

The research suggests that 4 million visits are made to the Downland each year where dog walking is part of the experience. This popular use of the Downs results from a distinct profile of

visitor. The volume of excreta deposited on the Downland as a result provides opportunity for an interesting diversionary calculation.

Dog walkers are prepared to travel some distance but not more than 100 miles. More than two thirds come from Sussex and as would be expected the data from the Visitor Survey shows a clear inclination to have travelled less than 10 miles.

The "dog walker" has a minimal expectation of spending in any of the areas researched except travel of between £1-£2. As such they are the user group with the lowest per capita expenditure. They are more likely to be the very frequent visitor, using the Downland once a week or more. They are more inclined to use footpaths and bridleways together with Downland villages but less inclined to use formal facilities. They are short stay visitors by and large, being more likely to stay less than two hours. They are not long distance walkers, being more likely to walk less than two miles.

"Dog walkers" are more likely than the typical visitor, to be on a day trip but for those who are staying overnight, touring caravans assume an above average importance. They are more likely to be a family or couple who have always known about the Downs.

The landscape is of above average importance to this group who are inclined to be in the 65+ age group and therefore retired. The above average degree of satisfaction noted suggests that to this group the Downland is a welcome low price amenity, which they use constantly, with a great degree of pleasure.

10. *Reading* - the "quiet recreationalists"

Those who enjoy reading on the Downland form a distinct group, albeit they will also be included in some of the other user groups. They are more likely to be on a short break using formal accommodation or a touring caravan in an inland location. They are inclined to have always known about the Downs and will use toilets, tea and refreshment bar facilities and the footpaths network to a greater extent.

They stay longer periods on the Downland than the typical visitor and are inclined to walking, picnicking, general outdoor recreation and sightseeing. The view, epitomising landscape, is an important element in the experience of this group. They expect to spend more on travel in the £3-£12 categories and are more likely to be from the middle management social stratification.

This group account for 3.4 million visits to the Downland in a year.

11. *Natural History/Wildlife Study* - the "nature appreciators"

In many respects this group is similar to the typical Downland visitor although only representing 10 percent of visitor numbers; 3.4 million visits in a year. This reflects the fact that those with an interest in natural history pervade all user groups and do not make a clearly identified user group in their own right. Two characteristics which do differentiate this group however are: 1) the use of interpretation facilities, whether they be information boards, museums or countryside centres, and 2) the inclination to spend longer periods on the Downland than the typical visitor.

They are also inclined towards long distance walking, picnicking and visiting historic sites. The view and general outdoor recreation are important to this group and they seek areas set aside for recreation which they are inclined to visit more frequently than the average user.

Refining the user groups

From the analysis, 9 principal user or consumer groups emerge if type 1, "those who enjoy the view" is seen as a generic attribute rather than a characteristic of a user group. In addition a number of minor user groups can be identified with specific characteristics. Due to their individual size (less than 10 percent of total visitors) their impact on the Downland is not at a substantial level. It should be noted however that in total, minority group use exceeds the most popular of specific user groups. In preparing this analysis it was observed that the characteristics are not totally exclusive to any particular sub-sample however. All groups display characteristics which vary only slightly between groups.

The above evaluation was based on a manual comparative study of the sub sample data. Statistical confirmation of the findings was sought using a correlation matrix on SPSS. The matrix showed little distinct structure which is indicative that the user groups are not "stand alone" discrete clusters but rather modest variations on a central proposition, the typical Downland user. The typical Downland user is therefore a robust description, the characteristics of which cover all principal users with only minor variation, rather than a collective description for an assortment of totally different users.

The principal Downland user groups are summarised in Table 5.

Table 5. Principal consumer groups on the Downland (per annum)

Group	Percentage of all visitors	number of visits (millions)
All users	100.0	32.50
Short walkers	35.5	11.54
Facility seekers	33.9	11.02
Picnickers	30.2	9.82
Keen walkers	29.9	9.72
General recreationalists	26.6	8.65
Wealthy tourists	18.9	6.15
Dog walkers	12.8	4.16
Quiet recreationalists	10.3	3.35
Nature appreciators	10.3	3.35
Amended total of all visits		67.76
Amended overlap factor (percent)		209%

The refining of the identifiable user groups has enabled the overlap factor to be substantially reduced from that in Table 4, thereby giving more clearly defined market sectors. In addition, by adjusting the overlap factor to 100 percent, it is possible to calculate segmentation of the total "market" of 32.5 million visits by user groups. To do this however it is necessary to consider

those minor usage groups, revealed by the Downland Visitor Study but not included in the principal use analysis. In view of the high incidence of overlap, it is considered safe to assume that minority groups are accommodated within the principal groups. Table 6 identifies the market segmentation, which of course is "by volume".

The percentage of market has been arrived at by taking the number of known visits by each usage group as a percentage of all usage aggregated. The number of visits factor is then calculated by dividing the total visits of 32.5m according to the percentage of the market. It can be seen that the greatest single interest is short walkers which accounts for 17.0 percent of all Downland use. In turn this gives a visits factor of 5.54m of the 32.5m total known visits.

Table 6. Market segmentation by principal consumer usage on the Downland (per annum)

Group	Percentage of 'market'	indexed* number of visits factor (millions)
Short walkers	17.0	5.54
Facility seekers	16.3	5.29
Picnickers	14.7	4.71
Keen walkers	14.3	4.66
General recreationalists	12.8	4.16
Wealthy tourists	9.1	2.95
Dog walkers	6.1	2.00
Quiet recreationalists	4.9	1.61
Nature appreciators	4.9	1.61
Total	100.0	32.50
Amended overlap factor (percent)		100%

*Totals within 0.1 due to decimal rounding

Alternative evaluation of economic worth

On the Downland, tourism, conservation and the environment are inextricably linked. This paper now considers the possibility that these issues can have an economic value in a similar manner to farming on the Downland. Earlier it has been shown that Willis calculated a value for the landscape, based on a willingness to pay tax enquiry. It was concluded that there was an annual economic value of the Downland landscape of £80 million. The cost of maintaining the landscape was also identified by Willis as £4.32m payments to farmers and £1.94m public exchequer costs adjusted for EC contributions. The cost/benefit relationship is apparent and as a result, Willis argues that the nation gets good value for money.²³

The findings of the Downland Visitor Survey provide an alternative method of calculating the economic worth of the Downland derived from use for recreational tourism. It is estimated that 32.5 million visits are made to the Downland in a year. From the Visitor Survey it is known that the average expenditure per visit is £15.98. From these two figures it can be argued that the Downland generates £519.45 million in consumer expenditure in a year. This figure however is a substantial overstatement due to the nature of the questionnaire. Respondents were likely to be group or family leaders and expenditure figures reflected group expenditure rather than per

capita. As noted previously, the median for group size is 3.27 persons. Using this figure, per capita expenditure is: $\pounds 15.98 / 3.27 = \pounds 4.89$.

This figure sits comfortably with the findings of the UK Day Visits Survey, undertaken by Survey Research Associates for a wide range of agencies with countryside interests. The Survey found that the average spend per visit to the countryside was $\pounds 7.50$ but excludes individuals below the age of 15 years.²⁴ Group expenditure on the Downland calculates to $\pounds 13.74$ for all day visitors; this gives a per capita expenditure of $\pounds 4.20$ with 3.27 persons per group including children. The Downland as a low price recreational resource, with a high incidence of local usage, understandably produces a lower per capita spend, although the notion that this is calculated from an assumed group expenditure suggests that the Downland figure is a minimum, safe estimate.

Given that there are 32.5m visits to the Downland, consumer expenditure per annum, generated by the Downland is $32,500,000 \times \pounds 4.89 = \pounds 158,925,000$ ie $\pounds 159$ millions.²⁵

To put some scale to this substantial figure, the carriageway widening on the M25 between junctions 10 and 11 in 1994 is costed at $\pounds 35$ million²⁶; Proctor and Gamble plan to spend $\pounds 130$ million in 1994 on advertising²⁷; the Health Education Authority costs $\pounds 56$ million to run per annum²⁸ and the top ten UK travel advertisers spent $\pounds 97$ million on advertising in 1993.²⁹ The Downland is therefore a substantial economic generator.

Only a small portion of the $\pounds 15.98$ group recreational tourism expenditure is being made within the Sussex Downland, this is apparent from the breakdown of the total figure. The Visitor Survey data indicates that it is made up of $\pounds 5.38$ on food and drink, $\pounds 4.56$ on travel costs, $\pounds 3.47$ on entry costs and $\pounds 2.57$ on other costs. Table 7 illustrates the segmentation of the market by type of expenditure. Even entry fees will largely have been made at locations not strictly within the Sussex Downland.

Table 7. Expenditure segmentation by type of expenditure on the Downland (based on 32.5m visits per annum)

	Per capita visit	All visits £m	Percent of all expenditure
Food and drink	1.65	53.47	34
Travel	1.39	45.32	28
Entry fees	1.06	34.49	22
Other expenditure	.79	25.55	16
All expenditure	4.89	158.83*	100

*slight inaccuracies due to decimal rounding

Source: Visitor Survey (all data) and Willis et al

Economic worth of user groups

The principal user groups of the Downland have been identified. From this data it is now possible to consider the economic worth of each user group based on the expenditure that they

each make. From the Visitor Survey it is possible to calculate expenditure per visit, by type of expenditure, by user group. This is given in Table 8.

Table 8. Family/group expenditure by type and by principal user groups on the Downland (£'s per visit)

Group	Food & Wine	Travel	Entry Fees	Other	All
Short walkers	5.58	4.53	3.53	3.87	17.51
Facility seekers	6.80	5.13	4.19	3.37	19.49
Picnickers	4.90	5.27	4.62	3.11	17.90
Keen walkers	5.45	4.49	3.58	2.49	16.01
Gen. recreationalists	5.84	4.93	4.00	3.15	17.92
Wealthy tourist	7.25	6.19	7.55	5.79	26.78
Dog walkers	4.31	3.54	1.65	1.65	11.15
Quiet recreationalists	6.55	5.18	3.56	3.19	18.48
Nature appreciators	6.08	4.95	4.46	3.04	18.53
All	5.38	4.56	3.47	2.57	15.98

Source: Downland Visitor Survey

Table 9. Expenditure by principal user groups on the Downland

Group	Group/family each visit (£)	Per capita each visit (£)	Indexed visits factor (m)	Expenditure all visits (£m)	Percent value share
Short walkers	17.51	5.35	5.54	29.67	16.3
Facility seekers	19.49	5.96	5.29	31.53	17.4
Picnickers	17.90	5.47	4.71	25.78	14.2
Keen walkers	16.01	4.90	4.66	22.82	12.6
Gen. recreationalists	17.92	5.48	4.16	22.80	12.5
Wealthy tourist	26.78	8.19	2.95	24.16	13.3
Dog walkers	11.15	3.41	2.00	6.82	3.7
Quiet recreationalists	18.48	5.76	1.61	9.28	5.0
Nature appreciators	18.53	5.67	1.61	9.12	5.0
All	15.98	4.89	32.50	181.98*	100.0

*This misrepresents the actual of £158.925m due to bias in aggregation. The above figures are therefore of value in calculating percentage value share and are not absolute. See footnote ³⁰.

Source: Downland Visitor Survey and previous calculations

Using the data from Table 5, an estimate of each user group's share of the total economic worth can be calculated. To achieve this the total expenditure of each user group is multiplied by the number of visits factor thereby using the group visits indexed against the total 32.5 million

visits in a year. The "value" percentage share of each user group against the total can then be calculated. This complements the "volume" share of each user group given in Table 6.

Summary

Comparison between the volume shares estimated in Table 6 and the value shares estimated in Table 9 provides a measure of impact and economic worth of each user group. For example Dog walkers account for 6.1 percent of Downland use but only 3.7 percent of economic activity. By contrast wealthy tourists, although they account for 9.1 percent of Downland use, contribute 13.3 percent of economic activity. Volume and value shares are brought together in Table 10.

Table 10. Percentage volume and value by principal user groups on the Downland

Group	Percent volume share	Percent value share
Short walkers	17.0	16.3
Facility seekers	16.3	17.4
Picnickers	14.7	14.2
Keen walkers	14.3	12.6
General recreationalists	12.8	12.5
Wealthy tourists	9.1	13.3
Dog walkers	6.1	3.7
Quiet recreationalists	4.9	5.0
Nature appreciators	4.9	5.0
All	100.0	100.0
(Totals within 0.1 due to decimal rounding)		

Source: Tables 6 & 9

The £159 million of consumer expenditure per annum generated by the Downland in total, through direct taxation, represents a substantial revenue for the exchequer. Assuming all expenditure is subject to VAT at 17.5 percent, consumer expenditure gives central government a sum in excess of £24 million gross in direct taxation, before collection costs, as a result of Downland recreation. This compares with the cost of the Downland as identified by Willis and detailed earlier of £6.26 million. Willis's view that the nation is getting extremely good value for money is an understatement. It also indicates that a sum in the order of £135 million, excluding tax, is being spent into the economy on goods and services as a direct result of the Downland being available for recreation. Two provisos need to be stated in the application of these figures: a) that if the Downland were not available for recreation, expenditure would likely be made on other pursuits perhaps to a lesser extent and b) these figures are based on a number of assumptions which make them generally indicative rather than precise indicators. Further research would enable the data to be refined. In spite of the provisos, the data enables a considerable insight, not previously available, to be gained of Downland user expenditure.

As a result, user group volume and value relative importance can now be brought together for comparison purposes in Table 10.

From this paper a number of new ways of analysing Downland tourism emerge. The Visitor Survey has enabled principal user groupings to be identified and, when coupled with the Willis et al data, quantified. Having once established realistic volume figures, the Visitor Survey data has enabled economic value and shares to be put on user groups. Now that the user groups have been identified, subsequent research will enable the concept of user group volume and value to be refined. In this paper the economic value of the groups is compared with the costs of the Downland. This is a tenuous comparison in that there are other infrastructure costs necessary to support Downland tourism. It does however start to establish that the Downland, as a recreational resource, has an identifiable economic value. In addition the analysis will provide the basis of more informed management planning in the future, particularly as research methodology is further advanced and trend information over time developed.

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- ⁷ Willis K.G. *et al*, 1993. Report, Chapter eight. See table 8:4.
- ⁸ Willis K.G., 1994. *personal communication*, 7 Feb. para 1.
- ⁹ *ibid.* para 2.
- ¹⁰ Based on q.17 responses, using the median for each category, multiplying by the frequency and then taking the mean of the grand total.
- ¹¹ Willis K.G., *et al*, 1993. Report, chapter eight, table 8.4, calculated by subtracting percentage of visitors from the south region from 100 percent. The approximate compatibility of the south region with the south east counties of the Visitor Survey was determined in correspondence with Willis 19.4.94 and by reference to Appendix 4.8 of the Willis report, ESA General Public Survey Interview Sites.
- ¹² Countryside Commission, 1992. *Enjoying the Countryside, Policies for People*, CCP 371, p 10.
- ¹³ Countryside Recreation Network News, 1994. *1993 UK Day Visits Survey*, Survey Research Associates for Countryside Commission, Countryside Council for Wales, Scottish Natural Heritage, Scottish and Wales Tourist Boards, Forestry Commission, British Waterways and Dept. National Heritage, Volume 2, Number 1, Feb, page 8.
- ¹⁴ Countryside Commission, 1992. *Protected Landscapes in the UK*. CCP 362, p5; areas of National Parks, taken as 10 percent of total land area as generally published.
- ¹⁵ Sinclair G., 1992. *The Lost Land - Land Use Change in England 1945-1990*, CPRE, see table/ appendix 17.

- ¹⁶ Willis K.G., *et al*, 1993. Report, Table 5.18.
- ¹⁷ Tranter R.B., Bennett R.M. and Beard N.F., 1994. *Valuing Woodland Walks*, University of Reading, reported in Countryside Recreational Network News, Vol 2 No 2, June.
- ¹⁸ Willis K.G., *et al*, 1993. Executive Summary, page 9.
- ¹⁹ Standeven J. *et al*, 1994. *Sussex Downland Visitor Survey*.
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- ²² Analysis note: In order to estimate actual expenditures, visitor numbers by value category have been multiplied by the median value of each category. In the case of £20+, a figure of £25 has been used.
- ²³ Willis K.G. *et al*, 1993. Executive Summary p10.
- ²⁴ Countryside Recreation Network News, 1994. *1993 UK Day Visits Survey*, pages 1 and 7-12.
- ²⁵ This is a "safe" figure being a likely understatement of the actual (see Table 9 and related footnote).
- ²⁶ Public notice displayed on M25.
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- ²⁸ Murray I. 1994. "The Petting of the Body Politic", *Marketing Week*, 1 April, page 58.
- ²⁹ *Marketing Week*, 1994. Top 100 Advertisers, 13 May, page 40.
- ³⁰ This results from the overall expenditure being averaged across all respondents, including random non responses within individual groups; whereas the user group expenditure is only taken across the sample recorded for that user group, thereby excluding non responses. Furthermore, the total is based on selected sub samples with indeterminate overlap and not all sub samples. All group expenditure is therefore proportionately misrepresented. In addition some minor error is accrued by decimal rounding.