
The Economic Impact of Walking and Hill Walking in Wales

By: Dr Jane Bryan, Dr Calvin Jones, Prof Max Munday, & Mr Neil Roche,

Welsh Economy Research Unit

Cardiff University



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WELSH ECONOMY RESEARCH UNIT
Yr Uned Ymchwil i Economi Cymru

EXECUTIVE SUMMARY

- It is estimated that in 2009 there were 28 million walking related trips to the Welsh countryside and coast. Expenditure associated with these walking and hill walking trips was around £632m (direct spending).
- After leakages from this direct spending were removed, and the indirect impacts calculated through Input Output modelling, the overall expenditure impacts of walking activities in 2009 were estimated as:

£562m of additional demand in the Welsh economy;

£275m of gross value added;

and around 11,980 person-years of employment.

- Walking and hill walking activities in 2009 accounted for around 16% of the total tourism GVA in Wales.
- Domestic overnight visitors staying away from home in Wales were the major contributing factor to the overall economic impact of walking and hill walking in Wales.
- Much of the value in this study rests in the development of a baseline of tourism consumption spending associated with walking and hill walking. It is only recently that the opportunity has become available to undertake this type of analysis with improvements in underlying survey resources and with a system of Welsh tourism satellite accounts with which to explore the components and contribution of different types of tourism spending in Wales.
- The developed baseline becomes a means through which policymakers and walking institutions in Wales can now better understand the effects, for example, of initiatives which might increase the number of walking trips taking place in Wales. For example, this type of baseline will be particularly valuable where projects in Wales are claiming that interventions will lead to an increase in numbers of walking trips, but with no real means of understanding what an increase in trips means for the Welsh economy.

- More generally the analysis adds to the evidence base on the economic services derived from Welsh ecosystems. The developing Natural Environment Framework (NEF) in Wales is seeking to emphasise the connections between the social, economic and environmental dimensions of ecosystems and the services they provide. Visitation associated with walking is one component of this economic dimension. While it is very difficult to associate monetary values to bio-diversity and landscape, it has been possible here to assign monetary value to one set of intrinsic activities closely linked to the quality of regional environmental assets.

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1 Introduction

1.1 This report

1.1.1 The Welsh Economy Research Unit of Cardiff Business School was commissioned by Ramblers Cymru, Visit Wales, British Mountaineering Council and Countryside Council for Wales in November 2010 to undertake an analysis of the economic impact of walking and hill walking. In this report we set out the findings from our analysis. The remainder of this section outlines some context for the work, the objectives of the commission and then the structure of the remainder of the report.

1.2 Why consider the value attached walking & hill walking?

1.2.1 Across the UK there has been a series of studies that have estimated the economic value of walking and hill walking at different geographical scales. This has included research undertaken in Wales (see for example, Midmore, 2000). However since previous work was commissioned there have been major changes in access legislation in Wales (and across the UK). Furthermore there has been far more attention in Wales given to the stream of services deriving from natural capital, and the amounts of tourist and resident activity connected to different elements of the built and natural environment.

1.2.2 As we will show in this report there are a number of factors to be considered in analysing the economic impact of walking and hill walking to Wales; not least one of definition. However, while the analysis required to fully encompass the economic impacts of walking is necessarily complex, there is real value for policy makers and other institutions in understanding how, for example, visits levered by environmental assets link to wider economy effects. Furthermore these impacts are not just felt in 'tourism facing' sectors, but with visitor consumption supporting activity in a wide range of Welsh sectors. There is also a strong expectation that the magnitudes of economic impacts varies between categories of visitor, for example, between resident, day-trippers, and staying visitors (whether from Wales, other parts of the UK or overseas). We expect that an improved understanding of economic impact of discrete leisure activities could inform marketing strategies for tourism bodies in the public and private sector, but also inform work that explores the stresses on the natural environment expected to result from trends in visitation.

- 1.2.3 While previous analysis of the economic impact of walking in Wales has tended to rely on spending data generated in other regions, there is now the opportunity to develop estimates based more on what we know about different types of visitation in Wales, and the specific interconnections between visitor demands and the wider Welsh economy. We show in this report that the statistical base to inform estimates of tourism's economic impact have improved markedly. In particular the period 2005-10 has seen a much improved economic accounting of general tourism activity in Wales (including the development of a regional tourism satellite account detailing the spending patterns of different types of visitors and enabling for the first time a proper appreciation of tourism's contribution to regional gross value added (see Jones, 2010).
- 1.2.4 As shown above the need to better understand the economic impacts of walking and hill walking in Wales also links to recent changes in access legislation, together with continued improvements to key walking routes in Wales including the Pembrokeshire Coastal Path and with continued innovation being planned in linking tourism sites to multi use tracks, for example, the Dee Multi Use Trail. At the same time there are also other factors to be considered, not least the effects of major infrastructure and energy projects on tourism receipts linked to walking (i.e. recent examples here would include the development of the natural gas pipeline from Milford to Tirley in Gloucestershire; and plans for new on shore wind in upland areas managed by the Forestry Commission). Estimates of the economic value of walking also allow policymakers and planners to better appreciate the economic effects linked to shocks such as the foot and mouth outbreak which restricted access to considerable parts of Wales.
- 1.2.5 In short there is a need for a new analysis of the economic impact of walking and hill walking, and it is expected that such an analysis will serve a series of needs.

1.3 Research objectives and issues arising

- 1.3.1 Following from the above the main objectives of the research project can be summarised as follows:
- 1.3.2 First, to estimate the overall economic value of walking and hill walking to Wales in terms of the amounts of gross value added and employment supported by tourism consumption associated with walking. This enables us to show how the economic contribution of walking and hill walking can be compared to the overall value of tourism in Wales (in terms of contribution to GVA), and its value in comparison to GVA of the Welsh economy as a whole.

- 1.3.3 Second, is to show how the spending of walkers is distributed between different goods and services, and then the extent to which walkers spend monies on goods and services actually produced in Wales as opposed to being imported. This is a key issue in understanding the indirect economic impacts in Wales associated with tourism spending.
- 1.3.4 Third, to set the economic analysis in the context of an appreciation of a series of wider welfare benefits associated with walking and hill walking, informed by a review of existing literature on the topic.
- 1.3.5 Finally, to provide a series of recommendations for the monitoring and evaluation of the economic impact of walking and related recreational activities in Wales, as well as for funded programmes and projects.

1.4 Structure of the report

- 1.4.1 The remainder of the report is structured as follows. In the second section we briefly review literature on the economic significance of walking, but go on to consider some of the wider welfare benefits arising. For example the impacts of increased levels of walking might be seen in increased personal well-being. While it might be difficult to place a value on selected welfare improvements arising from increased walking it is no less relevant to the debate.
- 1.4.2 The third section outlines something of the walking 'resources' available in Wales, and describes the main institutions that support walking and hill walking in Wales.
- 1.4.3 The fourth section described the statistical sources used to inform the analysis, outlines the methodology employed and the issues that need to be considered in the analysis. The fifth section then provides the result from the analysis, considering both the direct and indirect economic impacts levered by visitor spending associated with walking.
- 1.4.4 The final section concludes, revealing the key points to come from the analysis and providing recommendations for further research.

2 The benefits of walking?

2.1 Background

2.1.1 In the absence of mechanical intervention, walking is the principal method by which humans move from place to place. Walking will always be an important form of transport. Moreover, as our dependence on mechanical intervention increases, then so walking becomes even more important as a leisure activity – which, in large measure, is free to all.

2.1.2 The following statistics from Department of Transport (2007) are of value in understanding something of the significance of walking in general (Department of Transport, 2007).

- 36% of people say they walk 20 minutes or more (including walks which are not on the public highway) at least 3 times a week,
- Walking accounts for nearly a quarter (23%) of all trips and 3% of the total distance travelled by people in the UK,
- In addition to the 245 trips per year mainly made on foot in 2005, the average person walks 67 further stages (parts of other trips which are mainly by another mode of transport).
- The average distance travelled on foot is around 200 miles per person per year.

2.1.3 By 2009, the Department for Transport reported that while walking retained a 23% share of all trips undertaken, more of their latest survey respondents (41%) made walks of 20 minutes or more at least 3 times a week. Walking was still a frequently used mode of transport used for education, shopping, and personal business (Department of Transport, 2009a, 2009b, 2009c).

2.1.4 According to the National Travel Survey (2008/09) walking constituted 20% of all trips undertaken in Wales, and 2.1% of the total distance travelled (Welsh Transport Statistics, 2009).

2.1.5 Moreover, walking is also a hugely popular form of recreation, which is '*a near-universally accessible and acceptable form of physical activity*' (Wimbush et al., 1998). Many more people choose to take exercise through walking rather than swimming, cycling or going to the gym. Walking is of benefit to individuals and the public good by reducing the pain and cost of illness and disease. Other indirect economic benefits are gained through agencies and societies using walking resources to attract visitor spending into a given locality. This section provides a review of the literature on these benefits.

2.2 Definitions

- 2.2.1 Walking is both a means of transport and a leisure activity. Leisure walking takes many forms: race-walking, walking with weights, Nordic walking and hiking, bush-walking, walking to raise funds for charity, treadmill walking, hill and mountain walking and so on. The activity invariably occurs daily, and permeates our language: 'shanks pony', 'daily constitutional', 'going for a stroll', 'ground pounding', 'rambling' etc.
- 2.2.2 Here the focus of the analysis is on leisure walking which includes hill walking associated with visitation. In the commentary and analysis that follows we take hill walking to include mountaineering. Fundamentally, we try to assess the spending that can be associated with different types of walking visitation. It is accepted that this is a narrow definition. For example, this would take no account of residents undertaking short walks in their own localities. However, much of the spending associated with walking and hill walking is associated with day visits and staying visits. This focus also allows some degree of comparison with other types of leisure visits.

2.3 Review: economic benefits

- 2.3.1 The health benefits linked to exercise and walking are of interest to policy makers because they can reduce the claim on the public purse, as well as improving the quality of life for individuals. While indirectly related to walking per se, there are a number of estimates which convert these health benefits to national health bill savings. For example, it has been estimated that the ill-effects of physical inactivity cost the National Health Service (NHS) in England in excess of £1bn annually (Allender *et al.*, 2007).
- 2.3.2 A House of Commons Health Select Committee Report in 2004 quoted the findings of the House of Commons Scrutiny Unit which estimated that obese people cost the NHS £1bn a year. Other estimates have linked money spent on health walk schemes to cost-savings of up to a factor of seven (Heron and Bradshaw, 2010).
- 2.3.3 However, the quantifiable benefits of walking have generally been explored with reference to impacts on the tourism economy. While walkers contribute to the tourism economy, it is an intricate process estimating separate walking-specific spending from more general visitation spending. This analysis appears in the fourth section of the report. Below is a review of studies that have considered the economic impact of walking and which contextualise the analysis in this report.

- 2.3.4 Christie and Matthews (2003) examined the economic and social value of walking in England. They estimated the walking 'resource' in the English countryside to be in the order of 188,000kms of rights of way, and over 33,600 km of long distance paths, in addition to innumerable shorter local 'promoted' footpaths. Following the introduction of the Countryside and Rights of Way Act 2000 (CRoW), they reported the expectation of 1 million hectares of open access land becoming available to walkers.
- 2.3.5 Using an estimate of 527 million walking trips undertaken annually, and an associated estimated expenditure of £6.14bn, they were able to calculate income generated from this spend at between £1.4bn to £2.7bn. This income was linked to between 180,559 and 245,560 full time jobs (FTEs) being supported by spend related to walking trips.
- 2.3.6 The Tourism and National Environment Audit for Scotland (Scottish Parliament, 2002) estimated that visitors to Scotland who were walkers and cyclists spent around £438m. Meanwhile, a 2008 study using the results from the Scottish Recreation Survey showed that 384 million outdoor recreation trips in Scotland could be linked to £2.8bn of spending. This study estimated that 80% of these outdoor trips had walking as the prime motivation, (Cuninghame, 2009).
- 2.3.7 Research has also been commissioned to look at the value of specific routes. For example, the South West coast path which comprises 630 miles of walking from Minehead on the edge of the Exmoor National Park to the shores of Poole Harbour in Dorset, has been estimated to generate over £300m a year for the local economy in 2002, with over a quarter of all visitors dedicated to walking the path. It is estimated that spending associated with the visitation supported 7,500 jobs. The path is also used by local residents, and their spending (estimated to be £116m) is then *retained* in the local economy. Income from path usage far exceeded the cost of its maintenance (South West Tourism/University of Exeter, 2003).
- 2.3.8 Other important routes have been the subject of similar research. Hadrian's Wall Path, which became the UK's 15th National Trail in 2003 and has 84 miles of uninterrupted walking along the riverside route in Tyneside, through farmland in Tynedale and a grazing upland section following the Whin Sill escarpment, has been estimated to attract £5m of annual visitor spend (Natural England, 2007).
- 2.3.9 Similarly, the West Highland Way in Scotland which links Milngavie, just outside Glasgow to Fort William in the Highlands, is estimated to attract 75,000 visitors a year which has been linked to £3.5m of spending, supporting over 200 local businesses (Wood-Gee, 2008).

- 2.3.10 The 2007 National Trail User Survey revealed that 93% of their users were walkers, and 51% were staying away from home. It was estimated that in 2004/05 that 12m visits are made to the National Trail Network in England and Wales each year (Natural England/Countryside Council for Wales, 2007).
- 2.3.11 In their report, Christie and Matthews (2003) suggested that the proposed (but under threat) All England Coast Path (a 2,500 mile route) could generate over £2.5bn of visitor spending per year, this supporting 100,000 full time equivalent jobs.
- 2.3.12 Midmore (2000) examined the economic value of walking in rural Wales. In order to calculate the direct effects of walking he used expenditure and employment data from a Scottish Natural Heritage study but then adjusted the figures to compensate for known differences in the profile of visitors to Wales. He reported a conservative estimate of £55m of incomes supported by walking and an estimated 3000 jobs. Mountaineering activities accounted for a further £22m of income and 1,250 jobs. Together this represented around 2% of rural GDP and 1% of rural jobs in Wales.
- 2.3.13 Midmore concluded that the potential role of walking in Welsh rural economic regeneration was being under-exploited.
- 2.3.14 In March 2006 the Countryside Council for Wales commissioned a study to examine the business benefits derived from the National Trails in Wales. The researchers identified over 600 accommodation providers having the potential to get business from trail users. On average, a third of turnover from these providers was derived from trail-users, with just over two thirds of accommodation providers experiencing growth from this source. The study also demonstrated the importance of trail users to local shops and pubs, restaurants and cafes.

2.4 Wider benefits

- 2.4.1 The review has already touched on the importance of the wider welfare benefits derived from walking. While this study focuses on spending associated with walking leisure visitation in Wales it is necessary to flag up the general welfare benefits.
- 2.4.2 In general terms modern lifestyles which include the extensive use of motor vehicles and public transport over walking can be connected to a series of health conditions. Walking for between 30-60 minutes on at least 3 occasions a week has been shown to deliver a number of health benefits (Pate *et al.*, 1995), and reduce the risks contracting the following conditions:
- Type 2 diabetes,
 - Heart disease (see British Heart Foundation, 2003; Powell *et al.*, 1987),
 - Cancer (see Department of Health, 2004; U.S. Department of Health & Human Services [USDHHS] & Centres for Disease Control & Prevention [CDC], 1996)

- Anxiety and depression (USDHHS & CDC, 1996).
 - Diseases linked to excesses of low-density lipoprotein (LDL) cholesterol
 - Obesity
 - Hypertension
 - Senile Dementia and Alzheimer's disease.
- 2.4.3 One of the earliest robust cost-benefit analyses of health outcomes of walking was conducted by Jones and Eaton in 1994. They estimated the annual cost (including lost productivity) of heart disorders to the US economy to be \$109bn in 1992. La Croix *et al.* (1996) observed that heart disease was also contingent on the amount of walking undertaken, with those walking for more than four hours a week experiencing a 30% reduction in hospitalisation compared to those who walked for one hour a week. Manson *et al.* (1999) found a similar result for women walkers, while Hakim *et al.*, (1999) found that heart disease was halved in men who walked over 1.5 miles a day.
- 2.4.4 Hardman (1999) looked at the health benefits associated with physical activity (by walking), and noted the relationship between ill health (including cardio-vascular condition, insulin sensitivity and bone density) and low levels of exercise. While the focus of this research was on the type of exercise i.e. short sharp bursts, versus more prolonged walking, it concluded that increasing physical activity had undoubted health benefits: 'the length of a session of physical activity must influence its potential to confer metabolic adaptations relevant to cardiovascular risk' (Hardman, 1999).
- 2.4.5 Garcia-Aymerich *et al.*, 2006) also note risk reduction for those with chronic pulmonary disease among regular walkers. Heron and Bradshaw (2010) highlight the many benefits of exercise and walking in particular for people over 50, where those who are physically active will enjoy 1.1 to 3.7 more 'quality years' than average. McTiernan *et al.*, 2003 show that older women who walk between 1 and 1.25 hours per week reduce the risk of breast cancer by 18%. This reduction in risk is shown to rise to 35% in women of normal weight.
- 2.4.6 Other work has looked at the benefits of developing good exercise habits in childhood and adolescence, showing that an active childhood lays down the foundation for an active and more healthy adulthood, with extended life prospects (British Heart Foundation, 2009). This is of particular importance in the context of growing childhood obesity and reductions in outdoor play. According to Bendon (2009) 38% of children in the UK now spend less than an hour outside each day, and 23% spend more than 14 hours a week in front of a television or computer screen.

- 2.4.7 A combination of diet change and daily walking were observed to be effective in the treatment of Type 2 diabetes. In fact 58% of the walking/diet change group against 31% of the control group experienced health gains (Diabetes Prevention Programme 2002). In March 2011, a new study has been commissioned to examine the effect of exercise on Diabetes type 1 in the UK (www.diabetes.co.uk, 2011)
- 2.4.8 The 'Walk this Way' Report (for Natural England and the Local Government Information Unit) has the objective of encouraging groups and individuals to set up 'walk schemes by sharing learning and good practice gained from existing projects'. The report also seeks to promote 'ways to overcome the barriers that are hindering health care organisations and local authorities from supporting and running schemes'. It recommends all forms of physical activity such as sport, gym-usage, dance, running etc, but notes that walking 'has the greatest chance of making a difference to the greatest number of people' (Heron and Bradshaw, 2010)
- 2.4.9 This document cites the work by Coombes *et al* (in press) who find good evidence that living close to an accessible high quality environment can lengthen life irrespective of other factors of life expectancy, while also making the point that access to a high quality natural environment is impeded not by its availability but by lack of inclination on the part of individuals.
- 2.4.10 The benefits of walking for health are not limited to the physical impacts of energy expenditure but also include the physical benefits gained from mental well-being and stimulation from an appreciation of landscape, wildlife, weather, etc, and the rewards from a sense of exploration. Hence, with walking having the added value of being an activity embedded within the landscape, it is unsurprising that it should also be linked to improving self-esteem and relieving the symptoms of depression and anxiety (Blumenthal, et al, 1999).
- 2.4.11 Clearly, walking in a landscape has educational benefits as individuals see and recognise animals and plants in their natural habitats. Other forms of outdoor physical activity, such as cycling and running, which make more intense demands on the body, tend to preclude this heightened sense of environment.
- 2.4.12 The international literature on the health benefits of exercise and walking is exhaustive. As a result, the discourse extends to national and regional policy documents, seeking to promote exercise (and walking) as means of reducing the cost of health.
- 2.4.13 It is also important to acknowledge the positive environmental impact of walking when one would otherwise use a car.

2.4.14 Section 3 examines in more detail the cross-cutting nature of walking with reference to many different UK and Welsh agencies. Here, we only highlight the fact of this shared interest in walking from the following organisations, each of which has published documents which identify the benefits of walking (or exercise) (see references and Table 3.4):

- Department of Transport
- Department of Health
- Department for the Environment, Food and Rural Affairs
- Department for Children, Schools and Families
- National Institute of Clinical Excellence (NICE)
- Local Government Information Unit
- Natural England
- English Sports Council and Sport Wales
- Ordnance Survey
- Forestry Commission
- Countryside Agency
- Environment Agency

2.5 Conclusions

- 2.5.1 Walking is a universally accessible and fundamental attribute. Perversely though, our modern lifestyles are such that we walk too little even as we know we should walk more.
- 2.5.2 While the economic benefits of walking are many, they are difficult to measure precisely as is evidenced by the scarcity of research outputs.
- 2.5.3 This section has described studies which have been undertaken to estimate the impact of this walking spending, but they are necessarily estimations. Nonetheless, walking can be a significant draw, and an important part of the visitor experience.
- 2.5.4 The most relevant of recent studies was conducted by Christie and Matthews (2003), who valued walking in England at between £1.4bn and £2.7bn in 2003, associated with 100,000 full-time equivalent jobs. Midmore (2000) looked at walking in rural Wales, but used figures derived from a Scottish study. This valued walking at £55m, associated with 3,000 jobs (excluding mountaineering). These are substantial sums.
- 2.5.5 Beyond the measurable economic consequences of walker spending, there are an abundance of health benefits associated with the activity (physical fitness, mental well-being, longevity and so on). Moreover, insufficient physical activity (of which walking is the most accessible) is associated with a raft of illnesses and conditions; mostly avoidable. Among these are cardio-vascular disease, diabetes, and obesity; the treatment of which is very costly.

2.5.6 The importance of walking to individuals and consequently to the community as a whole is evidenced also by the prominence it is given in a wide range of policy documents; a characteristic which is explored further in section 3.

3 Wales: the walking resource?

3.1 Introduction

3.1.1 It is difficult to provide an accurate inventory of the environmental assets (built and natural environment) that lever walking visitation to Wales. Figure 1 reveals the boundaries of areas classified as being of outstanding natural beauty, and the boundaries of national parks. However underpinning this is a rich tapestry of environmental assets. Moreover, walkers are not restricted to areas of rural Wales, and with walking activity also focused on city areas, and areas with past industrial heritage. In this section an attempt is made to describe some of the main resources available to walkers accepting this can only ever be partial.

3.2 Walking resources in Wales

3.2.1 There are a number of ways of characterising walking resources in Wales; i.e. by identifying walking landscapes, and defined parks which have qualities which are attractive to walkers, by listing mountains and hills, and by identifying defined major routes of national and perhaps international importance.

3.2.2 Christie and Matthews (2003) provide the useful distinction of area-based activity (walking over open countryside) or linear activity (taking place along footpaths). They also note the complex history of laws defining the nature of access starting from the National Parks and Access to the Countryside Act (1949) to the Countryside Rights of Way Act (2000) (CRoW).

3.2.3 By May 2005 CRoW had come into force in Wales, giving all people access to the open countryside without being restricted to footpaths (subject to certain conditions). The Countryside Council for Wales was instrumental in producing accurate maps of all open access land (www.ccw.gov.uk¹).

3.2.4 Walking resources in Wales are identified here using the above approach, bearing in mind however, that it is only possible to highlight the presence of a micro-fabric of other shorter, local walks which are too numerous to name individually. Information relating to these many and important paths is readily accessible through local authorities, tourist associations and walking groups who are responsible for producing marketing materials, and in some cases, maintaining route infrastructure and access points.

¹ <http://www.ccw.gov.uk/landscape--wildlife/protecting-our-landscape/special-landscapes--sites/protected-landscapes/sssisi--report/open-access-land.aspx?lang=en>

3.2.5 Table 3.1 below shows area-based walking resources under land type headings in Wales post and pre-CRoW.

Table 3.1 Area-based walking resources

Land Type	Area (Ha)	% of total land areas in Wales
CRoW Access:		
Mountain, Moor, Heath, Down (Open Country)	158,900	7
Registered common land (under the Commons Registration Act 1965)	109,250	5
Other land designated as 'access land' under Section 16 of the CRoW Act including Forestry Commission freehold forests	98,650	5
Sub Total	366,800	17
Pre-existing access	93,389	4
Total	460,189	21

Source: Wales Audit Office 2006 p 15

3.2.6 The area-based resources can also be categorised by special landscape qualities. For example, there are five Areas of Outstanding Natural Beauty (AONB) in Wales (out of a total of 46 in the UK – see also Figure 1):

- Anglesey
- Clwydian Range
- Gower Peninsula
- Llŷn Peninsula
- Wye Valley (straddling Wales and England)

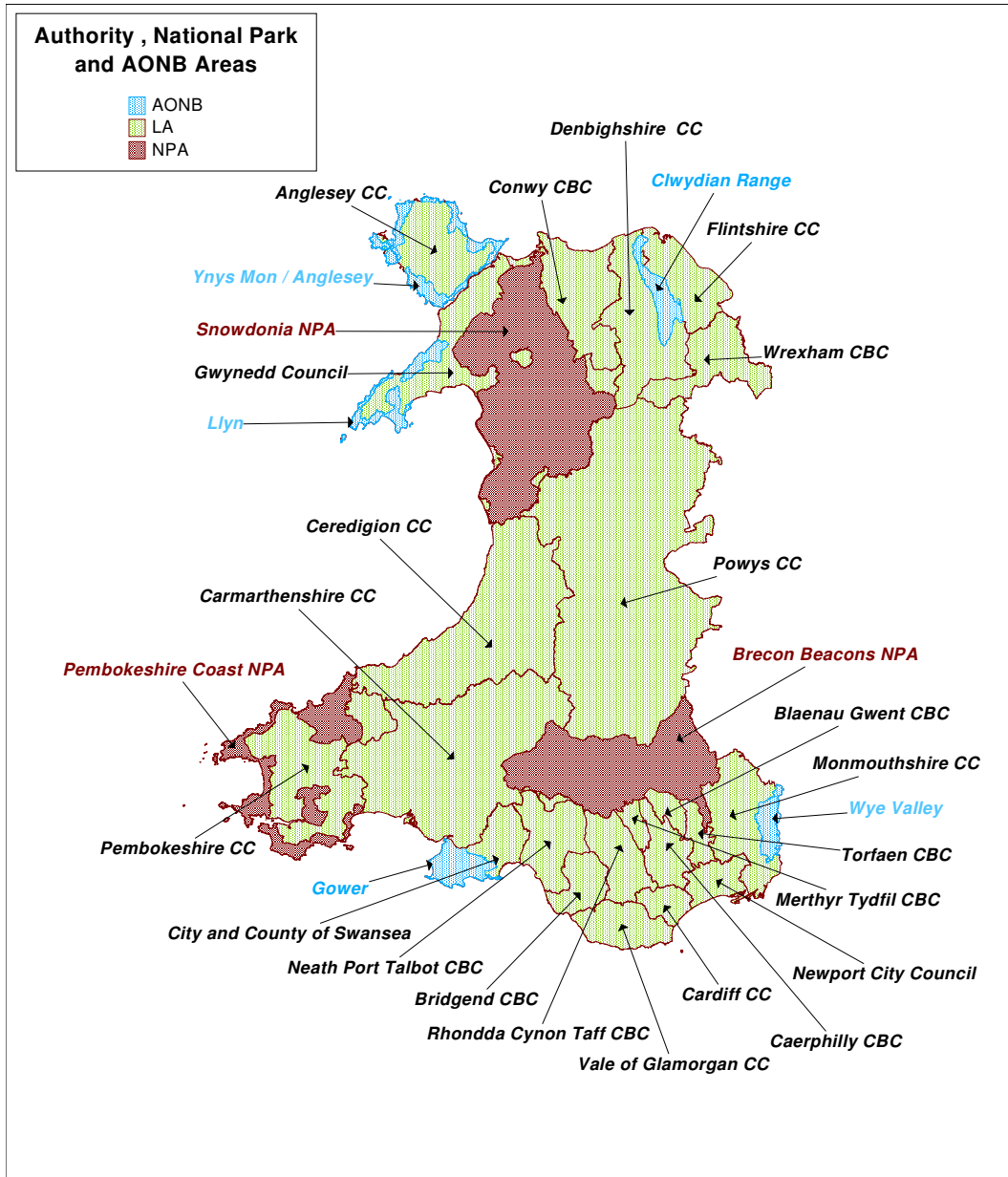
3.2.7 These AONB have been so designated in order to protect them from development for future generations and are under the stewardship of the Countryside Council for Wales (CCW). They are exceptional and distinctive landscapes, and cover very specific areas.

3.2.8 In terms of land cover, the three² National Parks in Wales (Snowdonia, 1951; Pembrokeshire Coast, 1952; and Brecon Beacons, 1957) have the greatest significance, occupying an area of 4100 sq km, or one fifth of Wales' total land area. Figure 3.2 shows the distribution of CRoW land by local access authority. Here, for example, Figure 3.2 shows that Snowdonia and the Brecon Beacons together comprise 42% of open access land in Wales (www.nationalparks.gov.uk).

3.2.9 As with AONB's these Parks have been afforded protection in recognition of the national importance of their landscape, while each has very different cultural heritage and historical land-use. They are managed by a National Park Authority, the members of which comprise local authorities (two-thirds) and Welsh Government appointees (one-third).

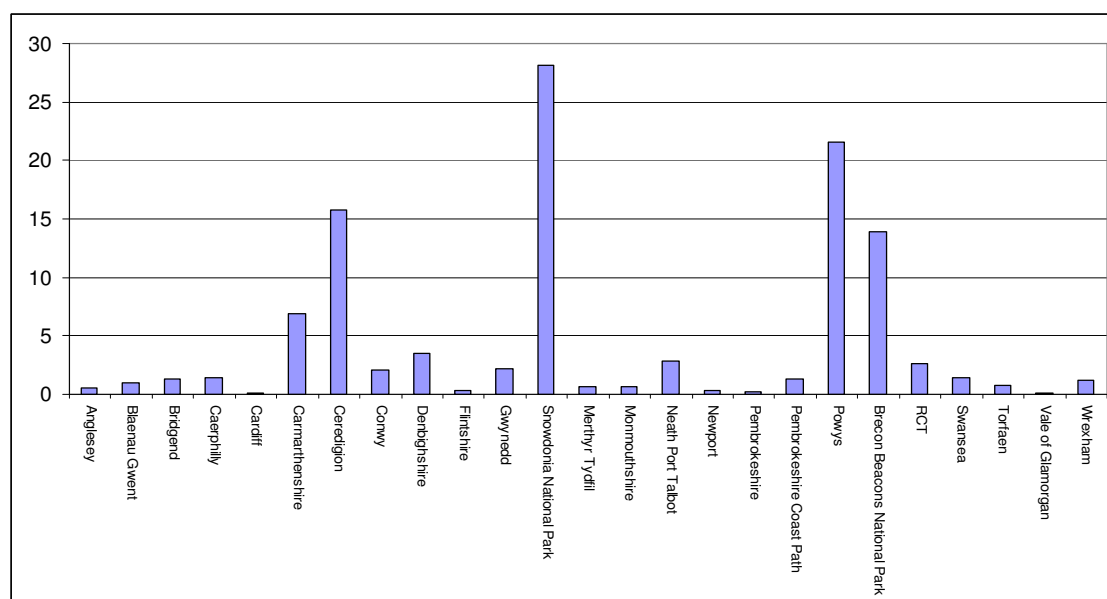
² http://www.nationalparks.gov.uk/wanpa/wanpa-about_wanpa/wanpa-nationalparkswales.htm

Figure 3.1: Wales – AONB & National Park Boundaries



3.2.10 National Park Authorities (NPAs) are funded by a National Park Grant from the Welsh Government and constituent authorities, with additional funding from European structural funds, Countryside Council for Wales (CCW) support grants, and income from fees e.g. planning and car parking etc.

Figure 3.2 Percentage of total access land in Wales by local authority/ national park (2006)



Source: Source: Wales Audit Office 2006:

3.2.11 The NPA resource in Wales is managed by over 300 staff on a full time basis. In 2001 a study was commissioned by the Valuing our Environment Partnership to estimate the value of the three National Parks of Wales to the Welsh Economy (www.nationalparks.gov.uk).³ This revealed that the National Parks in Wales:

- Supported nearly 12,000 jobs
- Produced total income of £177 million
- Generated £205 million of gross domestic product

3.2.12 Further insights into the walking resource in Wales are provided from elements of the pilot environmental satellite accounts for Wales (see DTZ & WERU, 2005). For example Table 3.2 reports a pilot land cover account for Wales. This speaks to the wide diversity of habitat in Wales, significant parts of which are accessible to walkers.

³ http://www.nationalparks.gov.uk/voe_national_parks_summary_english.pdf

Table 3.2 Pilot land cover account for Wales

Type	Area (Total ha)
Broadleaved & mixed woodland	99,600
Coniferous woodland	123,900
Woodland subtotal	223,500
Arable & horticultural	59,800
Improved grassland	1,012,700
Intensive arable subtotal	1,072,500
Neutral grassland	34,800
Calcareous grassland	1,160
Acid grassland	39,500
Bracken	31,100
Dwarf shrub heath	12,520
Fen marsh & swamp	41,720
Bog	3,650
Montane	400,100
Coastal habitats	15,620
Semi natural subtotal	580,170
Water bodies	7,470
Developed total	164,060
Unsurveyed urban land	8,000
Total	2,055,700

Source: Reported in DTZ & WERU, 2005 and derived from Countryside Council for Wales sources

3.2.13 Table 3.2 shows that improved grassland covers around 48% of the land area of Wales. In terms of woodland it is planted coniferous which dominates (62% of total woodland area), although with some expectation that planted broadleaf woodland will increase in line with recent interventions including the Woodland Grant Scheme, and with poor markets for softwoods removing the incentive for extensive replanting and restocking. Importantly much of the woodland in Wales is accessible to walkers. Uplands as a whole made up an estimated 19% of the regional land area.

3.2.14 In addition to the above are 'linear' walking resources, which comprise a network of paths to which access has been granted via legislation over the years. There are over 33,000 kilometres of Public Rights of Way in Wales, with over 2,000 km (7%) of these passing through Sites of Special Scientific Interest (www.ccw.gov.uk)⁴. The public have legal rights of access to:-

⁴ <http://www.ccw.gov.uk/landscape--wildlife/protecting-our-landscape/special-landscapes--sites/protected-landscapes/sssisi--report/public-rights-of-way.aspx?lang=en>

- Footpaths: 79% of Rights of Way in Wales are footpaths which can be used by walkers.
- Bridleways: (15%) which can be used by walkers, cyclists and horse riders.
- Restricted byways, which can be used by the same groups as bridleways and also allowing horse drawn carriages and other non-motorised vehicles.
- Byways, which are open to all traffic, including 4WD vehicles and motor bikes.

Table 3.3 Rights of Way in Wales (revised 2003)

Status	Length (km)	Proportion
Footpath	26,320	79%
Bridleway	4,965	15%
Restricted Byway	1,495	4.5%
BOAT (Byways Open to all Traffic)	431	1.5%
Total	33,211	100%

Source: CCW March 2003

- 3.2.15 There are three National Trails in Wales. These are Glyndŵr's Way, Offa's Dyke (passing in and out of Wales) and the Pembrokeshire Coast Path. These trails are the responsibility of partnerships between the CCW and relevant local authorities.
- 3.2.16 The Pembrokeshire Coast Path was the first of the National Trails in Wales, opened in 1970 and managed by the Pembrokeshire Coast National Park Authority. The trail is 300 km (186 miles) long and takes between 10 and 15 days to complete. It runs from St Dogmaels near Cardigan to Amroth Castle (east of Tenby), and includes along its entirety 35,000 feet of ascent and descent.
- 3.2.17 Offa's Dyke Path was opened in 1971 following the line of an earthwork built by Offa in the 8th century. It is 285 km (177 miles) long and takes around 12 days to complete. The trail criss-crosses the Wales: England border, starting on the south coast in Chepstow and ending at Prestatyn on the north coast. The path passes through ten different authorities, each with responsibility for their section (shared with CCW and the Countryside Agency in England).
- 3.2.18 Glyndŵr's Way was granted National Trail status in 2000 (launched in 2002). This trail is 217 kms (135 miles) long, and runs from Knighton to Welshpool via Machynlleth. It is managed and promoted by Powys County Council. It takes between 8 and 10 days to complete.
- 3.2.19 The National Trails perform a flag ship role for other walks in Wales. Wales' landscape lends itself to walking and there are also a large number of walking routes that are promoted to the public, by each of the local authorities (often in partnership with Visit Wales and tourism associations).

3.2.20 There are many long distance way-marked paths in Wales and the Ramblers Cymru provide information on 20 of these, as follows:

- Beacons Way: Abergavenny to Llangadog 161km
- Birmingham and Aberystwyth Walk: Birmingham to Aberystwyth 240km
- Cambrian Way: Cardiff - Conwy 440km
- Ceredigion Coast Path: Ynyslas (Borth) - Cardigan 101km
- Clwydian Way: Circular from Prestatyn 195km
- Dyfi Valley Way: Aberdyfi - Borth 172km
- Elan Valley Way: Birmingham - Elan 205km
- Isle of Anglesey Coastal Path: Circular via Llanfaethlu, Amlwch, Beaumaris, Holyhead 200km
- Landsker Borderlands Trail: Circular from Canaston Bridge 96km
- Llangollen Canal: Hurlston Junction near Nantwich to Llantysilio 74km.
- Maelor Way: Grindley Brook to Bronygarth 38km
- Marches Way: Chester - Cardiff 329km
- Monnow Valley Walk: Monmouth to Hay on Wye 65.5km.
- Montgomery Canal: Frankton Junction near Ellesmere to Newtown 56km. See Shropshire Union Canal
- Severn Way: Plynlimon - Bristol 360km
- Shropshire Union Canal: Ellesmere Port to Newtown, Llantysilio, Wolverhampton or Middlewich 251km
- Taff Trail: Brecon to Cardiff 109km
- Usk Valley Walk: Caerleon (Newport) to Brecon 77km
- Valeways Millennium Heritage Trail: circular via St Fagans 111km
- Wye Valley Walk: Chepstow – Plyn

3.2.21 To the above can be added a micro-network of footpaths used by local walkers and which intersect, in places, the main trails. Detailed Information/route maps etc. regarding these walking resources can be found on Local authority, National Trust and Forestry Commission websites.

3.3 Walking: Links to the policy agenda in Wales

3.3.1 The Welsh Government (WG) and associated government bodies: WG sets the political agenda for a number of directorates and external agencies whose scope impinges on walking resources and walking activities. As evidenced by the UK government departments listed earlier in the review section, there are many cross-cutting portfolios. Relevant directorates in WG include the Health and Social Services (within which is the Department for Health and Social Services) and Sustainable Futures (within which are the Departments for Rural Affairs, Department for Environment Sustainability and Housing, and the Department for Heritage (in which lies Visit Wales responsible for tourism)).

- 3.3.2 Local Authorities contribute to (and gain benefit from) walking resources in terms of funding the development and up keep of footpaths, and their marketing; working with local regional tourism partnerships, tourism associations and CCW, in pursuance of overarching health, welfare and economic gain.
- 3.3.3 The Countryside Council for Wales (in common with the National Trust) is charged with protecting the countryside, and securing and promoting its use for health and enjoyment. The Forestry Commission has a similar guardianship role, while balancing the commercial potential of woodland against its value for leisure use and the public good.
- 3.3.4 From a commercial point of view, it is possible to identify tourism services providers (to their walking client base) whose interests are coordinated through voluntary membership of tourism associations and liaison with regional tourism partnerships who bridge the gap between the private sector and Visit Wales (at the strategic government level).
- 3.3.5 The last stakeholder group refers to the walkers themselves, in groups, as individuals and as members of organisations. There are a number of national walking groups in the UK, including the Ramblers Association, Footprints, British Walking Federation, Red Rope, the Long Distance Walkers Association, the Backpackers Club, and the Hiking Club. At the Wales level, 16 walking groups have website identities and contact details, but there are many more active but less visible groups in existence, the economic effects of whom are estimated in subsequent sections.
- 3.3.6 The links between walking and a wide range of policy agenda are clear and described in Table 3.4. Repeatedly, strategic documents have understood the contribution of walking to social and economic welfare. Explicit and important references can be found in documents and initiatives in Wales, and examples are given below:
- Walking for Health (Natural England)
 - Walking the Way to Health (Natural England)
 - Sustrans Why Walk? Step your Way to a Happy Healthy Lifestyle.
 - Best Foot Forward – A Walking Strategy for Wales (WTB)
 - Walking the Way to Health Wales
- 3.3.7 These strands can be characterised in the following generic manner:
- Health benefits (linking to public cost implications and personal welfare)
 - Long-run environmental improvement and protection (linking in to climate change and protection of the landscape for future generations)
 - Short-run public provision (footpath/landscape maintenance/improvements linking in to recreation/social welfare for locals and exploiting the commercial value of the landscape derived from tourism)

Table 3.4 Walking Resources Stakeholders

Stakeholder	Key Departments/Policy Documents/sub-groups	Objectives
Welsh Government (WG)	<p>Health: (Department for Health and Social Services) Walking and Cycling Action Plan 2009-2013 Lets Walk Cymru (with CCW and Sport Wales) Food and Fitness Implementation Plan: Promoting Healthy Eating and Physical Activity for Children and Young People in Wales</p> <p>Environment: (Dept. for Environment Sustainability and Housing) 'Wales: A Better Country'</p> <p>Transport: 'One Wales: Connecting the Nation Wales Transport Strategy'</p> <p>Tourism: (Department for Heritage) 'Achieving Our Potential'</p>	<ul style="list-style-type: none"> • Improve the health and well being of Wales through increased physical activity; • Improve the local environment for walkers and cyclists; • Encourage sustainable travel to combat climate change; • Increase levels of walking and cycling through promotion of facilities; and • Ensure that walking and cycling are prioritised in policies, guidance and funding. • Reduce air pollution from traffic. • Ensuring sustainable access – especially by public transport, walking and cycling' • Opening an all Wales Coast Path, including provision for bikes and horses in appropriate places, which will be complete in time for the 2012 Olympics. • Providing access provisions in Tir Gofal and Glastir agri-environmental schemes, and Local Access Forums. • Implementation of Rights of Way Improvement Plans by all local authorities. • Using EU funding to improve the quality of the cycling and walking tourism product. • Encourage people to visit Wales and people living in Wales to holiday here. • Encourage the provision of tourism amenities and facilities in Wales
Local Authorities	<p>Health: 'The Route to Health Improvement' 'National Exercise Referral Scheme'</p> <p>Tourism: Tourism Strategies exist for each LA</p> <p>Transport: e.g. South-West Wales Integrated Transport Consortium (SWWITCH) South-East Wales Transport Alliance (SEWTA) North Wales Taith (Joint Transport Board (TAITH)) Mid-Wales Transport Consortium (TRACC)</p>	<ul style="list-style-type: none"> • To offer a high quality National Exercise Referral Scheme across Wales. • To increase the long term adherence in physical activity of clients. • To improve physical and mental health of clients. • To determine the effectiveness of the intervention in increasing activity levels and improving health. • To enhance the Landscape and Environment • To protect Heritage and Culture • Provision of Outdoor Recreation • Footpaths and Open Access: Information and Interpretation • Tourism Marketing
Environment Agency	<p>Environmental Stewardship: 'Creating a better place 2010 – 2015'</p>	<ul style="list-style-type: none"> • to protect and improve the environment, • to promote sustainable development. • To deliver the environmental priorities of central government and the Welsh Government
National Parks for	<p>Tourism:</p>	<ul style="list-style-type: none"> • Conserve and enhance natural beauty, wildlife and cultural heritage;

Wales/AONB	<p>'Walking Tourism Strategy' 'Sustainable Tourism Strategy' 'Clwydian Range AONB Sustainable tourism strategy and action plan' Management Plans Recreation Strategy</p>	<ul style="list-style-type: none"> Promote opportunities for the understanding and enjoyment of the area's special qualities to the public. Access authority for CROW access land, delegated powers for PROW Maintenance of Upland Paths
Countryside Council for Wales	<p>Land Stewardship + Health: 'The Rural Development Plan for Wales (RDP) 'Walking the Way to Health (WW2H) Programme'</p>	<ul style="list-style-type: none"> Champion the environment and landscapes of Wales and its coastal waters as sources of natural and cultural riches. Promote the landscape as a foundation for economic and social activity, and as a place for leisure and learning opportunities. Make the environment a valued part of everyone's life in Wales. Increase competitiveness of the agricultural sector. Improve land management. Enhance the quality of life in rural areas. Promote a community driven approach. Implement the Wales Coast Access Improvement Programme. Organise the National Access Forum Wales. Work in partnership to maintain upland paths.
Forestry Commission	<p>Land Stewardship 'Our purpose and Direction' Woodlands for People Health Benefits 'Economic Benefits of Accessible Green Spaces for Physical and Mental Health' Scoping study report by C J Consulting for the forestry Commission</p>	<ul style="list-style-type: none"> Manage the 38% of Welsh woodlands owned by the Welsh Government. Advise, on behalf of WG, on the development of forestry policy and its implementation. Encourage sustainable woodland management within the private sector. Administer grants & regulatory work, including licensing for felling and replanting. Promote recreation opportunities in an inclusive way, and encourage a wide range of people to visit. Provide way-marked walking routes.
National Trust	<p>Land/Heritage Stewardship 21 Downloadable walks http://www.nationaltrust.org.uk/main/w-vh/w-visits/w-visits-walks/w-visits-walks_wales.htm#nwales-walks</p>	<ul style="list-style-type: none"> Protect and conserve the national heritage/environment. Encourage sharing of this heritage. Provision of walking routes, and work on upland paths.
Tourism Associations/Regional Tourism Partnerships and the	<p>Tourism: each RTP has a tourism Strategy. There are 4 RTPs and 4 regional tourism associations + the Wales Tourism Alliance</p>	<ul style="list-style-type: none"> Improve the tourism offer in Wales. Assist in strategic marketing (including activity tourism). Deliver local tourism strategies. Represent the interest of the service providers.

National Walking Groups (min. 5 incl. the Ramblers) Local Walking Groups – min. 16 in Wales	Walking Wales Ramblers Cymru Manifesto 2011-2015	<ul style="list-style-type: none">• Facilitate walking as an individual and group activity.• Provide information.• Represent the interests of walkers to policy-makers.• Safeguard access to the countryside.• Promote good management of the countryside.
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3.4 Conclusions

- 3.4.1 This section has examined Wales' walking resources. In total 21% of Wales' land area is accessible. As a walking landscape it is graced with 5 Areas of Outstanding Natural Beauty and 3 National Parks (occupying 4122 km sq or one fifth of Wales total land area).
- 3.4.2 In terms of linear walking resources, there are over 33,000 kms of Public Rights of Way with 2000km (7%) of these passing through Sights of Special Scientific Interest. Within this network are Wales' 3 flagship National trails.
- 3.4.3 Information on these walking resources are extremely well disseminated through the websites and marketing materials of walking groups, associations, local authorities, the Forestry Commission and Countryside Council for Wales. There is a high level of awareness shown by each and every one of these stakeholder groups of the value of these walking resources, both as an attractant to Wales and as part of a healthy lifestyle.
- 3.4.4 The pyramid of stakeholder activity is led by the Welsh Government whose broad policy reach covers health, the safe-guarding of environment for future generations, the commercial interests of Wales (tourism), the proper expenditure of EU funding on infrastructure improvements, and the increase of countryside access, while respecting the needs of land owners.
- 3.4.5 Local Authorities share these interests but also compete with each other to capture visitor spending. There is overall strategic common ground recognising that Wales is most efficiently marketed to the outside world by concerted effort; a coordinating role undertaken by four Regional Tourism Partnerships in Wales.
- 3.4.6 Such is the scale and diversity of the responsibility and remit, that *guardianship* and *promotion* of the landscape (and its many uses) is spread between several organisations: national park authorities, AONBs, local authorities, the Countryside Council for Wales and the Forestry Commission – all working in concert.
- 3.4.7 User groups, most notably Ramblers Cymru, are also fully engaged in promoting the wisdom of walking. Characteristically, there is much consensus in all this effort, and not a single loser.

4 Economic impact of walking and hill walking: methods and data

4.1 Introduction

4.1.1 In this section we describe the methods that have been employed to estimate the value of spending⁵ associated with walking and hill walking in Wales. We begin by describing the general approach. Following this we review the data that has been used and the assumptions that have been made in deriving estimates of economic impact. In section 5 of the report we present the results from the analysis.

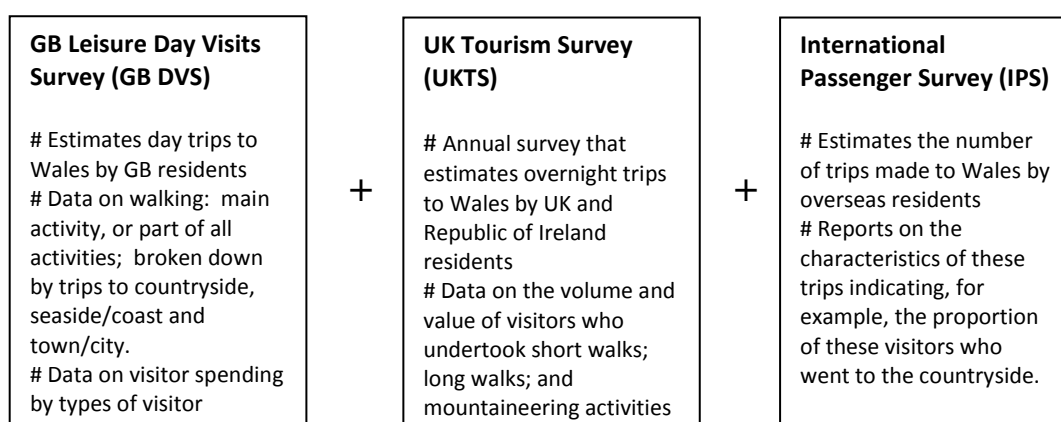
4.2 General approach

4.2.1 The assessment of economic impacts of leisure activity needs to take place at two discrete levels. For example, in the case of walking, there is a need to first estimate the **direct** economic impact of walking and hill walking in Wales. This focuses on the spending associated with visits linked to walking.

4.2.2 In gaining an estimate of direct effects there is need to examine information from the main visitor statistics surveys in the UK relating to volume and spending data of different types of walking visits. Main categories here are day visitors; domestic overnight visitors; and international visitors. Information for the impact study is needed on the number of trips associated with walking, and the extent to which walking is the prime or a secondary motive for a trip.

4.2.3 Figure 4.1 shows the main statistical sources that were used to inform the analysis of direct effects. The Figure summarises the nature of the surveys, what they report, and the types of data that were taken from each survey to inform the analysis.

Figure 4.1 Main Statistical Sources to inform Direct Effects

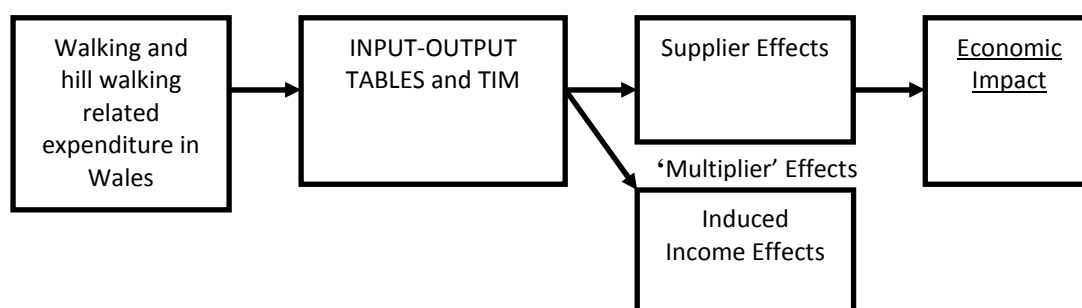


⁵ Only direct visitor expenditure (demand side) has been taken into account in this study. The report does not include the expenditure of the major walking-related organisations in Wales.

- 4.2.4 In section 4.3 below we discuss in more detail how the different statistical sources were used and the assumptions made to support the analysis.
- 4.2.5 However, the estimation of direct effects only provides a partial estimate of impact. There is also a need to consider how the spending of walkers and hill walkers supports economic activity in Wales **indirectly**. For example, accommodation providers in meeting the needs of visitors purchase goods and services from other Welsh sectors. Then spending of walkers supports activity in accommodation providers directly, but also works to support economic activity in the suppliers of goods and services to accommodation providers indirectly.
- 4.2.6 The extent of these ‘supplier’ effects partly depends on the level of local sourcing by suppliers. In accounting for the total economic impact associated with walking and hill walking these types of indirect effects need to be examined and understood.
- 4.2.7 This ‘supplier’ effect is only part of the story. The tourism sector supported by walking and hill walking activities employs a number of local people (e.g. in hotels/ B&Bs), adding to local incomes, at least a part of which will be spent regionally, further adding to local incomes, as will their suppliers etc. These are ‘induced-income’ effects and can be added to ‘supplier’ effects to form the total indirect consequences of the direct local economic activities. These effects levered by tourism spending can be expressed in terms of spending, incomes and jobs.
- 4.2.8 To estimate these indirect economic impacts it is necessary to have a model of the Welsh economy which shows how different types of consumption spending create indirect and induced effects across different sectors of the Welsh economy. The Input-Output tables for Wales provide such a framework (see for example Bryan et al., 2004 for a description of this framework). The most recent Input Output Tables for Wales for 2007 were produced by the Welsh Economy Research Unit with support from the Environment Agency Wales (July 2010) and are available at:
http://www.cf.ac.uk/carbs/research/groups/weru/IO_2007_Final_30_6.pdf
- 4.2.9 This framework provides one way of understanding and modelling the significance of different types of spending in the Welsh economy.

- 4.2.10 In addition to the Input-Output tables the analysis also used the Tourism Satellite Account (TSA) for Wales 2007 (produced by Cardiff University for Visit Wales in 2010). Using this tool, further analysis was possible on aspects of walking tourism's economic significance. The TSA provided a wealth of information on tourism's direct economic importance to Wales, including an employment module detailing how tourism directly supports Welsh employment. The TSA allows the estimation of Tourism Direct Gross Value Added (TDGVA). This variable shows how much of the gross value added (GVA) created in Wales is as a result of tourists' spending before, during or after trips to Wales (see http://www.cf.ac.uk/carbs/research/groups/weru/TSA_Wales_2007.pdf).
- 4.2.11 Cardiff University have undertaken additional work to develop a modelling structure from the Welsh TSA linking to the Input-Output framework described above. This is known as the Tourism Impact Model for Wales (TIM) and it is from this model that the impact figures are derived.
- 4.2.12 Figure 4.2 provides a summary of the approach. In summary, the direct visitor expenditure associated with walking and hill walking is used within the framework of the Input-Output tables for Wales and the Tourism Impact Model for Wales to estimate indirect and induced effects.

Figure 4.2 Summary of general approach



4.3 Tourism and visitor surveys informing the analysis

- 4.3.1 Data outlining the volumes and spending of visitors to Wales are available from a variety of sources. Information on 'domestic' tourism (trips within the UK by UK residents) is derived from both the *GB Leisure Day Visits Survey* and the *UK Travel Survey*. Statistics relating to overseas residents' visits to Wales are available from the *International Passenger Survey* published by the Office for National Statistics (ONS).

- 4.3.2 **GB Leisure Day Visits Survey (GB DVS)** – This survey focuses on numbers of GB leisure day visits, the amount of money people spend on day visits and on activities during these trips. Data on the characteristics of visits and visitors are included for the adult population (16 years and over), and estimates of the volume and value of visits are available for Wales from the Survey.
- 4.3.3 A number of agencies are involved in undertaking this survey, these including the national representative tourism bodies (such as Visit Wales, Natural England), the Countryside Council for Wales and the Environment Agency.
- 4.3.4 Wales has tended to be ‘oversampled’ in the GB DVS survey. This means that more data for Wales is collected than would be expected given its volume of visits compared to GB as a whole. The most recent iteration of this survey was undertaken in January 2011, with the results expected to be available later in 2011; unfortunately this was beyond the timescales of this current study.
- 4.3.5 The latest available data for day visits in Wales, providing the breakdowns of visits necessary for the estimation of the economic impact of walking and hill walking, were published in 2004, but with the information appertaining to 2002-3. The use of this data is not without problems. In the analysis in this report the aim was to use 2009 as a base year.
- 4.3.6 There are a number of important definitions used in the GB DVS. These include:
- “Leisure day visits” are defined as round trips made from home for leisure purposes, to locations elsewhere in the UK. In this definition people must start from, and return to, their home within the same day, but there is no lower time limit.
 - “Tourist day visits” are defined as a subset of leisure day visits in that tourist day visits are trips that last for three hours or more which are not taken on a regular basis.
- 4.3.7 Particularly useful data in the GB DVS for this study includes volumes and value of tourism visits where “walk, hill-walk, ramble” is the main activity undertaken. These data are further broken down for trips to the seaside/coast, countryside and town.
- 4.3.8 In summary, for this analysis we use the volume and spending data relating to walking in Wales from the 2002-03 GB DVS, but adjust spending estimates to 2009 prices.

- 4.3.9 Only visits to the countryside and seaside/coast from the GB DVS were included in estimations of the economic impact of walking and hill walking related activities. Therefore, activities such as walking tours around towns/ cities are not included in this analysis.
- 4.3.10 This GB DVS shows, not unexpectedly, that most leisure day visits in Wales are undertaken by Welsh residents (93.6%) with the remainder of visitors resident in England. Average spending patterns for English residents as a whole were applied to the sub-group who stated they had visited Wales on a day trip. We return to describe the data derived from GB DVS in section 5 of this report.
- 4.3.11 **The United Kingdom Travel Survey (UKTS)** - The 2009 iteration of the UKTS used in this study was a face-to-face interview survey commissioned jointly by the UK tourist boards including Visit Wales.
- 4.3.12 The scope of tourism trips in the UKTS is defined as any journey away from home lasting one or more nights, to any destination within the United Kingdom and the Republic of Ireland, by any mode of transport, for any purpose, and staying in any type of accommodation. Day excursion trips are not covered by this survey.
- 4.3.13 The last full year of data available pertains to the calendar year 2009.
- 4.3.14 Data is available in the UKTS by the activity categories of short walks (defined as those of less than 2 miles), long walks (2 miles or above) and mountaineering (also including rock climbing, abseiling, caving and potholing). The UKTS includes a breakdown of volume and value visits by these categories. For the present research, along with the walking categories, mountaineering (which also covers rock climbing, abseiling, caving and potholing) was included.
- 4.3.15 A three year average (2007 to 2009) for the categories of short walks, long walks and mountaineering were used to help build confidence in the data, addressing any sample size issues, and avoid any 'exceptional' year impacting on the totals (e.g. adverse weather conditions deflating visitor numbers in a single year).
- 4.3.16 **The International Passenger Survey (IPS)** - This reports on the number of trips made by overseas residents to the UK, and the characteristics of their trip, including spending. The survey, which is undertaken by the ONS, is utilised by numerous government departments and organisations.
- 4.3.17 A random sample of passengers entering or leaving the UK by main air, sea and tunnel routes are asked to partake in face-to-face interviews for the IPS. The main aims of the IPS are to:

- collect data in order to measure travel expenditure and how it impacts on the UK balance of payments (on the travel account)
- provide detailed information about overseas visits to the UK for tourism policy, and
- provide data to feed into estimates of international migration (for more information see- http://www.statistics.gov.uk/downloads/theme_transport/travel-trends09.pdf)

- 4.3.18 Using the IPS data, VisitBritain have reported on activities engaged in by international visitors while they were in the UK. The “Activities Undertaken by Visitors from Overseas in Different Areas of the UK” report (updated in November 2010), was used in this study.
- 4.3.19 Also utilising IPS data, the ONS “Travel Trends” publication (2009) presents a breakdown of volume and value of overseas residents’ trips to Wales, delineated by local authority area.
- 4.3.20 Furthermore, the Welsh Government produces an “Overseas Tourism to Wales” factsheet with summary tables of key information, informed to a large extent from the IPS. Provisional data for 2009 was published in this factsheet in July 2010.
- 4.3.21 To identify the number of visits and spending by overseas visitors on walking related activities in Wales, the UK Tourism Survey figures on the proportion of countryside trips that involved walking were assumed to be typical of overseas residents’ trips (i.e. 51.3%, or just over half, took part in walking related activities in Wales).

4.4 Conclusions

- 4.4.1 The main UK tourism surveys provide a rich array of data to inform the analysis of spending associated with walking and hill walking in Wales. Importantly, the use of these statistics means that the contribution of walking and hill walking to the Welsh economy could, in the future, be compared to that in other UK regions, and for the UK as a whole using similar assumptions and base year.

5 The economic impact of walking and hill walking in Wales

5.1 Introduction

5.1.1 In this section we bring together the findings from the analysis of the survey sources described in section 4. Using these sources we estimate the direct spending associated with walking and hill walking visits to Wales, and then estimate the indirect economic effects associated with this spending. This becomes the basis for comparing the economic effects associated with walking and hill walking to tourism spending in Wales overall, and then in comparison to different types of tourism in Wales.

5.2 Direct spending by types of walking visitor

5.2.1 **Day Visits** - The GB Day Visits Survey of 2004 showed that there were 219 million leisure day trips to Wales in 2002/3. The majority of these were by Welsh residents, taking trips within Wales (205m), with the remainder made up from visits by English residents. From the survey it was possible to identify the average spend per trip, the proportion of these trips where walking was the main activity, and therefore estimate spending on walking related activities.

5.2.2 The total amount of expenditure attributed to the 17.6m leisure day trips of Welsh residents to the countryside in Wales is shown in Table 5.1 as £178.66m. Similarly, £47.98m of spend was attributed to the 4.18m Welsh residents' walking day trips to the seaside or coast.

Table 5.1: Residents of Wales Leisure Day Trips in Wales

	Volume of Leisure Trips (m)	Average spend per trip (£s)*	% where walking is main activity	Walking Trips (m)	Spending on leisure day trips (£m) walking main activity
Countryside	53.3	10.16	33	17.59	178.66
Seaside/Coast	24.6	11.47	17	4.18	47.98
Town	127.1	21.03	7	8.90	187.12
Total	205.00	17.21	15	30.67	413.76

*These figures have been adjusted to 2009 prices

5.2.3 Of all English resident day trips (to Wales plus elsewhere) around 25% were to countryside; 4% were to the seaside/coast; and 71% to a town/city. Using these proportions to divide out English residents' trips to Wales (14m) indicates that around 3.5m trips were taken to the Welsh countryside, and 0.56m to the Welsh seaside/coast. Only a proportion of these were for walking purposes (countryside 31%, and seaside/coast 20%).

5.2.4 Table 5.2 indicates that English resident leisure day trips in 2002/3 accounted for £11m of spending on walking trips to the Welsh countryside, and £1.7m on walking trips to the seaside or coast.

Table 5.2: Residents of England Leisure Day Trips in Wales

	Volume of Leisure Trips (m)	Average spend per trip (£s)*	% where walking is main activity	Walking Trips (m)	Spending on leisure day trips (£m) walking main activity
Countryside	3.50	10.28	31	1.09	11.15
Seaside/Coast	0.56	15.06	20	0.11	1.69
Town	9.94	18.52	10	0.99	18.41
Total	14.00	16.13	16	2.19	31.25

*These figures have been adjusted to 2009 prices

5.2.5 Combining the information in Tables 5.1 and 5.2 provides the total number of leisure day trips in Wales, where walking was the main activity. This was estimated at 32.9m (Table 5.3). This is a combination of the figures for Welsh and English residents.

Table 5.3: Expenditure on leisure day trips in Wales which had walking as the main activity (£million)

	Walking trips (m)	Spending (£m)
Countryside	18.674	189.811
Seaside/Coast	4.294	49.662
Town	9.891	205.533
Total	32.859	445.006

5.2.6 In this analysis we include only trips to the countryside and seaside/coast in measuring walking related impacts. The combined total for these two categories was **£239.5m** of expenditure and **22.97m** trips in Wales.

5.2.7 **b) Domestic Overnight Trips** - The UKTS identifies tourism trips as any journey away from home lasting one or more nights, to any destination within the UK and the Republic of Ireland. In 2009 there were an estimated 8.95m of these domestic tourism trips in Wales, accounting for 32.88m bed-nights, and expenditure of £1,412.8m.

5.2.8 The UKTS includes information on the volume of trips where the main activity is walking related, and also where walking related activities are only a part of the overall trip. In order to avoid any major fluctuations in the yearly averages, and overcome any issues with sample sizes, averages from 2007 to 2009 were used for this analysis and constrained to 2009 volumes.

5.2.9 There were an estimated 1.41m tourist trips in Wales in 2009 where walking related pursuits were the main activity undertaken. These accounted for £235m of spend.

Table 5.4: Volume and Spend of Tourism trips in Wales, where walking related activity was the main purpose (3 year average of trips 2007 – 2009)

	Trips (m)	Nights (m)	Spend (£m)
Short walks as main purpose of trip	0.62	2.47	92.33
Long walks as main part of trip	0.64	3.12	116.39
Mountaineering as main purpose of trip	0.15	0.49	26.09
	1.41	6.08	234.81

Table 5.5: Gross Volume and Spend of Tourism trips in Wales, where walking related activity was part of the overall trip (3 year average 2007 – 2009)

	Trips (m)	Nights (m)	Spend (£m)
Short walks as part of trip	3.03	12.72	496.29
Long walks as part of trip	1.86	8.79	354.91
Mountaineering as part of trip	0.247	0.935	41.95
	5.137	22.445	893.15

5.2.10 The contribution of expenditure of tourists who had included walking as an activity, was then estimated by: firstly removing those who stated their main activity was walking related (Table 5.4 above) so as to avoid double-counting; then the remaining tourism trips were multiplied with the average nightly expenditure per trip, i.e. £39 for trips that involved short walks, £42 for long walks, and nearly £36 for mountaineering.

5.2.11 Average expenditure per night was used instead of average expenditure per trip as these tourists did not go walking on every day of their trip (by definition walking activities were only a part of their overall visit). By assuming only one night's expenditure is walking related for these tourists the estimate is possibly conservative. However, a similar approach has been adopted in other research (Christie and Matthews (2003)), and improving the basis of the estimate here would be an important element in future research.

5.2.12 The average length of trip in Wales by activity in 2009 was just over three nights for those who engaged in mountaineering as part of their visit (3.3); four nights where short walks were undertaken (3.98); and five nights where long walks were part of the overall activities engaged in (4.88). This was calculated by dividing the number of nights, by the number of trips, for each activity.

Table 5.6: Net Volume and Spend of Tourism trips in Wales, where walking related activity was part of the overall trip (3 year average 2007 – 2009)

	Trips (m)	Nights (m)	Spend (£m)	Average spend per night (£)	Walking related spend (£m)
Short walks as part of trip	2.41	10.25	403.96	39.41	94.98
Long walks as part of trip	1.22	5.67	238.52	42.07	51.32
Mountaineering as part of trip	0.097	0.45	15.86	35.64	3.46
	3.73	16.37	658.34	40.22	149.76

- 5.2.13 Combining the estimates from above of £234.81m of spend where walking was the main activity (Table 5.4), and £149.76m of spend where walking was part of the overall trip (Table 5.6), gives a total of **£384.6m** of spend from around **5.14m** trips.
- 5.2.14 **c) Overseas Visitors** - The IPS estimated that there were 955,000 visits by overseas residents to Wales in 2009. These accounted for 6.14m bed-nights and expenditure of £321.5m.
- 5.2.15 The IPS indicated that a third (33%) of all trips made by overseas visitors to Wales went to the countryside. This was 315,150 visits in 2009, and assuming similar trends in spending, £106m (see http://www.visitbritain.org/Images/Activities%20by%20Area%20of%20the%20UK_tcm139-167960.pdf).
- 5.2.16 These figures for visits to the Welsh countryside were then further adjusted to identify the volume and spending by overseas visitors on walking related activities. Here UKTS data on the proportion of countryside trips that involved walking (51.3%, or just over half, in Wales) were used as basis for the estimation.
- 5.2.17 To calculate spending, for each trip it was assumed that one nights expenditure was related to walking. Based on these calculations, it was estimated that overseas visitors accounted for around **161,200** walking related trips in Wales and spent around **£8.4m**.

5.3 Summary of spending by walkers and hill walkers

- 5.3.1 The total volume of walking related activities in Wales and associated spending was then calculated from the data outlined above and is summarised in Table 5.7. It is estimated that in 2009 there were 28 million walking related trips to the Welsh countryside and coast. Expenditure associated with these walking trips was around £632m.

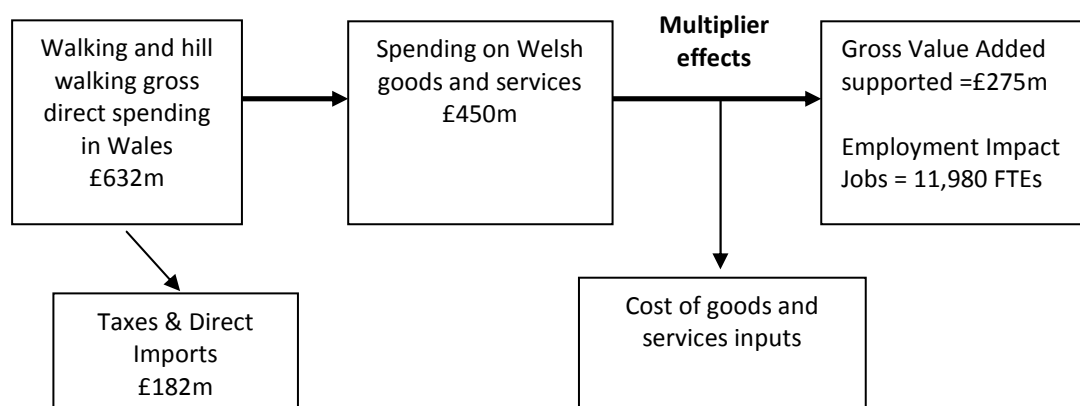
Table 5.7: Total trip volume and gross spending on walking and hill walking in Wales 2009

	Volume of walking trips (m)	Average expenditure per trip (£ per trip)	Total expenditure on walking related (£m)
Day Visitors			
Leisure day walking trips to the countryside	18.67	10.16	189.811
Leisure day walking trips to the seaside/coast	4.29	11.57	49.662
UK Resident Staying Overnight			
Tourist trips short walk main activity	0.62	148.90	92.318
Tourist trips long walk main activity	0.64	181.90	116.416
Tourist trips mountaineering main activity	0.15	173.90	26.085
Other Tourist trips that include a short walk as an activity	2.41	39.41	94.980
Other Tourist trips that include a long walk as an activity	1.22	42.07	51.322
Other Tourist trips that include mountaineering as an activity	0.097	35.64	3.457
International Visitors			
Overseas Visitors	0.162	52.00	8.424
Total	28.259	22.38	632.475

5.3.2 It is the figures in Table 5.7 that become the basis for analysis of economy wide effects associated with this level of tourism consumption.

5.4 Economy wide effects of walking and hill walking

5.4.1 The total expenditure figure of £632million shown in Table 5.7 above is the direct spend of walking and hill walking activity in Wales in 2009. Some of this spending goes on goods and services that are imported into the Welsh economy, and some 'leaks' out in the form of taxes. Figure 5.1 illustrates what happens to the initial direct spending total as it is modelled to estimate the indirect impact of walking activities.

Figure 5.1 How the Direct Expenditure on Walking and Hill walking flows through to Outputs

- 5.4.2 The gross spending figure (£632m) was firstly discounted for leakages such as taxes (including VAT), and spending on goods and services that are imports to Wales. The Welsh Tourism Satellite Account was used to inform the levels of import propensity (see section 4 above). The leakages (taxes plus direct imports) were here estimated at around £182m. For walking related goods bought in Wales but manufactured elsewhere (typically including jackets and boots), only a small element of the related spend is likely to be maintained in the region. Here only the retail profit margin will be kept in Wales.
- 5.4.3 The Tourism Impact Model for Wales shows that, for day trip visitors in the region, around 35% of their expenditure is taken up by goods and services imported from the rest of the UK, goods and services imported from the rest of the world (outside of UK), and production taxes. These monies are therefore leaked out of the calculations for estimating the economic impact of walking related activities on Wales.
- 5.4.4 Similarly, from the TIM for Wales, around a quarter of the spending of domestic overnight stay visitors, and overseas visitors, is shown to leak out of the Welsh economy (due to spending on non-Welsh goods and services, or taxes).
- 5.4.5 Once these leakages are removed, the remaining net expenditure resulting of £450m is an injection into the Welsh economy, which businesses receiving these monies then re-spend in successive indirect rounds (e.g. accommodation providers purchase goods and services from other Welsh sectors to meet the needs of their visitors, causing these suppliers to then purchase inputs from elsewhere, and so on). The resulting increase in the output of local providers, increases local wealth which in turn leads to increases in the levels of spending.

- 5.4.6 The overall economic impact is defined in terms of changes in output, gross value added (incomes), and employment that result in the economy. The size of these impacts depends upon the extent to which injections into the economy are retained regionally (so that the larger the propensity to spend on imported goods and services the smaller the amount that will be kept within the Welsh economy). This is expressed numerically by the multiplier coefficient. The lower the ability of the local economy to meet demand for goods and services, the higher the leakages (as spending takes place on imports), and the lower the multiplier.
- 5.4.7 Table 5.8 shows that the short-term related expenditure impact of walking and hill walking on Wales. These activities resulted in an **additional £562m of demand** in the Welsh economy.
- 5.4.8 Some of this additional output does not add to Welsh employment or incomes (e.g. cost of goods and services inputs) and the measure Gross Value Added (or GVA) is a more appropriate metric for regional economic impact. The additional activity in the regional economy was associated with **£275.4m of GVA** (GVA is considered the most appropriate true measure of the value of economic activity, summing locally earned incomes, company profits and some taxes).
- 5.4.9 The indicative estimate of the employment impact that might be associated with walking and hill walking activities for Wales in 2009, is around 11,980 person-years of employment.

Table 5.8: The Economic Impact of Walking and Hill Walking in Wales 2009

	Wales
Output (£millions)	562.1
Gross Value Added (£millions)	275.4
Employment (FTE*)	11,980

*FTE = Full-Time Equivalent

- 5.4.10 Table 5.9 shows the estimated expenditure related impact of walking activities split by industrial sector in Wales for 2009. The impact was most concentrated in Accommodation (£81.2m of gross value added), Distribution/Retail (£52.8m GVA), and Restaurants/ Bars/ Cafes (£33.8m GVA).
- 5.4.11 It is important to note that the impacts are not just felt in 'tourism facing' sectors, but that visitor consumption supported activity in, for example, financial and business services (£33m GVA) and manufacturing sectors (£26m GVA).

Table 5.9 The Economic Impact of Walking and Hill Walking in Wales 2009, breakdown by industrial sector

Sector			
£Millions	Output	GVA	FTEs
Manufacturing sectors	101.8	25.7	540
Distribution/ Retail	97.4	52.8	2,130
Accommodation	143.1	81.2	4,510
Restaurants etc.	61.9	33.8	2,040
Transport & Communication	55.4	25.5	880
Financial & Bus. Services	56.5	33.2	770
Recreation etc.	6.3	3.2	110
Public Sector (inc. forestry)	28.5	14.6	710
All other industries	11.1	5.4	290
TOTAL	562.1	275.4	11,980

5.5 Do economic impacts vary by type of walking visit?

5.5.1 Spending by UK residents who stay overnight in Wales away from home, account for the majority of walking related economic impact: 73% of output; nearly 75% of value added; and 77% of employment. A major contributing factor here is that a relatively large proportion of spending on accommodation tends to be retained within the Welsh economy.

Table 5.10 Economic impacts by type of walking visit

	Output	GVA	FTEs
Day visits	140.5	65.1	2,590
Domestic overnights	412.7	205.6	9,190
Overseas	8.9	4.7	200
Total	562.1	275.4	11,980

5.6 Which parts of the regional economy benefit most from walking?

5.6.1 There are a number of difficulties in estimating tourism economic impacts on smaller, sub-regional geographic areas- including understanding how tourism economies work in smaller areas and a general lack of data.

5.6.2 Work on providing an indicative estimate of the direct value of tourism for unitary authorities and other sub-regions of Wales has been carried out by Jones (2010). The method disaggregates TSA gross value added and Welsh tourism-dependent employment by unitary authorities based on an amalgam of demand-side (Scarborough Tourism Economic Activity Monitor, 'STEAM') and supply-side (ONS Annual Business Inquiry and Annual Population Survey data).

- 5.6.3 Table 5.11 indicates the potential breakdown of walking and hill walking GVA by tourism areas in Wales. This assumes that walking related spend were allocated in the same way as general tourism spend, and should therefore be treated with a 'health warning' and cannot be considered as of the highest statistical quality. With the inherent rural and coastline focus of walking related activities, the actual split would be more centred on these typologies of areas.

Table 5.11 Potential Indicative Impact of Walking and Hill walking by Wales Area

	GVA (£m)	% of GVA
North Wales	78	28.5
Mid Wales	50	18.1
South East Wales	90	32.6
South West Wales	57	20.8
Total	275	100.0

Note 1- table is indicative only and is based on assumption that walking and hill-walking related visitor spend is distributed in the same way as general tourism spend.

Note 2- Some locations are covered by more than one area e.g. Brecon Beacons is mainly covered by SE Wales but it also forms part of Mid Wales.

5.7 The contribution of walking to Welsh GVA

- 5.7.1 The total Gross Value Added figure for the Welsh economy in 2009 was £44,517m (Source: Office for National Statistics). The Tourism Satellite Account for Wales 2007 estimated that tourism as a whole accounts for around 3.8% of this Welsh GVA. Applying this proportion to the Welsh 2009 GVA total indicates that approximately £1,692m of GVA was contributed by tourism to the Welsh economy in 2009.
- 5.7.2 With walking and hill walking activities estimated in this report to have accounted for £275m of GVA in 2009, this then accounted for around 16% of all tourism GVA in Wales and 0.6% of all Welsh GVA.

6 Conclusions & recommendations

6.1 Main points from the impact analysis

- 6.1.1 It is estimated that in 2009 there were 28 million walking related trips to the Welsh countryside and coast. Expenditure associated with these walking and hill walking trips was around £632m (direct spending).
- 6.1.2 After leakages from this direct spending were removed, and the indirect impacts calculated through Input Output modelling, the overall expenditure impacts of walking activities were estimated as: £562m of additional demand in the Welsh economy; £275m of gross value added; and around 11,980 person-years of employment.
- 6.1.3 Walking and hill walking activities in 2009 accounted for around 16% of the total tourism GVA in Wales.
- 6.1.4 Domestic overnight visitors staying away from home in Wales were the major contributing factor to the overall economic impact of walking and hill walking in Wales.

6.2 Moving forward from the draft report

- 6.2.1 In what follows we provide some interim recommendations/conclusions arising from the analysis, and some considerations for further research. We stress these are very much provisional and we will develop further recommendations, linking through to policy in consultation with the steering group for the project.
- 6.2.2 In short the much of the value in the current study rests in the development of a baseline of tourism consumption spending associated with walking and hill walking. It is only recently that the opportunity has become available to undertake this type of analysis with improvements in underlying survey resources and with a system of Welsh tourism satellite accounts with which to explore the components and contribution of different types of tourism spending in Wales. This might be viewed as the start of a wider process.

- 6.2.3 The developed baseline becomes a means through which policymakers and walking institutions in Wales can now better understand the effects, for example, of initiatives which might increase the number of walking trips taking place in Wales. For example, this type of baseline will be particularly valuable where projects in Wales are claiming that interventions will lead to an increase in numbers of walking trips, but with no real means of understanding what an increase in trips means for the Welsh economy. The analysis here then might be incorporated into return on tourism investment measures. For example, a large number of projects are currently taking place under the banner of the EU Environment for Growth programme and with an ongoing monitoring and evaluation challenge to link environmental improvements to tourism receipts. On the negative, the baseline also allows us a better understanding of what might happen if walking activity is curtailed or temporarily displaced, for example, through events similar to the foot and mouth outbreak.
- 6.2.4 More generally the analysis adds to the evidence base on the economic services derived from Welsh ecosystems. The developing Natural Environment Framework (NEF) in Wales is seeking to emphasise the connections between the social, economic and environmental dimensions of ecosystems and the services they provide. Visitation associated with walking is one component of this economic dimension. While it is very difficult to associate monetary values to bio-diversity and landscape, particularly, the intrinsic values of landscape, it has been possible here to assign monetary value to one set of leisure activities closely linked to the quality of regional environmental assets.
- 6.2.5 It is accepted that the scope of the developed baseline of the economic impact of walking and hill walking is narrow. A comprehensive analysis might extend to value the wider set of welfare outcomes associated with walking activity. Uppermost here are the health benefits of walking in the context of an ageing UK population. It is also accepted that there are other 'gaps'.
- 6.2.6 The method used here does not allow us to pick up on residents walking close to their homes. However, these walkers are still important because while such people might not be classed as tourist (as they are within their usual environment), the leisure time spent walking close to home does reduce spending leakages from the local economy. The method adopted takes no account of instances where Welsh residents walk in other parts of the UK and overseas, yet buy goods and services to support their walking activity in the regional economy.

- 6.2.7 Other gaps include the value of volunteer time. For example, members of the Ramblers and British Mountaineering Council dedicate unpaid time to improving the social and physical infrastructure surrounding walking, and this has a value. These same institutions themselves spend monies in the local economy which support walking activity. While it is difficult to combine elements of the supply side to the analysis here this is nonetheless worthy of note.
- 6.2.8 In terms of the method there are still residual concerns relating to selected assumptions used, in particular relating to the proportion of trips where walking takes place. It is also important to recognise that the day visitor estimates used in this report are based on a date set that is nearly a decade old. Constraints on resources available to develop the regional statistical base are expected to preclude large scale surveys of walking. However, the Environment for Growth project cited above is expected to yield a great deal of information about walking visitation which might be incorporated into future research.
- 6.2.9 This report on the economic impact of walking and hill-walking in Wales should aid in evaluating the benefit of new improvements to the walking-related infrastructure (such as the Wales Coastal Path), presenting a baseline of figures for 2009.

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