Economic assessment of the health benefits of walking on the Wales Coast Path

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Wales Coast Path

Llywodraeth Cymru
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About Natural Resources Wales

Natural Resources Wales brings together the work of the Countryside Council for Wales, Environment Agency Wales and Forestry Commission Wales, as well as some functions of Welsh Government. Our purpose is to ensure that the natural resources of Wales are sustainably maintained, enhanced and used, now and in the future.

Wales' landscape, environment and wildlife are amongst its greatest resource, worth more than £8bn to the Welsh economy.

- We will work for Wales' economy and enable the sustainable use of natural resources to support jobs and enterprise. We will help businesses and developers to understand and consider environmental impacts when they make important decisions
- We will work for the communities of Wales to protect people and their homes as much as possible from environmental incidents like flooding and pollution. We will provide opportunities for them to learn, use and benefit from Wales' natural resources
- We will work to maintain and improve the quality of the environment for everyone. We will work towards making the environment and natural resources more resilient to climate change and other pressures.

We are the principal adviser to the Welsh Government on the environment, enabling the sustainable development of Wales' natural resources for the benefit of people, the economy and wildlife.

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Crynodeb: asesiad economaidd o'r buddion iechyd o gerdded ar Lwybr Arfordir Cymru

- Mae Llwybr Arfordir, Cymru sy'n 870 milltir o hyd, yn cynnig cyfleon gwerthfawr am tua 2.8 miliwn o deithiau cerdded, beicio a merlota.

- Mae ymweliadau â Llwybr Arfordir Cymru'n dod â budd economaidd arwyddocaol i economi Cymru. Cyhoeddodd Cyfoeth Naturiol Cymru adroddiad yn 2013 ar yr effeith economaidd a ddaw o gwariant y rhai sy'n ymweld â Llwybr Arfordir Cymru. Daeth i'r casgliad fod y Llwybr yn cynhyrchu gwerth ychwanegol o tua £16 miliwn gros i economi Cymru.

- Mae'r adroddiad yn defnyddio teclyn Asesiad Economaidd Iechyd (HEAT) ganSefydliad Iechyd y Byd i gynnal asesiad economaidd o'r buddion iechyd sy'n dod o ganlyniad i bobl yn cerdded y llwybr Arfordir Cymru yn rheolaidd.

- Gan ddefnyddio data gan bobl yn cyfrif ar y llwybr ac arolygon defnyddwyr, amcangyfrifwyd fod 23,688 o bobl wedi cerdded ar y llwybr pob wythnos. Ar gyfartaledd roedd y rhain yn cerdded 4.38 milltir yr wythnos (wedi'u taenu dros 1.6 ymweliad ar gyfartaledd yr wythnos).

- Roedd cymaint â hyn o gerdded yn atal 7 o farwolaethau'r flwyddyn ymysg y boblogaeth gerdded, o gymharu â phobl nad ydynt yn cerdded yn rheolaidd.

- Gellir cyfrifo gwerth economaidd am y nifer o farwolaethau a gafodd eu rhwystro, gan ddefnyddio'r hyn sy'n cael ei alw'n werth bywyd ystadegol. Yn seiliedig ar hyn, gwerth economaidd y buddion iechyd o gerdded ar Lwybr Arfordir Cymru yw **£18.3m y flwyddyn.**

- Mae hynny'n cael ei rannu'n **£11.3 miliwn** mewn ardaloedd cydgyfeiriant a **£7 miliwn** mewn ardaloedd y tu allan i ardaloedd cydgyfeiriant.

- Ymysg y cerddwyr, dywedodd 19% na fydden nhw'n cerdded o gwbl heb y llwybr. Felly, **mae £3.5 miliwn o fudd y flwyddyn yn gallu cael ei cysylltu'n uniongyrchol i fodolaeth Llwybr Arfordir Cymru.**

- Mae'r teclyn HEAT wedi'i brofi'n addas i'w ddefnyddio yn y byd hamdden ac argymhellir ail adrodd y gwerthusiad hwn mewn blynyddoedd i ddod.

Executive Summary

- The 870 mile long Wales Coast Path (WCP) provides valuable opportunities for around 2.8 million walking, cycling and horse-riding trips for recreation and transport each year.

- Visits to the WCP provide significant economic benefit to the Welsh economy. Natural Resources Wales (NRW) published a report in 2013 on the economic impact of spending by visitors to the WCP[1]. This concluded that the WCP generated approximately £16m gross added value to the Welsh economy.

- This report uses the World Health Organization's Health Economic Assessment (HEAT) tool to conduct an economic assessment of the health benefits arising from people walking regularly on the Wales Coast Path.

- Using data from counters on the path, and user surveys, we estimated that 23,688 people walked on the path every week. On average they walked 4.38 miles per week (spread over a mean of 1.6 visits per week).

- This level of walking prevented 7 deaths per year among the walking population, compared to people who do not walk regularly.

- An economic value can be calculated in relation to the number of deaths prevented, using what is termed the value of statistical life. Based on this, the economic value of the health benefits of walking on the Wales Coast Path is **£18.3m per year**.

- This is divided into **£11.3m** per year in convergence and **£7m** per year in non-convergence areas.

- Among these walkers, 19% of people said that without the path they would not have walked at all. Thus **£3.5m of benefit per year can be directly attributed to the existence of the Wales Coast Path.**

- The HEAT tool has shown to be adaptable to use in the leisure setting, and it is recommended that this valuation is repeated in future years.

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1 Natural Resources Wales. The Wales Coast Path Visitor Survey 2011-13. The Economic Impact Of Wales Coast Path Visitor Spending On Wales 2013.

1.   Background

The 870 mile long Wales Coast Path (WCP) was formally opened in May 2012, stretching from Monmouthshire in the south to Flintshire in the north. The WCP provides valuable opportunities for around 2.8 million walking, cycling and horse-riding trips for recreation and transport each year.

Visits to the WCP provide significant economic benefit to the Welsh economy. Natural Resources Wales (NRW) published a report in 2013 on the economic impact of visitor spending on the WCP[2]. This concluded that the WCP generated approximately £16m gross added value to the Welsh economy.

In addition to this analysis, Natural Resources Wales now wish to be able to consider the impact of the investment in the WCP on the health of the nation.

2.   Aim

The aim of this project is to conduct an economic assessment of the health benefits derived from walking the Wales Coast Path. The assessment uses data from visitor counters and a site-based survey of route users as inputs to the WHO HEAT for walking tool. The report uses this assessment to make a number of recommendations for future monitoring of visitor numbers, and for conducting such an economic assessment in the future.

3.   Introduction to the HEAT

The Health Economic Assessment Tool for Walking (WHO HEAT[3]) has been developed by the World Health Organization to provide estimates on the value of health effects from walking. The tool has been developed primarily with transport planning in mind.

The HEAT is designed to answer the following question:

> *If x people walk for y minutes on most days, what is the economic value of the health benefits that occur as a result of the reduction in mortality due to their physical activity?*

It uses published data from epidemiological studies to compare the mortality rates of walkers and non-walkers, and applies this to the volume of walking in the study area. This is used to estimate the reduction in the number of deaths that might occur as a result of regular walking. These deaths are then valued using the standard economic approach within transport appraisal of the *value of a statistical life*. Full details of the HEAT methods are available[4] [5].

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2 Natural Resources Wales. The Wales Coast Path Visitor Survey 2011-13. The Economic Impact Of Wales Coast Path Visitor Spending On Wales 2013.
3 http://www.heatwalkingcycling.org
4 Kahlmeier et 2011.   Health economic assessment tools (HEAT) for walking and for cycling. Methodology and user guide. Economic assessment of transport infrastructure and policies. Copenhagen. WHO.
5 Rutter et al. Economic Impact of Reduced Mortality Due to Increased Cycling. **American Journal of Preventive Medicine.** Volume 44, Issue 1 , Pages 89-92, January 2013

Value of a statistical life

The concept of *value of a statistical* life (VSL) is central to the HEAT as it enables an assessment to be made of the economic value of the deaths prevented by a given amount of regular walking. VSL is commonly used by transport economists, and is based on a methodology called "willingness to pay". This is how much a representative sample of the population would be willing to pay (in monetary terms) to avoid a specific risk such as the risk of a traffic injury. VSL is commonly used by transport economists to place a value on lives saved through road safety improvements. The HEAT applies the same concept to lives that have been (theoretically) saved through increased walking, compared to the non-walking population.

Limitations of the HEAT approach

There are some limitations of the use of the HEAT that should be considered. Overall it is important to consider that the HEAT takes a simple approach to assessing the mortality benefits of regular walking. It uses relative risk figures and applies these to a standard-aged population. It therefore does not consider differences in impact by age, and does not take account of the other health benefits of walking such as improved mental health or reduced incidence of disease.

Using the HEAT in a leisure setting

The HEAT has been used in a number of situations and settings, but it has rarely been applied to a recreation setting or path similar to the WCP. NRW therefore also wished to ascertain the appropriateness of applying the HEAT tool, which was designed for assessing routine physical activity behaviour such as walking or cycling to work, in a leisure context such as the WCP.

4. Calculating input data for the HEAT

Making an economic assessment of the amount of walking along the path using the HEAT tool requires two different types of data:

- An estimate of the number of people walking along the path, and the average frequency of their walking
- An estimate of the average time spent walking, or distance walked, on the path by each person, on each visit

Number of people walking & frequency

An estimate of the number of people who use the path is not directly available from either the route user survey or the counter data. The route user survey (See annex A) uses a random sample of visitors to the path and asks them questions about their path usage. It therefore provides data on frequency of use but does not help us estimate the number of people walking.

The data from the counters on the path provide a value for the total number of times that a person has passed a counter while walking along the path. This may not equate to the total number of walkers for the following possible reasons:

- A proportion of people will walk on sections of the path without any counters, so will not be included in the counts at all;
- A person who walks to a destination and then returns via the same route would trigger the counter twice.
- There is a small number of counters for the length of the path, therefore there are large areas where there are no counters.

The count data therefore need to be adjusted to take account of the proportion of people making return journeys, to reach an estimate of the total number of people walking on the path. The proportion of people making return journeys had to be calculated from additional analysis of the route user survey. The survey contains a detailed map of the area surrounding the interview site with the route of the Wales Coast Path highlighted in red. Respondents were asked to mark the journey they were taking that day along the path. As part of the initial analysis of the survey, the research company was asked to report the distance travelled in one direction, rather than the total distance travelled, or whether the walk was an 'out and back' including a return to the same start point. This analysis was relevant for NRW's main objectives, as they wanted to focus on the amount of the path that was being used: the focus was therefore on how much of the path each walker had used. However, this is inadequate for the HEAT analysis as we need an estimate of the total distance walked, and – for the reasons discussed above – we need to know how many journeys included a return trip to the same start point.

For the HEAT analysis, the data had to be re-analysed by NRW using the original questionnaires. This provided data on the total distance walked, along with the proportion of trips that were return journeys.

> **Recommendation**
>
> To avoid having to undertake additional analysis in future years, it is recommended that the survey responses be analysed routinely to ascertain the total distance walked on each trip, and the proportion of walkers making return journeys. Alternatively, it would be considerably easier to ask respondents a question like: '*are you returning to the same place where you started your walk today'.* This would provide additional validation for the return journey calculation.

We combined the counter data (total number of times a counter had been triggered by a passing walker in either direction) and the estimate of the proportion of people who made return journeys to estimate the total number of trips per year.

The HEAT tool allows the user to estimate the number of walkers by entering the number of trips and the proportion making return journeys. However, the HEAT is designed to assess the value of regular commuting behaviour, so the default values are based on regular (almost daily) walking. This is likely to lead to values that don't represent users of the Wales Coast Path who are not generally making daily journeys. We therefore used values from the route user survey to estimate the mean frequency of walking along the path, and used that to calculate the number of walkers.

This calculation is shown at Annex 1. It shows that the mean frequency of walking along the path is 1.6 trips per person per week.

The estimate was cross-validated through discussion with NRW: while people living on the path – especially dog walkers – may walk daily (or even more frequently), the majority walk much less often, with 20% saying they only used it once a year. The result also appears consistent with some other surveys: The South West Coast Path user survey[6] found users visited the path on average 30 times per year (approx 0.6 times per week) while in the Fife coast path survey[7] the mean was higher at 2 walks per week on average.

Using this mean frequency we calculated that 23,688 people had walked on average 1.6 times per week, with 59% making return trips.

Distance walked

One way to calculate the mean distance walked would be to use the data from question 9 in the survey which asks respondents to estimate the distance they will walk along the path from the start to the furthest point. Comparison of these responses with the calculated distance data (i.e. the analysis of the maps and measuring the start and end points) shows that respondents tended to overestimate the distance to a large degree (self-assessed distance is 46% greater than measured distance). This demonstrates 'social desirability bias' which is a common phenomenon that tends to affect self-reported estimates of a number of issues including distance walked, height and weight, etc[8]. This discrepancy seems particularly large and is cause for concern. It is also striking that the mean distance for self-assessed single journey and the mean total journey are nearly identical, potentially

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[6] http://www.ramblers.org.uk/~/media/Files/Campaign%20with%20us/The-Economic-Value-of-the-South-West-Coast-Path.pdf
[7] http://fifecoastandcountrysidetrust.co.uk/userfiles/Fife%20Coastal%20Path%20Study%20-%20Final%20Report%20-%20FV%2018%2005%2009.pdf
[8] http://en.wikipedia.org/wiki/Social_desirability_bias

implying that respondents did not understand that they were being asked for only the single portion of their journey. See Annex 3 for the full questionnaire.

Question		Mean distance (miles)
Q8: "on the following map please can you draw in your entire trip along the coast path today. Mark the start of your trip with an S and the finish with an F. If you will be doubling back along the same route please make sure you indicate the furthest point you will be reaching on the path before you turn back. "	Measured by research company from maps; single leg of journey only	1.82
	Measured by research company from maps; total distance (i.e. distance doubled if return journey)	2.72
Q9: "approximately how many miles along the coast path do you think you will cover on your trip today between the start point on the path and the furthest point from the start on the path? NOTE THIS IS NOT THE TOTAL MILES WALKED TODAY – IT IS THE TOTAL MILES ALONG THE STRETCH OF THE COASTAL PATH	Intended to be distance covered only on single leg of a return journey (self-assessed)	2.65

The alternative way to calculate the mean distance walked is to use the data from question 8 which asks people to highlight start and finish points on a map. There may be some methodological problems with this technique. The main issue is that people may not walk exactly as planned, though this is likely to be balanced out by some people walking further, and some walking shorter distances than planned. Further, it is important that the map data are analysed correctly and that the real distance is measured rather than the distance between the start and end points 'as the crow flies'. The research company were commissioned to measure the total distance using an opisometer (a map-measuring device) rather than measuring the straight line distance so this issue should have been addressed. Overall it does seem likely that this method will produce a more accurate assessment of distance than the self-assessed total used in question 9. In fact, it appears that question 9 provides significantly exaggerated distances.

To ensure that the HEAT calculations are as accurate as possible, the measured data from question 8 were used.

5. Performing the HEAT calculation

Having derived the best possible estimates of the use of the path we entered the following data into the HEAT tool:

Number of walkers = 23,688 per week

Distance walked = 4.38 miles per week
(1.61 trips per week * 2.72 miles per person per trip)

The following parameters were chosen:

Value of a statistical life[9] = £3.229m
This is the default value from the HEAT for the UK

Mortality rate[10] = 538/100,000
This is the crude mortality rate for Wales[11]

Discount rate[12] = 5%
This is the default rate recommended by the HEAT

Appraisal period[13] = 10 years
This is the default rate recommended by the HEAT

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[9] See section 3 for explanation of Value of Statistical Life

[10] Mortality rate is a measure of the total number of deaths in a population, scaled to the size of that population, per unit of time. For the HEAT, mortality rate is expressed in deaths per 100,000 population.

[11] See Annex 2

[12] The theoretical or observed rates commonly used by economists to discount future payoffs. Since benefits occurring in the future are generally considered less valuable than those occurring in the present, a discount rate is applied to future benefits.

[13] The time period over which benefits are calculated.

6.   Results

HEAT estimate

Reduced mortality as a result of changes in walking behaviour

The walking data you have entered corresponds to an average of **1.01** km per person per day.

This level of walking provides **an estimated** protective benefit of: **6 %** (compared to persons not walking regularly)

From the data you have entered, the number of individuals who benefit from this level of walking is: **23,688**

Out of this many individuals, the number who would be expected to die if they were not walking regularly would be: **127.44**

The number of deaths per year that are prevented by this level of walking is: 7

Financial savings as a result of walking

Currency: GBP, rounded to 1000

The value of statistical life in your population is:	3,229,000
The annual benefit of this level of walking, per year, is:	23,742,000
The total benefits accumulated over **10** years are:	237,416,000
When future benefits are discounted by **5 %** per year:	
the current value of the average annual benefit, averaged across 10 years is:	18,333,000
the current value of the total benefits accumulated over 10 years is:	183,327,000

This produced the value of **£18.3m** per year (averaged over 10 years).

This value is based on the HEAT's estimate that the increased amount of walking among users of the WCP (compared to people who do not walk regularly) has led to the prevention of 7 premature deaths.

Each life saved is valued at £3.229m per year. The total is then discounted back to the present day (to reflect the fact that the projected savings are in the future).

More detailed information and explanation of the concept of value of statistical life, discounting, and the methods behind the HEAT calculation are available in the HEAT user guide[14].

This £18.3m is divided into **£11.3m** per year in convergence and **£7m** in non-convergence areas.

This calculation is based on the proportion of counts measured in convergence and non-convergence areas (i.e. the measured use of the WCP in each area). Although local level mortality rates for the different areas within Wales were not available to us, it is very likely that the levels will be higher in the convergence areas as mortality is closely linked with

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[14] http://www.euro.who.int/__data/assets/pdf_file/0003/155631/E96097rev.pdf?ua=1

deprivation. The health benefits accruing from the path are thus likely to be greater in these areas, as a result of which the HEAT figures calculated here may well underestimate the benefit. If local mortality data are available these could be used to generate revised results

Attributing benefit directly to the coast path

A weakness of many evaluations is that it is difficult to attribute benefits directly to the intervention itself. In the above calculations we have estimated the value of the health benefits of a number of people walking along the Welsh Coast Path, and attributed this value to the existence of the path itself. In other words we have assumed that it is the existence of the path that led to the creation of the health benefits. However, while it may be true that some people walked along the path 'because it was there', a number of people may have walked the same distance and frequency if the path did not exist; they simply would have made their journeys elsewhere.

This issue was addressed in question 6 of the survey which asked respondents what they would have done if they had not been able to access that particular stretch of the Wales Coast Path. 11% said they would have undertaken the journey by car/ van/ bus/ train etc while 8% said they would have not made the journey or gone walking/ cycling/ horse-riding at all. Thus at least 19% of the total respondents claim to be making walking journeys that can be directly attributed to the path itself.

Applying this to the HEAT calculation, we can say that at least £3.5m per year of benefit can be directly attributed to the Welsh Coast Path (19% of £18.3m).

This is an assessment of the net impact of the WCP and should not be compared with evaluations that use a gross impact figure. This calculation is also quite conservative: most evaluations take a much more generous view of the potential range of benefits and do not only assess directly attributable benefits. The HEAT tool only considers reductions in mortality and does not, for example, estimate benefits from reduced illness, such as diabetes or obesity-related conditions.

7.   HEAT calculations in future years

These calculations took a considerable amount of time and effort as the data had to be sourced from the various surveys and converted into the right format for the HEAT tool. For future years, the following process should be followed:

1. Use count data to generate an accurate and up-to-date assessment of the number of counts on the path (i.e. people passing a counter in either direction)
2. Use data from the latest user survey (using questions 6, 8 and 14 of the visitors survey. See Annex 3) to estimate the mean frequency of walking among users of the path (using proportion of return trips). Ideally this would be made easier by including a question like '*Are you walking there and back on the Wales Coast Path today?*' in the survey. We can advise on specific questions if required.
3. Use this frequency to calculate the number of unique visitors
4. Enter these data into the online HEAT tool
5. Calculate the proportion in convergence and non-convergence areas (if desired)
6. Use data from the user survey to calculate the directly attributable benefit (if desired).

8. Methodological considerations.

Use of count data

We have raised above a few potential problems with interpreting readings from counters as representing the actual number of visitors. Our investigation of the source data indicates some other concerns. Flintshire recorded the second highest number of visitors of any Local Authority, although the estimate comes from a single observation in July-Sept 2010. When compared with the record of observations for other areas, we would expect several years of quarterly results to have been reported. This observation is an order of magnitude greater than any other reading (and 2 orders of magnitude greater than most readings). One possible explanation for the anomaly is that this represents the total number of readings for multiple years. It's difficult to say given that the only other readings (for Oct-Dec 2012 and Oct-Dec 2013) are 0, owing to vandalism (explanatory note dated 23 April 2013). If the result does cover multiple years, it can't be included in the annual sum for all areas. Given that this result accounts for 15%, it would seem to warrant further scrutiny.

There are several instances of apparent under-counting owing to equipment faults, vandalism, theft, closure of routes and partial reporting. There are also occasional instances of attempts to correct reporting errors. In the context of other observations these discrepancies appear to be within tolerable limits.

Although the data are not available for a direct comparison of the same period for each area, the aim appears to have been to select the most recent, and reliable full year of data. This should serve to balance out seasonal variation with the year (which would be a problem if we were to look at the summer quarter only, for example). It does, however, involve the implicit assumption that the latest year is representative for all past and future years. In reality the counter data shows trends of rising and falling use. A full investigation of the trend data might suggest some interesting patterns although it might not be possible to make a fair comparison given the inconsistencies in data quality.

Value of a statistical life

There have been some criticisms of the approach taken to using the value of a statistical life. Its use is common in transport economics, where a road safety improvement that saves a life has a standard financial benefit. However, some critics of the approach say that it is inappropriate to value human life in this way. Another issue is that the financial value of the reduced deaths is somewhat intangible: it is not 'healthcare savings' or money not spent on treatment, which would require a different economic approach.

Adaptations needed to use the HEAT tool for recreational walking

One of the concerns expressed by NRW at the start of this project was that the HEAT might not be directly applicable to use in a leisure setting, as it was originally designed to assess the value of commuter walking and cycling. The main issue is the frequency of walking, as the default values in the HEAT are based on much higher frequency of walking than is normally seen on leisure paths. This has been addressed by performing our own calculations of walking frequency rather than using the HEAT default values.

The other consideration is that the baseline level of physical activity may be different between the types of people who regularly commute (by bike or by foot), and people who walk for leisure along a coast path. This might mean that the additional benefits of the walk

may vary between the groups. However this is dealt with in the HEAT as the relative risk of mortality between walkers and non-walkers takes account of their baseline level of leisure-time physical activity. This means that it is only the additional walking that leads to the reduction in risk. Thus the HEAT should be just as applicable to a leisure setting as regular commuting. However, overall the HEAT does seem to be a very suitable compromise between technical complexity and ease of use, and has been shown to be applicable to the situation of assessing the benefits of a coast path.

9. Conclusions

The HEAT tool has allowed an economic assessment to be made of the health benefits arising from people walking regularly on the Wales Coast Path.

Using data from counters on the path and user surveys, we estimated that 23,688 people walked on the path every week. On average they walked 4.38 miles per week (spread over a mean of 1.6 visits per week).

This level of walking prevented 7 deaths per year among the walking population (compared to people who do not walk regularly).

Using standard values for a statistical life, this amounts to an average value per year of walking on the Wales Coast Path of **£18.3m.**

This is divided into **£11.3m** per year in convergence and **£7m** in non-convergence areas.

Within these walkers, 19% of people said that without the path they would not walk at all. Thus **£3.5m of benefit per year can be directly attributed to the existence of the Wales Coast Path.**

The HEAT tool has shown to be adaptable to use in the leisure setting. It could be used to repeat this valuation in future years. If survey questions were amended appropriately this could provide more robust results.

Annex 1

Main calculations: trips and distance

	A	B	Formula
	Wales Coast Path counts per year	**Bold** = HEAT input data	
1	Raw number of counts	2,823,517	
3	proportion return trips	59.36%	
5	number of one way trips	1,147,598	(1-A3)*B1
7	number of return trips	1,675,919	A3*A1
9	total unique trips per year	1,985,558	A5+(A5/2)
11	total unique trips per week	38,184	A9/12
13	total persons per week	**23,688**	A11/B29

IF only 19% of these trips can be attributed to the path

	A	B	Formula
20	total WCP-specific trips per year	377,256	A9*0.19
22	total WCP-specific trips per week	7,255	A20/52
24	total WCP-specific persons	**4,501**	A22/B28
26	mean total miles per person per trip	2.72	
28	mean trips per week	1.61	
29	mean total distance per week (miles)	**4.38**	A26*A28

Trip frequency

		Daily	Weekly	Once per month	Once per year	Hardly ever	First time	Don't know	Total
%		19%	22%	23%	20%	5%	9%	1%	99%
n	1566	297.5	344.5	360.1	313.2	78.3	140.9	15.6	1550.3
Days per year		365	52	12	1	0.5	0.5	0	
Person trips per year		108602.1	17915.0	4322.2	313.2	39.2	70.5		131262.1
Person trips per week									2524.2
Mean trips per person per week									1.6
Mean trips per person per year									**83.8**

Annex 2

Calculating the Crude Mortality Rate for Wales

We used the most recent version of the online HEAT tool (launched in May 2014). This has mortality rates for a number of countries including the WHO Europe Region (659 deaths/100,000 persons per year) and the UK (434/100,000) but we wanted to use the rate for Wales to make the calculations more directly applicable. We calculated the following:

- Deaths per year in Wales using ONS Data (Table 11 on registered deaths) = 10,069 = 5,906 male + 4,163 female
- Population (census table KS102EW) = 1,871,290
- death rate per 1000 pop = 10,069/ 1,871,290 * 1000 = **5.38**

NB This a) uses deaths from 2012 and population from 2011; b) is based upon ages 25-74 rather than 20-74 as in the HEAT.

Annex 3. User survey

WALES COAST PATH VISITOR SURVEY
(B01135 Draft 5)

For office use:	Sample point ref:	(1)	(2)	Case number	(3)	(4)	(5)	(6)

APPROACH ADULTS AGED 16 AND OVER

Good morning/afternoon. My name is………from Beaufort Research, a member of the Market Research Society. We are conducting a short survey on behalf of the Countryside Council for Wales to understand why and how people are using the coastal path, and help us manage the path better. The survey will only take around 5 minutes or so to complete . The responses you provide will be held by the Countryside Council for Wales and the information will be used for research purposes only. Would you be able to help?

Q1	**RECORD RESPONDENT'S MODE OF TRANSPORT ON COAST PATH**	
	MAY MULTICODE	
		(7-9m)
	Walking	1
	Cycling	2
	Horse riding	3
	Using a motorised vehicle (e.g. motorbike, quad bike)	4
	Using an assisted/ disability vehicle	5

Q2	Would you like to take part in this survey in English or Welsh?	(10)
	English	1
	Welsh	2

Q3	**SHOWCARD C**	
	And which of the following best describes why you are using the path today?	
	SINGLE CODE. IF "DOGWALKING" RECORD AS LEISURE TRIP FROM	(11)
	HOME OR AS PART OF HOLIDAY/ BREAK AS APPROPRIATE	
	To go to or from your usual place of work or another destination	1
	Non-routine work trip purposes	2
	Part of a leisure trip from home	3
	Part of a leisure trip as part of a longer break or holiday in Wales	4
	Other (specify) _____	5

	They are joined up into one path	1
They are not joined up into one path but will be in the near future	2
They are not joined up into one path but will be in the long term	3
They are not joined up into one path and probably never will be	4
Don't know	5

Q5	**READ OUT** In 2012 the Wales Coast Path will be created with 850 miles of pathways around the country's coastline. It includes already existing coastal paths along with sections which have been improved and new sections of path.	
	Can you tell me whether you think that the path you are on now is… **READ OUT, SINGLE CODE**	(20)
	An **unchanged existing** section	1
	An **improved** section	2
	A **new** section of path	3
	Don't know	4

Q6	**SHOWCARD E** Thinking about this visit, if you had not had access to this section of coastal path, what would you have done? **SINGLE CODE**	
		(21)
	Walked/ cycled/ horse ride by another route somewhere else	1
	Undertaken the journey by car/ van/ bus/ train etc	2
	Not made the journey or gone walking/ cycling/ horse riding at all	3
	Other	4
	Don't know	5

ASK ALL

How many adults are <u>in your immediate party</u> for walking/ cycling/ riding along the path today?

Q7a   **INCLUDE ALL THOSE AGED 16+. IMMEDIATE PARTY = THOSE WITHIN THE SAME GROUP THAT SHARE FINANCIAL RESPONSIBILITY.**

Record no. adults

(22)	(23)	(24)

Q7b   And how many children are <u>in your immediate party</u> for walking/ cycling/ riding along the path today?
INCLUDE ALL THOSE AGED <16.

Record no. children

(25)	(26)	(27)

Q8   **READ OUT. HAND PEN TO RESPONDENT.**
On the following map please can you draw in your entire trip along the coast path <u>today</u>. Mark the start of your trip with an S and the finish with a F. If you will be doubling back along the same route please make sure you indicate the furthest point you will be reaching on the path before you turn back.

IF UNABLE TO USE MAP SEE BELOW

RECORD TRIP ON PATH VERBATIM, BELOW, GIVING AS MUCH DETAIL AS POSSIBLE (PLACE NAMES, POINTS OF INTEREST). GIVE START POINT AND END POINT AND – IF RETURNING TO THE START POINT – FURTHEST POINT ALONG THE PATH REACHED BEFORE TURNING BACK.

_____

_____

_____

_____

MAP PAGE – INDIVIDUAL TO EACH LOCATION. EXAMPLE <u>DUNRAVEN BAY</u> BELOW.
Arrow indicates position of interviewer.
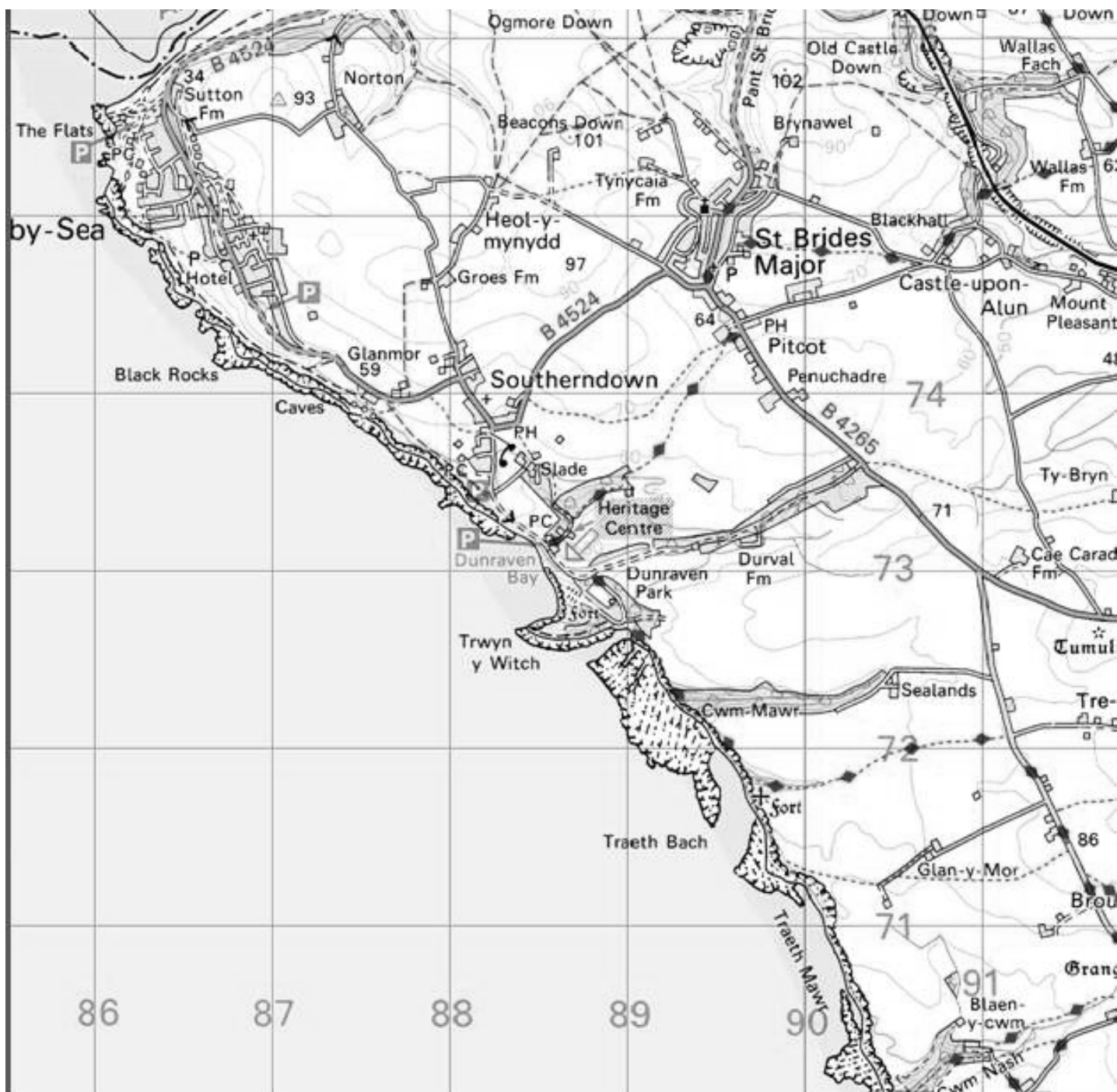
IF START AND/OR END IS <u>NOT</u> ON MAP ABOVE, PLEASE WRITE IN START/ END POINTS, BELOW, GIVING AS MUCH DETAIL AS POSSIBLE (PLACE NAMES, POINTS OF INTEREST).

Q9	**ASK ALL** Approximately how many miles along the coast path do you think you will cover on your trip <u>today</u> between the start point on the path and the furthest point from that start point on the path? **NOTE THIS IS NOT THE TOTAL MILES WALKED TODAY – IT IS THE TOTAL MILES ALONG THE STRETCH OF THE COAST PATH** **IF ESTIMATE GIVE MID POINT. IF DON'T KNOW RECORD YYY** Estimated number of miles ☐ ☐ (22) (23)	

Q10	Approximately how much do <u>you and your immediate party</u> expect to spend during the following today:
	
	[USE LEADING ZEROS. IF A RANGE, RECORD THE MID POINT. IF NOTHING WRITE IN 0000. IF 'DON'T KNOW' WRITE IN YYYY. 'REFUSED' WRITE IN ZZZZ]
	
	£ £ £ £
	a. while traveling along this section of coast path ☐☐☐☐ = spent today/ intend to spend
	    (55) (56) (57) (58)
	
	b. <u>on the entire trip today</u> (including spend along the route as well as fuel costs to and from the coast path, parking, food and drink and souvenirs but <u>excluding accommodation</u>) ☐☐☐☐ = spent today/ intend to spend
	    (59) (60) (61) (62)

Q11	Does your visit to this coastal path involve you staying overnight in Wales away from home?	(70)	
		Yes	1 ➔ **Q12**
		No	2 ➔ **Q14**
		Don't know	3 ➔ **Q14**

Q12	How many nights **in Wales** will you be staying in order to use the coast path? **IF 'DON'T KNOW' CODE AAA** Record nights ☐ ☐ ☐ (71) (72) (73)

Q13	**SHOWCARD F** In what type of accommodation will you be staying in Wales?	(74)	
		Hotel	1
		Guesthouse/ B&B/ Farmhouse	2
		Self-catering cottage/ house/ apartment	3
		Campsite/ caravansite (static or touring)	4
		Hostel or bunkhouse	5
		With friends or family	6
		Other	7

Q14	**ASK ALL SHOWCARD G** Which of the following best describes how often you use the coast path in Wales?	(75)	
		Daily	1
		Weekly	2
		At least once a month	3
		At least once a year	4
		Hardly ever	5
		This is the first time	6

Q15	Thinking about you and anyone in your immediate party (IF APPLICABLE) on the coast

path today, is there anyone whose day to day activities are limited because of a health problem or disability which has lasted, or is expected to last, at least 12 months? **INCLUDE PROBLEMS RELATED TO OLD AGE**

(76)

Yes – limited a lot	1
Yes – limited a little	2
No	3

CLASSIFICATION

Now just a few details to check that our sample is representative

GENDER
(80)

Male	1
Female	2

AGE
(81)

Write in age _____

STATUS IN HOUSEHOLD
(82)

* Chief Income Earner	1
Other adult (aged 16+ or over)	2

WORKING STATUS OF RESPONDENT (83)

Working full time (30+ hours per week)	1
Working part time (up to 29 hours per week)	2
Full time education	3
Retired	4
Not working	5
Other	6

OCCUPATION OF CHIEF INCOME EARNER*

Actual job: _____

Position/ grade: _____

SOCIAL CLASS
(84)

AB	1
C1	2
C2	3
DE	4

WHAT IS YOUR ETHNIC GROUP? SHOWCARD G

White	(85)	Mixed		Asian or Asian British		Black or Black British		Chinese or other	
White British	1	White & Black Caribbean	4	Indian	8	Caribbean	C	Chinese	F
White Welsh	2	White & Black African	5	Pakistani	9	African	D	Other	G
Other white	3	White & Asian	6	Bangladeshi	A	Other Black	E		
		Other mixed	7	Other Asian	B				

*The Chief Income Earner is the member of the household with the largest income, whether from employment, pensions, state benefits, investments or any other source. Either male or female.

Beaufort Research conduct back-checks on a sample of interviews to make sure that they were carried out according to our procedures. For this reason we would like to collect your address and telephone number but you do not have to provide this. These details will not be passed on to Countryside Council for Wales nor any third party and will only be used to verify a small percentage of the interviews we conduct. Would you be happy to give your contact details?

Respondent name: _____

Address:_____ County (Country if outside UK): _____

Postcode:	(86)	(87)	(88)	(89)	(90)	(91)	(92)

Telephone number:

THANK RESPONDENT: CLOSE INTERVIEW: PROVIDE THANK-YOU LEAFLET

INTERVIEWER DECLARATION: I declare that I have conducted this interview in accordance with your instructions.

Signature: _____

	D	D	M	M	Y	Y	INTERVIEWER NO.	Accompanied:	*Supervisor*

Date of interview:											Yes 1 No 2	
	(93)	(94)	(95)	(96)	(97)	(98)	(99)	(100)	(101)	(102)		____

Month:	(103)	**Day of week**:	(104)	**Time of day:**	(105)	**Weather (Mainly):**	(106m)
January	1	Monday	1	Before midday	1	Sunny	1
February	2	Tuesday	2	After midday	2	Cloudy	2
March	3	Wednesday	3			Showers	3
April	4	Thursday	4			Rain	4
May	5	Friday	5			Windy	5
June	6	Saturday	6				
July	7	Sunday	7				
August	8						
September	9						
October	A						
November	B						
December	C						