The South West Coast Path Health and Wellbeing Assessment 2020 Report

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Full report available on:

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1. Executive Summary

Exercising outdoors, and the health and wellbeing benefits associated with being in natural environments has taken on new importance during the coronavirus (COVID-19) pandemic. COVID-19 has exposed and exacerbated existing health and socio-economic inequalities as well as disparities in access to natural environments that need to be urgently addressed. But at the same time, since the advent of this crisis, our natural environments have attracted larger numbers of visitors, including a variety of people who were not traditionally using these environments before. The pandemic has therefore provided real opportunities to engage with new user communities to bring greater health and wellbeing benefits and to forge stronger connections with our green spaces and natural environments.

There has been growing interest in quantifying and demonstrating the health and well-being benefits of green and blue spaces in the UK, including the coast and trails such as the South West Coast Path (SWCP), influenced by growing research on health-environment links. The significant health and wellbeing benefits (both for physical and mental health) of doing physical activity outdoors and connectedness to nature are now well evidenced.

This report provides a health and wellbeing valuation of the South West Coast Path based on available visitor and population data on visits to this National Trail. It was commissioned by the South West Coast Path Association (SWCPA), a registered charity whose mission is to help people access, enjoy and protect Britain's longest National Trail. The SWCP is 630 miles long and connects many communities to the diverse nationally important landscapes along the region's coast.

The report reviews methods for health and wellbeing valuation and then uses the WHO HEAT tool v4.2 and the UEA MOVES v2.0 tool to produce valuations. It draws on methods and outputs from previous valuations, particularly the England Coast Path baseline assessment study (ICF *et al.* 2019a and b). An assessment of mental health and qualitative benefits is included below.

Results

Summary of the main health and wellbeing valuation results

The economic health and wellbeing valuation measures the estimated economic value of the *physical* health benefits from walking on the South West Coast Path. It is measured in different ways by different tools – HEAT measures the value of the reduced death rate; and the MOVES tool measure the savings in health care costs from reduced ill-health and disease.

Valuation results

Valuation tool	Value for SWCP (per year) (based on 2019 SWCPA figures)	What this measures
WHO HEAT	**£5.5 million** directly attributable **£69.1 million in total**	**Value of reduced death rate** (based on standard statistical value of a life)[1]; directly attributable value: 8% of total
MOVES (UEA / Sport England)	**£7.4 million**	**Savings in health care costs** based on the **reduced incidence of disease**

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[1] HEAT does not include the benefits from reduced illness, such as diabetes or obesity-related conditions.

The report also gives a valuation of the health and wellbeing benefits from the SWCP Connecting Actively to Nature (CAN) programme of approximately £8,800 per year using the MOVES tool and approx. £16,000 using the HEAT; with a return on investment value of 153% (MOVES tool) and 125% (HEAT) over a period of ten years (see Table 7).

Conclusions

The HEAT valuation results, which measures the **value of the reduced death rate** associated with walking on the SWCP, show health and wellbeing benefits totalling **£69.1 million per year** for all SWCP users of which **£5.5 million per year** is directly attributable for those walking on the SWCP who would not be walking elsewhere (an estimated three premature deaths avoided per year directly attributable). This can be compared with previous valuations for the England Coast Path (£19 million) and the Wales Coast Path (£3.5 million) both directly attributable.

The HEAT valuation broken down by type of visitor indicates that **51% of SWCP visitors are local day visitors** (living within 10 miles of the SWCP); 15% are non-local day visitors; and 34% are overnight visitors. This gives a segmented health and wellbeing value (only for HEAT) of **£2.8 million per year for local day visitors; £0.9 million for non-local day visitors; and £1.9 million for overnight visitors[2]**. This is important since local people are likely to be able to use the path more often and therefore to be gaining the most health and wellbeing benefits from it.

These figures represent an **underestimate of the actual health and wellbeing benefits** relating to the SWCP: the valuation only covers the physical health benefits, as mental health valuation tools are not yet available. The HEAT valuation figures only relate to the economic value of the avoidance of deaths through walking on the SWCP, and leave out the benefits related to reduced illness / ill-health (e.g. reduction in diabetes and obesity-related conditions).

The MOVES valuation is *in addition to* the HEAT valuation, because it is based on the reduced occurrence of disease[3]. Valuations using the MOVES tool, which quantify the **savings in health care costs** based on the **reduced incidence of disease**, give a value of **£7.4 million per year** (value of Quality Adjusted Life Years gained). The MOVES results also show that the **relative health benefits and return on investment (ROI) are much greater for older age groups – with an ROI of 55% for age 16-30 compared with 3162% for the 61+ years age group**.

The assessment of the mental health and qualitative benefits of the SWCP also details several less quantifiable benefits including reductions in stress and greater feelings of positivity, an increased sense of autonomy, a greater sense of 'functioning well' (e.g. dealing with problems well, feeling useful and feeling close to other people) and of nature connectedness. Walking (with others) on the SWCP also promotes **greater social contact** (e.g. through Connecting Actively to Nature projects), which is particularly important at this time, and which can bring other synergistic health and wellbeing benefits (including in a safe, socially distanced way).

However, what is also left out of this analysis is the potential value of the substantial benefits that would accrue from expanding the usage of the South West Coast Path to the large numbers of inactive and relatively inactive people as well as socio-economically disadvantaged and Black, Asian and Minority Ethnic (BAME) groups who are not yet accessing this trail.

The research literature highlights that recreational visits to the coast in England, particularly for walking, are **more likely to be made by people from lower socio-economic backgrounds compared**

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[2] Using England Coast Path segmentation data (ICF *et al.* 2019a and b).
[3] Although there are methodological issues with making a direct comparison (see below).

to other natural environments (e.g. woodlands). Therefore*,* ensuring coastal environments of the SWCP are accessible to more socio-economically deprived communities **could help to reduce health inequalities** (Elliott *et al*., 2018; Garrett *et al*. 2019). The fact that new user communities have been accessing natural environments during the Covid-19 pandemic provides real opportunities to increase longer term engagement with the SWCP by a range of demographic groups, potentially bringing greater health and wellbeing benefits.

Summary of the main recommendations on future research and partnership working relating to the SWCP

- Developing **consistent data collection questions** on the health and wellbeing benefits of the SWCP including qualitative and mental health indicators for use in visitor surveys and other data collection instruments, ensuring these are translatable to other settings;
- Gathering **additional data on segmentation of walkers** on the SWCP – the proportion of local day visitors / visitors from elsewhere / overnight visitors;
- Collecting data on the **range and diversity of SWCP users including BAME and disadvantaged communities** and on the current levels of engagement, health and wellbeing benefits, barriers to access for these communities to inform the development of interventions to better target and engage with these communities.
- Investigating the health and wellbeing **characteristics and benefits related to social contact** arising from community-level coastal access to the SWCP and a sense of connectedness to the coast;
- Identifying the specific health and wellbeing **benefits of long-distance walking** on the South West Coast Path and how this relates to and can be compared with walking on other long-distance trails, as well as with walking shorter distances.
- Further work identifying the potential **benefits for inactive and relatively inactive people** of walking on the SWCP and how best to realise these (e.g. through further CAN projects and related work);
- Investigating how to exploit synergies, **expand partnership working** and to scale up existing work being done and networks with other organisations and groups in coastal areas of the SWCP (see details below);
- Evaluating the **impact of SWCPA's work to date** (including further data collection and analysis work on CAN and evaluating other projects and programmes) and developing and implementing recommendations on improving access for those with long term conditions;
- **Repeating the health and wellbeing assessment every 5 years**, or when significant new data becomes available, e.g. after the next visitor survey.

General recommendations for further research on health and wellbeing benefits relating to natural environments:

- **Quantifying the mental health benefits** of walking in a similar way to physical health benefits (either by devising suitable models or when such models become available).
- Investigating and **strengthening the linkages, comparability and consistency** of current health and wellbeing research in natural environments (both quantitative and qualitative) **with mental health / wellbeing indicators**, with NHS / public health and local government data on mental health.
- Investigating linkages and **synergies with the growing work on nature connectedness**, including use of indicators and measures.
- Investigating how the health benefit valuation figures from **HEAT and MOVES** tools (supplemented with other methodological tools as necessary) can be **robustly combined and / or compared**.

2. Introduction

Exercising outdoors, and the health and wellbeing benefits associated with being in natural environments have taken on new importance especially during the coronavirus (COVID-19) pandemic when other leisure activities have been severely limited. According to research commissioned by Sport England (2020), almost two thirds of adults consider exercise to be more important than ever during the COVID-19 crisis and 65% also believed exercise to be helping them with their mental health during the outbreak. The recent People and Nature survey (Natural England 2020) highlighted that almost half the population (46%) report spending more time outside than before COVID-19. 42% of adults stated that 'nature and wildlife is more important than ever to my wellbeing'.

COVID-19 has exposed and exacerbated existing health and socio-economic inequalities as well as disparities in access to green spaces and natural environments. But at the same time, since the advent of this crisis, our natural environments have attracted larger numbers of visitors, including a variety of people who were not traditionally using these environments before, both to inland environments such as our National Parks[4] and to our coastal areas, especially in the South of England[5]. The pandemic has therefore provided a real opportunity to engage with new user communities to bring greater health and wellbeing benefits related to our natural environments and to forge stronger connections with our green spaces and natural environments, including the coast.

This report provides a health and wellbeing valuation of the South West Coast Path based on available visitor and population data for this National Trail. The report was commissioned by the South West Coast Path Association (SWCPA), a registered charity whose mission is to champion the South West Coast Path (SWCP) in order to help people access, enjoy and protect Britain's longest National Trail.

There has been growing interest in quantifying and demonstrating the health and well-being benefits of green and blue spaces in the UK, including trails such as the SWCP, influenced by research on the links between health and environments[6], and by the application of environmental economics and the Natural Capital approach (see Bateman and Wheeler 2018; and the Natural Capital project[7]). Recognising the links between health and environments now appears to be central to UK government environmental policy: Defra's 25 year Environment Plan (Defra 2018a) and an accompanying evidence review (Defra 2018b) foreground these aspects. UK Public Health policy also shows increasing awareness of the importance of green and blue spaces, including the recommendation 'Consider local green (and blue) space to be critical assets for maintaining and supporting health and wellbeing in local communities' (Public Health England 2020:12); and recommends formal valuations of the benefits of green and blue spaces to increase recognition of these benefits[8]. In addition, Natural England's Monitor of Engagement with the Natural Environment

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[4] See reports of an incident related to wild camping on Dartmoor
https://www.bournemouthecho.co.uk/news/national/18630562.emergency-powers-used-stop-wild-camping-part-dartmoor/
[5] See e.g. reports of crowds in June 2020 in Bournemouth https://www.bbc.co.uk/news/uk-england-dorset-53176717
[6] See the Beyond Greenspace website (https://beyondgreenspace.net/) for prominent research from the European Centre for Environment and Human Health (ECEHH) at the University of Exeter.
[7] https://naturalcapitalproject.stanford.edu/about/people
[8] See Public Health England 2020:13 – 'Consider whether a formal valuation of benefits is necessary to strengthen the case for the creation, revitalisation and maintenance of greenspace.'

(MENE) survey[9] and its successor, the People and Nature Survey (Natural England 2020), have also produced valuable ongoing population-level data and insights into this area since 2009.

Relevant health and wellbeing valuations to date include a population-wide study of green spaces in England (White et al. 2016); a valuation of the England Coast Path (ICF *et al.* 2019a and b) and of the Wales Coast Path (Cavill, Rutter and Gower 2014) and in the South West of the East Devon's Pebblebed Heaths (Petersen 2018). Such valuations provide useful evidence (see below) and are likely to be helpful in demonstrating the importance of natural spaces and trails networks and in making the case for continued public investment in their protection and promotion, as well as for targeting of future projects and partnerships.

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[9] Natural England's MENE survey (2009-19) – see further details below. Available on:
http://publications.naturalengland.org.uk/publication/4897139222380544

3. The health and wellbeing benefits of being in natural environments and of exercising outdoors

Due to a growing body of literature on the topic, the significant health (both for physical and mental health) and wellbeing benefits of doing physical activity outdoors and connectedness to nature (exposure to green and blue spaces) are now well evidenced and documented (see for example, Defra 2018b; 2018a; Natural England 2016a and b; White et al. 2013; Wheeler et al. 2012; White et al. 2010 and the Blue Health project[10]). The benefits of exposure to natural environments include – for mental health, reductions in psychological stress, fatigue, anxiety and depression (with the most significant benefits reported for marginalised groups). There is also a growing body of evidence about both the importance and benefits of connecting with nature for psychological wellbeing, especially those aspects associated with 'functioning well' (e.g. Martin et al. 2020; Pritchard et al. 2020; see the discussion on mental health below).

Natural environments are also places where we meet and interact with others and they provide opportunities for meaningful social contact which produce synergistic health and wellbeing benefits. Research on practical conservation volunteering work, for example (see e.g. TCV 2016), has shown that exposure to natural environments, a sense of achievement, enjoyment and social contact were important outcomes of participating in these activities and formed pathways to positive mental health outcomes (Lovell *et al.* 2015; see also Natural England 2016a). Research on health walks (e.g. de Moor 2013) shows similar positive benefits. *The synergistic benefits of interacting with other people in natural environments has gained heightened importance during the COVID-19 pandemic* because outdoor interactions (when socially distanced) are considered much safer and less likely to result in virus transmission than indoor interactions.

For physical health, exposure to natural environments is linked to reductions in mortality for certain groups; increases in self-reported health; more favourable heart rate, blood pressure, vitamin D levels, recuperation rates, and cortisol levels (which relates to stress), and is also associated with lower prevalence of diabetes (type 2). Rates of obesity tend to be lower in populations living in greener environments. Exposure to green space during pregnancy is also associated with better maternal, foetal and child cognitive development outcomes (Defra 2018: 8-9).

Exercising outdoors brings additional benefits compared to exercising indoors. Research shows exercising outdoors (especially in green environments) is associated with stress reduction, decreases in depression, tension, confusion and anger and with self-perceived increases in energy and feelings of revitalisation, positive engagement and restorative effects (see Natural England 2016a: 3-4).

Socio-demographic characteristics such as health status, age, ethnicity, and socioeconomic status have been found to influence use of natural environments for physical activity. Certain socio-demographic groups, including those with a long-term illness or disability, aged 65 and over, and of Black, Asian and Minority Ethnic (BAME) origin, are consistently less likely to use natural environments for physical activity (Ward Thompson and Aspinall 2011; Burt et al. 2013). Natural environments are particularly important for supporting physical activity in urban populations and among children (especially boys). However, reported barriers to families accessing green spaces include lack of interest, limited time, lack of car access, cost of parking, unsuitable paths, and cold weather (see Natural England 2016a: 3).

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[10] https://www.ecehh.org/research/bluehealth/

The length of time spent outdoors also matters – spending 120 minutes or more per week in natural environments is associated with good health and wellbeing outcomes, according to evidence from the MENE survey. However, it does not matter how the 120 mins of contact per week was achieved (e.g. one long or several shorter visits per week). The beneficial effects were found across different age and demographic groups, including for older adults and those with long-term health issues (White et al. 2019).

Recent Public Health England (2020) figures indicate that an estimated *£2.1 billion per year could be saved in health costs if everyone in England had good access to greenspace*, due in the main to increased physical activity in those spaces. People meeting the weekly physical activity guidelines (5 x 30 minutes per week of moderate to high intensity exercise) in a greenspace setting experienced improvements to quality of life that could be quantified at approximately £2 billion per year. For urban greenspace settings in England, a welfare gain (measured in Quality Adjusted Life Years (QALYs[11])) of £1.2 billion was found for those undertaking one or more 'active' visits (30 minutes, moderate intensity activity daily) – it is further estimated that in England there would be an annual savings of about £760 million in avoidable medical costs if people had one or more 'active' visits per week to a greenspace (Public Health England 2020:33).

Nature-based interventions

There is now considerable evidence on the range and efficacy of, and recommendations for, nature-based interventions (see Lovell, Depledge and Maxwell 2018; and Petersen 2018:21-23 for a brief summary of an earlier Defra report on 'What Works'). Relevant work includes on nature connection, social and green prescribing, the benefits of green infrastructure for health and wellbeing (see e.g. Lovell *et al.* 2020) and of participating in practical conservation work (see above). As much of this work has been covered extensively elsewhere, links will be made in this report to the relevant mechanisms where possible (see below).

Social and green prescribing

Social and green prescribing (see Polley *et al.* 2020; Polley *et al.* 2017; Health Education England 2016) refers to mechanisms that enable people to be referred to nature-based interventions that combine spending time in nature with opportunities for social contact. These include outdoor walking groups via a GP or other health practitioner for both physical and mental health conditions (as either treatment or prevention). These types of mechanisms have grown in importance in the counties in which the SWCP is located in recent years (although there is likely to have been some disruption during the COVID-19 pandemic), including the recruitment of link workers in GP surgeries. There is huge potential for linking such mechanisms more closely with the SWCP (see the recommendations section) through Connecting Actively to Nature (CAN) programmes (see below) as well as through Local Nature Partnerships and related groups (such as in Devon the Naturally Healthy partnership) which bring together health and environmental practitioners as well as researchers. However, there are also a number of barriers and constraints that are likely to limit the widening of access especially for disabled, disadvantaged and BAME populations e.g. lack of transport, funding cuts, fragmentation of interventions as well as safety concerns (see e.g. Petersen 2018:37).

The health and wellbeing benefits of walking

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[11] A Quality Adjusted Life Year is a measure of the state of health of a person or group in which the benefits, in terms of length of life, are adjusted to reflect the quality of life. One QALY is equal to 1 year of life in perfect health (Public Health England 2020:9).

The benefits specifically of walking (this applies to all environments not just in green/blue spaces) have also been well documented (see e.g. C3 Collaborating for Health 2012:4; de Moor 2013[12]). Walking is a particularly accessible form of physical activity: it is low-impact, appropriate for all age-groups, and is free. As well as being a practical way to get from A to B, walking can also help avoid weight gain over the longer term. Even slow walking burns around 114 calories per mile walked for someone weighing 200lb (91kg). Brisk walking speed is about 3.5 miles (5km) per hour.

Studies have shown an association between walking and a reduction in deaths from all causes, ranging from 19-30% depending on the frequency and length of walking activities. The most significant reduction in mortality is associated with walking 20 km per week (beyond normal day-to-day activities), while a reduction of 19% was associated with 2.5 hours of brisk walking per week (around 12.5km, assuming walking at about 5km/hour). While the usual recommendation for physical activity for adults is 30 minutes at least five times a week, the *health benefits of brisk walking begin to be seen at levels well below this level*. For example, a study of 400,000 people found that just 15 minutes a day of moderate exercise (which includes brisk walking) can have significant health benefits, adding up to three years to life expectancy. Every additional 15 minutes of daily exercise reduced all-cause death rates by a further 4% (C3 Collaborating for Health 2012:4).

Walking has also been shown to have a significant preventative effect and / or positive impact on a range of diseases including cardiovascular disease (heart disease and stroke); type 2 diabetes, cancer, arthritis, lower back pain, mental health conditions such as anxiety; as well as improving cognitive functioning and memory in older adults (C3 Collaborating for Health 2012:5-7) (see figure 1).

Research conducted in collaboration with the Walking for Health programme (de Moor 2013:15-16) also highlighted the following statistics, advantages and benefits to walking:

- Walking is the **most accessible physical activity**, and already the **most popular**. It also has the **greatest potential to grow**, particularly among people **disproportionately affected by low physical activity levels and poor health**.
- Because it is easily accessible, and can be done almost anywhere at any time, walking can address many of the reported barriers to being more active, such as lack of time, money, poor health and physical limitations. It is also **accessible to people from groups who could most benefit from being more active — such as older people or those on low incomes**.
- Walking is **free, requires no special equipment, training, or gym or club memberships**.
- Walking is a **moderate, low-impact activity unlikely to cause injury**.
- Walkers can **start slowly and easily and build up gradually**, ideal if for those who are very unfit, have a long-term condition or are on a rehabilitation programme. For some people it is a '**gateway'** to more vigorous activities.
- Walkers can wear everyday clothing, reducing (potential) feelings of embarrassment for unfit or overweight people.
- It is a **multipurpose activity** that **facilitates social interaction** and / or **getting from A to B**.
- Only 4% of people either need help when walking outside the home or are unable to walk on their own at all.
- Walking is an accessible form of physical activity for **those who because of age, long-term conditions, mobility problems or low levels of fitness, find other activities too challenging**

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[12] See de Moor 2013 and https://www.walkingforhealth.org.uk/get-walking/walk-us for info about the extensive network of health walking groups across the UK (Walking for Health).

— an important way to counterbalance the tendency for physical activity levels to decrease with age. Being physically active is **particularly beneficial for the mental health of older people**, improving cognitive functioning, memory, attention and processing speed, reducing symptoms of dementia, improving mood and satisfaction with life, and decreasing feelings of loneliness. Active older adults reduce their risk of cognitive decline by 38% and even those who are moderately but insufficiently active reduce the risk by 35%.

- 9.1 million adults in England, or 22% of the population, walk recreationally for at least 30 minutes once a month. **This is almost twice the number that swim** (5.6 million, 13.4%), **more than twice the number that go to the gym** (4.5 million, 10.7%), and **nearly three times the number that cycle** (3.5 million, 8.5%).

- Adults in **England spend more time walking per week than any other non-occupational activity** — 2.2 hours for men and 1.9 hours for women — and 90% of adults do at least some walking every month.

- In 2002, **a third of adults** said that walking for more than 10 minutes was **their only form of exercise in a typical month**.

- However, walking, including walking for everyday transport, has **notably declined over recent decades overall**. The distance travelled on foot per year per person declined in Great Britain by 30% between 1975 and 2010, although in 2011 it rose slightly. Walking trips as a percentage of overall trips declined by 32% between 1986 and 2011. The long-term decline in children walking to school has also continued in recent years.

The physical and mental health benefits of walking are summarised in the diagram below.

Figure 1: The Health benefits of walking

Figure 1: The Health benefits of walking

BOOSTS ENDORPHINS
EASING STRESS, TENSION, ANGER
FATIGUE, AND CONFUSION
IN TEN MINUTES

REDUCES
GLAUCOMA RISK

HALVES
ALZHEIMER'S DISEASE
RISK OVER 5 YEARS

LIMITS SICKNESS
BY HALVING ODDS OF CATCHING A COLD

IMPROVES HEART HEALTH
BY INCREASING HEART RATE
AND CIRCULATION

WORKS
ARM & SHOULDER
MUSCLES

IMPROVES
BLOOD
PRESSURE
BY FIVE POINTS

ENGAGES
AB MUSCLES

BUILDS BONE MASS,
REDUCING RISK OF
OSTEOPOROSIS

LIMITS COLON CANCER
BY 31% FOR WOMEN

STRENGTHENS LEGS,
INCLUDING QUADRICEPS,
HIP FLEXORS, AND HAMSTRINGS

IMPROVES
BALANCE

BURNS
MORE FAT
THAN JOGGING

ONLY 30 MINUTES A DAY,
5 TIMES A WEEK CAN MAKE YOU
HEALTHIER AND HAPPIER

Based on a diagram from C3 Collaborating for Health report (2014:4) www.everybodywalk.org

Blue spaces and the benefits of visiting the coast

For blue spaces (the oceans, coastal areas and inland waters such as lakes, rivers and canals), there is now strong evidence of the associated health and wellbeing benefits of spending time in these environments (see Gascon *et al.* 2017; White *et al.* 2013; White *et al.* 2010). Studies have shown that blue spaces also tend to be rated top in terms of views, with coastal margin views particularly favoured[13] (see White *et al.* 2010).

The coast has become the focus of increasing interest in relation to health and wellbeing (see e.g. Defra 2019; Natural England 2016c; White et al. 2013). People living near the sea report *better levels of health*, and higher levels of physical activity, *particularly in deprived areas* (see for example White *et al.* 2013; Wheeler *et al.* 2012; White *et al.* 2010 and the Blue Health project[14]). Recent estimates indicate that 271 million recreational visits are made to coastal environments annually (Defra 2019:1; Elliott *et al.* 2018; MENE data from 2014-15 gives an estimate of 313 million visits annually (Natural England 2016c:11)). The coast has been shown to play a role as a therapeutic and restorative landscape for promoting well-being and mental health, with people living by the coast reporting better mental health compared to those living further inland. Individuals report increased happiness when spending time in marine and coastal margins, compared to green spaces and urban environments (Defra 2019:1). Coastal visits also tend to last longer and involve a greater range of activities than visits to countryside or urban destinations[15] (Natural England 2016c).

Who visits the coast?

MENE data for England for 2014-15 (Natural England 2016c:11-18) indicates that adults (16 years and over) resident in England took 3.12 billion visits to the natural environment, and 10 percent of these visits (313 million) were to the coast. (An estimated 202 million of these were to seaside resorts or towns and 111 million to other seaside coastline.) This compares with 2014 tourism estimates showing that 32% of all domestic holidays (13 million holidays) and 9% of tourism day visits (123 million) were to a coastal destination[16]. The difference seen in these figures is due to the fact that MENE data includes shorter visits, those taken closer to home and visits taken for a wider variety of reasons. Around two-thirds (65%) of the 313 million visits were to a seaside resort or town (202 million visits) while the other visits (35%) were taken to more rural places on the coastline (111 million). *The majority of these coastal visits involve walking* (see Elliott *et al.* 2018).

In terms of age and group profile, around a quarter (26%) of visits to the coast were taken by families (with children under 16 years old), with a larger proportion (40%) taken by people classified as 'Empty Nesters' (55 and over, no children), and retired (29%) (which make up 18% of the whole population). 17% of visits to the coast were taken by people with a long-term illness or disability (this compares to 18% of the population) (Natural England 2016c).

Differentiating by socio-economic characteristics, the coast attracts a range of socio-economic groups but a higher proportion, around a third (32%), of coastal visits were by members of the most affluent AB groups, while 19% were by members of the D and E groups (unskilled/semi-skilled

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[13] See https://bluehealth2020.eu/news/why-bluespace/

[14] https://www.ecehh.org/research/bluehealth/

[15] On average visits to the coast lasted around three hours (3hrs 3 mins), about an hour longer than the averages recorded for visits to the countryside or urban destinations (1 hr 58 mins and 1 hr 51 mins respectively) (Natural England 2016c: 25).

[16] Estimates from GB Tourism Survey 2014 and data on tourism day visits from GB Day Visits Survey 2014 reported in Natural England 2016c.

manual occupations and unemployed) (Natural England 2016c). A study of the England Coast Path found that coast path users tend to be relatively well educated. Nearly 47% of visitors had at least a degree (or equivalent) compared to a national average of 27% with a large proportion (73%) having attained 'A' level qualifications or higher. However, qualifications below 'A' level or no qualifications were more common among local day visitors indicating a greater reach across demographic groups for local visitors (ICF *et al.* 2019a). The same source found that England Coast path visitors were skewed towards those in paid employment or retired: the largest proportion (44%) of people surveyed for were in full time work with 34% retired; 15% in part time work; 2% not in paid employment and 3% other (ICF *et al.* 2019b:42; see Table A11 in Appendix 1).

MENE data (Natural England 2016c) also shows that most of the c.300 million visits taken to the coast annually are made by a relatively small proportion of the population, while many people rarely or never visit the coast. Most visits to the coast are taken by around a fifth of the population. In 2015, around 71% of the population had visited the coast only twice or less times in the preceding 12 months. The data indicates that the following demographic groups tend to visit less frequently: women (73% compared to 69% men); people in C2DE socio-economic groups (75% compared to 66% of ABC1s); people with children in their household (74% compared to 70% with no children) and members of the Black, Asian and Minority Ethnic (BAME) population. The main reasons cited for not visiting the coast were being too busy at work or home (31%), bad weather (19%) and poor health (9%) (Natural England 2016c).

However, research from the BlueHealth programme highlights that recreational visits to the coast in England, particularly for walking, are *more likely to be made by people from lower socio-economic backgrounds compared to other natural environments* (e.g. woodlands). *Therefore, ensuring coastal environments are accessible to more socio-economically deprived communities could help to reduce health inequalities* (Elliott *et al.*, 2018; Garrett *et al*. 2019).

Half of visits (51%) to coastal paths in England are by local day visitors (living within 10 miles of the path); with 34% by overnight non-local visitors and 15% day visitors (non-local) (ICF *et al.* 2019a:17). This is significant because those who live locally are also likely to be those who visit more frequently, and therefore to be gaining greater health and wellbeing benefits from visiting the coast.

Risk factors and Coronavirus (COVID-19) effects on outdoor physical activity and health in the UK in 2020

Risks have been identified relating to environmental change now and in the coming decades that may lead to loss of some of the benefits associated with living close to or visiting marine and coastal environments. Risk factors potentially leading to reduced visits to marine and coastal environments include pollution, climate change, exposure to extreme weather and socio-economic and cultural change, inadequate planning and coastal community fragmentation (Defra 2019:1). A recent report on coastal water pollution also highlighted significant incidence of illnesses (e.g. gastroenteritis) and risks to health (e.g. infection by antimicrobial resistant bacteria) after swimming in water polluted by raw sewage outflows around our coasts (Surfers Against Sewage 2020; Leonard *et al.* 2020; Leonard *et al.* 2018).

COVID-19 has highlighted and exacerbated health inequalities and levels of mental ill health and highlighted the value of accessing greenspaces, but also inequalities in access to green spaces and natural environments. People with existing mental health difficulties and risk factors for poor mental health are likely to be affected disproportionately by the pandemic, including people from BAME communities. Emerging evidence suggests that in general people who were experiencing inequalities and poorer health before COVID-19 are likely to be the most adversely affected. Existing health inequalities are linked to greater severity of symptoms and increased likelihood of death for those

contracting COVID-19. People on low incomes, BAME groups and older people are likely to be particularly affected[17].

In addition, the global COVID-19 pandemic and the resulting lockdown has also brought many challenges regarding opportunities to carry out physical activity, to the economy and the UK tourism and recreational sectors, with highly differentiated effects. Preliminary evidence indicates that lockdown has resulted in an increase in the numbers of people enjoying physical activity outdoors during the spring period / early summer, including walking and cycling, due to indoor exercise options and other leisure activities being closed[18]. News reports and local accounts also show that visiting the coast has also proved particularly popular in the South West during the latter part of this period.

Available sources such as Sport England show that overall activity levels have generally held up to pre-lockdown levels[19] with one report by Statista showing a significant proportion (40%) of younger people (age 18-24 years) doing more exercise than usual (with around 26% of this age group less than usual)[20]. However, at the same time COVID-19 in the UK has led to an increase in inactivity for many older adults and adults with serious health issues or who perceive themselves as high risk (Roberts et al., 2020; Wheeler 2020; Olsen and Mitchell 2020); as well as for women, those in less affluent groups and BAME groups[21]. Even for those in the middle age group (35-44 yrs), the Statista study reported 32% of this group doing less exercise than usual (with 26% more than usual)[22].

Recent figures from Natural England's People and Nature Survey (Natural England 2020) show the increasing importance of our green and natural spaces for health and wellbeing since the start of the COVID-19 outbreak. In July 2020, the majority (67%) of adults[23] in England reported spending time outdoors in green and natural spaces, the highest level since the appearance of COVID-19. The most recent figures indicate a sustained increase since April (June 65%, May 60% and April 49%). Almost half the population (46%) say that they are spending more time outside than before COVID-19 (up from 44% in June and 26% in May). 42% of adults reported that 'nature and wildlife is more important than ever to my wellbeing'; and 35% reported visiting local green and natural spaces more often. Urban green spaces have consistently been the most popular type of green space visited, with 50% of adults reporting a visit in the last month. In addition, one in four (24%) of adults reported a visit to the seaside (including beach and other coastline) in July.

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[17] See 'Green social prescribing: Call for expressions of interest', the UK Government https://www.gov.uk/government/publications/green-social-prescribing-call-for-expressions-of-interest/green-social-prescribing-call-for-expressions-of-interest#fnref:2; 'COVID-19 and the nation's mental health', Centre for Mental Health https://www.centreformentalhealth.org.uk/publications/covid-19-and-nations-mental-health-july-2020; and 'Will COVID-19 be a watershed moment for health inequalities?' Health Foundation https://www.health.org.uk/publications/long-reads/will-covid-19-be-a-watershed-moment-for-health-inequalities .

[18] Results from survey by Savanta ComRes reported by Sport England in May 2020: https://www.sportengland.org/blogs/physical-activity-during-lockdown-story-so-far

[19] See https://www.sportengland.org/blogs/physical-activity-during-lockdown-story-so-far

[20] UK research reported in June 2020: https://www.statista.com/statistics/1119612/physical-activity-done-during-lockdown-in-the-uk/

[21] See https://www.sportengland.org/blogs/physical-activity-during-lockdown-story-so-far

[22] See https://www.statista.com/statistics/1119612/physical-activity-done-during-lockdown-in-the-uk/ . This is likely to be influenced by the challenges associated with the closure of schools for adults with children.

[23] Information on socio-demographic characteristics of respondents was not yet available for this data at the time of writing this report but will be available in forthcoming quarterly reports. See further info: https://www.gov.uk/government/publications/the-people-and-nature-survey-for-england-monthly-interim-indicators-for-july-2020-experimental-statistics/methods-and-limitations

However, a significant minority of adults (23%) reported not visiting green and natural spaces at all, with coronavirus concerns (principally contracting or spreading coronavirus while visiting green and natural spaces, or breaking coronavirus restrictions) consistently the main reason cited since the outbreak began (Natural England 2020). These differences are confirmed by other UK studies: 68% of 65+ year olds reported spending less time in greenspace during lockdown compared with 50% of 18-24 year olds (Wheeler 2020; Olsen and Mitchell 2020). There is also evidence that time spent doing activities requiring access to outdoor space decreased during lockdown amongst socio-economically disadvantaged families[24]. These studies point to polarisation of access to and experiencing of the benefits of natural/green space and the deepening of inequalities that need to be addressed as a matter of urgency.

The Natural England (2020) survey findings also highlight the heightened importance of green and natural spaces for families and children, with an increase in the percentage of adults who think that learning outside or about nature is especially important for their child at this time (28% of adults with children, up from 19% in June and May). Nearly half (46%) of adults with children believe their child seems happier when they have spent time outside (up from 36% in June and 40% in May).

About the South West Coast Path

The SWCP is 630 miles long and connects many communities to the diverse nationally important landscapes along the region's coast. The South West coast has a strong tourism sector with over 8.9 million visits to the Coast Path a year. This sector is estimated to bring over £520 million to the local economy and support over 10,400 jobs (FTEs; down slightly from around 11,000 in 2015). The total tourism visits for the SWCP represent around 5% of the total tourism visits (179.4 million) to the South West region. The total direct spend attributable to SWCP users for 2019 (£520.7m) represents a 4.1% increase on 2015 spending levels (£500.2m), driven by increased spend from staying visitors (South West Research Company Ltd 2020). In addition to the environmental and visitor economy aspects, the Trail provides significant health and well-being benefits to the community which will be detailed in later sections.

Existing health and wellbeing valuations of UK coast paths and other green spaces

To put the valuation of the SWCP in context we have provided a summary of relevant existing valuations below that relate to sections of the UK coast path and of green spaces. However, these are intended as contextual information only – the differences in methods used and timescales mean that these figures are not necessarily directly comparable (see ICF *et al.* 2019a: 26 for an example of comparing other valuations using different criteria; and ICF *et al.* 2019b for further info on methods).

Table 1: Comparison of previous health and wellbeing evaluations

Location	Valuation (per year)	Sample size	Estimated no. of deaths avoided (per year)	Notes on methods and data used

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[24] See https://babylab.brookes.ac.uk/research/social-distancing-and-development/family-activities

England Coast Path (ICF *et al.* 2019a and b)	**£19 million**	182,207 (2.2 million visitors in total) (2,867 for visitor survey)	11 (133 (estimate from total users)	MENE and visitor survey data[25]; WHO HEAT tool; uses counterfactual
Wales Coast Path (Cavill, Rutter and Gower 2014)	**£3.5 million** directly attributable[26] (£18.3 million in total)	23,688	7	Visitor survey data; WHO HEAT tool (no counterfactual). Weekly walkers only.
Natural environments in England (MENE data) (White *et al.* 2016)	**£2.18 billion**	3.20 million (estimated; population sample - MENE)	542	Covers all natural environments (England): uses WHO HEAT tool and QALYs. 'Active' people only[27].

4. Review of methods, data sources and methodological considerations for health and wellbeing assessments

This report reviews the methods available for measuring health and wellbeing benefits. This builds on existing valuations (see above) and literature (including a review of methods from a previous health and wellbeing valuation study on the East Devon Pebblebed Heaths (Petersen 2018)). The main methods and tools are listed and then summarised below:

   a. **WHO Health Economic Assessment Tool (HEAT)**
   b. **Quality Adjusted Life Years (QALYs)**
   c. **UEA Model for Estimating the Outcomes and Values in the Economics of Sport (MOVES) tool**

In addition, we report results using the **Outdoor Recreational Valuation (ORVal) tool** (see below).

It is important to note that in assessing the health and wellbeing value, these methods measure different aspects (see ICF *et al.* 2019b:105) as follows, and are not therefore necessarily directly comparable:

   a. **HEAT** – calculates the **reduced death rate** using the statistical value of a life (it does *not* include the benefits from reduced illness, such as diabetes or obesity-related conditions);
   b. **QALYs** - calculates the **value of the additional years lived**, as a result of improvements in health and reduced incidence of disease, adjusting this value for the quality of life;

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[25] Also included data from people counters and manual counts.
[26] I.e. they would not have walked elsewhere if not on the Wales coast path.
[27] Only those who fulfil the UK exercise recommendations of 5 x 30mins per week were included in these figures.

c. **MOVES** – calculates the **savings in health care costs** based on **the reduced incidence of disease** among walkers compared to non-walkers, converting this into savings to the NHS as a result of reduced treatment costs (and also reports results using QALYs).

The **ORVal** tool measures overall **economic outdoor recreational value** (not health and wellbeing) – so has been included to give additional perspective on the health and wellbeing valuation figures.

As these methods have different strengths as well as distinct required input information (see below), the totals using both WHO HEAT and the UEA MOVES tool were reported on.

Summary of data sources

A combination of data sources was used in line with other valuations to calculate the input figures (see e.g. ICF *et al.* 2019a and b). Visitor data commissioned or collected by the South West Coast Path Association (SWCPA) (South West Research Company Ltd 2020) was used; along with data from an online survey from 2020 and additional data (and assumptions) from the England Coast Path baseline assessment (ICF *et al.* 2019a and b). In addition, selected data from a SWCP coastal visits survey from 2013[28] (South West Research Company 2013), SWCPA visitor data from 2016 and 2011 were also used, supplemented by data held by the SWCPA and Active Devon on their Connecting Actively to Nature (CAN) programme. Weighted MENE data for 2009-2019[29] was also used for context and comparison. The following table illustrates key characteristics of the data and survey sources used.

Table 2: Key characteristics of South West Coast Path assessment data sources

Name and year(s) of survey	Sample size (no. of people)	Characteristics of sample
England Coast Path baseline assessment (ICF *et al.* 2019a and b)	2919 surveys (32 locations)	Visitor survey (face-to-face); automatic people counters; manual counts; triangulated with other sources including GBDVS, MENE etc.
MENE 2009-2019	46,000-49,000 (per year)	Weighted population survey
SWCPA Monitoring and Evaluation report 2020 (by South West Research Company Ltd)	35,746 (whole of GB) - based on Great Britain Day Visits Survey (GBDVS) 2019	Weighted population survey (online panel); tourism day visits only (not local residents)
SWCPA Online survey 2020	1043	Online survey for members and supporters of SWCPA; 60% from South West of England
SWCPA Visitor survey 2016	238	Face-to-face survey; respondents in Devon & Cornwall; 54% from South West of England (44% day visitors from home and 56% overnight visitors)

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[28] Only selected raw data was available for this data source limiting its use in this valuation.
[29] Natural England's MENE survey (2009-19) used a weekly quota sample and population weights, to estimate visit frequency to natural environments across England, and the data provides details on a single, randomly selected visit, including: a) duration; b) activity; and c) environment type. Available on: http://publications.naturalengland.org.uk/publication/4897139222380544

SWCP Coastal visits survey 2013 (by South West Research Company Ltd)	2481 (600 interviews)	Visitor survey (face-to-face) – 16% were from South West of England; 75% from elsewhere in UK

Review of valuation tools

a. The World Health Organization's Health Economic Assessment Tool (HEAT)

The Health Economic Assessment Tool for Walking and Cycling (WHO HEAT 4.2)[30] was developed by the World Health Organization (WHO) to provide estimates on the value of the physical health benefits from walking and cycling with a view to informing transport planning. The HEAT aims 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?

HEAT calculates the reduced death rate among walkers compared to non-walkers, and calculates the deaths averted (or lives saved) due to increased walking. This is then converted into a financial value using standard statistical values of a life.

HEAT is based on published data from epidemiological studies comparing 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, based on willingness to pay[31]. For further details on the methodology for HEAT see Kahlmeier *et al.* (2017); ICF *et al.* (2019b) and for examples of its application see the study on the Wales Coast Path (Cavill, Rutter and Gower 2014); the population-level study using MENE data (White *et al.* 2016); the England Coast Path baseline study (ICF *et al.* 2019a and b); the PASTA project[32] and the WHO website[33] (mainly cycling examples).

HEAT gives a *conservative estimate as it does not include the benefits from reduced illness, such as diabetes or obesity-related conditions*. The tool requires input of data on the total number of visitors and the average trip duration and frequency. The benefits of reduced mortality are estimated in this report using for the value of a statistical life of £1.809 million based on the Department of Transport (2020) updated figures consistent with UK Government Green Book Guidance (HM Treasury 2018)[34]. The valuation provides an estimate of the number of deaths

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[30] http://www.heatwalkingcycling.org/#start_tool

[31] The value of a statistical life is the societal economic value of reduced premature mortality (including estimates relating to an inability to work, lost consumption, health-care costs paid by the individual (not insurers) and the individual's pain and suffering). It is not the value of an identified person's life but rather an aggregation of individual values for small changes in risk of death (see Kahlmeier *et al.* 2017:53).

[32] Physical Activity through Sustainable Transport Approaches (PASTA), http://www.pastaproject.eu/heat-tool/

[33] https://www.euro.who.int/en/health-topics/environment-and-health/Transport-and-health/activities/guidance-and-tools/health-economic-assessment-tool-heat-for-cycling-and-walking/examples-of-applications-of-the-health-economic-assessment-tool-heat-for-walking-and-cycling

[34] This is slightly updated 2020 values based on the England Coast Path (ECP) baseline assessment (ICF *et al.* 2019b:16), which uses the estimates of the monetary value of a prevented fatality valued at £1.735 million (in 2017 prices) based on the value of a life of £1.548m (in 2010 prices) from Department for Transport TAG data book, December 2017. Available at: https://www.gov.uk/government/publications/webtag-tag-data-book-december-2017 . The ECP value was inflated to 2017 prices using the HM Treasury GDP deflator. Available at:

avoided and the economic value associated with this outcome. The estimates are adjusted for substitution, i.e. the extent to which use of the path is occurring instead of a non-physical activity, thereby providing a net increase in physical activity of the user. The valuation is also projected forward to estimate health benefits over a ten year period[35] (see ICF *et al.* 2019b: 15-16).

b. Quality-adjusted Life Years (QALYs)

This method calculates the value of the additional years lived, as a result of improvements in health and reduced incidence of disease. It then adjusts this value for the quality of life (so that a year in full health is worth more than a year lived in poor health). This method is primarily used by the National Institute for Health and Care Excellence (NICE) (ICF et al. 2019b:105).

A Quality-adjusted Life Year (QALY)[36] is a measure of the state of health of a person or group in which the benefits, in terms of length of life, are adjusted to reflect the quality of life.

One QALY is equal to 1 year of life in perfect health. QALYs have been widely used for decision-making in the health sector as a measure of cost-effectiveness.

QALYs are calculated by estimating the years of life remaining for a patient following a particular treatment or intervention and weighting each year with a quality-of-life score (on a 0 to 1 scale). It is often measured in terms of the person's ability to carry out the activities of daily life, and freedom from pain and mental disturbance / ill-health. QALYs can be used on their own or within a model (e.g. the MOVES tool – see below) to calculate the health benefits and cost-effectiveness associated with different interventions and environments.

It is important to note that the White *et al.* (2016) study *reports obtaining similar results using QALYs and the HEAT tool for calculating health and wellbeing benefits*.

c. The Model for Estimating the Outcomes and Values in the Economics of Sport (MOVES) tool

The MOVES 2.0[37] tool is a downloadable Excel-based epidemiological tool developed by Sport England and the University of East Anglia's Medical School Health Economics Consulting Group. It measures savings in health care costs. This method calculates the reduced incidence of disease among walkers compared to non-walkers, and converts this into savings to the NHS as a result of reduced treatment costs (ICF *et al.* 19b:41). It is designed to show the return on investment for health and wellbeing of sport and physical activity, based on the evidence that increased physical

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https://www.gov.uk/government/collections/gdp-deflators-at-market-prices-and-money-gdp . Based on the ECP value of £1.735 million the HEAT valuation using 2019 SWCPA figures would be slightly lower at £4.7 million per year (see table A4 in Appendix 1). The HEAT default value is £3,582,409, based on 2015 prices (in Euros; 1EUR = £1.12 conversion rate as of 10/11/2020) which gives a much higher HEAT valuation of £11 million for the SWCP. White *et al.* (2016) use a value of £3,229,114 per person which is much closer to the HEAT default value.

[35] The England Coast path (ECP) methodology uses the counterfactual scenario to assess the impact of the ECP programme (what the benefits would have been without implementing the ECP programme) for this new national trail (which involves some extension of existing trails) (ICF *et al.* 2019a: 4). Calculating the counterfactual is not possible for the SWCP as it is an existing trail in its entirety, although future research could look at changes over time.

[36] See entry for QALY on https://www.nice.org.uk/glossary?letter=q

[37] Available on: https://www.sportengland.org/our-work/health-and-inactivity/what-is-moves/moves-tool/

activity reduces the risk of a number of diseases, including cardiovascular disease and diabetes. It is based on UK epidemiological data relating to population, age and gender, and the related disease rates for conditions that could be improved through sport and physical activity. The MOVES tool includes use of QALY values to calculate the cost-effectiveness of different types of physical exercise intervention. It also provides Return on Investment estimates, requiring inputting of intervention costs.

The MOVES tool, in contrast with HEAT, differentiates the benefits based on the age group and gender of participants.

The Outdoor Recreational Valuation (ORVal) Tool

ORVal is a mapping tool (both descriptive and predictive) and is based on an underlying econometric model (see Day and Smith 2017 for a detailed description of the methodology). Based primarily on Natural England's extensive MENE dataset it puts an outdoor recreational value onto different local areas across the UK, based on a modified travel cost valuation, and the choices of sites available. ORVal can be used to predict the increase or decrease in recreational value attributed to changes in use or infrastructure, e.g. housing developments. While ORVal is helpful to give an idea of recreational value, it does not account specifically for health benefits, which are therefore additional to the values indicated by the tool.

Overall choice of valuation method and guidance on implementation

This report follows the methodology used for the England Coast Path baseline assessment as far as possible (ICF et al. 2019a and b), which, along with the Wales Coast Path valuation (Cavill, Rutter and Gower 2014), uses the HEAT tool, as these are the most relevant assessments done so far and it also has particular advantages compared with alternative methods[38]. We however, where possible, also calculate values using other methods such as the MOVES tool, which have been used in other relevant valuations and is used by Sport England. The MOVES tool gives information on savings of health care costs and cost effectiveness of interventions, which is likely to be useful for organisations planning interventions, therefore we have reported on these as well (the MOVES tool requires information on the cost of interventions to be inputted). We have also drawn on other valuations that use HEAT (the Wales Coast Path valuation; and White *et al.* 2016), since these are useful for comparison, and because there are methodological issues with using the England Coast Path method as it is (see below).

Useful guidance (including a step-by-step guide) on methodology and implementing the online HEAT tool with appropriate parameters (background and input figures) is provided in the England Coast Path baseline assessment (ICF *et al.* 2019b:111-112) (see also Kahlmeier *et al.* 2017). The specific parameters used for the HEAT calculations (tables A5, A6) and for the MOVES calculations (table A8) for this report are provided in Appendix 1. The MOVES tool requires significantly more input information than HEAT (including gender and age group breakdowns, level of intensity of exercise, drop-off rate for participation and cost of interventions) which gives it both strengths in terms of flexibility, scope and nuance; but brings added data collection / collation requirements.

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[38] See ICF et al. 2019b:107-8 for a full discussion of the relative merits of using the HEAT tool for the England Coast path. Reasons for choosing HEAT include: 1) it focuses on the most important and most evidence-based relationship with physical activity (the impact on all-cause mortality). 2) It uses relative risks for all-cause mortality that control for leisure time physical activity therefore removes the need to collect data on total physical activity. 3) The approach also uses linear dose-response curves, meaning that any increase in activity has a linear increase in health benefit. 4) HEAT is suitable for assessing regular (rather than one-off) physical activity. 5) HEAT is evidence-based, validated by WHO and has been quite widely used, including for the Wales Coast Path and England Coast path assessments. 5) It requires fairly limited types of data input and analysis. 6) It can measure benefits relating to small differences in (regular) physical activity.

5. SWCP health and wellbeing valuation results

Summary of MENE visit numbers data

Visit numbers were calculated using the data and parameters from the South West Coast Path Association and the England Coast Path baseline assessment (ICF *et al.* 2019a and b. (See Appendix 1 for more information about the comparison with MENE 2009-2019 data.) These are estimates for walkers on the SWCP unless specified (see Appendix 1, table A1 for further details).

Table 3: Comparison of figures for annual visit numbers

Details about estimate	Estimate of visits (per year)
Estimate of **all England Coast Path (ECP) users** (from 'bottom up' figures ICF *et al.* 2019a and b)	29.1 million
Estimate of **SWCP component (approx.30% of ECP)** (using data and assumptions in ICF *et al.* 2019b:62)	8,730,571 (8.73 million)
South West Coast Path Association 2019 estimate	**8,971,562**
South West Coast Path Association 2018 estimate	8,634,034
MENE estimates (30% of MENE data estimate for England)	4,029,976 (low); 6,246,963 (high)

The SWCPA 2018 visit estimate is consistent with the England Coast Path (ECP) baseline figures (8.63 million visits compared with 8.73 million) (ICF *et al.* 2019a and b) but uses less recent figures. For this valuation we have therefore used the most up to date SWCPA 2019 figures (South West Research Company 2020) for the health and wellbeing valuations, which are based on the 2019 Great Britain Day Visits Survey (GBDVS 2020). Although the GBDVS is stated not to include local residents, there is a high level of agreement with the ECP figures, therefore for the valuation we assume that the SWCPA 2019 figures include local residents.

Low and high estimate figures were also calculated using MENE data (see table A2 in Appendix 1 for more detail). The ECP baseline assessment figures are similar to the SWCPA figures and are higher than those calculated using MENE data due to the assumptions used for this study (ICF *et al.* 2019a and b) - they are likely to be more accurate due to the data collection method used and the triangulation with other sources in the ECP baseline assessment.

Results of the WHO HEAT Valuation

This valuation was calculated using the England Coast Path baseline assessment method and assumptions (from ICF *et al.* 2019a and b) using the WHO HEAT and SWCPA data, as above.

Table 4: Results of WHO HEAT Valuation for SWCP (2019 estimate)

HEAT valuation (per year) – directly attributable	£5,528,571 (£5.5 million)
HEAT valuation (per year) – total users	£69,107,142 (£69.1 million)
No. of visits valuation based on	8971562 (9.0 million)

Total estimated no. of premature deaths avoided per year	3 directly attributed; 41 for all SWCP users

The WHO HEAT valuation for SWCP is **£5.5 million per year** (directly attributable value) with a total value of **£69.1 million** per year, **preventing an estimated three premature deaths per year** (directly attributable). This is consistent with the £19 million per year valuation for the England Coast Path (29.1 million visits) (equating to around 29% of this value) and with the £3.5 million valuation for the Wales Coast Path (2.8 million visits).

These figures are based on an average walking time of 3.29 minutes per day (ICF *et al.* 2019a:28)[39]. These calculations use the same proportion of visits to visitors as occurs in the England Coast Path baseline data (visitors = 7.56% of visit numbers) (ICF *et al.* 2019a:35). The valuation figures are discounted at 1.5%[40]. See Appendix 1 for detailed valuation information, comparison of low and high values using different data sources (table A4), and the parameters used.

The main figures above show the *8% of people who would not have exercised if they did not walk on the SWCP*, so represent those benefits that can be directly attributed to the SWCP (based on ICF *et al.* 2019: 27).

UEA / Sport England MOVES tool results

Table 5: Summary of MOVES results

	Totals
Annual value of QALYs gained	**£7,442,073 (£7.4 million)**
Total no. of QALYs gained	3721
Programme cost per year	£513,726
Net cost of programme	Cost saving
Return on Investment (Net monetary benefit) per year	£9,727,772

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[39] Based on guidance and estimates by the Ramblers Association and consistent with previous data for the SWCP (see ICF *et al.* 2019b:58; 60).
[40] The ECP baseline assessment used a 1.5% value for discounting (ICT *et al.* 2019b:112) consistent with UK Government Green Book Guidance - see paragraph A2.54 in HM Treasury (2018). The Green Book. Central Government Guidance on Appraisal and Evaluation. Available at: https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-governent

Details of MOVES estimate based on 2019 SWCPA visit numbers:

Total annual value of QALYs gained: **£7,442,073 (£7.4 million)** equating to 372.1 QALYs per year (average) based on the **reduced incidence of disease**[41] as a result of walking on the SWCP.

In terms of return on investment the net monetary benefit per year is £9,727,772 (£9.7 million) with a programme cost for the SWCP of £513,726 per year (assuming a cost of £1 per person per year).

It is important to note that the full MOVES results show clearly that the **relative health benefits and return on investment (ROI) are much greater for older age groups – with an ROI of 55% for the 16-30 age group compared with 3162% for the 61+ years age group** (see full results in table A7, Appendix 1).

These figures assume brisk walking intensity (the middle category), starting from some exercise, 0.38 hours per visit and 1 trip on average per week (equivalent to 3.29 minutes per day) and assumes a cost of £1 per person per day[42] and a brisk walking pace[43]. Willingness to pay per QALY was set at £20,000 (this is the default MOVES value and is consistent with the value used in the White *et al.* 2016 study) and the 3.5% discounting default value was used[44]. A breakdown of 52% male and 48% female was used as well as age group frequency categories based on the overall figures for the England Coast Path baseline study (ICF *et al.* 2019b:41) (see details, full list of parameters used and additional estimates in Appendix 1.)

Connecting Actively to Nature (CAN) valuation results

CAN is an outdoor activity programme linking people with nature and is a Devon Local Nature Partnership programme supported by Sport England and managed by Active Devon in partnership with the South West Coast Path Association. CAN is aimed at inactive (and less active) people aged over 55, in Devon, Torbay and Plymouth, including people with multiple barriers to activity such as: health conditions, poor fitness and isolation[45]. The projects reported on here all involved walking on the South West Coast Path (mainly Couch to Coast projects and one Nordic Walking project). Locations included Wembury, Teignmouth, Westward Ho!, Barnstaple and Torquay.

Data from a total of five CAN projects with 191 participants on the SWCP was analysed. 90% out of 108 participants were aged 61+ giving an estimate of 172 participants out of a total of 191 participants in this age group. The vast majority of participants were female (73%), with 27% male.

Out of 130 participants from these groups[46], 35% were inactive (doing less than 30 mins of moderate intensity physical activity) when the programme started and 40% (52 respondents) were disabled.

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[41] Including type 2 diabetes, coronary heart disease, cerebrovascular disease (stroke), breast cancer, colorectal cancer, dementia, depression and hip fracture (see details in Table A8b in Appendix 1).

[42] Future ROI calculations would benefit from including an estimate for the overall maintenance costs of the SWCP for greater accuracy of these figures.

[43] A brisk walking pace is equivalent to 4.65 METs/hour. METs/hour measures the intensity of exercise and energy expended (4.65 METs/hour is equivalent to a brisk walk of around 3 miles per hour. See below and https://www.healthline.com/health/what-are-mets#definition for an explanation.

[44] This valuation uses a drop off figure of 55% for the first year as in the SWCPA online survey 2020, 55% of walkers specified that they walk all year round; the 6.7% default value was used for drop off after the first year.

[45] See https://www.activedevon.org/introducing-the-connecting-actively-to-nature-can-campaign/ for further information on this programme.

[46] From the SWCP CAN Impact document (2019). Data was not available for some participants at the time of writing, e.g. from Torbay groups.

CAN HEAT Results

Overall HEAT valuation: **£59,273 per year** for 145 participants (average benefits over 10 years). If we then calculate the 8% substitution value used in the HEAT calculations for the SWCP above (i.e. that only 8% would not have walked elsewhere if not on the SWCP) this gives a very low estimate of £4,742 per year. However, as this programme is benefiting a significant number of people who are otherwise inactive (or not very active) this figure is likely to be much higher – e.g. using the 35% proportion for previously inactive participants this gives a figure of **£20,745 per year**. The intermediate (average) value can be estimated at **£16,003 per year**. The net monetary benefit using this value is therefore £8,898 per year based on a £7,105 programme cost (see below). This gives a Return on Investment (ROI) value of 125% or **£1.25 per £1 invested**. Using the high estimate £20,745 figure gives a net monetary benefit of an ROI value of 293% or **£2.93 per £1 invested**.

The CAN HEAT figures were based on the following parameters: 5.4 mins per day (equivalent to 0.625 hours walking once a week); sub-city level; 145 out of 191 of participants aged 50-74 (based on the 77% estimate from Active Devon data and the available data we have for distance walked etc); £49 programme cost per person per year (average value) [total for 145 participants £7,105]; 4.83 km per hour (3 miles per hour – brisk walking pace); 1.5% discounting.

CAN MOVES results

According to the MOVES results, the total annual value of QALYs gained for the 191 participants is **£9,200** (equivalent to 4.6 QALYs) **(£8,833** of this is for the 61+ years age group). The net monetary benefit for both age groups is **£6,151 per year**. However, the results show that the Return on Investment (ROI) and net monetary benefits are **considerably higher for the 61+ years age group** (**53%**) than for the 46-60 years age group (minus 48%) (see details in Table 6): in other words for the 61+ years age group there is a return on investment of **£1.53** for **every £1 invested** over a ten year period. However, it needs to be borne in mind that 90% of participants were in the 61+ age group therefore the numbers were very small for the 46-60 years age group. (SWCP maintenance costs were not included in these figures[47]).

Table 6: Summary of CAN MOVES results for different age groups

			Totals
Age range	46-60	**61+**	
Total value of QALYs gained (10 yrs)	£3,732	**£88,326**	£92,058
Annual value of QALYs gained	£373	**£8,833**	£9,206
No. of QALYs gained	0.2	**4.4**	4.6
Incremental cost effectiveness ratio (cost per QALY)	£30,987	**£5,608**	
Programme cost over 10 yrs (cumulative)	£7,241	**£57,605**	£64,846

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[47] It is possible that the programme cost is a one-off cost for each participant therefore increasing the ROI considerably. As above, future ROI calculations would benefit from including an estimate for the overall maintenance costs of the SWCP for greater accuracy of these figures.

Annual cost	£724	**£5,761**	£6,485
Net monetary benefits (Return on investment)	minus £2050	**£63,558**	£61,508
Return on investment (QALY)	£0.52 (minus 48%)	**£1.53 (53%)**	

These results were calculated using the following parameters in the model: 0.625 hours walking once a week; 191 participants in total (172 of 61+ yrs; 19 of 46-60 yrs); 80% completion; £49 programme cost per person (average value); brisk walking pace (4.65 METs/hour[48]); average duration 37.5 minutes, once a week; value realised over a ten year period.

Comparison with estimates of overall Return on Investment for CAN programme

Overall, the CAN programme has previously calculated a £3.31 return on investment (ROI) to the healthcare system for every £1 invested (using the UEA MOVES tool) across all locations, but this is highly dependent on retention, initial activity levels, and the age of the participant. The retention rate used for this calculation was 60% over 3 years, and this ROI £3.31 for every £1 invested is realised over the 25 years following the start of the activity (which counterintuitively means a larger ROI for younger participants)[49]. This is similar to the high estimate calculated using the HEAT tool above but calculates the benefits over a 25 year period.

Table 7: Summary of CAN valuations and ROI using HEAT and MOVES tools

	MOVES estimate (using QALYs)	HEAT estimate (intermediate)	HEAT estimate (high)
Value of health benefits per year	**£8,833**	**£16,003**	**£20,745**
Programme cost per year	£5,761	£7,105	£7,105
No. of initial participants	172 (80% drop off to 139) (90% of participants who are age 61+)	145 (age 50-74 yrs)	145 (age 50-74 yrs)
Net monetary benefit per year	£3,072	£8,898	£13,640
Return on investment	**£1.53 (153%)**	**£1.25 (125%)**	**£2.93 (293%)**

N.B. These estimates are not directly comparable due to the different numbers of participants and differing assumptions used.

These figures are likely to represent a significant underestimate as the programme cost covers considerable numbers of new participants taking the CAN programmes each year.

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[48] 4.65 METs/hour was chosen here as it is the intermediate value within the MOVES tool and reflects the likelihood of encountering hilly and steep terrain on the SWCP but allows for less intensity than the value for Cross country / Hills which is 6 METs/hour; Slow is 2.5 METs/hour for the MOVES tool.
[49] Pers. comm. 03/07/2020, Tim Howard, Active Devon.

Outdoor Recreational Valuation (ORVal) results

Recreational[50] value of the SWCP: £41.8 million per year

This is based on an estimated 16 million visits per year (ORVal estimate).

Disaggregating by socio-economic status[51], this is split up across the categories as follows (figures are per year): AB (the most affluent groups) £10.4 million; C1 13.3 million; C2 10.3 million and DE (unskilled / semi-skilled manual occupations and unemployed) 7.8 million.

This corresponds to a breakdown of the 16 million estimated visits (per year) by socio-economic category of AB 20%; C1 34%; C2 23%; DE 23%.

These estimates do not include the specific health and wellbeing benefit value of walking on the SWCP[52].

Summary of health and wellbeing valuation results

Table 8: Summary of main health and wellbeing valuation results

Valuation tool	Value for SWCP (per year) (based on SWCPA 2019 figures)	What this measures
WHO HEAT	**£5.5 million** directly attributable **£69.1 million in total**	**Value of reduced death rate** (based on standard statistical value of a life)[53]; directly attributable value - 8% of total
MOVES (UEA / Sport England)	**£7.4 million**	**Savings in health care costs** based on the **reduced incidence of disease**
ORVal (University of Exeter)	**£41.8 million**	Recreational value only (health and wellbeing value is additional to this)

Differentiating the health and wellbeing benefits for different types of visitors to the SWCP (segmentation)

The health and wellbeing value of the SWCP can be broken down by type of visitor (local day visitors / non-local day visitors / overnight visitors) according to the best available figures. This is relevant since local people are likely to be able to use the path more often and therefore to be gaining the most health and wellbeing benefits from it. The available data (see table 9) indicates that **51% of SWCP visitors are local day visitors** (living within 10 miles of the SWCP); **15% are non-local day**

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[50] Termed 'welfare' value in this model.

[51] Based on classification of the occupation of the primary earner in the household – see for example https://www.ukgeographics.co.uk/blog/social-grade-a-b-c1-c2-d-e for further details.

[52] Prof. Brett Day, University of Exeter, pers. comm., May 2018; see also Day and Smith 2017.

[53] HEAT does not include the benefits from reduced illness, such as diabetes or obesity-related conditions.

visitors; and **34% are overnight visitors**. This gives a segmented health and wellbeing value of **£2.8 million per year for local day visitors; £0.9 million for non-local day visitors; and £1.9 million for overnight visitors** (see Table 9). As accurate figures for segmentation according to type of visitors specifically for the SWCP were not available at the time of writing these are compiled using baseline figures for the England Coast Path (ICF *et al.* 2019b:41)[54].

Table 9: Percentage of types of visitors (England Coast Path figures) and segmentation of health and wellbeing benefits

Visitor type	% of responses (weighted)	Health and wellbeing benefits for the SWCP by type (WHO HEAT figures[55])
Local day visitor	**50.8%**	£2,808,514 (**£2.8 million**)
Non-local day visitor	**15.4%**	£851,400 (**£0.9 million**)
Overnight visitor	**33.8%**	£1,868,657 (**£1.9 million**)
Total respondents	100%	£5,528,571 (£5.5 million)

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[54] Although the SWCPA 2019 visitor numbers (South West Research Company 2020) state that they do not include local resident visitors to the SWCP, the ECP visitor numbers, which were based on bottom-up data collection, are similar to the SWCPA 2019 value. Therefore, for this section of the report we have assumed that the SWCPA 2019 figure also includes local visitors in the absence of more accurate data.
[55] Based on the SWCPA 2019 HEAT estimate value.

6. Towards an assessment of the qualitative health and wellbeing benefits and benefits for mental health of walking on the SWCP

Qualitative and mental health benefits

Given the obvious limitations and gaps in the current tools available for quantifying the health and wellbeing benefits of walking on the SWCP, and the fact that many benefits are not easily quantifiable, we also report on qualitative aspects of health and wellbeing. In particular, mental health benefits, although they occur at the same time and are synergistic with physical health benefits, are harder to put an economic value to since the available tools do not cover this aspect. However, they can be assessed using validated indicators (see below), and so are reported on below.

A range of less quantifiable health and wellbeing benefits of accessing and living near to a biodiverse environment such as the SWCP are evidenced in the qualitative research literature. These include evidence that first-hand experiences of wildlife are meaningful and important, contribute to quality of life, and result in feelings of well-being that include spiritual aspects and those that cannot be expressed through words (Curtin 2009; see also Natural England 2016b). Previous studies have looked at the participant experience using a range of qualitative methodologies (see e.g. Bell *et al.* 2015). Others have explored the links between health and wellbeing and ecosystem services using participatory and deliberative methods for evaluating qualitative and non-monetary ecosystem services (see Fish *et al.* 2011a; 2011b). Work on nature connectedness (see above) is also very relevant in demonstrating the benefits of spending time in natural environments (Martin et al. 2020; Pritchard et al. 2020).

Specific health and wellbeing benefits have been reported in relation to people walking (in sections or the entirety of) the South West Coast Path. Walking long distance trails such as the SWCP appears to have the potential to bring *added transformative benefits* (perhaps relating to a sense of achievement) over and above the normal health and wellbeing benefits of walking in natural environments, illustrated by a number of individual stories detailed on the SWCPA website[56]. However, more work needs to be done to understand (and investigate whether it is possible to capture and quantify) these benefits.

In addition, qualitative CAN SWCP project outcomes (see below) are able to shed light on the synergistic benefits associated with joining an experience of walking along the SWCP with the social benefits of walking in a group.

The next section collates findings from the SWCPA visitor surveys and SWCP CAN project feedback, supplemented by data and analysis from the England Coast Path (ICF *et al.* 2019a and b) and by MENE data.

The SWCPA online survey (1043 respondents) was conducted during lockdown in May 2020. The results show important health and wellbeing benefits associated with the SWCP during this period, particularly for SWCP-engaged walkers (respondents to this survey were mainly members and supporters): 87% of respondents had walked at least 30 miles of the SWCP.

At least three quarters of respondents reported positive outcomes associated with walking on the SWCP such as reductions in feelings of stress (75%); increased positive feelings (79%); and feeling

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[56] See https://www.southwestcoastpath.org.uk/love-the-coast-path/what-we-do/stories/ ; and https://southwestcoastpathblog.wordpress.com/category/completer/

more connected to nature (83%); and at least half reported feeling more energetic (60%) and better able to sleep (57%) (see table 10 below).

Table 10: Qualitative benefits reported in the SWCPA 2020 online survey

Feeling after walking the SWCP[57] **Respondents**

Less stressed	75%	723
More positive	79%	760
More energetic	60%	583
Able to sleep better	57%	550
More connected to nature	83%	799
Inspired to be active	62%	595
Inspired creatively	25%	244
Inspired to take action to protect the environment	43%	419
None of these	1%	5
Other (please specify)	5%	45
	Answered	964

The SWCPA 2020 online survey also produced interesting findings on the usual distances walked on the SWCP compared with other locations: 65% said they usually walk the furthest distance on the SWCP compared with other walks they do (e.g. 15% walk furthest on a local way-marked footpath; 5% around a village / town).

Other positive benefits from walking the SWCP were highlighted in the responses in the online survey to the question: "What does the Coast Path mean to you?". These included feeling *"Emotionally refreshed; excited; a sort of feeling of loss when not there"*; that the Trail gave them the opportunity to "Escape, to breath [sic.] and to be in my own headspace", "Reduce stress from our job in the ambulance service*"* and "Shut out the strain of everyday life and have 'me' time*."* One response underlined the importance of the SWCP for many people as "*Vital for my physical and mental health*"[58].

In addition, the online survey highlighted the main reasons that respondents visited the SWCP as primarily for the views and the proximity to the sea. Other reasons frequently cited included for the sense of adventure; working towards completing the whole national trail; varied terrain; and visiting places along the way.

SWCP CAN programme qualitative and mental health data

The qualitative data from the CAN programmes in 2019 indicates that a significant number of the participants enjoyed and experienced positive benefits from the CAN programme. 100% (43

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[57] Q11 question wording: 'Which of the following feelings (if any) do you feel after walking the Coast Path? (Select all that apply)'

[58] See https://southwestcoastpathblog.wordpress.com/2020/07/21/lockdown-survey/ for further details on this survey.

respondents) of the feedback comments received were positive with the most frequent aspects mentioned as follows[59]:

Table 11: Summary showing count and % of types of comments

	Count[60]	%
Positive experience overall	43	100
Social contact aspects including meeting other people, talks (on local area and history), visiting cafes, feeling supported by staff	39	91
Positive experience of walks	18	42
Sense of achievement/good build up of distance/improved fitness	10	23
Discovered new walks / areas	6	14
Enjoyed / enjoyable	11	26
Brilliant / excellent / exceptional	5	12

Comments typically mentioned multiple aspects including social contact – especially meeting (new) people and the talks – with appreciation of the walks and of building up of walk length and / or gaining a sense of achievement. E.g. 'Very interesting talks. Length of walk very good, building up to 5k. Great way to start for non-walkers'. 'Social contact was important, good the way the walks increased over the weeks, beautiful scenery'. 'Brilliant walk, leaders helped me to achieve more than I've walked for some time. Very enjoyable, positive and informative'. Others referred to motivational aspects of going out with a group: 'Gets you out when you normally wouldn't, seen areas not yet personally discovered, nice to walk and meet others, interesting talks afterwards'. Several participants enjoyed the way that walks were combined with talks on the local area and history: 'Enjoyed it all and even though we live here, we learned alot!' Several walkers in Torbay in particular mentioned (and appreciated) that they had visited new areas unknown before as part of the CAN walks.

Mental wellbeing measures for the CAN programme

CAN uses the Short Warwick-Edinburgh Mental Well-being Scale indicators to measure wellbeing – these are widely used and validated UK measures (see Tennant *et al.* 2007)[61]. The results of the rating measures are more mixed than the qualitative comments above would suggest, which is not unexpected given that CAN is targeting inactive older adults, including a significant proportion with disabilities (and these ratings are a snapshot and therefore by themselves do not measure the impact of CAN programmes – see Stewart-Brown and Janmohamed 2008 on how to use these indicators to measure impact)[62]. With the exception of one measure, about *autonomy* ('I've been able to make up my own mind about things'), which was rated significantly higher (47% agreed - see

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[59] All submitted comments were included here.

[60] As this was an open question the responses have been coded as multiple responses.

[61] CAN data for 2019 SWCP programmes collected and analysed by Active Devon with the University of Exeter; the data covers 109 participants.

[62] A comparison of pre- and post-programme ratings (not available when compiling this report), as well as investigating other contributing factors, would be necessary to determine the impact of the CAN programme on these aspects of wellbeing. The results for each measure have been compared here but these would normally be combined to give an overall wellbeing score for each participant.

below), only 14-23% indicated positive agreement with the following rating measures, with most neither agreeing nor disagreeing:

Table 12: Mental wellbeing measures for CAN programme

Statement	% neither agreed nor disagreed	% agreed	Average rating
I've been feeling relaxed[63]	39	14	3.64
I've been dealing with problems well	46	17	3.78
I've been thinking clearly	46	**23**	**3.92**
I've been feeling close to other people	44	19	3.76
I've been feeling optimistic about the future	52	18	3.85
I've been feeling useful	44	16	3.70
I've been able to make up my own mind about things	40	**47**	**4.31**

Autonomy has been shown to be strongly linked with wellbeing in the literature (see e.g. Reis *et al.* 2000; Radoilska 2012); therefore it is significant that this is the highest rated measure and it suggests there are tangible wellbeing benefits. The second highest rating was on thinking clearly (23%). Along with this, three other measures (dealing with problems well, feeling useful and feeling close to other people) fit with the 'functioning well' category reported in recent nature connectedness research (Martin et al. 2020; Pritchard et al. 2020)[64] and in mental wellbeing research (defined as good psychological functioning, good relationships with others and self-realisation - see e.g. Stewart-Brown and Janmohamed 2008). Use of such measures in future SWCP research and evaluations would benefit from further work investigating and strengthening consistency and comparability amongst mental health / wellbeing indicators, Office for National Statistics (ONS) measures and nature connectedness wellbeing indicators.

The third highest rated was feeling close to other people (19%), underlining the importance of these types of opportunities for social contact and the associated positive benefits.

According to the CAN data for 2019 the vast majority of participants rated their nature connectedness very highly after the CAN programme. For example, 88% (96 out of 109 respondents) strongly agreed with the statement 'Being in nature makes me very happy' and 84% (92 respondents) strongly agreed with the statement 'Spending time in nature is very important to me'[65].

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[63] Rated 4 or 5 on a 1-7 scale where 1-strongly disagree, 7=strongly agree; no respondents rated above 5 on this question; subsequent questions were rated in the same way; the questions had between 103 and 107 respondents.

[64] In Martin *et al.* (2020) the following outcomes measures were used: general health was measured using a single item 'How is your health in general?' (1, 'Very Bad' - 5, 'Very Good'). Wellbeing items used were developed by the UK's Office of National Statistics (2019): 1) 'Overall how satisfied are you with life nowadays?' (Evaluative wellbeing) and 2) 'Overall to what extent do you feel that the things you do in your life are worthwhile?' (Eudaimonic wellbeing – 'functioning well' aspects). Both items are scored on an 11-point Likert scale (0, 'Not at all' - 10, 'Completely'), with higher scores indicating better wellbeing.

[65] Rated 6 or 7 on a 1-7 scale where 1=strongly disagree, 7=strongly agree.

Qualitative and positive mental health outcomes from visits to the coast in England

According to MENE data for England over the 2009-2015 period there was a *31% increase* in the number of visits taken *for health or exercise* reasons. The most commonly cited reasons for visiting the coast (in descending order) were for health and exercise (37%) , to relax and unwind (36%), for fresh air / to enjoy pleasant weather (34%), to exercise your dog (34%), and to enjoy scenery (30%) (Natural England 2016c: 29).

In addition, the MENE 2009-2015 data showed a significant increase in the proportion of coastal visits that included usage of a path, cycleway or bridleway (+7%), and of those walking without a dog (+11%) and playing with children (+36%) in coastal locations. (Natural England 2016c:28-32).

Respondents visiting the coast (and countryside) tended to report stronger positive outcomes than those taken to urban green space. Specifically, *enjoyment was rated higher for visits to the coast than for other types of location* (55% strongly agreed with the relevant statement compared to 50% for countryside visits and 40% for urban greenspace visits). 36% of respondents also said that they felt calm and relaxed after visiting the coast (Natural England 2016c:28-32) (see below).

According to MENE 2009-2015 data, as shown in table 12 below, the qualitative outcomes for all except one of the qualitative indicators were slightly higher for visits to the coast than for the countryside, and significantly higher than for visits to towns and cities. Interestingly, figures reported in the England Coast Path baseline assessment (ICF *et al.* 2019a) show considerably higher ratings on all of these outcomes, indicating there are very significant qualitative and mental health benefits from walking on the coast path.

Table 13: Qualitative experiences of visits to the coast and England Coast Path from MENE data compared with countryside and town or city (% of respondents who agreed strongly with statements)

Statement	Coast (all coastal visits) (%)	Countryside (%)	Town or city (%)	England Coast Path (ICF *et al.* 2019a)
I enjoyed it	**55**	50	40	86
It made me feel calm and relaxed	**36**	35	26	73
It made me feel refreshed and revitalised	**36**	34	26	75
I took time to appreciate my surroundings	**37**	34	24	72
I learned something new about the natural world	**10**	9	7	26
I felt close to nature	27	**28**	18	61

Sources: Natural England 2016c:29 unless otherwise stated; for England Coast Path ICF *et al.* 2019a.

Notably, the qualitative outcomes using these same statements are also significantly higher for the England Coast Path compared to other National Trails (see ICF *et al.* 2019a:15).

There is considerable potential for linking these types of qualitative outcomes more explicitly with mental health indicators as used in mental health settings, nature connectedness research and reported in local government statistics (see above and below), but this is outside the current scope of this report.

7. Conclusions

Exercising outdoors, and the health and wellbeing benefits associated with being in natural environments has taken on new importance during the coronavirus (COVID-19) pandemic. COVID-19 has exposed and exacerbated existing health and socio-economic inequalities as well as disparities in access to natural environments that need to be urgently addressed. The pandemic has therefore provided real opportunities to engage with new user communities to bring greater health and wellbeing benefits and to forge stronger connections with our green spaces and natural environments.

The HEAT valuation results, which measures the **value of the reduced death rate** associated with walking on the SWCP, show health and wellbeing benefits totalling **£69.1 million per year** for all SWCP users of which **£5.5 million per year** is directly attributable for those walking on the SWCP who would not be walking elsewhere (an estimated three premature deaths avoided per year directly attributable). This can be compared with previous valuations for the England Coast Path (£19 million) and the Wales Coast Path (£3.5 million) both directly attributable.

These figures represent an **underestimate of the actual health and wellbeing benefits** relating to the SWCP: the valuation only covers the physical health benefits, as mental health valuation tools are not yet available (see below). The HEAT valuation figures only relate to the economic value of the avoidance of deaths through walking on the SWCP, and leave out the benefits related to reduced illness / ill-health (e.g. reduction in diabetes and obesity-related conditions).

The HEAT valuation breakdown by type of visitor indicates that **51% of SWCP visitors are local day visitors** (living within 10 miles of the SWCP); 15% are non-local day visitors; and 34% are overnight visitors. This gives a segmented health and wellbeing value of **£2.8 million per year for local day visitors; £0.9 million for non-local day visitors; and £1.9 million for overnight visitors**). This is important since local people are likely to be able to use the path more often and therefore to be gaining the most health and wellbeing benefits from it.

The MOVES valuation is *in addition to* the HEAT valuation, because it is based on the reduced occurrence of disease[66]. Valuations using the MOVES tool, which quantify the **savings in health care costs** based on the **reduced incidence of disease**, give a value of **£7.4 million per year (value of QALYs gained)**. These results also show that the **relative health benefits and return on investment (ROI) are much greater for older age groups – with an ROI of 55% for age 16-30 compared with 3162% for the 61+ years age group** (see Appendix 1).

The assessment of the mental health and qualitative benefits of the SWCP also details several less quantifiable benefits including reductions in stress and greater feelings of positivity, an increased sense of autonomy, a greater sense of 'functioning well' (e.g. dealing with problems well, feeling useful and feeling close to other people) and of nature connectedness.

Walking (with others) on the SWCP also promotes **greater social contact** (e.g. through Connecting Actively to Nature projects), which is particularly important at this time, and can bring other synergistic health and wellbeing benefits (including in a safe, socially distanced way).

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[66] Although there are methodological issues relating to differences in the parameters and data used which means these are not directly comparable; however, this aspect warrants further investigation.

However, what is also left out of this analysis is the potential value of the substantial benefits that would accrue from expanding the usage of the South West Coast Path to the large numbers of inactive and relatively inactive people as well as socio-economically disadvantaged and BAME groups who are not yet accessing this trail.

The research literature highlights that recreational visits to the coast in England, particularly for walking, are **more likely to be made by people from lower socio-economic backgrounds compared to other natural environments** (e.g. woodlands). Therefore, ensuring coastal environments of the SWCP are accessible to more socio-economically deprived communities **could help to reduce health inequalities** (Elliott *et al*., 2018; Garrett *et al*. 2019). The fact that new user communities have been accessing natural environments during the Covid-19 pandemic provides real opportunities to increase longer term engagement with the SWCP by a range of demographic groups, potentially bringing greater health and wellbeing benefits.

8. Recommendations for future research and partnership working

The findings and gaps in the evidence indicated in this report lead to a number of recommendations for areas of future research and data collection as well as partnership working. Existing partnership work would benefit from further collaboration across multiple disciplines and organisations including academic institutions, environmental organisations and public health-related organisations, which may help in securing future research funding. The following themes have been identified:

Recommended areas for future data collection and analysis for the South West Coast Path Association (SWCPA):
- Developing **consistent data collection questions** (and related methodology) on the health and wellbeing benefits) of the SWCP (including qualitative and mental health indicators for use in visitor surveys and other data collection instruments, and ensuring these questions and the corresponding data is consistent with and translatable to other England or UK coast path settings[67].
- Gathering **additional data on segmentation of walkers** on the SWCP – the proportion of local day visitors / visitors from elsewhere / overnight visitors, which would facilitate better understanding of the different usage patterns and health and wellbeing benefits associated with these different segments.
- Collecting data on the **range and diversity of SWCP users including BAME and disadvantaged communities** and on the current levels of engagement, health and wellbeing benefits, barriers to access for these communities; and developing recommendations and interventions to better target and engage with these communities[68].
- Investigating the health and wellbeing **characteristics and benefits related to social contact, cultural identity and sense of place** arising from community-level coastal access to the SWCP and a sense of connectedness to the coast[69].
- Identifying the specific health and wellbeing **benefits of long-distance walking** on the South West Coast Path and how this relates to and can be compared with walking on other long-distance trails, as well as with walking shorter distances.
- Further work identifying the potential **benefits for inactive and relatively inactive people** of walking on the SWCP and how best to realise these (e.g. through further CAN projects and related work).
- Investigating how to exploit synergies, **expand partnership working** and to scale up existing work being done and networks with other organisations and groups in coastal areas of the SWCP. This includes with the RSPB, the National Trust and the University of Exeter as part of the South West Partnership for Environment and Economic Prosperity (SWEEP)[70], by the

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[67] This includes collecting consistent data in future SWCP surveys on distance (and / or time) walked; frequency of walking on the path (to assist in calculating the number of visitors from the number of visits), whether respondents would have walked elsewhere if not on the SWCP, and qualitative and mental health benefits; as well as on demographic characteristics of respondents including gender, age, socio-economic status, and home postcode (see e.g. the England Coast Path survey questions ICF *et al.* 2019b:142-148).

[68] Perhaps drawing on work by (or in partnership with) Natural England (Social Science division), who report that they have been working on social inclusion and the natural environment, including issues around environmental justice and equality of access to and benefit from the natural environment for different groups (C. Willis, pers. comm., Mar.2020); see also section on suggestions for expanding partnership working below.

[69] Future England Coast Path assessments may collect data on some of these aspects (see ICF *et al.* 2019b:113). See also previous work on cultural aspects including Allen, Groom and Smith (2017); Armitage (2015; 2013).

[70] E.g. the SWEEP project 'One Coast: Developing a South West Coastal Corridor for People and Nature' – see https://sweep.ac.uk/portfolios/one-coast/one-coast

Blue Communities project[71]; with local organisations such as **Active Devon**, **Walking for Health** / Walk and Talk and **OneSmallStep**[72] working with older people, young families and other relatively inactive groups; with **Local Nature Partnerships** and the **Naturally Healthy**[73] group, including their networks on **social and green prescribing**[74] and building on potential opportunities arising from the **new UK Government green social prescribing fund**[75]; with local government / public health staff, link workers, GP practice managers and local organisations working on (green) social prescribing; with **MIND** on mental health[76]; with **Devon and Cornwall Refugee Support** and **Fotonow** working **with asylum seekers**[77]; and by the **Alzheimer's Society** with people with Alzheimer's and their carers[78].

- Evaluating the **impact of SWCPA's work to date** (including further data collection and analysis work on CAN and evaluating other projects and programmes) and developing and implementing recommendations on improving access for those with long term conditions (e.g. usage of Tramper vehicles).

- **Repeating the health and wellbeing assessment every 5 years**, or when significant new data becomes available, e.g. after the next visitor survey (see above suggestions for questions to include in the survey).

General recommendations for further research on health and wellbeing benefits:

- **Quantifying the mental health benefits** of walking in a similar way to physical health benefits (either by devising suitable models or when such models become available[79]).

- Investigating and **strengthening the linkages, comparability and consistency** of current health and wellbeing research in natural environments (both quantitative and qualitative; including CAN) **with mental health / wellbeing indicators**, with NHS / public health and local government data on mental health.

- Investigating linkages and **synergies with the growing work on nature connectedness**, including use of indicators and measures.

- Investigating how the health benefit valuation figures from **HEAT and MOVES** tools (supplemented with other methodological tools as necessary) can be **robustly combined and / or compared**.

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[71] This project, a partnership between academic and local partners in the South West and in developing countries, involves a number of relevant partner organisations including the European Centre for Environment and Human Health (ECEHH) (a WHO Collaborating Centre), Plymouth Marine Laboratory, the University of Exeter and the North Devon Biosphere Reserve; see https://www.blue-communities.org/Home

[72] See https://www.activedevon.org/; https://www.walkingforhealth.org.uk/walkfinder/dartmouth-walk-talk ; https://onesmallstep.org.uk/about-onesmallstep/ for further organisational information.

[73] See https://www.naturaldevon.org.uk/priorities-and-projects/naturally-healthy/

[74] See Polley *et al.* 2020 for a recent report and recommendations on enabling the potential of social prescribing in the voluntary and community sectors.

[75] The £4.27 million Green Social Prescribing Fund aims to improve mental health and wellbeing in communities hardest hit by coronavirus. The project will examine how to develop best practice and scale up green social prescribing services in England to help improve mental health outcomes, reduce health inequalities and alleviate demand on the health and social care system. This will be done through the development of four local 'test and learn' pilots across England. See https://www.gov.uk/government/publications/green-social-prescribing-call-for-expressions-of-interest/green-social-prescribing-call-for-expressions-of-interest

[76] See https://www.mind.org.uk/

[77] This is an existing joint SWCP walking and photography project for asylum seekers – for organisational details see http://dcrs-plymouth.org/ and http://www.fotonow.org/

[78] See https://www.mylifemycare.com/article/7042/Alzheimers-Society---Newly-Diagnosed-Support

[79] Models are reported to be in development e.g. as part of the Natural Capital Project - see https://naturalcapitalproject.stanford.edu/software/invest

9. Limitations of this research

A number of limitations are inherent in this research, which have been highlighted briefly in the relevant sections above. These include the necessity of using assumptions and figures drawn from other studies (particularly the England Coast Path baseline assessment (ICF *et al.* 2019a and b) and the Great Britain Day Visits Survey 2019) in the absence of comprehensive current SWCP-specific data. This includes SWCP figures to calculate the number of visitors (for this report we calculate this using the number of visits and frequency of visits[80]), the limitations of the valuation models and methods themselves, which cover subsections of the overall health and wellbeing benefits, and the other gaps and limitations of the existing data used – as results using such models are only as good as the data inputted. In addition to the above, more work is needed in order to collect robust figures for the SWCP for segmentation (local residents, day visitors and staying visitors) and demographic characteristics of visitors, as well as retention rates (particularly for calculations using the MOVES tool). Addressing the research gaps and recommendations above could significantly improve the scope and accuracy of future health and wellbeing assessments and valuations for the SWCP.

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[80] Visit figures can lack clarity relating to these two types of data – e.g. with visit numbers sometimes reported as number of 'users'.

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11. Appendix 1: Additional Tables and Figures

Table A1: Visit number estimate details – comparing MENE, ECP and SWCPA estimates

Details of visit numbers estimate	Estimate of visits (per year)
MENE all natural environment visits in England with 'Specific visit location included - Path, cycleway or bridleway'	415,714,000
96% for walkers for MENE data (ICF *et al.* 2019a & b [81])	399,085,440
Low estimate, all England (includes 25% of those visiting a 'seaside resort or town') (ICF *et al.* 2019a & b)	25,300,000
High estimate, all England (includes 75% of those visiting a 'seaside resort or town') (ICF *et al.* 2019a & b)	43,200,000
Estimate of all England coast path users ('bottom up' figures ICF *et al.* 2019a and b)	29.1 million
Estimate of SWCP component (30%) (using data and assumptions in ICF *et al.* 2019a and b)	8.73 million
SWCPA 2018 visit estimate	8,634,034
SWCPA 2019 visit estimate	8,971,562
Low estimate (30% of direct MENE data estimate for England)	4,029,976

All figures are per year (for MENE data these are averaged over the 10 years). For MENE data, the monthly cumulative weighting[82] (recommended for visit location question) and the following questions were used consistent with the England Coast Path study (ICF *et al.* 2019a and b):

'Specific visit location included - Path, cycleway or bridleway' (Q5).

In addition, visits were filtered for coastal location and these figures used to create a low estimate and a high estimate (see ICF *et al.* 2019a and b) as we don't know exactly how many of those who visited a 'seaside resort or town' walked specifically along the coast path:

'General type of place where most time during the visit was spent = In a seaside resort or town (25% for low estimate; 75% for high estimate) + 'Other seaside coastline (including beaches and cliffs)' (100%) (Q2).

As a check, figures using the following filter were also reported (see table A2):

'Visit destination - National Trail (within 100m)' = 'South West Coast Path'.

Table A2: Additional figures for visit numbers including low and high estimates (walkers only)

Details of visit numbers estimate	Low estimate	High estimate
Estimate of all England Coast Path visits directly from MENE data (using Q2 and Q5)	13,433,250	20,823,210
MENE estimates for SWCP (30% of low estimate for England[83])	4,029,976	6,246,963

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[81] This source cites GBDVS 2015.

[82] LAWeightY1Y10MonthlyVISIT

[83] 30% figure is based on visit numbers for the SWCP and England Coast Path (ICF *et al.* 2019a and b).

Estimates for all England Coast Path visits using MENE data (ICF *et al.* 2019a and b)	25,300,000	43,200,000
MENE estimates for SWCP (30% of low estimate for England; using assumptions in ICF *et al.* 2019a and b)	7,590,000	12,960,000
Estimates using MENE 'Visit destination - National Trail (within 100m)' = 'South West Coast Path'; Q2 and Q5	1,657,246	2,444,675

The figures show a total range of between 1.7 million and 8.7 million visits for the SWCP. However, the estimates using the SWCP visit destination question were considerably lower compared to the 30% of the England Coast Path (ICF *et al.* 2019a and b) baseline assessment figures (see discussion in main report). It also suggests that the MENE SWCP visit destination figures may be missing significant numbers whose destination was more than 100m inland but that had walked along the coast path. Due to these shortcomings, we have therefore not used these figures for the valuation.

Table A3: Comparison of average time walked per person per day using time and distance data

Source of data	No. of visits per person per week (average)	Distance walked (average) in miles	Mins per visit (average or median)	Estimate mins walked per day
ECP 2019 (ICF *et al.* 2019a and b)	0.22	--	90	3.29
SWCP 2020 online survey	0.67	--	202.3	19.36
SWCP 2016 visitor survey	1.50	4.32	--	18.51

Table A4: Comparison of WHO HEAT assessments for differing visitor numbers, average time walked figures and values of a statistical life

	Low MENE estimate (and HEAT default value)[84]	2018 SWCPA estimate (and HEAT default value)	2019 SWCPA estimate (and HEAT default value)	2019 SWCPA estimate using England Coast Path 2019 value (£1.735 million for a statistical life)	2019 SWCPA estimate using TAG 2020 value (£1.809 million for a statistical life)	Very high estimate (using SWCPA 2018 visit estimate and SWCP 2016 visitor survey estimated walk duration); HEAT default value
Average time in mins	3.29	3.29	3.29	3.29	3.29	18.51

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[84] The first three columns and the last use the HEAT default value of approximately £3.582 million for the value of a statistical life (using EUR to £ conversion rate of 1.12 on 11/11/2020).

walked per day						
Visit numbers	4029976	8634034	8971562	8971562	8971562	8634034
No. of people (using 7.56% conversion figure from ICF *et al.* 2019a:35)[85]	304666	652733	678250	678250	678250	652733
HEAT valuation (per year) for 8% directly attributable (1.5% discounting)	**£4,942,857** (£4.9 million)	**£10,571,428** (£10.6 million)	**£10,982,143** (£11.0 million)	**£4,735,714** (£4.7 million)	**£5,528,571** (£5.5 million)	**£59,642,857** (£59.6 million)
Total HEAT valuation per year (all users; 1.5% discounting**)**	£61,785,714 (£61.8 million)	£132,142,857 (£132.1 million)	£137,500,000 (£137.5 million)	£59,196,429 (£59.2 million)	**£69,107,142** (**£69.1 million)**	£745,535,714 (£745.5 million)
HEAT assessment no. of deaths avoided per year	2 directly attributable; 19 in total (all SWCP users)	3 directly attributable; 40 total	3 directly attributable; 41 total	3 directly attributable; 41 total	3 directly attributable; 41 total	18 directly attributable; 224 total

Table A5: Detailed parameters used within HEAT

Country: United Kingdom
City (or region) level
City: Plymouth
Reference year 2020
Benefits calculated over 10 years
Pedestrians
Adult population 20-74 yrs
Walking only
Physical activity only
Calculated 7.56% of visit numbers to get no. of people (based on ICF *et al.* 2019a:35)
90% of this to account for adult only population
8% who would not have exercised if didn't walk on SWCP (substitution value)
Output valuation discounted to 1.5%[86].

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[85] This figure was then adjusted for adults only (90%).

[86] Following the ECP baseline assessment we used a 1.5% value for discounting (ICT *et al.* 2019b:112) consistent with UK Government Green Book Guidance - see paragraph A2.54 in HM Treasury (2018).

Table A6: Parameters from within the WHO HEAT model

Parameter description	Parameter value	Units
Discount rate	1.5	%
Average walking speed	5.3	km/h
Value of statistical life in euro by country (value for United Kingdom in 2015)[87]	4036472 (HEAT default value)	euro/death
All cause mortality rate for reference case (value for United Kingdom and age group 20-74)	434.0967	deaths/inhabitant

Table A7: Full MOVES results for 2019 SWCPA estimate of visitor numbers

					Totals
Age range	16-30	31-45	46-60	61+	
Walking speed	Brisk	Brisk	Brisk	Brisk	
Total value of QALYs gained (10 yrs)	£1,080,201	£2,214,217	£29,165,632	£41,960,677	**£74,420,727**
Annual value of QALYs gained	**£108,020**	**£221,422**	**£2,916,563**	**£4,196,068**	**£7,442,073**
Total no. of QALYs gained	54.0	110.7	1458.3	2098.0	**3721.0**
Incremental cost effectiveness ratio (cost per QALY)	£7,140	Cost saving	Cost saving	Cost saving	
Programme cost over 10 yrs (cumulative)	£695,404	£713,264	£2,442,270	£1,286,323	£5,137,261
Programme cost per year	£69,540	£71,326	£244,227	£128,632	£513,726
Net cost of programme	£69,540	Cost saving £75,144	Cost saving £8,629,912	Cost saving £14,537,593	
Return on Investment (Net monetary benefit)	£694,545	£2,289,360	£37,795,544	£56,498,270	**£97,277,719**

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[87] See earlier discussion on the value of a statistical life.

Return on Investment (NHS expenditure avoidance) per £1 invested	£0.45	£1.11	£4.59	£12.30	
Return on Investment (QALY) per £1 invested	£1.55	£3.11	£12.07	£32.62	
Return on Investment (QALY) (%)	55%	211%	1107%	3162%	
Numbers needed to treat to gain 1 QALY	1595	803	216	91	

An example MOVES output and the figures for the recalculated age categories are provided below.

Table A8a: Example MOVES Tool outputs including parameters used

Demographics	Sex	Mixed	Results - Cost-Utility Analysis			
	Age Group	46-60		**Time Horizon**	*10*	years
	Starting Activity Level	Some activity				
				Costs	**QALY**	**DALY**
Activity	**Type**	Walking	**No sports Intervention**	£1,796,166,787	-217,638.1	196,366.8
	Intensity	Brisk	**Sports Intervention**	£1,787,536,874	-216,179.9	194,767.7
	Duration	0.38	**Difference**	**-£8,629,912**	**-1,458.3**	**-1,599.2**
	Frequency	1	**Incremental Cost Effectiveness Ratio (ICER)**		Cost saving	Cost saving
Scale	**Beginning participants**	314708	**Results - Return on Investment**			
	Ends with (# achieving benefit)	173089	**Cumulative programme costs**	**£2,442,270**		

	Median years of ongoing participation	10	**Reduction in NHS health expenditure**	**£11,072,183**		
			Net cost of programme (Programme costs less NHS savings)	**-£8,629,912**		
Costs	**Programme cost**	£1	**Total value of QALYs gained (WTP * QALYs)**	**£29,165,632**		
	Per participant or fixed cost?	Per participant	**Net monetary benefit, NMB (value of QALYs - net cost)**	**£37,795,544**	*100% probability NMB > 0*	
	One-time or ongoing cost?	Ongoing		**Per £1 invested**	**% ROI**	
	Willingness-to-Pay per QALY	£20,000	**Return on Investment (NHS Expenditure avoidance)**	**£4.59**	**359%**	
			Return on Investment (QALY)	**£12.07**	**1107%**	
Assumptions	**Discount rate, costs**	3.50%		**Avoid 1 event**	**Gain 1 QALY**	**Avoid 1 DALY**
	Discount rate, outcomes	3.50%	**Numbers Needed to Treat (NNT)**	**279**	**216**	**197**
		10/11/2020 23:45				

Table A8b: Example MOVES Tool output - health outcomes (for 61+ age group)

Disease	Cases Without Intervention	Cases With Intervention	Cases avoided	Consequences NHS Treatment Costs (£)	QALYs Gained
Type 2 Diabetes	17637.64	17603.59	34.04105	-98328.8803	61.70158
Coronary Heart Disease	27928.4	27779.29	149.1118	-1144449.31	369.3378
Cerebrovascular disease (Stroke)	9337.724	9280.075	57.64904	-704809.97	103.9141
Breast Cancer	6467.405	6460.185	7.220034	-327430.731	9.457339
Colorectal Cancer	4537.861	4524.678	13.18265	-491732.024	26.33414
Dementia	91878.75	91594.69	284.0609	-7156624.95	820.5605
Depression	2615.411	2575.831	39.57991	-372475.518	62.72325
Hip fracture	19176.94	18507.72	669.222	-5528063.85	644.0052
Total	179580	178326	1254	-15823915	2098

This equates to a £15.8 million cost saving for the age 61+ age group.

Table A9: MOVES Tool recalculated age categories using MENE data for coast path visits (England)

Age group data using visitor data from ICF *et al.* (2019b:41).

Based on the previous HEAT visitor numbers calculations:

Total 2019 SWCPA visitor numbers: 678250

Age group	% - All respondents
16-24	3.2%
25-34	9.5%
35-44	13.1%
45-54	21.6%
55-64	24.8%
65-74	23.3%
75+	4.6%

Modified age group	% - All respondents (modified categories)	2019 SWCPA visitor estimates
16-34	12.7%	86138
35-44	13.1%	88851
45-64	46.4%	314708
65+	27.9%	189232

The equivalent categories for MOVES are 16-30; 31-45; 46-60; 61+. These use the adjusted numbers for visitors as calculated for WHO HEAT above (7.56% of the visit numbers). Due to rounding the visitor estimate figures are not exact. 55% of walkers specified that they walk all year round (SWCPA online survey 2020) therefore this figure was used for the MOVES tool drop-off figure as a rough estimate for the first year; with 6.7% default value being used for drop off after the first year. The equivalent value of 0.38 hours, once a week was used for 3.29 mins per person per day.

Gender breakdown

Using visitor data from ICF *et al.* 2019a:10: the gender breakdown is 52% male; 48% female.

Table A10: Breakdown of employment status for England Coast Path respondents
(reproduced from ICF *et al.* 2019b:42)

Employment status	Number of respondents	% of weighted responses			
		All respondents	Local day visitor	Non-local day visitor	Overnight visitor
Full-time paid work	1379	44.9%	38.0%	47.9%	54.0%
Part-time paid work	400	15.2%	17.0%	14.4%	12.8%
Retired	933	34.3%	38.2%	31.8%	29.5%
Not in paid employment	46	2.0%	2.5%	2.4%	0.9%
Other	81	3.1%	3.6%	3.3%	2.2%
Did not wish to say	23	0.6%	0.7%	0.3%	0.7%

Table A11: Visit numbers: South West Research Company Ltd 2019 figures for the SWCP by county

County	No. of visits	% of visits
Cornwall	2,485,575	28
Devon	3,250,825	36
Dorset	2,856,124	32
Somerset	379,037	4
Total for SWCP	**8,971,562**	100

Source: South West Research Company Ltd 2020.

N.B. These are based on available figures from the most recent 2019 Great Britain Day Visits Survey (GBDVS 2020). The source states that these figures do not include non-tourism visits by local residents, such as regular dog walkers. However, the bottom up model for the England Coast Path baseline assessment gives a similar figure therefore in this report we have treated this as the total number of visits.