

---

*Coast to Capital Local Transport Body  
Application: Supporting Document*

# Beautiful Outdoors: Capital Investment Programme: phase one

Prepared for  
**West Sussex County Council**

27 November 2014

**CH2MHILL®**

Elms House  
43 Brook Green  
London  
W6 7EF



<b>Version No</b>	<b>Version Name</b>	<b>Prepared by</b>	<b>Reviewed by</b>	<b>Approved by</b>	<b>Date</b>
1	draft	Anne Pentecost / Tali Diamant	Phillip Rust	C Weedon	12/11/14
2	draft	Anne Pentecost / Tali Diamant	Phillip Rust	C Weedon	20/11/14
3	final	Anne Pentecost / Tali Diamant	Phillip Rust	C Weedon	24/11/14
4	Final	Anne Pentecost / Tali Diamant	Phillip Rust	Philip Rust	27/11/14



## SECTION 1

### Acronyms and Abbreviations

BRES	Business Register & Employment Survey
C2C LEP	Coast to Capital Local Enterprise Partnership
CBA	Cost Benefit Analysis
CBR	Cost Benefit Ratio
CCLTB	Coast to Capital Local Transport Body
DfT	Department for Transport
EAST	Early Assessment and Sifting Tool
FUR	Functional Urban Regions
GVA	Gross Value Added
IMD	Index of Multiple Deprivation
LSOA	Lower Super Output Area
O&M	Operation and Maintenance
PCU	Passenger Car Unit
Pm10	Particulates
PT	Public Transport
PVB	Present Value Benefits
PVC	Present Value Costs
SEP	Strategic Economic Plan
SDNP	South Down National Park
SNCI	Site of Nature Conservation Importance
TAG	Transport Analysis Guidance
TEMPro	Trip End Model Presentation Programme
WebTAG	Web Transport Analysis Guidance
WSCC	West Sussex County Council

# Executive Summary

This document covers the main impacts assessed in considering the high-level qualitative strategic outline business case for phase one of the Beautiful Outdoors capital investment programme. This is to support the funding application being submitted to the Coast to Capital Local Transport Body (CCLTB) on behalf of the West Sussex County Council (WSCC) for £335,000 to fund and manage phase one of the programme. The total cost for phase one is £450,000. WSCC is requesting £335,000 from the CCLTB, and will provide £115,000 capital funding as match.

The key points from the document are summarised below.

## Beautiful Outdoors capital investment programme, phase one

The Beautiful Outdoors capital investment programme is a three-year programme of sustainable improvements to key assets in West Sussex, namely enhancement to the countryside, walking and cycling, and the South Downs National Park (SDNP), and is a key strand of work within the broader Beautiful Outdoors Package.

The Beautiful Outdoors Package includes:

- A marketing campaign, particularly targeting visitors from London and the South East, which will include a walking and cycling offer linked to the South Downs National Park. WSCC will be investing £250,000 revenue funding in Wave 1 of the marketing campaign for 2015/2016 delivery.
- Business support to enterprises in the local tourism, accommodation, food service and agriculture sectors.
- A 3-year capital investment programme, of which the high-level outline strategic business case of phase one (enhancements to improve footpaths, bridleways and cycle routes in the South Downs National Park (SDNP) during 2015/2016) is considered in this document.

The Beautiful Outdoors package is aimed at raising awareness of the natural offering of West Sussex among visitors as a place to visit and potentially live, and of encouraging high value, staying visits (in line with the SDNP strategic management plans).

Phase one of the capital investment programme comprises discreet enhancements to the network of footpaths, bridleways and cycle routes within the SDNP. Phase one encompasses fifteen enhancements grouped within three areas of the South Downs National Park, namely Arundel-Amberley, Shoreham-Steyning and the South Downs Way, which will all feature strongly in the Beautiful Outdoors marketing campaign from Spring 2015:

### Arundel-Amberley

- Improved signage onto the National Trail, the South Downs Way, from Amberley Station along quiet roads and by-ways.
- Improvement of roughly 160 steps of a popular path linking Arun floodplain and Peppering High Barn.
- Extension of existing boardwalk along the River Arun in areas which are prone to flooding therefore increasing the availability of the path.
- Improved surfacing along a popular local bridleway network and part of the promoted route, the Monarch's Way.
- Improved surfacing for convenient cycle access to/from Bignor Hill off the South Downs Way.

### Shoreham-Steyning

- Improved surfacing for convenient access to/from Shoreham into the South Downs National Park.
- Improved surfacing to upgrade sections of the popular North-South promoted route, The Downs Link. This route links to the South Downs Way and provides access from Shoreham to the National Trail.

- Improved surfacing on a path linking the village of Steyning to the Downs.
- Improved surfacing of a footpath which provides a link for walkers onto the wider local network.

### **South Downs Way**

- Improved surfacing between Devils Dyke and Fulking to combat poor drainage and erosion thereby opening up the wider bridleway network.
- Improved visibility and signage of the South Downs Way crossing of B2141 Harting Hill.
- Improvement in surfacing to create a circular route near the already popular visitor attraction Devils Dyke.
- Improved surfacing and widening on the South Downs Way adjacent to A273 with increased visibility at the road crossing.
- Improved surfacing with better signage and visibility of the A283 crossing to improve safety of this South Downs Way section.
- Signage of feeder routes between the South Downs Way and visitor services (e.g. accommodation, beauty spots and pubs).

Maps showing the location of the enhancements may be found in Appendix 1.

The phase one enhancements are expected to benefit a broad range of visitors by improving sustainable access to key assets of the SDNP from transport and visitor hubs, leading to increased visitor satisfaction, footfall and visitor spend in the SDNP and thus supporting local businesses.

## **Scheme related benefits**

### **Sustainable travel**

In improving the condition, information and safety of West Sussex's network of pathways, cycle routes and bridleways, the Beautiful Outdoors capital investment programme promotes sustainable leisure travel, in line with C2C's sustainable transport objectives of improving walking and cycling links, creating better cycling and pedestrian access to rail stations and improving information to the travelling public.

Walking and cycling as sustainable transport modes play an important part in reducing carbon dioxide emissions, air pollution, noise and traffic congestion<sup>1</sup> and making more efficient use of transport networks<sup>2</sup>.

### **Visitor safety and security**

Improving the safety at crossings and the general safety of walkers and cyclists through better surfaced paths has the potential of reducing injury or death. Further, improved information, signage and maps are likely to increase the sense of safety and well-being particularly of long distance walkers and cyclists. The expected impact on road safety casualties is likely to be small, however improved visibility at several crossings could help prevent road accidents and casualties.

## **Economic growth benefits**

### **Footfall and visitor spend**

Phase one enhancements are designed to enhance the SDNP visitor experience by improving the quality of footpaths, bridleways and cycle routes and improving signage, thus addressing the key known deterrents to SDNP visits as identified by the South Downs Visitor & Tourism Economic Impact Study.

<sup>1</sup> Pucher, J., & Dijkstra, L. (2003) Promoting safe walking and cycling to improve public health: lessons from the Netherlands and Germany. American Journal of Public Health, 93(9), 1509. Cited in Davis, A (2014) as above.

<sup>2</sup> Davis, A. (2014): Department for Transport: Claiming the Health Dividend: A summary and discussion of value for money estimates from studies of investment in walking and cycling.

Visitor numbers are therefore expected to increase as a result of the enhancements, along with corresponding visitor spend and visitor satisfaction.

It is not possible to quantify the incremental increase in visitor footfall and spend as a result of the phase one enhancements.

### **Job creation**

The tourism and leisure sector in the Coast to Capital LEP region currently employs 37,000 people<sup>3</sup>. The SDNP alone supports 8,200 local jobs<sup>4</sup>. Any measurable increase especially in overnight and weekend visitor numbers has the potential to generate direct employment within the SDNP; indirect employment in the accommodation and food service, hospitality and agricultural sectors as well as induced employment in the WSCC area. Induced employment results from increased income in the economy leading to increased employment in non-tourism sectors.

Employment impacts are expected to be small for phase one, although WSCC will create a post of Project Manager to deliver phase one. It is not possible to quantify these employment impacts.

### **Gross Value Added (GVA)**

Increases in direct, indirect and induced employment would generate corresponding increases in GVA.

### **Impact on government revenues**

Increases in employment would generate tax revenues for central government. These impacts are expected to be very small for phase one. It is not possible to quantify these effects.

## **Social benefits**

### **Socio-distributional impacts**

In so far as the tourism and associated sectors such as accommodation and food services employ a wide range of skills, from high skilled entrepreneurs to relatively unskilled service staff, an increase in employment in these sectors has economic redistribution potential through the possible increase in the number of jobs across all skill levels.

### **Physical activity**

Cycling and walking are physical activities that provide significant health benefits, including reducing the risk of conditions such as cardiovascular disease; stroke; obesity; type two diabetes; osteoporosis; colon and breast cancer and depression. Physical activity also delivers benefits in terms of mental health, stress, injury risk, health-related quality of life, all-cause mortality and productivity and reduced absenteeism

<sup>3</sup> Coast to Capital Local Enterprise Partnership Strategic Economic Plan (2014)

<sup>4</sup> <http://www.southdowns.gov.uk/about-us/news/press-notice/tourists-bring-464-million-boost-to-south-downs-economy>

from work<sup>5</sup>. Further, even modest increases in urban cycling which result in the reduction in motor vehicle use and enhanced air quality could lead to improvements in respiratory health<sup>6</sup>.

Moreover, access to nature and green exercise (defined as activity in the presence of nature)<sup>7</sup> leads to positive short and long term physical and mental health outcomes<sup>8</sup>. The associated economic benefits of enhancing green spaces and using them for physical activity include reduced national health costs, reduced mortality and morbidity and increased productivity and reduced absenteeism.

Promoting walking and cycling on the South Downs through better quality footpaths and cycle routes, safer crossings and better signage has the potential to generate appreciable direct and indirect benefits.

### Accessibility

Improved footpaths, clear and informative signage and safer crossings are likely to improve the accessibility of visitors to the South Downs from neighbouring transport hubs and towns and villages. This improved access may encourage higher use of sustainable public transport modes for travel to the SDNP as opposed to private car, which is at present the main mode of transport to and from the national park, with 83% of visitors arriving at the SDNP by private car. 22% of respondents to the Tourism South East (2013) surveys suggested that improved ease of access and safety could lead them to consider an alternative mode of transport to the private car for travel to and from the national park<sup>9</sup>.

Further, phase one enhancements aimed at removing tree roots and gullies from paths could potentially aid less confidently mobile visitors to access attractions and amenities within the SDNP.

## Environmental benefits

A number of the phase one enhancements will take place within or in close proximity to designated cultural heritage assets and ecological sites, including Scheduled Monuments, Sites of Special Scientific Interest and woodlands listed on the National Inventory of Woodlands and Trees. Although it is envisaged that the proposed enhancements will result in no significant long term adverse impacts on these features some further investigation and consultation is recommended to ensure that appropriate mitigation is proposed and that the statutory bodies and local authority are fully informed of the proposals and given the chance to respond.

In terms of landscape, it is also envisaged that there will be no significant long term adverse impact provided that appropriate materials are used and no trees are removed.

<sup>5</sup> See the following cited in Davis, A. (2014): Department for Transport: Claiming the Health Dividend: A summary and discussion of value for money estimates from studies of investment in walking and cycling:

- Bize, R., Johnson, J.A., & Plotnikoff, R.C. (2007) Physical activity level and health-related quality of life in the general adult population: a systematic review. *Preventive Medicine*, 45(6), 401-415.
- Cavill, N., Davis, A. (2007) *Cycling and health: What's the evidence?* London: Cycling England.
- Cavill, N., Kahlmeier, S., Rutter, H., Racioppi, F., & Oja, P. (2007) *Economic Assessment of Transport Infrastructure and Policies: Methodological guidance on the economic appraisal of health effects related to walking and cycling*. In World Health Organization Regional Office for Europe (Ed.), WHOLIS N. E90944 Copenhagen, Denmark.
- Genter, J.A., Donovan, S., Petrenas, B., & Badland, H. (2008) *Valuing the health benefits of active transport modes* Transport Agency Research Report 359. Auckland, New Zealand.
- Oja, P., Titzel, S., Bauman, A., de Geus, B., Krenn, P., Reger-Nash, B., & Kohlberger, T. (2011) Health benefits of cycling: a systematic review. *Scandinavian Journal of Medicine & Science in Sports*, 21 (4), 496-509.

<sup>6</sup> Bristol City Council: Essential Evidence on a page, number 128 (2014): Improving urban air quality through increased cycling use. ([www.travelwest.info/evidence](http://www.travelwest.info/evidence))

<sup>7</sup> Bristol City Council: Essential Evidence on a page, number 122 (2014) What is the best dose of nature and green exercise for improving mental health? ([www.travelwest.info/evidence](http://www.travelwest.info/evidence))

<sup>8</sup> *ibid*

<sup>9</sup> Tourism South East (2013): South Downs Visitor & Tourism Economic Impact Study, Technical Report on the Research Findings

It is envisaged that any temporary impacts on air quality, noise, water quality or as a result of disturbance of contamination or path diversions during construction can be adequately mitigated by the adoption of appropriate construction methods and standards, with no significant long term impact.

The main benefit of the proposed improvement works will be to improve user safety, improve visitor satisfaction and encourage a greater use and appreciation of the landscape without causing increased erosion to the paths or countryside, thus helping to secure its long term character and use. Pedestrians, cyclists and equestrians will benefit from phase one.

## Contribution to Strategic Economic Plan

The following strategic priorities are outlined in Coast to Capital Local Enterprise Partnership's (C2C LEP) Strategic Economic Plan:

- Successful Growth Locations, including transport investment;
- Successful Businesses;
- Building Competitive Advantage;
- Skills and Workforce;
- Growth is Digital and
- Housing and infrastructure.

### Building Competitive Advantage

The visitor economy is significant for the Coast to Capital region – both in terms of direct and indirect employment, with the tourism and leisure sector accounting for approximately 4% of total employment in the LEP region. The South Downs National Park is recognised as an important part of C2C's visitor economy.

### The Rural Economy and Tourism

Approximately 20% of C2C's population lives in a rural area, and around 22% of C2C businesses are located there. The rural areas contribute significantly to C2C's economy across a wide range of sectors. Within the C2C rural areas are the South Downs National Park and three Areas of Outstanding Natural Beauty.

C2C LEP has identified initiatives to support rural tourism to boost growth and local GVA through increased number of visits and thereby increased employment.

The Beautiful Outdoors package is aimed at enriching West Sussex's rural tourism offer and encouraging more high-value overnight, weekend and longer holiday visitors to West Sussex, thereby expanding the tourism sector and associated sectors including food service and agriculture.

### Sustainable Transport packages

A key focus of C2C's Transport Programme is supporting sustainable transport packages, which regenerate areas by tackling congestion and improving journey quality and reliability and restoring confidence in C2C towns as areas which are ready and fit for growth.

The following measures are applicable to sustainable transport packages:

- Improvements to walking and cycling links and the urban realm;
- Improvements to rail stations, including better cycling and pedestrian access;
- Behavioural change measures, including improved information to the travelling public;
- Improving accessibility to rural areas; or
- Improving road safety.

In improving the condition, information and safety of West Sussex's network of pathways, cycle routes and bridleways, the set of enhancements in the Beautiful Outdoors capital investment programme comply with the measures for sustainable transport packages.

# 1 Introduction

---

This supporting document covers the main impacts assessed in considering the high-level qualitative strategic outline business case for phase one of the Beautiful Outdoors capital investment programme. This is to support the funding application being submitted to the Coast to Capital Local Transport Body (CCLTB) on behalf of the West Sussex County Council (WSCC) to help fund and manage phase one of the programme. The total cost of phase one is £450,000. WSCC is requesting £335,000 from the C2C LEP via the CCLTB, and will provide £115,000 capital funding as match.

The Beautiful Outdoors capital investment programme is a three-year programme of sustainable improvements to key assets in West Sussex, namely enhancement to the countryside, walking and cycling, and the South Downs National Park (SDNP). Phase one of the capital investment programme comprises discreet enhancements to the network of footpaths, bridleways and cycle routes within the SDNP.

This document sets out the potential impacts only of phase one of the Beautiful Outdoors capital investment programme.

The document is structured as follows:

- Section 2: Methodology;
- Section 3: Scheme Overview;
- Section 4: Base Case;
- Section 5: Scheme Related Benefits;
- Section 6: Expected Economic Benefits (Economic Growth);
- Section 7: Social Distributional Impact;
- Section 8: Environmental Impact;
- Section 9: Contribution to the Strategic Economic Plan;
- Section 10: Appendix A: Maps
- Section 11: Appendix B: Detailed Environmental Review.

## 2 Methodology

---

HM Treasury's Logic Model approach has been used to explain the objectives of the phase one package of investments and to map these to the impacts that are expected to arise as a result of the investment.

The potential benefits and costs of the project have been assessed in line with CCLTB's Funding Application guidelines, DfT's EAST sifting tool and Webtag. The CCLTB Funding Application covers the following aspects of a strategic outline business case: expected economic benefits; social distributional impact; environmental impact; contribution to the Strategic Economic Plan; and local indicators.

A high-level qualitative assessment of the potential impacts has been prepared as there is insufficient data for a quantitative assessment.

## 3 Scheme Overview

The Beautiful Outdoors Package is a set of network enhancements aimed at augmenting the position of the South Downs and neighbouring areas as a short break and weekend destination for visitors, with the initial focus of the marketing campaign on visitors from London and the South East.

The Beautiful Outdoors Package includes:

- A marketing campaign, particularly targeting visitors from London and the South East, which will include a walking and cycling offer linked to the South Downs National Park. WSCC will be investing £250,000 revenue funding in Wave 1 of the marketing campaign for 2015/2016 delivery.
- Business support to enterprises in the local tourism, accommodation, food service and agriculture sectors.
- A 3-year capital investment programme, of which the high-level outline strategic business case of phase one (enhancements to improve pathways, bridleways and cycle routes in the South Downs National Park (SNDP) during 2015/2016) is considered in this document.

Phase one encompasses fifteen enhancements grouped within three areas of the South Downs National Park, namely Arundel-Amberley, Shoreham-Steypning and the South Downs Way:

### Arundel-Amberley

- Improved signage onto the National Trail, the South Downs Way, from Amberley Station along quiet roads and by-ways.
- Improvement of roughly 160 steps of a popular path linking Arun floodplain and Peppering High Barn.
- Extension of existing boardwalk along the River Arun in areas which are prone to flooding therefore increasing the availability of the path.
- Improved surfacing along a popular local bridleway network and part of the promoted route, the Monarch's Way.
- Improved surfacing for convenient cycle access to/from Bignor Hill off the South Downs Way.

### Shoreham-Steypning

- Improved surfacing for convenient access to/from Shoreham into the South Downs National Park.
- Improved surfacing to upgrade sections of the popular North-South promoted route, The Downs Link. This route links to the South Downs Way and provides access from Shoreham to the National Trail.
- Improved surfacing on a path linking the village of Steypning to the Downs.
- Improved surfacing of a footpath which provides a link for walkers onto the wider local network.

### South Downs Way

- Improved surfacing between Devils Dyke and Fulking to combat poor drainage and erosion thereby opening up the wider bridleway network.
- Improved visibility and signage of the South Downs Way crossing of B2141 Harting Hill.
- Improvement in surfacing to create a circular route near the already popular visitor attraction Devils Dyke.

- Improved surfacing and widening on the South Downs Way adjacent to A273 with increased visibility at the road crossing.
- Improved surfacing with better signage and visibility of the A283 crossing to improve safety of this South Downs Way section.
- Signage of feeder routes between the South Downs Way and visitor services (e.g. accommodation, beauty spots and pubs).

Maps showing the location of the enhancements may be found in Appendix 1.

West Sussex County Council has poorer economic performance and lower Gross Value Added (GVA) than its peer regions<sup>10</sup> and has identified the local labour-force shortage as partial reason for this<sup>11</sup>. The Beautiful Outdoors package is aimed at raising awareness of the natural offering of West Sussex among visitors as a place to visit and potentially live, and of encouraging high value, staying visits (in line with the SDNP strategic management plans).

The phase one enhancements are expected to benefit a broad range of visitors by improving sustainable access to key assets of the SDNP from transport and visitor hubs leading to increased footfall and visitor spend in the SDNP and thus supporting local businesses. These enhancements are ready to implement and are expected to start and complete within the 2015/16 financial year. Phase one is expected to have a low impact on WSCC's future maintenance budget.

Figures 1 and 2 outline the case for phase one. The enhancements proposed are designed to improve the quality of visits to the SDNP by improving accessibility and safety. This is expected to lead to increased visitor numbers resulting in expanded tourism sector income and employment, with positive indirect and induced impacts on the broader West Sussex economy.

A high-level summary of the intended impacts of phase one of the Beautiful Outdoors capital investment programme is presented in Figure 1.

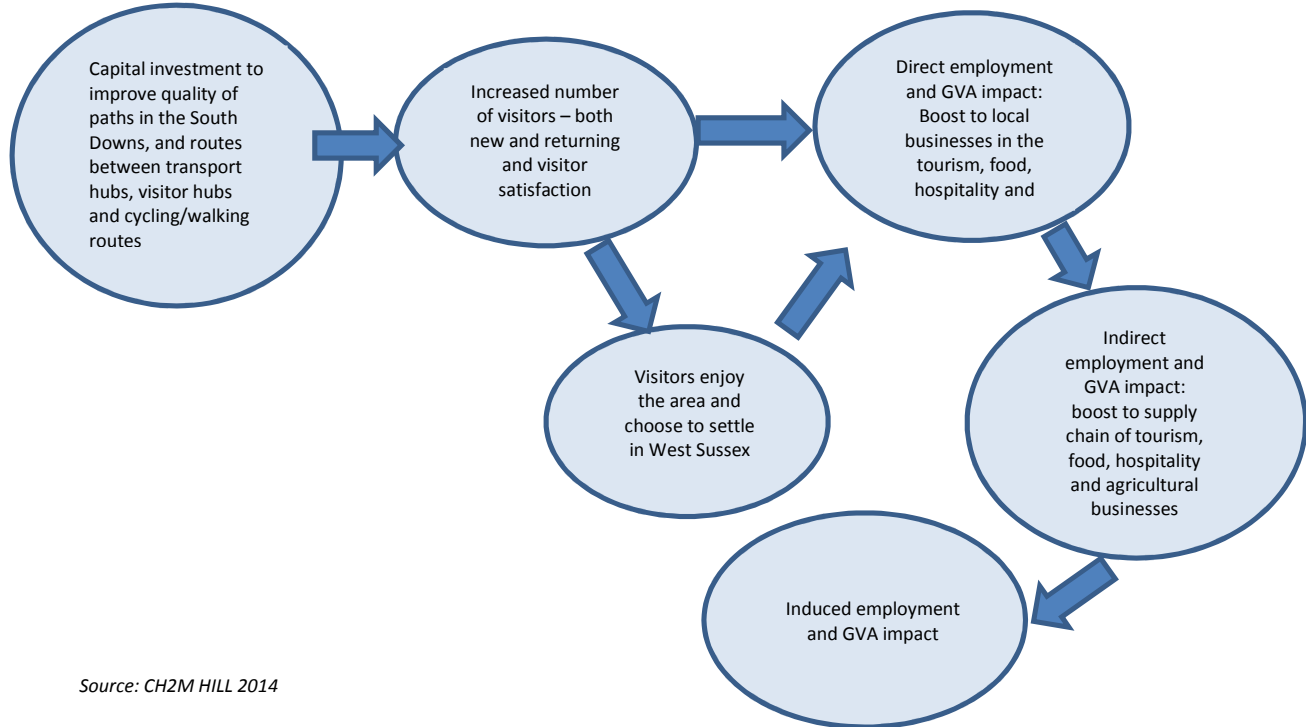
Figure 2 describes the relationship between phase one's inputs, activities, outputs, outcomes, and impacts in a Logic Model as defined in HM Treasury's Magenta Book<sup>12</sup>.

<sup>10</sup> KPMG (2014): West Sussex Economic Growth Options, Cabinet discussion paper

<sup>11</sup> Ibid.

<sup>12</sup> HM Treasury, The Magenta Book: Guidance for evaluation

Figure 1: Diagram to show linkage between South Downs improvements and economic growth



Source: CH2M HILL 2014

Figure 2: Logic Model of Beautiful Outdoors Scheme

Objectives	Activities	Resources required	Outputs	Outcomes	Impacts
Increase the number of return and first-time visits to the South Downs National Park	3-year investment program incorporating sustainable transport improvement including Phase 1 (assessed in this report): a package of enhancements within the South Downs National Park to footpaths, bridleways and cycle routes.	Finance	Resurfaced and better sign-posted footpaths, bridleways and cycle-ways within the South Downs National Park	Improved linkage and sustainable access between the South Downs and local towns and tourism sites / attractions / amenities	The South Downs and neighbouring areas positioned as a major weekend destination for people living in London and the South East
Attract more high-value, overnight visits to the South Downs National Park and West Sussex area		Design and construction staff	Extended signage to make visitors aware of attractions and amenities in the South Downs area	Improved journey quality and safety for walkers and cyclists on the South Downs	Demographic improvement, an increase in local labour-force
Boost the local West Sussex Tourism sector and associated sectors such as Food and Alcohol and Agriculture (Vineyards)		Materials	Safer crossings	Increased footfall, visitor number and spend benefitting local businesses	Increased GVA for West Sussex in line with peer regions
Encourage high earning aged 25-45 to visit the West Sussex area, with the long term aspiration that some relocate to West Sussex, helping to address the demographic and labour force challenges that constrain growth (namely shortage of working age people to fill available vacancies)		Business partnerships		Job creation	
Promote sustainable transport	Improving walking and cycling links, creating better cycling and pedestrian access to rail stations and improving information to the travelling public.			Increase in GVA	
Improved well-being and physical health of resident population	Promoting walking and cycling as leisure pursuits in the SDNP			Reduced risk of cardiovascular disease; stroke; obesity; type two diabetes; osteoporosis; colon and breast cancer and depression. Further benefits in terms of mental health; reduced stress, reduced risk of injury, improved health-related quality of life, reduction in all-cause mortality and improvements in productivity and reduced absenteeism	Improved quality of life and improved health of resident population, reduced national health costs

Source: CH2M HILL (2014) based on HM Treasury (2011) Magenta Book Guidance, Project Brief Objectives WSCC

## Costs and time frame

The estimated cost of phase one is £450,000. Optimism bias at an average of 28% across the enhancements has been included in the estimate. VAT is excluded.

The capital investment programme will be delivered over three years. Phase one is planned to start and conclude within the 2015/16 financial year.

## Funding

WSCC is applying for £335,000 of capital funding from the C2C LEP via the CCLTB with this application. This is to contribute towards funding year one (2015/2016) of the three year investment programme, and does not include funding required for further years and later phases, nor does it include related initiatives that will be implemented to meet the objectives of Beautiful Outdoors / West Sussex Growth Strategy. WSCC will match £115,000 capital funding towards phase one of the capital investment programme. Further, WSCC will invest £250,000 revenue funding in wave 1 of the Beautiful Outdoors marketing campaign for 2015/2016 delivery.

## 4 Base Case

Phase one is aimed at improving the quality of visits to the South Downs National Park, a key asset in WSCC's natural tourism offering. This section discusses the socio-economic base case for West Sussex County and the South Downs National Park. It is against the base case that the impacts of the enhancements are measured. Overall, West Sussex is an affluent county, positioned 125 out of 149 counties in the multiple deprivation index, 2010<sup>13</sup> (where position one is ascribed to the most deprived county and 149 to the least deprived).

### 4.1 West Sussex Demographics

#### Population

The resident population of West Sussex in 2013 was 821,400<sup>14</sup>, with 24% of the population in the 25 to 44 years age cohort. Those aged 44 years and older account for nearly half of residents (49%). Compared to the national United Kingdom (UK) average, West Sussex has a lower proportion of residents under 40 years of age and a higher proportion of residents over 40 years of age<sup>15</sup>.

The population residing within the South Downs National Park in 2013 was 113,756<sup>16</sup>. The South Downs is by far the largest of all 13 of the UK's national parks by population size, with nearly three times the population of the second largest national park, the Lake District (population 40,345). Table 1 identifies the SNDP population by age cohort. Only a fifth of the population are aged between 25 and 45 years.

*Table 1: Population breakdown of the South Downs National Park, 2013*

Total	Under 16	16-24	25-45	46-65	over 65
113,756	20,363	10,159	23,958	34,316	24,960
100%	18%	9%	21%	30%	22%

*Source: ONS, 2013 mid-year population statistics, accessed through NOMIS*

#### Employment

West Sussex is an economically active area with low unemployment, indeed with a potential labour force gap that compromises future local economic growth prospects<sup>17</sup>. Unemployment rates in West Sussex are low (5%) compared to the UK average of 7%<sup>18</sup>. Employment rates are higher than the UK average (79% compared to 71%)<sup>19</sup>.

<sup>13</sup> Department for Communities and Local Government (2010) Indices of Multiple Deprivation, County Summaries

<sup>14</sup> ONS (2013) mid-year population statistics

<sup>15</sup> KPMG (2014) West Sussex economic Growth Options, Appendices,

<sup>16</sup> ONS (2013) National Park Statistics

<sup>17</sup> KPMG (2014): West Sussex Economic Growth Options, Cabinet Discussion Paper

<sup>18</sup> ONS (June 2014) Annual Population Survey

<sup>19</sup> Ibid.

Table 2: Employment and unemployment rates of West Sussex

Geography	Employment rate (16-64 year olds)	Employment rate (25-49 year olds)	Unemployment rate (16-64 year olds)
West Sussex	79%	86%	5%
UK	72%	81%	7%

Source: ONS, Annual Population Survey, June 2014

### Qualifications and skills

The population of West Sussex is highly skilled, with 35% of residents holding an NVQ level 4+ (degree equivalent) qualification<sup>20</sup>. This does, however, mask significant variation across the county; Adur, for example, has the lowest NVQ level 4+ qualification level among 16-64 year olds at 24.3%<sup>21</sup>, compared to Chichester which has the highest level of NVQ level 4+ achievement at 51.6%<sup>22</sup>. The UK average stands at 35%<sup>23</sup>, which for West Sussex means three districts (Chichester, Horsham and Mid Sussex) are above the UK average and four are below. In the South Downs National Park itself, 38.5%<sup>24</sup> of residents over 16 years of age have an NVQ level 4+ qualification. These high skills translate into high level occupations where 46%<sup>25</sup> of the West Sussex working-age population are in managerial, professional or associate professional roles, as may be seen in Table 3.

Table 3: Proportion of working-age population by occupation, West Sussex and South Downs National Park

Occupation category	West Sussex	SDNP	UK average
Managers, directors and senior officials	11%	16%	10%
Professional occupations	19%	22%	20%
Associate professional and technical occupations	16%	14%	14%
Administrative and secretarial occupations	11%	10%	11%
Skilled trades occupations	9%	13%	11%
Caring, leisure and other service occupations	10%	8%	9%
Sales and customer service occupations	10%	5%	8%
Process, plant and machine operatives	5%	4%	6%
Elementary occupations	11%	9%	11%

Source: West Sussex & UK: Annual Population Survey, June 2014; SDNP: ONS, Census 2011

### Sectoral employment

West Sussex is a service based economy with 80% of those employed working in a service industry<sup>26</sup>. Key sectors for West Sussex include Air Transport, due to Gatwick airport, with a location quotient<sup>27</sup> showing that employment in the air transport sector is nine time more concentrated in West Sussex than nationally (England). To complement this, the travel agency sector is nearly three times more

<sup>20</sup> KPMG (2014) West Sussex Economic Growth Options, Appendices

<sup>21</sup> ONS (Dec 2013) Annual Population Survey

<sup>22</sup> Ibid.

<sup>23</sup> Ibid.

<sup>24</sup> ONS (2011) National Park census Data

<sup>25</sup> ONS (June 2014) Annual Population Survey

<sup>26</sup> Ibid.

<sup>27</sup> All location quotient analysis source: CH2M Hill analysis of BRES (2013) data

concentrated in West Sussex than in England. Manufacturing also performs well against the England average, especially manufacturing of computer, electronic and optical products and pharmaceutical products, the former with a location quotient greater than three and the latter greater than two. Tourism industries such as accommodation, sports activities, libraries and museums, retail trade and food and beverage service industries all show a location quotient greater than unity suggesting that employment concentration in these sectors is greater than the England average.

### Commuting

A high proportion of West Sussex residents commute out of the area for work, as is shown in Table 4. Nearly 40% of the resident population commute out of Adur and Mid Sussex. Arun has the lowest proportion of resident out-commuting at 13%. On average West Sussex is subject to net out-commuting where over 15,000 more workers commute out of West Sussex than into West Sussex (27% of residents). The most popular workplace<sup>28</sup> for West Sussex residents is the South East drawing 67% of out-commuters followed by London (27% of all out commuters). Within the South East Brighton and Hove is the most popular workplace drawing 20% of all out-commuters of West Sussex. This out-commuting is potentially a consequence of the lack of jobs in West Sussex; on average for every West Sussex resident there is 0.82 jobs available, this ratio is as low as 0.56 jobs per resident in Adur. Chichester and Crawley have more jobs available than number of residents.

Table 4: Proportion of workforce commuting outside of West Sussex, 2011

District	Resident population	Of which, commute out of West Sussex	Total jobs	Job density
Adur	23,437	38%	21,000	0.56
Arun	52,678	13%	49,000	0.57
Chichester	39,635	30%	71,000	1.05
Crawley	47,857	28%	84,000	1.18
Horsham	51,101	29%	63,000	0.78
Mid Sussex	57,145	38%	65,000	0.74
Worthing	41,018	17%	54,000	0.83
West Sussex	312,871	27%	407,000	0.82

Source: ONS: 2011 census, & job density data set accessed through NOMIS

Workers in West Sussex are most likely to drive to work: 60%<sup>29</sup> of residents in 2011 drove a car or van to work as their main method of travel to work. This is higher than the England average of 54%<sup>30</sup>. Just 3% cycle, however 10% walk<sup>31</sup>.

### Businesses base and demography

In 2012 West Sussex had 34,535<sup>32</sup> active enterprises. Mid Sussex District had the highest number of active enterprises and Adur, the lowest, with a difference of over 4,000. For West Sussex there was a net decrease of the number of enterprises. The largest net decrease was seen in Arun with a net decrease of 100 enterprises. Only Adur, Crawley and Horsham saw a net increase in the number of

<sup>28</sup> Commuting analysis source: CH2M HILL analysis of ONS (2011) Census Commuting data

<sup>29</sup> ONS (2011) Census data, method of travel to work statistics (series WP7701EW)

<sup>30</sup> Ibid.

<sup>31</sup> Ibid.

<sup>32</sup> ONS (2013) Business Demography Dataset

businesses, however this net increase was seen to be small, totalling 80 between all three districts. Survival rates of newly born enterprises has fallen since the national recession in 2008. In 2007 one year survival rates of new firms stood at 96.9% on average in West Sussex. For firms born in 2011, this average dropped to 87.3%, this is, however, still high.

In 2013 West Sussex hosted 36,510<sup>33</sup> businesses with the highest number shown for the professional, scientific and technical sector (16%). Public administration and defence is the smallest sector with only 1% of the business base. The accommodation and food service sector hosts over 2,000 businesses and the arts and entertainment sector hosts over 2,500 businesses in West Sussex showing a strong tourism sector business base. Most businesses (70%) are micro-sized firms with fewer than four employees, whereas only 3% of the business base have more than 50 employees. Nearly half of all enterprises are more than 10 years old, however 28% are less than three years old showing a healthy growth in newer businesses in West Sussex.

## 4.2 Tourism

### West Sussex visitor numbers and spend

West Sussex received over 20 million visits between 2011 and 2013<sup>34</sup>, 92% of which were day visitors who spent £1.15bn during their visits.

1.61 million overnight-trips were made to the area during this period, of which 48% were for holiday purposes<sup>35</sup>. 4.98 million visitor-nights were spent. Visitor spend on overnight trips amounted to £262 million, of which £154m (59%) was spent by holiday makers<sup>36</sup>. Table 5 presents the average spend per visitor in the WSCC area.

*Table 5: Average trip spend of (2011-2013)*

Type	Average spend per visitor
Day	£62
Night (holiday only)	£200
Night (all purpose)	£96

*Source: CH2MHILL analysis of Visit England data (2011-2013 average)*

### South Downs National Park Key Data

The South Downs National Park covers an area of 1,600km<sup>2</sup> spanning three counties: Hampshire, East Sussex and West Sussex. Within West Sussex the SDNP traverses six out of the seven local districts.

SDNP receives 39m visitors a year including an estimated 300,000 pedestrian, cyclist and horse riders<sup>37</sup>.

<sup>33</sup> ONS (2013): UK Business Activity, Size and Location Dataset

<sup>34</sup> Visit England Website Database

<sup>35</sup> Ibid

<sup>36</sup> Ibid.

<sup>37</sup> EcoCounter in South Downs 1<sup>st</sup> April 2013-31<sup>st</sup> March 2014, provided by West Sussex County Council

Table 6 and Table 7 summarise key tourism data for the park<sup>38</sup>.

*Table 6: Key tourism measures: South Downs National Park*

Key measure	Value
Number of trips to South Downs	39 million per year
Number of accommodation businesses	386
Total number of bed spaces	8,888
Total number of visitor attractions	119
Total number of activity businesses	44
Total number of other businesses	357
Proportion of residents who visit once a week	24%
Proportion of visitors aged over 45	73%

Source: Tourism South East (2013 Jan) South Downs Visitor & Tourism Economic Impact Study

*Table 7: Frequency of visitors to SDNP in 2011-2013*

Frequency	All	Visiting as holiday	Leisure day out	Short trip from home
Every day	10%	0%	10%	14%
Several times per week	8%	2%	7%	16%
Once a week	13%	1%	15%	16%
Once a month	22%	8%	26%	20%
Twice a month	12%	4%	14%	14%
Once every season	19%	28%	18%	13%
Can't recall/varies	9%	27%	5%	5%
Once/first time	7%	30%	4%	2%
Total number of visitors	6,815	1,227	3,816	1,090

Source: Tourism South East (2013 Jan) South Downs Visitor & Tourism Economic Impact Study

As Table 7 shows, only 7% of visitors were new to SDNP, 93% were return visitors.

In surveys conducted in 2012, the South Downs Visitor & Tourism Economic Impact Study<sup>39</sup> identified the following attributes of visitors to SDNP:

- 56% of visitors were leisure visitors on day trips out
- 18% of visits were by holiday makers
- 12% of holiday makers were from London
- 72% of people visiting for the day were from outside of the South Downs
- Visitors were mostly from the South East (29% Hampshire, 20% West Sussex, 17% East Sussex, 10% Surrey and only 5% from Greater London).

Table 8 presents the proportion of SDNP visitors by age band.

<sup>38</sup> Tourism South East (2013) South Downs Visitor & Tourism Economic Impact Study, Technical Report on the Research Findings

<sup>39</sup> Tourism South East (2013) South Downs Visitor & Tourism Economic Impact Study, Technical Report on the Research Findings

Table 8: Proportion of visitors by age band in 2011-2013

Age band	Proportion of sample visitors
Under 16	23%
16-24	6%
25-44	17%
45-64	37%
65+	17%

Source: Tourism South East (2013) South Downs Visitor & Tourism Economic Impact Study

The main reasons given by survey respondents for visiting the South Downs include walking, views, sight-seeing and attractions. Only 3% of respondents identified cycling as their main reason for visiting SDNP. The majority of day visitors repeat their visit monthly<sup>40</sup>.

Table 9 presents data on day-visitor spend in the South Downs National Park by type of spend and type of visitor. Highest spend across all visitor types is on food and drink. Holiday visitors spend more on average than day visitors and non-residents spend more than local residents.

Overnight-visitor spend on accommodation is shown in Table 10. This spend is in addition to the day-spend shown in Table 9. Overnight visitors account for only 5% of total visitors, and 35% of which stayed with friends and relatives and did not occur any additional accommodation costs<sup>41</sup>.

Table 9: Average day-visitor spend in the SDNP per visitor per day in 2011-2012

	All visitors	Holiday day visitor	Non-resident day trip	Resident day trip
Attractions	£1.51	£2.54	£0.86	£0.58
Food & drink	£4.72	£7.23	£3.76	£2.61
Transport	£1.96	£2.58	£1.52	£1.17
Shopping	£1.90	£2.45	£1.86	£1.13
Activities	£0.15	£0.14	£0.25	£0.01
Total	£10.24	£14.93	£9.20	£5.50

Source: Tourism South East (2013 Jan) South Downs Visitor & Tourism Economic Impact Study; Note total may not average as visits to friends & relatives omitted

Table 10: Additional spend on overnight accommodation in SDNP

	Paid accommodation costs only
Average spend per trip per person	£143.33
Average spend per person per night	£28.67

Source: Tourism South East (2013 Jan) South Downs Visitor & Tourism Economic Impact Study; note per person per night spend based on 5 night stay

<sup>40</sup> Ibid.

<sup>41</sup> Tourism South East (2013) South Downs Visitor & Tourism Economic Impact Study, Technical Report on the Research Findings

Visitor spend in the South Downs National Park in 2012 was estimated to be £464 million<sup>42</sup>.

The Impact Study identified better signage on pathways; more maps and better maintenance of pathways as significant areas for improvement in the SDNP. 51% of survey respondents commented that lack of signage on pathways and lack of maps was preventing them from visiting the South Downs National Park and 41% commented that lack of maintenance of pathways was a barrier<sup>43</sup>. The package of enhancements identified for phase one of the Beautiful Outdoors capital investment programme address these requirements.

The survey also indicated that 83%<sup>44</sup> of visitors used a private car or motorbike to get to the South Downs National Park. The key reasons given for this mode of transport were convenience (58%), no real alternative (23%) and ease of access (17%). The survey also identified that only 22% of those travelling by private vehicle would consider an alternative mode of transport.

---

<sup>42</sup> <http://www.southdowns.gov.uk/about-us/news/press-notice/tourists-bring-464-million-boost-to-south-downs-economy>

<sup>43</sup> Tourism South East (2013) South Downs Visitor & Tourism Economic Impact Study, Technical Report on the Research Findings

<sup>44</sup> Ibid

## 5 Expected Scheme Related Benefits

### 5.1 Sustainable travel

C2C LEP aims to support sustainable transport packages that regenerate areas and restore confidence in C2C towns as areas which are ready and fit for growth. C2C's sustainable transport packages include initiatives that improve walking and cycling links, create better cycling and pedestrian access to rail stations and improve information to the travelling public.

In improving the condition, information and safety of West Sussex's network of pathways, cycle routes and bridleways, the Beautiful Outdoors capital investment programme promotes sustainable leisure travel.

Research suggests that increases in active leisure travel are likely to translate into increases in active commuting and other forms of sustainable travel. Gomez et al. (2005)<sup>45</sup> find that leisure cyclists are also more likely to use active modes of transport for commuting as compared to non-cycle holiday-makers (Gomez et al (2005) while Weston et al. (2012)<sup>46</sup> find that public transport is used more often by cycle tourists than non-cycle tourists to reach their trip starting point or for making onward connections. Walking and cycling as sustainable transport modes play an important part in reducing carbon dioxide emissions, air pollution, noise and traffic congestion<sup>47</sup> and making more efficient use of transport networks<sup>48</sup>.

### 5.2 Expected impact on visitor safety and security

Improving the safety at crossings and the general safety of walkers and cyclists through better surfaced paths also has the potential of reducing injury or death. Further, improved information, signage and maps are likely to increase the sense of safety and well-being particularly of long distance walkers and cyclists.

The expected impact on road safety casualties is likely to be small, however improved visibility at several crossings could help prevent road accidents and casualties, particularly the intervention aimed at improving the South Downs Way crossing of the A283 by creating a proper surface from which to cross. Table 11 shows the number of accidents by severity over the last three years at the South Downs Way – A283 crossing. A total of nine incidents were reported, the majority being slight accidents. The average value of prevention of a road accident for a pedestrian is quantified by the Department for Transport at £78,435 and for a cyclist £52,731<sup>49</sup>.

<sup>45</sup> Ibid.

<sup>46</sup> Cited in Zovko, I (2013) The Value of Cycle Tourism - opportunities for the Scottish Economy, Transform Scotland

<sup>47</sup> Pucher, J., & Dijkstra, L. (2003) Promoting safe walking and cycling to improve public health: lessons from the Netherlands and Germany. American Journal of Public Health, 93(9), 1509. Cited in Davis, A (2014) as above.

<sup>48</sup> Davis, A. (2014): Department for Transport: Claiming the Health Dividend: A summary and discussion of value for money estimates from studies of investment in walking and cycling.

<sup>49</sup> WebTAG Databook, (2014), A 4.1.1 Casualty data, 2010 values and prices

*Table 11: Accident severity at the target improvement areas of the SDNP, 2012-2014*

	2012	2013	2014	Total
Slight	2	2	3	7
Serious	1	1	0	2
fatal	0	0	0	0
Total	3	3	3	9

Source: WSCC Road Safety Team

## 6 Expected Economic Growth Benefits

This section provides a high-level qualitative assessment of the potential economic growth impacts of phase one of the Beautiful Outdoors' capital investment programme. The impacts of phase one enhancements alone were considered in the assessment. Impacts could not be quantified due to lack of data.

### 6.1 Footfall and visitor spend

The set of enhancements which comprise phase one are designed to enhance the SDNP visitor experience by improving the quality of footpaths, bridleways and cycle routes and improving signage, thus addressing the key known deterrents to SDNP visits as identified by the South Downs Visitor & Tourism Economic Impact Study. Visitor numbers are therefore expected to increase as a result of the enhancements, along with corresponding visitor spend.

As discussed in section 4 above SDNP visitor spend is currently estimated to exceed £450 million a year<sup>50</sup> and the Federation of Small Businesses estimates that for every one pound spent with a local business, 83 pence feeds back to the local economy<sup>51</sup>.

It is not possible to quantify the incremental increase in visitor footfall and spend as a result of the phase one enhancements, aside from suggesting that even a 0.1% increase in visitor numbers could see increased spend in SDNP of around £450,000.

### 6.2 Job creation

The tourism and leisure sector in the Coast to Capital LEP region currently employs 37,000 people<sup>52</sup>. The SDNP alone supports 8,200 local jobs<sup>53</sup>. Any measurable increase especially in overnight and weekend visitor numbers has the potential to generate direct employment within the SDNP; indirect employment in the accommodation and food service, hospitality and agricultural sectors as well as induced employment in the WSCC area. Induced employment results from increased income in the economy leading to increased employment in non-tourism sectors.

Delivery of the network enhancements will be undertaken through WSCC's Living Places Highways Services Contract and the employment impact is considered negligible.

Overall, employment impacts are expected to be small for phase one, although WSCC will create a post of Project Manager to deliver phase one of the Beautiful Outdoors capital investment programme. It is not possible to quantify these employment effects.

### 6.3 GVA

Increases in direct, indirect and induced employment would generate corresponding increases in GVA.

<sup>50</sup> <http://www.southdowns.gov.uk/about-us/news/press-notices/tourists-bring-464-million-boost-to-south-downs-economy>

<sup>51</sup> <http://www.fsb.org.uk/keeptradelocal/images/fsbprocurementlores.pdf>

<sup>52</sup> Coast to Capital Local Enterprise Partnership (2014) Strategic Economic Plan

<sup>53</sup> <http://www.southdowns.gov.uk/about-us/news/press-notices/tourists-bring-464-million-boost-to-south-downs-economy>

While it is not possible to calculate the effect on gross value added (GVA) of the phase one enhancements, an indicative value of GVA for a set of tourism related jobs is provided in Table 12.

*Table 12: GVA generated by tourism sector jobs*

	Value
Number of jobs in transport & distribution sector West Sussex (2013)	26,800
Number of jobs in tourism sector West Sussex (2013)	28,300
Total GVA distribution, transport and tourism sectors combined	£4,031m
GVA tourism West Sussex (51% of total)	£2,070m
GVA per employee West Sussex	£73,144

*Sources, number of jobs: BRES (2013); GVA: ONS (2013) GVA NUTS 3 dataset.*

GVA at NUTS 3 level is grouped at a high level of sector definition, and thus tourism is combined with transport and distribution. In order to isolate tourism's contribution to GVA we have extracted the number of employees in each of these sectors (tourism, transport and distribution) from the Business Register and Employment Survey (BRES) results. These total number of employees was 55,100, of which 28,300 (51%) were employed by the tourism sector. We applied the 51% to the total GVA for the combined distribution, transport and tourism sectors to calculate the GVA contribution of the tourism sector: £2,070m. A GVA of £73,144 per employee then calculated.

## 6.4 Impact on government revenues

Increases in employment would generate tax revenues for central government. These impacts are expected to be very small for phase one. It is not possible to quantify these effects.

## 7 Expected socio-economic and distributional benefits

---

This section provides a high-level qualitative discussion of the potential socio-economic impacts of phase one of the Beautiful Outdoors' capital investment programme. The impacts of phase one enhancements alone were considered in the discussion. Impacts could not be quantified.

### 7.1 Potential socio-distributional impacts

In so far as the tourism and associated sectors such as accommodation and food services employ a wide range of skills, from high skilled entrepreneurs to relatively unskilled service staff, an increase in employment in these sectors has economic redistribution potential through the possible increase in the number of jobs across all skill levels.

### 7.2 Physical activity

Cycling and walking are physical activities that provide significant health benefits, including reducing the risk of conditions such as cardiovascular disease; stroke; obesity; type two diabetes; osteoporosis; colon and breast cancer and depression. Physical activity also delivers benefits in terms of mental health, stress, injury risk, health-related quality of life, all-cause mortality and productivity and reduced absenteeism from work<sup>54</sup>. Research by the London School of Economics (LSE) estimates that regular cyclists take one less sick day a year than non-cyclists<sup>55</sup>.

Further, even modest increases in urban cycling which result in the reduction in motor vehicle use and enhanced air quality could lead to improvements in respiratory health. This is in addition to the health benefits associated with increased physical activity<sup>56</sup>.

Moreover, access to nature and green exercise (defined as activity in the presence of nature)<sup>57</sup> leads to positive short and long term physical and mental health outcomes<sup>58</sup>. The associated economic benefits of enhancing green spaces and using them for physical activity include reduced health costs, reduced mortality and morbidity and increased productivity and reduced absenteeism.

---

<sup>54</sup> See the following cited in Davis, A. (2014): Department for Transport: Claiming the Health Dividend: A summary and discussion of value for money estimates from studies of investment in walking and cycling:

- Bize, R., Johnson, J.A., & Plotnikoff, R.C. (2007) Physical activity level and health-related quality of life in the general adult population: a systematic review. *Preventive Medicine*, 45(6), 401-415.
- Cavill, N., Davis, A. (2007) *Cycling and health: What's the evidence?* London: Cycling England.
- Cavill, N., Kahlmeier, S., Rutter, H., Racioppi, F., & Oja, P. (2007) *Economic Assessment of Transport Infrastructure and Policies: Methodological guidance on the economic appraisal of health effects related to walking and cycling*. In World Health Organization Regional Office for Europe (Ed.), *WHOLIS N. E90944* Copenhagen, Denmark.
- Genter, J.A., Donovan, S., Petrenas, B., & Badland, H. (2008) *Valuing the health benefits of active transport modes* Transport Agency Research Report 359. Auckland, New Zealand.
- Oja, P., Titze, S., Bauman, A., de Geus, B., Krenn, P., Reger-Nash, B., & Kohlberger, T. (2011) *Health benefits of cycling: a systematic review*. *Scandinavian Journal of Medicine & Science in Sports*, 21 (4), 496-509.

<sup>55</sup> LSE (date unknown) *The British Cycling Economy Gross Cycling Product Report*, supported by Sky and British Cycling

<sup>56</sup> Bristol City Council: *Essential Evidence on a page*, number 128 (2014): *Improving urban air quality through increased cycling use*. ([www.travelwest.info/evidence](http://www.travelwest.info/evidence))

<sup>57</sup> Bristol City Council: *Essential Evidence on a page*, number 122 (2014) *What is the best dose of nature and green exercise for improving mental health?* ([www.travelwest.info/evidence](http://www.travelwest.info/evidence))

<sup>58</sup> *ibid*

Illness as an outcome of physical inactivity has been conservatively calculated to cost the NHS up to £1.0 billion per annum (2006-07 prices). Indirect costs, including informal care, inferior physical and mental function, deficient physical and mental well-being, and loss of productivity through sick leave have been estimated as £8.2 billion per annum (2002 prices)<sup>59</sup>. Investment in initiatives that encourage and enable increased activity levels through cycling and walking is therefore likely to provide benefits not only in terms of individual health but also in terms of NHS cost savings<sup>60</sup>.

There are approximately 3,282km of public rights of way within the South Downs: 1813km of footpath; 1213km of bridleway; 53km of restricted byways; 77km of byways open to all traffic (BOATS); and 176km of road used as public path or right of way across the South Downs<sup>61</sup>. Promoting walking and cycling on the South Downs through better quality footpaths and cycle routes, safer crossings and better signage has the potential to generate appreciable direct and indirect benefits.

## 7.3 Accessibility

Improved pathways, clear and informative signage and safer crossings are likely to improve the accessibility of visitors to the South Downs from neighbouring transport hubs and towns and villages. This improved access may encourage higher use of sustainable public transport modes for travel to the SDNP as opposed to private car, which is at present the main mode of transport to and from the national park, with 83% of visitors arriving at the SDNP by private car. 22% of respondents to the Tourism South East (2013) surveys suggested that improved ease of access and safety could lead them to consider an alternative mode of transport to the private car for travel to and from the national park<sup>62</sup>.

Further, phase one enhancements aimed at removing tree roots and gullies from paths could potentially aid less confidently mobile visitors to access attractions and amenities within the South Downs National Park.

---

<sup>59</sup> Davis, A. (2014): Department for Transport: Claiming the Health Dividend: A summary and discussion of value for money estimates from studies of investment in walking and cycling.

<sup>60</sup> Ibid.

<sup>61</sup> <http://www.southdowns.gov.uk/about-us/news/?a=120824>

<sup>62</sup> Tourism South East (2013) South Downs Visitor & Tourism Economic Impact Study, Technical Report on the Research Findings

## 8 Environmental Impacts

---

This section presents a high level appraisal of potential environmental effects associated with phase one. The appraisal has been based on a desk study comprising a review of readily available data, including web-based data, to identify and consider the environmental risks exist at each location, in so far as they can be estimated at this stage. The full results of the appraisal of phase one (grouped according to geographical location) are presented in Appendix 2.

### 8.1 Environmental assessment summary

On the basis of the high level desk study and appraisal it has been identified that a number of the enhancements will take place within or in close proximity to designated cultural heritage assets and ecological sites, including Scheduled Monuments, Sites of Special Scientific Interest and woodlands listed on the National Inventory of Woodlands and Trees. Although it is envisaged that the proposed works will result in no significant long term adverse impacts on these features some further investigation and consultation is recommended to ensure that appropriate mitigation is proposed and that the statutory bodies and local authority are fully informed of the proposals and given the chance to respond. With appropriate mitigation, no adverse impacts are envisaged. Indeed, the increase in visitor numbers that would have the opportunity to appreciate these assets should be seen as a positive element of the proposal.

In terms of landscape, it is also envisaged that there will be no significant long term adverse impact provided that appropriate materials are used and no trees are removed. However, it is recommended that the detailed design of the proposals is discussed with the SDNP Authority to ensure that they are considered appropriate to their location.

It is envisaged that any temporary impacts on air quality, noise, water quality or as a result of disturbance of contamination or path diversions during construction can be adequately mitigated by the adoption of appropriate construction methods and standards, with no significant long term impact.

The main benefit of the proposed improvement works will be to improve user safety, improve visitor satisfaction and encourage a greater use and appreciation of the landscape without causing increased erosion to the paths or countryside, thus helping to secure its long term character and use. Pedestrians, cyclists and equestrians will benefit from phase one.

## 9 Contribution to the Strategic Economic Plan

---

This section presents an overview of the policy context for the Beautiful Outdoors Scheme. In line with the CCLTB Funding Application Form this section focuses on the C2C LEP Strategic Economic Plan (SEP).

### 9.1 The C2C LEP Strategic Economic Plan

The priorities and objectives of the C2C LEP are set out in their Coast to Capital Strategic Economic Plan<sup>63</sup>. The C2C LEP's vision is "that Coast to Capital will deliver exceptional growth and productivity gains to deliver economic performance to rival the best in Europe and the rest of the World." The following strategic priorities are outlined in the Plan:

- Successful Growth Locations, including transport investment;
- Successful Businesses;
- Building Competitive Advantage;
- Skills and Workforce;
- Growth is Digital and
- Housing and infrastructure.

#### **Building Competitive Advantage**

Building Competitive Advantage focuses on the sectors where the region has a competitive edge, including food production and the visitor economy. The visitor economy is significant for the Coast to Capital region – both in terms of direct and indirect employment, with the tourism and leisure sector accounting for approximately 4% of total employment in the LEP region. The South Downs National Park is recognised as an important part of C2C's visitor economy.

#### **The Rural Economy and Tourism**

Approximately 20% of the Coast to Capital population lives in a rural area, and around 22% of C2C businesses are located there. The rural areas contribute significantly to C2C's economy across a wide range of sectors. Within the C2C rural areas are the South Downs National Park and three Areas of Outstanding Natural Beauty.

C2C's rural economy faces a number of specific challenges including access to education and job opportunities, digital exclusion and high house prices. C2C LEP has identified initiatives to address these challenges, including supporting rural tourism to boost growth and local GVA through increased number of visits and thereby increased employment.

The Beautiful Outdoors package is aimed at enriching West Sussex's rural tourism offer and encouraging more high-value overnight, weekend and longer holiday visitors to West Sussex, thereby expanding the tourism sector and associated sectors including food service and agriculture.

#### **Coast to Capital Transport Programme**

The Coast to Capital Transport Programme aims to unlock stalled economic growth across the Coast to Capital area while addressing five overarching themes:

- Connectivity: "Can I get where I want to go?"
- Reliability: "Will I arrive when I expect?"
- Capacity: "Will I get a seat, a parking space, a clear road?"

---

<sup>63</sup> Coast to Capital Local Enterprise Partnership (2014) Strategic Economic Plan

- Quality: “Will my journey be healthy, safe, clean, sustainable and enjoyable?”
- Resilience: “Will transport be there when I need it – 24/7?”

### Sustainable Transport packages

A key focus of the C2C Transport Programme is supporting sustainable transport packages, which regenerate areas by tackling congestion and improving journey quality and reliability and restoring confidence in C2C towns as areas which are ready and fit for growth.

The following measures are applicable to sustainable transport packages:

- Improvements to walking and cycling links and the urban realm;
- Improvements to rail stations, including better cycling and pedestrian access;
- Behavioural change measures, including improved information to the travelling public;
- Improving accessibility to rural areas; or
- Improving road safety.

In improving the condition, information and safety of West Sussex’s network of pathways, cycle routes and bridleways, the set of enhancements in the Beautiful Outdoors capital investment programme comply with the measures for sustainable transport packages.

### Local Indicators

Key performance indicators set by the C2C LEP in the C2C SEP are as follows:

- Increase net private sector jobs;
- Increase GVA total (£billion) to reduce the gap with the South East; and

The targets are set out Table 13. The Beautiful Outdoors scheme aims to contribute to increasing net private sector employment and GVA.

*Table 13: Key Performance Indicators and Targets for the C2C LEP and adopted by WSCC*

Top line Priorities	2010 Baseline Coast to Capital	2010 Baseline South East Region	2020 Target
Net Private Jobs	652,200	Not applicable	140,000 net additional jobs
Private Jobs Share	81%	81%	Continue to match SE level
Public Jobs Share	19%	19%	Continue to match SE level
GVA Total £billion	£38.9bn	Not applicable	£55bn
GVA Per Head Working Age Population	£31,800	£35,100	Reduce gap with SE
Percentage of Companies Regularly Exporting	16%	Not available	1% increase year on year – double by 2035

*Source: C2C LEP (2014) C2C SEP*

# List of References

- Bize, R., Johnson, J.A., & Plotnikoff, R.C. (2007) 'Physical activity level and health-related quality of life in the general adult population: a systematic review'. *Preventive Medicine*, 45(6), 401-415.
- Bristol City Council (2014) 'What is the best dose of nature and green exercise for improving mental health?' *Essential Evidence on a page, number 122* ([www.travelwest.info/evidence](http://www.travelwest.info/evidence)).
- Bristol City Council (2014) 'Improving urban air quality through increased cycling use' *Essential Evidence on a page, number 128* ([www.travelwest.info/evidence](http://www.travelwest.info/evidence)).
- Coast to Capital Local Enterprise Partnership (2014) 'Strategic Economic Plan'.
- Cavill, N., Davis, A. (2007) 'Cycling and health: What's the evidence?' London: Cycling England.
- Cavill, N., Kahlmeier, S., Rutter, H., Racioppi, F., & Oja, P. (2007) 'Economic Assessment of Transport Infrastructure and Policies: Methodological guidance on the economic appraisal of health effects related to walking and cycling'. In *World Health Organization Regional Office for Europe* (Ed.), WHOLIS N. E90944 Copenhagen, Denmark.
- Davis, A. (2014) 'Claiming the Health Dividend: A summary and discussion of value for money estimates from studies of investment in walking and cycling'. Department for Transport.
- Department for Communities and Local Government (2010) Indices of Multiple Deprivation, County Summaries.
- Department for Transport (May 2014) WebTAG Databook.
- EcoCounter in South Downs 1<sup>st</sup> April 2013-31<sup>st</sup> March 2014, provided by West Sussex County Council
- Genter, J.A., Donovan, S., Petrenas, B., & Badland, H. (2008) 'Valuing the health benefits of active transport modes'. *Transport Agency Research Report 359*. Auckland, New Zealand.
- HM Treasury the Magenta Book: Guidance for Evaluation.
- <http://www.fsb.org.uk/keeptradelocal/images/fsbprocurementlores.pdf>
- <http://www.nationalparks.gov.uk/learningabout/whatisanationalpark/factsandfigures>
- <http://www.nhs.uk/Livewell/fitness/Pages/Getfitwithoutgym.aspx>
- <http://www.southdowns.gov.uk/about-us/news/press-notice/tourists-bring-464-million-boost-to-south-downs-economy>
- <http://www.southdowns.gov.uk/about-us/news/?a=120824>
- KPMG (2014): 'West Sussex Economic Growth Options', Cabinet discussion paper.
- KPMG (2014): 'West Sussex Economic Growth Options', Appendices.
- London School of Economics (date unknown) 'The British Cycling Economy Gross Cycling Product Report', supported by Sky and British Cycling.
- Oja, P., Titze, S., Bauman, A., de Geus, B., Krenn, P., Reger-Nash, B., & Kohlberger, T. (2011) 'Health benefits of cycling: a systematic review'. *Scandinavian Journal of Medicine & Science in Sports*, 21 (4), 496-509.
- Office of National Statistics ONS (Dec 2013) Annual Population Survey.

ONS (June 2014) Annual Population Survey.

ONS (2013) Business Demography Dataset.

ONS (2013) Business Register and Employment Survey.

ONS (2011) Census Data.

ONS (2011) National Park Census Data.

ONS (2011) Census Data, Method of Travel to Work Statistics (series WP7701EW).

ONS (2013) Mid-year Population Statistics.

ONS (2013) National Parks Statistics.

ONS (2013) UK Business Activity, Size and Location dataset.

Pucher, J., & Dijkstra, L. (2003) 'Promoting safe walking and cycling to improve public health: lessons from the Netherlands and Germany'. *American Journal of Public Health*, 93(9), 1509.

Tourism South East (2013) 'South Downs Visitor & Tourism Economic Impact Study', Technical Report on the Research Findings.

Visit England Website Database.

Zovko, I (2013) 'The Value of Cycle Tourism - opportunities for the Scottish Economy', *Transform Scotland*.

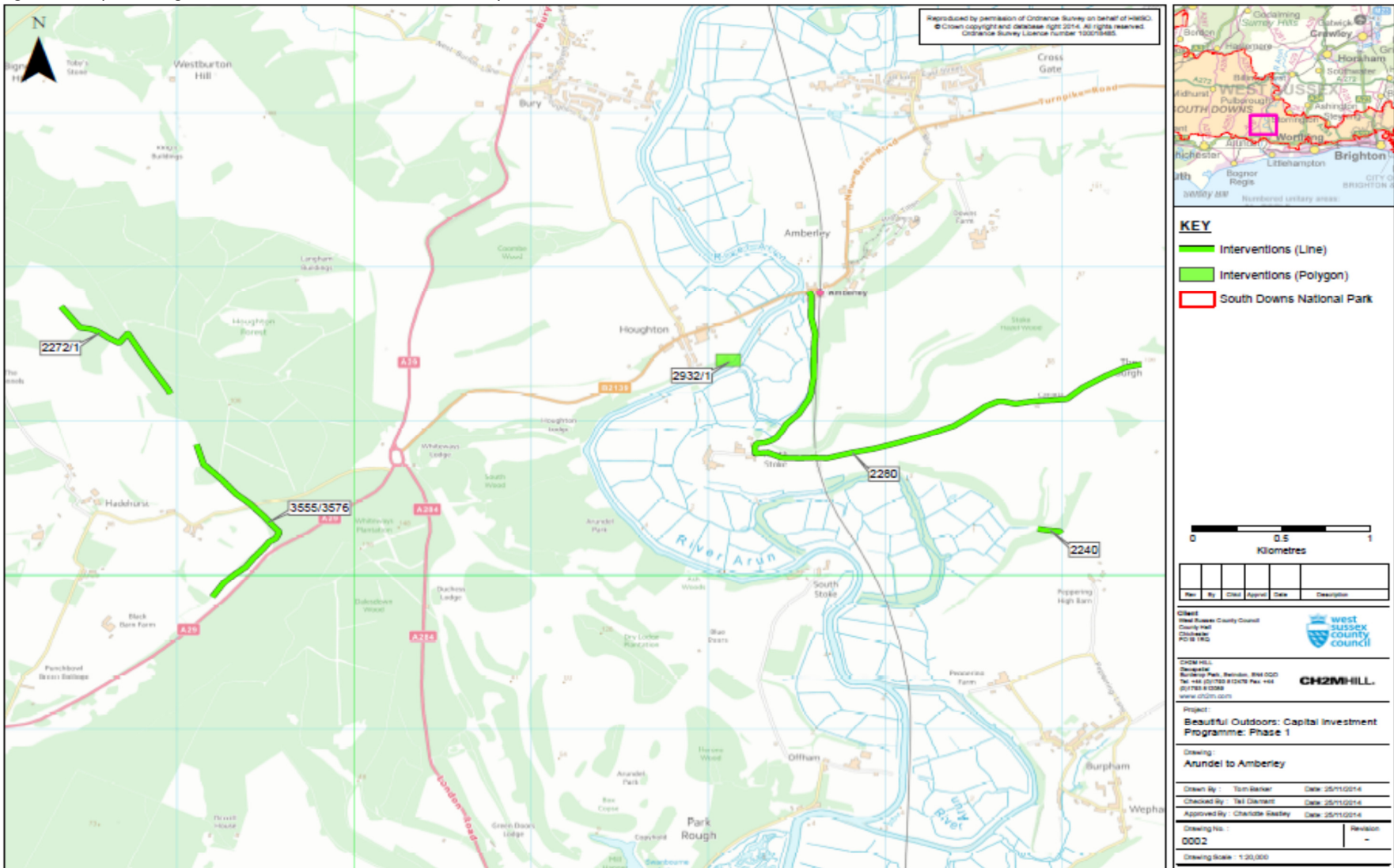
# Appendix 1: Maps of schemes

Figure 3: Map of phase one enhancements in the South Downs National Park



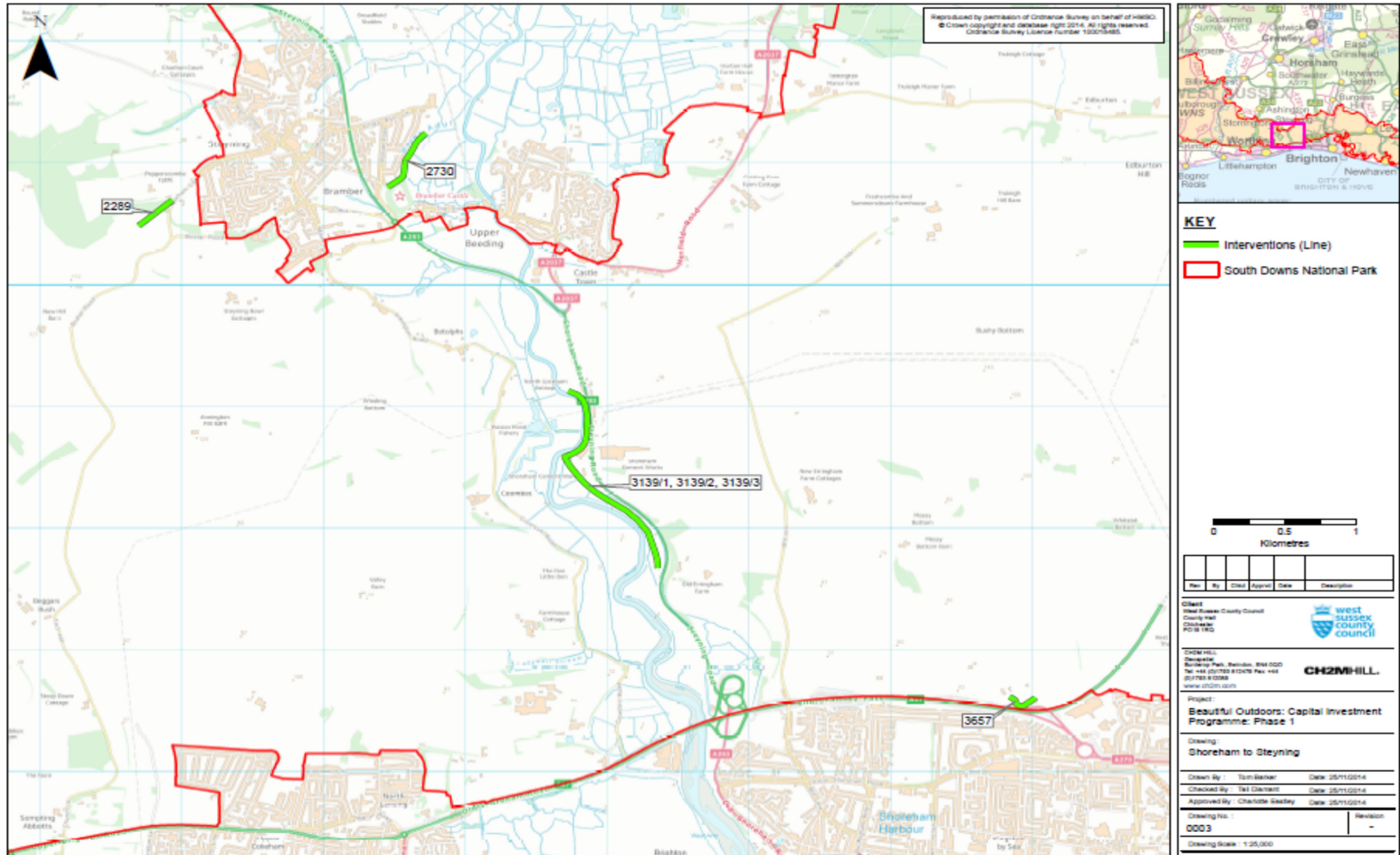
Reproduced from or based upon 2013 Ordnance Survey material with permissions of the Controller of HMSO © Crown Copyright reserved. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings. West Sussex County Council Licence No. 100023447.

Figure 4: Map showing enhancements in the Arundel-Amberley area



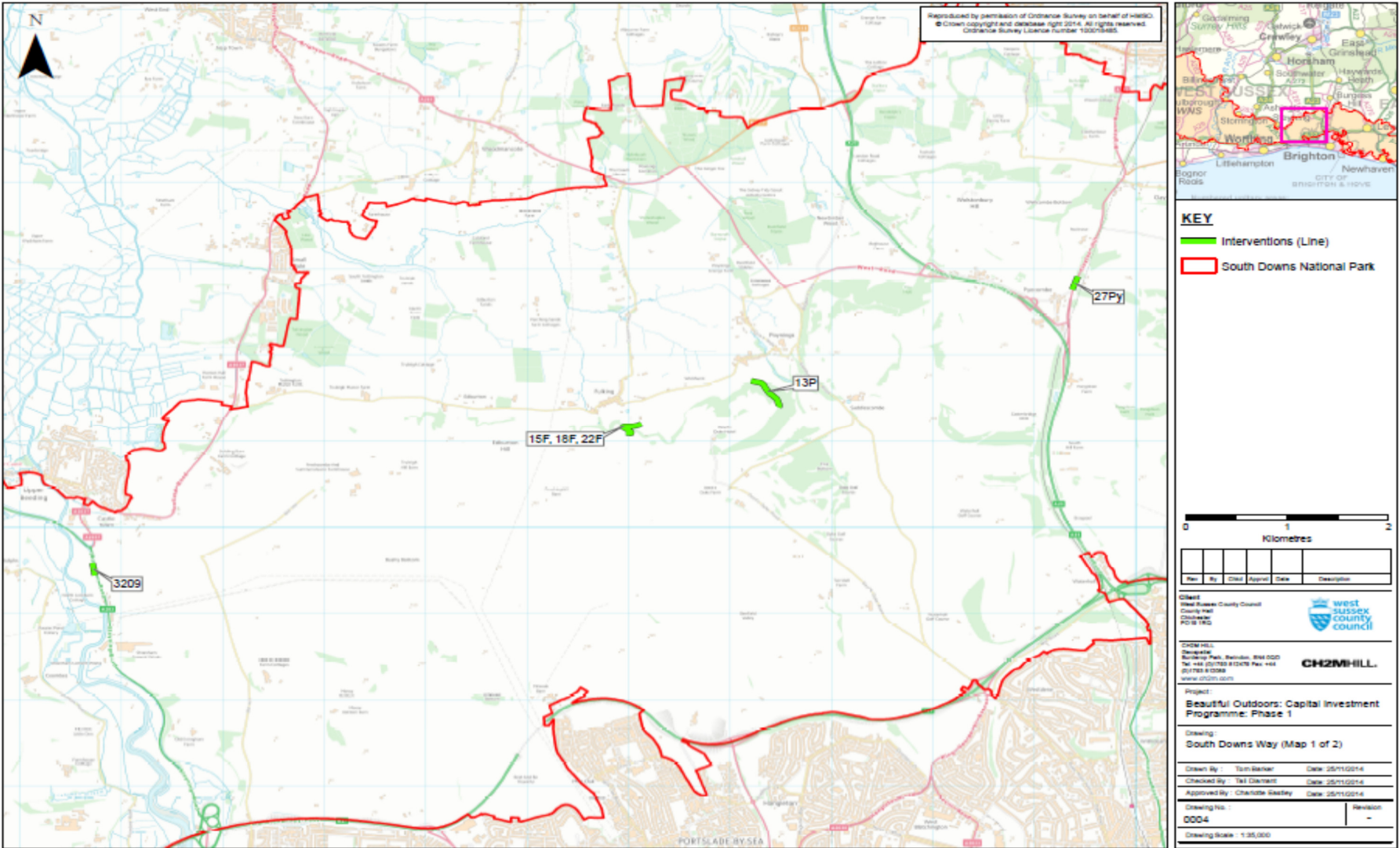
Reproduced from or based upon 2013 Ordnance Survey material with permissions of the Controller of HMSO © Crown Copyright reserved. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings. West Sussex County Council Licence No. 100023447.

Figure 5: Map showing enhancements in the Shoreham-Steyning area



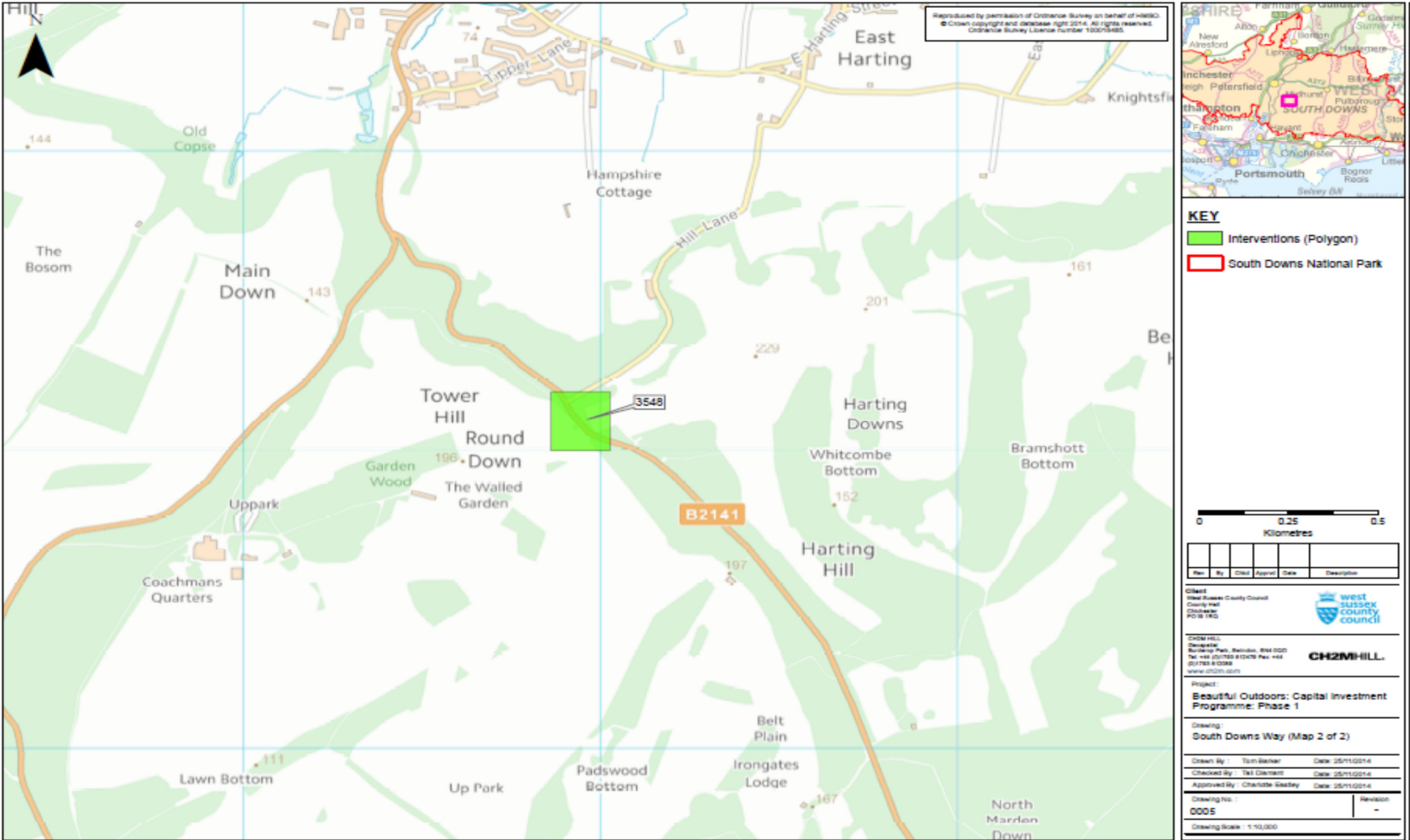
Reproduced from or based upon 2013 Ordnance Survey material with permissions of the Controller of HMSO © Crown Copyright reserved. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings. West Sussex County Council Licence No. 100023447.

Figure 6: Map showing enhancements along the South Downs Way (Part A)



Reproduced from or based upon 2013 Ordnance Survey material with permissions of the Controller of HMSO © Crown Copyright reserved. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings. West Sussex County Council Licence No. 100023447.

Figure 7: Map showing enhancements along the South Downs Way (Part B)



Reproduced from or based upon 2013 Ordnance Survey material with permissions of the Controller of HMSO © Crown Copyright reserved. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings. West Sussex County Council Licence No. 100023447.

# Appendix 2: Environmental Impacts

## Introduction

West Sussex County Council (WSCC) are currently proposing a package of improvements to a number of footpaths, bridleways and cycle ways associated with the South Downs Way, Monarch's Way, the Downs Link and Devil's Dyke in West Sussex.

The package comprises a number of discrete works, summarised as:

### Arundel-Amberley

1. Improved signage onto the National Trail, the South Downs Way, from Amberley Station along quiet roads and by-ways.
2. Improvement of roughly 160 steps of a popular path linking Arun floodplain and Peppering High Barn.
3. Extension of existing boardwalk along the River Arun in areas which are prone to flooding therefore increasing the availability of the path.
4. Improved surfacing along a popular local bridleway network and part of the promoted route, the Monarch's Way.
5. Improved surfacing for convenient cycle access to/from Bignor Hill off the South Downs Way.

### Shoreham-Steyping

6. Improved surfacing for convenient access to/from Shoreham into the South Downs National Park.
7. Improved surfacing to upgrade sections of the popular North-South promoted route, The Downs Link. This route links to the South Downs Way and provides access from Shoreham to the National Trail.
8. Improved surfacing on a path linking the village of Steyping to the Downs.
9. Improved surfacing of a footpath which provides a link for walkers onto the wider local network.

### South Downs Way

10. Improved surfacing between Devils Dyke and Fulking to combat poor drainage and erosion thereby opening up the wider bridleway network.
11. Improved visibility and signage of the South Downs Way crossing of B2141 Harting Hill.
12. Improvement in surfacing to create a circular route near the already popular visitor attraction Devils Dyke.
13. Improved surfacing and widening on the South Downs Way adjacent to A273 with increased visibility at the road crossing.
14. Improved surfacing with better signage and visibility of the A283 crossing to improve safety of this South Downs Way section.
15. Signage of feeder routes between the South Downs Way and visitor services (e.g. accommodation, beauty spots and pubs).

The existing surface materials of the rights of way network in West Sussex vary. Where new surfacing is required, the surfacing material will be sympathetically selected in order to blend in with surrounding landscape, whilst being mindful of the mode of the user groups and the associated degree of surface wear required (with use by horse necessitating a more durable and hard wearing surfacing than pedestrians), and local features such as drainage. Most surfaces in rural areas are of unbound stone (i.e. not Tarmac) and this is likely to be the material used at most locations.

Generally, where surfacing works are required, a path will be scraped, then graded before a new surface is laid. All surfacing works will be carried out along the existing Right of Way and within its boundary, such that there will be no disturbance of undisturbed ground, and no removal of trees, scrub or grassland.

This Technical Memorandum presents the results of a high level appraisal of potential environmental effects associated with this package of works. The appraisal has been based on a desk study comprising a review of readily available data to identify and consider the environmental risks exist at each location, in so far as they can be estimated at this stage. The following data sources were used to inform the environmental appraisal:

- <http://www.natureonthemap.naturalengland.org.uk>
- <http://www.britishlistedbuildings.co.uk>
- <http://www.heritagegateway.org.uk>
- <http://maps.environment-agency.gov.uk/wiyby>
- <http://www.westsussex.gov.uk>
- <http://www.crawley.gov.uk>

Environmental issues considered as part of the appraisal comprise archaeology and cultural heritage, air quality, ecology, water, landscape and townscape, geology and ground conditions, noise and vibration, and effects on vehicle travellers, pedestrians, cyclists and the local community.

Whilst the proposed works will, inevitably, result in some temporary nuisance and adverse impacts during construction, it is envisaged that most of these can be avoided or mitigated through the adoption of suitable construction methods and procedures. This includes potential impacts on air quality (dust from ground disturbance and emissions from construction plant and vehicles), noise, water quality (run-off high in suspended sediment), as well as potential disruption to the local community and visitors as a result of air quality, noise and any closures or diversion to paths whilst works are being undertaken. Such impacts can normally be avoided or managed through the adoption of good practice construction practices, so that any residual impacts will be temporary and will cease on completion, and they are not envisaged to be significant. They have not been considered further in this Technical Memorandum, although they may need further consideration as the design is developed and prior to construction to ensure that suitable mitigation and control can be put in place.

As the works are located within rural areas, no contaminated land is envisaged within the footprint of the works. As above, if contamination is discovered or suspected during construction, good practice construction practices would be adopted to ensure no adverse impacts on humans or the environment, and this issue has not been considered further in this Technical Memorandum.

The main issues are therefore archaeology and cultural heritage, ecology and nature conservation, landscape and land use.

For ease of reporting, some of the packages have been grouped according to their geographical location. The following groups have been made:

- Enhancements 1 to 5 (located in the vicinity of the River Arun and Amberley Station, extending west towards Bignor Hill)
- Enhancements 6 to 9 (located, in the vicinity of the River Adur, to the north of Shoreham at Steyning, Bramber and Upper Beeding)
- Enhancements 10 and 12 (located in the vicinity of Fulking, to the north of Shoreham)
- Enhancement 11 (located at Harting Hill, to the north of Chichester)
- Enhancement 13 (located at Pyecombe, to the north of Brighton)
- Enhancement 15 (which is not location-specific)

## **Enhancements 1 to 5**

### **Archaeology and cultural heritage**

There are numerous Scheduled Monuments located along the length of the South Downs Way and Monarch's Way ranging from buried prehistoric remains to more recent standing monuments. There are also many listed buildings both within village settlements and as isolated rural buildings.

There are five Scheduled Monuments located at Amberley Station; two to the south of Amberley station (one comprising Houghton Bridge on Stoke Road and the other associated with disused kilns and quarry),

and three located to the northeast at Amberley Museum (also associated with disused kiln and quarry). Further sites including tumuli and a Neolithic camp, which are located to the west of Amberley Station along the South Downs Way at Westburton Hill and close to where the South Downs Way and Monarch's Way converge to the south west of Bignor Hill and south of Coldharbour Farm. At this latter location, Monarch's Way passes along the Roman Road, Stane Street, and Monarch's Way itself is designated.

There are numerous listed buildings. Most are located within Amberley Station, Houghton, West Burton and Bignor, although Coldharbour Farm is also listed.

At present, it is not anticipated that the proposed works will necessitate excavations into previously undisturbed ground and that all works will take place on well-trodden paths. However, given that the Package 1 works will take place adjacent to Houghton Bridge Scheduled Monument, the high archaeological importance of known sites along the South Downs Way and Monarch's Way, and the high potential for unknown buried sites in the vicinity of the paths, it is recommended that more detailed evaluation is undertaken at a later stage. This should include consultation with the West Sussex Archaeological Advisory Service and, where works are in the vicinity of Scheduled Monuments, consultation with English Heritage (or be in accordance with procedures agreed with English Heritage).

No adverse impact on the setting of any sites or buildings is envisaged (see 'Landscape' below).

#### Ecology and biodiversity

There are numerous sites designated for their national and international ecological interest, some of which are extensive. These are:

- Arun Valley Special Protection Area (SPA), Arun Valley Special Area of Conservation (SAC), Arun Valley Ramsar Site and Amberley Wild Brooks Site of Special Scientific Interest (SSSI) is located approximately 1.5 km to north of Amberley station, on the floodplain to the immediate east of the River Arun (with a small area to the west), approximately 1.5 km north of Amberley Station. It is approximately 700m to the north of the South Downs Way, Package 1 at its closest point. No effect on this site is envisaged
- Amberley Mount to Sullington Hill SSSI comprises calcareous grassland located along the escarpment to the immediate north of the South Downs Way, and to the south of the path on Camp Hill, crossing over the path at two locations. Package 1 may be within this SSSI
- Arun Banks SSSI comprises woodland with fen and reedbed habitat associated with a bank and circular path to the immediate east of the River Arun, to south of North Stoke. Package 2 passes immediately adjacent to this SSSI
- Arundel Park SSSI comprises woodland and grassland within Arundel Park, located immediately west of the River Arun to the west of North Stoke, approximately 100m to the south of Monarch's Way at its closest location. Package 4 may be in close vicinity to this site, depending on the location of the works
- Fairmile Bottom SSSI comprises mainly deciduous woodland associated with Rewell Hill Wood, extending to the south west of Arundel Park SSSI, to the south of the A29. The majority of the site is also a Local Nature Reserve. The SSSI is approximately 300m to south of Monarch's Way and Package 4, depending on the location of the works
- Duncton to Bignor Escarpment SAC and Duncton to Bignor Escarpment SSSI comprises woodland along the escarpment located to the west of Amberley Station, extending west from West Burton, passing to the south of Bignor and north towards Duncton. The site lies mainly to the north of Monarch's Way and the South Downs Way, although both paths pass through a short section of the SSSI where the two paths almost converge to the south of Coldharbour Farm. Unless Packages 4 and 5 are located in this area, this SSSI is not likely to be affected.

There are also numerous woodlands included on the National Inventory of Woodlands and Trees, including Stoke Hazel Wood (through which the southern part of Package 1 will pass), woodland adjacent to Arun Banks SSSI (adjacent to which Package 2 will pass), Trot Row, Houghton Forest and Dalesdown Wood (through which Packages 4 and 5 will pass).

No search for protected species has been undertaken, but it can be assumed that nationally rare species or assemblages of plant and animal species are likely to be present within the designated sites. Protected wildlife may also be present, and may include breeding birds, bats, dormice, reptiles, badgers, water voles and invertebrates.

Although no ground disturbance beyond the existing paths, and no removal of trees, scrub or grassland is envisaged, it will be important for an experienced ecologist to undertake site visits to evaluate the potential for each site to support protected species and to make recommendations for mitigation, which may include the requirement for some site supervision prior to or during construction, delineation of sensitive features such as trees or hedges to be protected or programming to avoid sensitive times of the year. Where works are required within or adjacent to designated sites (Amberley Mount to Sullington Hill SSSI and Arun Banks SSSI due to Packages 1 and 2, and possibly Arundel Park SSSI, Fairmile Bottom SSSI and Duncton to Bignor Escarpment SSSI due to Packages 4 and 5), there will also need to be prior consultation with Natural England. Provided that any mitigation is implemented as required, it is envisaged that there will be no significant long term impact on ecology or nature conservation.

#### **Landscape and land use**

All works will take place within the South Downs National Park, which assigns a national level of importance to the landscape.

The proposed improvement works will result in some change to the surfacing of the paths, but the materials to be used will be selected with consideration to existing materials so that they tie in with what is already present and they are appropriate to that location. Where signs are to be placed, these will also be in keeping with the character of their location.

The main benefit of the improvement works will be to improve user safety, improve visitor satisfaction and encourage a greater use and appreciation of the landscape without causing increased erosion to the paths or countryside, thus helping to secure its long term use. Pedestrians, cyclists and equestrians will benefit from the proposals. Whilst no detrimental impact on the landscape is envisaged, in order to secure this beneficial effect without detriment to the landscape, it is recommended that the detailed design of the proposals is discussed with the South Down National Parks authority.

## **Enhancements 6 to 9**

### **Archaeology and cultural heritage**

There are a number of Scheduled Monuments located along the length of the South Downs Way and Monarch's Way in the vicinity of Steyning, Bramber and Upper Beeding. In particular, there are several Scheduled Monuments to the south west of Steyning, in the vicinity of Steyning Round Hill/Cross Dyke, some of which lie along or are in the vicinity of the path forming Package 8, and a listed building at Peppercombe Farm. There are also several Scheduled Monuments associated with the remains of Bramber Castle at Bramber. The path forming Package 9 passes through one of these monuments. A further Scheduled Monument is located to the east of the River Adur at Erringham Farm, in the vicinity of the southern end of Package 7.

Both Steyning and Bramber contain many listed buildings. At Steyning, these are concentrated along High Street and Church Street, whilst at Bramber, they are located mainly along The Street, but there are also listed buildings at Coombe, Botolphs and at Old Erringham, which lie to the south of these villages.

At present, it is not anticipated that the proposed works will necessitate excavations into previously undisturbed ground and that all works will take place on well-trodden paths. However, given that the Package 9 works will take place adjacent to Bramber Castle Scheduled Monument, Package 8 will be in the vicinity of the Scheduled Monument on the west side of Steyning, there is high archaeological importance of known sites in the area, and a high potential for unknown buried sites in the vicinity of the paths, it is recommended that more detailed evaluation is undertaken at a later stage. This should include consultation with the West Sussex Archaeological Advisory Service and, where works are along or in the

vicinity of Scheduled Monuments (particularly for Packages 8 and 9), consultation with English Heritage (or be in accordance with procedures agreed with English Heritage).

No adverse impact on the setting of any sites or buildings is envisaged (see 'Landscape' below).

### **Ecology and biodiversity**

There are numerous sites designated for their national ecological interest along the River Adur valley. These are:

- River Adur SSSI, which extends from the pedestrian foot bridge across the river in Shoreham to east of Applesham Farm. Most of the site is located within the river, but a small stretch extends along a drainage ditch on the east bank, just north of the A27, close to the Downs Link (Package 7)
- Beeding Hill to Newtimber Hill SSSI is a linear site made of several separate areas extending from the A283 Shoreham Road on the east side of the river south of Upper Beeding, eastwards to Newtimber Hill just west of Pyecombe. There are two areas located to the north and south of the South Downs Way, to the southeast of Upper Beeding and Castle Town. The path that forms Package 7 passes close to this SSSI, but is separated by Shoreham Road/Stevington Road. This site is unlikely to be affected
- Chanctonbury Hill SSSI is located approximately 2 km to the north west of Stevington. This site should not be affected

Mill Hill Local Nature Reserve comprising mainly grassland and scrub is located on the valley sides, to the east of Stevington Road and Erringham Farm. This site should not be affected.

There are also a number of woodlands included on the National Inventory of Woodlands and Trees, including woodland along the escarpment along Pepperscombe Farm (through which Package 8 will pass), woodland at Bramber castle (through which Package 9 will pass), and some at Old Erringham Farm (unlikely to be affected by Package 7).

No search for protected species has been undertaken, but it can be assumed that nationally rare species or assemblages of plant and animal species are likely to be present within the designated sites. Protected wildlife may also be present, and may include breeding birds, bats, dormice, reptiles, badgers, water voles and invertebrates.

Although no ground disturbance beyond the existing paths, and no removal of trees, scrub or grassland is envisaged, it will be important for an experienced ecologist to undertake site visits to evaluate the potential for each site to support protected species and to make recommendations for mitigation, which may include the requirement for some site supervision, delineation of sensitive features such as trees or hedges to be protected or programming to avoid sensitive times of the year. Where works are required within or close to designated sites (the ditch within River Adur SSSI due to Package 7), there will also need to be prior consultation with Natural England. Provided that any mitigation is implemented as required, it is envisaged that there will be no significant long term impact on ecology or nature conservation.

### **Landscape and land use**

These works will take place within the South Downs National Park. Comments and recommendations are as for Packages 1 to 5.

## **Enhancements 10 and 12**

### **Archaeology and cultural heritage**

There are a several Scheduled Monuments located along the length of and adjacent to the South Downs Way and Devil's Dyke in the vicinity of Fulking. These include various tumuli along the South Downs Way, a Mott and Baily to the west of Fulking approximately 200 m north of the South Downs Way, and the medieval village of Perching approximately 300m to the south of Fulking and the South Downs Way. A large fort is located to the south east of Fulking, which is approximately 100m to the north of the South Downs Way and through which the Devil's Dyke (Package 12) passes. A further site located on Devil's Dyke and the South Downs Way just to the south of the fort.

There are numerous listed buildings within Fulking along Clappers Lane and within Poynings and Saddlescombe.

At present, it is not anticipated that the proposed works will necessitate excavations into previously undisturbed ground and that all works will take place on well-trodden paths. However, given the high archaeological importance of known sites along the South Downs Way and Devil's Dyke, and the high potential for unknown buried sites in the vicinity of the paths, it is recommended that more detailed evaluation is undertaken at a later stage. This should include consultation with the West Sussex Archaeological Advisory Service and, where works are along or in the vicinity of Scheduled Monuments (for both Packages 10 and 12), consultation with English Heritage will be required (or be in accordance with procedures agreed with English Heritage).

No adverse impact on the setting of any sites or buildings is envisaged (see 'Landscape' below).

### **Ecology**

There is one site designated for its national ecological interest in the vicinity of the proposed works. This is:

- Beeding Hill to Newtimber Hill SSSI is a linear site made of several separate areas extending from the A283 Shoreham Road on the east side of the river south of Upper Beeding, eastwards to Newtimber Hill just west of Pyecombe, passing to the south of Fulking and Poynings. Both the South Downs Way and Devil's Dyke pass either adjacent to or directly through the SSSI.

No search for protected species has been undertaken, but it can be assumed that nationally rare species or assemblages of plant and animal species are likely to be present within the designated sites. Protected wildlife may also be present, and may include breeding birds, bats, dormice, reptiles, badgers, water voles and invertebrates.

Although no ground disturbance beyond the existing paths, and no removal of trees, scrub or grassland is envisaged, it will be important for an experienced ecologist to undertake site visits to evaluate the potential for each site to support protected species and to make recommendations for mitigation, which may include the requirement for some site supervision, delineation of sensitive features such as trees or hedges to be protected or programming to avoid sensitive times of the year. Where works are required within or close to designated site, there will also need to be prior consultation with Natural England. Provided that any mitigation is implemented as required, it is envisaged that there will be no significant long term impact on ecology or nature conservation.

### **Landscape and land use**

These works will take place within the South Downs National Park. Comments and recommendations are as for Packages 1 to 5.

## **Enhancement 11**

### **Archaeology and cultural heritage**

There are a number of Scheduled Monuments located along the South Downs Way in the vicinity of South Harting and the ruins of a Tower on Tower Hill approximately 100m to the east of the path, due south of South Harting. There are many listed buildings, mainly concentrated along the B2146 in South Harting and at the National Trust property on Uppark, which lies approximately 1km to the south east of the South Downs Way, in the far side of Tower Hill.

At present, it is not anticipated that the proposed works will necessitate excavations into previously undisturbed ground and that all works will take place within the highways boundary. However, given the high archaeological importance of known sites along the South Downs Way and in proximity to the works, and the high potential for unknown buried sites in the vicinity of the works, it is recommended that more detailed evaluation is undertaken at a later stage. This should include consultation with the West Sussex Archaeological Advisory Service and, due to the proximity to the ruins of the tower Scheduled Monument,

consultation with English Heritage will be required (or be in accordance with procedures agreed with English Heritage).

No adverse impact on the setting of any sites or buildings is envisaged (see 'Landscape' below).

### **Ecology**

There are two sites designated for their national ecological interest in proximity to the proposed works. These are:

- Harting Down SSSI, extends along the escarpment on the north side of the South Downs Way to the south of South Harting and along the hillsides on Little Round Down to the south of the path, to the south east of South Harting.
- Harting Downs LNR, which includes part of Harting Down SSSI and is located to the south east of South Harting

No search for protected species has been undertaken, but it can be assumed that nationally rare species or assemblages of plant and animal species are likely to be present within the designated sites. Protected wildlife may also be present, and may include breeding birds, bats, dormice, reptiles, badgers, water voles and invertebrates.

The proposed works will take place either within or immediately adjacent to Harting Down SSSI and Harting Down LNR. Although it is envisaged that all works will take place within the highways boundary such that there will be no ground disturbance beyond the existing paths, and no removal of trees, scrub or grassland, it will be important for an experienced ecologist to undertake site visit to evaluate the potential to support protected species and to make recommendations for mitigation, which may include the requirement for some site supervision, delineation of sensitive features such as trees or hedges to be protected or programming to avoid sensitive times of the year. Where works are required within the designated sites (Harting Down SSSI and Harting Down LNR), there will also need to be prior consultation with Natural England and the local planning authority. Provided that any mitigation is implemented as required, it is envisaged that there will be no significant long term impact on ecology or nature conservation.

### **Landscape and land use**

These works will take place within the South Downs National Park. Comments and recommendations are as for Packages 1 to 5.

## **Enhancement 13**

### **Archaeology and cultural heritage**

There is one Scheduled Monument located at Pyecombe. This is a linear feature approximately 200m to the west of the A273. There are two listed buildings in this part of the village, which are located on School Lane and Church Hill.

At present, it is not anticipated that the proposed works will necessitate excavations into previously undisturbed ground and that all works will take place within the highways boundary and no impact on buried archaeology is envisaged. However, it is recommended that consultation is undertaken with the West Sussex Archaeological Advisory Service once the details of the works are known to confirm that no further investigations will be required.

No adverse impact on the setting of any sites or buildings is envisaged (see 'Landscape' below).

### **Ecology**

There are several sites designated for their national ecological interest in proximity to the proposed works. These are:

- Beeding Hill to Newtimber Hill SSSI is a linear site made of several separate areas extending from the A283 Shoreham Road on the east side of the river south of Upper Beeding, eastwards to

Newtimber Hill just west of Pyecombe. The site is approximately 1.5 km to the west of the proposed works. No impact on this site is envisaged

- Woolstonbury Hill SSSI, which is located approximately 100m to the west of the A273

No search for protected species has been undertaken, but it can be assumed that nationally rare species or assemblages of plant and animal species are likely to be present within the designated sites. Protected wildlife may also be present, and may include breeding birds, bats, dormice, reptiles, badgers, water voles and invertebrates.

The proposed works will take place within 100m of Woolstonbury Hill SSSI. Although it is envisaged that all works will take place within the highways boundary such that there will be no ground disturbance beyond the existing paths, and no removal of trees, scrub or grassland, it will be important for an experienced ecologist to undertake site visit to evaluate the potential to support protected species and to make recommendations for mitigation, which may include the requirement for some site supervision, delineation of sensitive features such as trees or hedges to be protected or programming to avoid sensitive times of the year. Where works are required in the vicinity of the designated site, there will also need to be prior consultation with Natural England. Provided that any mitigation is implemented as required, it is envisaged that there will be no significant long term impact on ecology or nature conservation.

### **Landscape and land use**

These works will take place within the South Downs National Park. Comments and recommendations are as for Packages 1 to 5.

## **Enhancement 14**

### **Archaeology and cultural heritage**

There are Scheduled Monuments or listed buildings in the immediate vicinity of Package 14. The closest listed buildings are located on the west bank of the River Adur, at Botolphs on Annington Road (including Old Barn Cottage and St Botolphs Cottage), approximately 400m from the site.

At present, it is not anticipated that the proposed works will necessitate excavations into previously undisturbed ground and that all works will take place within the highways boundary. No impact on buried archaeology is envisaged. However, it is recommended that consultation is undertaken with the West Sussex Archaeological Advisory Service once the details of the works are known to confirm that no further investigations will be required.

No adverse impact on the setting of any sites or buildings is envisaged (see 'Landscape' below).

### **Ecology**

There is one site designated for its national ecological interest in proximity to the proposed works. This is:

- Beeding Hill to Newtimber Hill SSSI, which is a linear site made of several separate areas extending from the A283 Shoreham Road on the east side of the river south of Upper Beeding, eastwards to Newtimber Hill just west of Pyecombe. The site is approximately 180 to the south east of the proposed works. No impact on this site is envisaged

No search for protected species has been undertaken, but it can be assumed that nationally rare species or assemblages of plant and animal species are likely to be present within the designated sites. Protected wildlife may also be present, and may include breeding birds, bats, dormice, reptiles, badgers, water voles and invertebrates.

Although it is envisaged that all works will take place within the highways boundary such that there will be no ground disturbance beyond the existing paths, and no removal of trees, scrub or grassland, it will be important for an experienced ecologist to undertake site visit to evaluate the potential to support protected species and to make recommendations for mitigation, which may include the requirement for some site supervision, delineation of sensitive features such as trees or hedges to be protected or programming to avoid sensitive times of the year. Where works are required in the vicinity of the designated site, there will also need to be prior consultation with Natural England. Provided that any

mitigation is implemented as required, it is envisaged that there will be no significant long term impact on ecology or nature conservation.

### **Landscape and land use**

These works will take place within the South Downs National Park. Comments and recommendations are as for Packages 1 to 5

## **Conclusions**

On the basis of the high level desk study and appraisal it has been identified that some of the work packages will take place within or in close proximity to designated cultural heritage assets and ecological sites, as well as being located within the South Downs National Park. Although it is envisaged that the proposed works will result in no significant long term adverse impacts on these features some further investigation and consultation is recommended to ensure that appropriate mitigation is proposed and that the statutory bodies are fully informed of the proposals and given the chance to respond. With appropriate mitigation, no adverse impacts are envisaged.

In terms of landscape, it is also envisaged that there will be no significant long term adverse impact provided that appropriate materials are used and no trees are removed. However, it is recommended that the detailed design of the proposals is discussed with the South Down National Parks authority to ensure that they are considered appropriate to their location.

It is envisaged that any temporary impacts on air quality, noise, water quality or as a result of disturbance of contamination or path diversions during construction can be adequately mitigated by the adoption of appropriate construction methods and standards, with no significant long term impact.

The main benefit of the proposed improvement works will be to improve user safety, improve visitor satisfaction and encourage a greater use and appreciation of the landscape without causing increased erosion to the paths or countryside, thus helping to secure its long term character and use. Pedestrians, cyclists and equestrians will benefit from the proposals.