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Rampion 2 WIND FARM

Volume 4, Chapter 18

Socio-Economics Appendices

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Rampion 2 WIND FARM

Volume 4, Appendix 18.1

Socioeconomic and Tourism and Recreation Method Statement

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1. Introduction

1.1.1 This Method Statement outlines the proposed methodology to assess the Socioeconomic and Tourism impact of the proposed Rampion 2 project. The purpose of this document is to share the proposed approach with the Rampion 2 Expert Topic Group (ETG), as part of the Evidence Plan Process (EPP), in order to discuss and agree on the final methodology used for the impact assessment in the frame of developing the Environmental Statement (ES) for Rampion 2.

1.1.2 This Method Statement presents the methodology for the assessment of the socio-economic impacts generated by the proposed Rampion 2. The assessment will feed into the socio-economic chapter which will be included in the final ES submitted as part of the Development Consent Order (DCO) Application.

1.1.3 The assessment of the potential effects of the construction, operation and decommissioning of Rampion 2 upon the Sussex economy (including the impact on tourism) considers the following aspects:

- the impacts and potential socio-economic benefits associated supply chain capture and local expenditure by local businesses;
- the impacts of the proposed wind farm that would be constructed off, and visible from the shoreline of popular day and overnight visitor destinations; and
- the impacts of the construction of the wind turbine generators (WTGs) and associated infrastructure, laying of the export cables (for instance, both onshore and offshore cables), and construction of the onshore substation. Construction and installation has the potential to temporarily reduce access to and enjoyment of local recreational and tourism assets.

2. Proposed approach to assessment

2.1 Scope of assessment

Receptors

2.1.1 The Scoping Report (Rampion Extension Development Limited (RED), 2020) identified a number of socio-economic, tourism and recreation receptors for the assessment to consider. These are outlined in **Table 2-1** below, along with the phases of the Proposed Development against which these will be assessed, and the level of detail and rationale to be adopted in the assessment.

Table 2-1 Summary of socio-economic receptors identified in Scoping Report

Receptor	Construction	Operation and maintenance	Decommissioning	Level of detail and rationale
Socio-Economic Receptors				
Economy – Employment	✓	✓	✓	**Detailed assessment at construction and operation and maintenance phases**. 1) Impacts can be quantified and relatively accurately estimated. 2) Will cover both direct and indirect economic effects but excludes induced effects. **Simple assessment at decommissioning phase** as less information is available.
Economy – Gross Value Added (GVA)	✓	✓	✓	**Detailed assessment at construction and operation and maintenance phases**. 1) Impacts can be quantified and relatively accurately estimated. 2) Will cover both direct and indirect economic effects but excludes induced effects. **Simple assessment at decommissioning phase** as less information is available.
Change in demographics	✗	✗	✗	**Scoped out -** see **paragraph 2.1.2**
Demand for housing,	✗	✗	✗	**Scoped out -** see **paragraph 2.1.2**

Receptor	Construction	Operation and maintenance	Decommissioning	Level of detail and rationale
accommodation and local services				
Recreation and Tourism Receptors				
Onshore recreation activity	✓	✓	✓	**Detailed assessment at construction and operation and maintenance phases**. 1) Analysis will draw on published research. 2) The research tends to focus on offshore infrastructure, rather than onshore transmission and grid connection. 3) Analysis will draw on available, relevant data-sources. Where user data is not available, an indirect (for instance, inferred) approach will be adopted. **Simple assessment at decommissioning phase** as less information is available.
Offshore recreation activity	✓	✓ onshore × inshore (see **paragraph 2.1.3**)	✓	**Assessment at construction, operation and maintenance, and decommissioning phases.** 1) Analysis will draw on published data sources and information collection from user groups. 2) Research typically finds that a large majority of visitors do not expect any impacts, whilst some expect wind farm projects to have a positive impact. Visitors reporting that they are more/ less

Receptor	Construction	Operation and maintenance	Decommissioning	Level of detail and rationale
				likely to visit as a consequence of a wind farm development is typically small. 3) It will be difficult to quantify this for Rampion 2, and therefore a qualitative approach is recommended.
Tourism economy	✓	✓	✓	**Detailed assessment at construction phase. Simple assessment at operation and maintenance, and decommissioning phases.** 1) Whilst the scale of the tourism economy can be easily quantified (in terms of employment and economic output), the impact of construction, operation and maintenance and decommissioning is difficult to quantify. 2) In particular disruption to marine and coastal tourism activities, restricted access to local beaches and other tourism attractions, and changes in perceptions of the attractiveness of the area to visitors will be considered. 3) Analysis will draw on research assessing the impact of offshore and onshore windfarms on the tourism economy, and information collection from local public sector bodies and relevant agencies. A qualitative approach to the assessment will be used.

2.1.2 In the Scoping Opinion, the Planning Inspectorate (PINS) considered potential impacts of construction, operation and maintenance, and decommissioning activity on changes to population structure as a result of increased demand for labour and the subsequent demand for housing accommodation and local infrastructure. The Scoping Report stated that the impacts were likely to be negligible and any effects would be spread wider than the immediate study area. As such, the PINS agreed that both these matters could be **scoped out** from the EIA as significant effects are unlikely to occur.

2.1.3 With regards to inshore recreation during the operation and maintenance phase, the PINS agreed that significant effects are unlikely, and that the ES will assess operational effects in terms of offshore recreation. However, the PINS argues that without fully understanding the extent of the inshore area as defined in the context of the socio-economic assessment, inshore recreation during the operation and maintenance phase should be included within the assessment.

Study impact area

2.1.4 The selection of study impact area(s) for the socio-economic, tourism and recreation impact analysis needs to take account of the spatial scale at which impacts upon different receptors are likely to materialise. An overview of the receptors and proposed impact areas is presented below.

2.1.5 The assessment captures the socio-economic impact of Rampion 2 at two key (geographical) areas as follows:

- United Kingdom (UK) – defined the countries of England, Scotland, Wales and Northern Ireland; and
- Sussex – defined as the combined and contiguous geography consisting of East Sussex, West Sussex and the Brighton and Hove Unitary Authority area.

Table 2-2 Summary of receptors and study areas used

Receptor	Study area	Justification
Economy – Employment	Sussex and UK	Given the relatively specialist nature of the project supply chain, local expenditure is likely to be limited. However, total expenditure is likely to be spread widely and therefore is best captured at the county-level and/ or above.
Economy – GVA	Sussex and UK	Given the relatively specialist nature of the project supply chain expenditure is likely to be spread widely and is best captured at the county (or in this case, multiple county) level. Local Labour market catchments for both construction, operation and maintenance and decommissioning activity generally extend over a 90-minute drive time and align with functional geographies, roughly defined as Sussex.

Receptor	Study area	Justification
Tourism economy	Sussex	Impact of development on tourism is likely to be concentrated in close proximity of locations of construction/ operation and maintenance port and along onshore cable corridor (divided into sections) with a zone of influence generally set at 500 metres (m) from the onshore cable corridor. However, for the purposes of this assessment, the impact on the tourism economy takes into consideration the wider Sussex area, which in addition to the onshore cable corridor also includes coastal communities and the South Downs National Park (SDNP).
Onshore recreation	Cable corridor (divided into relevant sections)	The impact of onshore cable and substation construction activity on tourism and recreation activity will be focussed along the proposed onshore cable corridor, with a zone of influence generally set at 500m from the onshore temporary cable corridor. Sensitivity of the receptor will vary depending on location and level of activity required during the construction, operation and maintenance and decommissioning phases.
Offshore recreation	Offshore and inshore (inshore to be defined further as part of PEIR)	Possibility for offshore and inshore recreation to be impacted within the area of the Proposed Development, relevant safety buffers (during both construction and operation and maintenance phases) and in close proximity to landfall.

3. Baseline

3.1.1 The assessment of economic impacts for Rampion 2 is an assessment of 'base-case scenario' economic impacts – in line with the approach for all parameters set in the Environmental Impact Assessment (EIA) Methodology. The assessment provides an indication of base-case expectations with regards to economic benefits and worse case assumptions on dis-benefits. The baseline analysis will explore a range of socio-economic indicators to paint a full picture of the socio-economic characteristics of the impact area(s) identified, and the factors which drive and explain them. The baseline data review will cover the full range of demographic, economic, employment and sector datasets, and will set out the following:

- size and structure of the population and key demographic trends;
- nature of the labour market (including the size of the working age population, levels of economic activity and employment, and the nature of capacity that exists within the labour market);
- current level of, and recent trends in employment and GVA creation (in terms of total GVA, GVA per head and GVA per worker, and the factors which explain this);
- size and sectoral structure of the employment and business base;
- earnings associated with the current employment base, focussing on sectors relevant to construction and operation and maintenance activity, as well as the tourism economy;
- skills and occupations background of the study area's workforce; and
- onshore informal recreation facilities.

Table 3-1 Baseline indicators

Source	Date	Summary	Study area
Sub-national Gross Value Added (GVA)	1998 to 2018	Current position and trends in the following for identified Zones of Influence: 1) total GVA; 2) GVA in sectors of interest; 3) GVA per head; and 4) GVA per worker.	Local authority boundaries (including full coverage of Sussex).
Business Register and Employment Survey (BRES)	2009 to 2015 and 2015 to 2019	Current position and long-term trends in: 1) total employment (including full-time equivalent (FTE) employees); 2) sectoral mix; and	Local authority boundaries (including full coverage of Sussex).

Source	Date	Summary	Study area
		3) employment in relevant sectors: (i) energy sector, (ii) construction and manufacturing sectors relevant to offshore wind, (iii) tourism, (iv) ports and maritime activity, and (v) recreation activity.	
UK Business Counts	2010 to 2019	Current position and long-term trends in total stock of businesses, including size and sectoral breakdown.	Local authority boundaries (including full coverage of Sussex).
Employment forecasts	2020 to 2040 (or similar period)	Projected changes in (i) total employment (FTEs), and (ii) sectoral mix. Also provides historic data for range of economic and labour market indicators. The availability of forecasts will need to be determined in due course and could be provided/ made available via various sources (for example, Local Enterprise Partnership (LEP), etc).	Typically, local authority boundaries, however forecasts may only be available at the county-level (including full coverage of Sussex).
Mid-year population estimates	2001 to 2019	Current position and long-term trends in total and working age population.	Local authority boundaries (including full coverage of Sussex).
Sub-National Population Projections	2016 to 2041	Projected total and working age population.	Local authority boundaries (including full coverage of Sussex).
Annual Population Survey	2004 to 2020	Current position and long-term trends in: 1) the local labour market including (i) economic	Local authority boundaries (including full coverage of Sussex).

Source	Date	Summary	Study area
		activity, (ii) employment, and (iii) unemployment; 2) qualifications; and 3) occupations.	
Local tourism surveys	Latest available (referenced in PEIR)	Annual estimates of volume and value of tourism activity (day visitors and staying visitors); accommodation occupancy surveys.	Sussex coastline/ coastal communities (subject to data availability)
Economic Impact of Tourism	Latest available (referenced in PEIR)	Volume and value of tourism economy and the impact of visitor expenditure on the local economy.	Sussex coastline/ coastal communities (subject to data availability)
Ordnance Survey (OS) Explorer maps OL10 and OL11	May 2020	Identifies recreational assets onshore.	Onshore study area
Definitive Map and Statement	Latest available	Online digital versions of the definitive map of public rights of way (PRoW) will be searched. Reference to the legal definitive map and statement will be made as and when required.	Onshore study area
MAGIC – Multi-agency Geographic Information for the Countryside	May 2020	Used to identify the full suite of formally defined access and recreation assets, ranging from Access Land to Millennium Greens.	Onshore study area
Google Earth	May 2020	A basic understanding of the recreation geography and identify any assets not recorded on the OS sheets or MAGIC.	Onshore study area
Online searches onshore	May 2020	Used to identify recreational pursuits involving the Rivers Arun and Adur. Both rivers are used for swimming events and angling. Both are tidal into the study area and small boats, especially canoes, kayaks and	River Arun from Littlehampton to Arundel. River Adur from Steyning to Henfield.

Source	Date	Summary	Study area
		stand-up paddle boards use both rivers.	
Online searches onshore	May 2020	Used to identify public events taking place on assets within the cable corridor and its zone of influence	Onshore study area
Online searches inshore	May 2020	Used to identify recreational pursuits in the vicinity of Climping Beach. While the beach is recognised to be quieter than most on this stretch of coast, it is used regularly by windsurfers and kite surfers. At least one kite surfing school uses the beach for lessons.	Inshore at Climping Beach.
Recreational activity	Latest available	Data on use of offshore and related onshore recreational resources close to offshore wind farm infrastructure and the export and onshore cable corridor route.	Scoping Boundary
Economic studies	Latest available based on current stage of respective Local Plans (including Local Plan Review)	A range of research and specific assessments on economic activity, supply chain and skills strengths. Evidence of the relationships between offshore wind farm development and the tourism economy within the vicinity of them.	Local authority boundaries (at this stage level of coverage across Sussex is unknown)
Ports and harbour infrastructure	Latest available	Literature on the nature and range of facilities, assets and use.	Sussex and wider UK study area

3.1.2 In addition to the data-driven aspect, the baseline analysis will also consider the following in order to inform the sensitivity assessment of the receptors:

- relevant local economic and planning policies to identify implications for the socio-economic assessment (in particular the relevant sensitivity of receptors considered);
- published data and research relevant to the offshore wind sector, and its supply chain;

- published data and research about tourism and the visitor economy in Sussex,
- local policies, strategies and/ or other interventions which could enhance socio-economic impacts; and
- an overview of suitable port facilities in the nearby area, drawing on available ports and harbours infrastructure literature and any assessment undertaken by RED.

4. Assessment of impacts

4.1 Modelling economic activity and employment impacts

Overview

4.1.1 The assessment of economic impacts for Rampion 2 is an assessment of 'base-case scenario' economic impacts – in line with the approach for all parameters set in the EIA Methodology. The assessment provides an indication of base-case expectations with regards to economic benefits and worse case assumptions on dis-benefits.

4.1.2 The assessment of socio-economic impacts will focus primarily on the GVA and employment impacts of Rampion 2. The following section sets out the key assumptions and the (proposed) approach to assessing impacts on the receptors.

4.1.3 For the key quantitative measures of economic impact (for instance, employment and GVA output) we will develop an economic impact model to estimate the direct (as well as supply chain/indirect) employment and GVA impacts supported during both construction and operation phases. At this stage, there is very little information about the proposed approach, costs and therefore impacts supported during the decommissioning phase, and as such, this will be assessed qualitatively.

4.1.4 The assessment will exclude the induced impacts generated by all phases, as these are typically affected by greater uncertainty and are more difficult to measure and defend robustly in terms of their scale and additionality.

4.1.5 The assessment will be based on the assumption that a minimum 50 percent of total lifetime expenditure is retained within the UK, representing a 'base case' scenario (for instance, a conservative assessment of the beneficial economic impacts of Rampion 2). The latest offshore wind industry assessment on UK content, published in 2017 reported UK offshore wind farms achieving 48 percent UK content (RenewableUK, 2017), which represents the starting for The Guide to an Offshore Wind Farm (The Crown Estate (TCE), 2019). The offshore wind sector committed to increasing this to 50 percent UK content by the end of 2020. Under the least beneficial approach to socio-economics, it is assumed that UK content achieved for the Rampion 2 remains at 50 percent over the lifetime of the project.

4.1.6 It is worth noting that Rampion 2 will be working to achieve higher UK content than the base case used here for the purposes of the EIA. This is in line with target set out in the Offshore Wind Sector Deal struck with Government, which commits the offshore wind sector as a whole to reach 60 percent UK content by 2030.

4.1.7 The absolute scale of the economic impacts supported during the construction phase will be measured using the following methods:

- Direct construction employment and GVA – This relates to the economic impacts related to capital spend on design and construction of Rampion 2. In other terms, this relates to employment and GVA which is associated with the first round of capital expenditure (for instance, Rampion 2's direct expenditure

with prime (for instance, Tier-1) contractors within each impact area identified). The assessment will be driven by the level of expenditure on goods and services retained in each area. The additional output in each sector will be converted to jobs and GVA using sector-based benchmarks (for example, from the Office for National Statistics (ONS) Annual Business Survey (ABS)) appropriate to each impact area.

- Indirect construction employment and GVA – These impacts take place in supply chains of companies that supply goods and services as part of the supply chains during the construction phase. We will use our UK and regional Input-Output tables, supplemented by National Accounts data to estimate the amount of output generated across various sectors as a result of input into (or spend in) a particular sector of the economy. The model will estimate how direct spend with Tier-1 suppliers leads to indirect output further down the supply chain. The output from the model will be converted to FTE jobs and GVA using sector benchmarks.

4.1.8 The absolute scale of the economic impact during the operations phase will be measured using the same indicators as set out above (for instance, employment and GVA) although the methodology will differ slightly:

- Direct operation and maintenance employment and GVA – Jobs and wealth creation directly associated with operation and maintenance activity is defined as the FTE employees directly engaged in activities relating to the management, operation, monitoring and maintenance of Rampion 2. The assessment will be driven by the anticipated number of FTEs and their salaries analysed by type of employment.
- Indirect operation and maintenance employment and GVA – Jobs and GVA associated with supply chain spend during the operation and maintenance phase will include second round supply chain impacts. These will be measured using UK and regional Input-Output tables, supplemented by National Accounts data to estimate the amount of output generated across various sectors as a result of input into (or spend in) a particular sector of the economy. The model will estimate how direct spend with Tier-1 suppliers leads to indirect output further down the supply chain. The output from the model will be converted to jobs and GVA using sector benchmarks.

4.1.9 The output from this quantitative assessment will underpin the assessment of the magnitude of impacts on each receptor, which will be determined by the scale and nature of the impact in the context of the baseline position. More detail on the proposed approach to defining magnitude of impact is set out below.

Estimated construction and operation and maintenance costs

4.1.10 Construction and operations phase expenditure incurred by Rampion 2 is the key driver of economic impacts generated by the Proposed Development. At this stage, detailed cost estimates are not likely to be available, and are also commercially sensitive (and therefore cannot be shared). Given this, the approach taken will be to estimate the development (DEVEX) construction (CAPEX) and operating (OPEX) costs on the basis of the most robust and up to date industry data which is publicly available. Furthermore, the assessment generates

assumptions on the amount of supply chain expenditure that is captured nationally (for instance, within the UK) as defined by BVG Associates (2015) in a study for the Department for Energy and Climate Change (DECC), RenewableUK and TCE.

4.1.11 Assuming a maximum generation capacity of up to 1,200 megawatts (MW), it is estimated that the investment required for the construction of the Rampion 2 project adds up to around £2.87 billion (in 2019-pricing). Furthermore, the project's assumed 30-year lifespan is estimated to represent an overall investment in the region of £1.29 billion (in 2019-pricing). This brings total development, construction and operation and maintenance costs over the project's assumed 30-year lifecycle to around £4.16 billion (in 2019-pricing). **Table 4-1** below presents an overview of the overall levels of expenditure that could be captured by the Sussex and UK study areas under the base case scenario. These percentages are based on UK industry figures published by TCE and exclude anticipated expenditure throughout the project's decommissioning phase.

Table 4-1 Overall base-case Construction and Operations Sourcing Assumptions for Rampion 2, (percent)

	Sussex	Rest of UK	Total UK
Construction (incl. DEVEX)	0.3 percent	39 percent	40 percent
Operations	16 percent	61 percent	77 percent
Total (excl. Decommissioning)	5 percent	46 percent	52 percent

Source: Hatch calculations, based on TCE (2019).

4.1.12 On the basis of the proportions outlined above, it is estimated the overall share of the construction and lifetime operations expenditure retained in Sussex could add up to around 5 percent of total lifetime expenditure (excluding expenditure retained during the decommissioning phase).

Modelling economic impacts

4.1.13 The method used to quantify the impacts of Rampion 2 is set out below. Firstly, the process of development to operation and maintenance the wind farm is broken down into individual inputs.

- The DEVEX and CAPEX spending phases can be broken down into the following stages:
  - development and consent – this captures all survey work and studies required to obtain consent, from environmental surveys and seabed surveys to human impact studies and design studies;
  - manufacture of components – this includes all infrastructure, namely the WTG (broken down into individual components - including the nacelle, rotor and tower), and balance of plant (which includes the remaining segments of

the wind farm excluding WTGs, such as foundations, cables and substations); and

- construction, installation and commissioning.

- OPEX supply chain spend – this includes costs associated with the maintenance of equipment and spare parts, other operational services (including offices, admin and transportation) and other costs (business rates, etc.) related to operating and maintaining the wind farm once it becomes operational; and
- OPEX direct employment – the type of jobs which would be expected to be required to operate a wind farm.

4.1.14 Using the sourcing assumptions set out above, the GVA and employment impacts are quantified using our in-house economic impact model which captures the multiplier effects of local expenditure, and identifies the direct, indirect and induced benefits created at the local Sussex and national levels.

Tourism economy

4.1.15 The assessment against the receptors will be conducted through:

- consideration of the findings of published research assessing the impact of both onshore and offshore wind farms on visitors and visitor economies in the UK. This includes both the WTGs and towers, as well as the transmission and grid infrastructure. We are not aware of any empirical ex-post evidence for existing wind farms off the coast of Sussex, but we will explore this;
- examination of the characteristics of the tourism sector in the defined study areas, including the main visitor centres, types of visiting activity, and types of visitors (subject to the availability of information); and
- assessment of the scale, location and nature of the proposed offshore and onshore infrastructure and proposed construction methods in relation to the visitor centres and facilities.

Recreation activity

4.1.16 The assessment of potential impact on receptors will be conducted through:

- consideration of the strategic importance of individual recreation resources, with reference to published plans, policies and strategies;
- examination of the characteristics of the resources and their users, and analysis of the dependency of users on a particular resource; and
- review of the expected scale, construction methods and timetable for onshore and offshore infrastructure in relation to particular resources.

4.2 Assigning significance

4.2.1 The socio-economics, tourism and recreation assessment will assign significance as per the approach outlined within the Scoping Report (RED, 2020) drawing upon both the sensitivity of the receptor and the magnitude of impact.

Table 4-2 Matrix used to determine scale of effect

		Magnitude of Impact			
		Major	**Moderate**	**Minor**	**Negligible**
Sensitivity of Receptor	**Very High**	Major	Major	Moderate//Major	Negligible
	High	Major	Moderate/Major	Minor/Moderate	Negligible
	Medium	Moderate/Major	Moderate	Minor	Negligible
	Low	Minor/Moderate	Minor	Negligible	Negligible

4.2.2 The sensitivity of each receptor will be evaluated as either very high, high, medium or low based on the baseline position and its performance against benchmark areas, together with consideration of the importance of the receptor in policy terms. **Table 4-3** and **Table 4-4** below provide more detail on the approach that will be adopted in defining receptor sensitivity. For recreation, the benchmarks set will draw upon guidance set out by the Institute of Public Rights of Way and Access Management (IPROW, 2020).

Table 4-3 Sensitivity of receptor (socio-economics)

Sensitivity	Definition
Very High	Receptor will be of very high sensitivity where it is identified as a policy priority and there is evidence of major socio-economic challenges or opportunities for the receptor within the study area.
High	Receptor will be of high sensitivity where it is identified as a policy priority (as a result of economic potential and/ or need). There is evidence of socio-economic challenges and/ or opportunities for the receptor within the study area.

Sensitivity	Definition
Medium	Receptor will be of medium sensitivity where it is not identified as a policy priority (as a result of economic potential and/ or need). There is however evidence of considerable socio-economic challenges and/ or opportunities for the receptor within the study area.
Low	Receptor will be of low sensitivity where it is not identified as a policy priority (as a result of economic potential and/ or need). There is evidence that the receptor is resilient within the study area.

Table 4-4 Sensitivity of receptor (recreation)

Sensitivity	Definition
Very High	Effects could be felt by users of a type that are very high sensitivity either because they are identified as having a high priority in policy (for example, mobility-impaired users) and/ or are especially dependent on the recreation resources which the area has to offer (especially if there are no alternative resources available regionally). An example would be walkers or cyclists that have set out to use a particular route (for example, a National Trail or National Cycle Network route).
High	Effects could be felt by users of a type that are of high sensitivity either because they are identified as having a medium priority in policy and/ or are largely dependent on the recreation or access resources which the area has to offer and have few alternative resources available locally. An example would be horse-riders or off-road cyclists in an area with a limited bridleway network.
Medium	Effects could be felt by users of a type that are of medium sensitivity either because they are identified as low priority in policy and/ or are not particularly dependent on the specific recreational resources which the area has to offer and have some alternative resources available locally. An example would include casual walkers or cyclists not intent upon using a specific promoted route, and who have access to a number of alternative routes available to them.
Low	Low effects could be felt by those given no specific mention in policy, or by casual and/or local users with many alternative recreational resources available to them. An example would

Sensitivity	Definition
	include dog-walkers in a locality that is well-supplied with public rights of way or accessible open space.

4.2.3 The magnitude of impact to the receptor will be determined by considering the estimated deviation from baseline conditions once measures aimed at mitigating any adverse impacts are taken into consideration. The criteria used for the assessment of magnitude will be evaluated as either high, medium, low or negligible, and are set out in more detail below.

Table 4-5 Criteria for assessing magnitude of impact

Phase	Baseline Measure	Negligible	Minor	Moderate	Major
GVA impacts					
Construction	Direct = relevant sectors Indirect = wider economy	<0.1 percent	0.1 to 0.5 percent	0.5 to 1 percent	>1 percent
Operation and maintenance	Direct = electricity generating sector Indirect = wider economy	<0.1 percent	0.1 to 0.5 percent	0.5 to 1 percent	>1 percent
Decommissioning	Relevant sectors and wider economy	Qualitative approach. In general, decommissioning activities are of a similar nature to, but no worse than the impacts identified during the construction phase.			
Employment impacts					
Construction	Direct = relevant sectors Indirect = wider economy	<0.5 percent	0.5 to 1 percent	1 to 2 percent	>2 percent
Operation and maintenance	Direct = electricity generating sector Indirect = wider economy	<0.5 percent	0.5 to 1 percent	1 to 2 percent	>2 percent
Decommissioning	Relevant sectors and wider economy	Qualitative approach. In general, decommissioning activities are of a similar nature to, but no worse than the impacts identified during the construction phase.			

Phase	Baseline Measure	Negligible	Minor	Moderate	Major
Tourism Economy					
Construction, operation and maintenance, and decommissioning	Tourism economy	Qualitative approach based on review of research evidence.			

4.2.4 For the assessment of the magnitude of impact on outdoor recreation, the assessment will follow the guidance set out by the IPROW (2020).

Table 4-6 Criteria for assessing magnitude of impact (recreation)

Magnitude of Impact	Definition
Major	Proposals would cause a substantial change (for instance, greater than 30 percent) to existing patterns and levels of use of recreational resources, either permanently or for a significant period of time (for instance, several months to permanent) and only poor-quality alternatives are available. An example would include a strategically important route closed for several months during peak season, and the only alternative provision is alongside a busy road with restricted accessibility.
Moderate	Proposals would cause a modest change (for instance, between 10 percent and 30 percent) to existing patterns and levels of use, of recreation resources, or a more substantial change for a limited period (of a few weeks). An example would include a temporary reduction in levels of use and displacement to alternative resources, particularly amongst users for whom the resource is only marginally preferable to others available to them.
Minor	Proposals would cause a slight (for instance, of under 10 percent) or short-term (for instance, less than one month) change to existing patterns and levels of use of recreation resources, with a slight reduction in overall numbers and a low level of displacement.
Negligible	No discernible changes in levels and/ or patterns of use.

4.2.5 As identified in **Table 4-2** above, any receptors with a significance level of moderate and/or major will be defined as being significant in EIA terms.

5. Glossary of terms and abbreviations

Table 5-1 Glossary of terms and abbreviations

Term (acronym)	Definition
ABS	Annual Business Survey
Baseline	Refers to existing conditions as represented by latest available survey and other data which is used as a benchmark for making comparisons to assess the impact of development.
Baseline conditions	The environment as it appears (or would appear) immediately prior to the implementation of the Proposed Development together with any known or foreseeable future changes that will take place before completion of the Proposed Development.
CAPEX	Construction Expense / Expenditure
Construction effects	Used to describe both temporary effects that arise during the construction phases as well as permanent existence effects that arise from the physical existence of development (for example new buildings).
DCO Application	An application for consent to undertake a Nationally Significant Infrastructure Project made to the Planning Inspectorate who will consider the application and make a recommendation to the Secretary of State, who will decide on whether development consent should be granted for the Proposed Development.
Decommissioning	The period during which a development and its associated processes are removed from active operation.
DECC	Department for Energy and Climate Change
Development Consent Order (DCO)	This is the means of obtaining permission for developments categorised as Nationally Significant Infrastructure Projects, under the Planning Act 2008.
DEVEX	Development Expense / Expenditure
Direct employment and gross value added	Employment and gross value added which is associated with the first round of capital expenditure, for instance, Rampion 2's spend with prime contractors within each impact area of the study.

Term (acronym)	Definition
Embedded environmental measures	Equate to 'primary environmental measures' as defined by Institute of Environmental Management and Assessment (2016). They are measures to avoid or reduce environmental effects that are directly incorporated into the preferred masterplan for the Proposed Development.
Environmental Impact Assessment (EIA)	The process of evaluating the likely significant environmental effects of a proposed project or development over and above the existing circumstances (or 'baseline').
Environmental measures	Measures which are proposed to prevent, reduce and where possible offset any significant adverse effects (or to avoid, reduce and if possible, remedy identified effects.
Environmental Statement (ES)	The written output presenting the full findings of the Environmental Impact Assessment.
Evidence Plan Process (EPP)	A voluntary consultation process with specialist stakeholders to agree the approach and the information required to support the EIA and HRA for certain aspects.
Full-time equivalent (FTE)	A unit for measuring employment which indicates the workload which indicates the workload associated with each post. One FTE is the equivalent of a full-time post, whilst an FTE of 0.5 suggests half-time.
Future baseline	Refers to the situation in future years without the Proposed Development.
Gross value added (GVA)	The measure of the value of goods and services produced in an area, industry or sector of an economy. At the level of a firm, it is broadly equivalent to employment costs plus a measure of profit.
Impact	The changes resulting from an action.
Indirect effects	Effects that result indirectly from the Proposed Development as a consequence of the direct effects, often occurring away from the site, or as a result of a sequence of interrelationships or a complex pathway. They may be separated by distance or in time from the source of the effects. Often used to describe effects on landscape character that are not directly impacted by the Proposed Development such as effects on perceptual characteristics and qualities of the landscape.

Term (acronym)	Definition
Indirect employment and gross value added	Employment and gross value added which is associated with the suppliers of companies that supply goods and services as part of the supply chain of the proposed Rampion 2.
IPROW	Institute of Public Rights of Way and Access Management
Likely Significant Effects	It is a requirement of Environmental Impact Assessment Regulations to determine the likely significant effects of the Proposed Development on the environment which should relate to the level of an effect and the type of effect.
Local Enterprise Partnership (LEP)	Voluntary partnerships between local authorities and businesses set up in 2011, by the Department for Business, Innovation and skills to help determine local economic priorities and lead economic growth and job creation within the local area.
m	Metre
MAGIC	Multi-agency Geographic Information for the Countryside
Magnitude (of change)	A term that combines judgements about the size and scale of the effect, the extent of the area over which it occurs, whether it is reversible or irreversible and whether it is short term or long term in duration'. Also known as the 'degree' or 'nature' of change.
MW	Megawatt
Nationally Significant Infrastructure Project (NSIP)	Nationally Significant Infrastructure Projects are major infrastructure developments in England and Wales which are consented by DCO. These include proposals for renewable energy projects with an installed capacity greater than 100MW.
ONS	Office for National Statistics
OPEX	Operating Expense / Expenditure
OS	Ordnance Survey
PEIR Assessment Boundary	The PEIR Assessment Boundary combines the search areas for the offshore and onshore infrastructure associated with the Proposed Development. It is defined as the area within which the Proposed Development and associated infrastructure will be located, including the

Term (acronym)	Definition
	temporary and permanent construction and operational work areas.
Planning Inspectorate (PINS)	The Planning Inspectorate deals with planning appeals, national infrastructure planning applications, examinations of local plans and other planning-related and specialist casework in England and Wales.
Preliminary Environmental Information Report (PEIR)	The written output of the Environmental Impact Assessment undertaken to date for the Proposed Development. It is developed to support formal consultation and presents the preliminary findings of the assessment to allow an informed view to be developed of the Proposed Development, the assessment approach that has been undertaken, and the preliminary conclusions on the likely significant effects of the Proposed Development and environmental measures proposed.
Proposed Development	The development that is subject to the application for development consent, as described in Chapter 4.
PRoW	Public Rights of Way
Receptor	These are as defined in Regulation 5(2) of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 and include population and human health, biodiversity, land, soil, water, air, climate, material assets, cultural heritage and landscape that may be at risk from exposure to pollutants which could potentially arise as a result of the Proposed Development.
RED	Rampion Extension Development Limited
Scoping Opinion	A Scoping Opinion is adopted by the Secretary of State for a Proposed Development.
Scoping Report	A report that presents the findings of an initial stage in the Environmental Impact Assessment process.
SDNP	South Downs National Park
Secretary of State (SoS)	The body who makes the decision to grant development consent.
Sensitivity	A term applied to specific receptors, combining judgements of the susceptibility of the receptor to the

Term (acronym)	Definition
	specific type of change or development proposed and the value associated to that receptor.
Significance	A measure of the importance of the environmental effect, defined by criteria specific to the environmental aspect.
Significant effects	It is a requirement of the EIA Regulations to determine the likely significant effects of the development on the environment which should relate to the level of an effect and the type of effect. Where possible significant effects should be mitigated.
Temporary or permanent effects	Effects may be considered as temporary or permanent. In the case of wind energy development the application is for a 30 year period after which the assessment assumes that decommissioning will occur and that the site will be restored. For these reasons the development is referred to as long term and reversible.
TCE	The Crown Estate
UK	United Kingdom
WTG	Wind Turbine Generators

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4.18.2

Rampion 2 WIND FARM

Volume 4, Appendix 18.2

Socio-economics technical baseline

GoBe wood.

Contents

1. Socio-economic baseline

This Appendix presents the preparatory work for the socio-economics assessment presented in **Chapter 18: Socio-economics, Volume 2** as part of the Preliminary Environmental Information Report (PEIR).

1.1 Introduction

1.1.1 This Appendix sets out the socio-economic baseline in which Rampion 2 is to be delivered, covering the national, sub-regional and local policy context, in addition to a detailed assessment of the key socio-economic, tourism and recreation conditions within the study area. Where appropriate, comparison with the national average is included to provide additional context to the analysis.

1.2 Policy context

Introduction

1.2.1 Renewable energy and offshore wind in particular have become increasingly important nationally over the past two decades. Growth in the renewable energy sector has traditionally been driven by environmental benefits and contribution to climate change goals, however, it now presents a significant opportunity in terms of economic development and is becoming a key driver of regional economic growth, both at the national as well as local and sub-regional levels.

National policy context

United Kingdom (UK) Industrial Strategy

1.2.2 The 2017 White Paper entitled *Industrial Strategy: building a Britain fit for the future* (HM Government, 2017a) sets out the government's vision for the UK economy. The Industrial Strategy's underlying motivation is 'to create an economy that boosts the productivity and earning power throughout the UK'.

1.2.3 It identifies five foundations of productivity that align to the government's economic vision, supporting:

- the creation of high value jobs and skills (People);
- investment and sector growth through Sector Deals (Business Environment);
- innovation, research and development (R&D);
- investment opportunities (Ideas);
- investment in digital, transport, housing, low carbon and other infrastructure (Infrastructure); and
- developing Local Industrial Strategies which focus on local strengths (Places).

1.2.4 In addition, the Industrial Strategy sets out four Grand Challenges for the UK government and the economy as a response to global opportunities, including:

1) artificial intelligence (AI);

2) clean growth;

3) future of mobility; and

4) ageing society.

1.2.5 Clean Growth is identified as one of the main opportunities for the UK economy to take advantage of, through the 'development, manufacture and use of low carbon technologies, systems and services'. Offshore wind is one of the areas where the UK is seen as having world-leading capabilities, and the Industrial Strategy therefore aims to maximise the share of the global market taken up by UK businesses in the sector. In support of this, the UK government has committed to increasing support for innovation to reduce the costs of clean technologies, systems and services.

Clean Growth Strategy

1.2.6 Connected to the Industrial Strategy, the UK government has also developed a *Clean Growth Strategy* (HM Government, 2017b) to ensure that economic growth goes hand in hand with greater protection for the natural environment. Within this is a commitment to help businesses and entrepreneurs seize opportunities of a low carbon economy, and specifically offshore wind. This is driven by policies and processes to improve the route to market for renewable technologies such as offshore wind. Examples include up to £557 million for further Pot 2 Contracts for Difference (CfD) auctions and working with industry to develop an ambitious sector deal for offshore wind.

1.2.7 Under its ambition to deliver clean, smart and flexible power the Clean Growth Strategy seeks to deliver a diverse electricity system that supplies homes and businesses with secure, affordable and clean power, and aims to deliver this through the development of low carbon sources of electricity (including renewables). The Clean Growth Strategy acknowledges that the UK is well-placed to benefit and become one of the most advanced economies for smart energy and technologies.

1.2.8 The Strategy also outlines plans by the government to invest around £900 million of public funds between 2015 and 2021 in research and innovation in the power sector. This includes around £177 million aimed at reducing the cost of renewables, including innovation in offshore wind turbine generator (WTG) blade technology and foundations. New innovation opportunities are likely to arise across several areas, including floating offshore wind platforms.

UK Industrial Strategy - Offshore wind: Sector Deal

1.2.9 The UK government and the offshore wind industry have committed to a *Sector Deal* (HM Government, 2019a) to help the industry raise the productivity and competitiveness of UK companies to ensure the UK continues to play a leading role as the global market grows in the decades to 2050. Key commitments include:

- increasing UK content to 60 percent of value associated with offshore windfarm activity by 2030;
- £250 million industry investment in building a stronger UK supply chain to support productivity and increase competitiveness;
- providing forward visibility of future CfD rounds with support of up to £557 million;
- increasing exports fivefold to £2.6 billion by 2030; and
- increasing the representation of women in the offshore wind workforce to at least a third by 2030.

1.2.10 At the start of March 2020, the government issued a one-year progress note (BEIS, 2020) on the Sector Deal, highlighting a number of major developments in the sector such as:

- Development and establishment of the Offshore Wind Growth Partnership (OWGP) – A long-term business transformation programme aimed at promoting closer collaboration across the sector's supply chain, implementing productivity improvement programmes, and facilitating shared growth opportunities between developers and the supply chain. The OWGP's objective is to maximise the economic benefits of the UK's world-leading position in offshore wind by delivering increased productivity and competitiveness. To date, the OWGP has completed an in-depth assessment of capacity in the delivery of offshore wind foundations and made recommendations on how barriers to growth can be overcome.
- Development of regional clusters – Clusters are a collaboration between developers and regional supply chain, public sector and education bodies, with the ambition to increase productivity, competitiveness and innovation, whilst also helping to grow coastal economies.
- Appointment of a Diversity Champion.

1.2.11 The progress note highlights that since publication of the Sector Deal, the costs of offshore wind have continued to fall reaching £39.65/MWh (2012-pricing) for offshore wind farms to be delivered in 2023 to 2024. This represents an overall decrease of around 65 percent when compared with projects in the 2015 auction.

1.2.12 Furthermore, the note indicates that whilst the Sector Deal is progressing well, the government seeks to be more ambitious in order to achieve net zero carbon by 2050. This is likely to require higher volumes of offshore wind deployment than previously envisaged to meet greater levels of electrification across the economy.

1.2.13 Shortly following publication of the Sector Deal progress note, as a result of the COVID-19 pandemic, the country went into lockdown, resulting in expectation of a prolonged economic recession (Financial Times, 2020). At this stage it is not known what impact this recession will have on the ongoing development of the offshore wind sector, and the impact this will have on the implementation (and indeed delivery) of the Sector Deal.

Tourism Sector Deal

1.2.14 The *Tourism Sector Deal* (HM Government, 2019b) builds on the UK Industrial Strategy (HM Government, 2017a), by creating a framework which positions the tourism industry to take advantage of new markets whilst also leveraging initiatives designed to deliver the Strategy's Grand Challenges relating to the data-driven economy (AI), clean growth and ageing society.

1.2.15 The Tourism Sector Deal sets out an ambitious agenda that will deliver increases in productivity and investment that benefits local economies across the country. The Sector Deal introduces the concept of Tourism Zones, bringing together businesses and local organisations to establish a coordinated strategy for growth and encouraging increased visitor activity (and numbers) throughout the off-season.

1.2.16 The government is also introducing two new T-levels in Cultural Heritage and Visitor Attractions, as well as Catering to help deliver the industry workers of the future. This includes support to deliver 30,000 apprenticeships per year by 2025, and a mentoring programme aimed at supporting 10,000 employees to enhance their careers and develop as future leaders in tourism.

1.2.17 By 2025, the Tourism Sector Deal will:

- more than double the size of the industry nationally to £268 billion;
- grow employment in the sector to 3.8 million; and
- deliver a 1 percent increase in productivity worth £12 billion to the national economy.

National Policy Statement for Energy

1.2.18 Planning policy on offshore renewable energy nationally significant infrastructure projects (NSIPs), specifically in relation to socio-economics is contained in the *Overarching National Policy Statement for Energy* (NPS EN-1) (Department for Energy and Climate Change (DECC), 2011c), the *NPS for Renewable Energy Infrastructure* (NPS EN-3) (DECC, 2011b) and the *NPS for Electricity Networks Infrastructure10* (NPS EN-5) (DECC, 2011a). Neither NPS EN-3 nor NPS EN-5 provide specific guidance on socio-economic issues.

1.2.19 NPS EN-1 includes guidance on socio-economic matters that need to be considered in the assessment of energy infrastructure projects, including:

- an assessment of the effects on the coast, and in particular the effects of the proposed project on maintaining coastal recreation sites and features (see Section 5.5.7);
- the need to consult with the local community on proposals to build on open space, sports and/or recreational buildings and land. 'Taking account of the consultations, applicants should consider providing new or additional open space including green infrastructure, sport or recreation facilities, to substitute for any losses as a result of their proposal' (see Section 5.10.6);
- the creation of jobs and training opportunities (see Section 5.12.3);

- the provision of additional local services and improvements to local infrastructure (including educational and/ or visitor facilities) (see Section 5.12.3);
- the effects on tourism (see Section 5.12.3);
- the impact of a changing influx of workers during construction, operation and maintenance, and decommissioning phases (see Section 5.12.3); and
- cumulative effects (see Section 5.12.3).

National Planning Policy Framework

1.2.20 The *National Planning Policy Framework* (NPPF) (Ministry of Housing, Communities and Local Government (MHCLG), 2019) emphasises that one of the overarching objectives of the planning system is to contribute to the achievement of sustainable development. This includes backing the transition to a low carbon future by supporting the transition to renewable and low carbon energy (and associated infrastructure).

1.2.21 Whilst the NPPF does not contain specific policy statements for nationally significant infrastructure projects, it does outline three overarching dimensions (for instance, economic, social and environmental) which are relevant. Two of these are especially pertinent to the socio-economic assessment:

- economic – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right type is available in the right places and at the right time to support growth and innovation, and by identifying and co-ordinating development requirements, including the provision of infrastructure, and
- a social role – supporting strong, vibrant and healthy communities, by providing the supply of housing required to meet the needs of present and future generations, and by creating a high-quality built environment with accessible local services that reflect the community's needs and support its health, social and cultural well-being.

1.2.22 The NPPF explains (in paragraph 148) that the planning system should support the transition to a low carbon future. In addition, NPPF states that the planning system should shape places in ways that contribute to radical reductions in greenhouse gas emissions; minimise vulnerability and provide resilience to the impacts of climate change; and support the delivery of renewable and low carbon energy and associated infrastructure.

The Marine Policy Statement 2011

1.2.23 The *Marine Policy Statement* (HM Government, 2011) states that properly planned developments in the marine area can provide environmental and social benefits as well as drive economic development, provide opportunities for investment and generate export and tax revenues. There are obvious social and economic benefits from such an increase in network capacity, most notably the facilitation of offshore renewable energy. There are also social and economic risks associated with such an increase in underwater cabling, which may affect activities such as dredging and the use of certain fishing gear, and impact on other sea users,

including existing cable and pipeline operators. The marine plan authority should ensure, through integration with terrestrial planning, and engagement with coastal communities, that marine planning contributes to securing sustainable economic growth both in regeneration areas and areas that already benefit from strong local economies.

Local and sub-regional policy context

1.2.24 Whilst the application for development consent will be determined by the Secretary of State, local planning policy also includes material which is relevant to offshore windfarm developments, their relationships to local economic development, and the assessment of socio economic and recreation impacts associated with the proposed Rampion 2.

1.2.25 Both Coast to Capital Local Enterprise Partnership (C2CLEP) and South East Local Enterprise Partnerships (SELEP) cover large areas of Sussex. The entire cable corridor is located within the C2CLEP. Both LEPs have published policy context that is relevant to the baseline assessment.

1.2.26 The relevant policy documents from West Sussex County Council (WSCC) and East Sussex County Council (ESCC), in addition to the Brighton & Hove City Council are also considered as part of the assessment. The proposed onshore cable corridor for Rampion 2 is located within the districts of Arun, Horsham and Mid Sussex. As such, the relevant local planning documents from these three District Councils have been considered.

1.2.27 Planning policy for the South Downs National Park (SDNP) is produced separately (by the South Downs National Park Authority (SDNPA)) and as such this is also considered within the baseline policy context assessment.

Socio Economics

1.2.28 National aspirations in relation to economic growth and employment creation are echoed in the strategic aims of key local organisations (including the Coast to Capital LEP (C2CLEP), South East Local Enterprise Partnership (SELEP), and local authorities.

1.2.29 C2CLEP's *Strategic Economic Plan* (SEP) (C2CLEP, 2018) identifies eight economic priorities. Of particular relevance to the development of Rampion 2 are:

- Priority 3: Invest in sustainable growth;
- Priority 5: Pioneer innovation in core strengths, and
- Priority 8: Build a strong national and international profile.

1.2.30 The C2CLEP identifies that energy generation is critical to the economy and emissions reduction targets should be achieved without sacrificing economic growth:

"The way energy is generated, distributed, and consumed is critical to the economy and our lives, and has a significant impact on our environment. The Climate Change Act sets a legally binding target of reducing emissions by at least 80 percent by 2050, which needs to be achieved without sacrificing economic

growth. There is evidence this is already happening; energy use and emissions are falling while the economy continues to grow. However there still needs to be a significant transition to a low carbon economy to meet these targets. Coast to Capital is well placed to drive this having developed a local energy strategy in partnership with South East Local Enterprise Partnership and Enterprise M3. The area already has a range of projects taking place, such as community owned renewable energy cooperatives, the Rampion Wind Farm, and local government investment into large scale solar farms" (C2CLEP, 2018).

1.2.31 The *Local Energy Strategy* (C2C, EM3 and SELEP, 2018) prepared for the C2CLEP, SELEP and Enterprise M3 LEP, states that the wider South East region will prioritise renewable generation, which is identified as one of five priority themes of the strategy. Offshore wind development sits under renewable generation as a 'project model' of the strategy. The 'project model' states that further inward investment and economic development of the South East of England's offshore wind industry will be encouraged. This is because offshore wind opportunities for the tri-LEP area exist with Crown Estate block release in coming years and the LEPs will be a key facilitator in commercialising and supporting supply chain infrastructure developments. Furthermore, they cite the general growth in the UK offshore wind industry over recent years as a major reason for investment.

1.2.32 Both SELEP and C2CLEP areas cover the port of Newhaven, which is the current operation port for Rampion 1. An enterprise zone is located in Newhaven, Newhaven Enterprise Zone comprises eight key development sites in the centre of Newhaven, a port town east of Brighton and part of the Greater Brighton city region. The aim of the Enterprise Zone (EZ) is to address issues of business space, affordability and suitability which are key issues for the Greater Brighton economy, and act as a catalyst for the wider regeneration of Newhaven. Key aims of the enterprise zone which are particularly relevant include:

- to prioritise investment in transport plans;
- to support local housebuilders to create high-quality housing developments;
- work with partners to deliver key projects around reducing the amount of carbon released into the environment;
- enable the local community to access funds to enhance the local area;
- grow the cultural economy in the town;
- build on the legacy of the town and its vibrant community;
- to establish strong localised business networks and encourage collaboration across sectors and supply chains;
- to deliver better-quality employment opportunities for local people;
- to promote Newhaven as a deep-water port and hub for maritime industries; and
- to encourage the local community to apply to the Newhaven EZ Community Fund for support projects that will encourage a sense of place.

1.2.33 SELEP's *Strategic Economic Plan* (SELEP, 2014) sets out the following growth ambitions for the LEP area:

- to enable the creation of 200,000 sustainable private sector jobs over the decade to 2021, an increase of 11.4 percent since 2011;
- deliver 100,000 new homes by 2021, which will entail, over seven years, increasing the annual rate of completions by over 50 percent by comparison with recent years; and
- leverage investment totalling £10 billion, to accelerate growth, jobs and homebuilding.

1.2.34 SELEP's SEP cited the opportunity for investment in renewable energy via Rampion Offshore Wind Farm. Specifically, the Newhaven Clean Tech and Maritime Growth Corridor would benefit from Rampion's operation and maintenance port. They sought to work with other LEPs to development skills for growing the offshore wind sector.

1.2.35 The strategic objectives set out in the LEPs' policy documents are underpinned by the Core Strategies/ Local Plans of its constituent local authorities. The following section summaries the strategies / plans that are particularly relevant for the proposed development of Rampion 2, based on the onshore temporary cable corridor area and the location of ports in Sussex (and therefore areas which may benefit from the construction and operation and maintenance of Rampion 2).

1.2.36 At the County level, the *West Sussex Plan* (WSCC, 2017) sets out several priorities that are particularly relevant to the construction of a new offshore windfarm, including:

- a prosperous place – at the heart of this priority is attracting / supporting businesses and people who want to work in the county and then giving them the tools they need to grow their businesses; and
- a strong safe and sustainable place – West Sussex are determined to become one of the largest renewable energy providers in the UK.

1.2.37 The *West Sussex Economic Growth Plan* (WSCC, 2018a) is designed to help achieve the County Council's vision for West Sussex laid out within the West Sussex Plan. The Economic Growth Plan 2018 – 2023 sets out five priority themes, of particular relevance are:

- strengthening the coastal towns – strengthening the vibrancy of the coastal towns, and supporting the emergence of a creative coast;
- growing the green energy county – embedding the green energy sector in the county, providing a platform for innovation and a new economic identity for West Sussex;
- promoting West Sussex as a place to visit and work – enhancing and marketing the West Sussex experience, and supporting the vibrancy of the county; and
- enabling a workforce for the future – supporting a high-quality and enterprising workforce, that meets current and future business needs.

1.2.38 The Growth Plan notes that '*The Rampion Wind Farm and Your Energy Sussex partnership are evidence that the county is one where new and innovative approaches to energy efficiency and generation can be successfully implemented. Expanding this opportunity sector could therefore place West Sussex as a national green energy lab, and further support specialist manufacturing activity, ultimately driving income generation and growth*'.

1.2.39 The *East Sussex Growth Strategy* 2014 to 2020 (ESCC, 2014b) sets out the strategy for economic growth in Sussex between 2014 and 2020. The strategy is built around three pillars: Business, Place and People. The strategy identifies the following indicators which capture the aspirations of East Sussex:

- contribute to unlocking key employment floor space allocated in Local Plans;
- achieve average annual housing completions of 1,504 in East Sussex to 2020, in accordance with our Local Plans;
- increase Gross Value Added (GVA) per capita by 20 percent by 2020;
- maintain the employment rate for East Sussex at a higher level than the England rate to 2020;
- maintain the JSA claimant rate for East Sussex at below the England rate to 2020;
- increase the percentage of working age residents in East Sussex with a level 4 (degree) qualification to at least 35 percent by 2020; and
- reduce the percentage of working age residents in East Sussex with no qualifications and qualified only to NVQ1 to below the England level by 2020.

1.2.40 Team East Sussex (Team East Sussex, 2020) has produced a comprehensive Strategic Action Plan in response to the COVID-19 pandemic. The Action Plan lays out six missions, many of which have significant relevance to Rampion 2.

- Mission 1 - Thinking local, acting local - initiating a Buy Local supply chain programme across all business sectors. Reduce commuting and to encourage businesses of all kinds to consider relocating to East Sussex. A newly launched Business Hothouse programme will provide support to embryonic entrepreneurs currently looking to start a business.
- Mission 2 - Building skills, creating jobs - urgently need to retain our local skills, support employment and grow an agile workforce with greater skills levels. Offer targeted support for the development of sector specific skills, and for furloughed and redundant employees, in conjunction with employers and skills providers. Working with education to deliver training, including basic skills, short courses and digital skills programmes for tomorrow's workforce. Plans include work academies to help young people into employment, and new courses and learning packages for businesses to aid their recovery and growth.
- Mission 4 - Better places, fuller lives - need to shape the County for a sustainable, inclusive and resilient future. Already secured substantial amounts of money through the Local Growth, Getting Building and Growing Places Funds, all of which will help provide jobs and growth across the county.

- Mission 5 - Cleaner energy, greener transport - want to make sure the 'Reset' takes account of the drive towards a low-carbon, circular economy. planning ways in which clean energy technologies and de-carbonisation projects can be accelerated. Created an energy retrofit programme for local suppliers to help them reduce their costs and emissions.
- Mission 6 - The future is digital - grow digital connectivity to support the transformation of business and the local economy. continue to invest in fast broadband for businesses and homes throughout East Sussex. Developing proposals for those working from home to help reduce energy and unnecessary commuting, and to keep our communities livelier during the working week.

1.2.41 The *Brighton & Hove City Plan Part 1* (Brighton & Hove City Council, 2016) provides the overall strategic and spatial vision for the future of Brighton & Hove through to 2030. The policies in all the other Development Plan Documents for Brighton & Hove have to be in line with the City Plan Part 1, therefore it is the most important Development Plan Document.

1.2.42 Strategic objectives of particular relevance to the development of Rampion 2 include the following.

- SO1 - Ensure that all major new development in the city supports the regeneration of the city, is located in sustainable locations, provides for the demands that it generates and is supported by the appropriate physical, social and environmental infrastructure.
- SO3 - Develop Brighton & Hove as a major centre on the South Coast for sustainable business growth and innovation, creative industries, retail provision, tourism and transport.
- SO6 - Through joint working with Adur District Council, WSCC and the Shoreham Port Authority, maximise the potential of Shoreham Harbour for the benefit of existing and future residents, businesses, port-users and visitors through a long-term regeneration strategy.
- SO7 - Contribute to a reduction in the ecological footprint of Brighton & Hove and champion the efficient use of natural resources and environmental sustainability.
- SO19 - Contribute towards the delivery of more sustainable communities and the reduction of inequalities between neighbourhoods in Brighton & Hove.
- SO22 - Across the city apply the principles of healthy urban planning and work with partners to achieve an equality of access to community services (health and learning), to opportunities and facilities for sport and recreation and lifelong learning. Ensure pollution is minimised and actively seek improvements in water, land and air quality and reduce noise pollution.

1.2.43 There are opportunities to consider small scale renewable energy provision such as solar and wind energy technologies along the seafront. The *Brighton & Hove Energy Study* (AECOM, 2018) has identified particular potential for District Heating networks in and around the seafront within a long list of priority areas. Development within the long list of priority areas will be encouraged to consider

low and zero carbon decentralised energy, in particular heat networks. Developments will be required to either connect where a suitable system is in place, or would be at the time of construction, or design systems so that they are compatible with future connection to a network.

1.2.44 As identified in the *Horsham District Planning Framework* (Horsham District Council, 2015), the Local Plan for Horsham seeks to:

- ensure that future development in the district is based on sustainable development principles that strike the correct balance between economic, social and environmental priorities;
- meet employment needs, create opportunities to foster economic growth and regeneration, and maintain high employment levels in the district which help reduce commuting distances; and
- ensure that new development minimises carbon emissions, adapts to the likely changes in the future climate and promotes the supply of renewable, low carbon and decentralised energy.

1.2.45 The *South Downs Local Plan* (SDNPA, 2019) sets out the planning polices for the national park area which stretches from Eastbourne in East Sussex, through Brighton & Hove, to Chichester in West Sussex and beyond into Hampshire. At the heart of the plan is the need to nurture and protect the national park so that it can be enjoyed by this generation and future generations, all while providing for the socio-economic needs of communities that live and work in the national park. The plan sets out nine strategic objectives in order to move towards achieving the 2050 vision for the national park. The following objectives are of particular relevance to the assessment:

- to achieve a sustainable use of ecosystem services thus enhancing natural capital across the landscapes of the National Park and contributing to wealth and human health and wellbeing;
- to protect and provide opportunities for everyone to discover, enjoy, understand and value the National Park and its special qualities;
- to adapt well to and mitigate against the impacts of climate change and other pressures;
- to conserve and enhance the villages and market towns of the National Park as thriving centres for residents, visitors and businesses;
- to protect and provide for the social and economic wellbeing of National Park communities supporting local jobs, affordable homes and local facilities; and
- to protect and provide for local businesses including farming, forestry and tourism that are broadly compatible with and relate to the landscapes and special qualities of the National Park.

1.2.46 The *Arun Local Plan* (Arun District, 2018) sets out the vision for the Arun District to 2031 and beyond. The Local Plan states that economic growth for job creation is Arun's number one priority. This will be achieved by encouraging employment growth in sectors including manufacturing and marine based activities. Policy ECC DM1 Renewable Energy will support renewable energy development subject to the

criteria in this Policy. Schemes will be expected to contribute to the social, economic and environmental development and overall regeneration of the District.

1.2.47 The vision for the *Mid Sussex District Plan* (Mid Sussex District Council, 2018) is underpinned by four priority themes that promote the development of sustainable communities: Protecting and enhancing the environment; Promoting economic vitality; Ensuring cohesive and safe communities; and, Supporting healthy lifestyles. To provide opportunities for people to live and work within their communities, reducing the need for commuting.

Tourism & recreation

1.2.48 Local planning policy includes material which is relevant to the assessment of tourism impacts associated with the proposed Rampion 2.

1.2.49 The visitor economy is particularly important to the SELEP's rural and coastal communities. The landscape of the south-east is praised for its diversity and environment. With two major Areas of Outstanding Natural Beauty (AONB), a thriving agribusiness sector provides opportunities to improve, enhance and conserve the natural environment. This, in turn, leads to improved tourism and health benefits from recreation, while maintaining an attractive place to live and work of the kind sought after by many leading businesses.

1.2.50 One of the consequences of the decline of the visitor economy in some of these areas has been the inward migration of low-income residents, often dependent on benefits and including some with drug and alcohol problems, and ex-offenders into accommodation previously used by the tourism sector, such as hotels. Other coastal towns have a port focus – Harwich, Dover, Tilbury, Folkestone and Newhaven, although they have similar deprivation levels despite contrasts in the fortunes of their ports. Others are more prosperous and contain high proportions of retirees. There is a need to establish an intervention fund to upgrade and expand tourist accommodation and facilities to better exploit the growth potential of the tourism sector.

1.2.51 The *West Sussex Economy Reset Plan* (WSCC, 2020) draft local plan recognises that the tourism sector has been particularly hard hit by the pandemic and in response a key theme (theme six of the plan) is to protect and revive tourism and the visitor economy. The plan states the following.

- *'The sector is an important asset and contributor to the 'place' of West Sussex, drawing on the distinctive high quality natural environment, contributing to quality of life and health and well-being, the character and distinctiveness of the county, and the attractiveness to businesses and employees, and so has a wider contribution than the immediate economic contribution and associated jobs.'*
- *'Sustainable and responsible tourism should underpin the approach to help secure for the longer term the environmental gains from the COVID-19 crisis, such as improvements in air quality, increased access to nature and increased use of sustainable active travel.'*

1.2.52 The *West Sussex Rights of Way Management Plan* (WSCC, 2018b) sets out WSCC's approach to managing the PRoW network between 2018 to 2028, and sets out the following commitments and ambitions for PRoW in the county:

- to provide the least restrictive access, preferring gaps over gates, and gates over stiles;
- to work closely with the SDNPA to achieve a high-quality PRoW and access network; and
- protect (path) users' rights and their convenience.

1.2.53 The *East Sussex Cultural Strategy* (ESCC, 2014a) prioritises tourism under priority 2. This priority seeks to develop and promote the cultural tourism offer, raise its profile and attract more visitors and businesses. East Sussex aims to have a high value visitor economy and have a distinctive offer by being renowned for its natural assets, heritage, culture, market and coastal towns.

1.2.54 The *Brighton & Hove City Plan* (Brighton & Hove City Council, 2016) aims to have a year-round profitable tourism industry and a world class cultural and heritage offer. The following strategic objectives are particularly relevant to the development of the tourism industry:

- SO3 - Develop Brighton & Hove as a major centre on the South Coast for sustainable business growth and innovation, creative industries, retail provision, tourism and transport.
- SO5 - Maintain and strengthen the role of Brighton city centre, improve its attractiveness and recognise and protect its unique cultural, tourism and retail mix and look to diversify the evening economy and leisure function.
- SO13 - Enhance and maintain the distinctive image, character and vibrant, varied heritage and culture of the city to benefit residents and visitors. Support the role of the arts, creative industries and sustainable tourism sector in creating a range of high-quality infrastructure support facilities, spaces, events and experiences.
- SO17 - Enhance the seafront as a year-round place for sustainable tourism, leisure, recreation and culture whilst protecting and enhancing the quality of the coastal and marine environment.

1.2.55 The *Horsham District Planning Framework* (Horsham District Council, 2015) argues that there is a need for Horsham to enhance its rural economy. This can be achieved (in part) by maximising visitor spending through tourism across the district. Through local planning policy Horsham seeks to promote the district as an attractive place to stay and visit to increase the value of the tourism economy whilst protecting the areas cultural resource.

1.2.56 The *South Downs Local Plan* (SDNPA, 2019) has ecosystem services as the central aspect of the plan. Cultural services form a key pillar of ecosystem services. The plan seeks to promote sustainable tourism which can deliver economic benefits whilst protecting the landscape and special qualities of the national park. This includes safeguarding views.

1.2.57 Strategic Policy SD 20 Walking, Cycling and Equestrian Routes argues that proposals will be permitted provided that they maintain existing public rights of way and conserve (and enhance) the amenity value and tranquillity of the South Downs National Park.

1.2.58 The *Arun Local Plan* (Arun District, 2018) seeks to '*create vibrant, attractive, safe and accessible towns and villages that build upon their unique characters to provide a wide range of uses and which are a focus for quality shopping, entertainment, leisure, tourism and cultural activities'*.

1.2.59 Policy TOU SP1 - Sustainable tourism and the visitor economy within the *Arun Local Plan* states that '*sustainable tourism development will be encouraged where it protects as well as promotes the main tourism assets of:*

- *the waterfronts – the coast, rivers and estuaries,*
- *the complimentary visitor uses of the fertile coastal plain in conjunction with agriculture, and*
- *the backdrop and access for visitors to the South Downs National Park with the historic town of Arundel as it's focal point, that make the District attractive to visitors'.*

1.2.60 Proposals for visitor related development will be determined by Arun's capacity to absorb such growth, which for Arun this means tourism growth which:

- encourages long-term visitor interest / activity;
- ensures a viable visitor economy;
- provides benefit to local people;
- extends the visitor season; and
- protects and enhances the natural and built environment of Arun

1.2.61 The *Mid Sussex District Plan* (Mid Sussex District Council, 2018) promotes sustainable tourism, which will contribute to the sustainable growth of the rural economy and enhances the quality of life and the character and landscape of the district.

1.3 Baseline Analysis

1.3.1 The baseline analysis for the socio-economic assessment is mostly desk-based, drawing primarily on a range of published datasets and research reports. It describes the socio-economic characteristics of the study area by exploring socio-economic indicators that are particularly relevant to the selected receptors.

1.3.2 The key sources of data used to assess the baseline environment include the policy documents set out in the previous section, and the relevant national datasets from the Office for National Statistics (ONS) providing data on population, labour market and employment base conditions at the national and local levels. Where data is not available at the UK level (for example, ONS employment data is available for Great Britain (GB) rather than the UK) this is clearly stated.

1.3.3 The analysis draws on the most up-to-date sources available in November 2020 for all key socio-economic and recreation indicators, although the year that the data relates to varies according to the release calendar for each dataset. The baseline year for all socio-economic and recreation indicators is referenced throughout the chapter and stated in the table below.

1.3.4 The baseline analysis has also been informed by a walkover survey along the cable corridor conducted in August 2020. The purpose of the survey was to understand the nature and context of the key onshore recreation assets, in addition to their level of use.

Table 1-1 Key Data Sources for Baseline Indicators

Indicator	Source	Date	Summary	Coverage of study area
GVA	Sub-national GVA	1998 to 2018	Current position and trends in the following for relevant study areas: 1) total GVA; 2) GVA in sectors of interest; 3) GVA per head; and GVA per worker.	Local authority boundaries (including full coverage of Sussex).
Employment & Industry breakdown	Business Register and Employment Survey (BRES)	2009 to 2015 and 2015 to 2019	Current position and long-term trends in: 1) total employment (including full-time equivalent (FTE) employees); 2) sectoral mix; and 3) employment in relevant sectors: (i) energy sector, (ii) construction and manufacturing sectors relevant to offshore wind, (iii) tourism, (iv) ports and maritime activity, and (v) recreation activity.	Local authority boundaries (including full coverage of Sussex).
Offshore wind supply chain	UK Business Counts	2010 to 2019	Current position and long-term trends in total stock of businesses, including size and sectoral breakdown.	Local authority boundaries (including full coverage of Sussex).

Indicator	Source	Date	Summary	Coverage of study area
Employment	Employment forecasts	2020 to 2040 (or similar period)	Projected changes in (i) total employment (FTEs), and (ii) sectoral mix. Also provides historic data for range of economic and labour market indicators. The availability of forecasts will need to be determined in due course and could be provided/ made available via various sources (for example, LEP, etc).	Typically, local authority boundaries (including full coverage of Sussex).
Population	Mid-year population estimates	2001 to 2019	Current position and long-term trends in total and working age population.	Local authority boundaries (including full coverage of Sussex).
Population	Sub-National Population Projections	2018 to 2041	Projected total and working age population.	Local authority boundaries (including full coverage of Sussex).
Economic activity, Employment rate & unemployment	Annual Population Survey	2004 to 2020	Current position and long-term trends in: 1) the local labour market including (i) economic activity, (ii) employment, and (iii) unemployment; 2) qualifications; and 3) occupations.	Local authority boundaries (including full coverage of Sussex).
Tourist visitor numbers	Local tourism surveys	Latest available (referenced in PEIR)	Annual estimates of volume and value of tourism activity (day visitors and staying visitors); accommodation occupancy surveys.	Brighton & Hove

Indicator	Source	Date	Summary	Coverage of study area
Economic activity – Tourism	Economic Impact of Tourism	Latest available (referenced in PEIR)	Volume and value of tourism economy and the impact of visitor expenditure on the local economy	Brighton & Hove
Onshore Recreational Assets	Ordnance Survey (OS) Explorer maps OL10 and OL11	May 2020	Identifies recreational assets onshore	Onshore study area
Onshore Recreational Assets	MAGIC – Multi-agency Geographic Information for the Countryside	May 2020	Used to identify the full suite of formally defined access and recreation assets, ranging from Access Land to Millennium Greens	Onshore study area
Onshore Recreational Assets	Google Earth	May 2020	A basic understanding of the recreation geography and identify any assets not recorded on the OS sheets or MAGIC.	Onshore study area
Onshore Recreational Assets involving rivers	On-line searches onshore	May 2020	Used to identify recreational pursuits involving the Rivers Arun and Adur. Both rivers are used for swimming events and angling. Both are tidal into the study area and small boats, especially canoes, kayaks and SUP use both rivers.	River Arun from Littlehampton to Arundel. River Adur from Steyning to Henfield.
Inshore Recreational Assets	On-line searches inshore	May 2020	Used to identify recreational pursuits in the vicinity of Climping Beach. While the beach is recognised to be quieter than most on this stretch of coast, it is used regularly by windsurfers	Inshore at Climping Beach.

Indicator	Source	Date	Summary	Coverage of study area
			and kite surfers. At least one kite surfing school uses the beach for lessons.	
Offshore Recreational Activity	Recreational activity	Latest available	Data on use of offshore and related onshore recreational resources close to offshore wind farm infrastructure and the export and onshore cable corridor route.	Scoping boundary
Economic Impact – Tourism	Economic studies	Latest available/ TBD	A range of research and specific assessments on economic activity, supply chain and skills strengths. Evidence of the relationships between offshore wind farm development and the tourism economy within the vicinity of them.	Local Authority boundaries (at this stage level of coverage across Sussex is unknown)
Inshore Infrastructure	Ports and harbour infrastructure	Latest available	Literature on the nature and range of facilities, assets and use.	Sussex
Onshore recreation	WSCC	May 2020	Indication of the significant recreational assets that may be affected	Onshore area from landfall to substation.
Onshore recreation	SDNPA	May 2020	Indication of the significant recreational assets that may be affected, plus list of third-party events known to take place on countryside assets.	Cable corridor through the SDNP – approximately 33 percent of total route.
Onshore recreation	WSCC	November 2020	User data for Downs Link	Cable corridor crossing of key asset.

Indicator	Source	Date	Summary	Coverage of study area
Onshore recreation	SDNPA	November 2020	User data for South Downs Way	Cable corridor crossing of key asset.
Onshore recreation	English Nature	November 2020	No data available for Climping but data supplied for other coast path sections.	Landfall area only.
Onshore recreation	BEKS Kitesurfing School	November 2020	Data about numbers and frequency of use of Climping beach.	Landfall area only.
Onshore recreation	Aspire	November 2020	Route of annual River Arun swim	River Arun crossing point only.
Onshore recreation	West Sussex Interactive Map	November 2020	Online digital version of the definitive map of public rights of way used to identify PRoW in the study area.	Onshore study area
Onshore recreation	MAGIC	November 2020	Used to identify the full suite of formally defined access and recreation assets, ranging from Access Land to Millennium Greens	Onshore part of the PEIR Assessment Boundary
Onshore recreation	Google Earth	May 2020	A basic understanding of the recreation geography and identify any assets not recorded on the OS sheets or MAGIC.	Onshore part of the PEIR Assessment Boundary
Onshore recreation	On-line searches onshore	November 2020	Used to identify recreational pursuits involving the Rivers Arun and Adur. Both rivers are used for swimming events and angling. Both are tidal into the study area and	River Arun from Littlehampton to Arundel.

Indicator	Source	Date	Summary	Coverage of study area
			small boats, especially canoes, kayaks and SUP use both rivers.	River Adur from Steyning to Henfield.
Onshore recreation	On-line searches onshore	November 2020	Used to identify public events taking place on assets within the cable corridor and its zone of influence.	Onshore part of the PEIR Assessment Boundary
Onshore recreation	On-line searches inshore	November 2020	Used to identify recreational pursuits in the vicinity of Climping Beach. While the beach is recognised to be quieter than most on this stretch of coast, it is used regularly by windsurfers and kite surfers. At least one kite surfing school uses the beach for lessons.	Inshore at Climping Beach.
Onshore recreation	Recreational activity	Latest available	Data on use of offshore and related onshore recreational resources close to offshore wind farm infrastructure and the export and onshore cable corridor route.	Scoping Boundary

Study area

1.3.5 The study area for the baseline assessment is based on an aggregation of East Sussex, West Sussex and Brighton & Hove Unity Authority area (to correspond with the historic county of Sussex) and will henceforth be referred to as Sussex. Where appropriate, a detailed breakdown for East Sussex, West Sussex and Brighton & Hove, as well as districts within Sussex is also included. Data for the UK (or GB where UK data is not available) is also presented as a wider comparator to provide additional context to the various indicators used. Where both UK and GB data is unavailable, data for England is used instead.

Economy

Employment

1.3.6 Data from the ONS indicates that, in 2019, there were approximately 744,000 jobs (total employment) in Sussex, which equates to an estimated 590,500 FTE jobs. Employment density in Sussex is around 721 jobs for every 1,000 working age residents, which is below the national average by 46 jobs for every 1,000 residents (**Table 1-2**). Within Sussex, West Sussex provides more jobs than East Sussex and Brighton & Hove combined, with 404,000 jobs equating to around 324,500 FTE employee jobs. West Sussex has a higher employment density than East Sussex and Brighton & Hove, with 797 jobs per 1,000 working aged residents (compared with 610 jobs per working age residents in East Sussex and 705 jobs per working aged resident in Brighton & Hove).

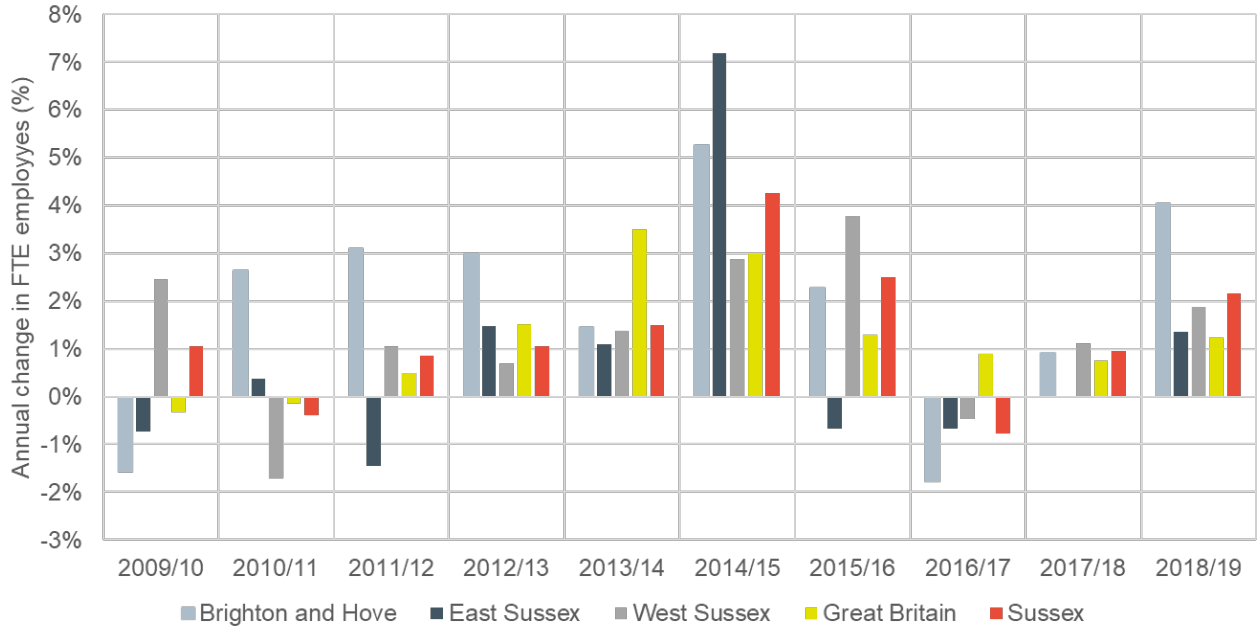
Table 1-2 Employment and Employment density Sussex, 2019

Area	Total Number of Jobs (000s)	FTE Employees (000s)	Employment Density (Jobs per 1,000 working age residents)
West Sussex	404	324.5	797
East Sussex	194	149	610
Brighton & Hove	146	116	705
Sussex	744	590.5	721
Great Britain	31,088	25,234	767

Source: ONS, (2019c). Please note: Numbers are rounded to nearest 500.

1.3.7 Since 2009, the Sussex economy grew by around 72,000 FTE jobs (14 percent), with the annual change in job numbers largely following the national trend (13 percent growth nationally since 2009). The highest percentage growth was seen in Brighton & Hove which experienced an FTE growth of 21 percent since 2009, the latest year (2018/19) showed markedly high growth in Brighton & Hove, with East Sussex and West Sussex also outperforming the national growth in FTEs.

Figure 1.1 Annual Change in Estimated FTE Employees, 2009 to 2019.



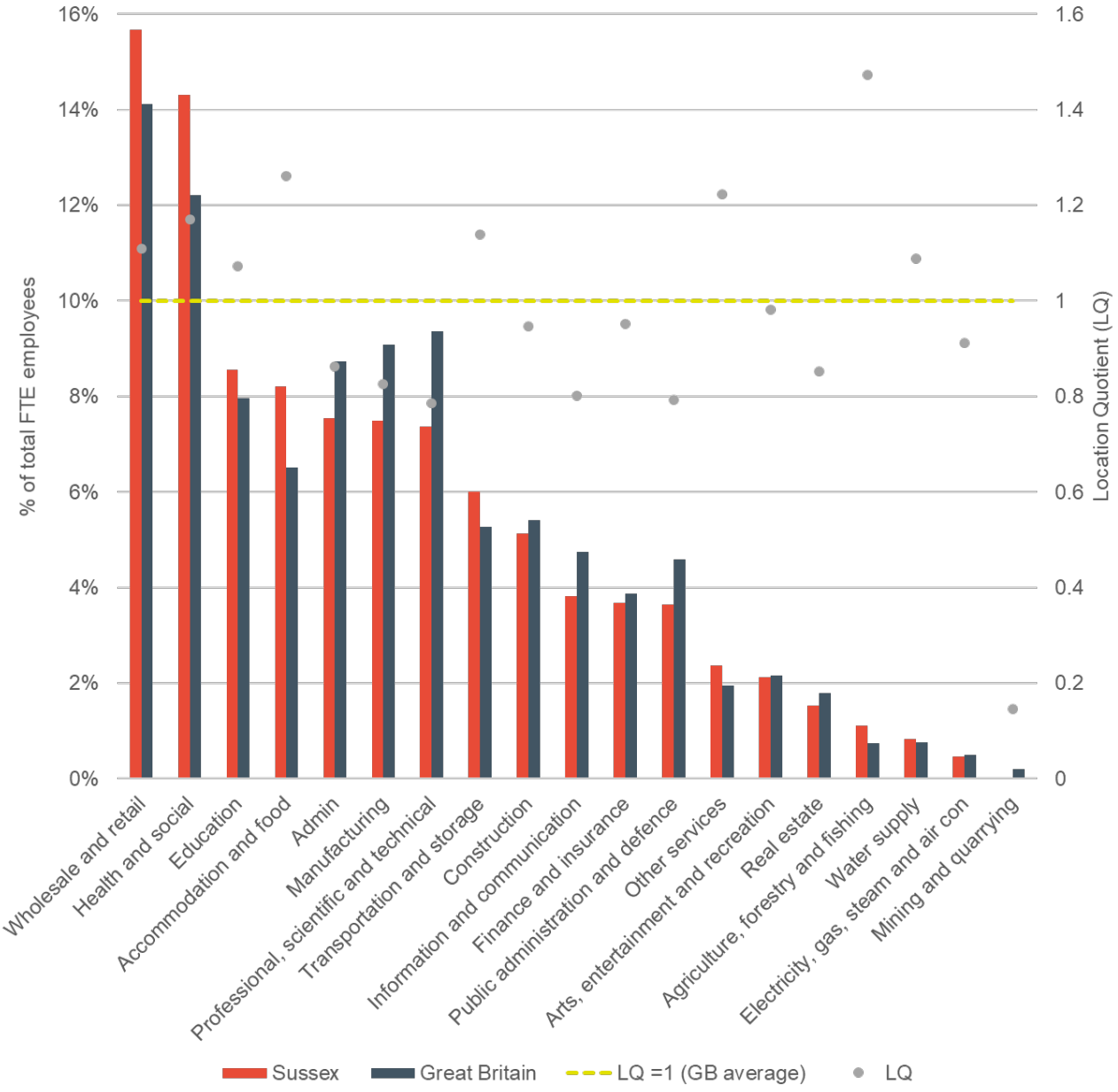
Source: ONS, (2019b)

Sectoral distribution of jobs

1.3.8 Analysis of FTE employees by sector highlights the importance of wholesale & retail, health & social work and education across Sussex. These sectors are more concentrated locally than is the case nationally and together represent 39 percent of all FTE jobs in Sussex.

1.3.9 In the context of offshore windfarms, construction, manufacturing, professional services and hospitality sectors are particularly important. The accommodation & food sector is more concentrated in Sussex than nationally (Location quotient (LQ) of 1.3). However, construction, manufacturing and professional services are less concentrated in Sussex than is seen nationally (with LQs of 0.9, 0.8 and 0.8 respectively).

Figure 1.2 Sectoral distribution of FTE employees, 2019



Source: ONS, (2019b). Please note: GB data is used instead of UK as UK data is not available. Hatch Regeneris calculations are used to estimate the FTE level.

Supply chain capacity and capability

1.3.10 Compared to other areas of the country, such as off the coast of East Anglia and the North East coast of England, the Sussex economy has limited offshore wind development over the past decade, with current offshore wind development limited to Rampion, which was the South East's first offshore windfarm.

1.3.11 Although the number of businesses involved in the offshore wind sector at the moment is limited, this number is likely to increase over time as offshore wind farms along the south coast, the wider region and nationally are expanded (for example, Rampion 2) and built-out. The industry is generally expected to expand

as it has been earmarked for growth in government policy over recent years, with the latest target being to have up to 40GW of generation capacity by 2030.

1.3.12 Given the recent development of the offshore wind industry in Sussex, there may be opportunities for businesses across several sectors to benefit from the construction and operation and maintenance activities related to Rampion 2. Employment data (see **Table 1-3**) shows a shortage of employment at the Sussex level for a number of key strategic sectors.

Table 1-3 Employment in Key Strategic Sectors, 2019

Sector	GB employment (FTEs)		Sussex Employment (FTEs)		
	Number (000s)	Percent	Number	Percent	Sussex LQ
Manufacturing	2,290	9.1	44,250	7.5	0.83
Construction	1,366	5.4	30,250	5.1	0.95
Land based transport	528	2.1	8,750	1.5	0.71
Civil Engineering	192	0.8	3,100	0.5	0.69
Energy Generation	127	0.5	2,700	0.5	0.91
Marine Transport	12	0.05	48	0.01	0.17

Source: ONS, (2019a)

Gross Value Added (GVA)

1.3.13 Data from the ONS indicates that Sussex contributed just over £40.1 billion GVA to the UK economy in 2018.

1.3.14 GVA per head of population data shows a significant gap between Sussex and the UK, with GVA per head in Sussex being 22 percent below the national average (or approximately £23,600 per head compared with £28,700 per head nationally).

1.3.15 East Sussex sits far below the national average, with a GVA per head of £16,000. This reflects the presence of low skilled occupations locally, and the sectoral composition within the employment base (characterised by relatively low value sectors). As the centre of economic activity in Sussex, Brighton & Hove is an exception with a GVA per head of £29,000, which is over the national average. This can be explained by the presence of higher-value jobs in the city.

Table 1-4 GVA and GVA per head, Sussex, 2018

Area	Total GVA (£ million)	GVA per head
West Sussex	£22,837	£26,600
East Sussex	£8,884	£16,000
Brighton & Hove	£8,410	£29,000
Sussex	£40,131	£23,600
South East	£277,260	£30,400
UK	£1,908,608	£28,700
UK excl. London	£1,458,330	£25,400

Source: ONS, (2020). Please Note: GVA estimates are rounded to the nearest million £.

Population

1.3.16 Sussex has a total population of around 1.71 million people, of whom 1.03 million (or 60 percent) are of core working age (for instance, aged 16 to 64). Nationally, the proportion of working age residents is slightly higher (at 62 percent). Within Sussex, there is significant variation in the proportion of working residents between Brighton & Hove (71 percent) and East and West Sussex (57 percent and 59 percent respectively).

Table 1-5 Population - Total and Working Age, 2019

Area	Population (000s)	Core Working Aged Population (aged 16 to 64) (000s)	Core Working Aged Population as a percent of the Total
West Sussex	864	507	59
East Sussex	557	318	57
Brighton & Hove	291	207	71
Sussex	1,712	1,032	60
UK	66,797	41,724	62

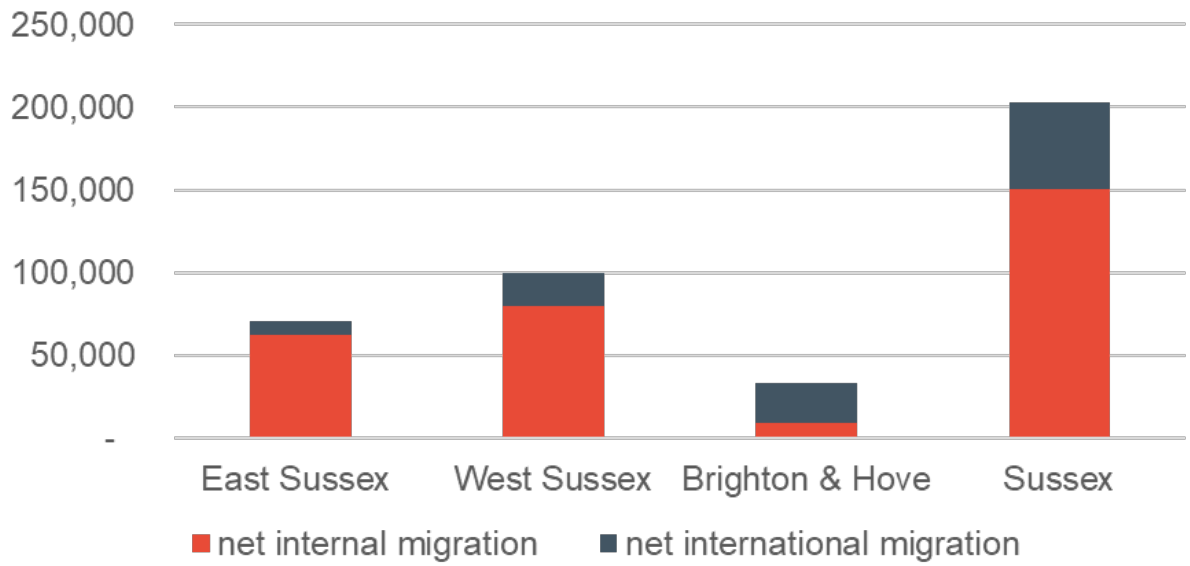
Source: ONS, (2019). Please Note: Figures are rounded to the nearest 1,000.

1.3.17 Overall, around 22 percent of the total population in Sussex is aged 65 and over (23 percent in West Sussex, 26 percent in East Sussex and 13 percent in Brighton & Hove). This is higher than the national average (of 19 percent) in 2019.

1.3.18 From 2010 to 2019 Sussex has experienced a significant quantity of net migration into the area, having seen a net additional 203,000 migrants over the period. This is significantly higher than the overall population increase experienced over the same period (+116,000), pointing to an underlying negative natural change in population in the area. Roughly a quarter (53,000) of Sussex's net additional migrants are international migrants and roughly three quarters are UK migrants (150,000).

1.3.19 Brighton & Hove attracted almost half of the additional net international migrants (24,000) to Sussex, whilst seeing relatively less internal net migration than the rest of Sussex. In contrast, East Sussex mainly saw net additional migrants in the form of internal migration.

Figure 1.3 Changes in net migration in Sussex 2010 to 2019



Source: ONS (2019).

Future population change

1.3.20 In March 2020, the ONS released updated population projections for local authorities in England over the next 25-years (for instance, up to 2043). These show that overall, Sussex's population is anticipated to increase by a little over 194,000 people (or +11 percent) over a 25-year period, compared with a projected increase of +10 percent nationally. Within Sussex, the total population is anticipated to increase by 13 percent in West Sussex, 10 percent in East Sussex and 7 percent in Brighton & Hove.

1.3.21 However, the population structure in Sussex is expected to change substantially over the period to 2043. Overall, the working age population is projected to increase by a further 20,0000 people (or +2 percent). Nationally the increase is anticipated to be higher (at +4 percent). Within Sussex, Brighton & Hove and West Sussex are projected to experience a +3 percent increase in the core working age population, whilst East Sussex is project to experience a slight decline in the population aged 16-64 (-1 percent).

1.3.22 The population projections are based on past demographic trends and do not account for future economic prospects.

Table 1-6 Population Projections, Change in Population, 2018 to 2043

Area	Aged 0-15		Aged 16-64		Aged 65+		Total Population	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent
West Sussex	-1,722	-1	17,433	3	99,380	51	115,084	13
East Sussex	-5,000	-5	-3,698	-1	66,845	47	58,109	10
Brighton & Hove	-1,492	-3	6,014	3	16,758	44	21,276	7
Sussex	-8,256	-3	19,749	2	182,983	49	194,469	11
England (000s) *	-98	-1	1,317	4	4,548	45	5,767	10

Source: ONS, (2020a). Please note: The 2018-based Sub-national Population Projections are not available for the UK or GB, therefore figures for England are presented as a national comparator.

Labour Market Indicators

1.3.23 Sussex outperforms many of the national comparators on a number of key labour market indicators. Sussex's economic activity rate (of 82 percent) is higher than the UK average (of 79 percent), as is its employment rate (79 percent) when compared with the national average (76 percent). Furthermore, the proportion of core working age residents who are economically inactive is below the national average (of 18 percent *vs* 21 percent nationally). Overall, West Sussex, East Sussex and Brighton & Hove show similar labour market performance, with little variation from the Sussex average across the three indicators mentioned above (see **Table 1-7**).

Table 1-7 Labour market performance, July 2019 to June 2020

Area	Economically Active		In Employment		Economically Inactive	
	Number (000s)	Percent Aged 16 to 64	Number (000s)	Percent Aged 16 to 64	Number (000s)	Percent Aged 16 to 64
West Sussex	417	83	404	80	87	17

Area	Economically Active		In Employment		Economically Inactive	
	Number (000s)	Percent Aged 16 to 64	Number (000s)	Percent Aged 16 to 64	Number (000s)	Percent Aged 16 to 64
East Sussex	262	83	254	80	54	17
Brighton & Hove	169	81	159	77	39	19
Sussex	848	82	817	79	180	18
UK	32,784	79	31,503	76	8,595	21

Source: ONS, (2020b)

1.3.24 The average unemployment rate in Sussex (3.9 percent) is slightly higher than the average for the UK as a whole (3.7 percent). There is however a marked variation within Sussex with West and East Sussex having an unemployment rate of around 3 percent whereas Brighton & Hove has an unemployment rate of 6 percent.

Table 1-8 Number of Unemployed Residents, Sussex, July 2019 – Jun 2020

Area	Unemployment (aged 16 to 64) (000s)	Unemployment rate (percent of population aged 16 to 64)
West Sussex	12.7	3.0
East Sussex	8.9	3.4
Brighton & Hove	10	6.0
Sussex	31.6	3.9
UK	1,281.5	3.7

Source: ONS, (2020b)

Earnings

1.3.25 Data on (gross) median annual earnings for full-time employees shows that earnings in Sussex vary around the national average depending on the area of Sussex and whether workplace-based earnings or resident-based earnings are used to measure earnings.

1.3.26 West Sussex, East Sussex and Brighton & Hove all have lower average workplace-based earnings than the national average (£28,900, £26,700, £30,200 respectively vs £30,400 nationally). Brighton & Hove is just 0.5 percent below the

national average whereas East Sussex lags the national average by 12 percent. Average resident-based earnings are higher than workplace-based earnings across Sussex, reflecting the number of residents commuting out of the area to higher value jobs. West Sussex and Brighton & Hove's resident-based earnings are higher than the national average (£31,300 and £32,000 respectively vs £30,400 nationally) whereas East Sussex lags the national average (£29,300).

Table 1.9 Resident and workplace median earnings for full-time employees (gross annual), Sussex 2019

Area	Residence-based earnings (£ per annum)	Workplace-based earnings (£ per annum)
West Sussex	£31,300	£28,900
East Sussex	£29,300	£26,700
Brighton & Hove	£32,000	£30,200
Sussex*	n/a	n/a
UK	£30,400	£30,400

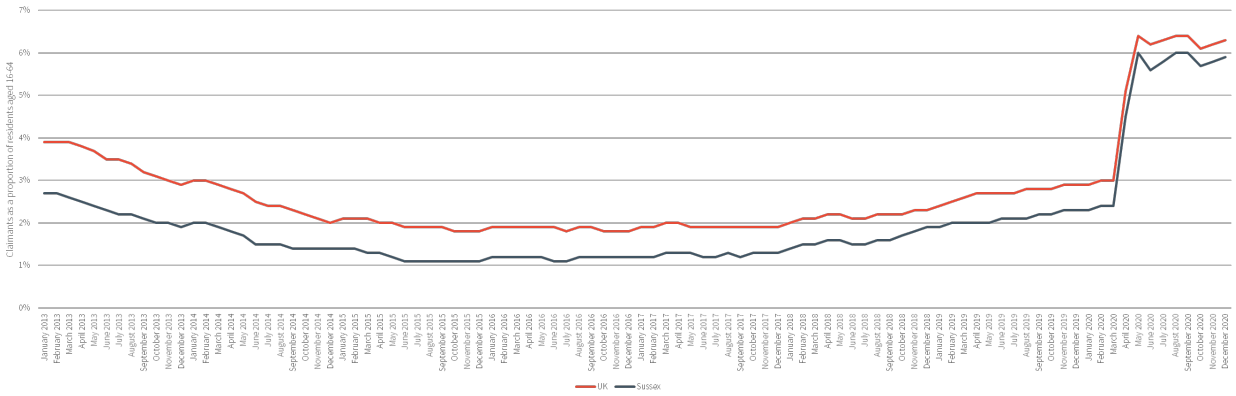
Source: ONS, (2019a). *Please note: There is no equivalent data available at the Sussex level, however it can be assumed that the Sussex average lies between the upper and lower averages for West Sussex, East Sussex and Brighton & Hove.

Claimant Counts

1.3.27 Claimant count data highlights the changing number of claimants over the last seven years. From 2013, the data shows falling rates across the UK and Sussex as the UK economy continued its recovery from the recession. However, since 2016 the number of claimants as a proportion of working age population in both Sussex and nationally has increased slightly. The proportion of claimants in Sussex has been below the UK average however it is noticeable that the gap between Sussex and the UK proportion has decreased over the last seven years.

1.3.28 Most recently, in December 2020, there were 60,500 claimants in Sussex, representing 5.9 percent of the population aged 16-64. The spike in claimants in 2020 is largely the result of restrictions placed by the Government on businesses in response to the COVID-19 pandemic (see **Figure 1.4**).

Figure 1.4 Claimant Count Rate, January 2013 to July 2020

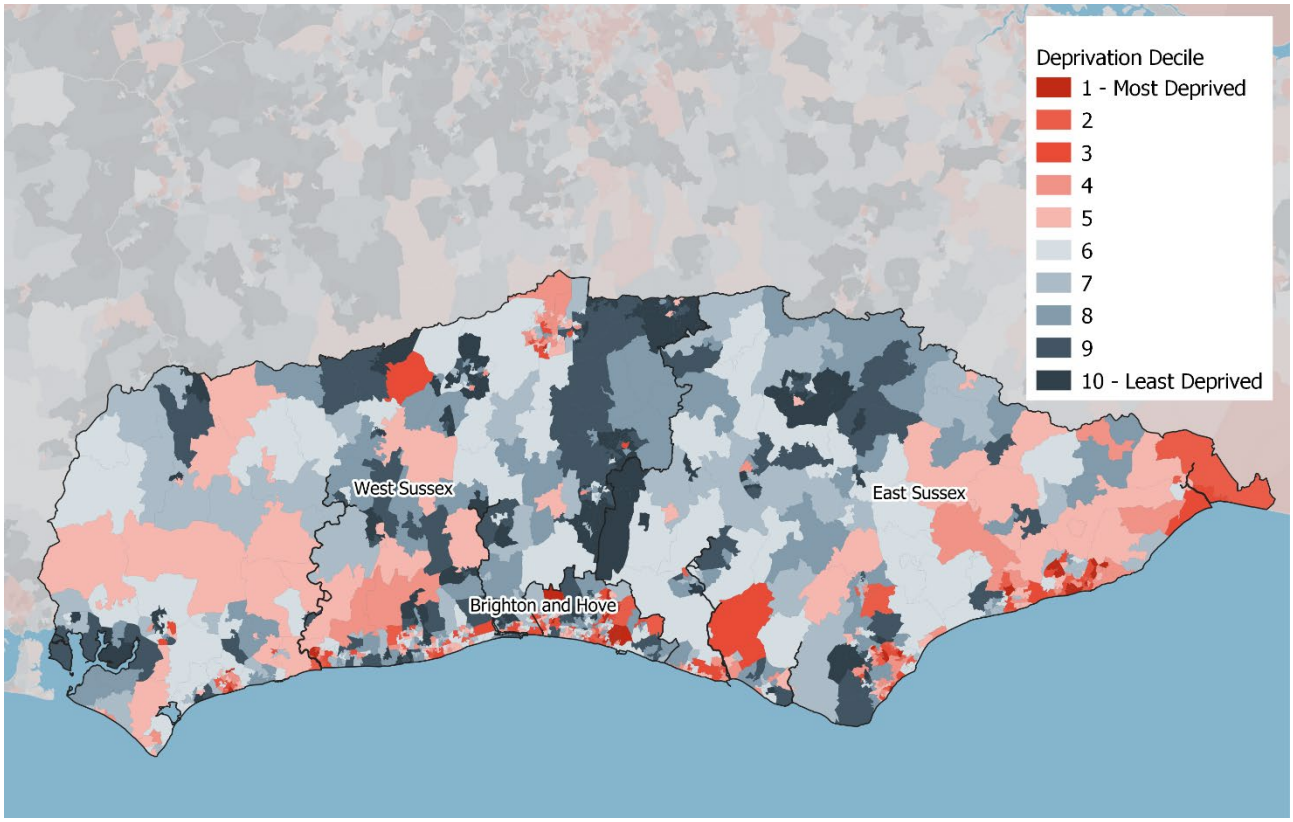


Source: ONS, Claimant Count, 2013 to 2020.

Deprivation

1.3.29 The Index of Multiple Deprivation (IMD) is the official measure of relative deprivation in England. It combines information from across seven domains (incl. income, employment, education, skills and training, health and disability, crime, barriers to housing and services, and living environment) to produce an overall relative measure of deprivation. **Figure 1.5** shows that there are some areas in Sussex displaying some of the highest levels of deprivation seen nationally.

Figure 1.5 Map of Deprivation by Decile, 2019



Source: ONS, (2019c).

1.3.30 Although the average incidence of these areas is less than is seen in England, there are pockets within Sussex which have relatively higher levels of deprivation than is seen nationally. At a local district authority level, Hastings stands out for having the highest levels of deprivation, where 16 (for instance, 30 percent) of the district's lower layer super output areas (LSOA) are in the 10 percent most deprived nationally. Please note that LSOAs represent the lowest level of hierarchy national statistics, and in this case IMD data is reported at.

Table 1-10 Neighbourhoods in the Highest Decile of Deprivation, 2019

Area	LSOAs in 10 percent most deprived nationally	Proportion of all LSOAs within area (precent)
West Sussex	5	1
East Sussex	22	7
Brighton & Hove	15	9
Sussex	42	4
England*	3,284	10

Source: ONS, (2019c). *Please Note: IMD data is only available for England, not UK or GB level.

1.3.31 Employment domain data almost identically mirrors the IMD data for the number of LSOAs in the most deprived 10 percent of LSOAs nationally.

Table 1-11 Employment Domain of Deprivation, 2019

Area	LSOAs in 10 percent most deprived nationally	Proportion of all LSOAs within area (precent)
West Sussex	5	1
East Sussex	23	7
Brighton & Hove	15	9
Sussex	43	4
England*	3,284	10

Source: ONS, (2019c). *Please Note: IMD data is only available for England, not UK or GB level.

Tourism economy

Overview

1.3.32 This section provides an overview of the tourism economy across Sussex. The study area attracts a large number of visitors to its many attractions, and AONBs. Tourism makes an important contribution to the economy of Sussex.

Tourism in Sussex

1.3.33 Tourism (as defined by the United Nations World Tourism Organisation (UNWTO, 2019)) is estimated to support 77,000 FTE jobs across Sussex (13 percent of total FTE jobs). Of these, 43,500 jobs are located in West Sussex, 17,500 are in East Sussex and 16,000 FTE jobs are in Brighton & Hove. The tourism sector supports 13 percent of all employment locally, which is higher than the national average.

Table 1-12 Tourism FTE Employment, 2019

	Full Time Jobs (000s)	Part Time jobs (000s)	FTEs (000s)	Percent of total FTEs	LQ vs GB
West Sussex	31	25	43.5	13	1.4
East Sussex	11	13	17.5	12	1.2
Brighton & Hove	11	10	16	14	1.4
Sussex	53	48	77	13	1.4
Great Britain	1,573	1,689	2,417.5	10	1.0

Source: ONS, (2019b). Numbers are rounded to the nearest 500.

1.3.34 Since 2014 the number of FTE tourism jobs within Sussex has grown by 9 percent, which sits below the employment growth seen within the tourism sector nationally (15 percent). Most notably the growth of tourism jobs has lagged in East Sussex which saw a growth rate in FTE jobs of just 3 percent compared to 10 percent in Brighton & Hove and 12 percent in West Sussex.

Table 1-13 Tourism FTE Employment (000s), 2014-19

	2014	2015	2016	2017	2018	2019	Percent change 2014 to 2019
West Sussex	39	39	41.5	40.5	42	43.5	12

	2014	2015	2016	2017	2018	2019	Percent change 2014 to 2019
East Sussex	17	17.5	17.5	17.5	17.5	17.5	3
Brighton & Hove	14.5	15.5	24	15	17	16	10
Sussex	70.5	72	83	73	76.5	77	9
Great Britain	2,110	2,206	2,323.5	2,303	2,358	2,417.5	15

Source: ONS, (2019b). Numbers are rounded to the nearest 500. Please note: ONS employment data collected before 2015 does not include units registered for PAYE only.

Tourism economy in Sussex

1.3.35 Tourism South East produce tourism economic impact assessments for local district areas. However only Brighton & Hove City and Hastings District have had a tourism economic impact assessment published in 2019. As the central location for tourism within Sussex, Brighton & Hove attracted 10.7 million day and 1.6 million overnight visitors in 2019. This generated an overall contribution of £1,303 million to the economy and supported (directly and indirectly) 17,984 jobs. In comparison the smaller town of Hastings attracted 3.8 million day and 0.5 million overnight visitors. This generated a GVA of £358 million to the economy and supported (directly and indirectly) 7,030 jobs.

1.3.36 This data points to billions of pounds of value being created and tens of thousands of jobs being supported every year across Sussex through the activity of the tourism sector.

1.3.37 In 2015 there were 23.6 million visits to East Sussex. Tourism spend in East Sussex in 2015 was reported to be over £1,14 billion in 2015. Eastbourne accounts for 26 percent of this spend, Wealden 22 percent, Rother 22 percent, Hastings 17 percent and Lewes 13 percent (ESCC, n.d.).

Table 1-14 Economic impact of tourism on Brighton & Hove and Hastings, 2019

	Brighton & Hove	Hastings
Room Occupancy	-	-
Volume of Day Trips (m)	10.7	3.8
Value of Day Trips (£millions)	£400	£146
Volume of Overnight Trips (m)	1.6	0.5

	Brighton & Hove	Hastings
Number of Nights (m)	5.2	2.4
Average Nights per Trip	3.1	4.7
Value of Overnight Trips (£millions)	£540.5	142.3
Value of all trips (£millions)*	£1,303	£358
Jobs (FTEs)*	17,894	7,030

Source: Tourism South East, (2019a, 2019b).

1.3.38 Overall, there was a slight increase in day visits to Brighton & Hove, from 10 million in 2014 to 10.7 million in 2019, although the number of day visits dropped to slightly below 10 million per annum between 2015 and 2018 (which coincides with the construction period of Rampion 1). Visitor expenditure was also higher in 2019 (especially when compared with 2014. In total, it is estimated that day visitors spent in the region of £400 million within the Brighton & Hove economy in 2019.

1.3.39 Overnight tourism showed a small amount of growth from 2014 to 2019, growing from 1.4 million overnight visitors, who spent £518 million to 1.6 million overnight visitors contributing £567 million to the local economy.

Table 1-15 Change Tourism Economy in Brighton & Hove, 2014 to 2019

	Day Visits		Overnight Tourism	
	Visits (million)	**Expenditure (£millions)**	**Visits (millions)**	**Expenditure (£millions)**
2014	10.0	£355	1.4	£518
2015	9.1	£332	1.5	£526
2016	9.6	£353	1.6	£533
2017	9.4	£335	1.5	£514
2018	9.5	£349	1.5	£515
2019	10.7	£400	1.6	£567

Source: Tourism South East, (2019a, 2018, 2017, 2016, 2015, 2014).

Visit Brighton visitor survey insights

1.3.40 Visit Brighton (Tourism South East, 2018a) have conducted a number of visitor surveys, the latest survey was conducted in 2018. These surveys provide useful insights for the assessment of the tourism baseline.

1.3.41 The highest proportion of visitor survey respondents indicated that the main purpose of their visit to Brighton & Hove was for 'leisure/ holiday' purposes (79 percent). Twelve percent were in Brighton & Hove primarily for the purpose of visiting friends or relatives. 2 percent were language students, 3 percent were on a special shopping trip and 1 percent were visiting for business purposes.

1.3.42 Thirty percent of staying visitors were on a short break of 2 to 3 nights, 19 percent for 1 night, 30 percent for 4 to 7 nights, 12 percent for 8-14 nights and 9 percent for more than 14 nights. Of the visitor groups staying overnight in Brighton & Hove, 64 percent were using serviced accommodation.

1.3.43 When asked what the main trigger had been for initiating their visit to Brighton & Hover, 26 percent said it was to visit the sea/beach and 18 percent said it had been to visit friends and/or relatives. Eleven percent had visited previously, 11 percent just wanted a day out and 7 percent had been triggered by the good summer weather.

1.3.44 The most popular activity undertaken by visitors was just walking around (81 percent), followed by going out for something to eat (76 percent), visiting the beach/seafront (75 percent), shopping (51 percent) and visiting a tourist attraction (46 percent). The main attractions visited were the pier (59 percent), the Royal Pavilion (29 percent) and the British Airways i360 (23 percent).

1.3.45 The average overall spend on eating out, shopping, entertainment and travel/transport among visitors staying overnight in Brighton & Hove in 2018 was £71.65 (per person per 24 hours). Expenditure on commercial accommodation was £105.47 (£94.94 in 2016). When added together the average total spend for staying visitors, was estimated to be £177.12 per person per night.

1.3.46 Day visitors on holiday visiting Brighton & Hove spent an average of £96.63 per person per day during 2018 Eating out accounted for the highest proportion of their spend. Day visitors from home to Brighton & Hove spent an average of £45.46 per person per day during 2018.

Nature of Tourism Offer in Sussex

1.3.47 Sussex is home to several attractions attracting over 100,000 visits per year. The most popular of these is Brighton Pier which consistently brings in between 4 and 5 million visitors per year, in 2019 Brighton Pier hosted 4.9 million visitors and has seen increasing levels of visitor numbers from 2012 to 2019.

Table 1-16 Visitor Attractions in Sussex which attracted over 100,000 visitors in 2019

Attraction	No. of Visitors	District
Brighton Pier	4,901,221	Brighton & Hove
Nymans	382,948	Mid Sussex
Wakehurst	312,813	Mid Sussex
Royal Pavilion	301,675	Brighton & Hove
Sheffield Park Garden	295,384	Wealden
Petworth House & Park	186,316	Chichester
Fishers Adventure Farm Park	176,932	Horsham
Southwater Country Park	170,000	Horsham
Standen	166,337	Mid Sussex
Bodiam Castle	165,785	Rother
Tulleys Farm	140,000	Crawley
Batemans	124,788	Rother
Horsham Museum & Art Gallery & Visitor Information Centre	109,255	Horsham

Source: Visit England, (2020).

Onshore recreation

Overview

1.3.48 This section presents an overview of the key onshore recreation assets within the Sussex study area. It provides a baseline for the socio-economic impact assessment the construction, operation and decommissioning activities related to Rampion 2 is likely to have on inshore and offshore recreation activities, including:

- shore-based wind surfing and kite surfing activity;
- non-bathing activities on Climping beach;
- Public rights of Way (PRoW), including the England Coast Path, Monarch's Way, South Downs Way (SDW) and Downs Link;
- cycle routes National Cycle Network 2 and regional route 223 (Downs Link);

- Rivers Arun and Adur;
- Access Land, including common land; and
- Village Green.

Wind surfing and kite surfing

1.3.49 There is a strong surfing community along the Sussex coast. The bathing waters within the study area are attractive for many water sports. Areas which attract surfers include:

- Littlehampton – the beach is reasonably exposed which leads to good surfing conditions.
- Brighton – Surfing is an important part of the Brighton culture and the area has a large surfing community. Surfing is popular around the Marina, at the Wedge and at the West Pier.
- Eastbourne – Eastbourne has good facilities for a variety of water sports and good conditions for surfing.
- West Wittering – A quieter spot for surfing with good surfing conditions.

1.3.50 Active Sussex lists the following Surfing clubs on their website:

- Brighton Surf Lifesaving Club;
- Shore Surf Club East Wittering; and
- X-Train, West Wittering.

1.3.51 Surfing can only occur during suitable weather conditions which allow for surf and swell with the best time of the year being autumn – winter but with frequency of activity often occurring summer to autumn.

1.3.52 Windsurfing is also a popular water sport activity in Sussex with a number of designated clubs and schools located on the coast. Popular locations for windsurfing and kitesurfing include Camber and Chichester which are home to the Kitesurf centre in Camber and Chichester Watersports. Brighton is also a popular area for windsurfing and kite surfing.

1.3.53 Other water based powered craft for use in water sports are known to occur within the Sussex area including speedboating and water-skiing. These activities tend to occur mainly in Spring and Autumn. Water based crafts for use of water sports can be launched from a number of facilities along the Sussex coast.

1.3.54 One kite surfing school regularly uses the inshore waters at Climping beach, based near to the car park at Atherington. Other schools use the location on an occasional basis. Numbers of kite/wind surfers is generally five to 20 and can be on any day according to prevailing conditions. (*Pers. comm. C. Miles 2020*).

Climping Beach

1.3.55 The beach has a large, privately run car park, toilets and a café. It is relatively busy on normal warm or sunny days, particularly during school and bank holidays,

however, online descriptions state that the beach is quieter than other local beaches.

1.3.56 The beach is not pristine. The sea defences have suffered significant damage during recent storms and there is evidence of heavy vehicles using the track behind the beach.

1.3.57 The Strava Heatmap for water-based activities shows that the sea at Climping Beach is relatively less popular compared to other nearby coastal stretches.

Public rights of way and promoted routes

1.3.58 The landfall, cable corridor and substation will potentially impact up to 136 PRoW, as recorded on the WSCC Interactive Map (WSCC, 2012), and allowing for a 500 metre (m) buffer each side of the onshore corridor. All of the paths surveyed were open and in acceptable condition. The paths were all assessed for relative levels of use using Strava Global Heatmap traces and Google Earth imagery. The results have been fully tabulated in **Annex A**.

1.3.59 Only a small number of paths in the corridor appear to be frequently or heavily used, these are listed, from south to north, in **Table 1.17** below:

Table 1-17 Key PRoW within the onshore cable corridor

Parish	Path No.	Type	Notes
Climping	829	Footpath	Part of England Coast Path (The footpath is subject to an unresolved application to upgrade to a Restricted Byway)
Climping	197	Byway open to all traffic	
Warning Camp	3740	Bridleway	Also a 'G' class road – G49
Burpham	2221	Bridleway	Also private vehicular route
Burpham	2191-2	Bridleway	
Angmering	2260	Bridleway	Crossed by corridor
Storrington & Sullington	2092	Restricted Byway	Part of the SDW. (Subject to a Traffic Regulation Order restricting motor vehicle use).
Storrington & Sullington	2693	Restricted Byway	
Washington	2665	Bridleway	

Parish	Path No.	Type	Notes
Washington	2697	Bridleway	Will be crossed. Potential access route.
West Grinstead	3514	Bridleway	Downs Link – on embankment.
West Grinstead	2372_2	Bridleway	Access route for Downs Link.

1.3.60 All other paths in the study area show signs of low or moderate levels of use.

1.3.61 The promoted routes crossed by the cable corridor consist of the England Coast Path, Monarch's Way, the Downs Link and the SDW National Trail.

1.3.62 The England Coast Path along Climping Beach has not yet been approved by the Secretary of State. Therefore, its future status as a national trail is unlikely to be having much impact upon current (or pre-COVID) levels of use. Most users of the path are probably beach users or local walkers/ dog-walkers. Once officially opened, it is expected that path use will increase. An indication of the levels that can be expected can tentatively be drawn from data from opened sections of the England Coast Path in southern England.

1.3.63 Data from Natural England (unpublished report, D. Pearce, 2020. pers. comm.) record that the England Coast Path at Pegwell Bay in Kent received about 46,500 visits per annum for 2017 and 2018. This figure is higher than is expected at Climping Beach as Pegwell Bay is closer to large centres of population. However, the seasonal and weekly patterns of use give a guide to the patterns of use that can be expected. At Pegwell Bay it has been found that there is a large seasonal change, with the colder months (for instance, October to March) recording half or less of the visits recorded between April and September. The peak months of July and August (212 visits/ day and 210 visits/ day respectively) are approximately four times as busy as the quietest months of December and January (of 54 visits/ day). The weekly distribution of visits shows an average of 115.8 counts on weekdays and a weekend average of 172. Therefore, weekend days generally have around 1.5-times the number of visits. Sunday visits are slightly higher than Saturday (176 Sunday, 168 Saturday).

1.3.64 No figures have been found for use of Monarch's Way. The Strava Heatmap suggests that it is only moderately trafficked.

1.3.65 The SDW shows up on Strava Heatmap as a heavily trafficked route. The SDNPA maintains several people counters along the route, including one at Kithurst Hill – approximately 1km from the expected cable crossing. Data have been supplied for 1 April 2015 to 31 March 2016, as this is the most recent year for which reliable data is available due to problems with data collection (pers. comm. Andy Gattiker, 23 November 2020).

1.3.66 The total number of users has been recorded by mode of use; 31,929 walkers, 12,173 cyclists and 179 horse riders. The year-round average daily traffic is 33 cyclists and 87 walkers per day. However, there is a seasonal variation, with July being the busiest month. A total of 5344 walkers used this part of the SDW during

July, or approximately 1,200 per week. Of these, on average about 130 used the SDW each weekday, 290 on a Saturday and 257 on a Sunday.

1.3.67 For cyclists on the SDW, visits peaked at 1895 for July 2015, with an average 39 cyclists per weekday, 133 on Saturdays and 109 on Sundays.

1.3.68 January was the quietest month with a combined average of only 56 users per day, compared to a combined average of 224 users per day in July.

1.3.69 Horse riding on this part of the SDW is negligible, with less than 1 percent of traffic being equestrian.

1.3.70 The Downs Link is a 37-mile bridleway route connecting the North and SDW National Trails to the coast at Shoreham. The Downs Link is also promoted by Sustrans as its regional route 223.

1.3.71 The cable route will cross the Downs Link between Partridge Green and Henfield. The route shows up on Strava Heatmap as being heavily used. A walkover survey (20 August 2020) showed a high level of use, particularly with groups of young cyclists and families. Walkers were also in abundance. A sole horse rider was seen near to Partridge Green.

1.3.72 Data has been obtained for traffic counters at three locations on the Downs Link at Henfield, West Grinstead and Rudgwick. The data cover the period 9 February 2020 to 8 October 2020. This period is predominantly within that covered by various levels of Covid 19 related restrictions and so the data cannot be taken to be strictly representative of pre-Covid use rates. In the absence of data covering 2019, it is not possible to quantify what changes in level of use have taken place but it is reasonable to assume that usage has probably increased and that, therefore, the data represent likely highest levels of use.

1.3.73 The total recorded users for the data period are: Henfield – 171,968; West Grinstead – 80,418; and Rudgwick – 59,441. The data give the weekly and monthly patterns of use shown in **Figure 1.6** and **Figure 1.7** below. The full data are shown in **Annex B**.

Figure 1.6 Average number of users per day of the week

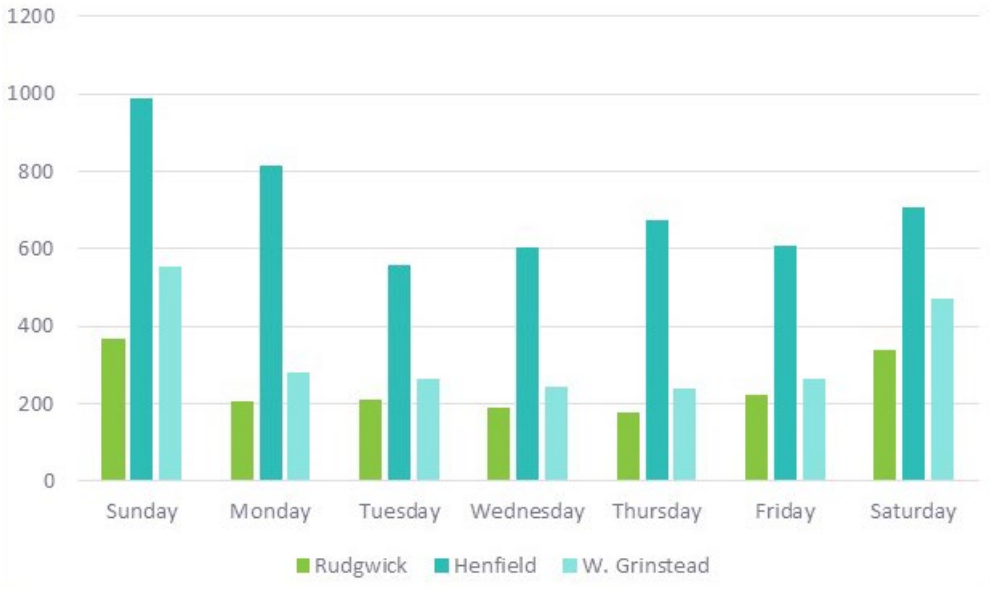
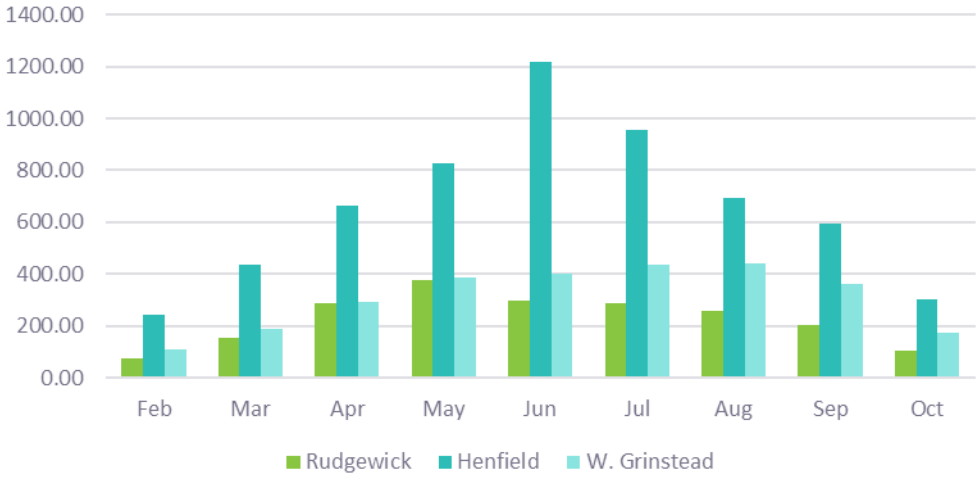


Figure 1.7 Average daily users by month



1.3.74 From the data it is apparent that there is a considerable increase in use during the warmer months at all sites but especially as recorded by the Henfield counter. It is also apparent that numbers of users are generally higher on a Sunday, though the mid-week fall in numbers is less notable for Henfield than for the other sites.

1.3.75 The Downs Link is on a low embankment, an old railway base, in the area of the expected cable crossing point.

Cycling routes

1.3.76 There are two promoted cycling routes to be crossed: National Cycle Network route 2, and regional route 223. Route 223 runs over the Downs Link, as discussed above.

1.3.77 National Cycle Network route 2 is a long-distance route which, when fully complete, will link Dover to St. Austell. The route will be crossed approximately 1km north of Climping Beach. At this location National Cycle Network route 2 runs on the minor road known as Ferry Road. No quantitative data is available but Strava Heatmap suggests frequent use by cyclists.

Rivers Arun & Adur

1.3.78 Both rivers are important recreation assets and both will be crossed by the onshore cable corridor. The River Arun will be crossed about 2km from the coast at Littlehampton. The western fork of the River Adur will be crossed about 2km south of Partridge Green, west of Henfield.

1.3.79 Both rivers host annual swimming events attracting more than 350 participants each. The rivers are both also recognised as kayaking/ canoeing rivers, though they are both heavily tidal – restricting canoeing opportunities. Angling also takes place along both rivers. Both rivers have public footpaths following one or both banks.

Access Land

1.3.80 Access Land is land designated under the Countryside and Rights of Way (CROW) Act 2000, giving the public a right of access for the purposes of open-air recreation. The study area includes land that is registered common land and land that qualifies as 'open country' under CROW.

1.3.81 There is a small number of commons that are in the vicinity of the onshore cable corridor, but none are directly crossed. The commons within the zone of interest are:

- unnamed common adjoining Spur Road, Climping (CL48, TQ005008);
- Horsebridge Common (CL22, TQ180151);
- Bines Green (CL21, TQ184169); and
- Washington Common (CL258, TQ115140).

1.3.82 Several parcels of other Access Land are in the vicinity of the onshore cable corridor and two will be crossed, both are near the northern border of the SDNPA, near Sullington Hill. There is a concentration of 'open country' access land along the northern border of the Downs, providing a large public access resource over approximately four miles of the National Park boundary.

1.3.83 The potentially affected Access Land parcels are at:

- Perry Hill, TQ054096;
- Barpham Hill, TQ064103;
- Unnamed, TQ086113; and
- Sullington Hill, TQ096122.

Village Green

1.3.84 While not a registered common and therefore not technically Access Land, there is one village green that falls within the onshore cable corridor. This is the Washington Recreation Ground and Allotments Village Green which has one football pitch, one cricket pitch and parking for 12 vehicles. The village green lies directly on the cable route and so will be temporarily disrupted. Two abutting parcels of land are also recognised as public green space, these are Jockey's Meadow and The Triangle, shown in **Figure 18.4, Volume 3**.

Inshore and offshore recreation

Overview

1.3.85 This section presents an overview of the key inshore and offshore recreation activities along the Sussex coast. It provides a baseline for the socio-economic impact assessment the construction, operation and decommissioning activities related to Rampion 2 is likely to have on inshore and offshore recreation activities, including:

- Bathing;
- Scuba diving;
- Recreational angling; and
- Recreational sailing, canoeing and kayaking.

Bathing

1.3.86 Bathing is a popular recreational activity along the Sussex coast due to the number of beaches available. Main use of bathing waters is predominantly in spring and summer during March to November with peak activity during the school summer holidays. Beaches which are notable to visitors and locals include:

- Brighton Central;
- Hove Lawns;
- Marina St Leonards;
- West Wittering;
- Bognor Regis East;
- Littlehampton Coastguards;
- Pelham Beach, Hastings;
- Saltdean, Brighton; and
- Worthing Beach.

1.3.87 The Blue Flag award is an internationally recognised designation which will attract tourists to beaches in the area. Blue Flag beaches are designated at the following locations in Sussex (Visit South East England, 2021):

- Brighton Central – a popular shingle and sand beach in one of Britain's most famous seaside resorts. The area has a refurbished pier, fun fairs, arcades, local boutiques and shopping in The Lanes. There are water sports available on Brighton beach such as kayaking and stand-up paddle boarding.
- Hove Lawns - Hove seafront begins at Hove Lawns and stretches right along to Hove Lagoon, near Portslade. This is a popular stretch of coast for walking along the seafront.
- Marina St Leonards - St. Leonards is a resort beach within the district of Hastings in East Sussex. The beach is predominantly shingle, with shallow sand flats exposed at low water.
- West Wittering – Popular with wind and kite surfers and offers views of Chichester Harbour and the South Downs and beyond. The area is internationally recognised for its wildlife, birds and unique beauty.

1.3.88 As is the case of the Blue Flag beaches, locations that are designated as clean bathing waters are likely to attract tourists to the beaches in that area. Sussex has a significant number of beaches with excellent water quality. Of the 27 bathing water beaches in Sussex which have had their water quality rated, the water quality at 16 beach quality was rated as 'excellent', eight beaches rated as 'good' and three rated as 'sufficient' (as set out by the Environment Agency).

Suba diving

1.3.89 Scuba diving is a popular inshore/ offshore activity along the Sussex coast, key diving sites include:

- Rib Dive;
- Brighton Marina;
- Indiana Wreck;
- South West Rocks;
- Fortuna Wreck;
- Oceana; and
- The Pentrych.

1.3.90 There are several charter boats available for diving trips from the Brighton coast, with the charter boats being able to visit areas offshore including Rampion 1 and the area for the proposed Rampion 2.

Recreational angling

1.3.91 Recreational angling using a rod and line can be separated into two distinct forms, shore fishing and boat fishing, with levels of activity dependent on the seasonality and availability of target species.

- Sussex Inshore Fisheries and Conservation Authority - The Authority has a marine district of approximately 500 square nautical miles (nm^2) containing unique combinations of marine species and habitats, which in turn support

significant commercial and recreational fisheries. The district has over 30 charter boat operators in its ports and harbours and numerous tackle shops along the coast to support the angler and their needs.

1.3.92 The Sussex coast is an attractive place for sea angling, the climate and excellent fishing grounds draws anglers from within Sussex and outside the area to fish from a boat or from one of Sussex's many angling hotspots, including Kingmere reef which sits inside a Marine Conservation Zone. Offshore the Sussex District contains 'marks' that are nationally recognised as offering a unique angling experience. These include, but are not limited to, an area known as 'Utopia' and 'The Overfalls' (both of these sites are in the eastern Solent). The Sussex coast has many closed bays and estuaries that are also significant areas for recreational sea anglers to fish from (Sussex Inshore Fisheries and Conservation Authority (IFCA), n.d.).

1.3.93 Recreational Sea Angling is enjoyed by a reported 40,000 residents and visitors to Sussex and it contributes £94m to the local economy. The significant economic activity generated by recreational sea angling in Sussex can be predominantly attributed directly to angling charter vessel businesses (Sussex IFCA, 2017).

Recreational sailing

1.3.94 There are many sailing clubs that operate in the Sussex area deploying from a number of harbours/ marinas and settlements throughout the year.

1.3.95 The main marinas in Sussex are Littlehampton marina (with 120 berths), Brighton Marina Village (the biggest marina complex in Europe and home to over 1,200 yachts), Newhaven Marina and Premier Sovereign Harbour Marina in Eastbourne.

1.3.96 The Sussex coast is popular for Regattas. The Sussex Regatta is an event organised by the Sussex Combined Clubs committee, consisting of representatives from yacht clubs around Sussex. Races happen frequently in the area. This includes races around the Rampion offshore wind farm.

1.3.97 Please note that the effects of Rampion 2 on shipping activity in Sussex are assessed in **Chapter 14: Shipping and navigation**.

Canoeing and Kayaking

1.3.98 Along its coast, Sussex has many clubs offering canoe or kayak hire as well as guided tours. Canoe clubs operating on the Sussex coast include Hastings, Cuckmere Valley, Hailsham, Chichester, Arun and Adur canoe clubs.

1.4 Tourism perception of wind farms

Introduction

1.4.1 This section undertakes a review of research examining the relationship between wind farms (both onshore and offshore), and associated infrastructure, on the visitor economy. Overall, there is a limited body of evidence relating to the extent to which offshore wind farms impact upon tourism. The primary research base can be divided into three broad groups focusing on (1) ex-ante research, (2) ex-post research and (3) wider research.

Ex-ante research

1.4.2 The ex-ante research covers a group of studies which have been carried out to ascertain and/ or explore potential reactions to wind farm developments. This group makes up the majority of the research base, and includes both scheme-specific studies, which tend to focus on impacts on a highly localised area, as well as larger area assessments, which consider the cumulative effect that wind farm developments across a larger impact area could have on tourism activity.

1.4.3 The majority of scheme-specific ex-ante studies rely predominantly on perceptions-based survey research to draw conclusions about the potential for wind farm developments to affect visiting behaviour in the future. Although there is a lot of variation in the survey methods adopted (incl. study areas, sampling techniques and questions asked) making it difficult to directly compare the studies on a like-for-like basis, these assessments typically explore two types of effects, including:

- the extent to which the presence of a wind farm has an effect on the visitor experience; and
- visitors' views on whether the development of a wind farm might affect their future visiting behaviour.

1.4.4 This approach tends to lead to a high level of uncertainty about the scale of potential impacts, particularly as the evidence base is mixed and findings vary across studies.

1.4.5 Furthermore, much of the focus of the research has tended to be on the impact of WTGs, rather than the onshore transmission and/ or grid infrastructure (unless developments are using pylons in areas which have sensitivity to landscape designations or scale of tourism activity). This is due to the concerns of stakeholders typically being around the visual impacts of WTGs, with less concern about the transmission infrastructure unless it relies on pylons.

Ex-post research

1.4.6 This part of the research base is limited in its coverage. Ex-post studies explore and provide evidence of the actual effects of specific wind farm developments. Relevant studies in this group are focused on assessing the observed changes in visitor behaviour after a wind farm has been built and is operational. These studies explore observed effects as reported by visitors, sector bodies, tourism and other businesses.

1.4.7 The most helpful UK-based studies of offshore wind farm developments are studies carried out in relation to North Hoyle (Arup Economics and Planning, 2002) and Gwynt Y Môr (RWE N Power Renewables, 2005) wind farms off the coast of North Wales. These were amongst the first offshore wind farm schemes nationally. Whilst there are several other offshore wind farms which have been operational for several years (including wind farms off the Norfolk coast), these have not yet been subject to any ex-post study in relation to tourism impacts.

Wider research

1.4.8 Alongside the thematic groups outlined above, there is also a wider body of literature which encompasses the following.

- Studies which provide secondary analysis of the evidence base (such as McGowan and Sauter (2005) and The Tourism Company (2012)) – Whilst some of these evaluations are helpful, there are many which draw selectively on the available evidence and, as a result may not provide a full assessment of the evidence.
- Studies from overseas (such as North Carolina State University (2016)) - A slightly greater evidence base of studies has emerged from countries where the offshore wind sector has been established for longer. This includes both ex-ante and ex-post research.
- General perceptions-based studies (such as RCUK (2009) and Soini *et al*. (2011)) – Exploring attitudes towards wind farms and associated infrastructure in general (for instance, not in connection to a specific development and/ or proposal).
- General tourism surveys (such as Failte Ireland (2012) and Cardiff City and County Council (2012) – Which explore what tourists value about a particular tourism destination and factors which enhance or detract from their experience.

1.4.9 It should be noted that across all strands of the research base, there is limited coverage in peer-reviewed academic literature. The lack of peer reviewed academic research in this area does not invalidate the evidence that exists although it does highlight the extent to which the evidence base is not yet well-established. It is therefore necessary, when reviewing the evidence that exists, to consider the reliability of the methodologies used in available studies, particularly where survey research and impact assessment methods are used.

Impact on tourism

1.4.10 Overall, the research typically finds a large majority of visitors and tourism-related businesses in local areas affected by potential developments do not expect any impact. A study for the National Grid (ERM, 2014) states 'A clear finding is that the majority of recreational users on ex-post and ex-ante projects perceive that the project will have 'no impact' on their personal behaviour and spend'. Likewise, the proportions of visitors reporting that they were more or less likely to visit as a consequence of a wind farm development are typically small. The proportion expecting negative impacts (in terms of the visitor economy and/ or their own behaviour) is usually marginally greater than those expecting positive impacts.

1.4.11 Whilst the research points towards potential for some visitors to be discouraged from making future visits to an area affected by a wind farm development, this is usually balanced (and in some cases exceeded) by visitors reporting that they will visit more frequently. This conclusion is reinforced by research studies (such as Gossop (2007) and BiGGar Economics (2008)) which have assessed the impacts post development, pointing towards there being no evidence of significant lasting impact of wind farm development and operation (either positive or negative) on tourism.

1.4.12 The research also points that visitors and tourism-related businesses recognise the potential for positive impacts associated with extra expenditure within the sector and local economy arising from the construction activity, or in some instances the additional interest in the seeing of the development.

1.4.13 Finally, the research also typically focuses on measuring opinions of what the impacts on the visitor economy could be prior to implementation of the scheme, with research being undertaken with a mix of visitors, tourism businesses, local residents and other stakeholders. However, there are few ex-post empirical studies identifying negative impacts on local visitor economies post-completion. A study by Glasgow Caledonian University (2008) suggests that even where there have been negative effects, these often occur in the form of displaced tourism with visitors diverting to neighbouring areas.

1.4.14 There are a complex range of factors which explain the attitudes of visitors to wind farm development and the consequences upon visiting behaviour. There is a need to be cautious in generalising but the evidence base (see for example Devine-Wright, 2007) points towards a tendency for younger people and those in higher socio-economic groups to be more accepting of wind farm development, in part influenced by their wider attitudes towards renewable energy and its role in addressing climate change.

1.4.15 A survey by Ipsos MORI (2014) of around 1,750 UK adults found that 76 percent of people surveyed, who had heard of wind farms supported their development. Although this report did not specifically survey tourists, it is still indicative of a generally positive outlook towards the construction of wind farms, whereby visiting areas with such an infrastructure should not deter most people from visiting.

1.4.16 The research base does not suggest that the extent to which tourists are attracted to an area by the quality of the landscape is important in determining visitors' reactions to wind farm developments. In addition, the research also states that visitors and tourism-related businesses usually recognise the potential for positive impacts associated with the extra expenditure in the sector, and the local economy arising from construction activity (or in some instances the additional interest in visiting the development).

1.4.17 Research by the Prof. Cara Aitchison at the University of Edinburgh on behalf of the Scottish Government's Renewables Inquiry (Aitchison, 2012) concluded by saying that 'the findings from both primary and secondary research relating to the actual and potential tourism impact of wind farms indicates that there will be neither an overall decline in the number of tourists visiting an area, nor any overall financial loss in tourism-related earnings as a result of a wind farm development'.

1.4.18 The literature does however indicate that wind farm developments will not have a significant effect on the overall volume and value of tourism activity in most instances. Various studies (such as University of the West of England (2004); Ipsos MORI (2014) and Glasgow Caledonian University (2008)) suggest that the majority of visitors do not expect their behaviour to be influenced (either positively or negatively) by the presence of wind farm developments.

1.4.19 Overall, the evidence outlined above suggests that offshore wind farm developments generate very limited, or no negative impact on tourist and recreational users during the construction and operation and maintenance phases.

2. Glossary of terms and abbreviations

Table 2-1 Glossary of terms and abbreviations

Term (acronym)	Definition
AI	Artificial Intelligence
AONB	Area of Outstanding Natural Beauty
Baseline	Refers to existing conditions as represented by latest available survey and other data which is used as a benchmark for making comparisons to assess the impact of development.
Baseline conditions	The environment as it appears (or would appear) immediately prior to the implementation of the Proposed Development together with any known or foreseeable future changes that will take place before completion of the Proposed Development.
CfD	Contracts for Difference
Construction effects	Used to describe both temporary effects that arise during the construction phases as well as permanent existence effects that arise from the physical existence of development (for example new buildings).
C2CLEP	Coast to Capital Local Enterprise Partnership
DCO Application	An application for consent to undertake a Nationally Significant Infrastructure Project made to the Planning Inspectorate who will consider the application and make a recommendation to the Secretary of State, who will decide on whether development consent should be granted for the Proposed Development.
Decommissioning	The period during which a development and its associated processes are removed from active operation.
DECC	Department for Energy and Climate Change
Development Consent Order (DCO)	This is the means of obtaining permission for developments categorised as Nationally Significant Infrastructure Projects, under the Planning Act 2008.
Direct employment and gross value added	Employment and gross value added which is associated with the first round of capital expenditure, for instance, Rampion 2's spend with prime contractors within each impact area of the study.

Term (acronym)	Definition
Embedded environmental measures	Equate to 'primary environmental measures' as defined by Institute of Environmental Management and Assessment (2016). They are measures to avoid or reduce environmental effects that are directly incorporated into the preferred masterplan for the Proposed Development.
Environmental Impact Assessment (EIA)	The process of evaluating the likely significant environmental effects of a proposed project or development over and above the existing circumstances (or 'baseline').
Environmental measures	Measures which are proposed to prevent, reduce and where possible offset any significant adverse effects (or to avoid, reduce and if possible, remedy identified effects.
Environmental Statement (ES)	The written output presenting the full findings of the Environmental Impact Assessment.
ESCC	East Sussex County Council
Evidence Plan Process (EPP)	A voluntary consultation process with specialist stakeholders to agree the approach and the information required to support the EIA and HRA for certain aspects.
EZ	Enterprise Zone
Full-time equivalent (FTE)	A unit for measuring employment which indicates the workload which indicates the workload associated with each post. One FTE is the equivalent of a full-time post, whilst an FTE of 0.5 suggests half-time.
Future baseline	Refers to the situation in future years without the Proposed Development.
GB	Great Britain
Gross value added (GVA)	The measure of the value of goods and services produced in an area, industry or sector of an economy. At the level of a firm, it is broadly equivalent to employment costs plus a measure of profit.
Horizontal Directional Drilling (HDD)	An engineering technique avoiding open trenches.
IMD	Index of Multiple Deprivation
Impact	The changes resulting from an action.

Term (acronym)	Definition
Indirect effects	Effects that result indirectly from the Proposed Development as a consequence of the direct effects, often occurring away from the site, or as a result of a sequence of interrelationships or a complex pathway. They may be separated by distance or in time from the source of the effects. Often used to describe effects on landscape character that are not directly impacted by the Proposed Development such as effects on perceptual characteristics and qualities of the landscape.
Indirect employment and gross value added	Employment and gross value added which is associated with the suppliers of companies that supply goods and services as part of the supply chain of the proposed Rampion 2.
LAF	Local Access Forum
Likely Significant Effects	It is a requirement of Environmental Impact Assessment Regulations to determine the likely significant effects of the Proposed Development on the environment which should relate to the level of an effect and the type of effect.
Local Enterprise Partnership (LEP)	Voluntary partnerships between local authorities and businesses set up in 2011, by the Department for Business, Innovation and skills to help determine local economic priorities and lead economic growth and job creation within the local area.
LQ	Location Quotient
LSOA	Lower Layer Super Output Areas
m	Metre
Magnitude (of change)	A term that combines judgements about the size and scale of the effect, the extent of the area over which it occurs, whether it is reversible or irreversible and whether it is short term or long term in duration'. Also known as the 'degree' or 'nature' of change.
MAGIC	Multi-agency Geographic Information for the Countryside
MW	Megawatt
NPPF	National Planning Policy Framework

Term (acronym)	Definition
Nationally Significant Infrastructure Project (NSIP)	Nationally Significant Infrastructure Projects are major infrastructure developments in England and Wales which are consented by DCO. These include proposals for renewable energy projects with an installed capacity greater than 100MW.
nm^2	Square Nautical Miles
ONS	Office for National Statistics
OPEX	Operating Expense / Expenditure
OS	Ordnance Survey
OWGP	Offshore Wind Growth Partnership
PEIR Assessment Boundary	The PEIR Assessment Boundary combines the search areas for the offshore and onshore infrastructure associated with the Proposed Development. It is defined as the area within which the Proposed Development and associated infrastructure will be located, including the temporary and permanent construction and operational work areas.
Preliminary Environmental Information Report (PEIR)	The written output of the Environmental Impact Assessment undertaken to date for the Proposed Development. It is developed to support formal consultation and presents the preliminary findings of the assessment to allow an informed view to be developed of the Proposed Development, the assessment approach that has been undertaken, and the preliminary conclusions on the likely significant effects of the Proposed Development and environmental measures proposed.
Proposed Development	The development that is subject to the application for development consent, as described in Chapter 4.
PRoW	Public Rights of Way
R&D	Research and Development
Receptor	These are as defined in Regulation 5(2) of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 and include population and human health, biodiversity, land, soil, water, air, climate, material assets, cultural heritage and landscape that may be at risk from exposure to pollutants which

Term (acronym)	Definition
	could potentially arise as a result of the Proposed Development.
RED	Rampion Extension Development Limited
Scoping Opinion	A Scoping Opinion is adopted by the Secretary of State for a Proposed Development.
Scoping Report	A report that presents the findings of an initial stage in the Environmental Impact Assessment process.
SDNP	South Downs National Park
SDNPA	South Downs National Park Authority
SDW	South Downs Way
Secretary of State (SoS)	The body who makes the decision to grant development consent.
SELEP	South East Local Enterprise Partnerships
Sensitivity	A term applied to specific receptors, combining judgements of the susceptibility of the receptor to the specific type of change or development proposed and the value associated to that receptor.
Significance	A measure of the importance of the environmental effect, defined by criteria specific to the environmental aspect.
Significant effects	It is a requirement of the EIA Regulations to determine the likely significant effects of the development on the environment which should relate to the level of an effect and the type of effect. Where possible significant effects should be mitigated.
Temporary or permanent effects	Effects may be considered as temporary or permanent. In the case of wind energy development the application is for a 30 year period after which the assessment assumes that decommissioning will occur and that the site will be restored. For these reasons the development is referred to as long term and reversible.
TCE	The Crown Estate
UK	United Kingdom
UNWTO	United Nations World Tourism Organisation
WSCC	West Sussex County Council

Term (acronym)	Definition
WTG	Wind Turbine Generator

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Annex A Public Right of Way (PRoW) potentially affected by Rampion 2

The following table lists PRoW potentially affected by the onshore temporary cable corridor, and their relative levels of use, as assessed from Strava Global Heatmap, Google Earth and walk-over survey.

In order to indicate if a path is within the South Downs National Park Authority (SDNPA) the following symbols have been used: ‘y’ = yes and ‘n’ = no.

Please note that the Strava categorisation is based on the following scale: '1' = very light, '2' = light use, '3' = light to moderate, '4' = moderate to light, '5' = moderate use, '6' = moderate to frequent, '7' = frequent use, '8' = heavy/very frequent use.

Table A-1 Sensitivity of PRoW potentially affected by Rampion 2

Parish	Path No.	Path Type	Within SDNP? (y/ n)	Strava	Notes
Climping	829	Footpath	n	7	Part of planned England Coast Path. Pedestrian use levels drop east of junction with 829_1, with most traffic using the 829_1. Path is subject to an unresolved application to upgrade it to a Restricted Byway.
Climping	829_1	Footpath	n	6	
Climping	169	Footpath	n	6	
Climping	171	Footpath	n	6	
Climping	197	Byway open to all traffic	n	7	Possible haul road/access route
Climping	173	Footpath	n	2	Path may be affected for 1km+
Climping	172	Footpath	n	1	
Climping	174	Footpath	n	1	Alternative routes available. Path is subject to application to upgrade to Restricted Byway. Not yet determined.
Climping	168	Footpath	n	2	Possible access route that may affect path for approximately 1km

Parish	Path No.	Path Type	Within SDNP? (y/ n)	Strava	Notes
climping	206	Footpath	n	4	Riverside path on levy. Local Access Forum (LAF) has advised of aspiration for bridleway status as part of active travel route.
Lyminster and Crossbush	2165	Footpath	n	6	Terminus with A284 may be affected and need small diversion
Lyminster and Crossbush	2207	Footpath	n	1	Path may be crossed in two locations
Lyminster and Crossbush	2205	Footpath	n	2	May be significantly affected subject to route around Crossbush
Lyminster and Crossbush	2202_1	Footpath	n	2	May be significantly affected subject to route around Crossbush
Lyminster and Crossbush	2202	Footpath	y	2	Possibly affected by proximity of works
Lyminster and Crossbush	2189	Footpath	y	6	Terminus at Crossbush may be affected
Warningcamp	2217	Footpath	y	1	Within 500m but low impact expected
Warningcamp	2218	Footpath	y	2	Within 500m but low impact expected
Warningcamp	2213	Bridleway	y	6	May impact for approximately 400m, would need diversion
Warningcamp	2219	Bridleway	y	4	Crossed. Monarch's Way. May need mitigation.

Parish	Path No.	Path Type	Within SDNP? (y/ n)	Strava	Notes
Warningcamp	2220_1	Footpath	y	4	Within 500m but low impact expected
Warningcamp	2213	Bridleway	y	4	Within 500m but low impact expected, part of Monarch's Way
Warningcamp	3740	Bridleway	y	8	Within 500m but expect low impact. Note, this is also a 'G' class road - G49.
Burpham	2219	Bridleway	y	4	Crossed. May need diversion
Burpham	2224	Footpath	y	6	Within 500m but low impact expected - Shielded by trees
Burpham	2227	Footpath	y	2	Within 500m but low impact expected - Shielded by trees
Burpham	2230	Footpath	y	2	Within 500m but low impact expected
Burpham	2221	Bridleway	y	7	Crossed. May need diversion (Private vehicular route)
Burpham	2226	Footpath	y	6	Within 500m, may be some impact at paths junction, but alternative available via 2256
Burpham	2256	Footpath	y	1	Crossed. May need diversion
Burpham	2256_1	Footpath	y	6	Corridor runs over the path for 1km+. May need temporary closure or diversion onto Coombe Lane (bridleway 2249) and footpath 3558
Burpham	2249	Bridleway	y	6	Within 500m but low impact expected

Parish	Path No.	Path Type	Within SDNP? (y/ n)	Strava	Notes
Burpham	3558	Footpath	y	1	Within 500m and joins 2256_1. Could be used as a diversion route. But may be affected by works by proximity.
Burpham	2214	Bridleway	y	5	Crossed at important paths junction at Wepham Down. May need diversion/careful temporary provision for a number of paths. (Becomes 2191)
Burpham	2191	Bridleway	y	5	Continuation of 2214. Important north-south bridleway link from SDW to Warning Camp. Path crossed at junction with 2214 and may be further impacted as it turns north, followed by the corridor for several hundred metres.
Burpham	3558_1	Bridleway	y	5	Runs close to corridor at southern end, gradually moving away. May be impacted by noise/visuals and temporary blockage.
Burpham	2191_2	Bridleway	y	7	Part of bridleway network that joins with 3558_1, 3558, 2214 and 2191 where the corridor crosses. Important north-south route option
Storrington and Sullington	2252	Bridleway	y	4	Crossed by corridor and may require local temporary diversion, or diversion onto alternative bridleway.
Angmering	2260	Bridleway	y	7	Crossed by corridor and may require local temporary diversion, or diversion onto alternative bridleway.

Parish	Path No.	Path Type	Within SDNP? (y/ n)	Strava	Notes
Patching	2173	Bridleway	y	6	Crossed by corridor and may require local temporary diversion, or diversion onto alternative bridleway.
Storrington and Sullington	2282_1	Bridleway	Y	6	Crossed by corridor and may require local temporary diversion, or diversion onto alternative bridleway.
Storrington and Sullington	2092	Restricted byway	Y	8	SDW. Critical crossing point near a major junction of paths. Follows ridgeline, so users may see the works even if not directly impacted.
Storrington and Sullington	2693	Restricted byway	y	8	Within 500m. Continuation of SDW on ridgeline, so there may be visual intrusion.
Storrington and Sullington	2108_1	Bridleway	y	3	Route of bridleway is contiguous with access route for SDW crossing. May need temporary closure but alternative route exists via 2282 and 2696, however, 2696 is probably much steeper.
Storrington and Sullington	2282	Bridleway	y	6	Within 500m. Expect some impact and loss of amenity but could provide alternative to 2108_1.
Storrington and Sullington	2689	Bridleway	Y	2	Within 500m and joins 2256_1. Could be used as a diversion route. But may be affected by works by proximity.
Washington	2665	Bridleway	y	7	Crossed by corridor and may require local temporary diversion, or diversion onto alternative bridleway.

Parish	Path No.	Path Type	Within SDNP? (y/ n)	Strava	Notes
Storrington and Sullington	2665	Bridleway	y	4	Crossed by corridor and may require local temporary diversion, or diversion onto alternative bridleway.
Storrington and Sullington	2691	Bridleway	y	6	May be used as an access route and so considerably impacted. Could use alternative bridleway/ minor road/ track access for riders but could require more use of A283. Would require signage well in advance to warn users of any closure.
Washington	2697	Bridleway	y	7	May be used as an access route and so considerably impacted. Could use alternative bridleway/ minor road/ track access for riders but could require more use of A283. Will require signage well in advance to warn users of any closure.
Washington	2623	Bridleway	y	3	Within 500m but expect low impact - unless the bridleway is promoted as a diversion route. Then can expect some increase in traffic.
Washington	2698	Footpath	y	6	May be used as an access route and so considerably impacted.
Washington	2666	Bridleway	y	3	Within 500m but expect low impact - unless the bridleway is promoted as a diversion route. Then could expect some increase in traffic.
Washington	2089_2	Footpath	y	1	Within 500m but low impact expected

Parish	Path No.	Path Type	Within SDNP? (y/ n)	Strava	Notes
Washington	2699	Footpath	y	2	Within 500m but low impact expected
Washington	2701	Footpath	n	2	Within 500m but low impact expected
Washington	2700	Footpath	n	2	Within 500m but low impact expected
Washington	2630	Footpath	y	6	Within 500m but expect low impact. Runs through Washington Common, which falls partly within 500m but not expected to be significantly impacted.
Washington	2703	Bridleway	y	2	Crossed. May need diversion
Wiston	2709	Footpath	n	2	Within 500m but low impact expected
Wiston	2710	Footpath	n	2	Crossed. May need diversion
Wiston	2711	Bridleway	n	2	Crossed. May need diversion
Wiston	2514	Footpath	n	2	Crossed. May need diversion
Ashurst	2594	Bridleway	n	2	Crossed. May need diversion (Private vehicular route)
Ashurst	2589_1	Bridleway	n	2	Possible access route that may affect path for approximately 0.5km
Ashurst	1868	Bridleway	n	2	AKA Spithandle Lane. Within 500m but not likely to be significantly affected.
Ashurst	2589	Footpath	n	2	Within 500m but low impact expected

Parish	Path No.	Path Type	Within SDNP? (y/ n)	Strava	Notes
Ashurst	2591	Footpath	n	2	Within 500m but low impact expected
Ashurst	2588	Footpath	n	2	Crossed. May need diversion
Ashurst	2590	Footpath	n	2	Within 500m but low impact expected
Ashurst	2950	Footpath	n	2	Within 500m but low impact expected
Ashurst	2519	Footpath	n	2	Crossed in two places. May need diversion (Private vehicular route). Might be used as access road at both locations. Approximately 600m might be affected, so could need temporary closure or traffic management systems.
Ashurst	2520	Footpath	n	2	Crossed. May need diversion
Ashurst	2518	Footpath	n	2	Within 500m but low impact expected
Ashurst	3202	Footpath	n	2	Riverside path on west bank. Not likely to be significantly impacted, however, access to the riverside may be affected if 2519 and/or 2520 are blocked.
Henfield	3200	Footpath	n	6	Riverside path on east bank. Not likely to be significantly impacted, though there may be noise for some weeks while work progresses, including Horizontal Directional drilling (HDD) under River Adur west fork.

Parish	Path No.	Path Type	Within SDNP? (y/ n)	Strava	Notes
West Grinstead	2372	Footpath	n	2	North of B2135 - Within 500m but expect low impact. There could be significant impact from Bines Farm for 300m north if concurrent with access road.
West Grinstead	3514	Bridleway	n	8	Downs Link. Will need to be crossed. Busy route on railway embankment.
West Grinstead	2374	Footpath	n	2	Crossed. May need diversion
West Grinstead	2372_2	Bridleway	n	8	Access route for Downs Link/ Sustrans regional route 223. Access will need to be maintained.
West Grinstead	2373	Footpath	n	2	Might be around perimeter of a set-down area, so could be significantly affected. Provides route around Partridge Green. Downs Link and 2372_2 would provide an alternative.
West Grinstead	2372_1	Footpath	n	1	Within 500m and serves Downs Link. May be affected if set down area or access route near to sewage works.
West Grinstead	1841_1	Footpath	n	1	Link path that may be affected if 2372_1 or 1841 are blocked. 2808 offers an alternative route.
West Grinstead	2808	Footpath	n	2	Within 500m. May be affected depending upon access to B2116 near Dunstan's Farm.

Parish	Path No.	Path Type	Within SDNP? (y/ n)	Strava	Notes
West Grinstead	1761	Footpath	n	2	Within 500m. May be minor impact depending upon arrangements at Dunstan's Farm access. But route could remain open.
West Grinstead	2800	Bridleway	n	2	Within 500m. May be minor impact depending upon arrangements at Dunstan's Farm access. But route could remain open.
West Grinstead	1774	Bridleway	n	2	Reeds Lane. Unlikely to be affected unless 2800 is closed.
Shermanbury	1774	Bridleway	n	2	Minor disturbance only at the eastern junction with A281.
Cowfold	1772	Footpath	n	2	Within 500m but expect low impact
Cowfold	1776	Footpath	n	2	Impact will depend upon use and layout of access road through Little Parkminster. Continuation of path to Park Farm could provide alternative for 1781 and vice versa.
Cowfold	1770	Footpath	n	2	Within 500m but low impact expected
Shermanbury	2378	Footpath	n	2	Within 500m but low impact expected
Shermanbury	2377	Footpath	n	2	Within 500m but expect low impact (Shielded by trees.
Shermanbury	1785	Bridleway	n	6	Crossed. May need diversion (Private vehicular route)

Parish	Path No.	Path Type	Within SDNP? (y/ n)	Strava	Notes
Shermanbury	2384	Footpath	n	2	Within 500m. Possible diversion route, but footpath only so would need landowner agreement for bridleway users.
Shermanbury	2382	Footpath	n	2	Potentially crossed in two places. May need diversions.
Shermanbury	2383	Footpath	n	2	Crossed. May need diversion, this may be possible onto Wineham Lane or 2382.
Shermanbury	2386	Footpath	n	2	Within 500m but low impact expected
Shermanbury	2388	Footpath	n	2	Within 500m but low impact expected
Shermanbury	2376	Bridleway	n	3	Within 500m but low impact expected
Shermanbury	1781	Footpath	n	2	Crossed at western end but could be mutual diversion route with 1776
Twineham	14T	Footpath	n	2	Within 500m but low impact expected
Twineham	8T	Footpath	n	2	Important N-S route that skirts sub-station at junction with 34Bo. Care needed to avoid disruption.
Twineham	9T	Footpath	n	2	Within 500m but low impact expected
Twineham	2T	Footpath	n	2	Within 500m but low impact expected
Twineham	2_1T	Footpath	n	2	Within 500m but low impact expected

Parish	Path No.	Path Type	Within SDNP? (y/ n)	Strava	Notes
Shermanbury	2390	Footpath	n	2	Within 500m but low impact expected
Shermanbury	2391	Footpath	n	2	Within 500m but low impact expected
Cowfold	1776_1	Footpath	n	2	Crossed. May need diversion – for example, 1781
Cowfold	1730	Bridleway	n	6	Crossed at eastern end near Kentstreet Lane.
Cowfold	1782	Footpath	n	6	Crossed at northern end. Potential for local alternative via 1784/1783.
Cowfold	1783	Footpath	n	2	Crossed. Potential for local alternative via 1784/1783.
Cowfold	1784	Footpath	n	2	Within 500m, potential for impact at western end. Part of good local network.
Cowfold	1785	Bridleway	n	6	Within 500m but low impact expected
Cowfold	1788	Footpath	n	2	Within 500m but low impact expected
Cowfold	1787	Footpath	n	2	Crossed. Potential for local alternative
Cowfold	1789	Footpath	n	2	Crossed. May need diversion
Cowfold	1790	Footpath	n	2	Crossed. 1791 offers local alternative.
Cowfold	1791	Footpath	n	2	Within 500m. Some disturbance expected.
Cowfold	1792	Footpath	n	2	Crossed near junction with 2380 and Kent Street.

Parish	Path No.	Path Type	Within SDNP? (y/ n)	Strava	Notes
Bolney	32Bo	Footpath	n	2	Within 500m but low impact expected
Bolney	36Bo	Footpath	n	2	Crossed. May need long-term diversion/extinguishment. Joins 1T.
Twineham	1T	Footpath	n	2	Crossed. May need long-term diversion/extinguishment. Joins 36Bo.
Bolney	31Bo	Bridleway	n	2	Within 500m but low impact expected
Bolney	30Bo	Footpath	n	2	Within 500m but low impact expected
Bolney	32Bo	Footpath	n	2	Within 500m but low impact expected
Bolney	34Bo	Footpath	n	2	Important N-S route that skirts sub-station at junction with 8T. Care would be needed to avoid disruption.
Bolney	35_1Bo	Footpath	n	2	Within 500m but low impact expected
Bolney	35Bo	Footpath	n	2	Within 500m but low impact expected
Cowfold	1775	Footpath	n	2	Within 500m but low impact expected
Cowfold	1777	Footpath	n	3	Within 500m but low impact expected
Cowfold	1778	Footpath	n	2	Within 500m but low impact expected
Cowfold	1780	Footpath	n	2	Within 500m but low impact expected
Cowfold	1766	Footpath	n	2	Within 500m but low impact expected

Parish	Path No.	Path Type	Within SDNP? (y/ n)	Strava	Notes
Cowfold	1767	Footpath	n	2	Within 500m but low impact expected
Cowfold	1758	Bridleway	n	2	Within 500m but low impact expected

Annex B Daily user counts from three locations on the Downs Link

Table B-1 Daily user counts from three locations on the Downs Link

	Date	Rudgwick	Henfield	West Grinstead	Date	Rudgwick	Henfield	West Grinstead
Sun	9/2/2020	38	126	51	7/6/2020	606	1024	813
Mon	10/2/2020	63	212	69	8/6/2020	310	601	320
Tue	11/2/2020	89	256	64	9/6/2020	315	864	357
Wed	12/2/2020	70	249	118	10/6/2020	117	481	173
Thu	13/02/2020	19	155	82	11/6/2020	172	454	238
Fri	14/02/2020	88	268	97	12/6/2020	198	405	236
Sat	15/02/2020	113	284	155	13/06/2020	562	1135	702
Sun	16/02/2020	62	234	72	14/06/2020	472	2488	844
Mon	17/02/2020	82	252	109	15/06/2020	291	926	328
Tue	18/02/2020	79	266	96	16/06/2020	297	632	360
Wed	19/02/2020	91	214	76	17/06/2020	129	1080	169
Thu	20/02/2020	30	178	78	18/06/2020	148	433	194
Fri	21/02/2020	93	273	160	19/06/2020	217	817	394
Sat	22/02/2020	163	375	281	20/06/2020	558	812	804
Sun	23/02/2020	145	289	137	21/06/2020	357	1004	629
Mon	24/02/2020	28	145	33	22/06/2020	249	768	498
Tue	25/02/2020	72	194	132	23/06/2020	288	853	524

	Date	Rudgwick	Henfield	West Grinstead	Date	Rudgwick	Henfield	West Grinstead
Wed	26/02/2020	59	267	105	24/06/2020	249	3046	354
Thu	27/02/2020	55	181	71	25/06/2020	240	495	363
Fri	28/02/2020	61	161	51	26/06/2020	250	525	375
Sat	29/02/2020	106	288	164	27/06/2020	255	442	287
Sun	1/3/2020	194	506	272	28/06/2020	599	2355	861
Mon	2/3/2020	63	237	87	29/06/2020	234	3185	291
Tue	3/3/2020	154	255	116	30/06/2020	155	265	151
Wed	4/3/2020	52	196	40	1/7/2020	250	629	412
Thu	5/3/2020	41	118	19	2/7/2020	183	532	292
Fri	6/3/2020	116	284	92	3/7/2020	273	571	416
Sat	7/3/2020	171	367	258	4/7/2020	370	482	471
Sun	8/3/2020	162	526	235	5/7/2020	492	1879	826
Mon	9/3/2020	72	247	102	6/7/2020	227	1267	394
Tue	10/3/2020	76	227	61	7/7/2020	320	519	316
Wed	11/3/2020	76	240	84	8/7/2020	128	345	184
Thu	12/3/2020	69	240	76	9/7/2020	224	469	278
Fri	13/03/2020	84	351	131	10/7/2020	242	1101	421
Sat	14/03/2020	184	463	269	11/7/2020	518	1138	840
Sun	15/03/2020	201	432	278	12/7/2020	477	1435	918
Mon	16/03/2020	96	372	147	13/07/2020	243	578	403

	Date	Rudgwick	Henfield	West Grinstead	Date	Rudgwick	Henfield	West Grinstead
Tue	17/03/2020	104	313	93	14/07/2020	242	471	330
Wed	18/03/2020	115	313	138	15/07/2020	278	555	394
Thu	19/03/2020	79	267	120	16/07/2020	210	541	352
Fri	20/03/2020	155	328	102	17/07/2020	278	812	424
Sat	21/03/2020	231	631	445	18/07/2020	508	1174	646
Sun	22/03/2020	301	650	601	19/07/2020	312	784	562
Mon	23/03/2020	197	563	227	20/07/2020	227	1093	379
Tue	24/03/2020	222	483	210	21/07/2020	274	860	324
Wed	25/03/2020	257	577	314	22/07/2020	241	819	303
Thu	26/03/2020	216	1942	260	23/07/2020	235	588	340
Fri	27/03/2020	262	610	254	24/07/2020	382	563	328
Sat	28/03/2020	269	441	354	25/07/2020	243	783	244
Sun	29/03/2020	181	362	154	26/07/2020	401	1552	872
Mon	30/03/2020	152	413	149	27/07/2020	129	334	146
Tue	31/03/2020	195	559	203	28/07/2020	245	1026	472
Wed	1/4/2020	260	471	228	29/07/2020	292	771	484
Thu	2/4/2020	232	505	194	30/07/2020	229	2421	415
Fri	3/4/2020	281	535	261	31/07/2020	206	3603	316
Sat	4/4/2020	326	637	397	1/8/2020	333	1122	571
Sun	5/4/2020	349	722	400	2/8/2020	486	1254	922

	Date	Rudgwick	Henfield	West Grinstead	Date	Rudgwick	Henfield	West Grinstead
Mon	6/4/2020	214	490	177	3/8/2020	255	865	470
Tue	7/4/2020	272	705	262	4/8/2020	281	603	424
Wed	8/4/2020	254	537	296	5/8/2020	240	620	397
Thu	9/4/2020	264	684	322	6/8/2020	236	561	422
Fri	10/4/2020	332	599	373	7/8/2020	224	468	323
Sat	11/4/2020	344	683	428	8/8/2020	226	420	390
Sun	12/4/2020	339	830	382	9/8/2020	461	581	490
Mon	13/04/2020	290	825	254	10/8/2020	199	373	236
Tue	14/04/2020	271	757	282	11/8/2020	225	408	292
Wed	15/04/2020	284	759	329	12/8/2020	246	402	246
Thu	16/04/2020	285	607	333	13/08/2020	124	323	306
Fri	17/04/2020	150	295	94	14/08/2020	196	449	317
Sat	18/04/2020	334	674	337	15/08/2020	261	484	432
Sun	19/04/2020	452	888	518	16/08/2020	309	720	578
Mon	20/04/2020	274	627	229	17/08/2020	167	927	387
Tue	21/04/2020	310	586	277	18/08/2020	188	973	502
Wed	22/04/2020	245	678	223	19/08/2020	75	455	118
Thu	23/04/2020	301	760	329	20/08/2020	277	592	506
Fri	24/04/2020	284	1117	274	21/08/2020	190	427	432
Sat	25/04/2020	419	1567	446	22/08/2020	322	734	679

	Date	Rudgwick	Henfield	West Grinstead	Date	Rudgwick	Henfield	West Grinstead
Sun	26/04/2020	573	859	542	23/08/2020	333	1401	688
Mon	27/04/2020	255	528	293	24/08/2020	210	999	362
Tue	28/04/2020	82	255	79	25/08/2020	105	342	249
Wed	29/04/2020	169	418	140	26/08/2020	230	682	398
Thu	30/04/2020	125	321	89	27/08/2020	210	1116	237
Fri	1/5/2020	232	438	162	28/08/2020	191	366	216
Sat	2/5/2020	439	838	499	29/08/2020	328	668	528
Sun	3/5/2020	356	1533	308	30/08/2020	452	1097	827
Mon	4/5/2020	258	607	233	31/08/2020	346	1125	768
Tue	5/5/2020	228	601	210	1/9/2020	199	520	333
Wed	6/5/2020	304	605	272	2/9/2020	199	485	300
Thu	7/5/2020	303	793	318	3/9/2020	138	386	307
Fri	8/5/2020	502	824	506	4/9/2020	244	437	330
Sat	9/5/2020	513	852	592	5/9/2020	359	761	671
Sun	10/5/2020	341	619	450	6/9/2020	446	775	797
Mon	11/5/2020	155	539	153	7/9/2020	171	381	279
Tue	12/5/2020	312	999	335	8/9/2020	171	445	289
Wed	13/05/2020	207	665	184	9/9/2020	195	708	342
Thu	14/05/2020	251	603	142	10/9/2020	144	1285	299
Fri	15/05/2020	292	703	242	11/9/2020	201	446	247

	Date	Rudgwick	Henfield	West Grinstead	Date	Rudgwick	Henfield	West Grinstead
Sat	16/05/2020	488	828	670	12/9/2020	412	711	581
Sun	17/05/2020	600	999	678	13/09/2020	422	1355	727
Mon	18/05/2020	291	606	133	14/09/2020	179	879	314
Tue	19/05/2020	358	706	120	15/09/2020	198	460	292
Wed	20/05/2020	303	892	254	16/09/2020	149	469	292
Thu	21/05/2020	214	891	184	17/09/2020	133	627	261
Fri	22/05/2020	316	523	256	18/09/2020	187	501	321
Sat	23/05/2020	411	577	361	19/09/2020	370	688	576
Sun	24/05/2020	663	1216	832	20/09/2020	371	1677	665
Mon	25/05/2020	642	1661	884	21/09/2020	145	477	283
Tue	26/05/2020	382	631	409	22/09/2020	154	396	311
Wed	27/05/2020	433	804	434	23/09/2020	74	293	145
Thu	28/05/2020	409	880	390	24/09/2020	49	196	125
Fri	29/05/2020	419	627	309	25/09/2020	93	291	152
Sat	30/05/2020	580	1201	696	26/09/2020	288	583	512
Sun	31/05/2020	504	1403	779	27/09/2020	295	634	459
Mon	1/6/2020	235	4778	219	28/09/2020	156	366	257
Tue	2/6/2020	322	1402	340	29/09/2020	116	418	268
Wed	3/6/2020	206	779	201	30/09/2020	75	172	138
Thu	4/6/2020	230	2952	208	1/10/2020	112	383	227

	Date	Rudgwick	Henfield	West Grinstead	Date	Rudgwick	Henfield	West Grinstead
Fri	5/6/2020	272	804	356	2/10/2020	41	171	72
Sat	6/6/2020	317	714	476	3/10/2020	127	467	200

4.18.3

Rampion 2 WIND FARM

Volume 4, Appendix 18.3

Assessment of sensitivity of Public Rights of Way (PRoW)

GoBe wood.

Contents

1. Assessment of sensitivity of Public Rights of Way (PRoW) affected by Rampion 2

1.1.1 The following table identifies the sensitivity of PRoW potentially affected by Rampion 2. In order to indicate if a path is within the South Downs National Park Authority (SDNPA) the following symbols have been used: ‘y’ = yes and ‘n’ = no.

1.1.2 Please note that the Strava categorisation is based on the following scale: '1' = very light, '2' = light use, '3' = light to moderate, '4' = moderate to light, '5' = moderate use, '6' = moderate to frequent, '7' = frequent use, '8' = heavy/very frequent use.

1.1.3 Furthermore, please note that a number of paths show no Strava tracks, however aerial photographs show a marked line on the ground.

Table 1-1 Sensitivity of PRoW potentially affected by Rampion 2

Parish	Path No.	Path Type	Within SDNPA? (y/n)	Strava	Sensitivity of PRoW	Notes
Climping	829	Footpath	n	7	Medium	Part of planned England Coast Path is subject to an unresolved application to upgrade it to a Restricted Byway.
Climping	829_1	Footpath	n	1	Low	Path is a short spur off 174.
Climping	169	Footpath	n	6	Low	
Climping	171	Footpath	n	6	Low	
Climping	197	Byway open to all traffic	n	7	Medium	Probable haul road/access route.
Climping	173	Footpath	n	2	Low	Path will be affected for 1km+.
Climping	172	Footpath	n	1	Low	
Climping	174	Footpath	n	5	Low	Alternative routes available. (Path subject to application to upgrade to Restricted Byway. Not yet determined).
Climping	168	Footpath	n	2	Low	Possible access route that will affect path for approximately 1km.

Parish	Path No.	Path Type	Within SDNPA? (y/n)	Strava	Sensitivity of PRoW	Notes
climping	206	Footpath	n	4	Low	Riverside path on levy (LAF has advised of aspiration for bridleway status as part of active travel route).
Lyminster and Crossbush	2165	Footpath	n	6	Low	Terminus with A284 may be affected and need small diversion.
Lyminster and Crossbush	2207	Footpath	n	1	Low	Path to be crossed in two locations.
Lyminster and Crossbush	2205	Footpath	n	2	Low	Maybe significantly affected subject to route around Crossbush.
Lyminster and Crossbush	2202_1	Footpath	n	2	Low	May be significantly affected subject to route around Crossbush.
Lyminster and Crossbush	2202	Footpath	y	2	Low	Possibly affected by proximity of works.
Lyminster and Crossbush	2189	Footpath	y	6	Low	Terminus at Crossbush may be affected.
Warningcamp	2217	Footpath	y	1	Low	Within 500 metres (m) but expect low impact.
Warningcamp	2218	Footpath	y	2	Low	Within 500m but expect low impact.
Warningcamp	2213	Bridleway	y	6	Medium	Impact for approximately 400m, will need diversion.

Parish	Path No.	Path Type	Within SDNPA? (y/n)	Strava	Sensitivity of PRoW	Notes
Warningcamp	2219	Bridleway	y	4	Medium	Crossed. Monarch's Way. Will need mitigation.
Warningcamp	2220_1	Footpath	y	4	Low	Within 500m but expect low impact.
Warningcamp	2213	Bridleway	y	4	Medium	Within 500m but expect low impact, but part of Monarch's Way.
Warningcamp	3740	Bridleway	y	8	Low	Within 500m but expect low impact. NB, This is also a 'G' class road - G49.
Burpham	2219	Bridleway	y	4	Medium	Crossed. Will need diversion.
Burpham	2224	Footpath	y	6	Low	Within 500m but expect low impact - shielded by trees
Burpham	2227	Footpath	y	2	Low	Within 500m but expect low impact - Shielded by trees.
Burpham	2230	Footpath	y	2	Low	Within 500m but expect low impact.
Burpham	2221	Bridleway	y	7	Low	Crossed. Will need diversion (Private vehicular route).
Burpham	2226	Footpath	y	6	Low	Within 500m, expect some impact at paths junction, but alternative available via 2256.

Parish	Path No.	Path Type	Within SDNPA? (y/n)	Strava	Sensitivity of PRoW	Notes
Burpham	2256	Footpath	y	1	Low	Crossed. Will need diversion.
Burpham	2256_1	Footpath	y	6	Medium	Corridor runs over the path for 1km+. Will need temporary closure or diversion onto Coombe Lane (bridle way 2249) and footpath 3558.
Burpham	2249	Bridleway	y	6	Low	Within 500m but expect low impact.
Burpham	3558	Footpath	y	1	Low	Within 500m and joins 2256_1. Could be used as a diversion route. But will be affected by works by proximity.
Burpham	2214	Bridleway	y	5	Medium	Crossed at important paths junction at Wepham Down. Will need diversion/careful temporary provision for a number of paths. (Becomes 2191).
Burpham	2191	Bridleway	y	5	Medium	Continuation of 2214. Important north-south bridleway link from South Downs Way (SDW) to Warning Camp. Path crossed at junction with 2214 and further impacted as it turns north, followed by the onshore temporary cable corridor for several hundred metres.

Parish	Path No.	Path Type	Within SDNPA? (y/n)	Strava	Sensitivity of PRoW	Notes
Burpham	3558_1	Bridleway	y	5	Medium	Runs close to onshore temporary cable corridor at southern end, gradually moving away. Will be impacted by noise/visuals and temporary blockage.
Burpham	2191_2	Bridleway	y	7	Medium	Part of bridleway network that joins with 3558_1, 3558, 2214 and 2191 where the onshore temporary cable corridor crosses. Important north-south route option.
Storrington and Sullington	2252	Bridleway	y	4	Low	Crossed by onshore temporary cable corridor and may require local temporary diversion, or diversion onto alternative bridleway.
Angmering	2260	Bridleway	y	7	Medium	Crossed by onshore temporary cable corridor and may require local temporary diversion, or diversion onto alternative bridleway.
Patching	2173	Bridleway	y	6	Low	Crossed by onshore temporary cable corridor and may require local temporary diversion, or diversion onto alternative bridleway.
Storrington and Sullington	2282_1	Bridleway	Y	6	Low	Crossed by onshore temporary cable corridor and may require local

Parish	Path No.	Path Type	Within SDNPA? (y/n)	Strava	Sensitivity of PRoW	Notes
						temporary diversion, or diversion onto alternative bridleway.
Storrington and Sullington	2092	Restricted bridleway	Y	8	High	South Downs Way. Critical crossing point near a major junction of paths. Follows ridgeline, so users will see the works even if not directly impacted.
Storrington and Sullington	2693	Restricted bridleway	y	8	Low	Within 500m. Continuation of SDW on ridgeline, so there will be visual intrusion.
Storrington and Sullington	2108_1	Bridleway	y	3	Low	Route of bridleway is contiguous with access route for SDW crossing. May need temporary closure but alternative route exists via 2282 & 2696, however, 2696 is probably much steeper.
Storrington and Sullington	2282	Bridleway	y	6	Low	Within 500m. Expect impact and loss of amenity but can provide alternative to 2108_1.
Storrington and Sullington	2689	Bridleway	Y	2	Low	Within 500m and joins 2256_1. Could be used as a diversion route. But will be affected by works by proximity.

Parish	Path No.	Path Type	Within SDNPA? (y/n)	Strava	Sensitivity of PRoW	Notes
Washington	2665	Bridleway	y	7	Low	Crossed by onshore temporary cable corridor and may require local temporary diversion, or diversion onto alternative bridleway.
Storrington and Sullington	2665	Bridleway	y	4	Low	Crossed by onshore temporary cable corridor and may require local temporary diversion, or diversion onto alternative bridleway.
Storrington and Sullington	2691	Bridleway	y	6	Low	May be used as an access route and so considerably impacted. Could use alternative bridleway/minor road/track access for riders but could require more use of A283. Will require signage well in advance to warn users of any closure.
Washington	2697	Bridleway	y	7	Medium	May be used as an access route and so considerably impacted. Could use alternative bridleway/minor road/track access for riders but could require more use of A283. Will require signage well in advance to warn users of any closure.

Parish	Path No.	Path Type	Within SDNPA? (y/n)	Strava	Sensitivity of PRoW	Notes
Washington	2623	Bridleway	y	3	Low	Within 500m but expect low impact - unless the bridleway is promoted as a diversion route. Then can expect some increase in traffic.
Washington	2698	Footpath	y	6	Medium	May be used as an access route and so considerably impacted.
Washington	2666	Bridleway	y	3	Low	Within 500m but expect low impact - unless the bridleway is promoted as a diversion route. Then can expect some increase in traffic.
Washington	2089_2	Footpath	y	1	Low	Within 500m but expect low impact.
Washington	2699	Footpath	y	2	Low	Within 500m but expect low impact.
Washington	2701	Footpath	n	2	Low	Within 500m but expect low impact.
Washington	2700	Footpath	n	2	Low	Within 500m but expect low impact.
Washington	2630	Footpath	y	6	Low	Within 500m but expect low impact. Runs through Washington Common, which falls partly within 500m but not expected to be significantly impacted.
Washington	2703	Bridleway	y	2	Low	Crossed. Will need diversion.

Parish	Path No.	Path Type	Within SDNPA? (y/n)	Strava	Sensitivity of PRoW	Notes
Wiston	2709	Footpath	n	2	Low	Within 500m but expect low impact.
Wiston	2710	Footpath	n	2	Low	Crossed. Will need diversion.
Wiston	2711	Bridleway	n	2	Low	Crossed. Will need diversion.
Wiston	2514	Footpath	n	2	Low	Crossed. Will need diversion.
Ashurst	2594	Bridleway	n	2	Low	Crossed. Will need diversion (Private vehicular route).
Ashurst	2589_1	Bridleway	n	2	Low	Possible access route that will affect path for approximately 0.5km.
Ashurst	1868	Bridleway	n	2	Low	AKA Spithandle Lane. Within 500m but not likely to be significantly affected.
Ashurst	2589	Footpath	n	2	Low	Within 500m but expect low impact.
Ashurst	2591	Footpath	n	2	Low	Within 500m but expect low impact.
Ashurst	2588	Footpath	n	2	Low	Crossed. Will need diversion.
Ashurst	2590	Footpath	n	2	Low	Within 500m but expect low impact.
Ashurst	2950	Footpath	n	2	Low	Within 500m but expect low impact.

Parish	Path No.	Path Type	Within SDNPA? (y/n)	Strava	Sensitivity of PRoW	Notes
Ashurst	2519	Footpath	n	2	Low	Crossed in two places. Will need diversion (Private vehicular route). Might be used as access road at both locations. C. 600m might be affected, so could be significant impact.
Ashurst	2520	Footpath	n	2	Low	Crossed. Will need diversion
Ashurst	2518	Footpath	n	2	Low	Within 500m but expect low impact.
Ashurst	3202	Footpath	n	2	Low	Riverside path on west bank. Not likely to be significantly impacted, however, access to the riverside may be affected if 2519 and /or 2520 are blocked.
Henfield	3200	Footpath	n	6	Low	Riverside path on east bank. Not likely to be significantly impacted, thought there may be noise for some weeks while work progresses, including Horizontal Directional Drilling (HDD) under River Adur west fork.
West Grinstead	2372	Footpath	n	2	Low	North of B2135 - Within 500m but expect low impact. There could be significant impact from Bines Farm

Parish	Path No.	Path Type	Within SDNPA? (y/n)	Strava	Sensitivity of PRoW	Notes
						for 300m north if concurrent with access road.
West Grinstead	3514	Bridleway	n	8	High	Downs Link. Will need to be crossed. Busy route on railway embankment. Needs HDD to reduce impact.
West Grinstead	2374	Footpath	n	2	Low	Crossed. Will need diversion.
West Grinstead	2372_2	Bridleway	n	8	High	Access route for Downs Link/Sustrans regional route 223. Access will need to be maintained.
West Grinstead	2373	Footpath	n	2	Low	Might be around perimeter of a set-down area, so could be significantly affected. Provides route around Partridge Green. Downs Link and 2372_2 would provide an alternative.
West Grinstead	2372_1	Footpath	n	1	Low	Within 500m and serves Downs Link. May be affected if set down area or access route near to sewage works.
West Grinstead	1841_1	Footpath	n	1	Low	Link path that may be affected if 2372_1 or 1841 are blocked. 2808 offers an alternative route.

Parish	Path No.	Path Type	Within SDNPA? (y/n)	Strava	Sensitivity of PRoW	Notes
West Grinstead	2808	Footpath	n	2	Low	Within 500m. May be affected depending upon access to B2116 near Dunstan's Farm.
West Grinstead	1761	Footpath	n	2	Low	Within 500m. May be minor impact depending upon arrangements at Dunstan's Farm access. But route could remain open.
West Grinstead	2800	Bridleway	n	2	Low	Within 500m. May be minor impact depending upon arrangements at Dunstan's Farm access. But route could remain open.
West Grinstead	1774	Bridleway	n	2	Low	Reeds Lane. Unlikely to be affected unless 2800 is closed.
Shermanbury	1774	Bridleway	n	2	Low	Minor disturbance only at the eastern junction with A281.
Cowfold	1772	Footpath	n	2	Low	Within 500m but expect low impact.
Cowfold	1776	Footpath	n	2	Low	Impact will depend upon use and layout of access road through Little Parkminster. Continuation of path to Park Farm could provide alternative for 1781 and vice versa.
Cowfold	1770	Footpath	n	2	Low	Within 500m but expect low impact.

Parish	Path No.	Path Type	Within SDNPA? (y/n)	Strava	Sensitivity of PRoW	Notes
Shermanbury	2378	Footpath	n	2	Low	Within 500m but expect low impact.
Shermanbury	2377	Footpath	n	2	Low	Within 500m but expect low impact (Shielded by trees.
Shermanbury	1785	Bridleway	n	6	Low	Crossed. Will need diversion (private vehicular route).
Shermanbury	2384	Footpath	n	2	Low	Within 500m. Possible diversion route, but footpath only so will need landowner agreement for bridleway users.
Shermanbury	2382	Footpath	n	2	Low	Potentially crossed in two places. Will need diversions.
Shermanbury	2383	Footpath	n	2	Low	Crossed. Will need diversion, this may be possible onto Wineham Lane or 2382.
Shermanbury	2386	Footpath	n	2	Low	Within 500m but expect low impact.
Shermanbury	2388	Footpath	n	2	Low	Within 500m but expect low impact.
Shermanbury	2376	Bridleway	n	3	Low	Within 500m but expect low impact.
Shermanbury	1781	Footpath	n	2	Low	Crossed at western end but could be mutual diversion route with 1776.

Parish	Path No.	Path Type	Within SDNPA? (y/n)	Strava	Sensitivity of PRoW	Notes
Twineham	14T	Footpath	n	2	Low	Within 500m but expect low impact.
Twineham	8T	Footpath	n	2	Low	Important N-S route that skirts sub-station at junction with 34Bo. Care needed to avoid disruption.
Twineham	9T	Footpath	n	2	Low	Within 500m but expect low impact.
Twineham	2T	Footpath	n	2	Low	Within 500m but expect low impact.
Twineham	2_1T	Footpath	n	2	Low	Within 500m but expect low impact.
Shermanbury	2390	Footpath	n	2	Low	Within 500m but expect low impact.
Shermanbury	2391	Footpath	n	2	Low	Within 500m but expect low impact.
Cowfold	1776_1	Footpath	n	2	Low	Crossed. Will need diversion – for example, 1781.
Cowfold	1730	Bridleway	n	6	Low	Crossed at eastern end near Kentstreet Lane.
Cowfold	1782	Footpath	n	6	Low	Crossed at northern end. Potential for local alternative via 1784/1783.
Cowfold	1783	Footpath	n	2	Low	Crossed. Potential for local alternative via 1784/1783.

Parish	Path No.	Path Type	Within SDNPA? (y/n)	Strava	Sensitivity of PRoW	Notes
Cowfold	1784	Footpath	n	2	Low	Within 500m, potential for impact at western end. Part of good local network.
Cowfold	1785	Bridleway	n	6	Low	Within 500m but expect low impact.
Cowfold	1788	Footpath	n	2	Low	Within 500m but expect low impact.
Cowfold	1787	Footpath	n	2	Low	Crossed. Potential for local alternative.
Cowfold	1789	Footpath	n	2	Low	Crossed. Will need diversion.
Cowfold	1790	Footpath	n	2	Low	Crossed. 1791 offers local alternative.
Cowfold	1791	Footpath	n	2	Low	Within 500m. Some disturbance expected.
Cowfold	1792	Footpath	n	2	Low	Crossed near junction with 2380 and Kent Street.
Bolney	32Bo	Footpath	n	2	Low	Within 500m but expect low impact.
Bolney	36Bo	Footpath	n	2	Medium	Crossed. May need long-term diversion/extinguishment. Joins 1T.

Parish	Path No.	Path Type	Within SDNPA? (y/n)	Strava	Sensitivity of PRoW	Notes
Twineham	1T	Footpath	n	2	Medium	Crossed. May need long-term diversion /extinguishment. Joins 36Bo.
Bolney	31Bo	Bridleway	n	2	Low	Within 500m but expect low impact.
Bolney	30Bo	Footpath	n	2	Low	Within 500m but expect low impact.
Bolney	32Bo	Footpath	n	2	Low	Within 500m but expect low impact.
Bolney	34Bo	Footpath	n	2	Low	Important N-S route that skirts sub-station at junction with 8T. Care needed to avoid disruption.
Bolney	35_1Bo	Footpath	n	2	Low	Within 500m but expect low impact.
Bolney	35Bo	Footpath	n	2	Low	Within 500m but expect low impact.
Cowfold	1775	Footpath	n	2	Low	Within 500m but expect low impact.
Cowfold	1777	Footpath	n	3	Low	Within 500m but expect low impact.
Cowfold	1778	Footpath	n	2	Low	Within 500m but expect low impact.
Cowfold	1780	Footpath	n	2	Low	Within 500m but expect low impact.
Cowfold	1766	Footpath	n	2	Low	Within 500m but expect low impact.

Parish	Path No.	Path Type	Within SDNPA? (y/n)	Strava	Sensitivity of PRoW	Notes
Cowfold	1767	Footpath	n	2	Low	Within 500m but expect low impact.
Cowfold	1758	Bridleway	n	2	Low	Within 500m but expect low impact.

2. Glossary of terms and abbreviations

Table 2-1 Glossary of terms and abbreviations

Term (acronym)	Definition
Horizontal Directional Drill (HDD)	An engineering technique avoiding open trenches.
Impact	The changes resulting from an action.
m	Metre
PRoW	Public Rights of Way
SDNPA	South Downs National Park Authority
SDW	South Downs Way
Sensitivity	A term applied to specific receptors, combining judgements of the susceptibility of the receptor to the specific type of change or development proposed and the value associated to that receptor.
Temporary or permanent effects	Effects may be considered as temporary or permanent. In the case of wind energy development the application is for a 30 year period after which the assessment assumes that decommissioning will occur and that the site will be restored. For these reasons the development is referred to as long term and reversible.

4.18.4

Rampion 2 WIND FARM

Volume 4, Appendix 18.4

Socio-Economics Cost and Sourcing Report

GoBe wood.

Contents

1. Cost and sourcing

This report presents some preparatory work for the socio-economics assessment. The note outlines the proposed approach to cost and sourcing which will ultimately be used as a basis for the assessment of Rampion 2's impact on the jobs and gross value added (GVA).

1.1 Introduction

1.1.1 Rampion 2 will have a generating capacity of up to 1,200 megawatts (MW). This capacity will be used to determine a number of assumptions which are used in the estimation of the economic impacts of Rampion 2. It is proposed that the assessment will draw on published information to reach a best estimate of the construction and operation and maintenance costs rather than relying on this information from the Applicant Rampion Extension Development Limited (henceforth the Applicant or RED), who is not able to release this for reasons of commercial confidentiality.

1.1.2 The assessment of economic impacts for Rampion 2 is an assessment of 'base-case scenario' economic impacts – in line with the approach for all parameters set in the Environmental Impact Assessment (EIA) Methodology. The assessment provides an indication of base-case expectations with regards to economic benefits and worse case assumptions on dis-benefits.

1.1.3 The assessment of economic impacts for Rampion 2 relies on information for development, construction and operation and maintenance phases for the following:

- **costs:** how much different elements of the wind farm and associated balance of plant assets will cost to construct and operate; and
- **sourcing:** what proportion of the supply chain expenditure will be retained in each of the impact areas identified for the development, construction and operational phases (for instance, Sussex – defined as West Sussex, East Sussex and the Brighton and Hove Unity Authority area, and nationally).

1.1.4 The assessment also considers the economic impacts of Rampion 2's decommissioning phase. However, given that this is over 30-years into the future from commissioning and there is very little experience nationally (apart from the decommissioning of UK oil and gas rigs), the assessment of the decommissioning phase is primarily qualitative. It is therefore assumed that the decommissioning activities of Rampion 2 will be similar to, but no worse than the impacts identified during its construction phase.

1.1.5 This report sets out the methodology for estimating each of these elements.

1.2 Construction and operation and maintenance costs

1.2.1 Construction and operation and maintenance expenditure incurred by Rampion 2 is the key driver of economic impacts generated by the Proposed Development. At this stage detailed cost estimates are not likely to be available and are also likely to be highly commercially sensitive. Given this, the proposed approach is to estimate the development and operating costs on the basis of the most robust and up to date industry data which is publicly available.

1.2.2 A key source of information on development and operation and maintenance costs is The Crown Estate's (TCE) *Guide to an Offshore Wind Farm* (TCE, 2019). This provides a reasonably comprehensive breakdown in cost estimates by type of expenditure for wind farms due to be built out up to 2025. The Guide also includes detailed information on operations, maintenance, service activities, decommissioning, floating wind and emerging technologies in data, digital and robotics and autonomous systems. The report takes account of bid prices seen in recent UK Government Contract for Difference (CfD) auctions to ensure that the cost estimates reflect the most recent evidence on price changes in the industry.

1.2.3 A number of studies have also considered the evidence for recent and future cost reduction potential. This evidence includes TCE's *Wind Cost Reduction Pathways Study* (TCE, 2012) and the *Cost Reduction Monitoring Framework* (Offshore Renewable Energy Catapult, 2016) in order to approximate the change over the period.

1.2.4 The assessment will use the evidence from TCE's latest study to provide cost estimates for each phase of Rampion 2 on a per MW basis. It should be noted that cost reductions have not been modelled during each phase of construction as these are assumed to be average costs across the build period and operating lifespan of wind farms.

Construction costs

1.2.5 Construction cost estimates are drawn from TCE's *Guide to an Offshore Windfarm* (TCE, 2019), and are set out in **Table 1-1** below. The total estimated cost per MW is £2.37 million.

1.2.6 TCE's report is based on an export cable 60 kilometre (km) in length (59km assumed to be offshore, and 1km onshore). The offshore export cable corridor for Rampion 2 is expected to be approximately 19km (for instance, between the offshore substation and landfall). The onshore corridor is estimated to be up to 37km (from landfall to onshore substation). Therefore, the total length of the export cable (for instance, both onshore and offshore) will equate to approximately 56km.

1.2.7 To account for the variance in export cable length, and proportion that is located onshore/ offshore, construction costs have been adjusted for balance of plant and installation and commissioning depending on export cable length. The updated construction cost estimates (on a Great British Pound per Megawatt (£/ MW) basis) for the Rampion 2 are set out in **Table 1-1**. On this basis, the adjusted construction cost (for instance, £/ MW) for Rampion 2 is estimated at £2.39 million per MW (2019-pricing).

Table 1-1 Estimated build costs for the construction phase (2019-pricing)

	TCE benchmarks (£/ MW)	Rampion 2 (£/MW)
1. Development and project management	£120,000	£120,000
2. Wind turbine	£1,000,000	£1,000,000
3. Balance of plant	£600,000	£591,000
4. Installation and commissioning.	£650,000	£679,000
Total	£2,370,000	£2,391,000

Source: TCE (2019).Cost estimates for Rampion 2 are generated by Hatch based on TCE's (2019) benchmarks.

Please note: figures may not sum due to rounding; the individual component figures provided within the guide do not sum to category totals and, as such, component proportions have been applied to category totals to ensure consistency

1.2.8 With an estimated capacity of up to 1,200MW and an estimated export cable length of 56km, these high level 2019 industry benchmarks would infer an indicative construction cost of £2.87 billion (2019-pricing). However, it is important to note that the costs of offshore wind deployment have been driven down in recent years and this trend is expected to continue, as a result of increased competition for CfD electricity tariffs, supply chain economies of scale and further technology innovation.

1.3 Operation and maintenance Costs

1.3.1 Past experience suggests that annual operation and maintenance costs for offshore wind farms range from approximately 1.5 percent to 3 percent of total construction costs (Wind Measurements International (WMI), n.d.). The assessment of the operation and maintenance phase is based on the least beneficial outcome, and therefore an annual cost amounting to 1.5 percent of initial investment is used. Furthermore, noting the above caveats (regarding the construction costs) this would amount to approximately £43 million per annum for Rampion 2.

1.3.2 During the operation and maintenance phase, costs are split into two elements:

- direct employment costs (for instance, those employed directly by the wind farm); and
- supply chain expenditure.

1.3.3 To estimate the direct jobs, previous experience has been drawn on from the offshore wind industry and current operation and maintenance employment at

Rampion 1 Offshore Wind Farm. It is estimated that an offshore wind farm, the size of Rampion 2 (for instance, 1,200MW), will require between 40 to 50 full-time equivalent (FTE) posts across the wind farm, allowing for some degree of efficiency across the operation of Rampion 1 and 2. For the purposes of the assessment, a mid-point of 45 FTE operation and maintenance jobs is assumed.

1.3.4 Salary estimates are then based on earnings data from the Office of National Statistics (ONS) and past consultation with developers on the likely employment costs associated with these types of direct jobs. Non-salary employment related costs have been excluded as these are assumed to be included in the other operation and maintenance costs presented below. The estimated average gross annual employment costs for each post is £55,000, giving a total annual employment cost of approximately £2.5 million for Rampion 2.

1.3.5 The estimates for other operation and maintenance costs (for instance, supply chain expenditure) are estimated to be just under £41 million each year, or £33,800 per MW for Rampion 2. This has been split proportionately across the categories within the *Guide to an Offshore Wind Farm* (TCE, 2019) to provide an estimate of costs for individual elements of the supply chain expenditure as follows:

Table 1-2 Estimated annual supply chain cost for operation and maintenance, £/ MW

	Rampion 2 (£/ MW)
Operations*	£11,100
Maintenance and service	£22,700
Total	£33,800

Source: Calculations by Hatch, based on TCE (2019).
Please note: this excludes salary costs which are calculated separately, but includes the associated on-costs such as employers pension contributions and national insurance and health insurance.

1.4 Geographical sourcing and expenditure retention

1.4.1 Building on the estimate of costs for each element of Rampion 2, the next step is to estimate the level of expenditure within the UK and Sussex study areas respectively.

1.4.2 The retention of expenditure is the proportion of Rampion 2 expenditure that is likely to be spent with suppliers located in the study area and hence support jobs and gross value added (GVA) in the supply chain within the area.

1.4.3 The analysis which informs the sourcing assumptions draws on the following sources of evidence:

- Ex-Post Assessments. The amount of UK and local supply chain sourcing which occurred during construction of existing UK wind farms provides useful context for the development of sourcing assumptions. UK content analysis by RenewableUK (2017) is the most up to date study available which informed the development of scenarios; and
- an assessment of local and national supply chain strengths. The level and type of capacity that exists in the local and national business base and the presence of companies already trading in or with capability to diversify into the offshore wind sector are important considerations. The following sources have been used to identify the construction and operation and maintenance activities which could feasibly be carried out by companies in the UK and local economic development study areas:
  - the Business Register Employment Survey – this dataset provides a detailed sectoral breakdown of national and local employment. Concentrations of employment and sector strengths were identified using a location quotient (LQ) analysis; and
  - local supply chain intelligence – drawn from local sector studies (such as (BVG Associates, 2015, 2014) and various locally produced policy and strategy documents (including (Coast to Capital Local Enterprise Partnership (C2CLEP), 2018; South East Local Enterprise Partnerships (SELEP), 2014) and Hatch's' wider knowledge of the local economy.

Local and national supply chain strengths

1.4.4 Offshore wind and other energy development in the UK presents a significant opportunity for the local and national economy.

1.4.5 The UK is a market leader in offshore wind having the highest operational capacity globally. The *Industrial Strategy* (HM Government, 2017) has set clean growth at the heart of its four grand challenges. Since then, the offshore wind sector has also issued a Sector Deal (HM Government, 2018) together with the government, which helps the industry raise productivity and competitiveness of UK-based companies to ensure the UK continues to play a leading role as the global market grows in the decades to 2050.

1.4.6 At the local (for instance, Sussex) level, there are no Tier 1 major plant suppliers (for example manufacturers of wind turbines and foundations) and despite efforts on the original Rampion project there is not yet an established Sussex subcontractor supply chain cluster. This is due in part to the south coast having not been one of the UK epicentres for offshore wind development and investment to date (in contrast to areas such as the Northeast, Humber and East Anglia). It is estimated that currently there are in the order of 20 businesses directly engaged with the offshore wind supply chain, a number of which are local offices of much larger (often national/ international) players within the sector (RenewableUK, n.d.). That being said, a review of employment change in local sectors relevant to the offshore wind supply chain indicates that there is considerable employment in sectors these, and that all sectors (with the exception of manufacturing) have experienced growth since 2015.

Table 1-3 Employment (FTEs) in sectors related to offshore wind supply chain in Sussex

	2015	2019	Percentage change 2015 to 2019
Manufacturing	3,200	2,800	-13
Construction	1,900	2,500	+36
Electric generation, transmission and distribution	1,300	2,200	+70
Transport	11,500	13,500	+14
Professional services	18,800	21,900	+16
Accommodation and food services	46,500	51,000	+10
Total	83,100	93,800	+13

Source: ONS (2018).

*Please note: ONS data suggests that there are currently fewer than 50 FTE jobs in sea and coastal freight water transport, with the majority of jobs in transport services being in freight transport by road and support activities.

1.4.7 Sussex forms part of two local enterprise partnership (LEP) areas – the C2CLEP and the SELEP. Both LEPs identify offshore wind and a number of related sub-sectors (such as advanced manufacturing) as key for the recovery and growth of their respective local economies. Furthermore, both LEPs identify clean growth as a major objective over the coming years, along with skills provision, and increased productivity. This prioritisation is helping to direct investment towards these sectors, which will play some part in helping to develop the offshore wind supply chain in the longer term.

Establishing base case for UK content assumptions based on Ex-Post Assessments

1.4.8 The scale of offshore wind development in the UK over the last two decades means there are now a number of examples of built out wind farms. Although information on the precise contracting arrangements for individual developments can be commercially sensitive, there are a number of summary studies that draw together evidence from developments to estimate average levels of UK sourcing. Two useful examples of this are:

- the UK content of operating offshore wind farms (BVG Associates, 2015); and
- offshore Wind Industry Investment in the UK (RenewableUK, 2017).

1.4.9 BVG's analysis of ten windfarms built between 2009 and 2013 in the UK provides the following range at the development (DEVEX), construction (CAPEX), and operational (OPEX) phases are set out in **Table 1-4**.

Table 1-4 UK supply chain content in offshore wind farm developments (percent)

	Lower	Upper	Weighted Average
DEVEX	16	90	57
CAPEX	12	32	18
OPEX	64	82	73
Total	30	57	43

Source: BVG Associates (2015).

1.4.10 The RenewableUK (2017) report provides a range for UK content from eight more recent offshore wind farms in the UK for each of the categories listed above (**Table 1-5**).

Table 1-5 UK supply chain content in offshore wind farm developments (percent)

	Lower	Upper	Weighted Average
DEVEX	27	92	73
CAPEX	22	38	29
OPEX	52	89	75
Total	44	53	48

Source: RenewableUK (2017).

1.4.11 The change between the two reports shows an increase in total UK content of around 5 percent as well as lower variability between the upper and lower bounds. This is helpful in providing more confidence in the estimates used for sourcing assumptions.

1.4.12 The BVG Associates (2015) report also provides a breakdown of CAPEX by category of expenditure as set out in **Table 1-6**.

Table 1-6 UK supply chain content in CAPEX, 2015 (percent)

	UK Content
Project development	67
Installation and Commissioning	33
Balance of Plant	18
Turbines	3

Source: BVG Associates (2015).

Note: UK Content has been calculated by dividing the proportion of capex by the contribution to UK content from the BVG Associates report

1.4.13 TCE's research (2019) builds on the research undertaken by BVG (2015) and provides an update to UK content sourcing throughout a project lifecycle (including development, construction, operation and maintenance and decommissioning). The research suggests that for recent windfarms, the overall UK content is a little under half (or 48 percent) of undiscounted lifetime spend. The key contributions typically include:

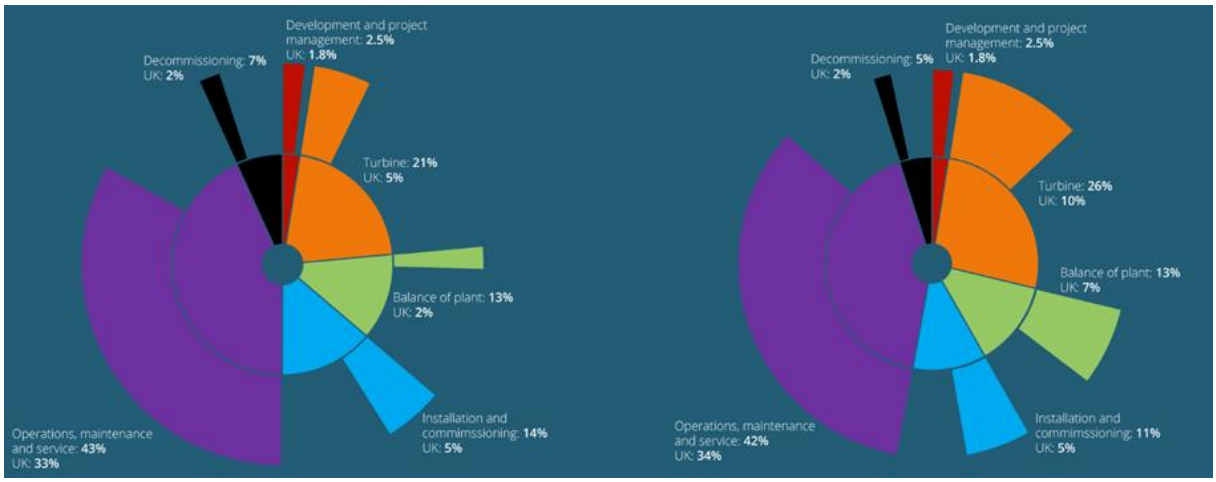
- operations, maintenance and service where much of the activity is close to the wind farm site;
- installation and commissioning where the UK has several leading marine contractors and equipment suppliers; and
- turbine-related expenditure, where most blades and some towers are supplied from the UK.

Anticipating future trends

1.4.14 As the EIA methodology seeks to establish a worst-case assessment (which in the case of socio-economics can be redefined as the least beneficial assessment), using current (for instance, available) industry averages (in terms of UK-based sourcing) for current projects, presents a reasonable conservative base case.

1.4.15 Nonetheless, it may be useful for stakeholders to be aware that the past trend of increased UK content over time is one that is likely to continue. The Offshore Wind Sector Deal (HM Government, 2018) commits the sector and Government to work to increase UK content up to 60 percent by 2030, including increases in the capital expenditure phase. This is represented in **Figure 1.1**.

Figure 1.1 UK Content for Recent Projects (left) and Aspiration for 2030 (right)



Source: TCE (2019).

1.4.16 Similar to the BVG Study (2015), TCE's (2019) research provides a breakdown of current UK content estimates by phase and sub-phase (for CAPEX spend) (**Table 1-7**).

Table 1-7 UK Supply Chain Content in CAPEX, 2019 (percent)

	UK Content
DEVEX	71
CAPEX	25
- **Turbines**	24
- **Balance of plant**	16
- **Installation and commissioning**	36
OPEX	77
Decommissioning	2
Aggregate UK lifetime content	48

Source: TCE (2019).Note: UK Content has been calculated by dividing the proportion of CAPEX by the contribution to UK content

1.4.17 Based on the above, capturing a minimum 50 percent UK content for the project lifetime is being applied to represent the 'base case' scenario (for instance, a conservative assessment of the beneficial economic impacts of Rampion 2). The latest offshore wind industry assessment on UK content, published in 2017 reported UK offshore wind farms achieving 48 percent UK content (RenewableUK, 2017), which represents the starting for *The Guide to an Offshore Wind Farm* (TCE, 2019).

1.4.18 The offshore wind sector committed to increasing this to 50 percent UK content by the end of 2020. Under the least beneficial approach to socio-economics, it is assumed that UK content achieved for the Rampion 2 remains at 50 percent over the lifetime of the project.

1.4.19 It is worth noting that Rampion 2 will be working to achieve higher UK content than the base case used here for the purposes of the EIA. This is in line with target set out in the Offshore Wind Sector Deal struck with Government, which commits the offshore wind sector as a whole to reach 60 percent UK content by 2030.

Local sourcing

1.4.20 There is considerably less evidence on sourcing for local areas. This is in part because it is much more difficult to record. The variability in local supply chain strengths also means averages from different locations are less useful in providing a robust basis for sourcing assumptions for economic impact modelling.

Construction phase

1.4.21 The evidence above has been drawn together to develop the proposed sourcing assumptions. These use TCE's (2019) figures as a base, with adjustments to the individual components depending on the port scenario.

1.4.22 The base case scenario illustrates the likely scale of impact where ports in Sussex are not used extensively during construction. As a result of all major construction port functions being located outside of Sussex, the scope to capture supply chain expenditure locally is very limited due to the limited presence in non-related parts of the offshore wind construction supply chain. That said, the base case assumes that some installation/ assembly/ staging occurs in (at least) one UK port – in line with the targets set out in the Offshore Wind Sector Deal (HM Government, 2018).

1.4.23 Under the base case scenario use, it is assumed that port-related activity in Sussex would be minimal. The specific capabilities which exist locally would result in opportunities associated with the charter and operation of non-specialist vessels (for example, for crew transfer).

1.4.24 **Table 1-8** compares the assumed proportion of retained expenditure for Rampion 2 based on UK content from TCE (2019) and RenewableUK (2017).

1.4.25 This is equivalent to the retention of between £30.1 million of first round construction related expenditure within the Sussex economy, and £1.14 billion nationally (2019-pricing).

Table 1-8 Construction phase sourcing assumptions (percent)

	Sussex	Rest of UK
Base case scenario	1.0	38.8
TCE (2019)	39.9*	

Source: Hatch calculations, based on TCE (2019).

*Please note: Totals may not add up due to rounding.

1.4.26 **Table 1-9** sets out in more detail the total level of DEVEX and CAPEX captured within Sussex and the rest of the UK under the base case scenario outlined above.

Table 1-9 Overall DEVEX and CAPEX for Rampion 2 captured within Sussex, the rest of the UK and total UK by phase and sub-phase (£ million)

	Sussex	Rest of UK	Total UK
DEVEX	£7.4	£94.6	£102.1
CAPEX	£22.7	£1,019.8	£1,042.5
1) Turbines	£0.0	£445.4	£445.4
2) Balance of plant	£0.4	£289.2	£289.6
3) Installation and commissioning	£22.3	£285.2	£307.5
Total: DEVEX + CAPEX	£30.1	£1,114.4	£1,144.6

Source: Hatch calculations, based on TCE (2019).

Operation and maintenance phase

1.4.27 It is assumed that the operation and maintenance port will be located in Sussex and it is assumed that all direct labour will be based within the area.

1.4.28 It is likely that the existing facilities at Newhaven Port would be utilised (and expanded where necessary) as the base for operations management of Rampion 2, as this would yield synergies and enable effective coordination with the existing operations team on Rampion 1.

1.4.29 That being said, the possibility of a supplementary (in addition to Newhaven) satellite facility further west in Sussex has not been discounted. Whether this would be advantageous will depend on the eventual westward extent of the offshore wind farm and whether, for example, having crew boat(s) stationed to service the most westward turbines, with vessels from Newhaven servicing the central/eastern parts of the turbine array.

1.4.30 For the first round operation and maintenance supply chain expenditure the benchmarks are used from TCE (2019) as a starting point. This assumes that on average 77 percent of overall OPEX (including employee costs) is retained within the UK. It has been assumed that this is a reasonable level of UK sourcing for Rampion 2 and the sourcing is split 15 percent and 85 percent between Sussex and the rest of the UK respectively (or 11 percent and 65 percent of total annual operation and maintenance expenditure respectively).

1.4.31 On this basis £7.1 million in direct staff wages and first round supply chain expenditure would be retained within Sussex each year (2019-pricing).

Table 1-10 Operation and maintenance phase sourcing assumptions (percent)

	Sussex	Rest of UK
Direct Employment	100	0
Supply Chain	11	65
Total operation and maintenance	16	61

Source: Hatch calculations, based on TCE (2019).

1.4.32 **Table 1-11** sets out in more detail the total level of annual operation and maintenance expenditure (defined as direct annual employment and supply chain expenditure) within Sussex and the rest of the UK.

Table 1-11 Overall annual OPEX for Rampion 2 captured within Sussex and the rest of the UK by phase and sub-phase

	Sussex	Rest of UK	Total UK
OPEX	£7.1	£26.3	£33.4
- **Direct employment**	£2.5	£0.0	£2.5
- **Supply chain expenditure**	£4.6	£26.3	£30.9

Source: Hatch calculations, based on TCE (2019).

Total sourcing

1.4.33 Assuming an estimated capacity of up to 1,200 MW, and up to a 30-year lifespan for Rampion 2, it is estimated the overall share of the construction and lifetime operation and maintenance expenditure retained within the UK will add up to 50 percent, which is the equivalent to £2.27 billion nationally (2019-pricing).

1.4.34 At the Sussex level it is not possible to quantify the overall total lifetime expenditure retained (for instance, for construction, operations and decommissioning) due to limited experience nationally in the decommissioning of offshore wind farms. That being said, total construction and lifetime operations expenditure sourced from within Sussex is estimated to be around £242.8 million (2019-pricing).

Table 1-12 Overall indicative lifetime sourcing assumptions for Rampion 2 (percent)

	Sussex	Rest of UK	Total UK
Construction (incl. DEVEX)	1.0	38.8	40
Operations	16	61	78
Decommissioning*	n/a	n/a	30
Total Lifetime (incl. Decommissioning)	n/a	n/a	50
Total Lifetime (excl. Decommissioning)	6	46	52

Source: Hatch calculations, based on TCE (2019).

*Please note: This is based on benchmarks for the Decommissioning phase presented in TCE (2019), where decommissioning costs represent 7 percent of total lifetime costs, of which 2 percent are to be retained by UK businesses. Given the limited number of projects undergoing decommissioning, it is not possible to generate estimates for supply chain retention at the Sussex level. Within the Preliminary Environmental Information Report

(PEIR)/ Environmental Statement (ES), the decommissioning phase is assessed qualitatively.

Table 1-13 Overall indicative lifetime Sourcing Assumptions for Rampion 2 (£ million)

	Sussex	Rest of UK	Total UK
Construction (including DEVEX)	£30.1	£1,114.4	£1,144.6
Operations	£212.7	£789.1	£1,001.8
Decommissioning*	n/a	n/a	£119.6
Total Lifetime (including Decommissioning)	n/a	n/a	£2,265.9
Total Lifetime (excluding Decommissioning)	£242.8	£1,903.6	£2,146.4

Source: Hatch calculations, based on TCE (2019).

*Please note: This is based on benchmarks for the Decommissioning phase presented in TCE (2019), where decommissioning costs represent 7 percent of total lifetime costs, of which 2 percent are to be retained by UK businesses. Given the limited number of projects undergoing decommissioning, it is not possible to generate estimates for supply chain retention at the Sussex level. Within the PEIR/ ES, the decommissioning phase is assessed qualitatively.

2. Glossary of terms and abbreviations

Table 2-1 Glossary of terms and abbreviations

Term (acronym)	Definition
CAPEX	Construction Expense / Expenditure
CfD	Contract for Difference
Construction effects	Used to describe both temporary effects that arise during the construction phases as well as permanent existence effects that arise from the physical existence of development (for example new buildings).
C2CLEP	Coast to Capital Local Enterprise Partnership
Decommissioning	The period during which a development and its associated processes are removed from active operation.
DEVEX	Development Expense / Expenditure
Direct employment and gross value added	Employment and gross value added which is associated with the first round of capital expenditure, for instance, Rampion 2's spend with prime contractors within each impact area of the study.
Environmental Impact Assessment (EIA)	The process of evaluating the likely significant environmental effects of a proposed project or development over and above the existing circumstances (or 'baseline').
ES	Environmental Statement
Full-time equivalent (FTE)	A unit for measuring employment which indicates the workload which indicates the workload associated with each post. One FTE is the equivalent of a full-time post, whilst an FTE of 0.5 suggests half-time.
Gross value added (GVA)	The measure of the value of goods and services produced in an area, industry or sector of an economy. At the level of a firm, it is broadly equivalent to employment costs plus a measure of profit.
Impact	The changes resulting from an action.
Local Enterprise Partnership (LEP)	Voluntary partnerships between local authorities and businesses set up in 2011, by the Department for Business, Innovation and skills to help determine local

Term (acronym)	Definition
	economic priorities and lead economic growth and job creation within the local area.
Location quotient (LQ)	A measure of a region's industrial specialisation relative to a larger region (for example, England). A LQ of 1.0 indicates that both regions have the same level of specialisation, whereas a LQ > 1.0 means that the smaller region has a higher concentration of a particular sector than is seen in the larger region.
km	Kilometre
MW	Megawatt
ONS	Office for National Statistics
OPEX	Operating Expense / Expenditure
£/ MW	Great British Pounds per Megawatt (MW)
Preliminary Environmental Information Report (PEIR)	The written output of the Environmental Impact Assessment undertaken to date for the Proposed Development. It is developed to support formal consultation and presents the preliminary findings of the assessment to allow an informed view to be developed of the Proposed Development, the assessment approach that has been undertaken, and the preliminary conclusions on the likely significant effects of the Proposed Development and environmental measures proposed.
Proposed Development	The development that is subject to the application for development consent, as described in Chapter 4.
Rampion 1	The existing Rampion Offshore Wind Farm located in the English Channel off the south coast of England.
RED	Rampion Extension Development Limited
SELEP	South East Local Enterprise Partnerships
Sensitivity	A term applied to specific receptors, combining judgements of the susceptibility of the receptor to the specific type of change or development proposed and the value associated to that receptor.
Significance	A measure of the importance of the environmental effect, defined by criteria specific to the environmental aspect.
TCE	The Crown Estate

Term (acronym)	Definition
The Applicant	Rampion Extension Development Limited (RED)
WMI	Wind Measurements International

3. References

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