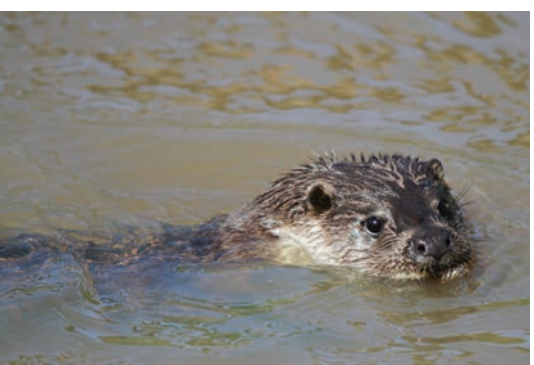


# NATURAL VALUE 2022

## THE STATE OF DORSET'S ENVIRONMENT





# FOREWORD

# DORSET LNP



Luke Rake, Chair of Dorset Local Nature Partnership

## Natural Value – The Importance of Nature to Dorset

In 2013, The Dorset Local Nature Partnership Board agreed that one of its first priorities should be to take stock of the state of Dorset's environment, hence the production of our first Dorset 'Natural Value' report in 2014. Since that time, much has changed, both legislatively and in terms of the ever more present impacts of climate change and environmental degradation where human impacts continue to be broadly negative for the state of nature. Of course, it is not all bad news, such as improving conditions in some SSSI areas, but the natural assets of Dorset continue to be under pressure, and this report aims to highlight the current 'state of play' in Dorset's environment, and bring up to date our understanding of Dorset's immense richness of landscape and the living world.

Since the last report, there has been a rapid shift in public opinion in the value of nature, both anecdotally and in some behaviours such as the rapid move away from single use plastics in some contexts, and there has been a much wider recognition of the role nature has to play in our world, both economic and in terms of health. Humans are very much not divorced from the world they inhabit, and we could not have seen this any more clearly than during the recent pandemic. We are part of nature, and it is thus incumbent upon us to understand it better.

The report that follows seeks to present locally specific information which demonstrates both the environmental value of the area and the economic and social value of the area's environment. The economic benefits of a healthy environment are real. The Dorset Local Nature Partnership published continued support for 'green' industries, and this follows on from the governmental shifts in agricultural and nature-led thinking within the Agriculture Bill and other work by DEFRA. Also at a governmental level, the commissioning of the Dasgupta Review by HM Treasury shows clearly that understanding the value of nature, both in economic and in biodiversity terms, is clear evidence that the tide is shifting in favour of policy that enhances and sustains natural capital, not purely denudes it.

There is still much to do. The report shows the trends and changes to Dorset's natural world over the last few years, such as further development, but also recognition of areas of special note, such as the Dark Skies reserve across the entirety of Cranborne Chase AONB, as well as activity with regard to heritage assets and fragile ecosystems.

When one lives in Dorset, it's quite easy to take for granted what we have. It's a beautiful county with immense variety and biodiversity. The landscape is rich, varied, and of interest at every turn. We have stunning chalk downlands, fragments of ancient woodlands, ancient holloways, river and lowland wetlands, and a staggering marine environment which attracts tourists from both home and abroad, with good reason. All of these, and more, harbour a range of sensitive natural assets which require our attention. It's important to know that this landscape is fragile, and continues to be so. We need to learn from it and ensure that it is in the best possible health for both our future, and the future of our children.

## Luke Rake FLS

Chair of Dorset Local Nature Partnership

Dorset Local Nature Partnership (DLNP) was formed and recognised by Government in 2012 as an outcome of the Government's Natural Environment White Paper (2011).

DLNP brings together a wide range of partners from public, private and voluntary sectors across Dorset (covering the area within Dorset and Bournemouth, Christchurch and Poole councils). The partnership exists to maximise the benefits to be gained from protecting and enhancing the unique natural assets of the area for people, wildlife and business.

DLNP is working with the Dorset Local Enterprise Partnership, to support an economy which is based on protecting and enriching the natural environment rather than diminishing it, and with the Health and Wellbeing Boards to harness the use of the natural environment to support and improve physical and mental health and wellbeing outcomes.

DLNP published its first Natural Value Report in 2014. This revision aims to set out the current state of Dorset's environment by updating data and including new evidence and research. It comes at a time when the need to respond to the climate and ecological emergencies are widely recognised. Unless stated, data for Dorset includes Bournemouth, Christchurch and Poole. Much of the data is set out under the former local authority boundaries rather than the two unitary councils formed in 2019, due to the time lag on the publication of data.

## CONTENTS

2	Foreword
4 - 9	Natural Capital
10 - 13	Natural Value
14 - 17	Natural Health
18 - 21	Natural Resilience
22 - 25	Natural Understanding
26 - 27	Natural Influence
28	Dorset LNP's Vision
29 - 30	Information



Kingcombe © Tony Bates





# NATURAL CAPITAL

Our natural assets (or natural capital) are often taken for granted, ignored in decision making or given lower priority than social and economic goals, but they are essential for our way of life. These assets provide goods and services we rely on, from fertile soil and productive land and seas to fresh water and clean air. They provide vital services (often called ecosystem services) such as pollination, natural protection against flooding, spaces for recreation, and the regulation of our climate.

We need to invest in our natural assets, taking a natural capital approach when decision making (i.e. incorporating the impacts on the environment from the outset, so as not to erode the assets which underpin our economy and quality of life). This will enable greater benefits to society, to our health and wellbeing and community resilience, and to our economy, to deliver a sustainable future and be an economic driver. This will also conserve and enhance our natural environment for its own intrinsic value, help to reverse the

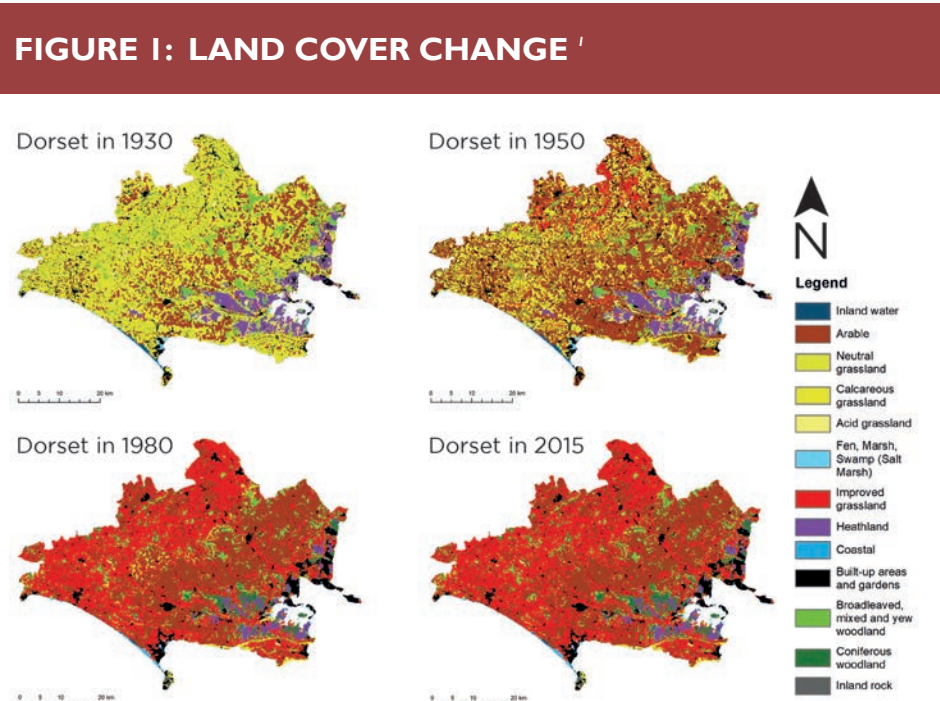
ecological crisis and help address climate change issues

**Land use change**

Dorset is recognised for its biodiversity and landscape quality, with many national and international designations for both wildlife species and sites. This does not mean however that all our natural environment is in good health. As with many areas in the country, land use has changed over time and more of our land has been developed to meet population growth and the need for housing and food.

Figure 1 shows that over time land use types that tend to be more wildlife-rich, such as neutral and calcareous grasslands and heathland, have been converted to improved grassland, arable and urban use, which tends to be less wildlife rich. The maps exclude most of the BCP Council area as this was not within the original 1930 map.

<sup>1</sup> Bournemouth University (2019)



**Landscape**

Over 52% of Dorset's high-quality landscape is designated as Areas of Outstanding Natural Beauty (AONB). Approximately 42% of Dorset is covered by the Dorset AONB with 1,129km<sup>2</sup> and is the fifth largest of the 46 AONBs in the UK. A further 278km<sup>2</sup> is covered by the Cranborne Chase AONB (29% of the AONB is within Dorset). These areas are designated for their beauty but are living, working areas so development is not prohibited but needs to be appropriate, for example using local stone or vernacular design.

In around 2000 the area of fragmented heathland (areas less than 35ha and >500m from neighbouring heathland blocks) in the south Purbeck area was approx. 230ha. Following restoration work (between 2000 and today), including reversion from conifer, improved pasture, arable, quarries etc. to lowland heathland/acid grassland, fragmentation has been reduced to around 145ha, a reduction of some 43%.

**Wildlife**

Nationally, biodiversity is in decline and between 1970 and 2019<sup>2</sup>, there was a significant decline of 13% in the average abundance of 696 terrestrial and freshwater indicator species and a 5% decline in average species distribution. Of 8,431 species assessed nationally, 15% are threatened with extinction, and 2% are already extinct.

The Dorset Biodiversity Audit 2021<sup>3</sup> lists 2,930 terrestrial and freshwater species and 157 marine species of conservation concern in Dorset (species that are rare, scarce, threatened, protected, declining or extinct in the county).

Table 1 demonstrates the marine priority habitats known to be present in Dorset, for most of these the total area is not known.

Table 2 sets out the area covered by terrestrial priority habitat within the area. The total area of priority habitat is some 19,900ha and is about 7.4%

<sup>2</sup> State of Nature (2019)  
<sup>3</sup> DERC (2021)  
<sup>4</sup> DWT (2020)

TABLE 1: MARINE PRIORITY HABITATS IN DORSET <sup>4</sup>		
	UK/Dorset Priority Habitat	Area/ha
Fragile sponge and anthozoan communities on subtidal rocky habitats	UK	unknown
Intertidal mudflats	UK	2049
Intertidal underboulder communities	UK	Estimated 50
Littoral chalk communities	UK	unknown
Maerl beds	UK	unknown
Peat and clay exposures	UK	unknown
Honeycomb worm ( <i>Sabellaria alveolata</i> ) reefs	UK	unknown
Ross worm ( <i>Sabellaria spinulosa</i> ) reefs	UK	unknown
Seagrass beds	UK	476
Sheltered muddy gravels	UK	unknown
Subtidal chalk	UK	unknown
Ampelisca mats	Dorset	unknown
Brittlestar beds	Dorset	unknown
<i>Neopentadactyla</i> aggregations in maerl gravel	Dorset	unknown
Black bream nesting sites	UK	unknown

TABLE 2: PRIORITY HABITATS IN DORSET 2020 <sup>3</sup>			
Priority Habitat	All Dorset Area (Ha)	DC Area (Ha)	BCP Area (Ha)
Coastal Floodplain & Grazing Marsh	655	460	195
Coastal saltmarsh	476	376	100
Coastal sand dunes	93	90	3
Coastal vegetated shingle	101	100	0
Lowland beech and yew	34	34	0
Lowland calcareous grassland	3,286	3,286	0
Lowland dry acid grassland	663	565	98
Lowland fens (excluding Valley mires)	47	45	2
Lowland fens (including Valley mires)	665	656	9
Lowland heathland	5,529	4,669	860
Lowland meadows	702	663	38
Lowland mixed deciduous woodland	4,401	4,288	112
Maritime cliff and slope	670	670	0
Ponds (of High Ecological Quality)	7	7	0
Purple moor grass	532	500	32
Reedbeds	289	272	18
Saline Lagoons	511	511	0
Traditional Orchards	67	67	0
Wet woodland	585	553	32
Wood pasture and parkland	590	590	0





Barn Owl © Stewart Canham

TABLE 3: WILDLIFE SITES <sup>5</sup>			
Local Sites	No of sites	Area (hectares)	% of Dorset*
Sites of Nature Conservation Interest	1,297	12,342	4.58%
Local Nature Reserves	49	702	0.26%
National Sites			
Sites of Special Scientific Interest	145	22,164	8.22%
Marine Conservation Zones**	9	67,890	25%
International Sites			
Ramsar	4	10,318	3.89%
SAC	15	12,800	4.75%
SPA	4	13,472	5.00%

\* There is much overlap between national and international sites.

\*\* Area to 12 nautical miles

TABLE 4: WILDLIFE SITE CONDITION (MARCH 2019) <sup>5</sup>							
	2014	2015	2016	2017	2018	2019	2020
Sites of Special Scientific Interest							
favourable condition	39%	39%	39%	40%	40%	40%	44%
unfavourable recovering condition	48%	49%	49%	48%	47%	47%	42%
unfavourable no change or declining/destroyed	13%	12%	11%	12%	8%	13%	14%
Sites of Nature Conservation Interest							
Good maintained / improving	43%	41%	42%	41%	45%	45%	45%
Fair maintained / improving	14%	16%	19%	21%	32%	32%	32%
Poor or declining	15%	16%	16%	16%	2%	2%	2%
Unknown	28%	26%	23%	22%	21%	21%	21%

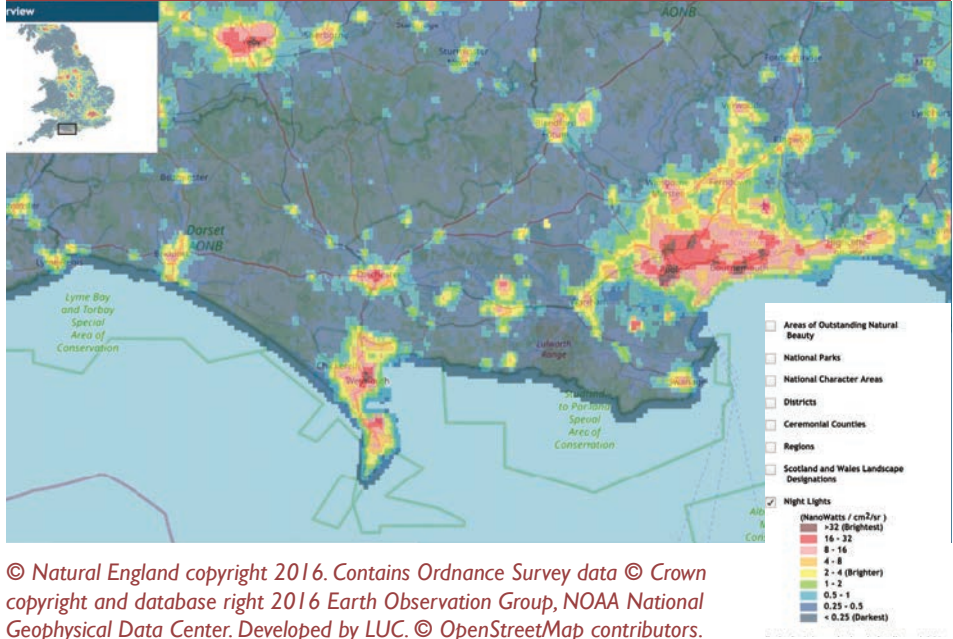
of Dorset’s area. Since the previous biodiversity audit in 2003 more data has been captured to complete the table. In addition, linear habitats such as rivers and hedgerows provide key habitats.

Between 2005 and 2019 there was a net increase of 109 hectares in the area of Sites of Nature Conservation Interest (SNCI) in Dorset (net increase of 4 sites). But at the same time, between 2005 and 2007 42 sites (or partial sites) were destroyed through development, mineral development, agriculture, forestry and General Permitted Development Orders covering almost (84ha). A further 46 sites, or partial sites, (87ha) had their SNCI status withdrawn because they no longer met the criteria<sup>5</sup>.



Durdle Door © Maria Clarke

FIGURE 2: LIGHT POLLUTION AND DARK SKIES IN DORSET <sup>9</sup>



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13.55% of Dorset is within one or more of SSSI, SNCI, nature reserves and Ancient Woodland. Of this, less than half of this land (6.35% of Dorset’s area) that has some form of recognition or protection in the land use planning system for nature conservation is known to be in good condition.

Dark skies

Across Dorset as more development has taken place across the landscape

you can see the change in light pollution. Light pollution also reduces the views of the night sky and so the sense of place and tranquillity. Light pollution also impacts wildlife by disturbing normal routines such as feeding, sleeping, breeding and migration which can have detrimental impacts such as invertebrates, bats and mammals. Research has also shown that trees in areas with light pollution can have an earlier budburst

(e.g., European Ash), which can have implications for emerging moths feeding which then impacts on the wider food chain<sup>6</sup>.

Advances in technology in mapping dark skies has meant that the new maps produced in 2016 are not comparable with the maps featured in the 2014 Natural Value Report. Figure 2 highlights the areas of light pollution and dark skies across Dorset. Both the former districts of West Dorset (11th) and North Dorset (16th) featured in the top 20 darkest districts in the Night Blight, study by CPRE in 2016<sup>7</sup>. Dorset was the 13th darkest county out of 41 counties. The Cranborne Chase is the first AONB in the country to be designated in its entirety as an International Dark-Sky Reserve<sup>8</sup>. Local authorities in Dorset have reduced light pollution over recent years by moving to part-night lighting and replacing to lower energy and ground-directed lighting – both of which also reduces carbon emissions and costs.

<sup>5</sup> DERC (2019)

<sup>6</sup> Royal Society Publishing (2016)

<sup>7</sup> CPRE (2016)

<sup>8</sup> Cranborne Chase AONB (2019)

<sup>9</sup> CPRE (2016)

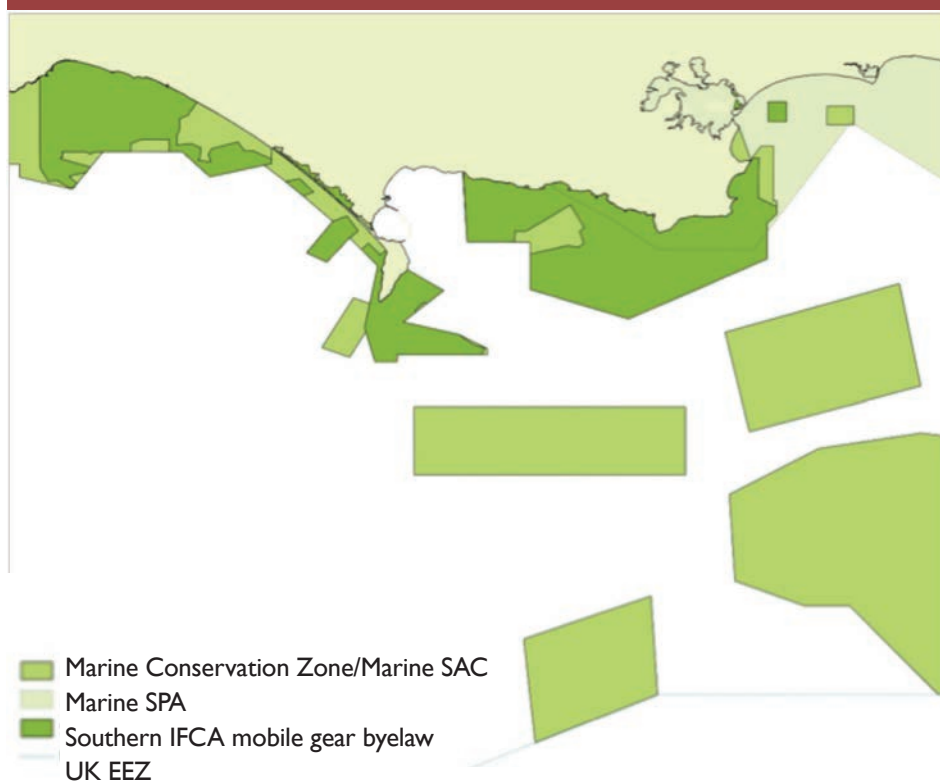


Haydon Hill © James Hitchin

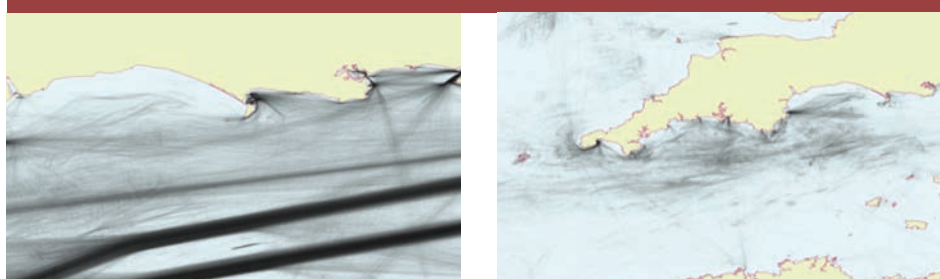




**FIGURE 3: DORSET MPAS AND SPAS 2020 <sup>10</sup>**



**FIGURE 4: MARINE TRANQUILLITY MAPS <sup>11</sup>**



Tracks of all vessels carrying AIS for the first week of each month in 2015

2017 fishing AIS tracks

### Seascape - Marine Designation and Protection

While Marine Nature Reserves have been theoretically possible since 1981 the Wildlife and Countryside Act, the first Marine Protected Area in Dorset came through the EU Birds Directive in 1985 (Chesil and Fleet SPA). Designation of MPAs didn't really take off in Dorset until the end of the first decade of the century, when the closure of Lyme Bay Reefs was closely followed by the designation of large areas of marine SACs. The first tranche of MCZ designation added more sites in 2013. A further six sites were designated in June 2019, and additional features were added to some of the existing sites<sup>10</sup>.

### Marine Tranquillity

Looking out from the coast, it can seem that the sea is a vast, empty space. The Marine Tranquillity map shows the tracks of all vessels carrying AIS (Automatic Identification System) for the first week of each month in 2015, across the south coast. This clearly shows that the sea is far from quiet and some areas, such as the shipping lanes, are especially busy. The impact of noise and other disturbance on fish and marine animals is not well understood but

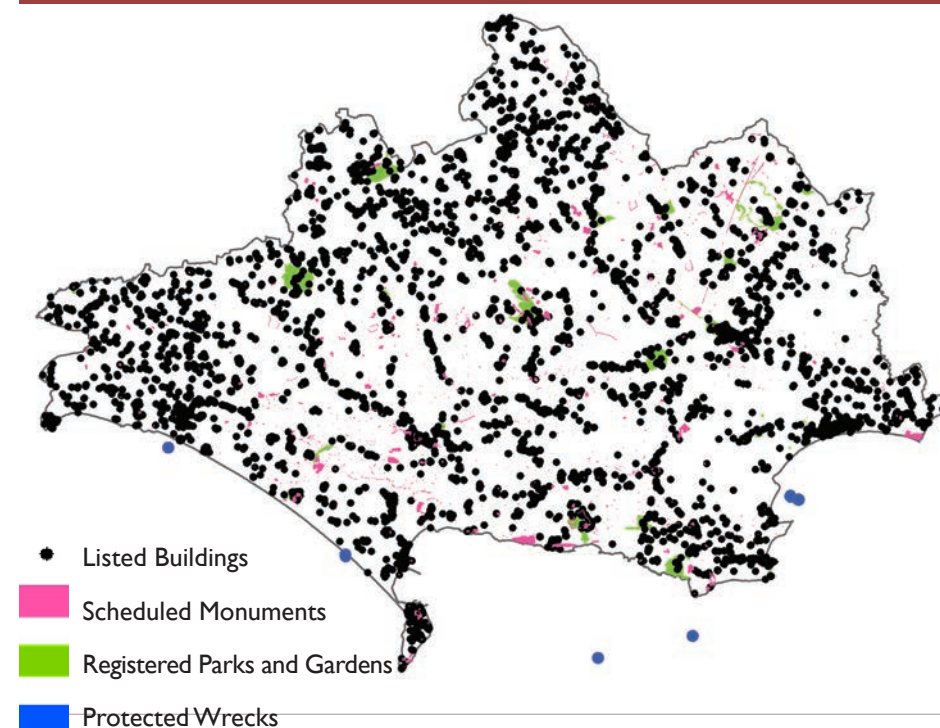
<sup>10</sup> DWT

<sup>11</sup> DWT (2021)

**TABLE 5: DESIGNATED HERITAGE ASSETS 2020 <sup>12</sup>**

	Listed Building	Scheduled Monument	Registered Park and Garden	Conservation Area
England	378,865	199,895	1,670	7,000 <sup>13</sup>
BCP	750	34	5	48
Dorset	9,218	984	33	179
Total	9,968	1,018	38	227

**FIGURE 5: MAP OF HERITAGE ASSETS 2020 <sup>12</sup>**



**TABLE 6: BUILDINGS AND SITES ON THE 2020 HERITAGE AT RISK REGISTER <sup>14</sup>**

	BCP	Dorset	Total
Archaeology	4	230	234
Building and structure	0	24	24
Conservation Area	2	2	4
Park and garden	0	1	1
Place of worship	5	5	10
Wreck	0	0	0

will impact on the ability of marine life to communicate. The map shows the percentage of time noise levels in each 2km grid square exceeded 130dB over a year. This is the level at which a mild behavioural reaction might be expected in fish with sensitive hearing. The maps show a relatively tranquil area in Lyme Bay.

### Heritage

There are over 11,000 heritage assets<sup>12</sup> across Dorset, with 273 sites (2.47%) at risk across Dorset. If lost, these assets are impossible to replace. Many individuals, communities and organisations are working to care for these assets through practical conservation work such as scrub clearance as well as

raising awareness, improving public access and maintaining the assets. Continued support is needed avoid their irreversible loss. Six of the 54 English Protected Wreck sites are off the coast of Dorset. There are no registered battlefields in the county.

The South Dorset Ridgeway Landscape Project<sup>15</sup>, led by Dorset AONB, received Heritage Lottery funding (now National Lottery Heritage Fund) in 2013 for a 5-year project. Running between Weymouth and Dorchester, this ridge of high land has been an important place for people since the Neolithic (4,000-2,000 BC) and includes over 1,000 ancient monuments. The landscape partnership scheme worked with farmers, schools, and communities to undertake practical conservation work, raise the profile of the landscape, and help interpret and celebrate the Ridgeway through creative arts.

There are 59 Local Geological Sites<sup>5</sup> in Dorset – these are areas selected for their important geomorphological or geological features as well as their contribution to scientific understanding.

The Dorset and East Devon Coast World Heritage Site (or Jurassic Coast) is 155km long (95 miles) of which around a third is within Dorset. The preservation of this outstanding natural asset remains a focus for a wide partnership of stakeholders and since 2017 the Jurassic Coast Trust (an independent charity), has had responsibility for facilitating and coordinating the management of the World Heritage Site. The Jurassic Coast remains in favourable condition<sup>16</sup>, with no significant changes since 2001 when the Site was designated. Pragmatic engagement between coastal authorities, landowners, communities and the Jurassic Coast Trust has helped ensure that necessary coastal defence works have not compromised the natural processes which create the Site's Outstanding Universal Value.

<sup>12</sup> Dorset Council (2021)

<sup>13</sup> Historic England (2021)

<sup>14</sup> Historic England (2021)

<sup>15</sup> Dorset AONB

<sup>16</sup> Jurassic Coast Trust



# NATURAL VALUE

There has been increasing recognition that Natural Capital is a driver for economic growth and that our stock of natural assets has essential value to our way of life. *The Government's Clean Growth Strategy*<sup>16</sup>, *Industrial Strategy*<sup>17</sup> and the *25 Year Environment Plan*<sup>18</sup> all recognise the need to invest in our natural capital, so we need to strengthen this understanding locally and embed natural capital into local decision making.

## Dorset's Environmental economy

A study commissioned by Dorset County Council, Dorset AONB and the Jurassic Coast Team in 2015 evaluated the value of Dorset's environment to the economy. The analysis of the 'Environmental goods and services' sector valued Dorset's environmental economy as about £0.25-0.9 billion and 3,900-16,750 jobs (FTE)<sup>19</sup>.

When adding in more data including sector flow, wider definitions of 'green economy' and the natural capital asset base and non-traditional environmental flows, the environmental economy of Dorset is worth between £0.9 billion and £2.5 billion per year and supports between 17,000 and 61,000 jobs<sup>19</sup> – depending on which approach is used to measure the value. Taking a central estimate, the environmental economy is worth approximately £1.5 billion a year, supporting 30,000 jobs – and is about 8-10% of the overall Dorset economy each year.

The study also estimated that the World Heritage designation influences around £1 million of economic activity in Dorset and East Devon each year and the Dorset AONB around £65 million. It should be noted that their boundaries overlap

so the figure cannot be combined, and it cannot be said with certainty that these associated estimates are purely down to their designations.

## Tourism

Visitor related spend<sup>20</sup> has generally increased annually, bringing £1.83 billion into the county in 2019 (rising from £1.44 in 2011) to Dorset's economy (including both UK and overseas visitors). In 2019 tourism accounted for 11% of all employment – a decrease from 14% in 2013. The sector is largely dependent on our environment and landscape so there is a need for balance between increasing tourism to support the local economy with the potential added pressures on sensitive sites and increased use of the transport network. Much of tourism is seasonal so this added pressure is not evenly spread across the year.

## A low carbon economy

Our carbon footprint generally relates to economic growth – emissions increase as the economy grows. This is the case internationally and, despite global agreements to reduce emissions (including the Paris Agreement 2015), in 2018 emissions worldwide from fossil fuels and industry increased at its fastest rate in 7 years<sup>21</sup> with an increase of around 2.7%. Estimated data for 2019 shows a reduced increase of 0.6%. BCP Council and Dorset Council both declared Climate and Ecological Emergencies in 2019 and are developing plans to reduce carbon emissions from their own operations as well as working with partners to reduce emissions in their boundaries as a whole.

Carbon emissions for the county continued on a downward trend

FIGURE 6: PER CAPITA CO<sub>2</sub> EMISSIONS<sup>22</sup>

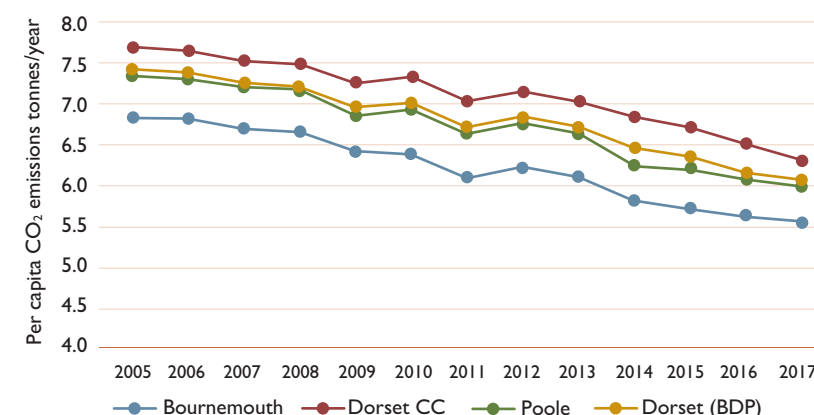


TABLE 7: RENEWABLE ELECTRICITY CAPACITY (MW)<sup>24</sup>

Electricity	2012	2013	2014	2015	2016	2017	2018	2019
ATW & AD	1.04	4.89	3.50	5.60	7.04	7.80	8.40	8.38
Hydro	0.07	0.07	0.13	0.13	0.13	0.13	0.13	0.14
Landfill gas	14.01	13.10	12.60	13.22	13.60	14.10	14.10	14.09
Energy from waste	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Onshore wind	0.23	0.86	0.87	1.03	1.10	1.10	1.10	0.89
Sewage gas	2.38	0.99	1.60	2.30	2.30	2.30	2.30	2.30
Solar PV	11.27	56.95	83.84	220.56	309.52	386.70	388.20	390.39
<b>Subtotal</b>	<b>29.99</b>	<b>77.86</b>	<b>103.53</b>	<b>243.83</b>	<b>334.70</b>	<b>413.13</b>	<b>414.13</b>	<b>417.19</b>

between 2005-2017<sup>22</sup> (Figure 6). Renewable energy production had increased in Bournemouth, Dorset and Poole from 0.95% of local energy consumption in January 2011 to 5.5% in March 2016<sup>23</sup>. By end 2018 there had been 14,737 renewable electric installations generating 481 GWh of renewable electricity a year<sup>24</sup> (281 installations within 2018). Of these installations 99% were photovoltaics (Table 7).

Dorset County Council (now Dorset Council) and Dorset AONB received European Regional Development Funding in 2018 for a three-year Low Carbon Dorset Programme (including the BCP area). The project supports energy efficiency and renewable energy projects with communities and businesses through advice and a £2.75 million Low Carbon Dorset Fund. Innovative public sector projects which support a low carbon economy

are also eligible for the fund. By the April 2021, £3.16 million<sup>25</sup> had been granted to projects (funding either committed, contracted or claimed) which were due to deliver savings of 4,875 tonnes of CO<sub>2</sub> carbon and deliver 28,9930 kWh per year.

Dorset Community Energy, a not-for-profit Community Benefit Society, was set up in August 2013, as part of a Big Lottery project (now National Lottery Community Fund). In 2015 the society raised £488,000<sup>26</sup> of local community investment from 150 mainly local shareholders, to finance 12 Solar PV installations on schools and four PV installations on community buildings of a total installed capacity of 420 kW.

The importance of food provenance is growing, and as well as supporting the local economy also reduces

food miles and the resulting carbon emissions. As of February 2021, Dorset Food and Drink had a membership of around 160 food and drink businesses<sup>27</sup>. Starting in 2013 Dorset Food Drink has held a one day 'Dorset Food & Drink Christmas Fair' to showcase its members. Between 2017 and 2019 this extended to be a two-day event with 50 stands/stallholders, attracting over 2600 visitors each year.

## Land and development

Environmental considerations are essential in determining land for development as well as opportunities for enhancing natural spaces which offer economic drivers to the county.

Local Authorities were given the duty to produce Brownfield Land Registers as part of The Town and Country Planning (Brownfield Land Register) Regulations 2017. The two unitary councils produced their first registers, in their new structures, in 2020. In Dorset Council area there were 83 sites (67.79ha) of which 20 sites had planning permission (19.07ha)<sup>28</sup>. In BCP Council there were 328 sites (135.07ha) or which 243 had planning permission (54.9ha).

Dorset Environmental Record Centre developed Dorset's Ecological Network Maps<sup>30</sup> for the LNP in 2017 and revised these in 2020. The maps can be used to view the existing ecological network and the higher potential areas which will support future biodiversity net gain and nature recovery.

<sup>16</sup> BEIS (2017)

<sup>17</sup> BEIS (2017)

<sup>18</sup> Defra (2018)

<sup>19</sup> Ash Futures (2015)

<sup>20</sup> South West Research Company Ltd (2020)

<sup>21</sup> Carbon Brief (2018)

<sup>22</sup> BEIS (2019)

<sup>23</sup> DC (2017)

<sup>24</sup> BEIS (2020)

<sup>25</sup> DC (2021)

<sup>26</sup> Dorset Community Energy

<sup>27</sup> Dorset Food and Drink (2021)

<sup>28</sup> DC (2020)

<sup>29</sup> BCP (2020)

<sup>30</sup> DERC (2020)



TABLE 8: DORSET SUMMARY OF PLANNING GAIN OUTCOMES 2011-21 - COMPLETED AND UNDERWAY <sup>31</sup>

All GI (incl SANG, NR etc.)	681.09 Ha
SANG	136.3 Ha
Nature Reserve	217.02 Ha
Permanent grassland including species rich grassland/ grazing marsh etc.	147.14 Ha
Woodland and Scrub	187.14 Ha
Heathland /pine off heath	94.25 Ha
Saltmarsh and intertidal habitats	3 Ha
Lake and Wetland	77 Ha
Overall area of new priority habitat and permanent grassland created	529.25 Ha
Area of Existing Habitats Enhanced/Managed	334.45 Ha
Total of New Hedgerow Planting (metres)	6824 Metres
No. of Ponds Created	364 No
Habitat Compensation	£463,495
Landscape Compensation	£2,000,000
Enhancement/Project support	£636,237

FIGURE 7: WATER CONSUMPTION <sup>32</sup>

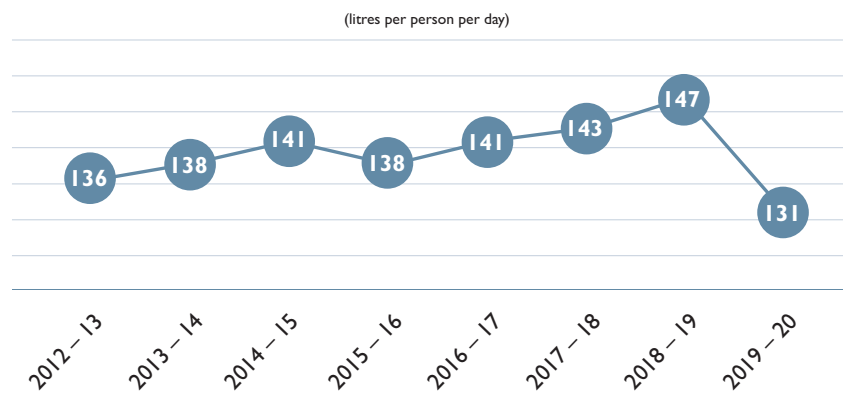


TABLE 9: BATHING WATER QUALITY <sup>33</sup>

standard	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Excellent	31	31	30	31	30	31	29	29	32	32	33
Good	4	5	6	5	6	5	8	8	5	4	3
Sufficient	4	2	2	2	1	2	1			1	
Poor		1	1	1	2	1	1				
Closed								1	1	1	2
De-designated								1	1	1	

As of Sept 2021, 681 hectares of green infrastructure had been created or restored in the county through planning gain associated with new developments (Table 8).

Water use

In the Wessex Water region water consumption was 143 litres per person per day in 2017-18, which is on a par with the national average, but higher than 2016-17. The increases in 2017-18 and 2018-19 are likely to be attributed to the warm spring and early summer and a lower installation rate of water meters than forecast in 2017 and the hot summer in 2018.

Bathing water quality

Clean bathing water is essential for marine life and for the economic wellbeing for our coastal communities in terms of both tourism and fishing industries. Diffuse pollution from agriculture and sewage pollution both affect our bathing waters.

The Classification system for bathing water quality has changed since 2014 Natural Value Report, however Table 9 backdates to the new system. Generally, our bathing water quality is excellent. The tough standards under the EU Bathing Water Directive and the investment from Wessex Water on their coastal sewage works have improved the waters around Dorset.

Waste

Dorset Waste Partnership brought together the county council (waste disposal authority) and the six borough and district councils (the waste collection authorities) into one waste and recycling service – this service transferred to Dorset Council on its creation. The levels of household waste across the area have been on a downward trend, although DCC and BoP saw slight increases in 2016-17. Recycling rates between 2008-9 and 2018-19 have seen an overall rise across the area, with some fluctuation (see Figure 8) <sup>34,35</sup>.

<sup>31</sup> Natural England (2021)

<sup>32</sup> Wessex Water (2020)

<sup>33</sup> Environment Agency (2019)

<sup>34</sup> Defra (2019)



FIGURE 8: HOUSEHOLD WASTE AND RECYCLING RATES

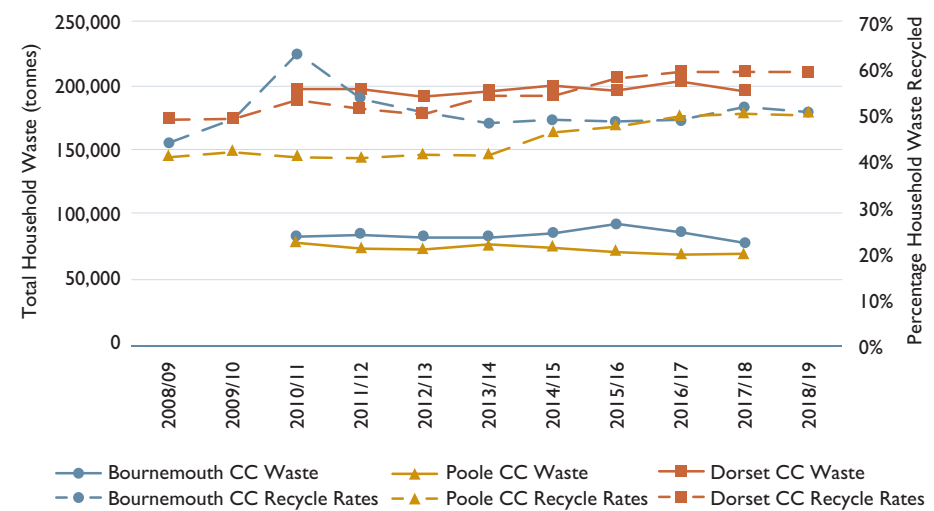
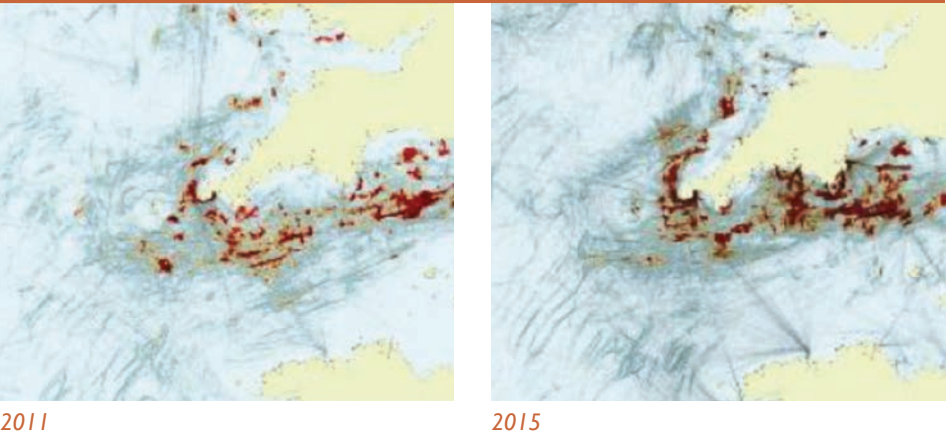


FIGURE 9: COMMERCIAL FISHING HEAT MAPS <sup>36</sup>

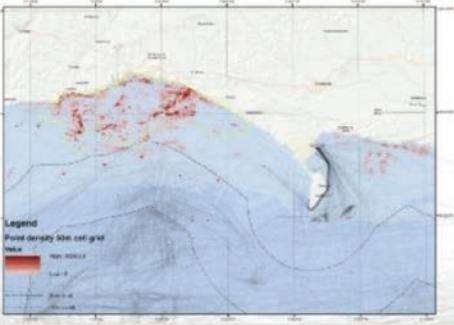


Commercial Fishing

These heatmaps, overlaid with fishing vessel track-lines, are based on anonymised AIS (Automatic Identification System) data for 2011

(left) and 2015 (covering the first week of each month) and are an indicator of the distribution and intensity of fishing activity. There are

FIGURE 10: INSHORE FISHING INTENSITY, BLUE MARINE <sup>37</sup>



many more tracks in the 2015 map, which reflects a change in rules in 2014, requiring all EU fishing vessels over 16m to carry AIS.

Dorset, as part of the Southern Inshore Fisheries and Conservation Authority District, has a long-standing byelaw excluding vessels of over 12m length from fishing in the district (out to 6nm). The effect of that boundary is visible in the above maps, especially the 2011 map, as the 2011 dataset contains fewer smaller vessels. The apparent lower activity inshore is partly down to the smaller vessels that work in this region not routinely carrying AIS.

Blue Marine's Lyme Bay Fisheries and Conservation Reserve project undertook a "Fully Documented Fisheries" trial in 2014 and 2015. This involved the fitting of inshore vessel monitoring systems to under 10m boats involved in potting and netting in Lyme Bay. Figure 9 shows a heatmap of inshore fishing intensity from this project. This has been overlain with the tracks of larger fishing vessels from AIS data.

Dorset received over £11 million from the Big Lottery (now National Lottery Communities Fund) Coastal Communities Funding since the programme was launched in 2012 supporting seven overarching projects including the Dorset Coastal Connections Project <sup>38</sup>.

<sup>35</sup> Let's Recycle (2019)

<sup>36</sup> MMO

<sup>37</sup> Blue Marine

<sup>38</sup> Dorset Coast Forum



# NATURAL

## HEALTH

In Dorset the Integrated Care System (NHS and local authorities) spend £1.4 billion on health services<sup>39</sup>. It is forecast that by 2023-24 NHS specialised services in Dorset will have a gap of £272million<sup>39</sup>. The health system needs to change to invest and focus on prevention to reduce the need for acute care in the long term.

There is increasing evidence about the value being in nature has to health and wellbeing. The natural environment makes a huge contribution to physical and mental health and wellbeing, with many people accessing natural and green spaces to support their quality of life, offering opportunities for physical activity and a place for quiet contemplation to reduce stress and anxiety. The pandemic highlighted the value of nature for people's wellbeing, particularly during the lockdowns.

### Natural health service

Physical activity can reduce the risk of major illnesses, such as type 2 diabetes, cancer, heart disease and stroke by up to 50%, and lower risk of early death by up to 30% as well as supporting good mental health. The cost of physical inactivity to Dorset CCG is around £6.5million<sup>40</sup>. A study by Exeter University valued the benefits to health of 'Green exercise' (physical activity in natural environments) in England at around £2.2 billion a year<sup>41</sup>.

Both inactivity and loneliness can have huge impacts to people's health and wellbeing. Table 10 demonstrates Dorset's activity levels. In 2019-20<sup>42</sup> 57% of BCP Council residents and 72% of Dorset residents were active (at least 150 minutes a week), compared with 61% across England. In the same year 30.6% in BCP Council area and 19.9% in Dorset Council area did less than 30mins a week (27% England).

While figures across Dorset are below the average for people feeling lonely often or always and above average for those never feeling lonely, almost 39%<sup>42</sup> of people felt lonely some of the time or occasionally (comparable with the England average).

One in four people will have a mental health issue at some time in their life and one in six people at any one time will have a mental health issue – this means that in Dorset, about 128,971 people out of a total population of 773,831 (mid-year estimates 2019) will have a mental health issue at any one time.

<sup>39</sup> Dorset Integrated Care System

<sup>40</sup> Active Dorset (2020)

<sup>41</sup> Exeter University (2016)

<sup>42</sup> Sport England (2020)

**TABLE 10: ACTIVE LIVES SURVEY ADULTS OVER 16YRS DORSET-WIDE** <sup>42</sup>

	2015-16	2016-17	2017-18	2018-19	2019-20
Active: at Least 150 minutes a week	62.0	64.0	66.6	66.5	64.5
Fairly active: 30-149 minutes per week	13.4	12.2	12.4	12.3	10.2
Inactive: less than 30 minutes a week	24.5	23.8	21.0	21.2	25.3

**TABLE 11: LONELINESS** <sup>42</sup>

	Dorset	BCP Council	Dorset Council	England
Often/always	0	0	0	5.3
Some of the time	19.7	21.4	17.9	16.9
Occasionally	19	19	18	21.5
Hardly ever	25.8	25.1	26.5	28.8
Never	31.6	30.1	33.3	27

**TABLE 12: DEPRESSION AND ANXIETY PREVALENCE** <sup>43</sup>

	BCP Council	Dorset	Southwest	England
Depression and anxiety prevalence (% on GP register 18+)	10.8	11.0	11.2	10.7

Research shows that just 5 mins in the natural environment helps to boost mood<sup>44</sup> and a recommendation has been made that we should all spend 120 minutes a week in the nature to support of wellbeing. Activities in the natural environment offer both a preventative and a therapeutic opportunity to support and enhance health and wellbeing.

The natural environment offers opportunities to support wellbeing and act as a prevention to illness through opportunities for physical

activity, social connection, mental stimulation and relaxation. Health needs and illnesses can also be supported by therapeutic opportunities to either reduce symptoms or help improve quality of life. The green prescription service, Natural Choices<sup>46</sup>, was rolled out across Dorset, offering over 60 activities from 27 providers (pre covid). The programme acts as an umbrella brand which brings together opportunities for activities within the natural environment which support both physical and mental wellbeing in

one place which people can self-refer to or can be signposted to by health professionals.

Dorset AONB received £328,000 from the Big Lottery for a three-year project (2017-2020) to engage older people needing additional support, including those living with dementia and their carers, in dementia friendly nature-based activities and sensory rich visits to places of interest in Dorset. The Stepping into Nature<sup>47</sup> evaluation highlighted the benefits of the project – 79% of people intended to spend more time outdoors, 92% felt they had good opportunities to socialise, 80% felt the activities allowed them good opportunities to connect to nature, 98% felt included and 91% intended to return and take part in further activities. A future £380,000 has been awarded to expand the project for a further three years.

### Access to natural spaces

The Dorset Sustainability and Transformation Plan (STP) brings the health system (NHS, Public Health,

<sup>43</sup> Public Health Dorset (2020)

<sup>44</sup> The Journal of Positive Psychology (2018)

<sup>45</sup> Exeter University (2019)

<sup>46</sup> Dorset LNP

<sup>47</sup> Dorset AONB





local authorities and the voluntary and community sector) together to support the transformation of the system into a sustainable model. The Prevention at Scale part of the STP includes a ‘Healthy Places’ programme – one of the few nationally to recognise the value of place and the environment as a wider determinate of health. There are over 7,000 or 4,689km (or 2,913 miles) of rights of way across Dorset (including footpaths, bridleways and byways) – all of which offer free opportunities for residents to be active in the natural world. As part of the Healthy Places programme and working with the Dorset Local Access Forum investments are being made in improving access to greenspaces through improving walking and cycle routes and replacing styles with gates to support access for all.

Public Health Dorset commissioned the European Centre for Environment and Human Health part of the

University of Exeter’s, College of Medicine and Health to evaluate access to greenspace in Dorset in 2018-19. The findings<sup>48</sup> demonstrate that in 44% in BCP council area and 57% in Dorset Council area of people live within a 300m safe walk of a public greenspace that is half a hectare in size or larger (WHO indicator of adequate access for health and wellbeing). Ensuring access to high quality greenspace is important for wellbeing.

Despite Dorset being seen as an affluent area there are areas of social deprivation, and these areas often have less access to green space.

Health inequalities

Health conditions are often exacerbated by having a cold home. Energy efficiency measures can reduce associated health implications. Healthy Homes Dorset<sup>49</sup> is funded by Public Health Dorset, managed by Dorset Council and delivered by

Centre for Sustainable Energy and Evolve Home Energy Solutions. The programme helps Dorset residents keep warm by installing loft and cavity wall insulation. Phase two of the programme to December 2019 supported 2,104 clients with Advice and referrals of which 1,459 had health conditions affected by living in cold homes. From these, 354 clients had home improvement measures installed such as insulation or heating upgrades. While the project focuses on supporting health and wellbeing, an indirect benefit of the project is reducing carbon emissions as well as reducing fuel bills.

Fuel poverty<sup>50</sup> in Dorset as a whole has fluctuated over the years peaking at 10.4% in 2014, but always below the national average. There was considerable variation in the local authority areas (pre 2019) reflecting the older housing stock and/or income levels. For 2019 BCP Council area was 10.3% and Dorset Council

TABLE 13: DORSET FUEL POVERTY DATA <sup>50</sup>

	2011	2012	2013	2014	2015	2017	2018	2019
Fuel Poverty Dorset	9.1%	8.4%	10.2%	10.4%	9.6%	10.2%	8.4%	9.7%
National average	10.9%	10.4%	10.4%	10.6%	11.0%	10.9%	10.2%	13.4%

Data not available for 2016.

TABLE 14: AIR POLLUTION <sup>52</sup>

	Bournemouth	Poole	Dorset	England
Annual exposure to PM2.5 (ug/m3, 2016)	9.4	9.3	8.7	25 (WHO limit)
Exposure to NO2 (ug/m3, 2016)	14.1	13.1	7.4	40 (WHO limit)
Fraction of motility attributable to particulate air pollution (% 2017)	5.1	5	4.5	4.7
Air pollution: fine particulate matter (2016)	8.9	8.8	7.7	9.3

area was 9.3% compared with the national average of 13.4%. Local authorities, public health and housing associations have undertaken work to improve energy efficiency to promote healthy homes. The Bournemouth Warm Homes project assisted 249 households with 310 measures that will save an estimated £1.7million and 9kt of carbon dioxide over the lifetime of the project<sup>51</sup>.

Air pollution

Long term exposure to air pollution can cause cardiovascular respiratory diseases linked to lung cancer, strokes and coronary heart disease as well as exacerbating asthma and lead to low birth weights and dementia.

Vegetation removes pollution (including Nitrogen Oxide, ozone, inhalable particulate matter 2.5 and sulphur dioxide) and a study in 2015 demonstrated that the total pollution removed by vegetation equated to £14.55 per person saved in healthcare costs in the former Dorset County Council area and £13.63 in the borough council areas of Bournemouth and Poole (UK average £15.39)<sup>53</sup>.

<sup>48</sup> Exeter University (2019)

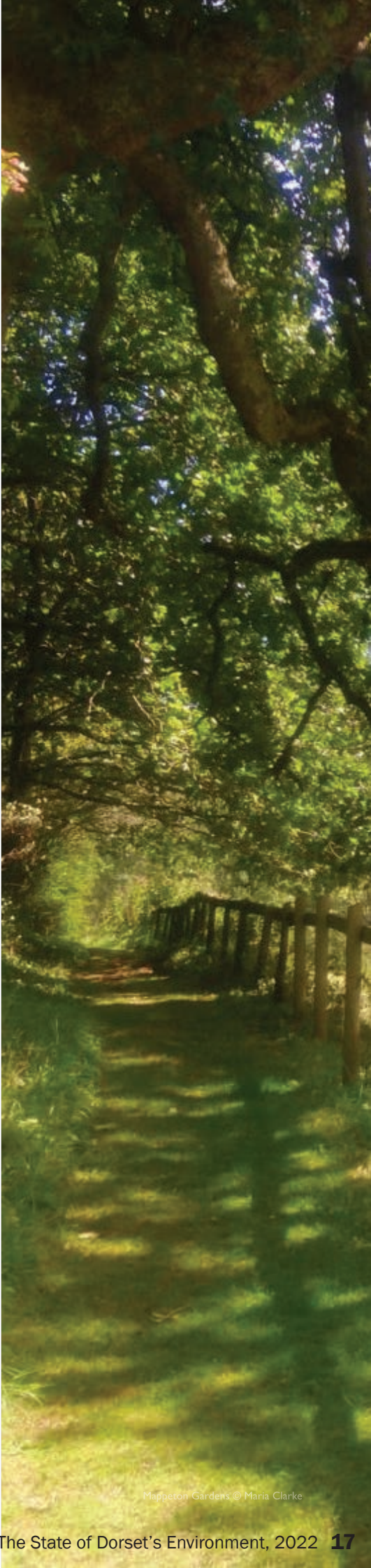
<sup>49</sup> Healthy Homes Dorset

<sup>50</sup> BEIS (2021)

<sup>51</sup> Bournemouth Borough Council (2017)

<sup>52</sup> Public Health Dorset (2017)

<sup>53</sup> ONS UK (2018)





# NATURAL RESILIENCE

Changes to the climate, economy and demography both globally and locally mean Dorset's environment continues to face a challenging future. We can aim to mitigate and adapt to the challenges if we work towards a well-managed and resilient environment. Working on a landscape-scale and whole catchment approaches will support this move to a resilient environment. Dorset has a good track record of bringing partners together and working at the landscape scale on projects such as Wild Purbeck and The Great Heath projects.

## Landscape Scale approaches

The Wild Purbeck Nature Improvement Area (NIA)<sup>55</sup> project between 2012-2015, was one of the 12 pilot NIAs across the country. Wild Purbeck covered an area of 46,000 hectares and supported large improvements to ecological connectivity and improve biodiversity. The 3-year programme was awarded just over £924,000, from Defra and together with partner funding delivered over £2 million worth of projects across Purbeck. The programme included woodland creation higher in the catchment, heathland restoration, wetland restoration, climate change adaption work with farmers and landowners, community engagement work, including a schools programme and visitor management planning. The partners continue to work together as Wild Purbeck and are still delivering a substantial stream of works to improve the environment of Purbeck.

The Great Heath Living Landscape<sup>56</sup> project received funding through Heritage Lottery Fund, Erica Trust and others to deliver an urban living landscape, supporting both wildlife and people. The project secured 589 hectares of land; improved access

to nature through 16 miles of the Castleman Trailway, 64 miles of the Stour Valley Way and 10 miles of other waymarked trails; engagement with over 18,500 people; 392 volunteering events; and contributions from 1,192 students.

## Catchment Based Approach

Across Dorset, three Catchment Partnerships operate under the umbrella of Dorset Catchment Partnerships: Poole Harbour Catchment Initiative (established 2011), Stour Catchment Initiative and West Dorset Rivers and Coastal Streams (both established 2013). All three partnerships have adopted the Catchment Based Approach and are well supported by local authorities, regulators, relevant NGOs and community groups, and both water companies operating in Dorset. Each partnership has identified key issues affecting the water environment at a catchment scale and developed a strategic approach to addressing them through partner-led projects. All projects are designed to be multi-benefit, delivering maximum impact.

In 2020-21 the Catchment Partnerships delivered 7km of river enhancements, planted 5,000 plus trees and 1,440m of hedgerows to improve habitat connectivity, and engaged with 1,500 people through online events etc; this is despite the significant challenges of delivering partnership work during covid restrictions.

Dorset Catchment Partnerships seek to influence policy through engagement with key partners and responses to consultations through the Dorset Strategy Group, promote exchange of ideas and progress evidence-based decision making around improvements to the water environment. This includes hosting the



Dorset Beaver Working Group, where academics, regulators, projects and stakeholders can share evidence and exchange views to develop best practice around beaver reintroduction projects and associated management issues.

Poole Harbour Catchment Initiative<sup>57</sup> (PHCI) supports partners to deliver a range of projects across the catchment, working with natural processes to deliver a range of benefits for nature recovery, manage flooding and low flows, and improve water quality. One example is Dorset Wildlife Trust and FWAG SW who have been working with landowners in the Devils Brook, River Hooke and River Corfe catchments through the Dorset Wild Rivers project to reduce overland runoff of sediment and nutrients, slowing the flow in the upper catchment to both attenuate flood peaks lower down, and reduce periods of low flow in winterbournes such as the Cheselbourne Stream.

The Catchment Partnership has supported the Poole Harbour Nutrient Management Scheme, developing a farmer-led approach (through the Poole Harbour Agriculture Group, supported by the NFU) to agricultural nitrate reductions

across the catchment, in response to the Environment Agency's Consent Order Technical Recommendations, published February 2021. The scheme will enable farmers to cut on-farm nitrate losses significantly and sustainably, to reduce eutrophication in Poole Harbour.

The Stour Catchment Initiative<sup>58</sup> (SCI) also seeks to work with natural processes where appropriate. In the Stour Headwaters, Dorset Wild Rivers (led by FWAG SW) is delivering a significant project with landowners. This includes developing opportunities with farmers in key stretches of the River Lodden (and others) for a variety of schemes ranging from improving habitats and water quality by managing shade and fencing out livestock on existing channels, to full-scale river restoration where appropriate.

The Dorset AONB has been working with the Dorset Wildlife Trust and the Farming and Wildlife Advisory Group to identify priority projects in the West Dorset Rivers and Coastal Streams catchment and build on the success of the River Asker project. The community-led project ran between 2018 to 2021 and had over 70 people directly

engaged, including eight skilled citizen scientists; delivered 1.4km of habitat improvements; 3km of natural flood management covering the headwaters of the catchment; 15ha of improved land management and 400m of new hedges for the benefit of the water environment; and at least 700 hours of community effort.

Wessex Water's EnTrade<sup>59</sup> was piloted in June 2016 within the Poole Harbour catchment. EnTrade allows buyers of environmental offsets to create an online auction for particular land use measures 'i.e. to buy reductions in pollutants, or carbon and biodiversity gains, to offset their own impacts. The platform estimates the environmental improvements for measures that farmers choose to bid for. This then allows the seller to enter their cost and see the resulting pound per unit of saving cost on which their bid will be judged. The twice-yearly auctions to buy cover crops and arable reversion to reduce nitrogen in Poole Harbour has offsets of over 60 tonnes of nitrates per year. 80% of eligible farmers entered

<sup>55</sup> Dorset AONB

<sup>56</sup> Dorset Wildlife Trust

<sup>57</sup> Poole Harbour Catchment

<sup>58</sup> Stour Catchment

<sup>59</sup> EnTrade



into the Poole Harbour market. Now expanded beyond Dorset, by 2020 25 trading events had been held, 1200 farmers were registered on the platform, deals with farmers amounted to £2.1million with £10m estimated value of future markets in the pipeline.

FIGURE 11: DORSET HEATHLANDS FIRES <sup>61</sup>

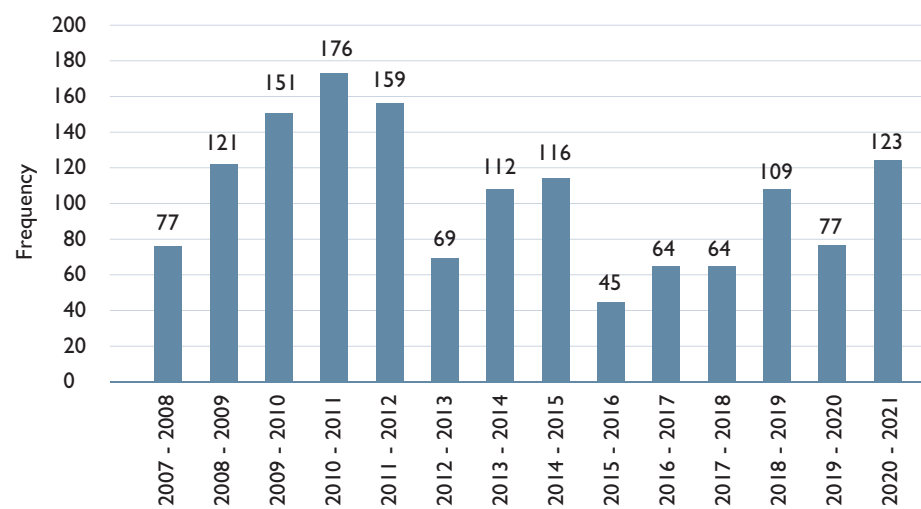


FIGURE 12: DORSET HEATHLAND BURNT <sup>61</sup>

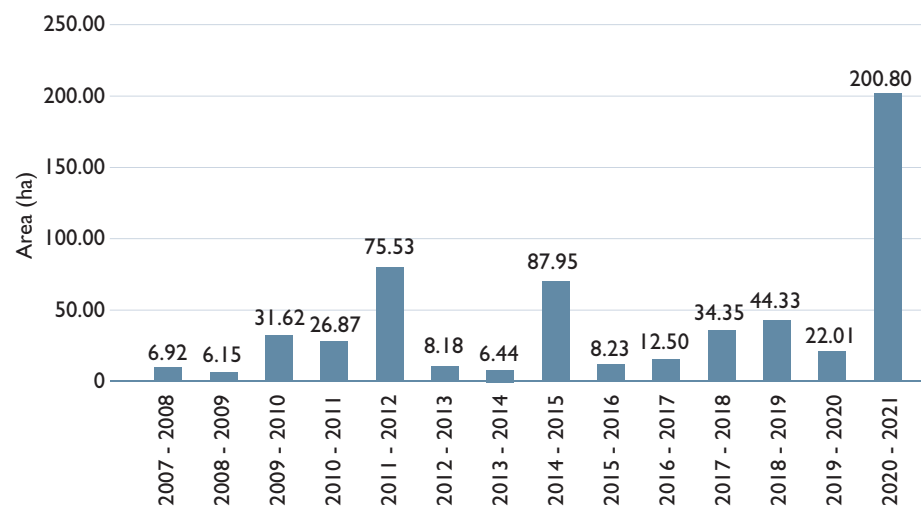
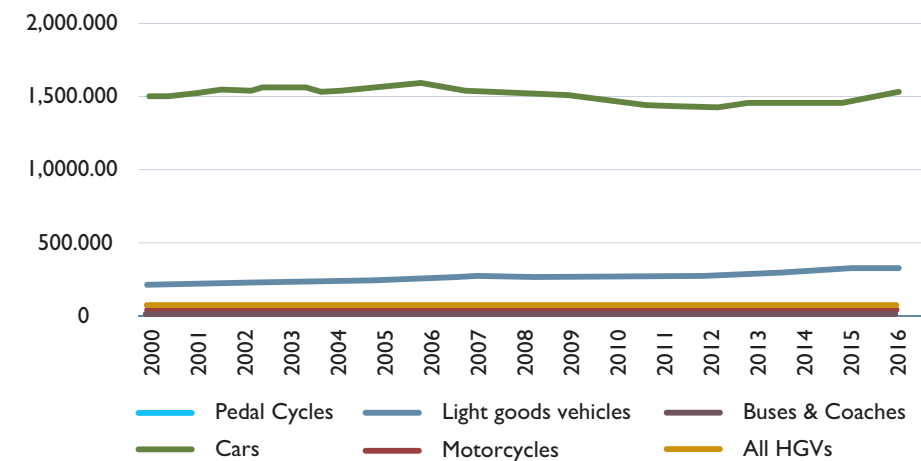


FIGURE 13: TOTAL TRAFFIC ON MAJOR DORSET ROADS 2000-2016 <sup>61</sup>



Heathland Fire

Heathland fires have a long-term impact on wildlife. The Urban Heaths Partnership’s<sup>60</sup> work in raising the profile of heathlands has resulted in the public calling in heathland fires quickly. The number of heathland fires remains lower than the 2010-11 peak of 176 fires. However, in terms of the total area burnt, the extensive Wareham Forest fire of 2020 accounted for 189.84ha in that year, a considerable increase of the previous largest area of 87.95ha in 2014-15.

Traffic volumes

In a largely rural area such as Dorset travel and transport to work and leisure is generally reliant on private cars which results in high carbon emissions. Transport by car is the highest mode of transport across the area, it has though reduced since a 2006 peak. Conversely, light goods vehicle traffic has increased.

The pandemic lockdowns had a big impact on travel in the area. In 2020<sup>62</sup>, 2.06 billion vehicle miles were travelled on roads in Dorset Council, down from 2.60 billion in 2019 and 1.08 billion vehicle miles on roads in Bournemouth, Christchurch and Poole in 2020 down from 1.4 billion in 2019.

Of these figures cars and taxis accounted for 1.1 billion vehicles miles in 2019 in BCP (870 million in 2020) and 2.04 billion in Dorset Council (1.5 billion in 2020).



<sup>60</sup> Urban Heaths Partnership

<sup>61</sup> Urban Heaths Partnership (2021)

<sup>62</sup> Department for Transport

The year 2007 saw a peak in cars and taxis in Bournemouth Borough Council of 443 million miles, reducing to 411 million miles in 2011, and rising again to 438 million miles in 2018. Dorset County Council area saw a general increase since 1993, with a slight decrease between 2016 (1.97 billion) to 2012 (1.9 million) but rise to 2.2 billion in 2018.

Climate change

Research from the University of Reading<sup>63</sup> demonstrates increases in temperature – the darker the red the higher the temperature. Figure 14 demonstrates the global data (1850-2019) and Figure 15 the data for England (1884-2019).

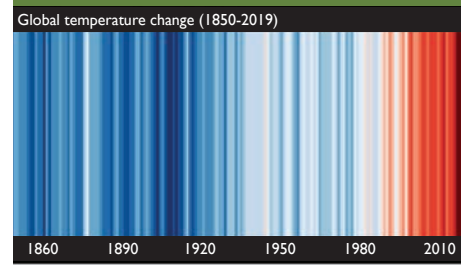
The Low Carbon Dorset programme (see Natural Value chapter) is working to improve energy efficiency and renewable energy to mitigate carbon emissions in Dorset. Dorset LNP and Dorset LEP hosted a joint workshop to investigate developing collaborative working on climate change adaptation in June 2019.

Draft natural capital accounts for the BCP Council area demonstrated that the value of carbon sequestration in the area is £405,000<sup>64</sup> per year, which is approximately £210 per hectare of greenspace.

Fisheries

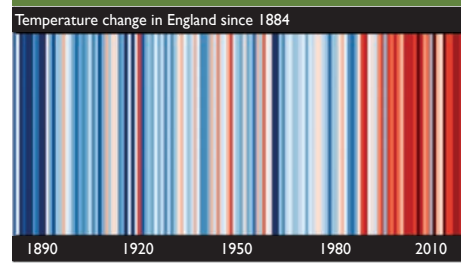
In 2015, The Sustainable Food City Partnership spearheaded Bournemouth and Poole’s successful campaign to become the world’s first Sustainable Fish City which now sees local businesses commit to only serving sustainable fish and removing endangered fish sources from the menu across the area. This meant that over 4 million meals per year were served using only sustainable sources.

FIGURE 14: GLOBAL TEMPERATURE CHANGES <sup>63</sup>



Working Toward Sustainable Fisheries in 2014, Defra published guidance<sup>65</sup> on the Revised Approach to the Management of Commercial Fisheries in European Marine Sites<sup>66</sup> ensuring all existing and potential commercial fishing operations were managed in line with Article 6 of the EU Habitats Directive 1992<sup>67</sup>. In Dorset, this resulted in a thorough assessment by Southern Inshore Fisheries and Conservation Authority (IFCA) of all gear, species and seabed interactions ensuring risk-based priorities toward vulnerable marine features through permanent spatial closure byelaws for bottom towed fishing gears and hand gathering activities. As a result, 31% of the Dorset inshore area (0-6nm) is now protected from mobile fishing gear, thanks to Defra’s Revised Approach. Up until this time, sensitive habitats such as rocky reefs and seagrass and their associated species were not protected from

FIGURE 15: ENGLAND TEMPERATURE CHANGES



damaging fishing activities, regardless of whether they were features of a Marine Protected Area. In Dorset, a total of seven in-depth Assessments have been applied to all other fishing activity interactions within all five of the MPAs in the Dorset area of the Southern IFCA district.

The Poole Harbour clam and cockle fishery was certified as sustainable by the Marine Stewardship Council (MSC) in 2018<sup>68</sup>. This is the first Dorset fishery to be declared as sustainable. Alongside this, 13 permitted fishers targeting the clams and cockles are being audited under the Responsible Fishing Scheme (RFS)<sup>69</sup>. This RFS Standard demonstrates that a vessel and its skipper are operating to best practice in five core areas: safety; health and welfare; training and professional development; the vessel and its mission; care of the catch<sup>70</sup>. This double certification of MSC and RFS is a global first.

<sup>63</sup> University of Reading

<sup>64</sup> Vivid Economics (2020)

<sup>65</sup> MMO (2014)

<sup>66</sup> MMO (2014)

<sup>67</sup> JNCC

<sup>68</sup> The Poole Harbour Clam & Cockle Fishery

<sup>69</sup> Seafish

<sup>70</sup> Seafish (2016)



# NATURAL

## UNDERSTANDING

The 'Blue Planet effect' has demonstrated that with greater understanding of environmental issues communities and individuals are more likely to make behavioural changes to support our environment, and this has seen a swell of information and a reduction of the use of single-use plastics. Social media has become an increasing way of sharing information and engaging with people to enhance understanding and pass out messages to support our environment.

It is worth noting that while awareness of single-use plastics seems to have made a difference in behaviours with relatively simple action, awareness raising on climate change has been made for some time but, as a more complex issue, has not delivered the same results to engage such a wide audience. This may be down to people feeling they can't make a difference to such a big issue.

### Dorset's living textbook

Organisations across Dorset have undertaken extensive work in schools to introduce children to nature and encourage teachers to pick up the subject in more detail as a follow up. The RSPB ran a 'connections to nature' project in Bournemouth and Poole between November 2015 and July 2019. This involved talks and activities within the school which reached 27,728 learners, and summer activities outside which over 3,400 pupils.

The Urban Heaths Partnership<sup>71</sup> work with schools to raise awareness of heathland fire. The Arson Courtroom Drama (ACD) is a curriculum-based session designed to reinforce the importance of heathlands due to their wildlife and biodiversity and highlight the consequences of heathland fires to the wildlife and the community. The sessions are aimed at 12-13-year-olds and is based in a courtroom

setting with students acting the roles of Judge, Accused, Witnesses, Defence and Jury. The sessions are held each year between January and April with 12 schools within the project area reaching around 1,800 students in 60 sessions. The programme focuses on the messages of 1) the importance of heathlands due to their wildlife and biodiversity and 2) the consequences of heathland fires to the wildlife and the community.

The Urban Heaths Partnership also leads the Dorset Dogs project which aims to encourage responsible dog ownership. Dorset Dogs promote the Doggy Do Code, encouraging dog owners to respect nature, raising awareness at events and organising walks across Dorset especially focused on Dorset's heaths. By March 2020, there had been 2,357 registered members signing up to the code. In 2019-20 they held over 83 engagement events including pit stops (information stands), guided walkies and the annual Festival reaching around 11,200 people (including giving out goody bags).

### Attitudes

Residents surveyed for the Dorset Environmental Economy Report<sup>72</sup> on how important the quality of the environment was on their decision to live in Dorset demonstrates this is and key factor with 63% stating that it was a very important or crucial/main contributory factor. This figure rises to 90% if including important factor. In the same survey approximately 75% felt that a deterioration on environmental quality would have a negative or major negative impact on their wellbeing.

Nationally a survey<sup>73</sup> into climate change attitudes found that 67% of those surveyed believed that hotter and longer heatwaves were caused

by climate change, 71% wanted to see greater investment in renewable energy, and 62% were interested in a pension funding of financial institution that considered climate change impacts of the companies it invests in.

### Community action and environmental volunteering

There are at least seven Transition Towns in Dorset, including, Bournemouth, Dorchester, Blandford, Bridport, Poole, Sturminster and Weymouth & Portland, as well as other climate action groups. These local communities raise awareness of sustainability and climate change in their areas to encourage more people to take action such as energy efficiency measures, growing or buying local food and reducing waste through reuse and recycling. Alongside these groups there are multiple 'friends of' groups and community groups supporting their local areas.

There is a strong culture of environmental volunteering in Dorset with volunteers working with local government departments, NGOs and on community activities and projects. Taking the approximate hours of the LNP partners in Table 15 this equates to around 148,602 hours of volunteer time in 2019. If you multiply the figure by the 2019 Real Living Wage of £9.00, this gives a volunteer value of £1,337,418. However, if multiplied by the Dorset average wage figure of £10.46 (as used by Volunteer Centre Dorset) this figure rises to £1,575,181. These are conservative figures and do not include the many volunteers working across the county in community groups and other NGOs, so the true figure will far exceed this value. As well as supporting nature conservation there is increasing evidence that environmental volunteering offers positive health and wellbeing benefits<sup>74</sup>.

TABLE 15: VOLUNTEERING IN DORSET'S ENVIRONMENT

Organisation	approx. hours 2019 <sup>75</sup>
BCP Council	62,037
Dorset Council	30,478
Dorset Wildlife Trust	26,239
National Trust (Purbeck)	10,470
Natural England	1,440
RSPB	17,938

Sourced individual organisations

TABLE 16: BEACH CLEANS<sup>76</sup>

Year	Number of cleans	Number of volunteers	Number of bags collected
2017	22	323	350
2018	14	800	293
2019	14	787	214
2020 – No event	N/A	N/A	N/A
2021	19	328	165



### Litter and fly tipping

Dorset Coast Forum's Litter Free Dorset - Land, Coast & Sea programme supported the '2-minute beach clean' initiative. Starting in Cornwall during the winter of 2013/14, the initiative began to encourage everyone using the beach just to spend a couple of minutes picking up rubbish every time they visit. Social media has been used to support the campaign, which has become international, using the hashtag #2minutebeachclean. The campaign is also moving inland through Litter Free Dorset (also through Dorset Coast Forum).

Twenty-two of Dorset's beaches were cleaned as part of the 2021 Great Dorset Beach Clean. It involved over 328 volunteers who offered a couple of hours to make a difference to our coasts, retrieving just over 165 bags of litter from beaches from Christchurch to Lyme Regis - tyres, buried rusty lobster pots, tents and oil drums were collected<sup>76</sup>.

<sup>71</sup> Urban Heaths Partnership

<sup>72</sup> Ash Futures (2015)

<sup>73</sup> ClientEarth (2018)

<sup>74</sup> The Wildlife Trusts (2017)

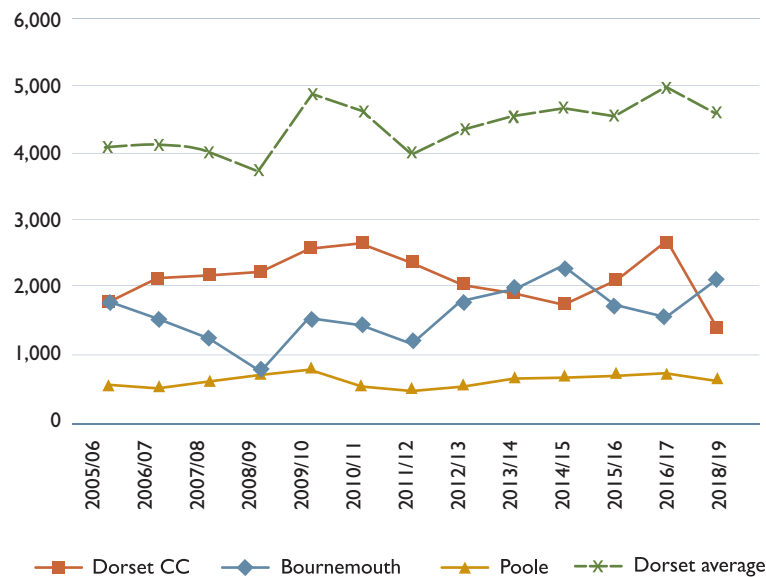
<sup>75</sup> Note these figures are approximate and vary between calendar and financial year but are included to give a proxy figure. Sourced from individual organisations.

<sup>76</sup> Dorset Coast Forum





FIGURE 16: FLY TIPPING



Fly tipping across the area generally increased by 268 incidents between 2014-15 to 2016-17 but decreased from 2017. While Bournemouth had seen a steady decrease, there have been increases in the Dorset County Council and Borough of Poole Council areas. In 2016-17 fly tipping cost the local authorities £234,162 an increase of over £18,000 from 2014-15<sup>77</sup>

<sup>77</sup> DEFRA (2021).



### Recreational angling

The southwest is clearly important for recreational angling with a significant concentration of UK records coming from the region.

The Angling Trust strategy “Fishing for Life” includes a target of anglers catching “more, bigger and healthier fish”. One indicator of this is the Specimen Sea Fish Awards scheme, where bronze, silver and gold certificates are awarded annually for fish caught at or above a qualifying weight for that species. The qualifying weights are different for each region and for boat and shore caught fish. Figure 18 shows the number of certificates issued per year for the Dorset and Hampshire region. (Gold certificates are for fish 150% or more of the qualifying weight, silver for fish of 125% or more).

Figure 19 shows the maximum sizes for fish landed each year (and submitted to the Specimen Sea Fish Awards scheme) for a selection of species. Some of these species have been subject to restrictions on landings for commercial or conservation reasons. Bass fishing has been heavily restricted recently, both commercially and recreationally. Black bream is likely to become a future protected feature in parts of Dorset, with subsequent restrictions on commercial and recreational



FIGURE 17: DISTRIBUTION OF SHORE (LEFT) AND BOAT (RIGHT) UK ANGLING RECORDS <sup>78</sup>



FIGURE 18: SPECIMEN FISH AWARDS <sup>79</sup>

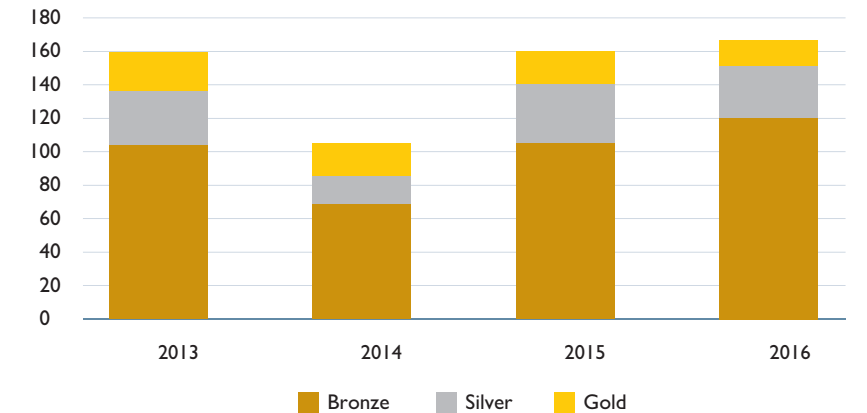
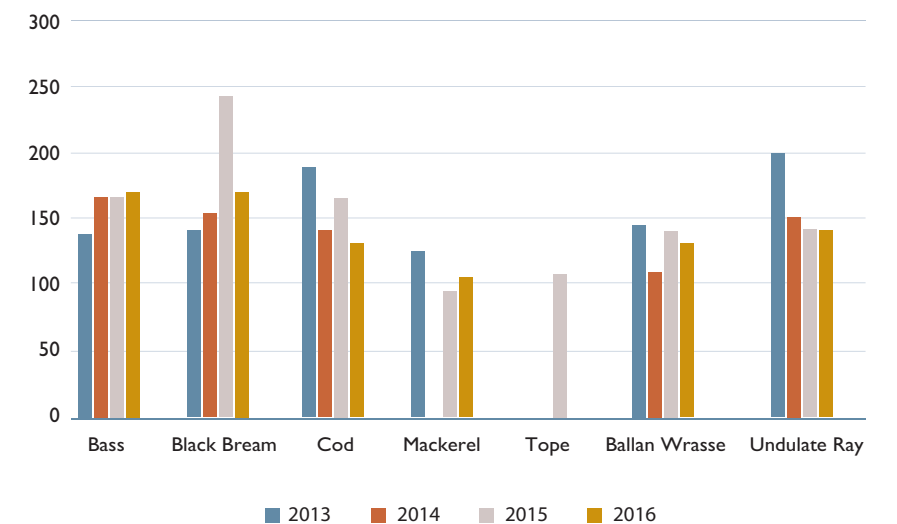


FIGURE 19: LANDED FISH SIZES <sup>80</sup>

Maximum size (% of specimen weight) of specimen fish in Dorset and Hampshire region



catches. Tope and undulate ray are both subject to landing restrictions, with limited commercial landings and recreational angling operating on a catch and release basis. Note that only one specimen tope was recorded in Dorset and Hampshire over this time period.



<sup>78</sup> The Angling Trust

<sup>79</sup> The Angling Trust

<sup>80</sup> The Angling Trust



# NATURAL INFLUENCE

Across Dorset there are thriving networks of stakeholders working to influence decision making. DLNP continues to work with Local Authorities and other partners, to embed the natural environment into decision making and responded to local, regional and national consultations and inquiries. For example, DLNP submitted responses to local plan consultations, the South West Rural Productivity Commission<sup>81</sup> led by a group of four Local Enterprise Partnerships in the South West, and the Government's Housing White Paper<sup>82</sup> and Building our Industrial Strategy<sup>83</sup> consultations.

## Planning and development

Planners have a key role in ensuring our natural capital is protected and ideally enhanced through development. Supplementary Planning Documents such as *The Dorset Heathlands Planning Framework 2020-25*<sup>84</sup> and *Nitrogen Reduction in Poole Harbour*<sup>85</sup> (April 2017) set out mitigation measures to ensure new developments do not cause harm to these key areas.

DLNP's Ecological Networks maps<sup>86</sup>

were published in autumn 2017 (and updated in 2020) for each local authority area. These maps set out the existing ecological networks, including international, national, and local sites, as well as the higher potential sites. The maps collate information on existing sites, such as nature reserves and SSSIs and look for the corridors and stepping stones between them. The maps are informing the development of the Local Plans and will inform the Local Nature Recovery Strategy for Dorset. The local authorities received the maps and guidance documents to support their local plans and development management and highlight areas of potential enhancements through mitigation and compensation. Changes to the National Planning Policy Framework<sup>87</sup> in 2018 set out stronger net gain requirements with planning decisions. A training webinar was held for planners in January 2021 on the updated maps.

<sup>82</sup> Dorset LEP (2017)

<sup>83</sup> MHCLG (2017)

<sup>81</sup> Dorset LEP (2017)

<sup>82</sup> MHCLG (2017)

<sup>83</sup> BEIS (2017)

<sup>84</sup> BCP/DC (2020)

FIGURE 20: ECOLOGICAL NETWORKS (EXISTING AREAS) <sup>86</sup>

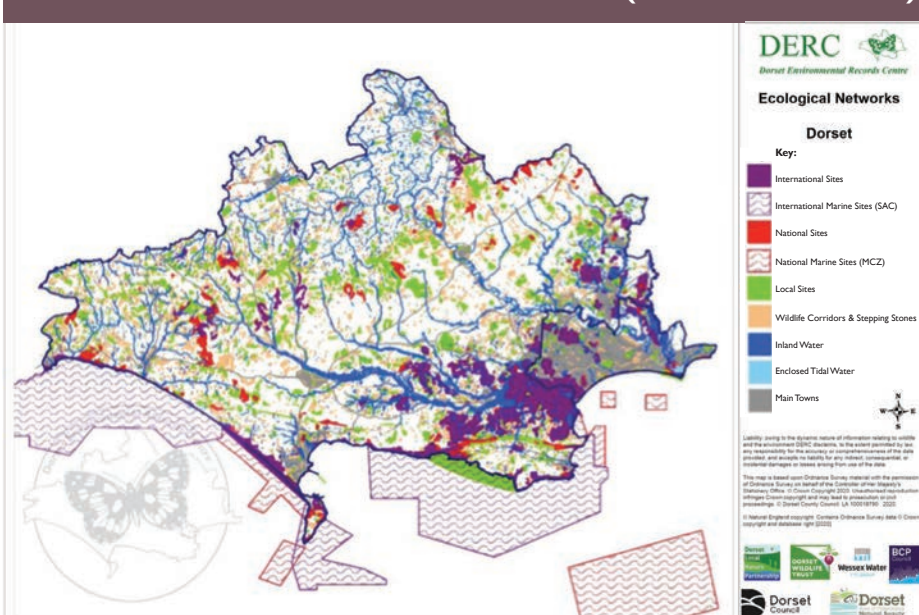
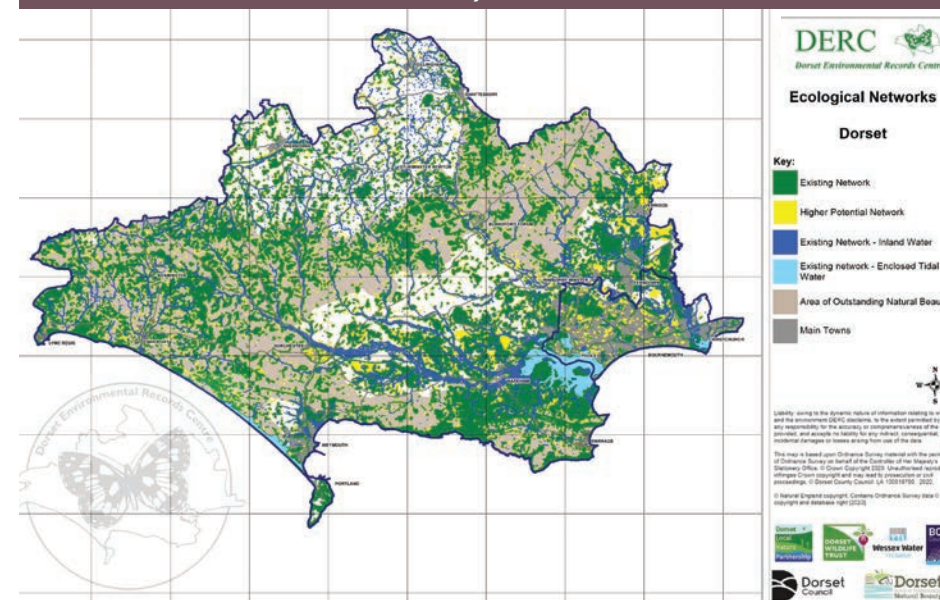


FIGURE 21: ECOLOGICAL NETWORKS (EXISTING AND HIGHER POTENTIAL AREAS) <sup>86</sup>



## Biodiversity Protocol and Compensation Framework

Dorset continues to be a leader on biodiversity mitigation, biodiversity net gain and compensation work through planning, with the work being shown as best practice by Natural England. The Dorset Bat Protocol was launched 2009 and widened to incorporate all protected species and important habitats in 2011 under the Dorset Biodiversity Appraisal Protocol<sup>88</sup> which operates across the Dorset Council area. To date, over 2,600 Biodiversity Plans have been approved and since the National Planning Policy Framework 2018 amendment setting out a requirement for measurable net gain, each Biodiversity Plan secures biodiversity enhancement features such as fruit trees, bee bricks, bat tube and bird boxes through development.

The Dorset Biodiversity Compensation Framework (BCF) is an integral part of the protocol and is used as a last resort in cases of residual loss to biodiversity – following the avoid, mitigate, compensate hierarchy. Since 2015 over £340,000 has been agreed under the BCF for biodiversity work in the County. This included £1,000 of compensation funding secured for skylarks and £77,000 for foraging greater horseshoe bats<sup>89</sup>. Examples of mitigation and enhancements delivered through the protocols since 2009 are listed in figure 20.

<sup>85</sup> BoP/NDDC/PDC/WDDC (2017)

<sup>86</sup> DERC (2020)

<sup>87</sup> MHCLG (2018)

<sup>88</sup> Dorset Council (2011)

<sup>89</sup> Dorset Council (2021)

<sup>90</sup> DERC (2019)

TABLE 17: MITIGATION AND ENHANCEMENTS SECURED THROUGH BMP/BMEP/BP <sup>90</sup>

Data	2009-19
Total number of bat boxes / bat tubes erected	2,412
Bat roosts retained and enhanced	343
Bat roosts created or replaced	403
Barn owl boxes	82
Other bird boxes	2,011
Reptile hibernacula	51
Log piles	51
Native woodland and scrub planting (sites)	82
Grassland creation and enhancements (sites)	54
Pond creation and enhancement (sites)	29



# DORSET LNP'S

## VISION

The Dorset LNP is working towards a future in which:

- Dorset's natural environment is richer in quality and diversity, and more resilient to change in urban and rural areas and in the marine environment.
- Dorset's natural systems are providing a wider and more valuable range of services, more reliably, to people and wildlife.
- Dorset's communities have increased understanding of, better access to, and are more engaged in and supportive of the care and management of Dorset's environment, for its own sake, and for the benefits it offers them.
- Dorset's outstanding natural value is recognised, protected, enhanced, celebrated, and invested in.
- Dorset's environment contributes to, and benefits from, development of a low-carbon, resource efficient and socially inclusive economy in which greener business practices are widely adopted.
- Dorset's wildlife sites are bigger, better, and more joined up, giving them greater resilience in the face of future change and challenges.
- Dorset's world class terrestrial, coastal and marine environment is recognised as what makes Dorset a great place to live, work and visit.

- It is recognised that a healthy natural environment and a strong and sustainable local economy are mutually dependent.
- Maintenance of a healthy environment is recognised as a critical success factor in the wellbeing of current and future generations.
- Development and growth in Dorset is planned so that the natural resource on which the development is based is enhanced and not eroded, thus restricting future development.
- The natural environment is not thought of as a constraint to be overcome, rather it is the basis upon which growth and development can be sustained and therefore consistently requires both protection and enhancement to deliver such benefits.
- Dorset's impacts on the global environment are reduced.

A summary of the work of the Dorset Local Nature Partnership can be viewed in the LNP's Annual Reports: [www.dorsetlnp.org.uk/Annual\\_Report](http://www.dorsetlnp.org.uk/Annual_Report)

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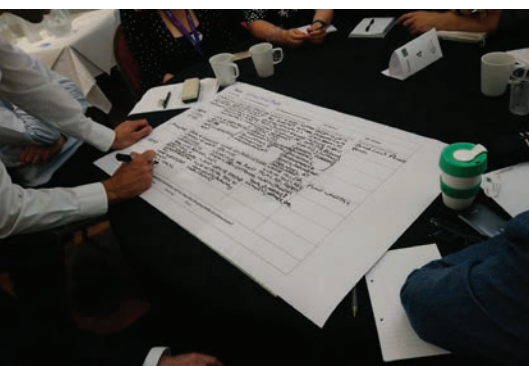
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