

Dartmoor National Park



State of the Park Report 2010 Review

V4

January 2011

About this Document

This Report describes the condition or 'state' of the Dartmoor National Park in 2010. Guidance¹ advises State of the Park Reports include evidence of the current state of, and the issues affecting:

- the special qualities of the National Park;
- how these special qualities are enjoyed and by whom;
- and the economic and social well-being of National Park communities.

The purpose of the Report is therefore:

- to identify the pressures and issues affecting the National Park;
- to ensure that the National Park Authority and other organisations are aware of the most important issues affecting the National Park;
- to measure whether work that is being done is having a positive effect (in particular, serving as a baseline for monitoring the progress of the National Park Management Plan);
- and to identify any new issues.

This Report is structured around the ambitions of the adopted Dartmoor National Park Management Plan 2007-2012. These ambitions are designed to reflect the special qualities of the National Park.

The Report provides an update on information set out in the State of the Park Report December 2008. The evidence is based on time series data where available in order to describe change or trends. It is important to note that time series data is not always available, or that sometimes it may not be over a long enough time period in order to confidently assess change.

The evidence in this Report has two key roles:

1. it complements the monitoring of the actions of the National Park Management Plan in order to assess whether the current plan is having the intended impact on the ground;
2. it provides an evidence base for key issues in the National Park, which will inform the preparation of the next National Park Management Plan.

A State of the Park Focus Group made up of a cross-section of interest groups and organisations met in November 2010. This group discussed the data emerging from the State of the Park report, whether it is fit for purpose, and where other data may be available to improve our understanding. The group also discussed whether there were any new or emerging issues which should be included in the State of the Park Report. More detailed comments have been included under specific sections of the report where appropriate.

¹ The Countryside Agency: *National Park Management Plans – Guidance* (2005)

Key statistics

Sense of Place		
Area of the National Park ²		95,573 Ha
Total area of Sites of Special Scientific Interest (SSSI)		26,267 Ha
Total area of Special Areas of Conservation (SAC)		25,346 Ha
Total area of County Wildlife Sites (CWS)		1,636 Ha
Total area of common land		35,310 Ha
Total area of Section 3	Moorland	44,910 Ha
	Woodland	6,095 Ha
Total length of principle rivers		533 km
Number of Conservation Areas		23
Number of Listed Buildings	Grade I	50
	Grade II*	177
	Grade II	2336
Scheduled Monuments		1,208
Access for All		
Length of Public Rights of Way	Footpaths	354 km
	Bridleways	360 km
	Byways	20 km
Area of land open to public access		46,663 Ha
Number of tourist visitors	Day visitors	2.16m (2009)
	Staying visitors	378,000 (2009)
Average 24hr traffic flow across main Dartmoor roads in August (7 cordon roads)		21,416 vehicles
Area of the National Park used for live firing (military training)		9,187 Ha
Communities and Business		
Number of Parishes partly or wholly within the National Park		51
Total population of National Park (2008)		34,977
Population by age group (census 2001)	School and pre-school age (0-15)	6,124 (17.5%)
	Working age (16-64)	20,271 (58.0%)
	Pensionable age (65+)	8,582 (24.5%)
Housing stock (census 2001)	Total households	14,677
	Owner occupied	10,075 (71%)
	Private rented	2,180 (15%)
	Social housing	1,502 (11%)
	Second homes/holiday lets	431 (3%)
Total GVA/GDP for National Park (related to National)		£513.1m (2008)
Average household income (and Devon)		£28,400 (£27,000)
Average house price		£234,556 (2009)

Table 1 Key Dartmoor Statistics

² Please note the methodology for calculating geographic areas (e.g. areas in hectares – Ha) used by the Authority has been changed in line with the methodology used by Natural England. This has resulted in adjustments to some figures included in this Report.

State of the Park Review Summary – 2010 headlines

Cross cutting themes

- **Hill Farming:** The contribution of agriculture to economic output (GVA) on Dartmoor has fallen from 10% to 4.2% between 1998 and 2008. This is not simply a result of agriculture being out run by other sectors, or inflation, but a fall in economic output in real terms (-1.9% between 1998 and 2008). Nationally, output in this sector grew by 2.4% over the same period, though it is only 0.9% of the national economic output (GVA). This figure does not reflect diversification, or indirect agricultural benefits, however this fall supports concerns that a sector which shapes Dartmoor and supports many communities and other business sectors, is playing a diminishing direct economic role on Dartmoor.
- **Climate Change:** Mean annual temperature change on Dartmoor is +0.8°C between 1900 and 2007. Whilst Dartmoor can play a role reducing the causes of climate change this indication that the climate on Dartmoor is changing must be recognised in terms of the impacts it may have. This change has the potential to impact habitats and species, and people living on Dartmoor. For example, records show that egg laying dates for the Pied Flycatcher on Dartmoor, have moved forward by 2 weeks since the 1960s.
- **Social Inclusion:** Information on the types of visitors and non-visitors to Dartmoor is poor, however national research³ shows that 20% of those who do not engage with the natural environment are from BME (black and minority ethnic) groups. Given that only 1.7% of the Dartmoor's urban catchment⁴ are from BME groups it is likely that the number of regular visitors to Dartmoor from minority groups is very low.
- **Traffic and Transport:** The number of people travelling on Dartmoor buses has increased by an average of 6.75% per year between 2003 and 2009. The level of bus use in Devon as a whole has increased at a similar rate.

Sense of Place

- **Archaeological Heritage:** The number of Scheduled Monuments at Risk on Dartmoor has reduced by 60 to 424 (35% of total) in 2010, the main reasons for monuments being at risk are plant and scrub growth, and stock erosion. The reduction in the number at risk is considered a result of specific targeting of agri-environment schemes aimed at achieving land management which gives more favourable conditions for the archaeological sites.
- **Historic Built Environment:** There are 2 additional listed structures on Dartmoor since the last Report, these are important railway viaducts engineered by Brunel. The number of listed buildings that are at risk has been significantly reduced as a result of improved understanding through re-survey.
- **Habitats and Wildlife:** The number of Marsh Fritillary butterflies recorded on Dartmoor is at its highest for over a decade. This is the result of specific work through the 2 Moors Threatened Butterfly Project with agri-environment schemes targeting the management of Rhôs pasture habitat (most of which are County Wildlife Sites). The Marsh Fritillary is an indicator of habitat in good condition; habitat which supports a range of other important species on Dartmoor.
- **Habitats and Wildlife:** The percentage of Sites of Special Scientific Interest (SSSI) which are in *favourable* or *unfavourable and recovering* condition has increased from 92% to 96% (compared with 93% for England). In particular this is a result in an increase in the area

³ Natural England – Measuring Engagement with the Natural Environment (MENE) Survey 2009

⁴ Exeter, Plymouth and Torbay

which is now *unfavourable and recovering*. This is considered a result of work targeting land management through agri-environment schemes to achieve more favourable conditions for habitat improvement.

Access for All

- **Interpretation, Information and Communication:** Visitors to DNPA information centres have increased for the first time since 2005/06 to 229,131 in 2009/10.
- **Tourism:** Tourist spend on Dartmoor has risen at a higher rate than inflation 2003-2009. Whilst spend on accommodation has remained relatively static (see below) increases have been seen in food and drink, transport and shopping in particular.
- **Tourism:** The number of visitors staying in serviced accommodation has fallen by 20% 2003-2009. This pattern has been seen nationally, but is notably higher on Dartmoor. The number of bed spaces in non-services accommodation (e.g. self-catering) has increased, whilst the number of bed spaces in serviced accommodation (e.g. hotels) has fallen.
- **Recreation and Enjoyment:** The number of people using monitored public footpaths on Dartmoor has increased by 7.7% between the 2009 and 2010 seasons. Whilst this is a consistent pattern across paths and this pattern is evident elsewhere, there are only 2 years data so far and this is most likely a reflection of better weather in the summer of 2010.

Communities and Business

- **Community Well-being:** 92% of people living on Dartmoor are satisfied with their local area as a place to live (sample survey). This compares with 80% as an average for England. This is a baseline survey, so we cannot yet monitor any change in this. However we do know that the level of crime, health services, and access to nature are important to people on Dartmoor in making somewhere a good place to live, and that affordable housing and public transport are also important, but are considered to need improving most.
- **Community Well-being:** The proportion of the Dartmoor population aged 65 and over has increased from 19.9% (2001) to 24.5% (mid-year estimate 2008). This is a higher proportion of over 65s than nationally, but a trend that is evident nationally. As this trend continues it will place increasing pressure on certain public services on Dartmoor, which can be more dispersed and more difficult to deliver in a deeply rural area.
- **Community Well-being:** The average house price on Dartmoor in 2009 was £234,556, falling from a peak of £252,851 in 2007; average house prices are currently 8.3 times average household income on Dartmoor. House prices on Dartmoor passed the national average in 2001, and continued to grow at a higher rate until the market peaked in 2007. The number of property sales on Dartmoor dropped by 52% from 2007 to 1,172 sales in 2008. Sales grew marginally between 2008 and 2009; data for the first quarter of 2010 does not suggest any significant growth in buyer confidence.
- **New Development:** As house affordability remains a significant issue Dartmoor planning policy is succeeding in improving the provision of affordable houses for local people. The total number of new houses built on Dartmoor has fallen to 48 in 2009/10, in line with the regional target. The number and proportion of those built which are affordable houses for local needs has increased (to 38% of dwellings completed in 2009/10). The proportion approved in the same period has increased to 74%, indicating that affordable housing completions should increase in future years.
- **Military Training:** The use of Dartmoor for live firing has declined recently due to the current level of military deployment.

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Cross Cutting Themes

Climate Change (and air quality)

Headline Indicators	Monitoring Period	Latest Data	Trend
Number of days each year with moderate or high levels of air pollution (Yarner Wood monitoring station)	1987-2008 ⁵ (annual)	36 days	No notable trend. Dartmoor 10 year average higher than UK rural 10 year average
Number of Air Quality Management Areas within or adjacent to National Park	2006-2008 ⁵ (annual)	1 AQMA on A38 at Dean Prior	High NO ₂ levels monitored and falling slowly. Action plan not considered necessary.
Mean annual temperature change on Dartmoor	1900-2007 ⁵ (annual)	+0.8°C	Average temperature increasing

Table 2. Climate Change (and air quality) indicators

What does the evidence show?

Climate data for Dartmoor shows a temperature rise of 0.8°C over the last century with the most significant increase since 1960s (see figure 2). Average rainfall has increased since the late 1970s with increased contribution from heavy winter rainfall events (see figure 1). This data acts as evidence to drive work on reducing the human causes of climate change, and to enable us to plan better to adapt and mitigate the impacts of a changing climate.

With data showing the climate changing on Dartmoor it is important to look at whether this is evident 'on the ground'. One method of looking at ecological impact is through phenology - the study of periodic plant and animal life cycle events and how these are influenced by variations in climate. Migratory bird monitoring at the East Dartmoor National Nature Reserve (NNR) has shown that egg laying dates for the Pied Flycatcher have moved forward by 2 weeks since the 1960s. (See figure 5). Although it cannot be proven that climate change is the sole reason for this, a clear pattern is evident.

Work is being undertaken jointly by National Park Authorities to look at adaptation to climate change in line with Defra monitoring. This work will identify where Dartmoor's special qualities are vulnerable to climate change, guiding actions to mitigate and adapt to change, and potentially form a framework for monitoring response to climate change at a more local level.

The emission of pollutants into the atmosphere also affects air quality, which can have a significant impact on human health, wildlife and habitats. An air quality monitoring station within the National Park at Yarner Wood measures ozone concentration. Ground-level ozone (O₃) is a secondary pollutant produced by the reaction between nitrogen dioxide (NO₂),

⁵ Given the long term nature of climate data this has not been updated as part of this review.

hydrocarbons and sunlight. Concentrations of ozone are high in the south west where higher temperatures, sunlight levels, altitude, and the coastline promote its generation. The number of days with moderate or high levels of pollution can vary greatly each year due to the weather; the data shows no long term trend. Some of the ground level ozone in the UK comes from pollution in mainland Europe.

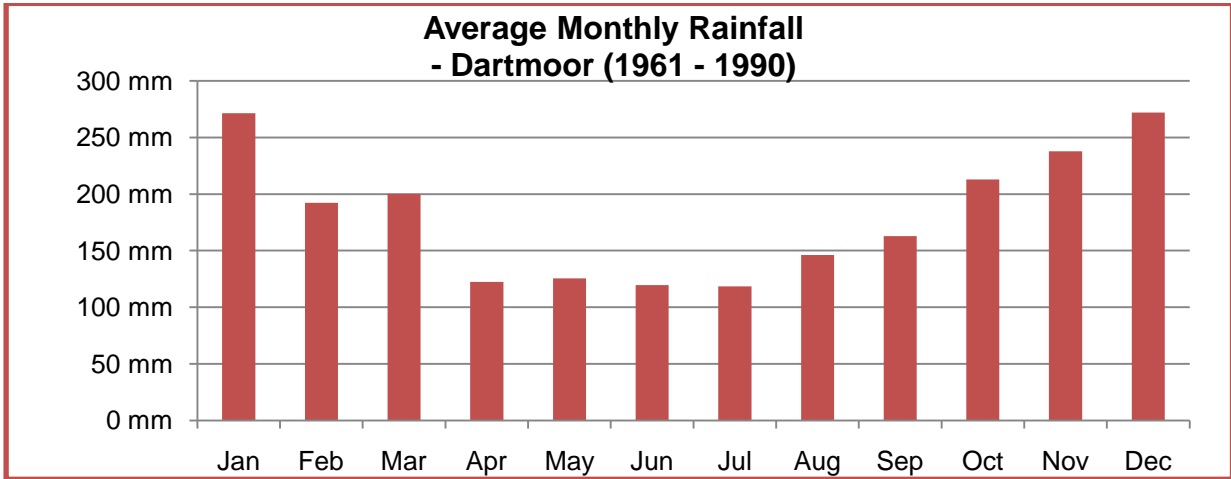


Figure 1. Average Dartmoor monthly rainfall (Source: Devon County Council)

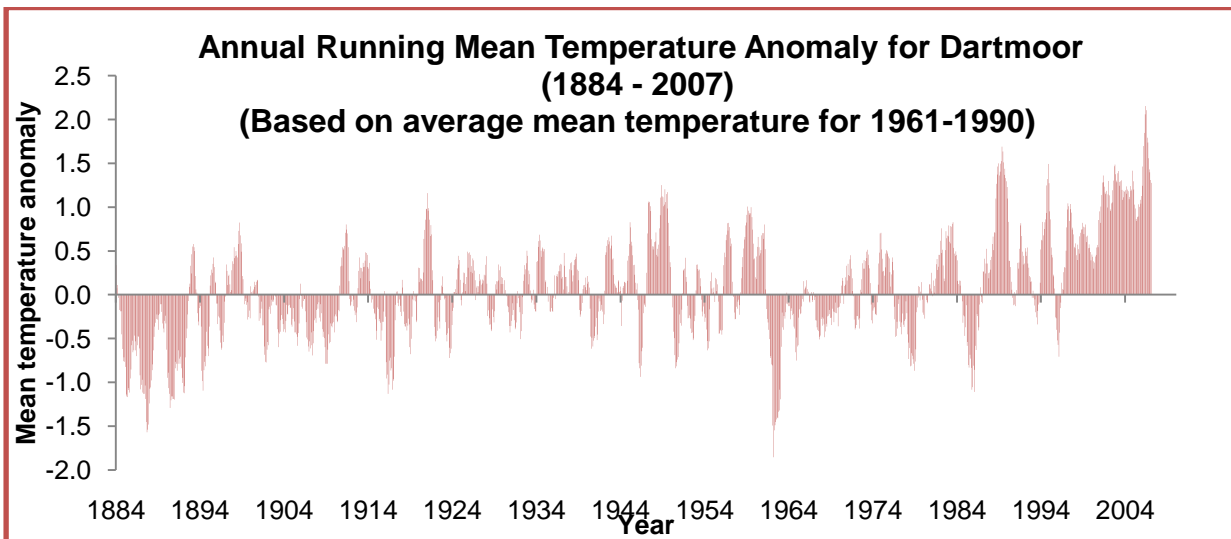


Figure 2. Annual running mean temperature anomaly (Dartmoor) (Source: Devon County Council)

Figure 1 shows the average monthly rainfall pattern on Dartmoor, with the lowest rainfall levels normally occurring between April and July, and the highest in January and December. Figure 2 shows temperature variation, where 0.0 is the average temperature between 1961 and 1990, the graph shows where the trend is for average temperatures above or below that average. It shows a trend of higher average temperature since the mid 1960s. Figure 3 shows the seasonality ratio for Dartmoor, combining annual average rainfall and temperature figures to identify whether there is any trend towards changing seasonal patterns.

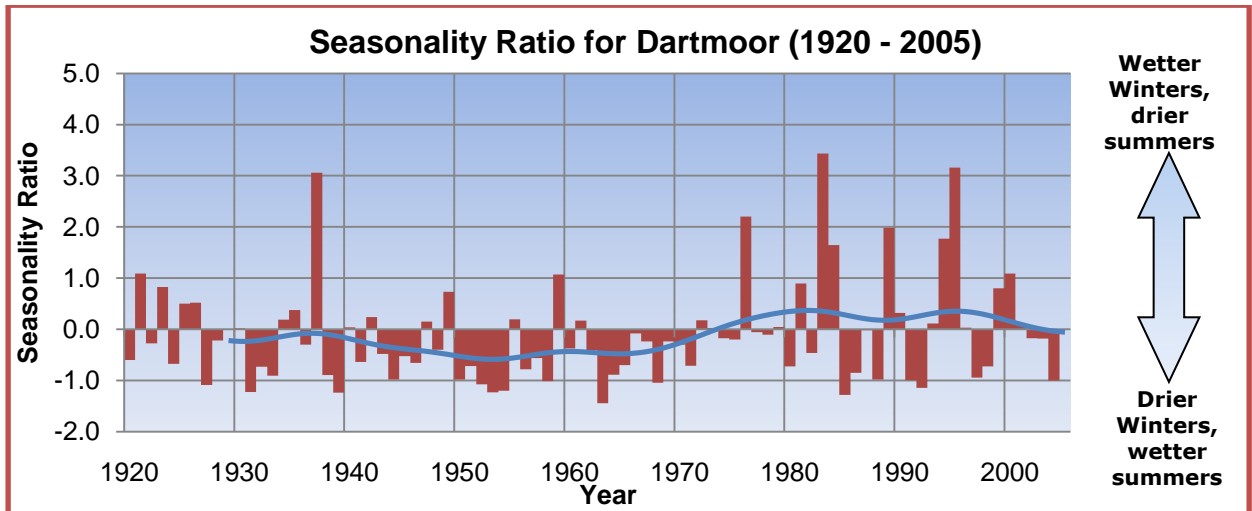


Figure 3. Seasonality ratio (Dartmoor) (Source: Devon County Council)

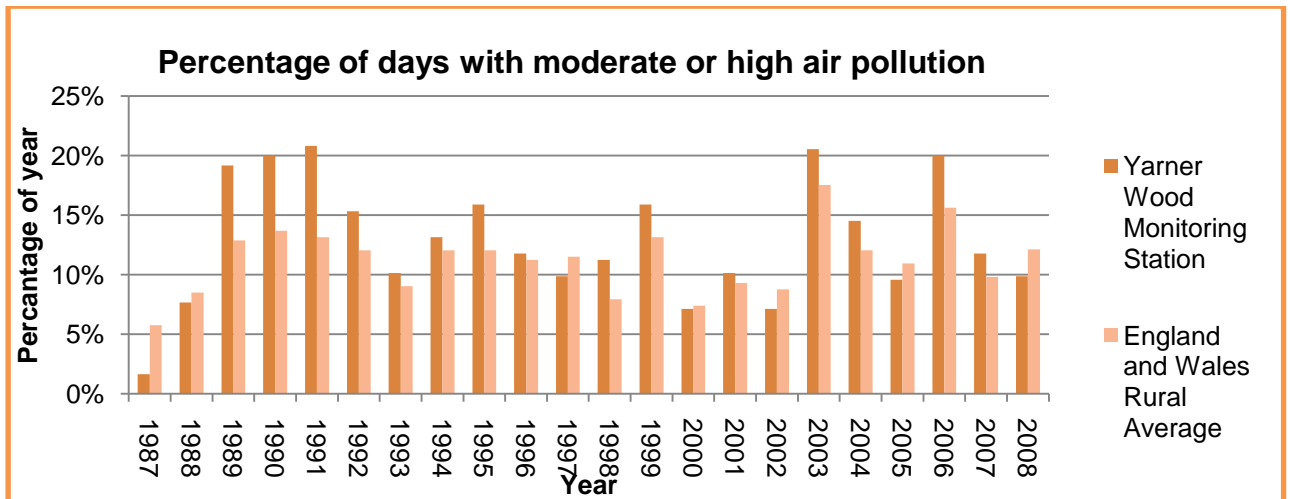


Figure 4. Percentage of days with moderate or high air pollution (Source: Defra)

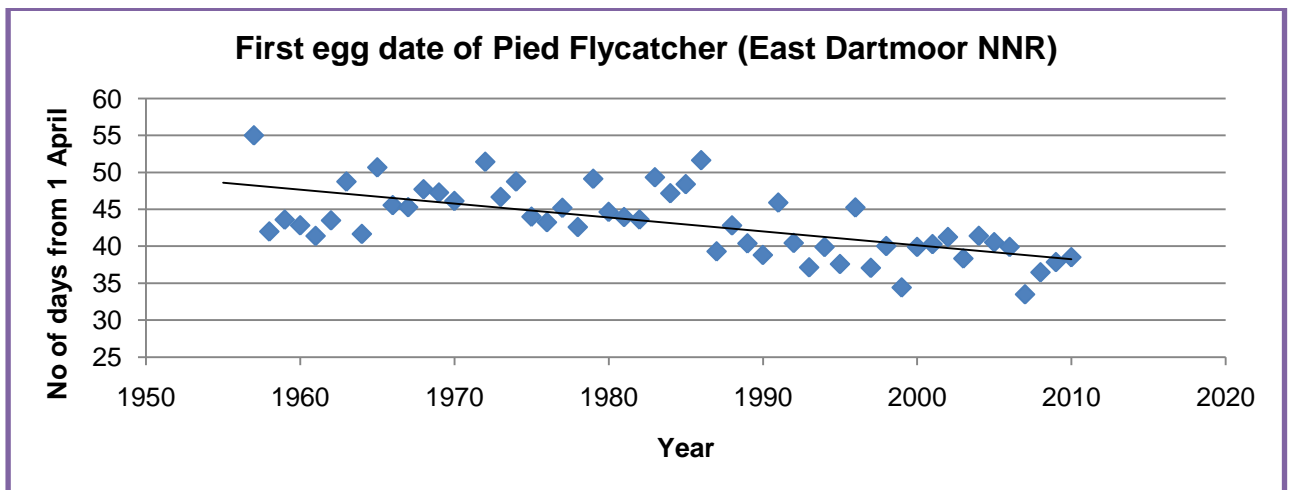


Figure 5. Annual mean pied flycatcher first egg date at East Dartmoor NNR 1957-2010 (Source: Malcolm Burgess and Natural England)

Upland Farming

Headline Indicators	Monitoring Period	Latest Data	Trend
% of Dartmoor Gross Value Added (GVA) generated by forestry and farming	1996-2008 (annual)	4.2% of GVA	Falling
Proportion of Farm Business Income (FBI) which is public subsidy	2006/7 (baseline)	289% of FBI	Baseline

Table 3. Upland Farming indicators

What does the evidence show?

The contribution of agriculture to economic output (GVA) on Dartmoor has fallen from 10% to 4.2% between 1998 and 2008. This is not simply a result of agriculture being out run by other sectors, or inflation, but a fall in economic output in real terms (-1.9% between 1998 and 2008). An increase in farm prices has resulted in small recovery in output evident in 2007/08. Nationally, output in this sector grew by 2.4% over the same period, though it is only 0.9% of the national economic output (GVA). This figure does not reflect diversification, or indirect agricultural benefits, however this fall supports concerns that a sector which shapes Dartmoor and supports many communities and other business sectors, is playing a diminishing direct economic role on Dartmoor.

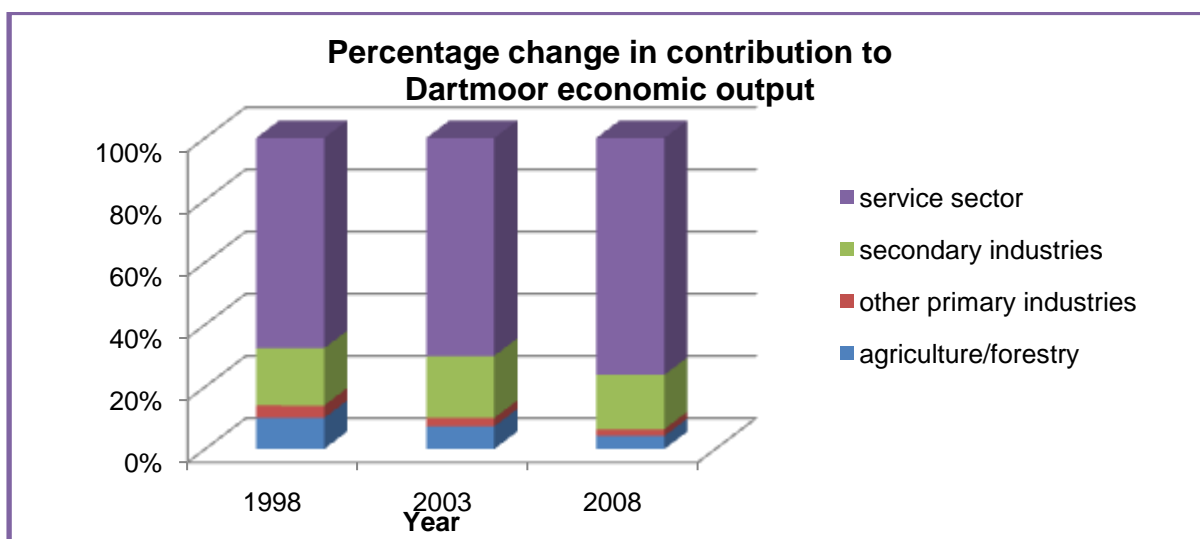


Figure 6. Percentage change in contribution to economic output (agriculture) (Source: DNPA)

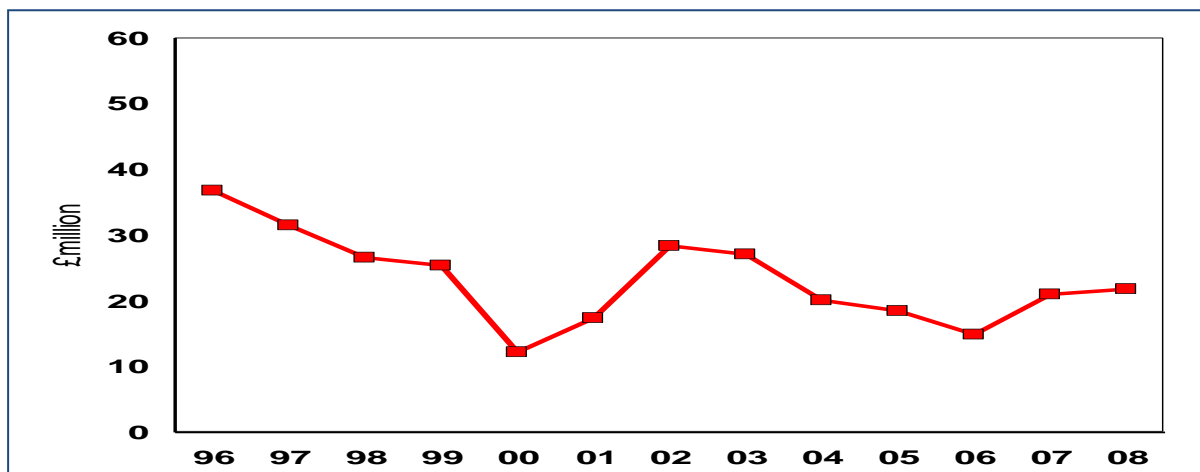


Figure 7. Agricultural output on Dartmoor 1996 – 2008 (Source: DNPA)

Traffic and Transport

Headline Indicators	Monitoring Period	Latest Data	Trend
Average 24hr traffic flow across main Dartmoor roads in August (7 cordon roads)	1987-2009 (annual)	21,416 vehicles	Average annual increase of 0.76% over last 10 years
Annual number of passenger trips on Dartmoor bus services	2003-2009 (annual)	278,229 passengers	Average annual increase of 6.75% over last 6 years
85 th percentile vehicle speed monitored on open moorland roads (speed below which 85% of vehicles are travelling)	2007-2009	51.3 mph	Small annual increase (though from small dataset)
Percentage of Dartmoor households which own a car or van	2001	87%	Baseline data from census.
Percentage of working population who usually travel to work driving a car or van	2001	59%	Baseline data from census

Table 4. Traffic and Transport indicators

What does the evidence show?

Traffic levels on main Dartmoor roads have increased (0.76% per annum) in line with national trend reported by the Department for Transport for rural roads (0.78% annual increase in last 10 years). The number of people travelling on Dartmoor buses has increased by an average of 6.75% per year between 2003 and 2009. The level of bus use in Devon as a whole has increased at a similar rate.

Monitoring of the speed of vehicles in the 40mph zone (which covers the unfenced moorland roads) has been carried out since 2007. This data has enabled targeted speed enforcement. Data from the speedvisor devices (which monitor speed, and remind speeding drivers of the limit) suggests they may be becoming less effective with time.

Data on travel to work shows the reliance of Dartmoor’s working population on the private car for travel to work. Whilst an increasing proportion are working from home figure 11 (below) is an example of the varied pattern of commuting from Dartmoor communities.

Figure 12 shows an example of travel to work patterns from Dartmoor communities (Ashburton and Buckfastleigh). This shows the volume of workers commuting out of Dartmoor in order to work in surrounding communities. Many people live on Dartmoor and commute to Exeter, Plymouth, and Newton Abbot, as well as smaller towns such as Tavistock, Okehampton and Ivybridge. Census data shows that 59% of workers commute driving a car or van.

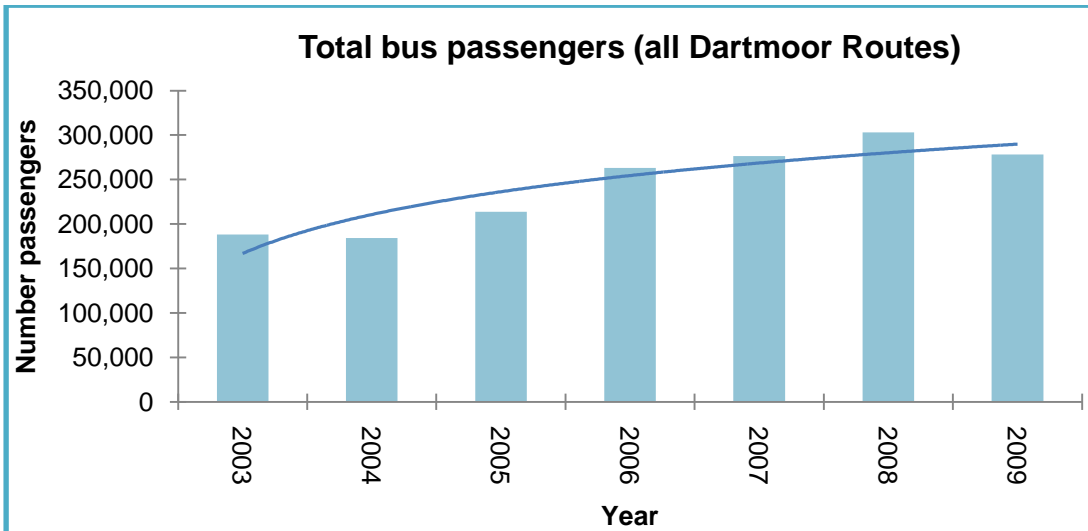


Figure 8. Bus passengers (all Dartmoor routes) (Source: Devon County Council)

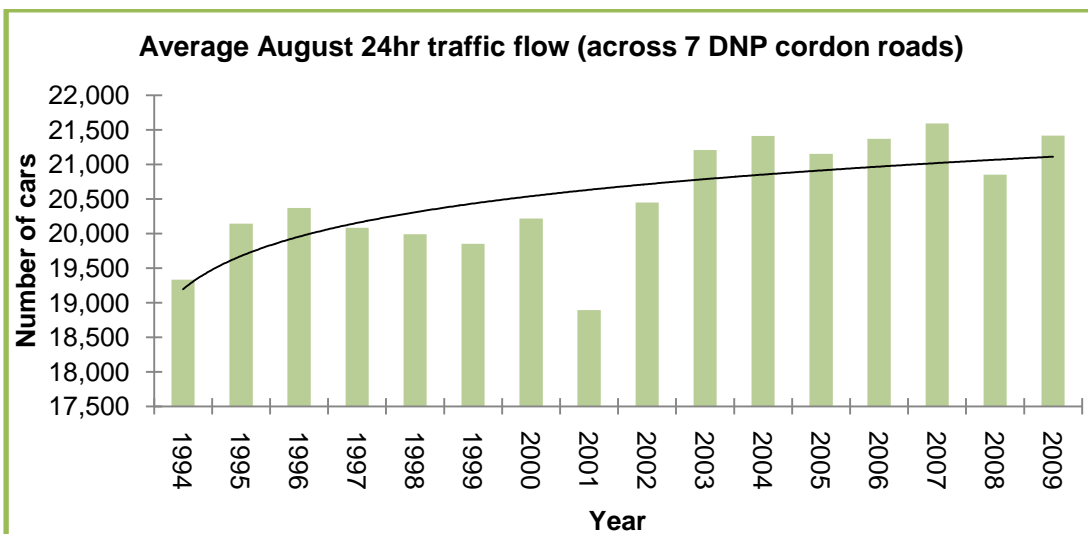


Figure 9. Traffic flow (Dartmoor cordon roads) (Source: Devon County Council)

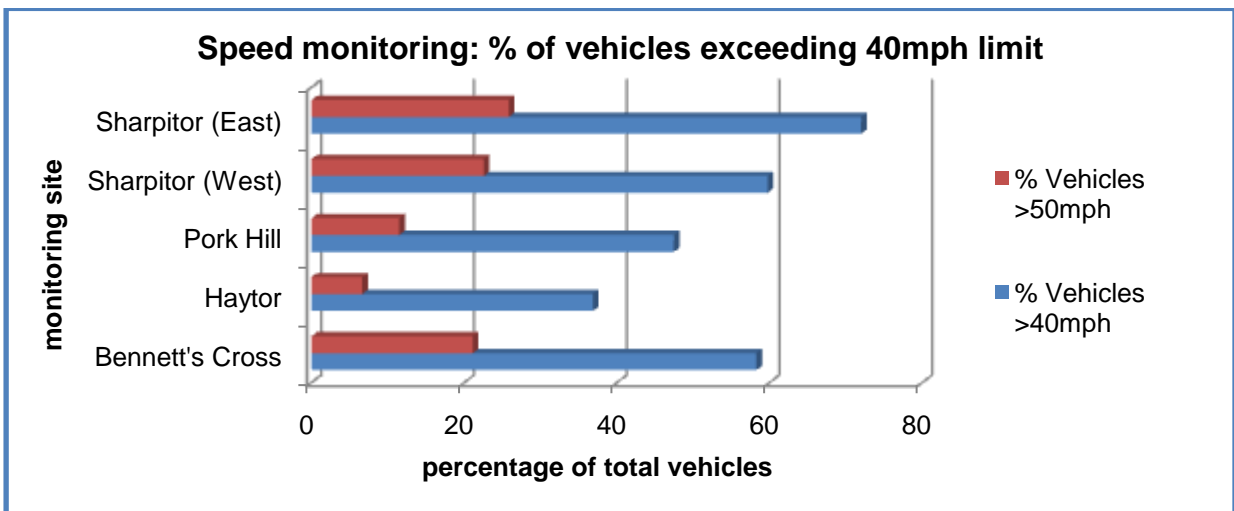


Figure 10. Speed monitoring in 40mph zone (Source: DNPA)

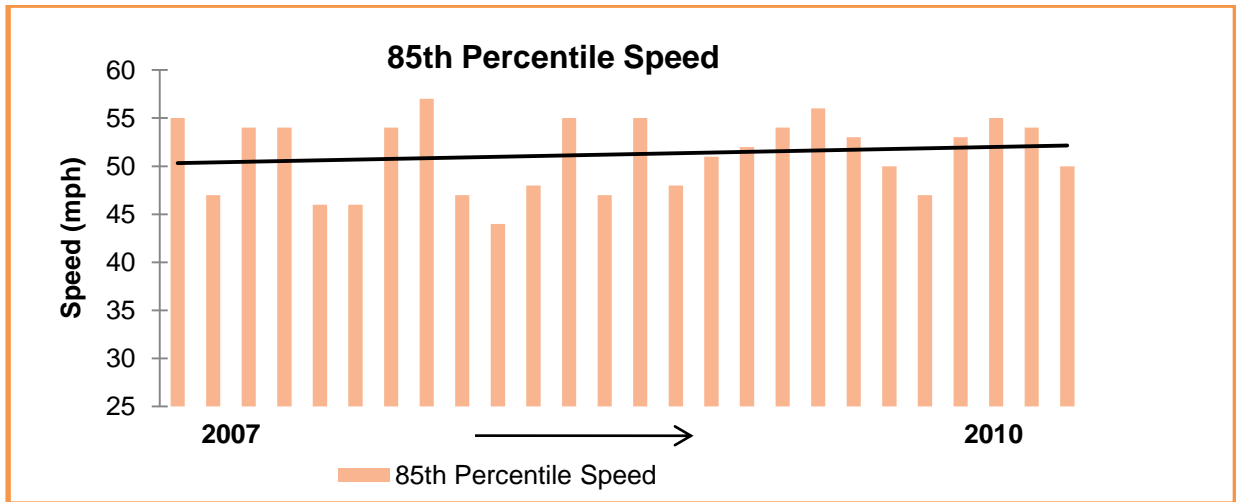


Figure 11. 40mph limit monitoring (85th percentile speed) (Source: DNPA)

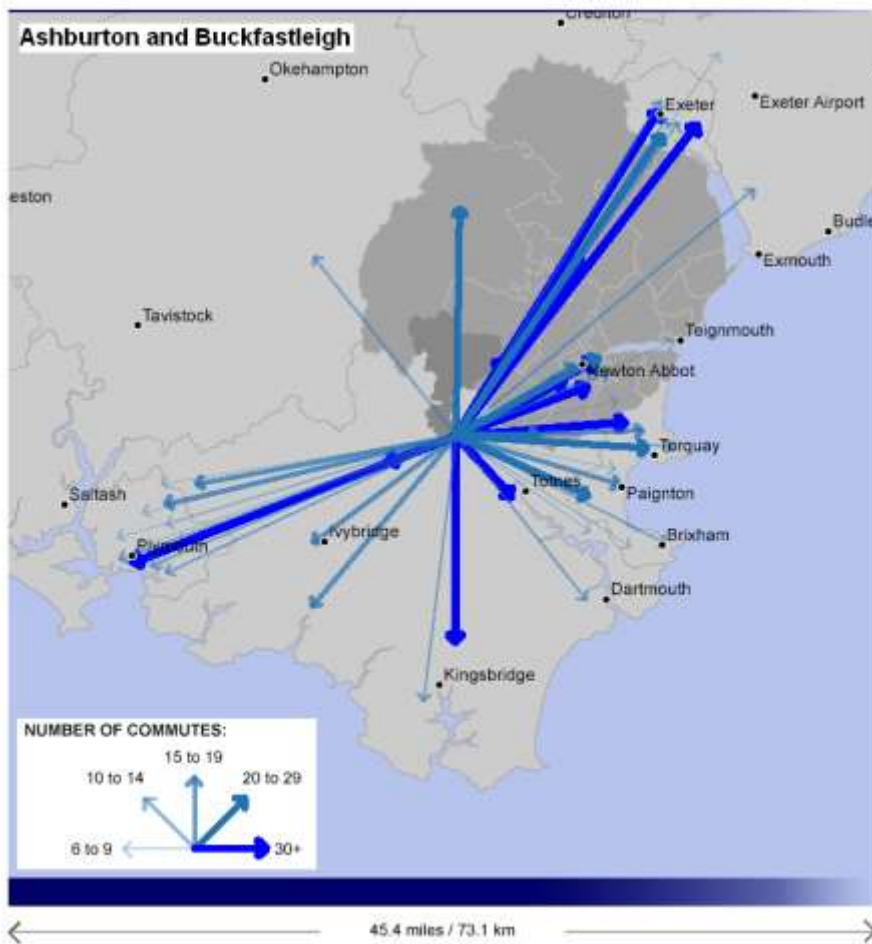


Figure 12. Travel to work patterns (Ashburton and Buckfastleigh) (Source: Office for National Statistics)

Social Inclusion

What does the evidence show?

With regard to the resident population, 70% of Dartmoor is in the lowest quartile of the ‘barriers to housing and services’ domain of the national Indices of Deprivation 2007; 52% is in the lowest quartile of the ‘living environment’ domain (note that key data for this domain relates to housing condition, and housing without central heating). Planning policies aim to resist the loss of local services, and focus new development in areas where people have access to them. In the past two years the Authority has granted one planning permission for change of use which has resulted in the loss of the last shop in a community.

In contrast the data shows that Dartmoor is particularly good for low impact of crime and also fairly good for education, skills and training.

In terms of visitors to the National Park data from Natural England’s MENE survey (Measuring Engagement with the Natural Environment, first annual report 2010) provides national data on visits to the natural environment. This shows that of non participants, most had ‘no particular reason’ for not visiting the natural environment, of non participants and infrequent participants a lack of spare time for recreation, or lack of ability due to old age or ill health, are also key barriers.

Figure 16 shows the socio-economic profile⁶ of visitors and non-visitors clearly illustrating the higher level of participation from the more affluent, and higher level of non-participation from those from less affluent or deprived backgrounds.

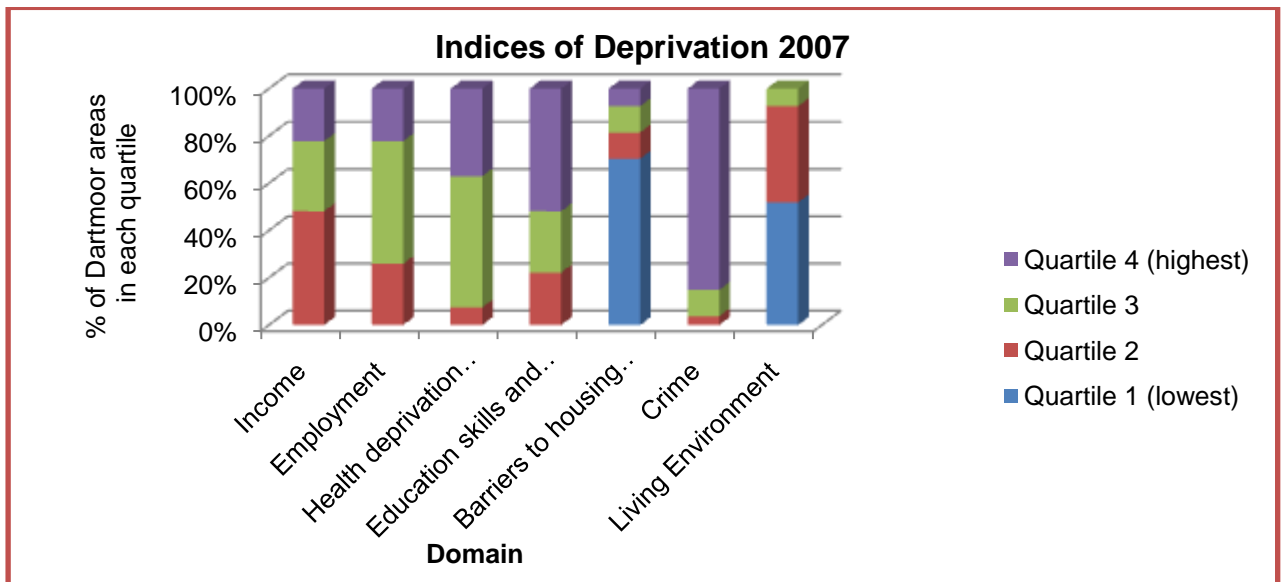


Figure 13. Indices of Deprivation domains 2007 (Source: Department for Communities and Local Government)

⁶ A - professional people, very senior managers in business or commerce, or top level civil servants. B - Middle management executives in large organisations, Principal officers in local government and civil service. Top managers or owners of small business concerns, educational and service establishments. C1 - Junior management, owners of small establishments, and all others in non-manual positions. C2 - All skilled manual workers and those manual workers with responsibility for other people. D - All semi skilled and unskilled manual workers, and apprentices and trainees to skilled workers. E - All those entirely dependent on the state long term, through sickness, unemployment, old age or other reasons. Those unemployed for a period exceeding 6 months (otherwise classified on previous occupation). Casual workers and those without a regular income.

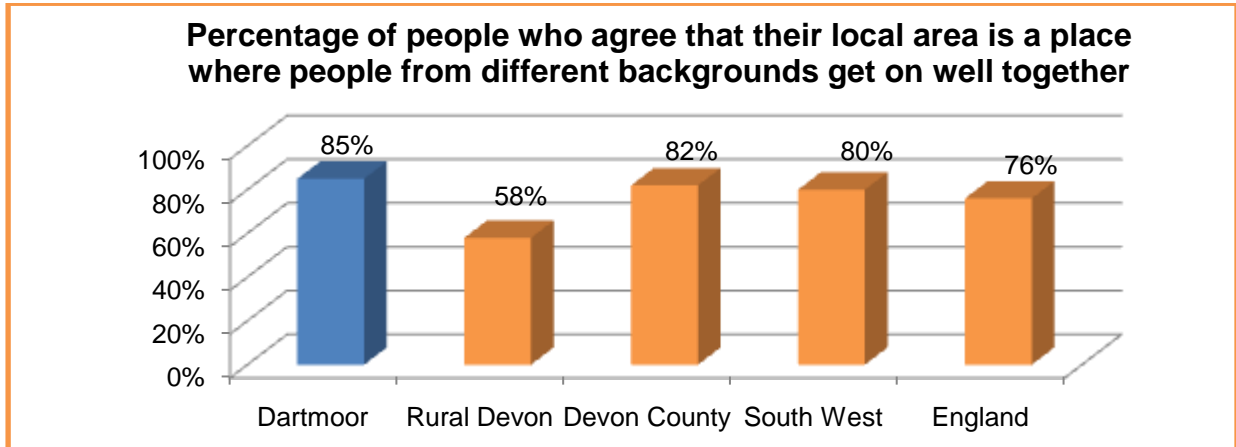


Figure 14. Percentage of people who agree people from different backgrounds get on well together (Source: Place Survey 2008)

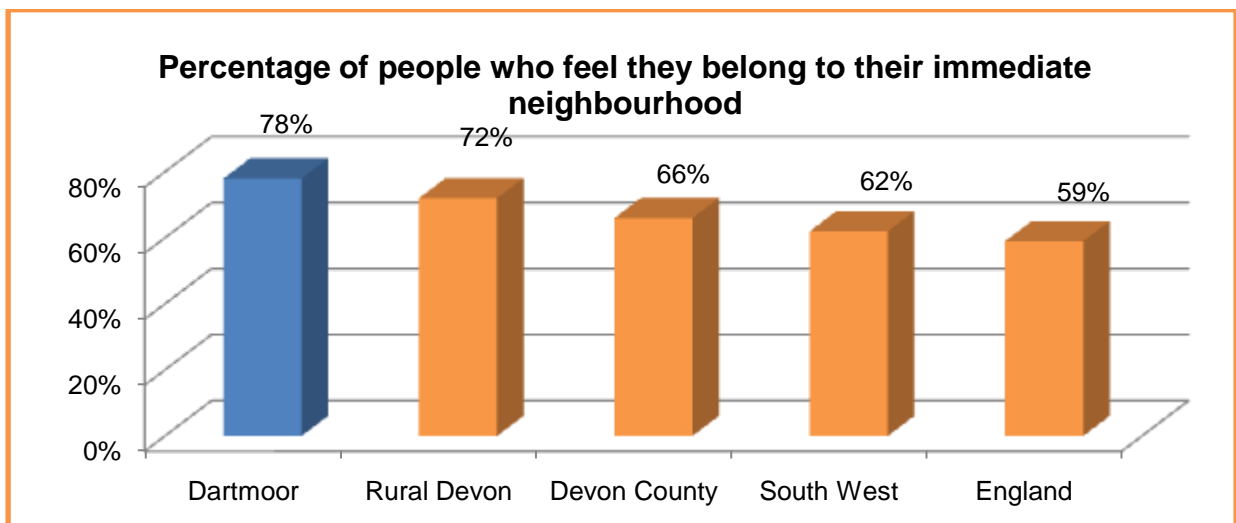


Figure 15. Percentage of people who feel they belong to their immediate neighbourhood (Source: Place Survey 2008)

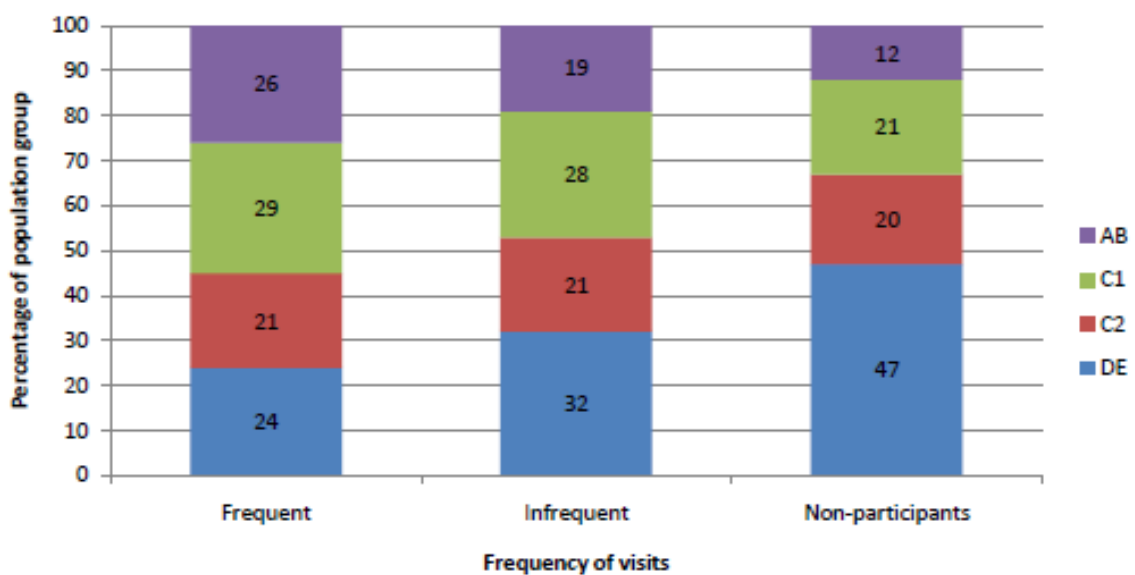


Figure 16. Socio-economic profile by frequency of participation in visits to the natural environment (%) (Source: Natural England MENE Survey 2010)

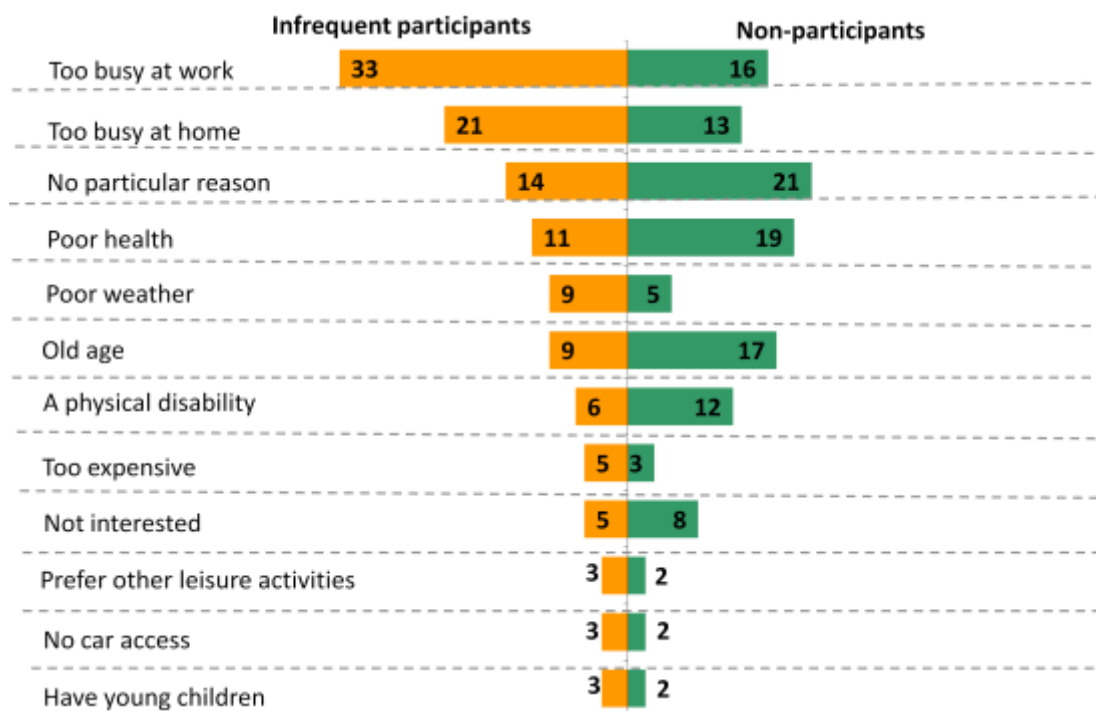


Figure 17. Reasons for not participating in visits to the Natural Environment (England) (Source: Natural England MENE Survey 2010)

Cross Cutting Themes

Key data sources and further information

Defra: Air quality indicators for sustainable development

<http://ww2.defra.gov.uk/environment/quality/air/>

South Hams District Council: Air Quality Monitoring (AQMA – Dean Prior)

http://www.southhams.gov.uk/index/residents_index/ksp_environment/ksp-environment-air-quality.htm and

http://www.southhams.gov.uk/2010-pr_report_2.pdf

Devon County Council: A warm response – our climate change challenge (September 2005)

<http://www.devon.gov.uk/index/environment/climatechange/climate-strategy.htm>

Devon County Council: Traffic flow and public bus use figures

DNPA: Dartmoor Economic Model

http://www.dartmoor-mpa.gov.uk/dartmoor_economy_1994-2004.pdf

DNPA: Forward Planning and Community Service - Speedvisor monitoring

Office for National Statistics: Census

<http://www.neighbourhood.statistics.gov.uk/>

South West Observatory: Air pollution data

<http://www.swo.org.uk/>

SWPLF: Use of countryside assets by under-represented groups in the south west (March 2007)

<http://www.southwestlandscapes.org.uk/CommissionedWorks.asp>

University of Exeter: Hill farming systems in SW England: economic viability and the delivery of public goods (2008)

<http://www.dartmoor-mpa.gov.uk/laf-full-report.pdf>

place survey

Natural England: Measuring Engagement with the Natural Environment (MENE) survey 2010

<http://www.naturalengland.org.uk/ourwork/enjoying/research/monitor/default.aspx>

Indices of Deprivation 2007

<http://www.neighbourhood.statistics.gov.uk/dissemination/Info.do?page=news/newsitems/7-december-2007-indices-of-deprivation-2007.htm>

Audit Commission: Place Survey 2009

<http://www.audit-commission.gov.uk/localgov/audit/nis/Pages/placesurvey.aspx>

Sense of Place

Landscape

Headline Indicators		Monitoring Period	Latest Data	
Total area of the National Park identified by the DNPA Section 3 Conservation map	Moor and Heath	2008 (baseline)	44,910 Ha	Baseline
	Woodland	2008 (baseline)	6,095 Ha	Baseline

Table 5. Landscape indicators

What does the evidence show?

Since the last State of the Park Report a Landscape Character Assessment (LCA) has been undertaken of Dartmoor. This identifies the key character areas of the Dartmoor landscape (see Table 5) and the main features of those areas. This provides a framework for monitoring change, identifies vulnerable features or areas and provides an evidence base for decision making. This work enables specific features or issues to be identified and monitored more closely.

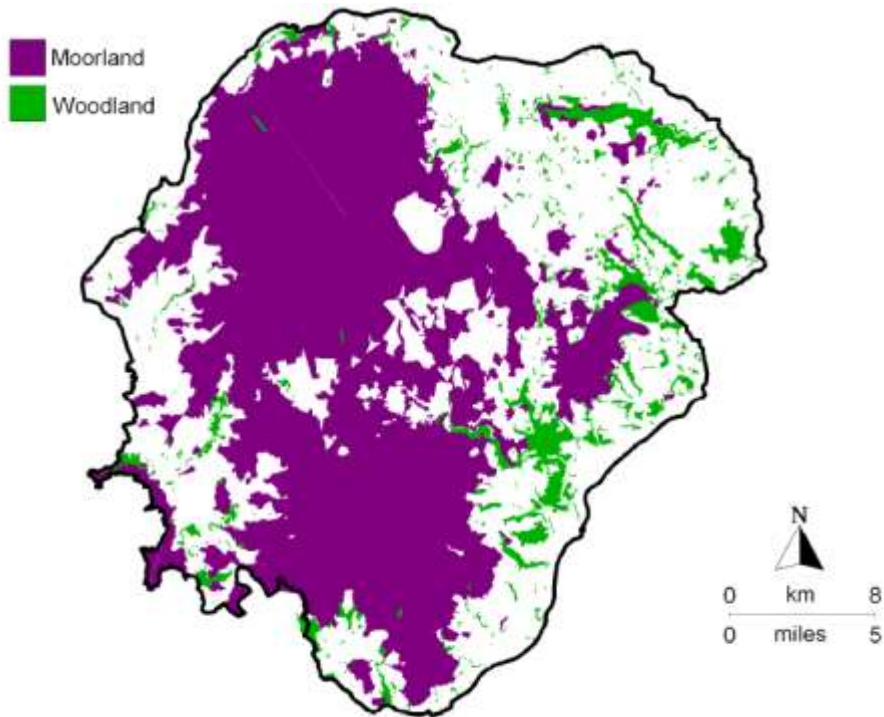
It is estimated that the area of woodland encroachment in the National Park is approximately 540 Ha. This figure is based on a desk study of aerial photography assessing areas mapped as moor which appear to be 'scrubbing up'. This is currently an estimated baseline figure but enables future monitoring and targeting of management. Future survey will be based on aerial photography of a better resolution and thus easier to distinguish between developing woodland and gorse, hopefully providing a more accurate picture of the issue.

A remote sensing pilot project has been undertaken in Dartmoor National Park aimed at assessing the potential role remote sensing could play in improving our understanding of Dartmoor. The pilot has demonstrated that remote sensing could improve our understanding of a range of issues including blanket bog extent, hedgerow lengths, the amount of scrubbing up, habitat condition and identification of archaeological features. It could also provide a tool to monitor change in these issues over time.

Phytophthora ramorum has been identified in Japanese Larch in the South West. Through winter 2010/11 most of the significant larch plantations on Dartmoor will have been felled, this will be either to capitalise on their value without the disease, or as a result of infection.

Landscape Character Type	Area (Ha)
Upland Moorland with Tors	30,806
Moorland Edge Slopes	27,267
Unsettled High Upland Moorland	17,792
Upper Farmed and Wooded Slopes	6,118
Upland River Valleys	5,505
Inland Elevated Undulating Land	4,719
Farmed and Forested Plateau	2,391
Settled Valley Floors	339
Urban	295
Lowland Plains	289
Sparsely Settled Farmed Valley Floors	44

Table 6. Landscape Character Types in the Dartmoor National Park (Source: DNPA Landscape Character Assessment)



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Figure 18. Section 3 Moorland and Woodland (Source: DNPA GIS)

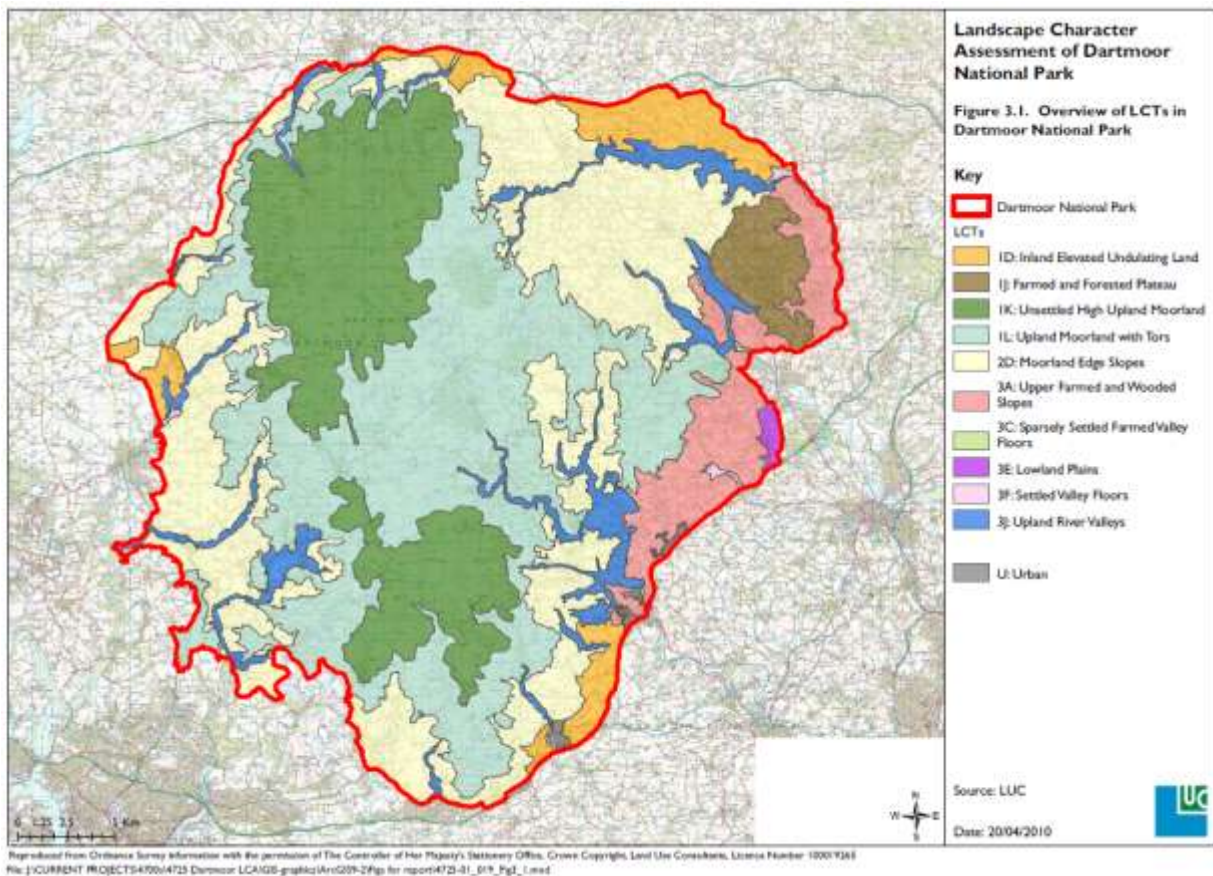


Figure 19. Overview of Landscape Character Assessment of Dartmoor National Park (Source: Figure reproduced from Dartmoor National Park Landscape Character Assessment)

Tranquillity and Remoteness

Headline Indicators	Monitoring Period	Latest Data	Trend
Number of classified settlements which have switched off street lights (and number of lights)	2010 (5 yearly)	11 (373 street lights)	Baseline data

What does the evidence show?

The Campaign to Protect Rural England (CPRE) is leading a national campaign on tranquillity. It conducted a survey to identify what makes a place more tranquil (such as seeing a natural landscape, hearing running water and seeing the stars at night) or less tranquil (such as hearing traffic noise, seeing lots of people or urban development). Using this survey a map has been created which shows where the most tranquil areas of England are. This map shows Dartmoor as the single largest unbroken area of tranquillity in the south of England. However, the map shows clearly the impact of the major trunk roads which surround the National Park, the surrounding towns and the close proximity of Plymouth.

The County Council is currently operating a scheme to reduce street lighting in Devon (which will reduce light pollution as well as save energy). Of Dartmoor’s 8 largest settlements Moretonhampstead has agreed a small number of night time switch offs, and the 7 other settlements are programmed for the next 2 years. Of the 34 other classified settlements on Dartmoor 10 have already agreed to switch off a total of 373 street lights between the hours of 00.30 and 05.30. The remaining settlements are programmed for the next 2 years.

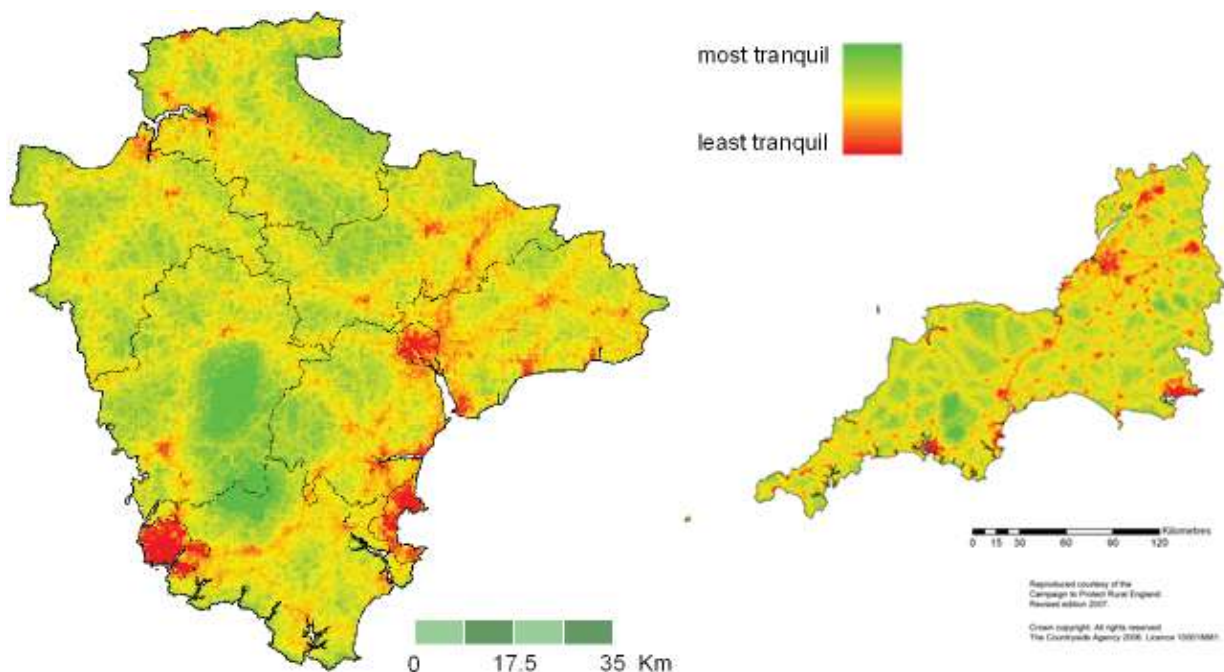


Figure 20. Tranquillity Mapping Devon and South West England (Source: CPRE 2007)

Habitats and Wildlife

Headline Indicators	Monitoring Period	Latest Data	Trend
% of SSSI area in 'favourable' or 'unfavourable recovering' condition	2008 (5 yearly)	25,256 Ha (96% of SSSI area)	Increasing proportion in favourable condition. Higher proportion than England (93%)
% of actions from the Dartmoor BAP achieved	2001-2007 (annual)	94% of actions	308 out of 326 actions – targets monitored on 5 yearly basis to see whether actions have had desired outcome.
Area of woodland encroachment on land currently mapped as moorland	2009 (baseline)	540 Ha	Baseline figure for further monitoring

Table 7. Habitats and Wildlife indicators

What does the evidence show?

The percentage of Sites of Special Scientific Interest (SSSI) which are in *favourable* or *unfavourable and recovering* condition has increase from 92% to 96% (compared with 93% for England). In particular this is a result in an increase in the area which is now *unfavourable and recovering*. This is considered a result of work targeting land management through agri-environment schemes to achieve more favourable conditions for habitat improvement.

The number of Marsh Fritillary butterflies recorded on Dartmoor is at its highest for over a decade. This is considered the result of specific work through the 2 Moors Threatened Butterfly Project with agri-environment schemes targeting the management of Rhôs pasture habitat (most of which are County Wildlife Sites). The Marsh Fritillary is an indicator of habitat in good condition; habitat which supports a range of other important species on Dartmoor.

Indicator species	2005	2007	2009	2010	Trend
Total number of Southern Damselfly colonies	3 colonies: peak number 79, 199, 107	3 colonies: peak number 95, 159, 207	3 colonies: peak number 209; 205; 222	Not available	Evidence of stable population, growing dataset
Total number of Marsh Fritillary sites	33	n/a	46	62	Number of Marsh Fritillary recorded on Dartmoor highest for over a decade, and a good indicator of the quality of Rhôs Pasture habitat
Total number of Vigur's Eyebright plants	1200	550	285	Not available	Relatively stable, but showing longer term decline

Table 8. Key indicator species 2005-2009 (Source: DNPA)

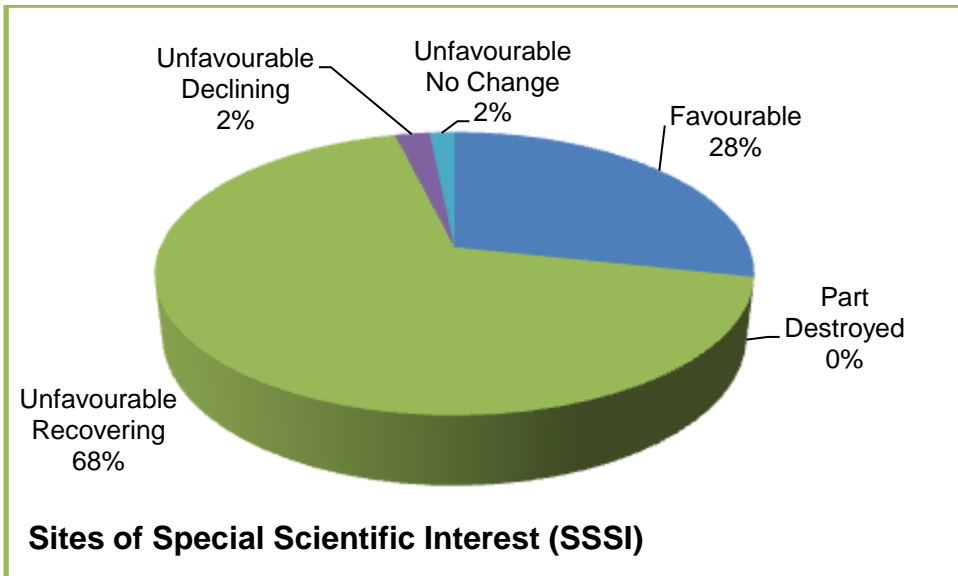


Figure 21. Condition of Sites of Special Scientific Interest (SSSI) (Source: Natural England)

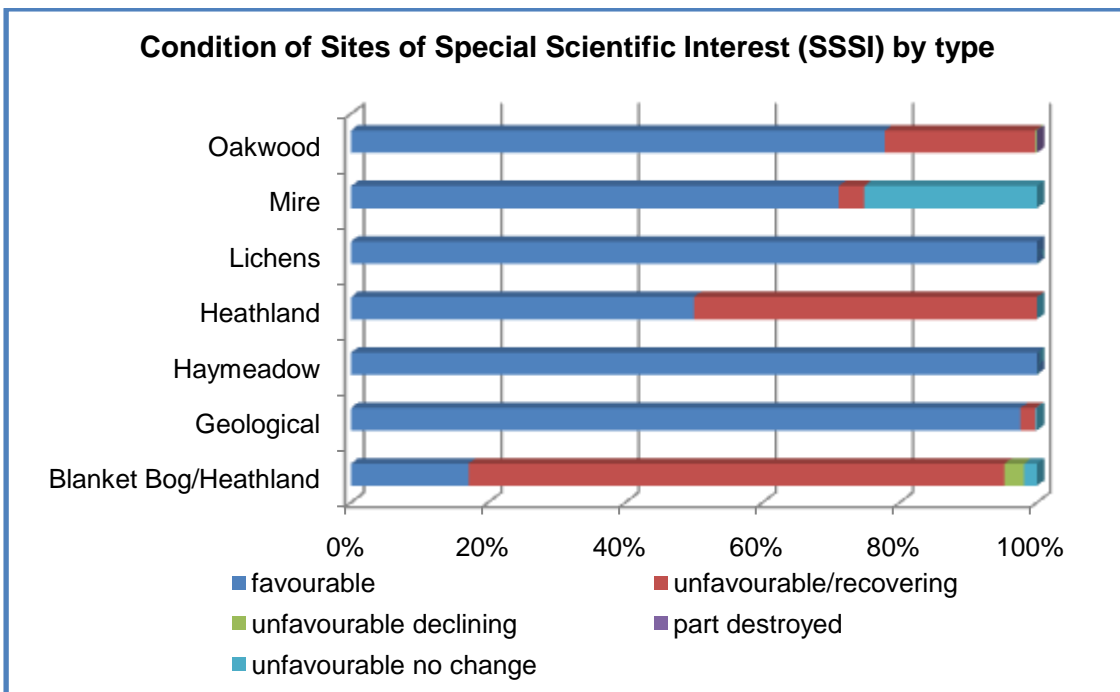


Figure 22. Condition of Sites of Special Scientific Interest (SSSI) by type (Source: Natural England)

Cultural Distinctiveness

Headline Indicators	Monitoring Period	Latest Data	Trend
Annual number of traditional local fairs, festivals and agricultural shows	2007/08 (annual)	19 events	Baseline figure
Population of native Dartmoor ponies	2007 (baseline)	350 ponies	Baseline figure
Area of traditional orchard	2010	76 Ha	Baseline figure

Table 9. Cultural Distinctiveness indicators

What does the evidence show?

Dartmoor has a rich cultural background. Many local traditions, cultures and skills have been maintained for centuries and they have helped shape the National Park as we see it today. Their continuation is essential in conserving and enhancing the special qualities of Dartmoor; they may include:

- traditional skills which affect the fabric of the National Park, for example thatching, stone walling, hedge laying, woodland management for charcoal making and coppice wood, common land management and animal husbandry
- traditional products which are individual or community dependent, for example local foods and local breeds of animal stock
- small scale traditional manufacturing using local resources, for example wood products and structural timbering, charcoal making, stone cutting, sett making and stone masonry
- traditional events which show a thriving community celebrating its past and present, for example local fairs, festivals, markets and seasonal animal gathering (drift).
- traditional local activities such as letterboxing

A system for monitoring the number of traditional local fairs, festivals and agricultural shows was put in place in 2008, and estimated there are about 19 of these events still active each year on Dartmoor. Local groups play an important role in sustaining these traditions. Equally, local history societies and other organisations can play a valuable role in recording and curating the history of Dartmoor, this vibrant interest in local history goes back 250 years itself. There are currently 18 local history societies and organisations active in the National Park area. Further to this the Dartmoor Oral History Project ('Moor Memories') has made 162 recordings of local memories of Dartmoor's history.

Archaeological Heritage

Headline Indicators	Monitoring Period	Latest Data	Trend
Total number of scheduled monuments	2010 (5 yearly)	1,208 monuments	Baseline figure
Number of scheduled monuments at risk (and %)	2010 (5 yearly)	424 (35%) monuments at risk	Reduced by 60 since 2008

Table 10. Archaeological Heritage indicators

What does the evidence show?

There is evidence of human presence on Dartmoor dating back as far as the fourth millennium BC. A substantial historic resource remains evident in the Dartmoor landscape today. 14 Premier Archaeological Landscapes (PALs), ranking amongst the finest in Europe, total 7,246 Ha of the National Park (these are a locally identified designation). Dartmoor contains the greatest concentration of prehistoric stone rows in Britain and over 10,000 ha of Bronze Age field systems.

There are 17,500 entries on the Historic Environment Record (HER) including 1,208 scheduled monument (SMs); 6% of the national total. The number of Scheduled Monuments at Risk on Dartmoor has reduced by 60 to 424 (35% of the total) in 2010, the main reasons for monuments being at risk are plant and scrub growth, and stock erosion. The reduction in the number at risk is considered a result of specific targeting of agri-environment schemes aimed at achieving land management which gives more favourable conditions for the archaeological sites.

Inevitably conservation work focuses on designated (scheduled) sites and in particular those at risk. Other work is carried out through agri-environment schemes and other projects, which will conserve and enhance the condition of non designated assets. Whilst the Authority does monitor such work, it is likely that the focus on designated sites will be intensified as the resources available for the work reduce.

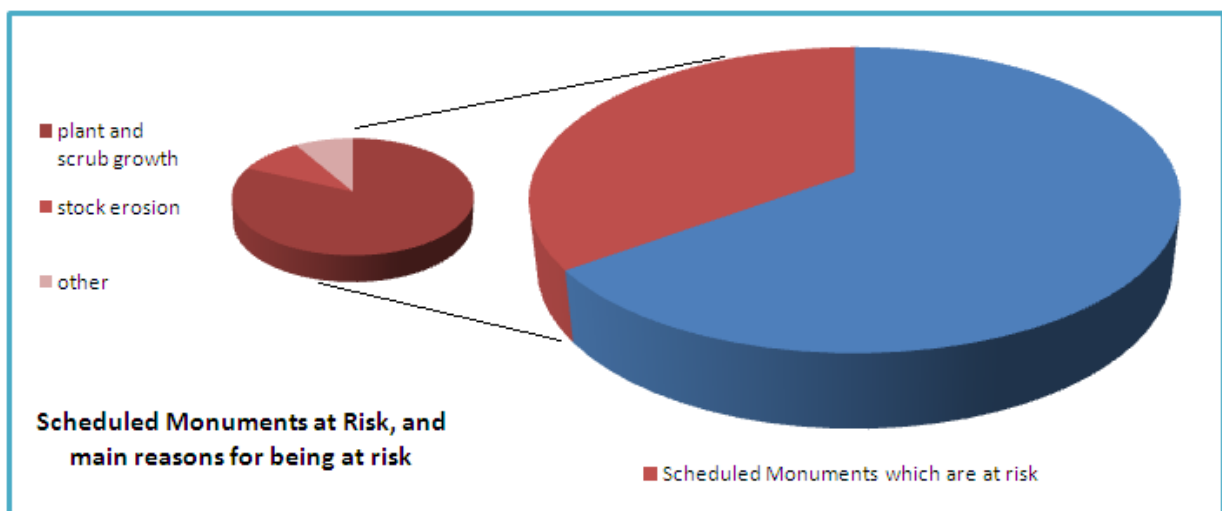


Figure 23 Scheduled Monuments at Risk on Dartmoor, and main reasons for being at risk (Source: DNPA and English Heritage)

Historic Built Environment

Headline Indicators	Monitoring Period	Latest Data	Trend
Number of listed buildings	2010 (5 yearly)	2,563	The number of buildings which are listed has reduced mainly as a result of re-survey
Total number of Listed Buildings at risk (BAR)(and as % of total)	2002-2010 (5 yearly)	39 (1.5%)	The number of Buildings at Risk has been significantly reduced as a result of proactive re-survey and casework

Table 11. Historic Built Environment indicators

What does the evidence show?

There is a diverse and distinctive historic buildings tradition on Dartmoor dating from at least 13th century, much of which is still in habitation and use today. From this large quantity of heritage assets a small proportion are designated to acknowledge their national importance. Designated heritage assets like listed buildings (2,563) and conservation areas (23) mix with many other local heritage assets such as over 900 historic farmsteads, and these are gradually being identified as entries on the Historic Environment Record (HER).

An improving condition of the historic built environment, in particular designated heritage assets comes from monitoring through cyclical surveys and proactive casework, and has especially resulted in more clarity and a significant reduction in the number of listed buildings at risk. Also, changes in this data come from a recent re-survey where improved information on individual structures and buildings has produced a better understanding of the number of listed buildings. Spot listing this year has produced two additional designated railway viaduct structures. Likewise, a new conservation area has recently been designated on Dartmoor taking the total number to 23. An English Heritage national survey of conservation areas shows that one conservation areas is 'at risk' (Horrabridge), 17 Conservation Areas are at risk in Devon in total.

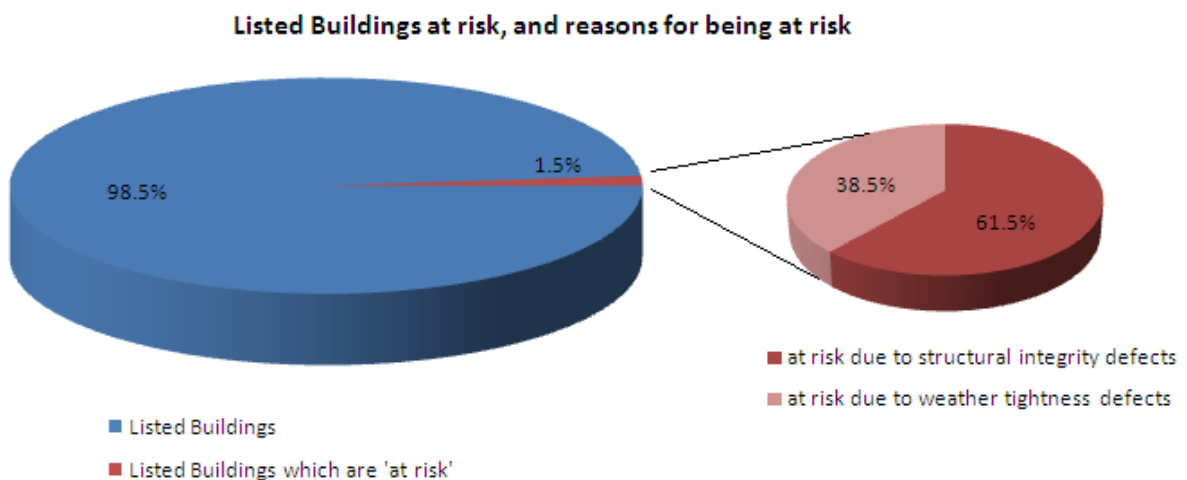


Figure 24. Listed buildings at risk, and reasons for being at risk (Source: DNPA and English Heritage)

Water Environment

Headline Indicators	Monitoring Period	Latest Data	Trend
% of monitored DNP river length achieving 'moderate' or 'good'	2010 (annual)	93% of river length	93% of 725k of monitored river length
Number of new dwellings permitted on sites within EA river flood zone 3 (number of permissions)	2006-2010	0 (0)	No current trend

Table 12. Water Environment indicators

What does the evidence show?

The Environment Agency has moved to a new monitoring system (under the Water Framework Directive) which means that no trend is currently evident in water quality data. Data shows that the majority of river length is in 'moderate' condition. The monitoring system is based on quality within unit lengths, as a result a unit which is mainly good, but includes a section which is moderate, will be listed as moderate. This is therefore not an entirely clear reflection of the length of river which may be in good condition on Dartmoor but does result in notable improvements if units which are poor or moderate improve.

According to Environment Agency monitoring there are 62 'water bodies' (river catchment areas) that either completely or partly fall within the Dartmoor National Park. Of these 4 are currently at Poor status, 44 are Moderate and 14 are Good status. 8 of the water bodies are classified as Heavily Modified Water bodies and these have an objective to reach Good Ecological Potential by 2015 and 2027. Of the non-heavily modified water bodies, 21 have to reach Good Ecological Status by 2015 and 33 have to reach Good Ecological Status by 2027. The failing elements within these water bodies include fish, phosphate, pH, metals, phytoplankton and macro-invertebrates. More information on the Water Framework Directive can be found by following the reference below.

There is no current trend in permissions granted in flood risk zones, and the Authority has in the past 5 years granted planning permission for dwellings on sites within flood zone 3, however the Authority has not in the past 5 years granted permission contrary to the advice of the Environment Agency.

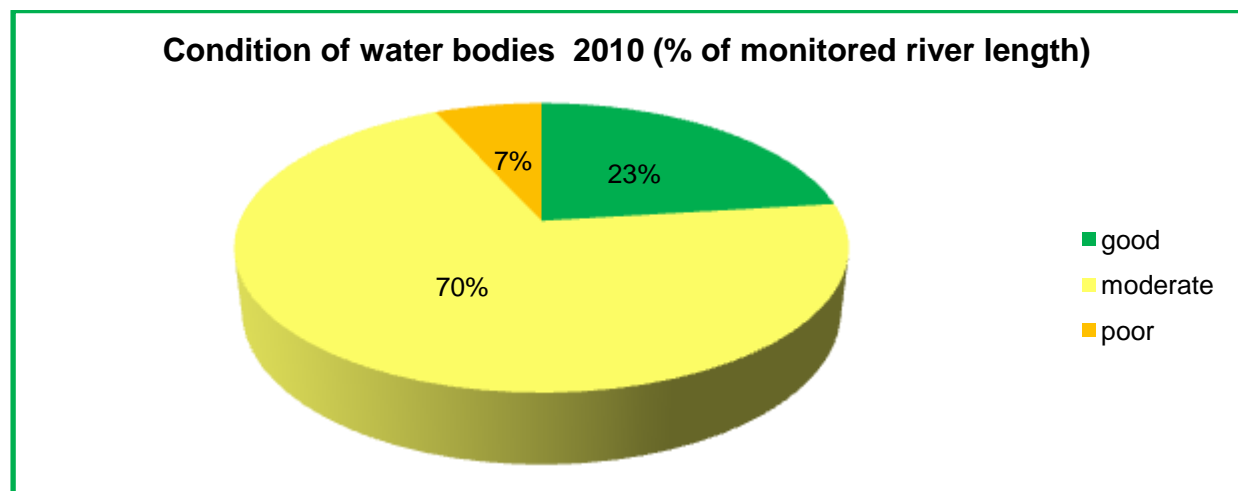


Figure 25. Condition of Dartmoor rivers 2010 (Source: Environment Agency)

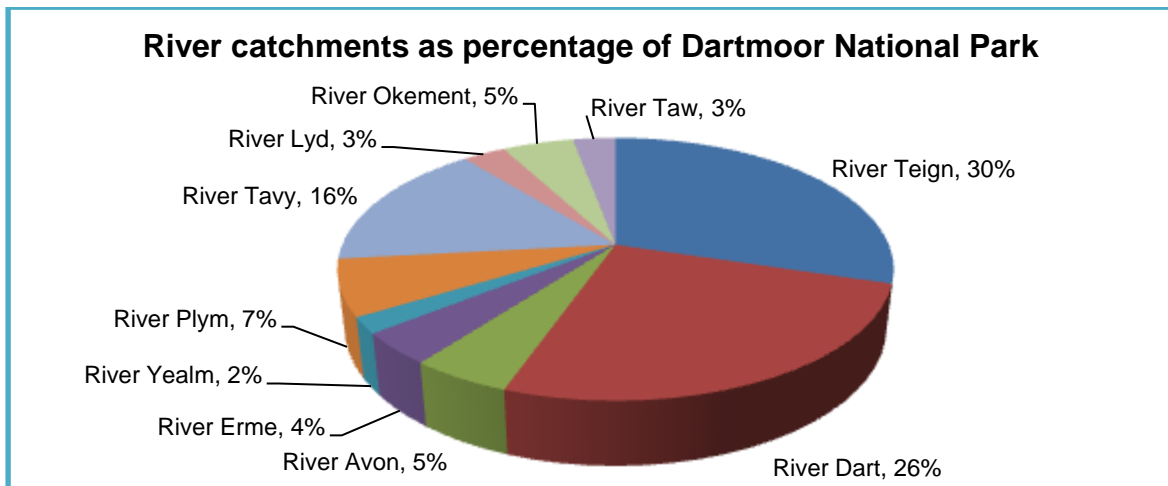


Figure 26. Area of river catchments as percentage of Dartmoor National Park (Source: DNPA Strategic Flood Risk Assessment 2009)

Sense of Place

Key data sources and further information

CPRE: Tranquillity Mapping 2007

<http://www.cpre.org.uk/campaigns/landscape/tranquillity>

Dartmoor National Park Authority – Landscape Character Assessment

www.dartmoor-npa.gov.uk/forward_planning-landscape_character_assessment

Dartmoor National Park Authority – Strategic Flood Risk Assessment 2009

DARE – Dartmoor Hydropower Survey (2004)

<http://www.devondare.org/downloads.htm>

Dartmoor Pony Heritage Trust

DNPA: Natural Environment Service: Section 3 Maps

English Heritage: Heritage at Risk

<http://www.english-heritage.org.uk/caring/heritage-at-risk/>

Environment Agency – Water Framework Directive

www.environment-agency.gov.uk/wfd

Environment Agency – Catchment Abstraction Management Strategies (CAMS)

<http://www.environment-agency.gov.uk/business/topics/water/119927.aspx>

Natural England: SSSI Condition Survey

<http://www.english-nature.org.uk/Special/sssi/index.cfm>

Access for All

Interpretation, Information & Communication

Headline Indicators	Monitoring Period	Latest Data	Trend
Annual number of visitors to information centres operated by DNPA ⁷	2001-2009 (annual)	229,131 visitors	Falling gradually since 2002/03, increase in 2009/10

Table 13. Interpretation, Information and Communication indicators

What does the evidence show?

The number of visitors to these Information Centres peaked at around 350,000 when the High Moorland Visitor Centre opened in 1993; numbers declined through the 1990s and have settled at around 225,000 to 238,000 over the last 8 years (with the exception of 2001 with foot and mouth disease in the UK). In 2009/10 there has been a slight increase in the number of visitors.

In order to maintain the data time-series future calculations will need to include figures based on number of days centres are open, as changes in opening hours may mask any trends.

The annual pattern of visitors to centres has remained consistent year on year, with the largest number seen in July and August, and the smallest number of visitors between November and March.

Use of different areas of the DNPA web site are monitored monthly. Since the last Report this has shown an increase in the proportion of hits to the ‘visiting’ area of the web site.

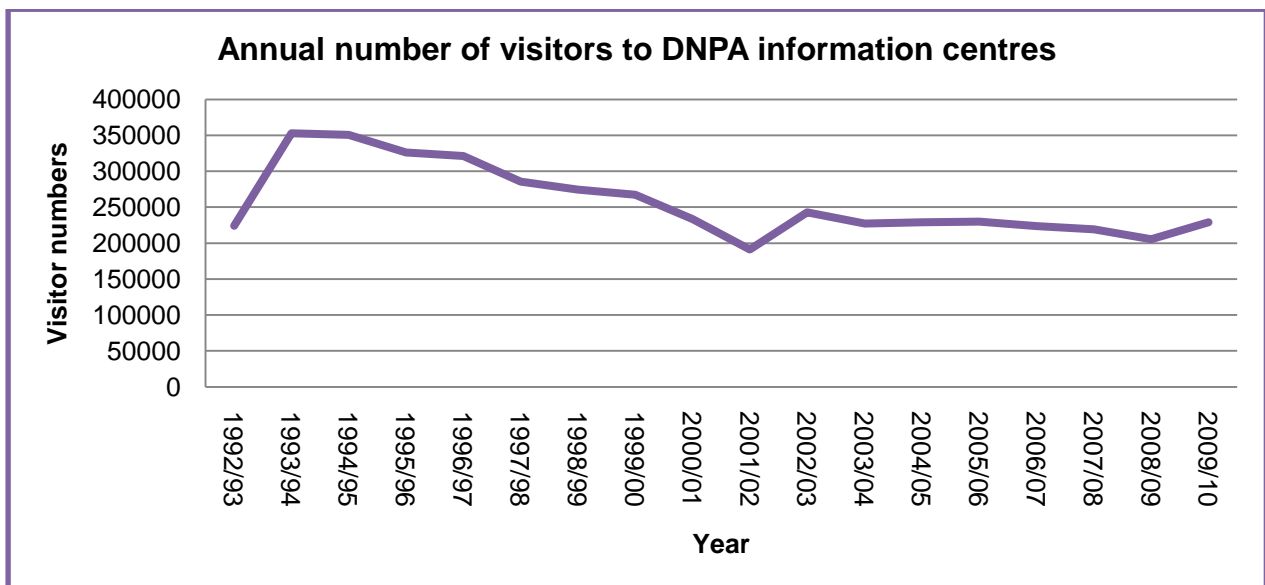


Figure 27. Annual number of visitors to DNPA information centres (Source: DNPA)

⁷ This is the total for 4 centres: The High Moorland Visitor Centre (Princetown), and National Park Information Centres at Postbridge, Haytor and Newbridge

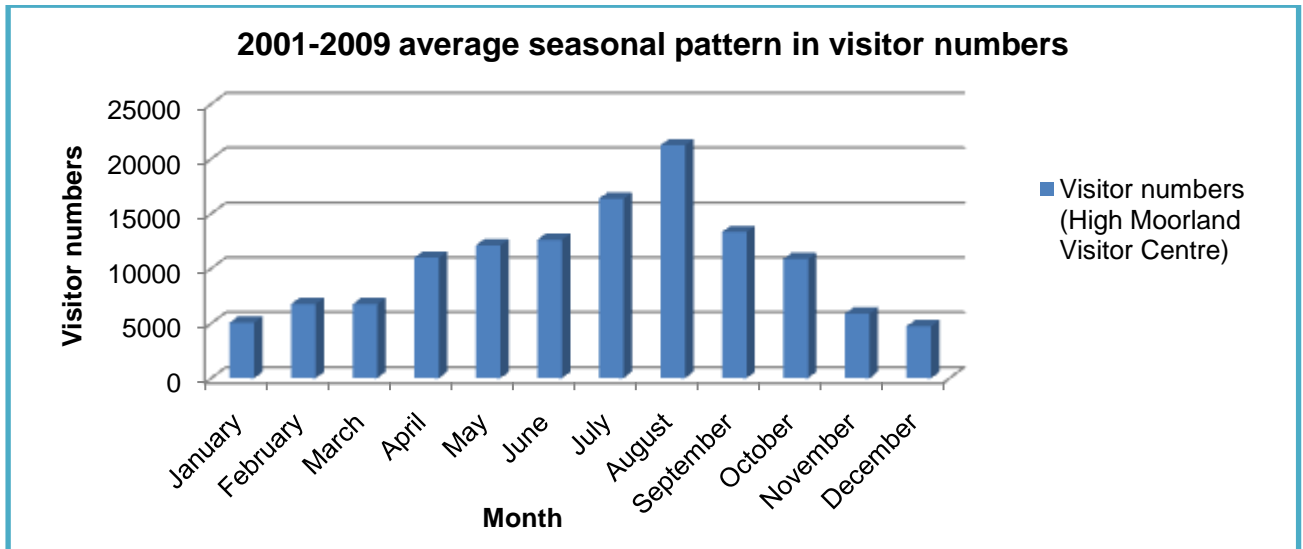


Figure 28. Seasonal pattern in visitor numbers to HMVC (Source: DNPA)

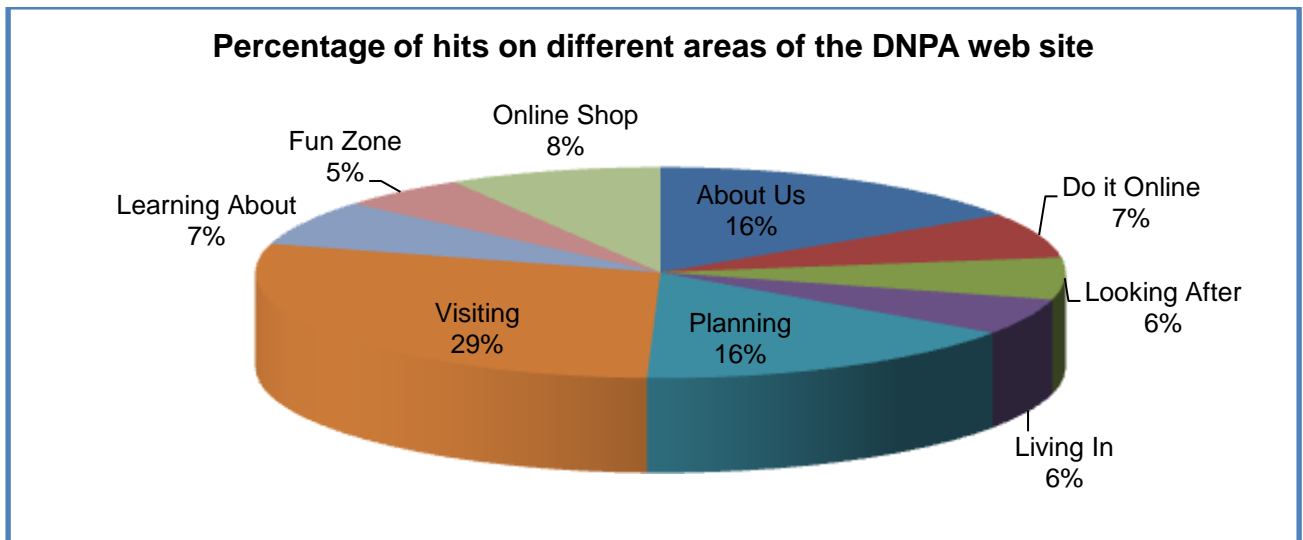


Figure 29. Hits on the DNPA web site (Source: DNPA)

Learning and Education

Headline Indicators	Monitoring Period	Latest Data	Trend
Total annual attendance of guided walks led by DNPA	2001-2008 (annual)	2,312 walkers	Relatively consistent
Total annual attendance on education events organised by DNPA	2003-2010	6,312 participants	Falling from peak in 2006

Table 14. Learning and Education indicators

What does the evidence show?

DNPA aims to offer different types of education and learning experiences in order to improve understanding of the special qualities of the National Park. Data from within Authority is robust and shows consistent positive learning experiences on Dartmoor. Recent patterns have shown the number of primary school trips falling and number of secondary trips increasing, with the overall number of events falling.

Nationally, data from the Natural England MENE (Measuring Engagement with the Natural Environment) Survey 2010 shows that people surveyed reported positive experience of the visits with 97% having enjoyed their visit. Notably however, nationally only 34% reported that they had learned something new about the natural world.

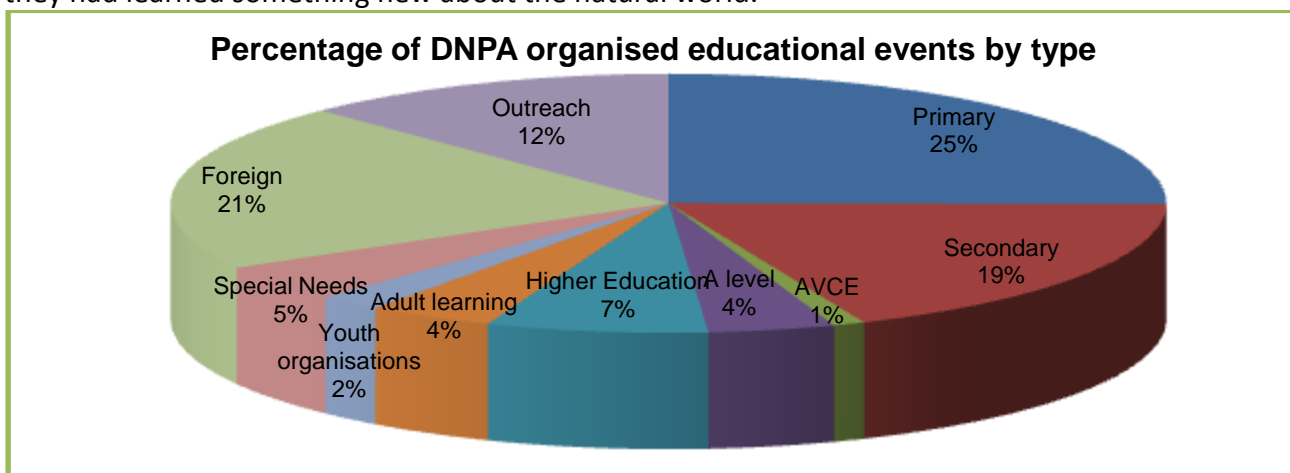


Figure 30. DNPA organised educational events (Source: DNPA)

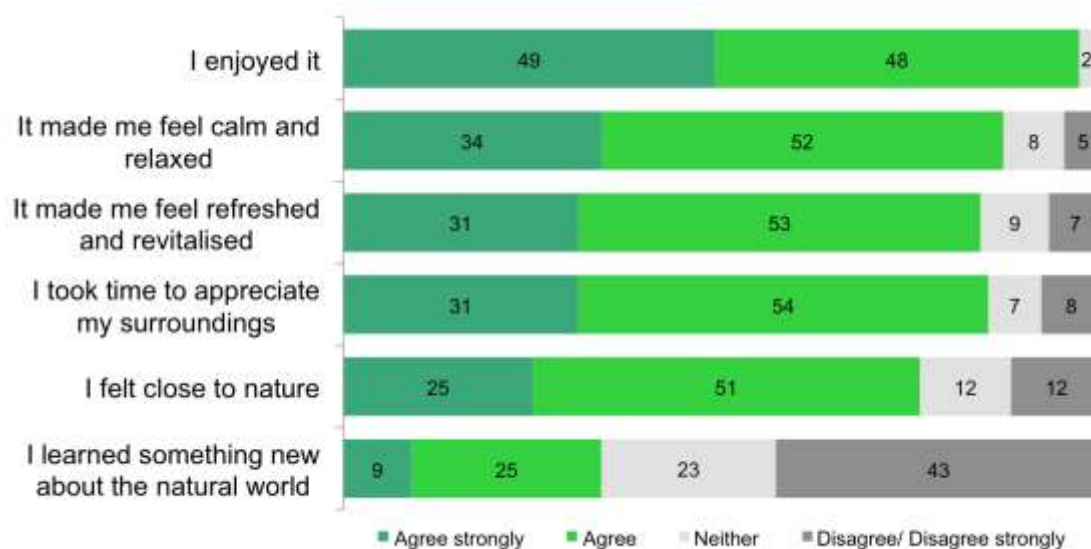


Figure 31. Outcomes of visits to the Natural Environment, England (Source: Natural England MENE survey 2010)

Recreation and Enjoyment

Headline Indicators	Monitoring Period	Latest Data	Trend
Number of events considered through DNPA organised events system	2003-2010 (annual)	56 events	Fewer events considered but an increasing number of participants
Total length of promoted long distance walking routes	2008 (baseline)	316 km	No change

Table 15. Recreation and Enjoyment indicators

What does the evidence show?

The Authority has recently published a draft Recreation and Access Strategy, for consultation. Preparation of this Strategy was through focus groups, road shows, meetings with landowners and key stakeholders, and school surveys. This has identified a number of specific recreation issues on Dartmoor.

Litter is perceived as an issue, with the volume of litter collected having increased from 500 bags in 2005 to over 1,200 bags in 2009. Incidents of uncontrolled dogs worrying livestock are an issue, with approximately 50 incidents records in 2009.

The number of events considered through the DNPA organised events system doubled between 2003 and 2007 and now considers 50-60 events per year. The number of participants in events has increased to 13,000 in 2010, partly as a result of the Original Mountain Marathon event on Dartmoor which involved 3,000 competitors.

In 1997 the National Park Authority started to monitor 206 sites which it identified as suffering from erosion. The number of sites identified peaked at 336 in 2002 and has been reduced to 122 sites in 2009 with 77% of these sites currently stable or improving. Most erosion sites are linear (normally paths); the most common causes of erosion at these sites are a combination of heavy use by walkers, stock, horses, and water erosion.

A range of recreational activities continue to take place on Dartmoor, these include canoeing, geocaching, mounting biking, and the flying of model planes. 6 recreational user groups (e.g. climbers) now have agreed codes of conduct on Dartmoor. Rangers are aware of local trends and issues relating to recreational activities, however it is difficult to measure how much these recreational activities take place on Dartmoor.

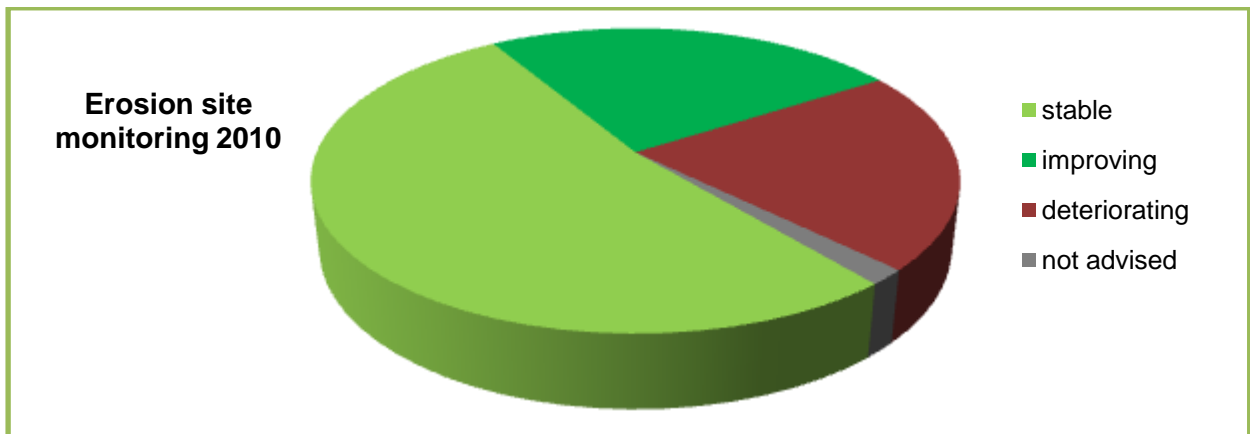


Figure 32. Condition of erosions sites monitored 2010 (Source: DNPA)

Enabling Access

Headline Indicators	Monitoring Period	Latest Data	Trend
Total area of land open to public access	2005-2010 (annual)	46,663 ha	No change
% length of PRoW which are 'easy to use'	2007 - 2010 (annual)	94% easy to use	Improved in 2009/10
Number of passengers using Dartmoor bus services annually	2003-2010 (annual)	278,229 passengers	Average increase of 6% per annum over monitoring period
Number of people using monitored footpaths	2009-2010 (apr-sep)	73,785 users	7.7% increase from first monitoring season

Table 16. Enabling Access indicators

What does the evidence show?

The number of people using monitored public footpaths on Dartmoor has increased by 7.7% between the 2009 and 2010 seasons. Whilst this is a consistent pattern across the paths currently monitored and this pattern is evident elsewhere, there are only two years of data so far and this is most likely a reflection of better weather in the summer of 2010.

Monitoring of the use of moorland car parks has also been carried out in 2010. Data from the Princetown public car park shows a monthly pattern as might be expected, with increased levels of use in April, and July and August. This averages at 281 cars per day through the season. This data will provide a helpful baseline for future monitoring, in particular with the addition of other moorland car parks over time.

The number of people travelling on Dartmoor buses has increased by an average of 6.75% per year between 2003 and 2009. The level of bus use in Devon as a whole has increased at a similar rate (see Figure 8, Page 12).

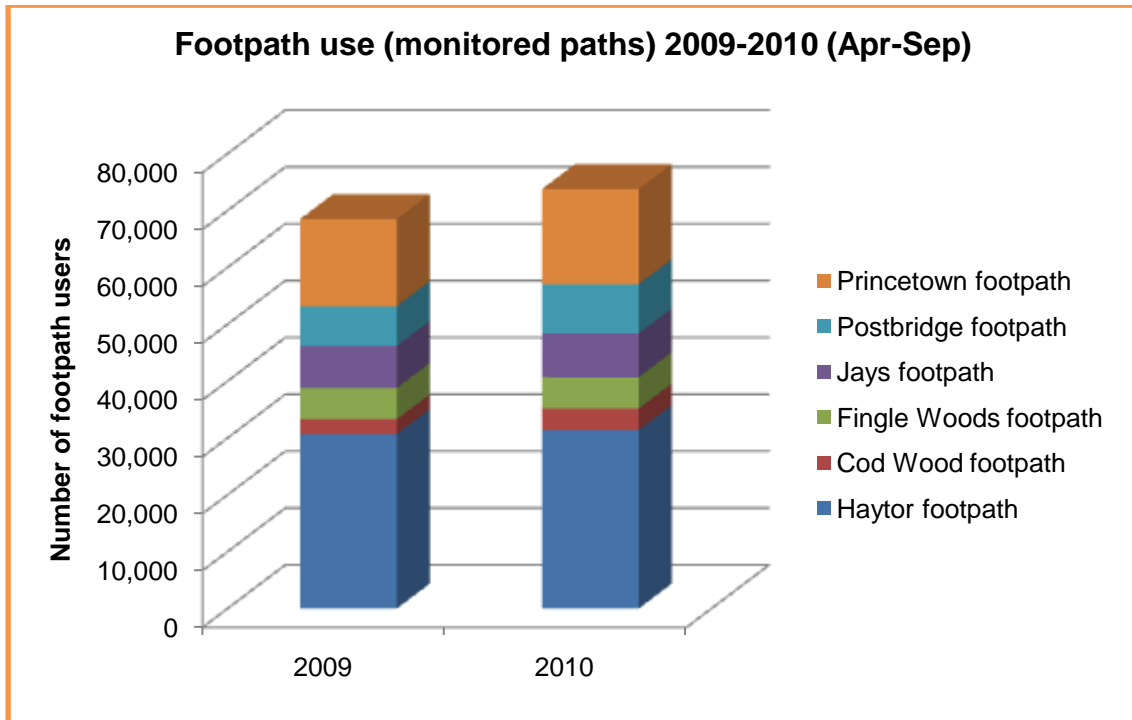


Figure 33. Monitored footpath use 2009 – 2010 (Source: DNPA)

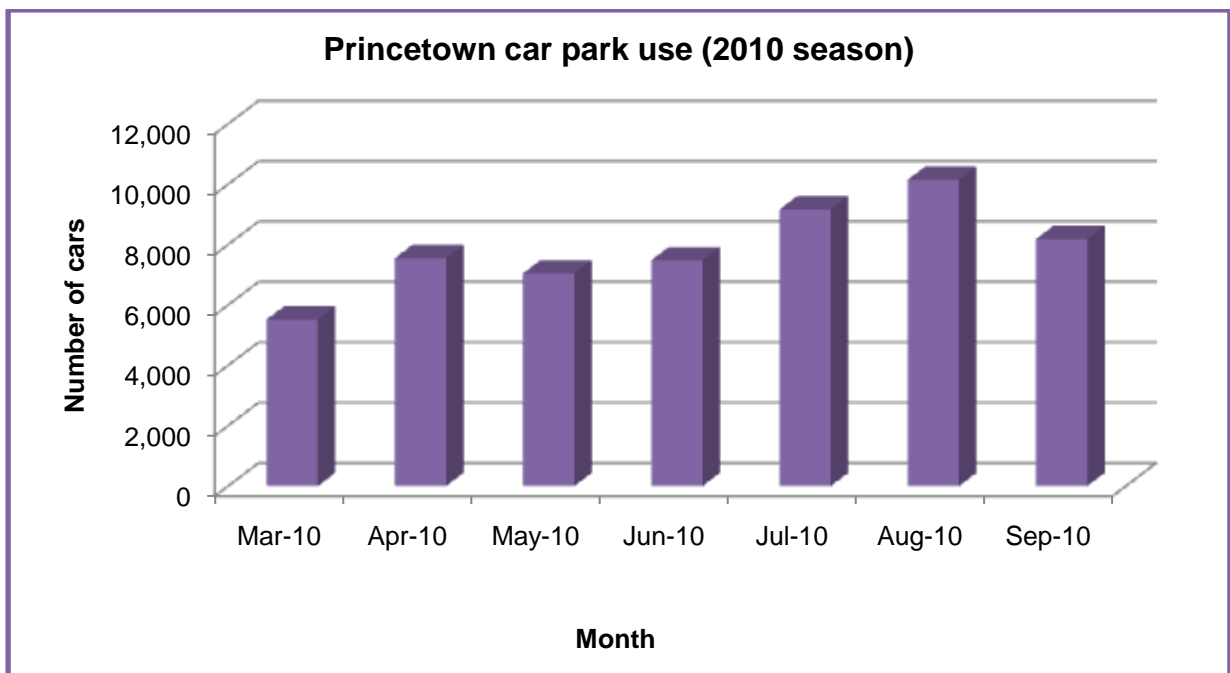


Figure 34. Car park monitoring – Princetown public car park 2010 season (Source: DNPA)

Tourism

Headline Indicators	Monitoring Period	Latest Data	Trend
Annual number of tourist visitors ⁸ to Dartmoor	2003 -2009 (annual)	2.54m visitors	Fell in 2008, increased in 2009.
Annual number of staying visitors to Dartmoor	2003 -2009 (annual)	378,000 staying visitors	Fallen 2% per annum since 2003
Total annual visitor spend	2003 -2009 (annual)	£144m	Risen 2.7% per annum since 2003

Table 17. Tourism indicators

What does the evidence show?

Figures from the STEAM (Scarborough Tourism Economic Activity Monitor) are beginning to show some trends in day visitor and staying visitors with a baseline in 2003, and monitoring in 2007/8/9. This shows that tourist spend on Dartmoor has risen between 2003 and 2009. Whilst spend on accommodation has remained relatively static increases have been seen in food and drink, transport and shopping in particular.

The number of visitors staying in serviced accommodation has fallen by 20% between 2003 and 2009. This pattern has been seen nationally, but is notably higher on Dartmoor. The number of bed spaces in non-serviced accommodation (e.g. self-catering) has increased, whilst the number of bed spaces in serviced accommodation (e.g. hotels) has fallen. Given that spend on accommodation has remained steady whilst numbers have gone down, this might suggest an increase in the cost of holiday accommodation on Dartmoor.

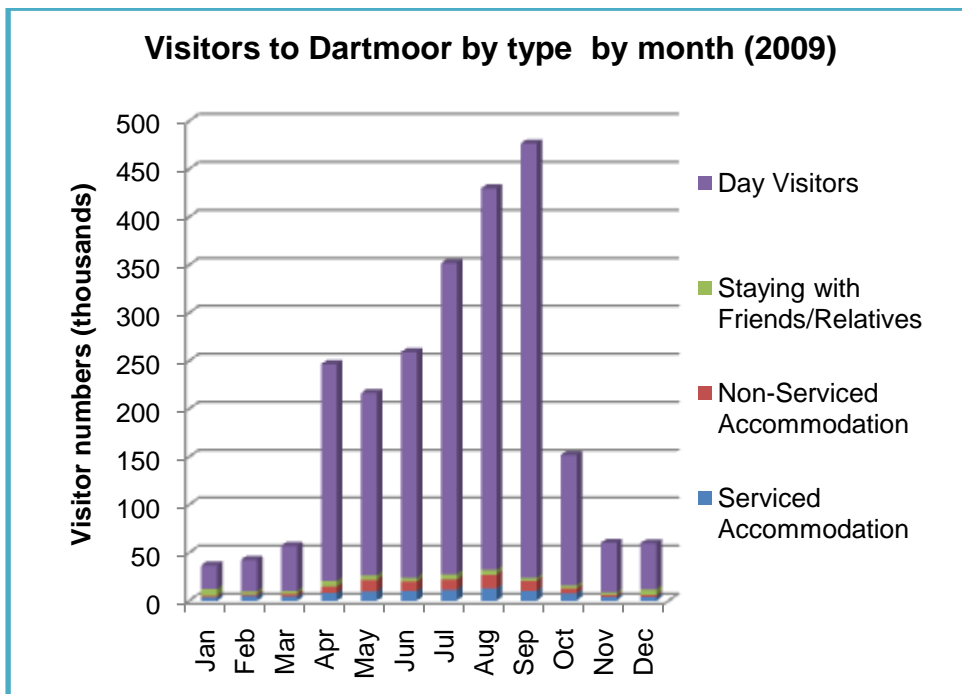


Figure 35. Types of visitors to Dartmoor by month (Source: DNPA STEAM)

⁸ This is the sum of staying visitors and day visitors to Dartmoor

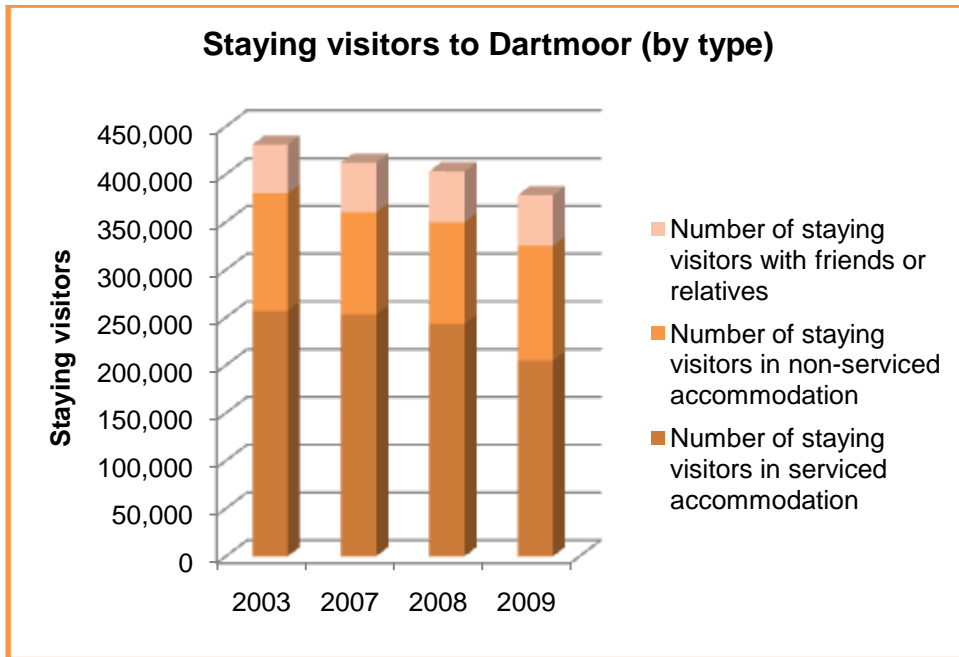


Figure 36. Staying visitors to Dartmoor 2003- 2009 (Source: DNPA STEAM)

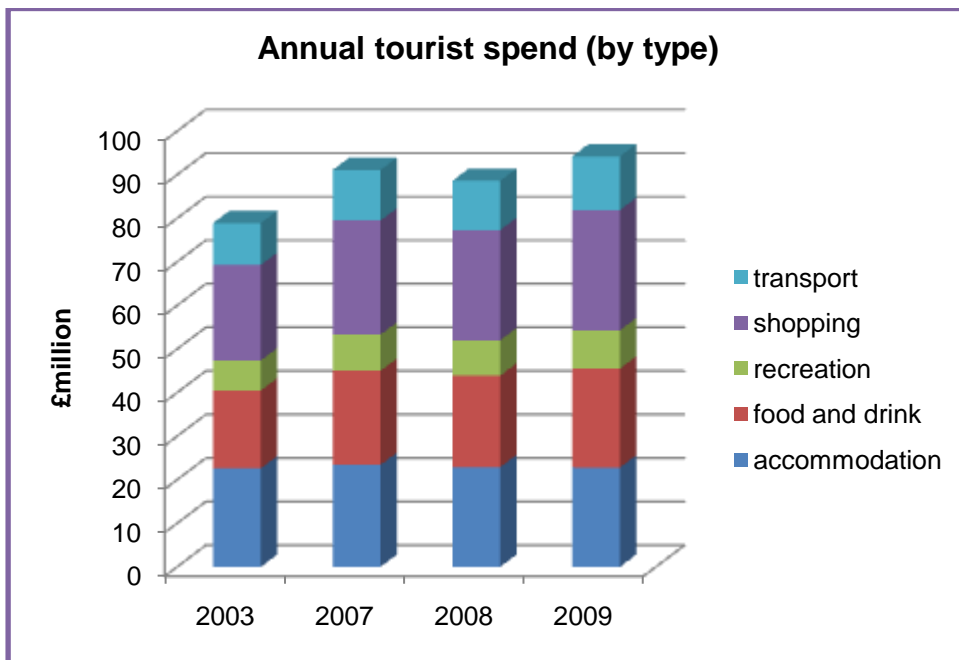


Figure 37. Annual tourist spend on Dartmoor 2003- 2009 (Source: DNPA STEAM)

Access for All

Key data sources and further information

Devon County Council: Long distance route counter

Devon County Council: Public bus use figures

DNPA: Education Service

DNPA: Information, Education and Communication Service

DNPA: Recreation, Tourism and Ranger Service (recreation strategy)

<http://www.dartmoor-npa.gov.uk/recreation-strategy.htm>

DNPA: Scarborough Tourism Economic Activity Monitor (STEAM) 2010 (Global Tourism Solutions (UK) Ltd.)

Communities and Business

Land Management

Headline Indicators	Monitoring Period	Latest Data	Trend
% of Dartmoor Gross Value Added (GVA) generated by forestry and farming	1996-2008 (annual)	4.2% of GVA	Overall output falling and % of Dartmoor output falling
Total area of woodland under active management	1998-2010 (annual)	4,989 Ha	Fallen by over 300 Ha between 2008 and 2010
Total area of new woodland created annually	1998-2010 (annual)	7.4 Ha	98 Ha of woodland created in last 10 years. Variable annually, 2010 is around average
% of National Park area managed through agri-environment schemes	2010 (annual)	59%	Fallen from 68% in 2008

Table 18. Land Management indicators

What does the evidence show?

Figure 35 below shows the classification of the fertility of soils on Dartmoor, the extent of Grade 5 soils (least fertile) illustrates the difficulty there can be in land management with viable upland farming on Dartmoor. The shift from ESA to Environment Stewardship means that trends in the uptake and options of agri-environment schemes on Dartmoor are difficult to monitor. However, figure 34 below shows the extent to which protected areas on Dartmoor are managed through agri-environment schemes. Evidence under *Habitats and Wildlife* and *Archaeology* also demonstrate the potential positive outcomes from targeted land management. Table 20 below shows the uptake of options relating to improvements to traditional boundaries on Dartmoor, these options are included in a good proportion of agreements on Dartmoor, linking closely with management of features identified as important in the Landscape Character Assessment of Dartmoor.

The area of woodland under active management has fallen between 2008 and 2010. This may be accounted for by low timber prices (discouraging active management) combined with the lower level of interest in the revised English Woodland Grant scheme. The fall is small however, and may simply be a product of sites falling between plan periods. Future monitoring will identify whether this trend continues.

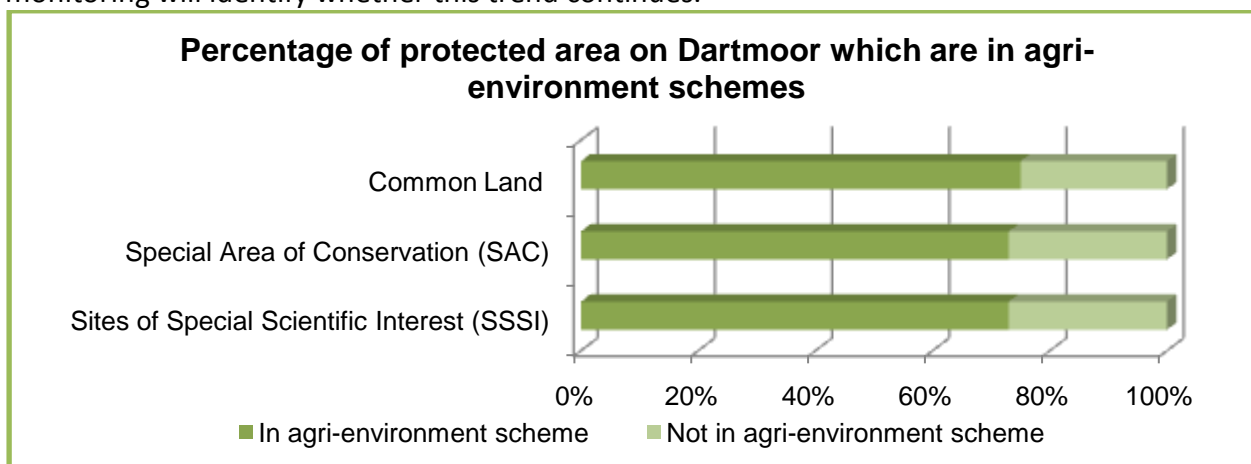


Figure 38. Percentage of protected areas on Dartmoor which are in agri-environment schemes (Source: DNPA and Natural England)

Landowner	Area (Ha)	% of DNP
Duchy of Cornwall	28,734	30%
South West Lakes Trust	3,669	4%
Maristow Estate	3,203	3%
National Trust	2,382	2%
Ministry of Defence	1,418	1%
Dartmoor National Park Authority	1,405	1%

Table 19. Area of the National Park (and %) owned by major landowners (Source: DNPA)

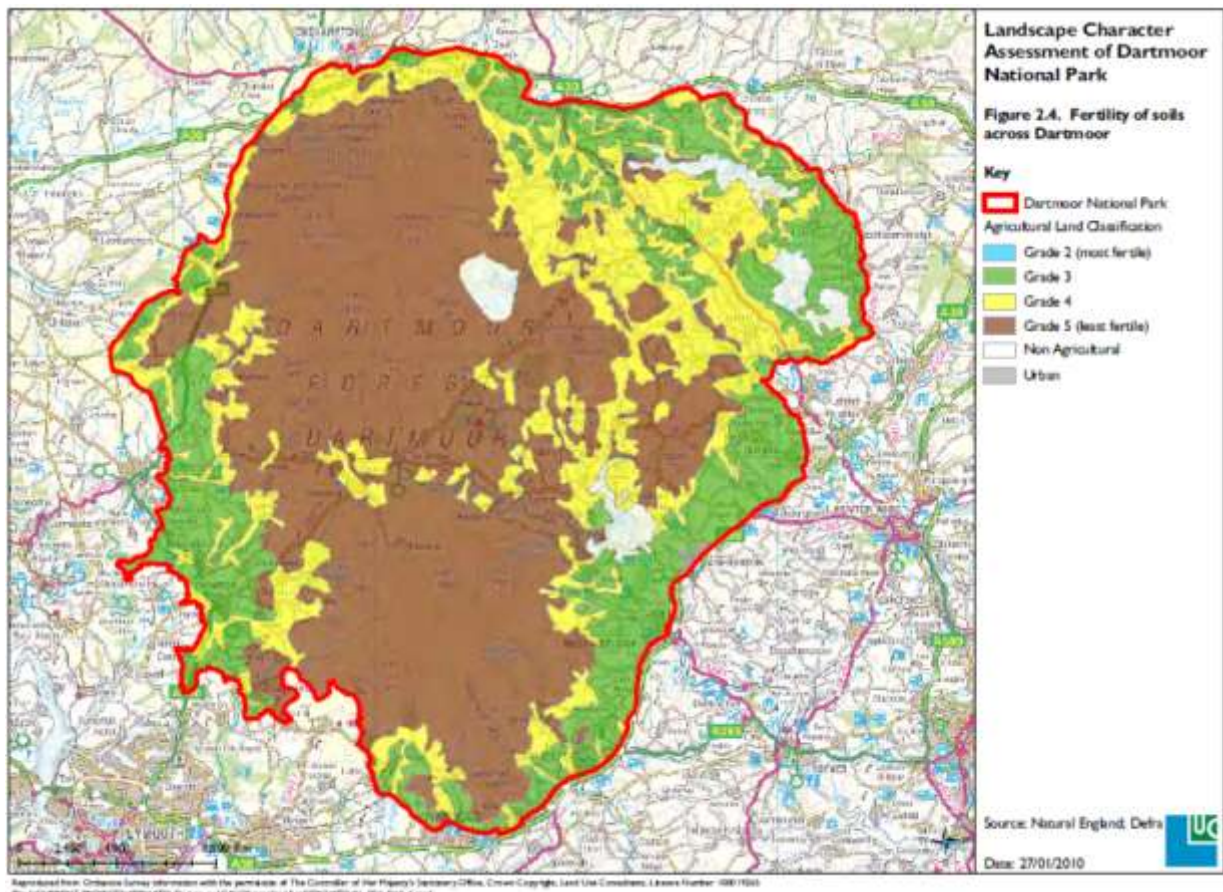


Figure 39. Fertility of soils on Dartmoor (Source: Figure reproduced from Dartmoor Landscape Character Assessment 2010)

Community Well-being

Headline Indicators	Monitoring Period	Latest Data	Trend
Net annual change in primary/secondary services and facilities within classified settlements	2005-20010 (annual)	-1	1 community shop lost since 2008
Housing Affordability (ratio of average household income to average house price)	2004-2009 (annual)	House prices 8.3 times average income	Fallen from 9.1 at the peak of the housing market,
Average Dartmoor house price	1995-2009 (annual)	£234,556	Grew strongly until 2007, fallen since
% of DNP population working mainly at or from home	2001 (Baseline)	20% of working population	Baseline data
Percentage of people in Dartmoor National Park who are satisfied with their local area as a place to live (survey)	2009 (baseline)	92%	Baseline data, Compares with 88% Devon, 80% England

Table 20. Community Well-being indicators

What does the evidence show?

92% of people living on Dartmoor are satisfied with their local area as a place to live (sample survey). This compares with 80% as an average for England. This is a baseline survey, so we cannot yet monitor any change in this. However we do know that the level of crime, health services, and access to nature are important to people on Dartmoor in making somewhere a good place to live, and that affordable housing and public transport are also important, but are considered to most need improving (see figure 41).

The proportion of the Dartmoor population aged 65 and over has increased from 19.9% (2001) to 24.5% (mid-year estimate 2008). This is a higher proportion of over 65s than nationally, but a trend that is evident nationally. As this trend continues it will place increasing pressure on certain public services on Dartmoor, which can be more disperse and more difficult to deliver in a deeply rural area.

The average house price on Dartmoor in 2009 was £234,556, falling from a peak of £252,851 in 2007; average house prices are currently 8.3 times average household income on Dartmoor. House prices on Dartmoor passed the national average in 2001, and continued to grow at a higher rate until the market peaked in 2007. The number of property sales on Dartmoor dropped by 52% from 2007 to 1,172 sales in 2008. Sales grew marginally between 2008 and 2009; data for the first quarter of 2010 does not suggest any significant growth in buyer confidence.

	2001 (census)		2008 (mid-year estimate)	
Total population of National Park	33,552		34,977	
School and pre-school age (0-15)	6,241	(18.6%)	6,124	(17.5%)
Working age (16-64)	20,634	(61.5%)	20,271	(58.0%)
Pensionable age (65+)	6,677	(19.9%)	8,582	(24.5%)

Table 21. Dartmoor population by age group 2001 and 2008 (Source: Office for National Statistics)

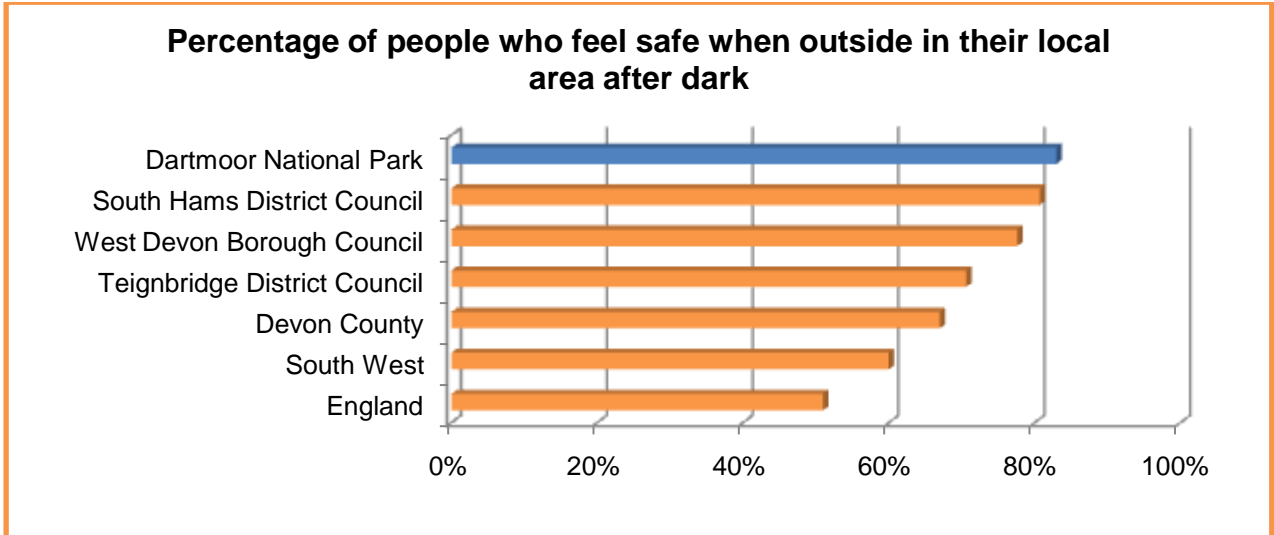


Figure 40. Percentage of people who feel safe when outside in their local area after dark (Source: Place Survey 2008)

What is important in making somewhere a good place to live and what most needs improving

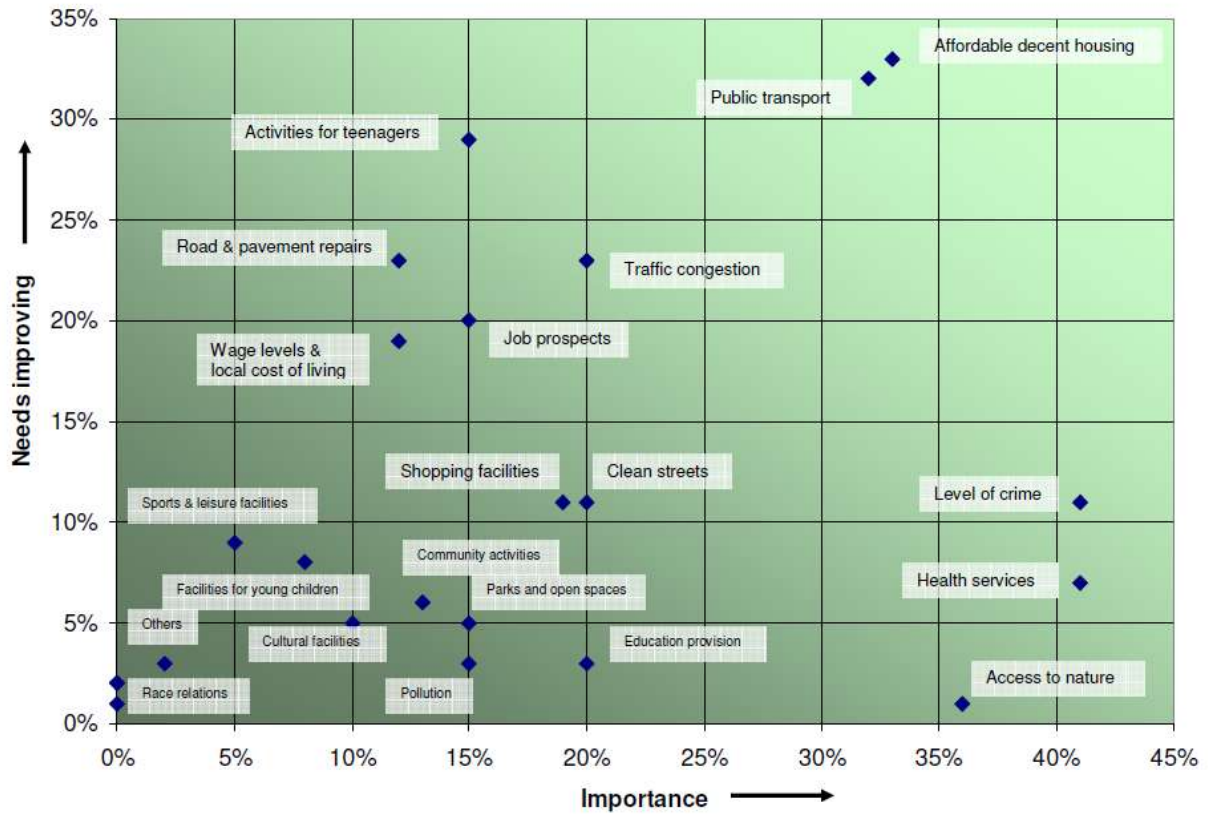


Figure 41. What is important in making somewhere a good place to live, and what most needs improving (Source: Place Survey 2008)

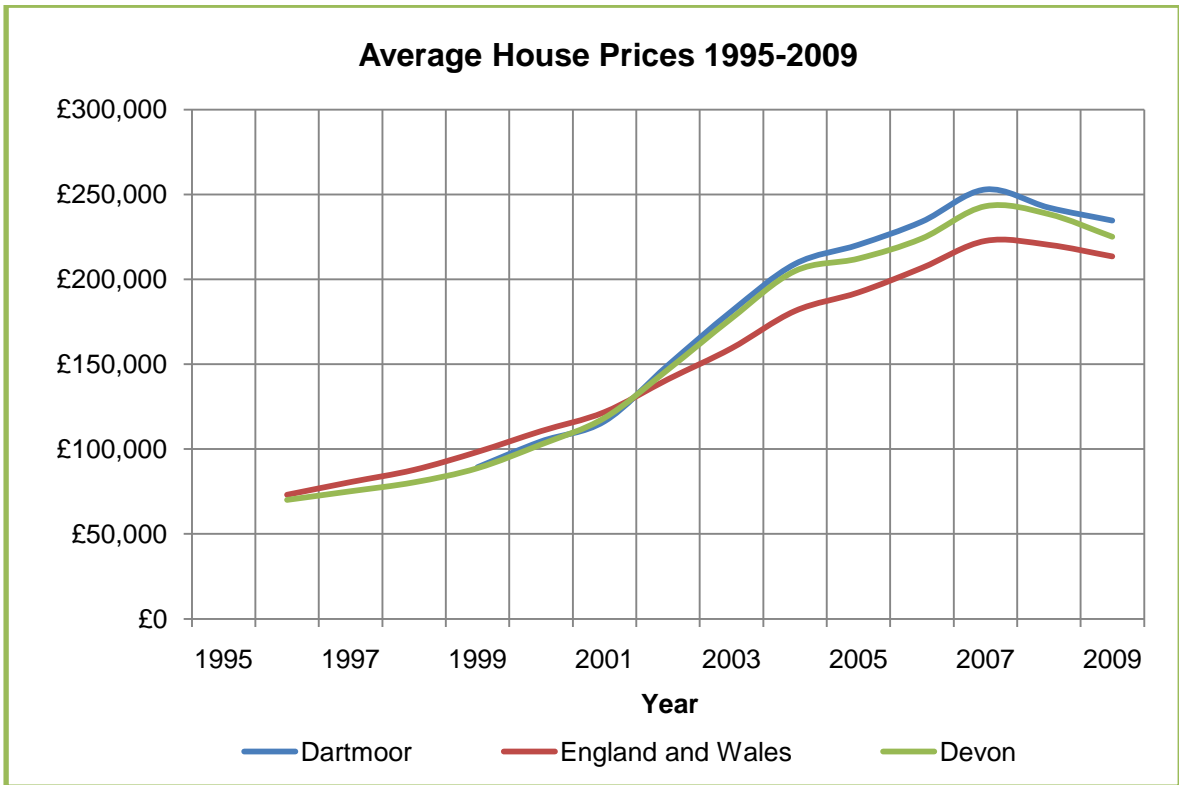


Figure 42. Average house prices Dartmoor, Devon, England and Wales 1995-2009 (Source: DNPA and Land Registry)

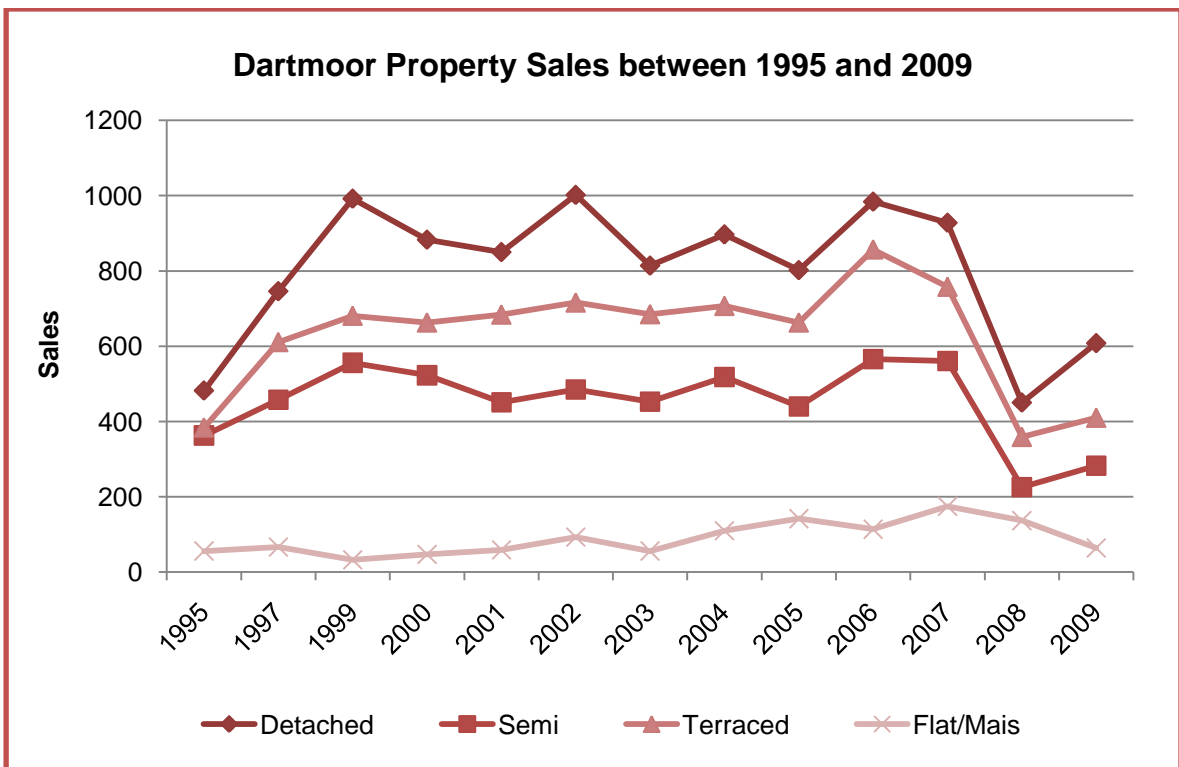


Figure 43. Property sales on Dartmoor by type 1995 -2009 (Source: DNPA and Land Registry)

Economic Activity

Headline Indicators	Monitoring Period	Latest Data	Trend
Self-employed as % of labour force	1996-2008 (annual)	33%	Significantly higher than national, and increasing
Dartmoor per capita income as percentage of national	1996-2008 (annual)	68%	Gap closing, but slowly
Annual % change in GVA of Dartmoor	1996-2008 (annual)	6.8% per annum	Growing at a faster rate than the UK economy

Table 22. Economic Activity indicators

What does the evidence show?

Evidence suggests Dartmoor weathered the recession relatively well in 2009/10. The unemployment rate (the Job Seekers Allowance claimant rate) in the DNP fell from 2.6% to 2.4% over the monitoring period and remains below the rate of 4.2% in England.

The Dartmoor economic model is a key source of data in this area, and enables comparisons with county and national data. The evidence from it shows a broad ranging rural economy with a number of notable trends. These include a declining direct economic role of agriculture (see *Hill Farming* for more information). This data does not reflect indirect output or diversification, but it is important to note that a sector which plays a vital role in managing the landscape and thus other sectors (such as tourism, which comprises around 10% of the Dartmoor economy) is reducing in size.

Data also shows an increasing role of the real estate and business activities sector. The increased role of professional services on Dartmoor reflects the increasing ability to work from home or in a remote location, using electronic means of communication.

Figure 41 shows the location of telephone exchanges on Dartmoor. Distance from telephone exchanges dictates potential broadband speed. The map illustrates the areas of the National Park which are greater than 2 miles from exchange, and therefore unlikely to achieve reasonable broadband speeds (though this does not take into account actual length or quality of cable). Current records show there are currently 679 business addresses within 2 miles of exchanges, and 53 more than 2 miles from exchanges.

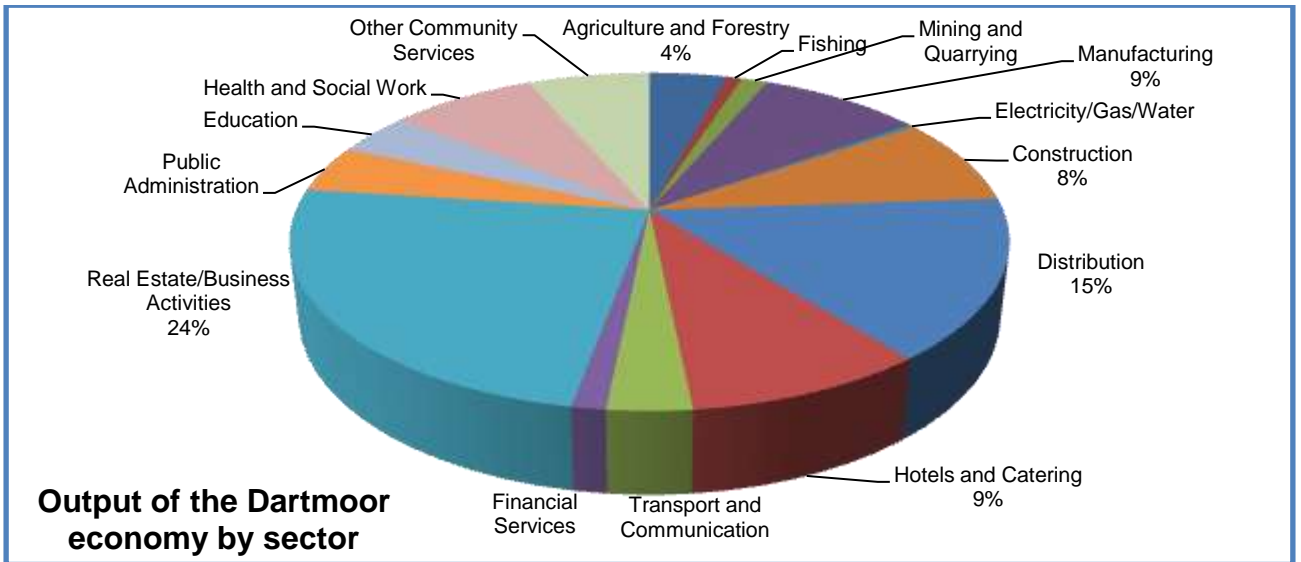


Figure 44. Output of the Dartmoor economy by sector (2008) (Source: DNPA)

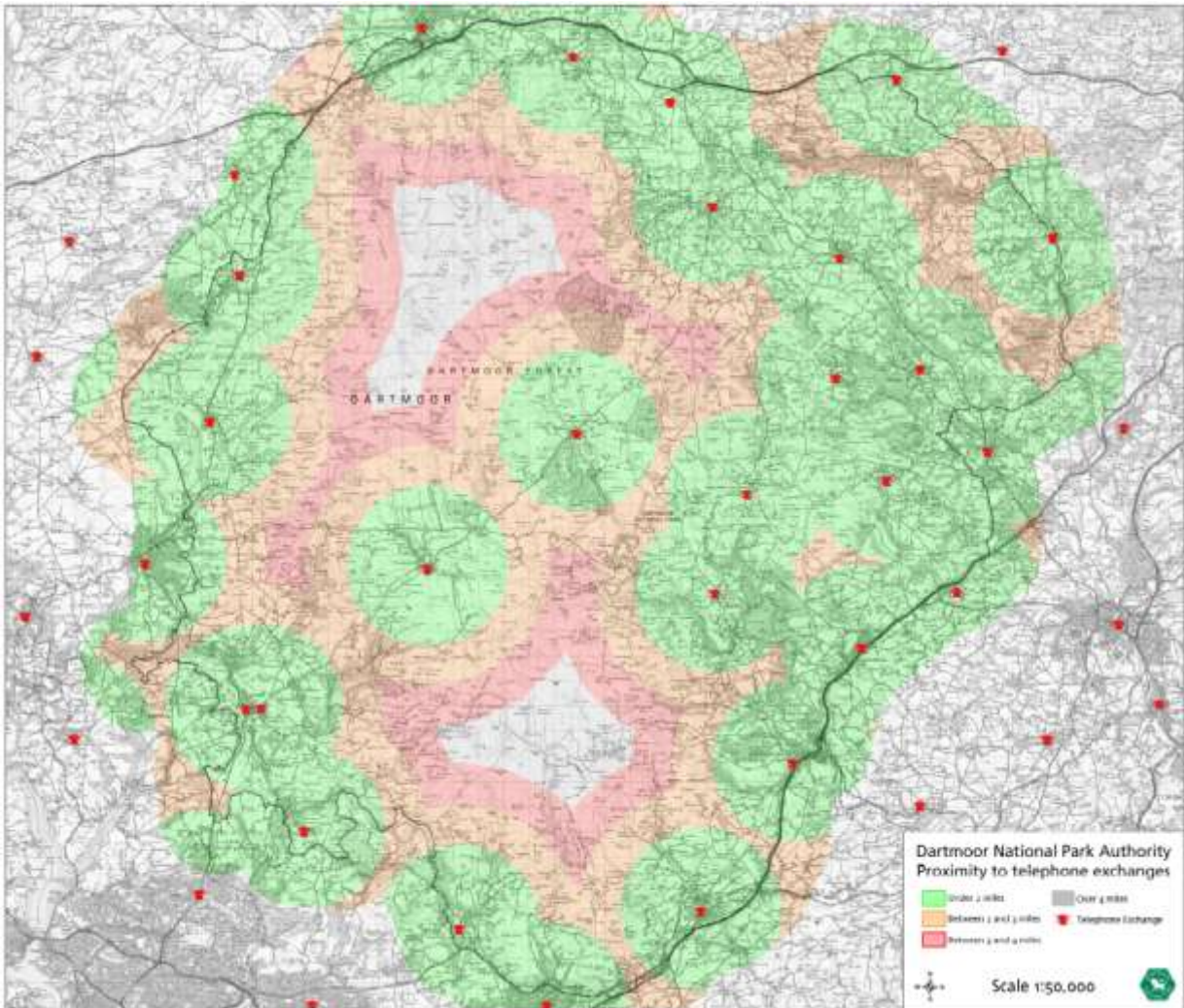


Figure 45. Map showing distance from telephone exchanges on Dartmoor (Source: DNPA)

New Development

Headline Indicators	Monitoring Period	Latest Data	Trend
Total number of new dwellings completed (net)	2001-2009 (annual)	48 dwellings	Significant decrease in the number of dwellings completed
Number of affordable dwellings completed (net)	2001-2009 (annual)	18 dwellings (38%)	Notable increase in the number and proportion of dwellings completed
% of new housing built within the 8 Local Centres in the National Park ⁹	2004-2010	53%	Target is 60%, and has fallen slightly from 08/09
% of planning applications granted annually	2004-2008 (annual)	92% approved	Increasing approval rates year on year.

Table 23. New Development indicators

What does the evidence show?

As house affordability remains a significant issue Dartmoor planning policy is succeeding in improving the provision of affordable houses for local people. The total number of new houses built on Dartmoor has fallen to 48 in 2009/10, in line with the 'indicative' regional figure of 50 per year. The number and proportion of those built which are affordable houses for local needs has increased to 38% of dwellings completed in 2009/10 (from 8% in 2008/09). The proportion approved in the same period has increased to 74% (from 24% in 2008/09, indicating that affordable housing is in the pipeline and that affordable completions should increase further in future years.

The number of replacement dwellings continues to be high, with 29 permissions granted since 2007/08. The number of dwellings permitted for agricultural workers (and tied with a legal agreement) has averaged 3 per year for the last 10 years.

The target for achieving greater than 60% of new housing in Local Centres has been almost met again with 53% of all new dwellings being provided within these 8 largest settlements (56% in 2008/09). It is acknowledged that the proportion of development outside of classified settlements remains higher than would be desired. An analysis of the applications for new dwellings permitted outside of classified settlements shows that 6 were conversions, 2 agricultural dwellings, and 1 Certificate of Lawfulness (CoL). It is worthwhile noting that all of these developments (excluding the CoL) were in accordance with planning policy when they were determined.

Whilst the level of development for employment space remains relatively steady on Dartmoor notable in 2009/10 was permission granted for an employment development totalling 2,300m² of B2 (general industrial) floorspace.

⁹ 8 Local Centres as identified in the Core Strategy are Ashburton, Buckfastleigh, Chagford, Horrabridge, Moretonhampstead, Princetown, South Brent, Yelverton

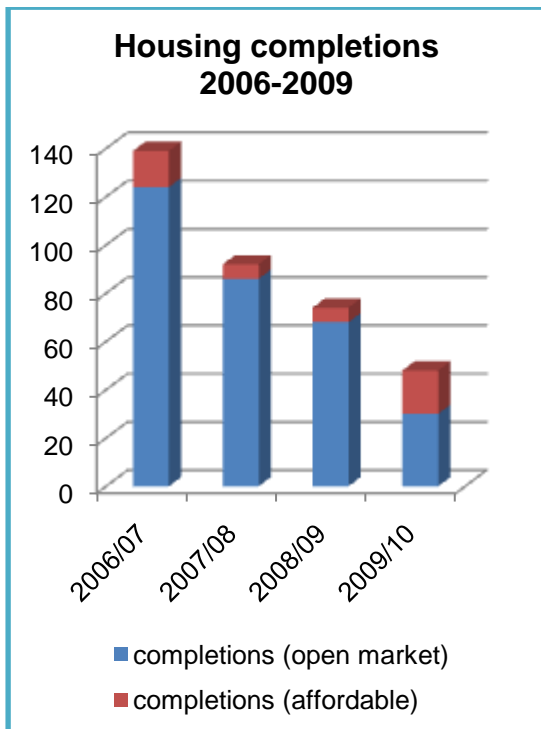


Figure 46. Housing completions on Dartmoor 2006/07 - 2009/10 (Source: DNPA)

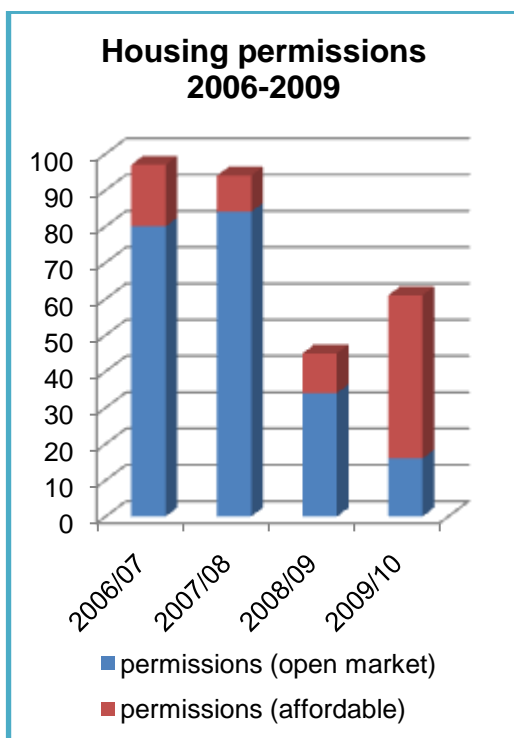


Figure 47. Housing permission on Dartmoor 2006/07 – 2009/10 (Source: DNPA)

Energy

Headline Indicators	Monitoring Period	Latest Data	Trend
Number of permissions granted (and total number of applications) for micro-renewable energy development annually	2006-2010 (annual)	9 approved (0 refused)	The number of applications has fallen, however approval rate has increased

Table 24. Energy indicators

Results

The number of planning permissions granted by the Authority for renewable energy development on Dartmoor fell in 2008/09 after 'permitted development rights' (work that can be done without the need for planning permission) were increased. The Authority granted 9 planning permissions for renewable energy development in 2009/10, and refused none. It also responded to 29 pre-application enquiries on renewable energy.

Given that an increased amount of development does not require planning permission, it is difficult to monitor the amount of domestic renewable energy development on Dartmoor, and even more difficult to estimate the output it may produce.

A programme of street light switch off is being undertaken by Devon County Council, more information can be found under *Tranquillity and Remoteness*.

A study by the Centre for Sustainable Energy in 2004 estimated 36% of Dartmoor households to be of solid walled construction, and 55% of properties not connected to mains gas. This gives an indication of the potentially poor efficiency of many Dartmoor homes, the difficulties that there can be in improving energy efficiency, and of the number potentially reliant on electricity, bottled gas and oil central heating.

Many Dartmoor communities are working proactively to take opportunities to use of renewable energy in order to reduce their influence on climate change. The Dartmoor Circle is made up of 13 local groups which work together, and with other local organisations (such as the National Park Authority) on projects such as...

See also Climate Change above.

Military Training

Headline Indicators		Monitoring Period	Latest Data	Trend
% of land open to public access which can be closed for live firing		2003-2010 (annual)	17.5% of access land	No change
Number and % of days each year that range danger areas may be closed to the public (published closure)	Okehampton	2003-2010 (annual)	12 days	Falling due to lower current demand
	Willsworthy	2003-2010 (annual)	44 days	Falling due to lower current demand
	Merrivale	2003-2010 (annual)	35 days	Falling due to lower current demand
Number and % of days each year that range danger areas were actually closed to the public (actual closure)	Okehampton	2003-2010 (annual)	10 (83%)	Improving following a drop
	Willsworthy	2003-2010 (annual)	38 (86%)	Improving following a drop
	Merrivale	2003-2010 (annual)	27 (77%)	Improving following a drop

Table 25. Military Training indicators

Results

The level of use of Dartmoor for live firing has reduced recently, due to the current higher levels of military deployment. The total number of days has fallen from an average of 263 days in total per year across all of the 3 live firing ranges in previous years, to 91 days in 2010.

The number of published live firing days cancelled dropped to 15% in 2007. This increased to 29% in 2009, meaning that there were more days where live firing was published, but did not then take place. The main reason for this was an increase in cancellation by the user, but also an increase in good weather cancellation (see figure 44). Subsequently the number of days that the military have identified for firing has been reduced in response to the current lower levels of training.

Training Areas ¹⁰		Training rights	Range Danger Area	Guaranteed Public Access each year ^{11 12}	Actual firing as % of published firing (2010)
Okehampton	6,336 ha	Licensed	4,966 ha	247 days	83%
Willsworthy	1,553 ha	Freehold	1,010 ha	120 days	86%
Merrivale	3,756 ha	Licensed	3,211 ha	190 days	77%
Cramber	849 ha	Leasehold	0 ha	365 days	n/a
Ringmoor	596 ha	Licensed	0 ha	365 days	n/a
Sheepstor	84 ha	Licensed	0 ha	365 days	n/a

Table 26. Military training areas – key statistics (2010) (Source: Landmarc)

¹⁰ MOD also has rights to train on other areas within the Dartmoor National Park and makes arrangements for the use of other land when specific training objectives require.

¹¹ The number of days of Guaranteed Public Access varies each year depending on when Public Holidays fall.

¹² Only the Range Danger Areas are closed for public safety. Notification was increased from 2 to 6 weeks in 2006 to improve the certainty of public access and enable forward planning.

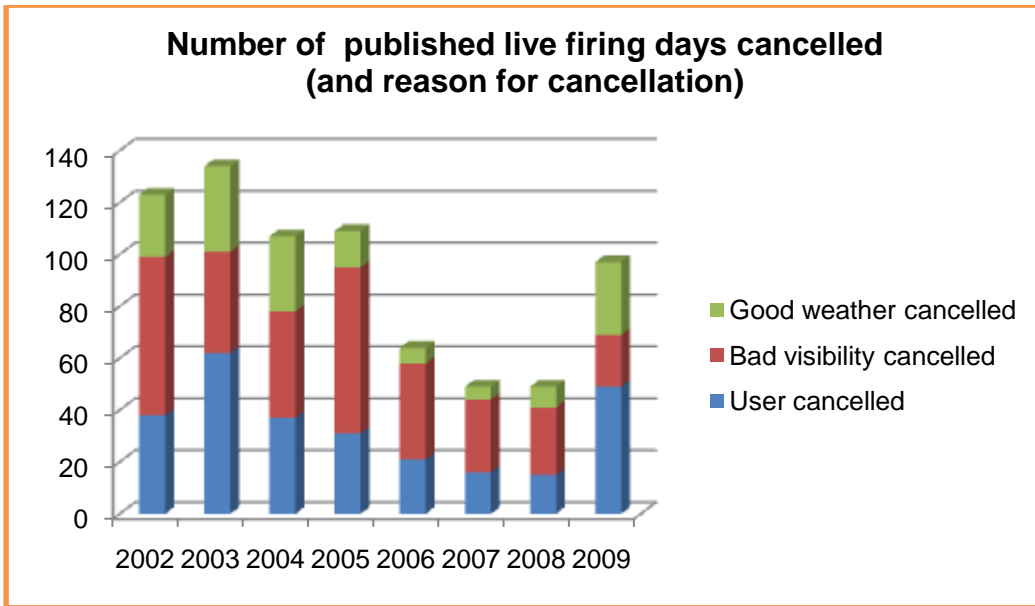


Figure 48. Number of published live firing days cancelled (and reason) (Source: Landmarc)



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Figure 49. Military training areas on Dartmoor (Source: DNPA GIS)

Communities and Business

Key data sources and further information

Centre for Sustainable Energy: Study of hard to treat home (2004)

<http://www.cse.org.uk/>

Commission for Rural Communities: State of the Countryside 2010

<http://ruralcommunities.gov.uk/2010/07/06/state-of-the-countryside-2010/>

Defra: Agricultural Census

<http://www.defra.gov.uk/evidence/statistics/foodfarm/landuselivestock/junesurvey/index.htm>

DNPA: Dartmoor Economic Model

http://www.dartmoor-npa.gov.uk/dartmoor_economy_1994-2004.pdf

Natural England: Environmental Stewardship

<http://www.naturalengland.org.uk/ourwork/farming/default.aspx>

DNPA: Forward Planning and Community Service: Annual Monitoring Report

<http://www.dartmoor-npa.gov.uk/pl-amr.htm>

Land Registry: UK house prices

<http://www.landreg.gov.uk/houseprices/>

Ministry of Defence (Landmarc)

<http://www.dartmoor-ranges.co.uk/>

NOMIS: Official labour market statistics

<https://www.nomisweb.co.uk/>

Office for National Statistics (Census)

<http://www.neighbourhood.statistics.gov.uk/>

Planning Inspectorate: statistical reports

<http://www.planningportal.gov.uk/planning/appeals/planninginspectorate/statistics>

RegenSW: Survey of renewable electricity and heat projects in south west England

<http://www.surveys.energysw.com/>

How might understanding of the State of the Park be improved?

Improving data in existing areas

Climate Change (and air quality)

There is a need to improve understanding of the potential impacts of climate change on Dartmoor. Local records of phenology and the work being undertaken on adaptation will begin to address this.

Upland Farming

The Authority cannot currently obtain data on stocking numbers, or information on the number of commoners exercising their grazing rights. Up to date data on farm incomes would be of benefit, as would further detail on the indirect value of farming and farm diversification.

Traffic and Transport

Future monitoring may need to consider the impact of reducing public subsidies on rural bus services. Data from the census on car ownership and travel to work is now out of date and potentially not an accurate reflection of the current situation.

Social Inclusion

With regard to visitors and non-visitors to Dartmoor there is a lack of information specific to the area. There is also a lack of data available from partners on wider trends and contextual information (for example profiling).

Landscape

Data is now more robust, it does not however enable a measure of change or analysis of specific issues which may impact the Dartmoor landscape. Remote sensing would enable more quantitative monitoring, and monitoring of change/trend.

Tranquillity and Remoteness

Whilst there is data on tranquillity and dark night skies this is not quantitative so as to monitor change or the impact of specific issues in order to allow more targeted work.

Habitats and Wildlife

Some data is not over sufficient timescale as to confidently assess trend. Data may require further analysis or study in order to confidently associate change with specific action/issues.

Cultural Distinctiveness

More information on local skills would be useful, in particular more information from outside of the Authority. No up to date data on the population of traditional Dartmoor breeds.

Archaeological Heritage

Large areas (for example half of the Premier Archaeological Landscapes) remain un-surveyed and it is difficult to identify change. For purposes of SotP however data may need to focus more on condition/quality and link with other data on moorland management. New entries (many from surveys and data accumulated over previous years) are now being added to the HER enabled by a temporary officer post. Existing records are also being 'cleaned'.

Historic Built Environment

Data is mostly contextual rather than qualitative, and it does not reflect upon quality, or vulnerability of buildings/structure. There is scope for data to better distinguish types of asset, and reasons for buildings being at risk. There is potential for planning and agri-environment data on improvements to buildings/structures.

Water Environment

Data does not clearly identify the importance of Dartmoor as a water resource. More detailed analysis of water quality may enable focussed efforts in areas of poor or moderate water quality in order to achieve improvements.

Interpretation, Information & Communication

Data does not identify people's awareness or understanding of Dartmoor's special qualities. Data is not currently benchmarked in order to better understand patterns compared with other National Parks, or locally.

Learning and Education

There is a lack of data from outside of the Authority. There is potential for a better understanding of the work undertaken by other groups such as schools, outdoor education centres, Duke of Edinburgh, and Ten Tors.

Recreation and Enjoyment

Whilst there is increasing information on access (e.g. PRoW) the process of capturing the range of recreational activities that people enjoy on Dartmoor, and potential impact upon NP purposes is based more in experience than data.

Enabling Access

As with social inclusion there is a lack of information on the type of people using and not using the moor. Also there is a lack of qualitative data (peoples satisfaction with areas etc.), however this is currently improving. Proxies such as the number of concessionary fares on buses may have potential.

Tourism

There is currently no information included on the numbers or types for visitors to specific attractions. There is also a lack of visitor profiling.

Land Management

There is scope to potentially better link agri-environment uptake and options with specific objectives (e.g. landscape management, archaeology, water management, ecology).

Community Well-being

The key issue is the lack of up to date contextual data from the census, which is unlikely to accurately reflect the current situation on Dartmoor.

Economic Activity

Understanding and data is good, an extension of this might be the ability to assess secondary benefits (e.g. tourism, agriculture) and for impact analysis (e.g. change to/loss of a key sector or employer).

New Development

Quantitative data is readily available, key weakness are a lack of data on the energy efficiency of new development (linked with below) and measures of the quality of design.

Energy

A carbon footprint is not available for the National Park. There may be scope to look at this for individual communities in order to gauge the success of actions. Renewable energy development is increasingly difficult to monitor; there may be scope to monitor uptake on Dartmoor through uptake of feed in tariff.

Military Training

Data is available on levels of military use and its impact on access. Data on impact of the military on special qualities and the importance of the military in Dartmoor economy may have some value.

Are there other issues not covered by the State of the Park Report?

Currently the State of the Park Report reflects the structure and therefore main issues of the National Park Management Plan. The State of the Park Report will play an important role in the preparation of the next National Park Management Plan by identifying the key issues the Plan should address. It is important therefore that the next State of the Park Report, whilst maintaining continuity where possible, is not constrained by this, and identifies new or emerging issues that were perhaps insignificant at the time the current plan was prepared.

The following list highlights a number of issues identified in the preparation of this Report, and noted by the State of the Park Focus Group. These may not be significant issues however they are not currently included in the State of the Park Report.

- Forestry – is currently neither a ‘stand alone’ issue nor a cross cutting theme. There is a risk that certain issues may not be fully understood as forestry and woodland issues may appear in landscape, habitats and wildlife, land management etc.
- Waste and recycling – which link closely with both climate change and energy. Understanding of issues at a National Park level is low due to data availability only at a district level.
- Sustainability – other issues at a community level such as allotments, community renewable energy and low impact dwellings have been identified as important in planning policy preparation. There may be scope for these to be considered in the Report.
- Community Involvement – following on from the above Dartmoor communities can play a role in identifying issues important to them and the wider National Park both through consultation and in the preparation of plans (including at a community level). There may scope for this to be reflected in the State of the Park Report.
- Quarrying – is currently not reported. This industry, although relatively small on Dartmoor has an impact on landscape, but also an important role to play in providing local stone, and employment.
- Animal accidents on unfenced moorland roads – whilst there is data on the effectiveness of the 40mph limit, there is currently a lack of information on its effectiveness in terms of minimising animal accidents.
- Telecommunications and broadband – have increased in importance in terms of how they enable remote working and the delivery of services in rural areas. Whether this is an opportunity or a constraint on Dartmoor is not fully understood.

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List of Abbreviations

AMR: Annual Monitoring Report
AQMA: Air Quality Management Area
BAP: Biodiversity Action Plan
BAR: Buildings at Risk
BME: Black and Minority Ethnic groups
CAMS: Catchment Abstraction Management Strategy
CPRE: Campaign to Protect Rural England
CRoW: Countryside and Right of Way Act 2000
DNPA: Dartmoor National Park Authority
DSDF: Dartmoor Sustainable Development Fund
EA: Environment Agency
FBI: Farm Business Income
GIS: Geographical Information System
GQA: General Quality Assessment
GVA: Gross Value Added
Ha: Hectare
HER: Historic Environment Register
ILMP: Integrated Land Management Plan
kW: kilowatt
LDF: Local Development Framework
M@RS: Monuments at Risk Survey
MENE: Monitoring Engagement with the Natural Environment
PAL: Premier Archaeological Landscape
PAWS: Plantations on Ancient Woodland Sites
PRoW: Public Right of Way, including a footpath, bridleway and byway
REAP: Resources and Energy Analysis Programme
RoWIP: Rights of Way Improvement Plan
SAC: Special Area of Conservation
SM: scheduled monument
SotPT: State of the Park Report
SPD: Supplementary Planning Document
SSSI: Site of Special Scientific Interest
STEAM: Scarborough Tourism Economic Activity Monitor
SWPLF: South West Protected Landscapes Forum
WRMU: Water Resource Management Unit