

The background image is a photograph of a large, leafless tree in the foreground, its branches reaching across the top of the frame. In the background, a large, white, classical-style building with a portico and columns is visible. The foreground is filled with many small, white daffodils with yellow centers, growing in a green field. The sky is a clear, pale blue.

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Cornwall AONB Monitoring: Phase 2

Draft report
Prepared by LUC in association with Plymouth University
October 2013

Project Title: Cornwall AONB Monitoring: Phase 2

Client: Cornwall AONB Unit

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1

Introduction



1 Introduction

The Cornwall AONB Monitoring Project

- 1.1 In 2008, a detailed methodology and baseline information was produced to instigate a programme of landscape monitoring in the Cornwall Area of Outstanding Natural Beauty (AONB). The baseline information collected for this 'Phase 1' study was supplemented by a range of other information about the AONB, collected and presented interactively in the Cornwall AONB Atlas which was launched in early 2010 (available at <http://www.cornwallaonb.org.uk/research>). Both Phase 1 of the AONB Monitoring Project and the AONB Atlas provide the primary evidence base for the current AONB Management Plan (2011-2016)¹, and helped shape the policies and actions set out in the strategic chapters of the Plan.
- 1.2 Now in 2013, the AONB Unit is beginning to undertake the Management Plan review, which is a timely opportunity to re-visit the baseline landscape information collected in both Phase 1 and the AONB Atlas under a new 'Phase 2' of the Monitoring Project. This allows for an analysis of landscape change over the five-year period since 2008, capturing new trends impacting on the landscapes of the AONB and providing up-to-date evidence about the state of the AONB for the Management Plan review.

Method undertaken for Phase 2

- 1.3 Phase 1 set out a detailed methodology for monitoring landscape change across the AONB, presenting information for a range of 'indicators' at a variety of scales from the AONB as a whole², its twelve AONB sections³, a specially defined set of 23 'Landscape Monitoring Units (LMUs)⁴' to – at the smallest scale – 47 sample squares (1km²). The scale of monitoring undertaken at Phase 1 reflected the nature of the data and information collected – from that derived from national level (AONB as a whole) to primary evidence collected through field survey (sample squares). The scale of the monitoring also sought to reflect how landscape change may impact on local distinctiveness; with some trends likely to impact on the whole of the protected landscape, whilst others would only apply to certain AONB locations.
- 1.4 For Phase 2 it was decided to simplify and streamline the landscape monitoring approach, whilst providing a meaningful narrative of landscape change since 2008. To be consistent with the AONB Management Plan, information analysed for Phase 2 in this report has largely been presented for the protected landscape as a whole, with further detail provided for the 12 AONB Sections wherever possible. Primary data collection requiring fieldwork has still used the sample squares defined in Phase 1 to allow for direct comparison.
- 1.5 In addition, the full range of monitoring indicators defined for Phase 1 (26 in total) has been condensed down to the most relevant to today and those most likely to influence landscape change in the AONB in the future. Also, some data used for Phase 1 indicators has not been updated since; meaning an equivalent analysis to monitor change has not been possible. In some cases, new data has emerged since Phase 1 that can be used to monitor some of the indicators; in these cases a new baseline has been laid down for future monitoring.
- 1.6 The selected indicators for Phase 2 are structured in a clear way under the following six themes (to complement the structure of the AONB Management Plan themes where possible):

¹ <http://www.cornwallaonb.org.uk/management-plan>

² Covering a total of 964 km² or 96,400 hectares, based on the latest dataset from Natural England (2013)

³ The twelve AONB sections are described and mapped here: <http://www.cornwallaonb.org.uk/visit>

⁴ The LMUs are a sub-set of the 12 AONB sections and nest within the spatial framework provided by the Cornwall Landscape Character Assessment (2007) <http://www.cornwall.gov.uk/default.aspx?page=24874>

- Planning and development
- Farming, food and forestry
- Biodiversity and geodiversity
- Heritage and culture
- Community and economy
- Transport and access

- 1.7 Both data from Phase 1 (largely analysed in 2008) and the AONB Atlas (2009) have been used as the baseline for assessing change over time in Phase 2. It should be noted that the digital boundary used to 'cut' the data for the Atlas was designed to allow a direct comparison with Cornwall county as a whole. This means that data were presented for the areas of the AONB that were within the Ordnance Survey defined Cornwall boundary, which runs to the Mean Low Water springs. However, for Phase 2, all of the AONB has been included. Where relevant, data from the Atlas has been 're-cut' to the full AONB boundary (including areas below the Mean Low Water springs) for comparison.

Structure of this report

- 1.8 This report is structured using the above themes, with a chapter on each. For each theme, information collected for the relevant indicators is presented in turn, with an analysis of change since Phase 1/the Atlas provided where directly comparable information is available. The data used for the indicators in each theme is listed at the end of each chapter, along with summary recommendations for future monitoring.
- 1.9 This report ends with a summary of the findings, providing an overview of landscape change witnessed in the AONB since 2008.

2

Planning and Development



2 Planning and Development

Indicators selected for this theme

2.1 The following monitoring indicators have been selected for the 'Planning and Development' theme:

- Extent of dark night skies
- Levels and type of development in the AONB
- Settlement pattern
- Number and area of Conservation Areas

Extent of dark night skies

- 2.2 In Phase 1, baseline information for this indicator came from CPRE's Night Blight map (2000), which provided a spatial indication of relative levels of light pollution for the AONB as a whole (with results presented by AONB Section). This data has not been updated since 2000. In Phase 2, a new baseline for 2013 has been laid down using results from the CPRE Big Star Count 2013⁵, where members of the public were asked to record how many stars in the constellation of Orion were visible from their geographic point. This is a national project, designed to measure how much light pollution is affecting the visibility of the night sky. CPRE currently repeats this initiative annually, forming a reliable source of ongoing monitoring information for this indicator.
- 2.3 The results of CPRE's Big Star Count 2013 are set out in **Table 2.1** below – with the locations of the counts added together and presented by AONB section. Please note that the voluntary nature of the Big Star Count means that full coverage of the AONB is not guaranteed.

Table 2.1: Results of CPRE's Big Star Count by AONB Section

AONB section	Number of stars counted (2013)
Pentire Point to Widemouth (Boscastle)	10
Trevoze Head to Stepper Point (Padstow)	48
Trevoze Head to Stepper Point (St Merryn)	5
South Coast Central (Mylor Bridge)	26
South Coast Central (St Ewe)	31
South Coast Eastern (Fowey)	18

CPRE Star Count (2013)

⁵ <http://www.cpre.org.uk/resources/countryside/dark-skies/item/3286-star-count-map-2013>

Levels and types of development within the AONB

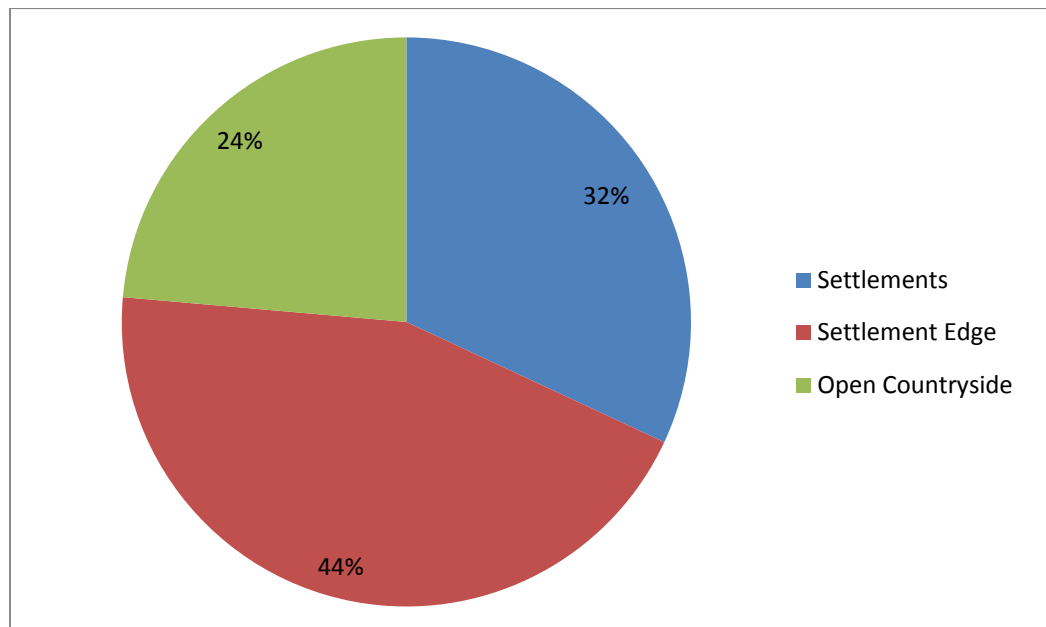
Number and type of planning applications (2008-13)

- 2.4 Trends of development in the AONB were analysed using planning application data obtained from Cornwall Council. The data covered planning applications within the AONB boundary from the 1st April 2008 to 31st March 2013. Only full applications that were approved or refused were included in the analysis. Other application types and applications that were withdrawn were not included.
- 2.5 In order to make the planning data more manageable and meaningful to analyse for the purpose of this report, the raw data was amalgamated into four overall categories, as follows:
- **Major development** – Including the development types, 'Small scale major dwellings', 'All other large scale development', 'All other small scale major development' and 'Small scale major distribution/servicing.'
 - **Householder/dwellings** – Including the development types 'Householder' and 'Minor – Dwelling'.
 - **Minor developments (excluding dwellings)** – Including the development types 'All other minor developments', 'Minor – Offices/light industry' and 'Minor – Retail distribution/servicing.'
 - **Changes of Use**
- 2.6 For each of these categories, location (settlement, settlement edge or open countryside) and approval rates were analysed. Settlements were defined using Ordnance Survey Strategi GIS dataset for urban regions in the UK, with a 0.5km buffer area defining the settlement edge. The data was also analysed spatially by AONB section.

General patterns of application type and location

- 2.7 The majority of applications (3,666) within the five year period were within the 'Householder/dwellings' category, and mainly concentrated within the AONB's settlements (53%). There were a total of 72 applications in the 'Major Development' category, over 44% (32) of which were located on the edge of settlements, see **Figure 2.1** below.

Figure 2.1: Location of major planning applications in the AONB



Source: Cornwall Council (2013)

- 2.8 The total number of applications for 'Minor developments (excluding dwellings)' (984) over the time period were relatively uniform across all locations. Applications for changes of use were less common (168) and were also relatively evenly distributed across the AONB landscape.

Approval rates

- 2.9 **Table 2.2** below sets out the total number of applications received in the three different location categories, along with their planning decision.

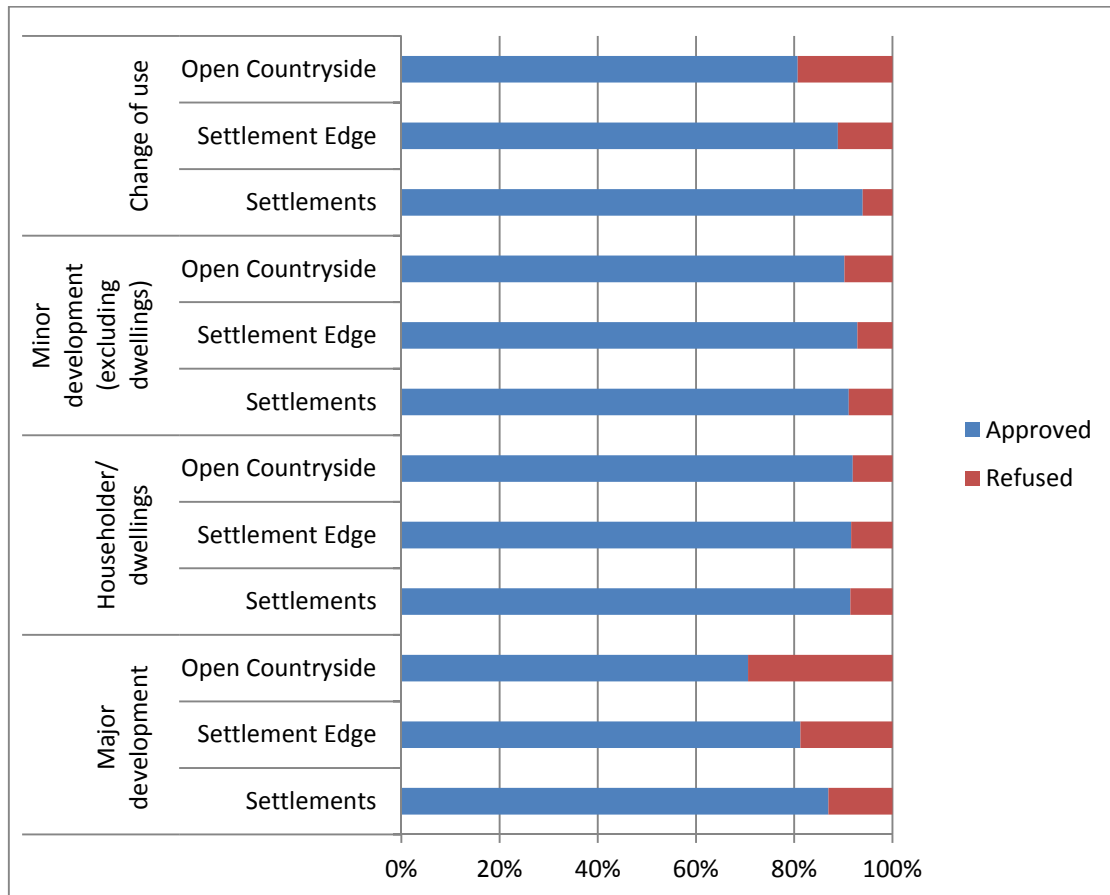
Table 2.2: Planning application totals by development type, location and outcome

Development Type	Location	Approved	Refused	Total
Major development	Settlement	20	3	23
	Settlement Edge	26	6	32
	Open Countryside	12	5	17
Householder/ dwellings	Settlement	1197	112	1309
	Settlement Edge	1581	145	1726
	Open Countryside	580	51	631
Minor development excluding dwellings	Settlement	307	30	337
	Settlement Edge	287	22	309
	Open Countryside	305	33	338
Changes of use	Settlement	62	4	66
	Settlement Edge	40	5	45
	Open Countryside	46	11	57

Source: Cornwall Council (2013)

- 2.10 **Figure 2.2** illustrates the approval rates for the different development categories and locations. Applications within the 'Major development' category had the highest overall rate of refusal (19%), and showed a clear trend with those located in the open countryside most likely to be refused, with a 29% refusal rate, compared to 19% on a settlement edge and 13% within a settlement. This trend remained fairly consistent throughout the five-year time period.
- 2.11 Approval rates for applications classed as 'Householder/dwellings' and 'Minor development (excluding dwellings)' did not vary significantly between the different location categories, generally having a high rate of approval (between 90% and 92%). Approval rates for changes of use showed a clear pattern depending on the location of the application, with those in settlements having a higher approval rate (94%) than those in the open countryside (81%).

Figure 2.2: Approval rates of planning applications within the AONB by development type and location.

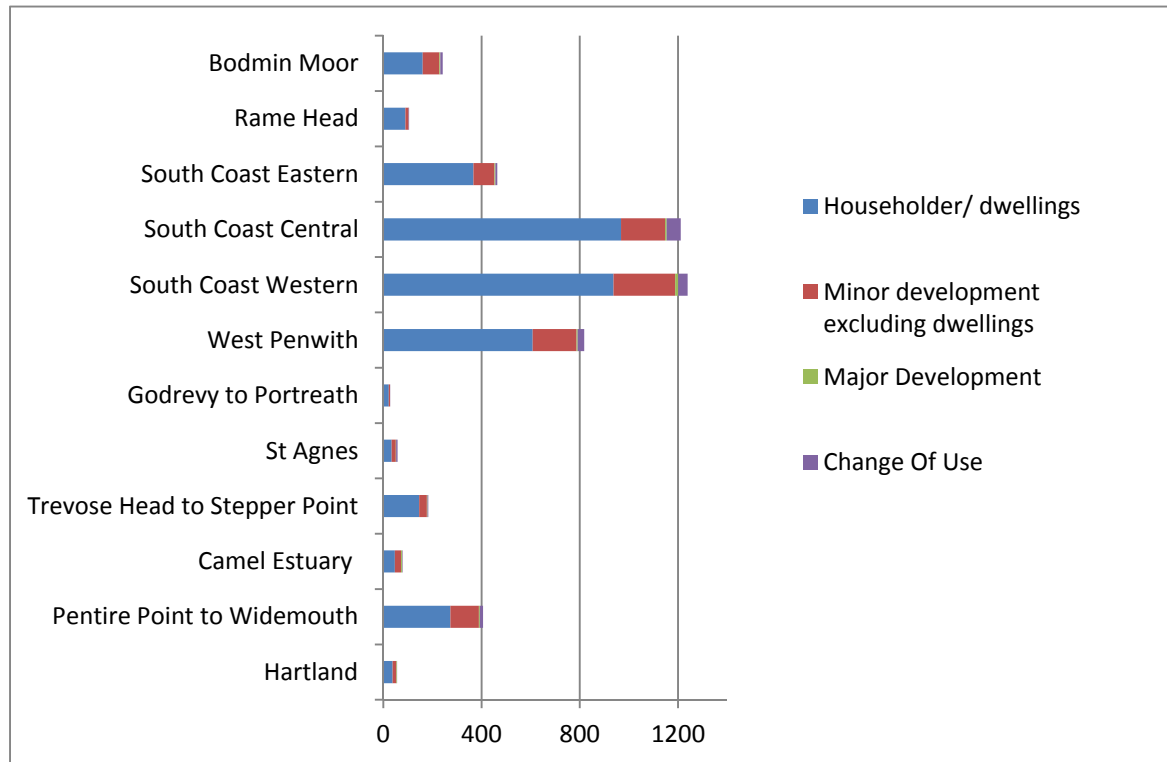


Source: Cornwall Council (2013)

Analysis by AONB Section

- 2.12 The planning data was also analysed for each of the 12 AONB sections, firstly by development category. **Figure 2.3** below shows the total number of planning applications by AONB section. This shows that, perhaps unsurprisingly, the most common application type in all AONB sections was in the 'Householder/dwellings' category, followed by 'Minor development (excluding dwellings)' and 'Change of Use'. Major applications were the least common, accounting for 2% of the total.

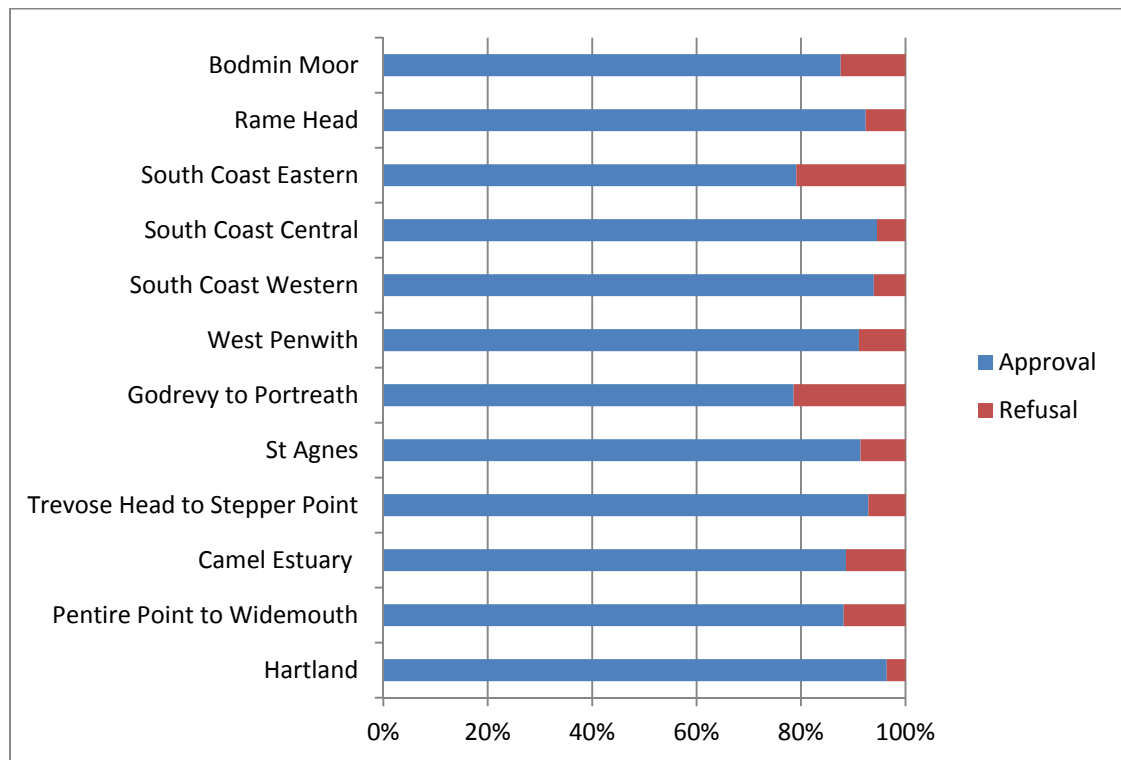
Figure 2.3: Total number and development type by AONB section



Source: Cornwall Council (2013)

- 2.13 **Figure 2.3** shows that South Coast Western had the highest amount of planning applications over the five-year period, totalling 1,239. 930 of these (75%) of these were in the 'Householder/dwellings' category, 251(20%) in 'Minor development', 38 in the 'Changes of use' category and 20 were 'Major developments'. South Coast Central and West Penwith also had large number of planning applications (1,211 and 818 respectively). The Camel Estuary had 8 major developments, two of which were refused. Those which were approved included two housing developments for a total of 70 dwellings, in 2009 and 2012.
- 2.14 Approval rates were varied between AONB sections (shown in **Figure 2.4**); highest in Hartland (96%) and lowest in Godrevy to Portreath (79%). Approval rates did not, however, correlate with the geographical or population sizes of the different AONB sections. The distribution of approved planning applications and types are illustrated in **Figures 2.5 – 2.7**.

Figure 2.4: Approval rates by AONB section



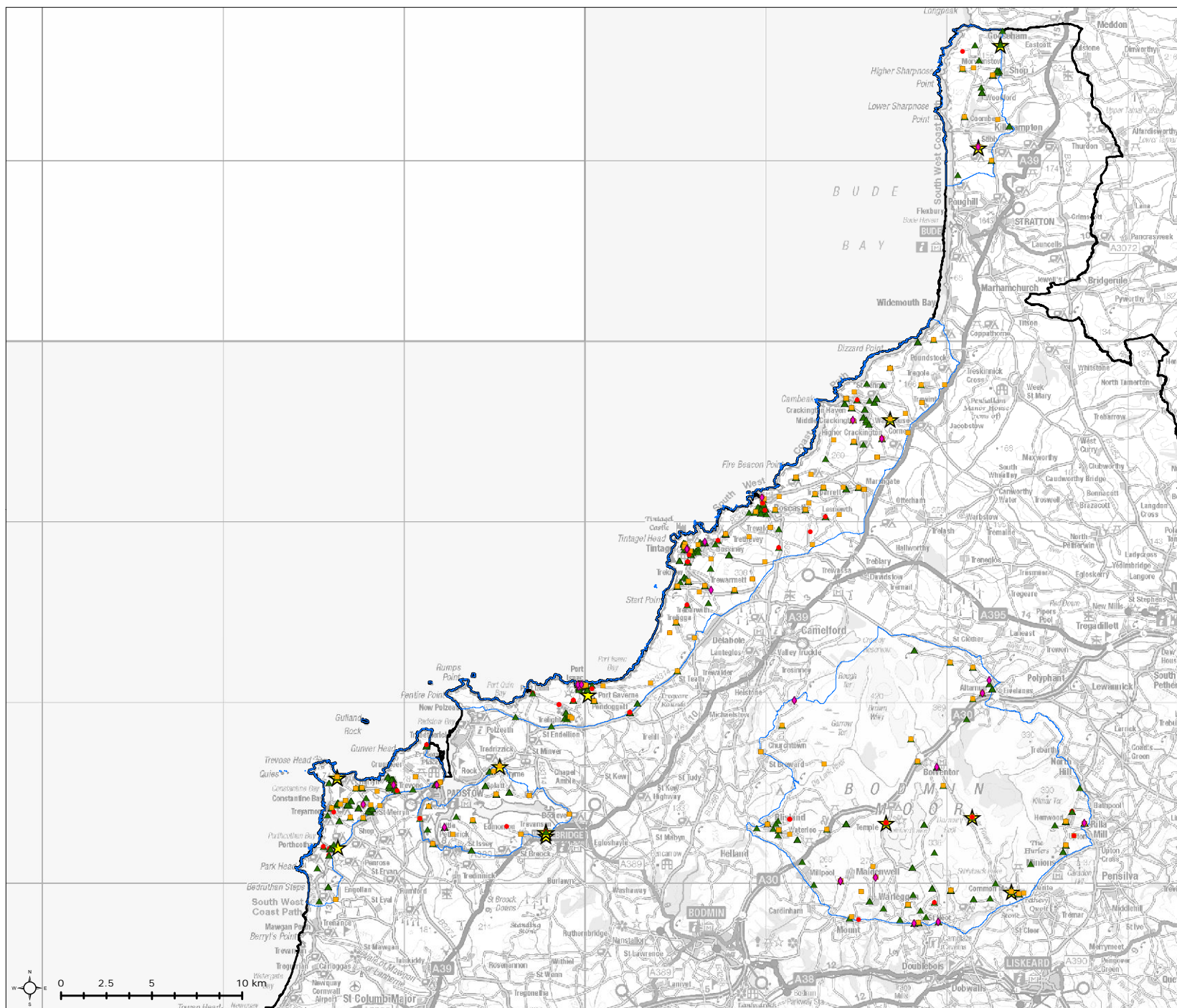
Source: Cornwall Council (2013)

- 2.14 Of the 24 applications for housing developments larger than ten dwellings, 20 were approved. 2009 and 2012 both saw a spike in applications for large housing developments, with 8 and 9 respectively. Interestingly, in 2009 two applications were refused, whilst in 2012 all nine applications were approved. The largest application for a housing development was in the South Coast Eastern section near the settlement of Fowey, where a development of 82 houses and associated infrastructure and landscaping was approved in 2012.
- 2.16 Following the introduction of the Feed-In Tariff in April 2010, there has been a marked increase in applications for domestic scale solar and wind installations in the AONB, peaking in 2011. For solar PV installations, there was an almost threefold increase in the number of applications approved, from 26 in 2010 to 73 in 2011. Approved domestic wind applications increased from 5 in 2010 to 18 in 2011.

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Figure 2.5
Planning Applications in
North Cornwall AONB
sections

- Cornwall
- Cornwall AONB
- Planning status: Approved
 - ★ Major development
 - ◆ Change of use
 - Minor development excluding dwellings
 - ▲ Householder/dwellings
- Planning status: Refused
 - All types of development



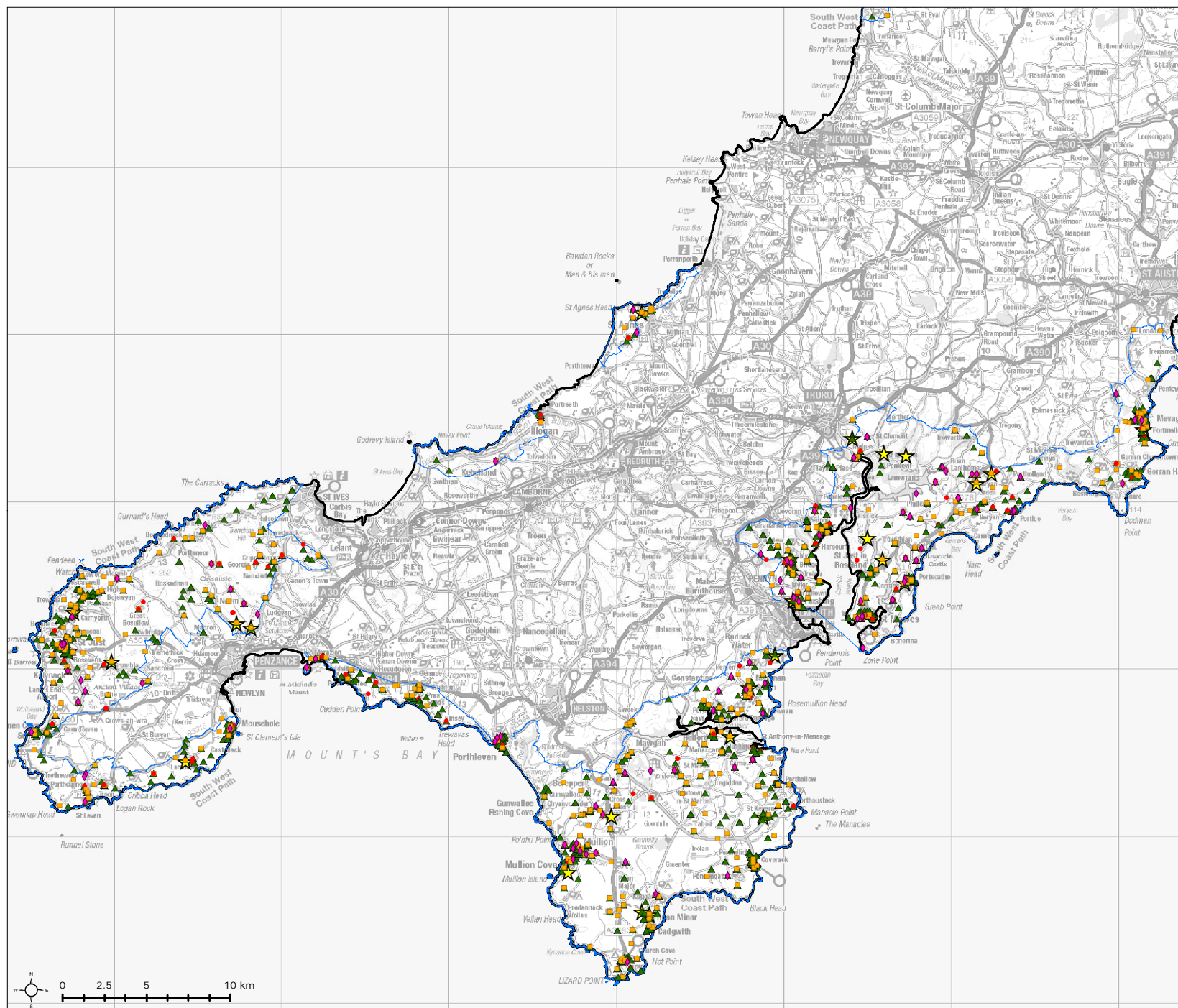
Map Scale @ A4: 1:300,000



Cornwall AONB Monitoring: Phase 2

Figure 2.6
Planning Applications in
South Cornwall AONB
sections

- Cornwall
- Cornwall AONB
- Planning status: Approved
 - ★ Major development
 - ◆ Change of use
 - Minor development excluding dwellings
 - ▲ Householder/dwellings
- Planning status: Refused
 - All types of development



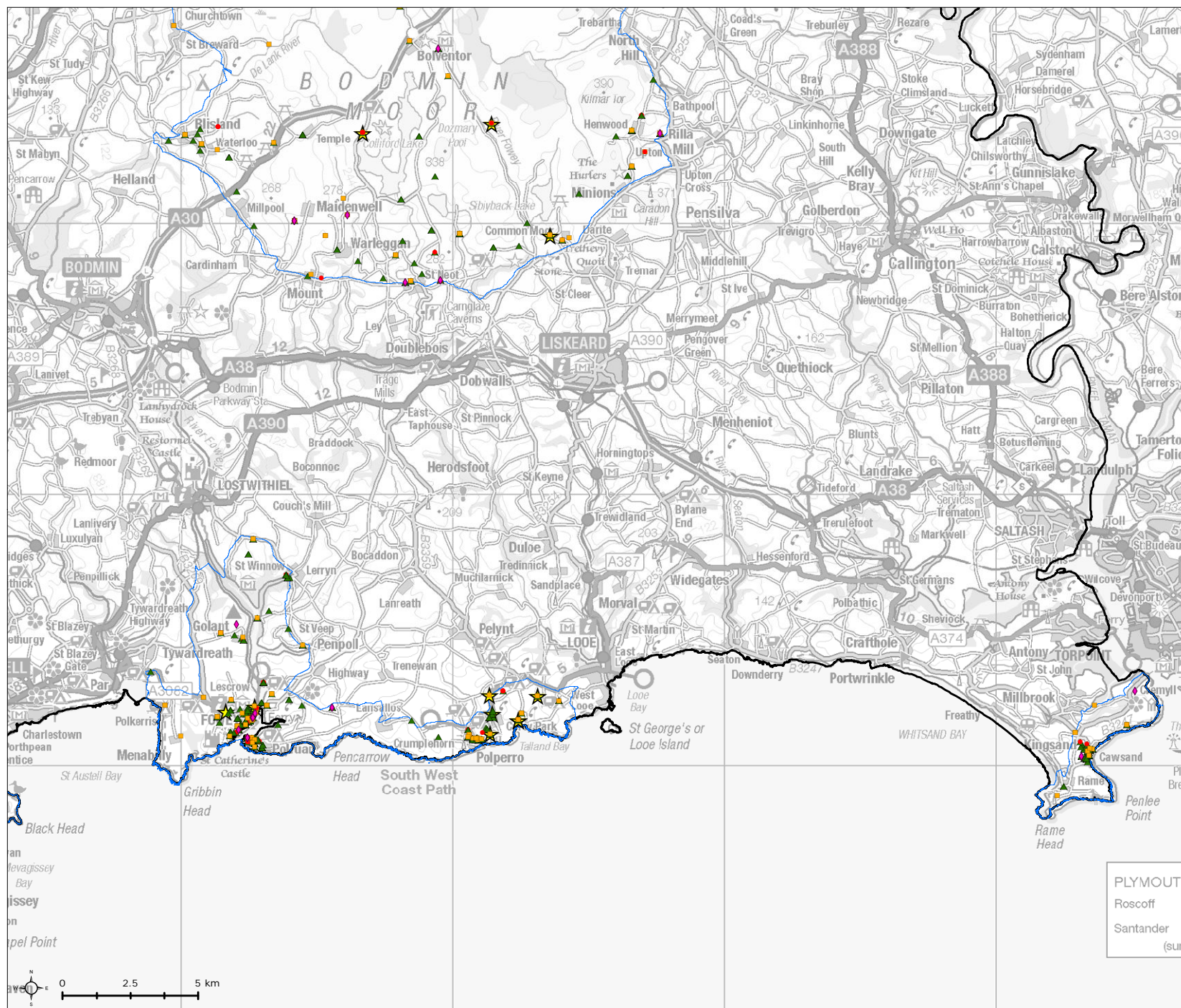
Map Scale @ A4: 1:325,000



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Figure 2.7
Planning Applications in
East Cornwall AONB
sections

- Cornwall
- Cornwall AONB
- Planning status: Approved
 - ★ Major development
 - ◆ Change of use
 - Minor development excluding dwellings
 - ▲ Householder/dwellings
- Planning status: Refused
 - All types of development



PLYMOUTH
Roscoff
Santander
(sum)

Map Scale @ A4: 1:200,000



Number of onshore wind and solar PV developments within the AONB

- 2.17 **Table 2.3** shows that there is currently 12.2MW capacity generated from operational onshore wind and solar PV developments in the AONB, up from 5.62MW since 2008. This change is explained by the repowering of Goonhilly Downs Wind Farm, which increased in generating capacity from 5.6MW to 12MW (now powered by six 107 metre high turbines, replacing the previous 14 smaller turbines that were present in 2008). No new large scale onshore wind or solar PV developments have been constructed or become operational in the AONB since 2008, although there are three solar farms that have been consented and are awaiting construction, providing an additional 10.25MW capacity. Additionally, there are five developments in planning or awaiting decision (four wind turbines and one solar PV development), which if constructed will have a capacity of 0.17MW. The location of these developments is illustrated in **Figure 2.8**.
- 2.18 Renewable energy developments adjacent to and visible from the AONB are also important to monitor in terms of their potential impacts on the setting and character of the protected landscape. Current data from the Department of Energy and Climate Change on renewable energy developments shows a number of large solar and wind farms that are in close proximity to the AONB boundary, particularly in the northern and western areas of the county. Examples of commercial scale wind farms on the border of the AONB include the Delabole Wind Farm (four 99m turbines) next to the Pentire Point to Widemouth section and Crimp Wind Farm (four 71m turbines) on the boundary of the Hartland AONB section.
- 2.19 There are also a number of commercial scale solar farms found throughout Cornwall that may be visible from parts of the AONB. Some examples of these solar farms include Langunnett Solar Farm (6MW capacity) near to the South Coast Eastern area, Middle Treworder Farm (5MW) next to the Camel Estuary section and East Woolley Farm (5MW) adjacent to Hartland.


Table 2.3: Onshore wind and solar PV developments within the AONB

Technology	AONB Section	Name	Status 2008	Number and height of turbines	Capacity 2013 (MW)
OPERATIONAL					
Wind	South Coast Western	Goonhilly Downs Wind Farm Repower	Existing smaller windfarm (now decommissioned – see below)	6 x 110m	12
Wind	South Coast Western	Trelease Farm	Operational	1 x 34.5m	0.01
Solar	West Penwith	Pendeen Parish Members Institute	Operational	N/A	0.01
					TOTAL CAPACITY: 12.2
CONSENTED AND AWAITING CONSTRUCTION					
Solar	South Coast Western	Goonhilly Downs – PV	N/A	N/A	5
Solar	South Coast Western	Higher Tregarne Solar Farm	N/A	N/A	5
Solar	South Coast Western	Worvas Farm Solar Park	N/A	N/A	0.25
					TOTAL CAPACITY: 10.25
IN PLANNING/AWAITING DECISION					
Wind	West Penwith	Trevilley Farm Cottages Wind Turbine	N/A	1 x 18.6m	0.01
Wind	Pentire Point to	Collamoor Wind Turbine	N/A	1 x 35m	0.05







Technology	AONB Section	Name	Status 2008	Number and height of turbines	Capacity 2013 (MW)
	Widemouth				
Wind	Pentire Point to Widemouth	The Poldark Inn Wind Turbine	N/A	1 x 35m	0.05
Wind	Pentire Point to Widemouth	Condolden Farm Wind Turbine	N/A	1 x 35m	0.05
Solar	Camel Estuary	Dinham Farm Caravan Solar Park	N/A	N/A	0.1
					TOTAL CAPACITY: 0.17
DECOMMISSIONED					
Wind	South Coast Western	Goonhilly Downs - Windfarm	Operational: Capacity: 5.6 MW	14 x 25m	Decommissioned (Re-powered)
					TOTAL CAPACITY: 5.6

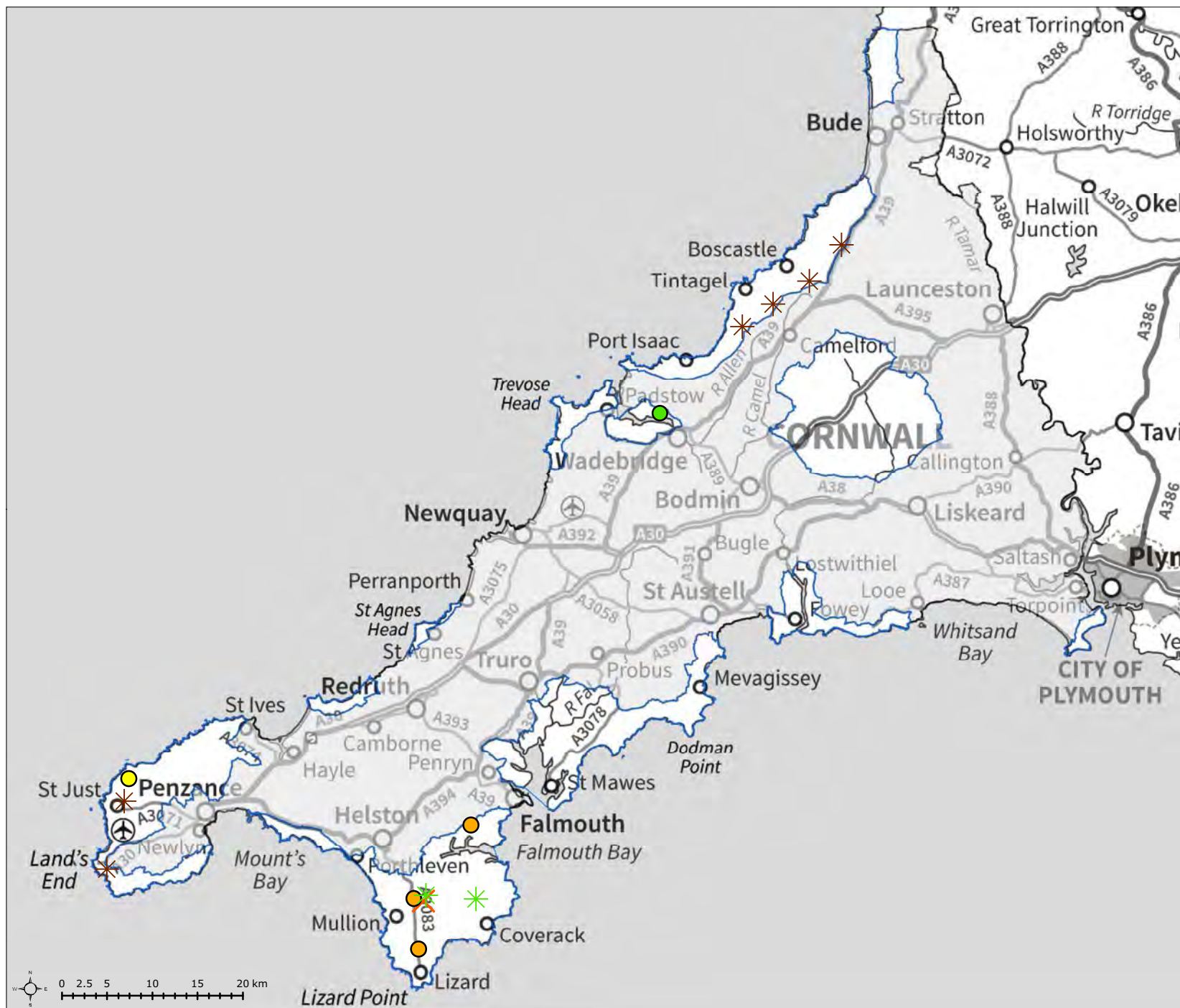
Source: RESTATS and Renewable UK (accessed 29 October 2013)

Figure 2.8
Wind and field scale solar PV
schemes within the AONB

 Cornwall AONB

Renewable Energy

-  Solar,
Awaiting Construction
-  Solar,
Operational
-  Solar,
Application Submitted
-  Wind Onshore,
Decommissioned
-  Wind Onshore,
Operational
-  Wind Onshore,
Application Submitted



Map Scale @ A4: 1:600,000



Number and type of offshore developments

- 2.20 At present, there are no offshore renewables adjacent to the AONB – this situation has remained unchanged since Phase 1 (2008).
- 2.21 The Wave Hub development is located 16km north east of St Ives and connects to a substation at Hayle, and is used to test marine renewable energy devices. The Wave Hub itself occupies 55 square meters of sea on an area of 8km² that has been leased for 25 years from the Crown Estate. Devices tested at the Wave Hub may be visible from the West Penwith and Godrevy to Porthreath AONB sections.
- 2.22 Developments in planning stages that may be installed at the Wave Hub in the future include the semi submerged Pelamis device and the ETI Floating offshore Wind Demonstrator, which could be up to 175m in height.

Settlement pattern

- 2.23 In Phase 1, 47 sample squares were selected across the AONB to monitor development-led landscape change over time under the 'Settlement Pattern' indicator. This used the method of Aerial Photographic Interpretation (API) to lay down the baseline in 2008, using aerial photographs from 2005. The API was used to classify, using GIS, areas of built development using the following categories:
- Permanent development
 - Temporary caravans / camping sites
 - Static caravans / chalets
 - Agricultural glass houses
- 2.24 The API process was repeated for Phase 2 by Plymouth University using aerial photographs from March 2012. Tables 2.2 to 2.6 provide a breakdown of the results from API undertaken in Phases 1 and 2.

Permanent development

- 2.25 **Table 2.4** illustrates the change in the area occupied by permanent development in the sample squares from each AONB section. The majority of sample squares had not seen any significant change; the largest increase was seen in the South Coast Central AONB section, with an increase of 2 hectares (4.2%) classed as permanent development.

Table 2.4: Areas of permanent development in the sample squares (2005 and 2012)

AONB Section	Area (ha) 2005	Area (ha) 2012	Difference (ha)
Hartland (Sample square refs: SX1868, SS2115)	1.6	1.66	0.06
Pentire Point to Widemouth (Sample square refs: SX0080, SX0789, SX0886, SX1492)	24.6	25.2	0.6
Bodmin Moor (Sample square refs: SX1868,	8.5	8.5	0

AONB Section	Area (ha) 2005	Area (ha) 2012	Difference (ha)
<i>SX2369, SX2369, SX1479)</i>			
Camel Estuary (Sample square refs: SW9272, SW9673, SW9475)	7.7	7.9	0.2
Trevose head to Stepper Point (Sample square refs: SX8672, SW8774)	14.7	14.7	0
St Agnes (Sample square refs: SW7959, SW7151)	12.1	12.1	0
Godreavy to Portreath (Sample square refs: SW6042, SW6444)	4.3	4.3	0
West Penwith (Sample square refs: SW3734, SW3923, SW4235, SW4436, SW4625, SW4634, SX4837, SX4840)	28.2	28.2	0
South Coast Western (Sample square refs: SW 7528, SW6522, SW7114, SW7114, SW7117, SW7526, SW7722)	39.3	39.3	0
South Coast Central (Sample square refs: SW8037, SW8134, SW8632, SW8843, SW9340, SX0145)	47.6	49.6	2
South Coast Eastern (Sample square refs: SX0950, SX1152, SX1156, SX1254, SX1350, SX1551, SX2252)	23.1	23.1	0
Rame (Sample square ref: SX4351)	3.6	3.6	0

Source: Cornwall Council (2005 aerial photographs) and Microsoft World Imagery (29.03.2012)

- 2.26 **Table 2.5** provides more detail on the changes recorded in the sample squares (for those where change has been recorded since Phase 1), including the types of developments these can be attributed to.

Table 2.5: Change in settlement pattern in AONB sections (for selected sample squares)

AONB section	Sample square reference	Narrative of change
South Coast Central	SW8037	1 new residential and 1 new agricultural building near Carsawan
	SX0145	1 agricultural building and 2 residential buildings near Cemy
	SW8134	Extension to boat yard near Church Town
	SW9340	1 new development of 2 small agricultural buildings near Trethennal Manor, possibly barns/stables.
Hartland	SS2009	2 new agricultural buildings at Dunsmouth Farm
West Penwith	SW4625	1 agricultural building which appears to be a polytunnel removed near Treen, however the land still looks active so this 0.3 ha area has still been classified as developed until further surveys confirm that it has been permanently removed.
South Coast Western	SW7722	1 new agricultural building at Lesneague
Pentire Point to Widemouth	SX0080	New car park developed near Port Isaac (see Figure 2.2 below)
Camel Estuary	SW9272	1 new residential buildings near Trevorricks and a new small complex of 2 buildings near Tredore possibly agricultural/industrial units
St Agnes	SW7151	New building (possibly industrial) on the edge of St Agnes

Source: Microsoft World Imagery (29.03.2012)

- 2.27 **Figure 2.9** below illustrates the change in the landscape near Port Isaac resulting from the addition of a new car park (within the Pentire Point to Widemouth AONB Section). This is clearly visible in the aerial photograph from 2012 when compared with the same view captured in 2005.

Figure 2.9: Comparison of 2005 and 2012 aerials showing a new car park near Port Isaac (sample square SX0080)

2005



2012



Temporary caravans / camping sites

- 2.28 The same 47 sample squares were re-visited in Phase 2 to look at changes in the area and number of temporary caravans and tents. The results are only presented for those where this development was present. **It is important to note that the time of year the two sets of aerial photographs were taken (summer in 2005 and March in 2012) will have had an impact on the changes shown for this seasonal development type.**
- 2.29 **Table 2.6** shows that there was little change in the area of sites for temporary caravans/tents in the sample squares; the only difference was a marginal decrease in the South Coast Central AONB section. On the other hand, the number of caravans/tents recorded showed dramatic changes in some instances. All AONB sections witnessed a decrease in number except for Pentire Point to Widemouth, which did not have any caravans/tents present in Phase 1 (but had 72 visible in Phase 2). The greatest change was seen in Trevoise Head to Stepper Point, with a decrease of 589 caravans/tents (74%), as illustrated in sample square examples shown in **Figure 2.10**.

Table 2.6: Number/area of temporary caravans/tents (2005 and 2012)

AONB Section	2005		2012		Comparison	
	Area (ha)	No of caravans/tents	Area (ha)	No of caravans/tents	Difference (ha)	Difference (no)
Pentire Point to Widemouth (Sample square refs: SX0080, SX0789)	4.3	0	4.3	72	0	72
Camel Estuary (Sample square refs: SW9272, SW9475)	1.6	14	1.6	10	0	-4
Trevoise head to	23.6	796	23.6	207	0	-589

AONB Section	2005		2012		Comparison	
Stepper Point (Sample square refs: SW8672, SW8774)						
St Agnes (Sample square refs: SW7050)	3.1	66	3.1	0	0	-66
West Penwith (Sample square refs: SW4840)	0.7	17	0.7	0	0	-17
South Coast Western (Sample square refs: SW5728)	5.2	128	5.2	13	0	-115
South Coast Central (Sample square refs: SW9340)	0.4	15	0.36	8	-0.04	-7

Figure 2.10: Comparison of 2005 and 2012 aerals showing difference in caravan/tent numbers in Trevoze Head to Stepper Point (sample square SW8774)

2005



2012



Static caravans / chalets

- 2.30 **Table 2.7** illustrates a similar pattern for the number/area of static caravans and chalets in the sample squares, with negligible change in area but some vast differences in numbers likely to be explained by the timings of the aerial photographs. At Trevoze Head to Stepper Point there was an increase of 69 static caravans/chalets, whilst in the South Coast Western section, there was a decrease of 138.

Table 2.7: Number/area of static caravans and chalets (2005 and 2012)

AONB Section	2005		2012		Comparison	
	Area (ha)	No of static caravans/chalets	Area (ha)	No of static caravans/chalets	Difference (ha)	Difference (No)
Pentire Point to Widemouth (Sample square ref: SX0080)	0.9	6	0.9	6	0	0
Camel Estuary (Sample square refs: SW9475)	0.4	6	0.36	7	-0.04	1
Trevoze head to Stepper Point (Sample square refs: SW8672, SW8774)	1.7	6	1.7	75	0	69
South Coast Western (Sample square refs: SW5728)	5.1	151	5.1	13	0	-138
South Coast Eastern (Sample square refs: SX1350)	0.4	11	0.4	14	0	3

Source: Cornwall Council (2005 aerial photographs) and Microsoft World Imagery (29.03.2012)

Agricultural glass houses

- 2.32 There were not any changes in the area of agricultural glass houses located in the sample squares – squares presented here are those which have this development type present.

Table 2.8: Area of agricultural glass houses (2005 and 2012)

AONB Section	Area (ha) 2005	Area (ha) 2012	Difference (ha)
Camel Estuary (Sample square ref: SW9272)	0.3	0.3	0
West Penwith	0.4	0.4	0

AONB Section	Area (ha) 2005	Area (ha) 2012	Difference (ha)
<i>(Sample square ref: SW3923)</i>			
South Coast Western <i>(Sample square ref: SW7117)</i>	0.1	0.1	0
South Coast Eastern <i>(Sample square ref: SX1152)</i>	0.1	0.1	0

Source: Cornwall Council (2005 aerial photographs) and Microsoft World Imagery (29.03.2012)

Number and area of Conservation Areas

- 2.34 **Table 2.9** below provides a list of the number and area covered by Conservation Area designation, comparing current figures with those presented in the Cornwall AONB Atlas (2009). The current location of Conservation Areas within the AONB is also mapped in **Figure 2.11**.
- 2.35 There are a total of 52 Conservation Areas in the AONB - occurring in all AONB Sections apart from Hartland, St Agnes and Godrevy to Portreath. This has not changed since 2009. The majority of Conservation Areas are found in the southern AONB sections; West Penwith and South Coast Central both contain 26 Conservation Areas, half of the total number in the AONB. However the greatest area of Conservation Areas occurs on Bodmin Moor, with 740.5ha, or 53% of the total area of Conservation Areas found in the AONB.
- 2.36 Overall, the area covered by Conservation Areas in the AONB has shown a marginal change of just over 1 hectare; however this is likely due to updates in digitising of the Conservation Area data rather than any changes in the designated area.

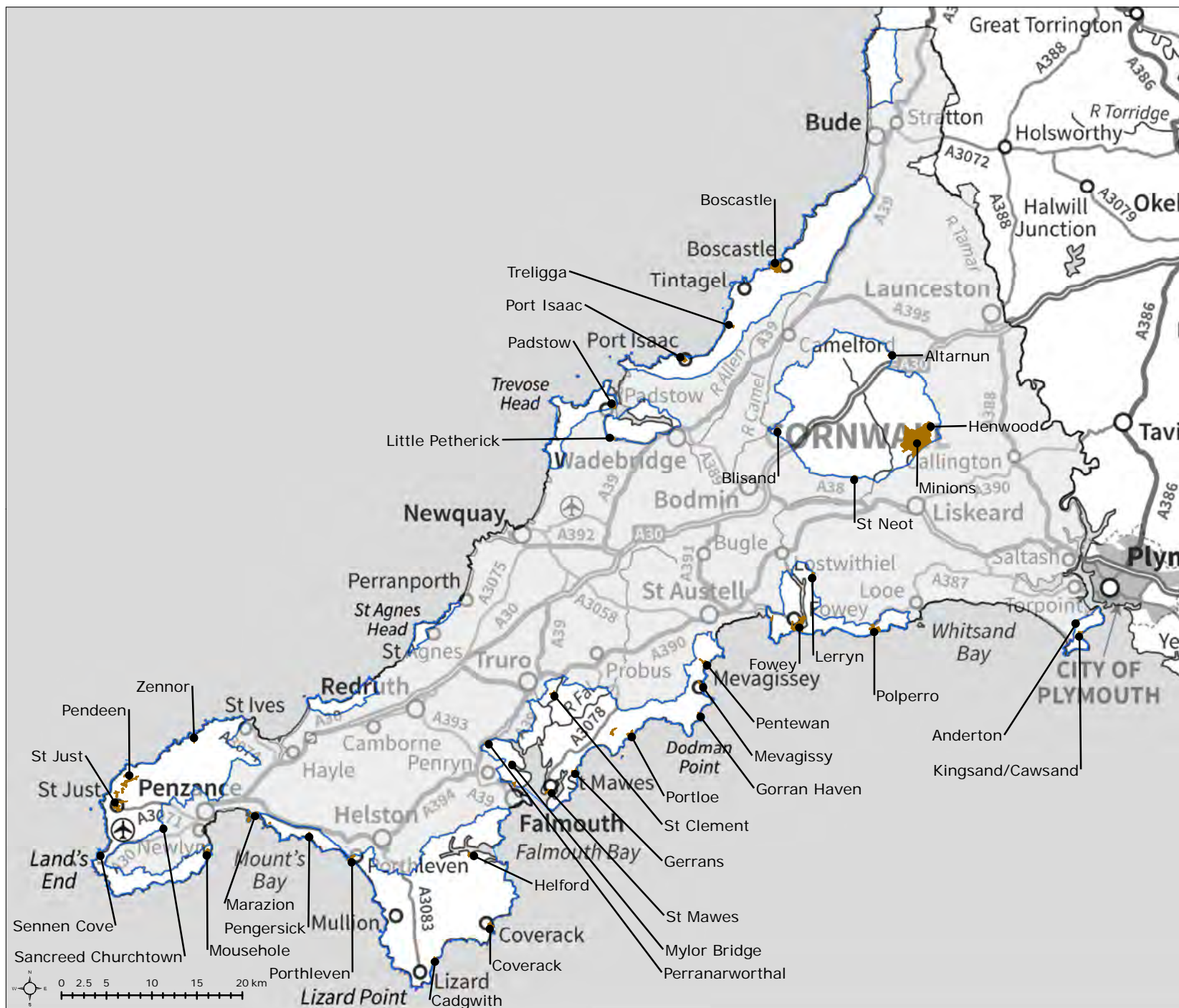
Table 2.9: Conservation Area coverage between 2009 and 2013

AONB Area	Number of Conservation Areas	Area 2009 (ha)	Area 2013 (ha)	Change (ha)
Pentire Point to Widemouth	3	115.34	115.34	0
Bodmin Moor	5	740.57	740.50	<i>Minor change</i>
Camel Estuary	1	3.11	3.11	0
Trevose Head to Stepper Point	1	5.82	5.82	0
West Penwith	13	139.12	139.12	0
South Coast Western	8	84.19	83.08	<i>Minor change</i>
South Coast Central	13	139.02	139.02	0
South Coast Eastern	6	152.02	152.02	0
Rame Head	2	14.20	14.18	<i>Minor change</i>
Total	52	1393.40	1392.19	-1.22

Source: Cornwall and Scilly Historic Environment Record (2009 and 2013)

Figure 2.11
Conservation Areas in
the AONB

□ Cornwall AONB
■ Conservation Areas



Map Scale @ A4: 1:600,000

List of data sources used for this theme

2.37 The data sources used for this theme are as follows:

- Cornwall Council Planning Records (2008 – 2013)
- CPRE Star Count Maps 2013
- Department of Energy and Climate Change: RESTATS renewable energy database, accessed on 29 October 2013 <https://restats.decc.gov.uk>
- Renewable UK: onshore wind energy database, accessed on 29 October 2013 <http://www.renewableuk.com/>
- Microsoft (2012) World Imagery photos
- Cornwall Aerial Photos (2005)
- Cornwall and Scilly Historic Environment Record: Conservation Areas (2013)

Recommendations for ongoing monitoring

2.38 The AONB should repeat the monitoring of all indicators under the 'Planning and Development' theme every five years, to coincide with AONB Management Plan reviews.

2.39 In addition, the AONB should:

- Keep a watching brief for any future updates to CPRE's Night Blight mapping (2000) to enable a direct comparison with Phase 1.
- Consider commissioning an AONB project on dark night skies, encouraging AONB communities to undertake their own star counts (see the protocol for indicator 1.3 in the Phase 1 monitoring report). Local projects could be initiated for parts of the AONB felt to be most sensitive to light pollution, such as those on the fringes of the main urban areas.
- Continue to provide input into planning decisions on onshore and offshore renewables, with particular reference to information contained in the Cornwall Landscape Character Assessment (2007) and Cornwall Council's Assessment of the Landscape Sensitivity to Onshore Wind Energy and Large-scale Photovoltaic Development in Cornwall (2011).
- Consider commissioning a Seascape Character Assessment (potentially in partnership with Cornwall Council and others) to provide baseline evidence to help inform marine planning decisions; with pressure for offshore development likely to be a growing force for change.

3 Farming, Food and Forestry



3 Farming, Food and Forestry

Indicators selected for this theme

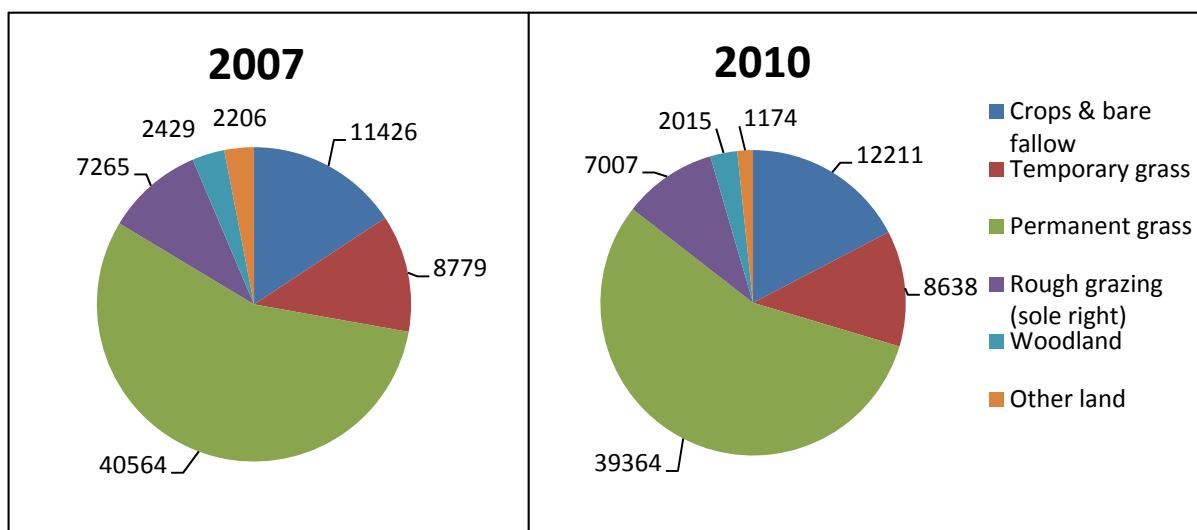
3.1 The following monitoring indicators have been selected for the 'Farming, Food and Forestry' theme:

- Patterns of agricultural land use
- Levels of Environmental Stewardship uptake
- Extent of biomass planting
- Field patterns and size
- Field boundary type and condition
- Woodland cover and type
- Levels of woodland management

Patterns of agricultural land use

3.2 The total area of land under agricultural use in the AONB has decreased slightly from 72,669 hectares in 2007 to 70,409 hectares – or 73% of the AONB's total land area – in 2010 (a decrease of just over 3%). This decrease has occurred across all different types of agricultural land use, except for crops and bare fallow, which has shown an increase of 6.9%. This change is illustrated in the charts at **Figure 3.1** below.

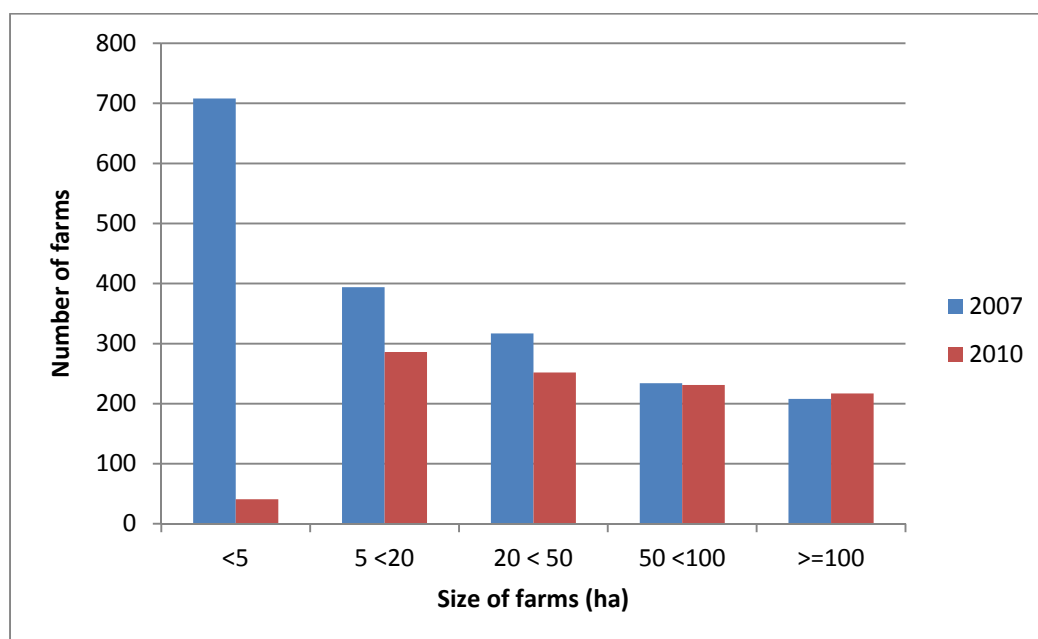
Figure 3.1: Agricultural land uses in the AONB (2007 and 2010)



Source: Defra June Survey of Agriculture (2007 and 2010).

3.3 Interestingly, the number of agricultural holdings has dropped by 35.6%, from 1,595 in 2007 to 1,027 in 2010 (**Figure 3.2**), indicating a trend towards larger farms. The greatest reduction has been seen in smallholdings of 5 hectares or less, which have decreased in number by 95% from 708 to 41. Very large farms of over 100 hectares is the only size category that has seen an increase (by 9 to a total of 217), likely to suggest a trend of farm amalgamation and purchase of smallholdings by people outside of commercial agriculture.

Figure 3.2: Number of agricultural holdings in different size categories in the AONB (2007 and 2010)



Source: Defra June Survey of Agriculture (2007 and 2010).

Levels of Environmental Stewardship uptake

Overall levels of uptake

- 3.4 **Table 3.1** illustrates the changes in Environmental Stewardship (ES) agreements in the AONB since the same figures were presented in the AONB Atlas, in 2009⁶. These show that there has been a 53% increase in the area of the AONB under some form of ES agreement, with 48% of the total AONB area under agreement. In terms of area covered, in 2009 ES agreements covered a total of 30,433 hectares, with 2013 coverage increasing to 46,510 hectares. This is likely to be due in large part to the cessation of the previous 'classic' agri-environment schemes (Countryside Stewardship and Environmentally Sensitive Areas (ESA)) which were phased out from 2006. Many of these 10-year agreements were still in place in 2009, accounting for a lower uptake in ES at that time.

Scheme uptake

- 3.5 In terms of the scheme itself, there has also been a significant change in proportion of the different tiers of ES implemented in the AONB, with those involving Higher Level Stewardship (HLS) all showing a vast increase (including following the end of the West Penwith ESA). On the other hand, Organic Entry Level Stewardship (OELS) showed a marked decrease of 42%, going from the second most popular scheme in 2009 to the scheme with the least uptake in 2013. However, Organic Entry Level Stewardship plus Higher Level Stewardship experienced a significant increase during the same period (421%), now accounting for 5% of ES uptake in the AONB.

⁶ Please note that the Atlas presented ES uptake for areas of the AONB within the Cornwall county boundary. 2013 figures represent the area of the whole AONB including those areas beyond the Cornwall boundary. Whilst the exact figures may not be directly comparable, the trends and general direction of change is not affected.

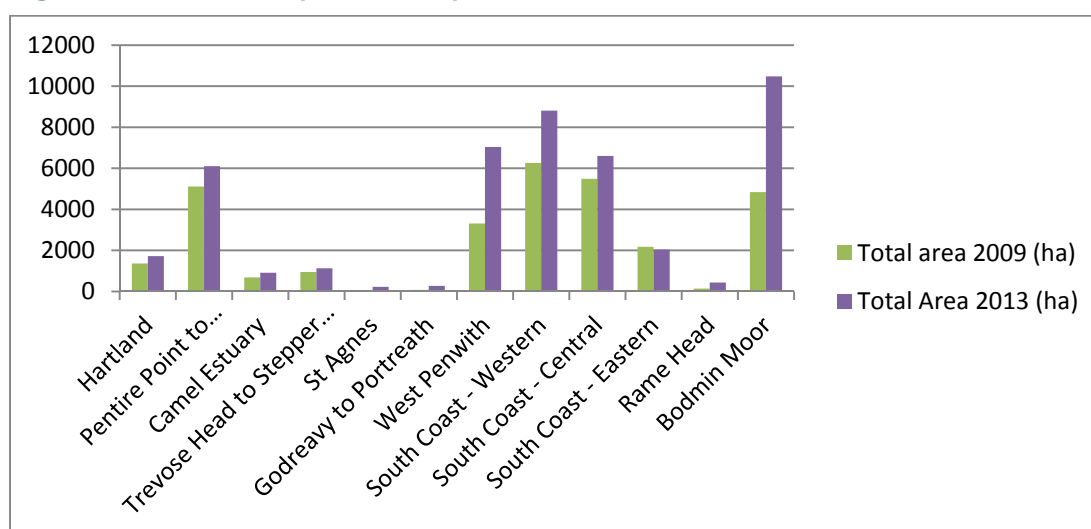
Table 3.1: Environmental Stewardship agreements in the AONB

Stewardship Scheme	Area in AONB (ha) 2009	% of all ES	Area in AONB (ha) 2013	Cost 2013 (£)	% of all ES	% change 2009-2013
Entry Level Stewardship	23,361	77%	23,721	£751,532	51%	2%
Entry Level plus Higher Level Stewardship	2,602	9%	15,873	£2,246,003	34%	510%
Higher Level Stewardship	247	1%	2,334	£253,113	5%	845%
Organic Entry Level Stewardship	3,752	12%	2,135	£198,340	5%	-43%
Organic Entry Level plus Higher Level Stewardship	470	2%	2,448	£364,027	5%	421%
Total	30,433	100%	46,510	£3,813,016	100%	53%

Source: Natural England ES GIS data 2009, NE Protected Landscapes Monitoring Framework 2013

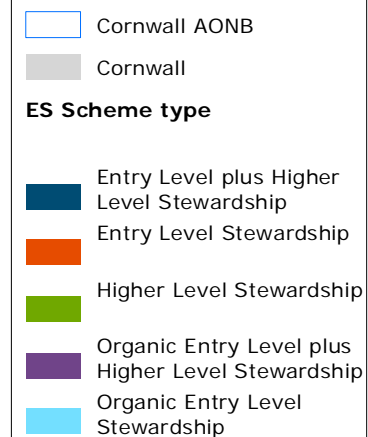
- 3.6 Looking at the AONB sections in more detail, all have experienced an increase in Environmental Stewardship uptake since 2009, except for the South Coast Eastern section which has seen a 6% decrease. **Figure 3.4** illustrates the changes in mapped format, with the graph at **Figure 3.3** providing further information. These show that the increase in ES uptake has not been uniform across all sections of the AONB. In particular, uptake on Bodmin Moor has more than doubled to 10,482 hectares, and is now the AONB section with the greatest amount of ES uptake. **Figure 3.5** demonstrates how increased uptake of schemes with an HLS element has contributed to the overall increase in the area of the AONB under ES. Reflecting the overall trend, OELS uptake has decreased in all AONB sections.

Figure 3.3: Total ES uptake area per AONB section



Source: Natural England GIS data (2009 and June 2013)

Figure 3.4
Environmental Stewardship
Uptake



Map Scale @ A4: 1:825,000

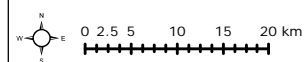
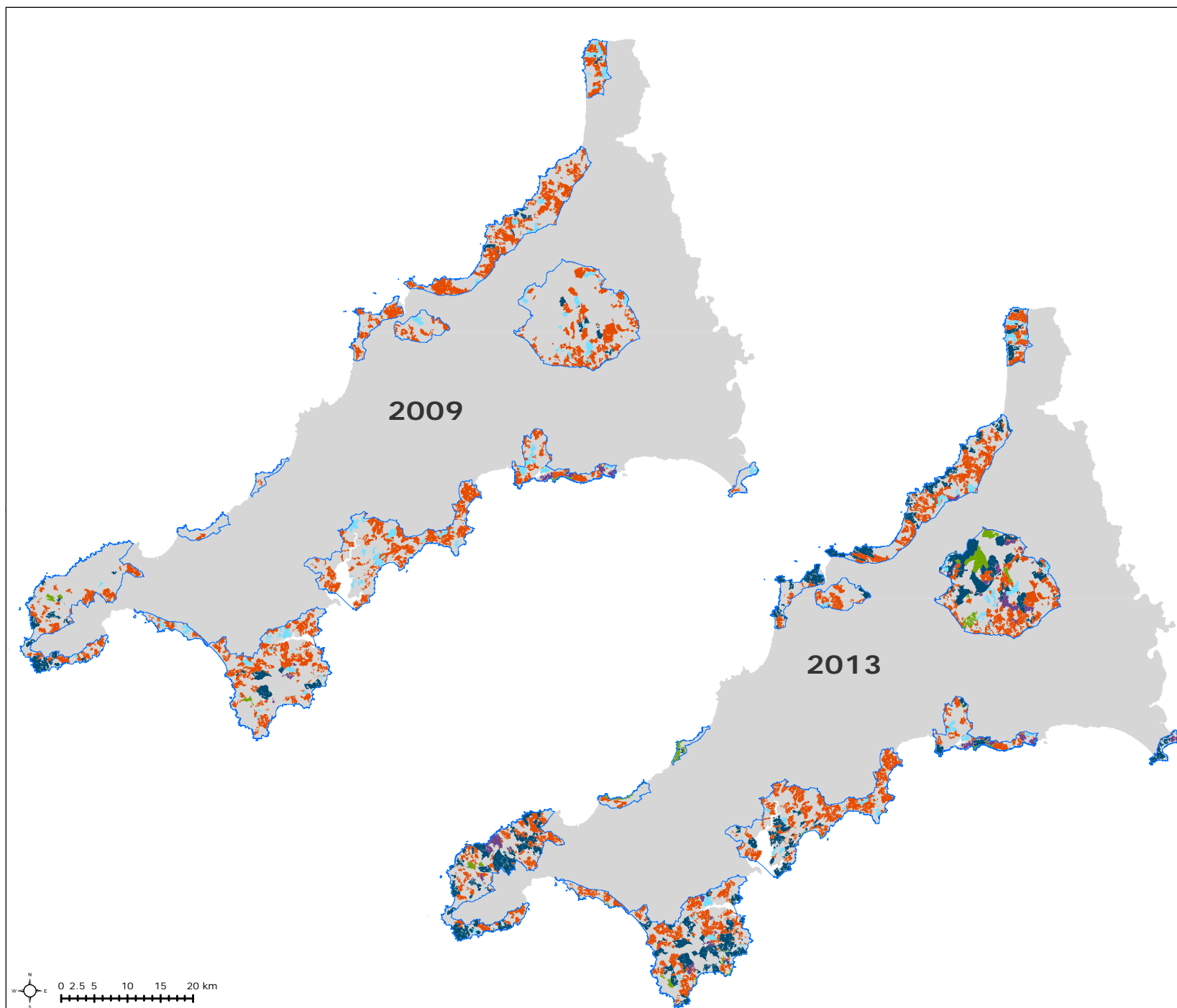
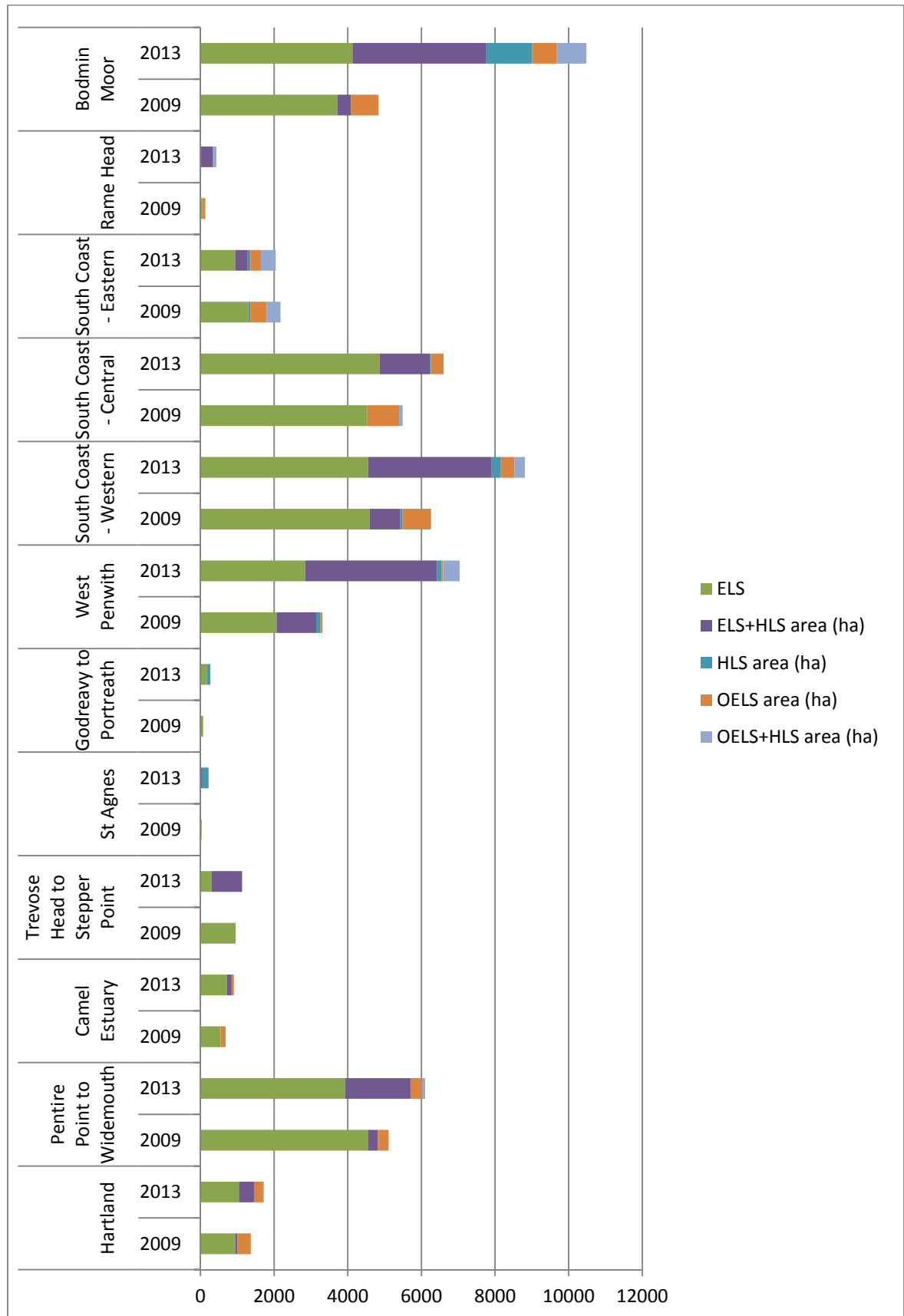


Figure 3.5: ES uptake by scheme and AONB section



Source: Natural England GIS data (2009 and June 2013)

Option uptake

- 3.8 **Table 3.2** below provides a breakdown of option coverage in the AONB, by main option groups. This shows that the greatest number of agreements relate to the management, restoration and creation of low input grassland, with 409 agreements in this option group. It is also interesting to note the significant coverage (over 1,000 hectares) of land under ES for the purposes of the management and protection of archaeological features, given the rich historic environment within the AONB.

Table 3.2: ES option group uptake

ES option groups	Area (ha)/length (m)/number of trees	Number of agreements
Area of low input grassland managed, restored or created under ES	7,050	409
Linear access (m)	6,761	<i>Not available</i>
Area of land under ES for the maintenance, restoration or creation of moorland	3,842	135
Area of land under ES for the management, restoration or creation of lowland heathland	2,036	68
Area of land under ES specifically for the management and protection of archaeological features	1,070	78
Number of hedgerow trees and in-field trees managed under ES	311	35
Area of woodland managed and created under ES	272	30
Open access (ha)	233	<i>Not available</i>

Source: Natural England (2013)

Field patterns and size

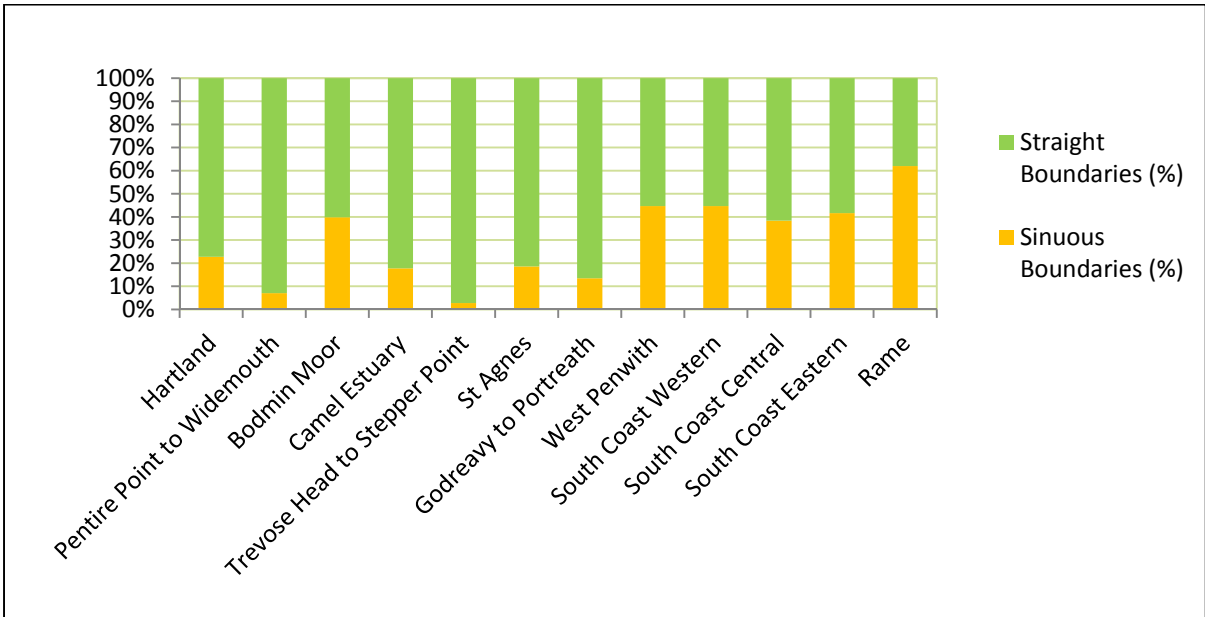
- 3.9 47 sample squares across the AONB were selected in Phase 1 for the analysis of this indicator. A baseline was laid down in 2008 using aerial photography from 2005, which has been repeated for Phase 2 using aerial photography from 2012. The same method of aerial photographic interpretation (API) was undertaken by Plymouth University in both phases to allow a direct comparison and analysis of change, following the monitoring protocol (indicator 2.4) set out in the Phase 1 report (May 2008).

Field patterns

- 3.10 An assessment of field patterns was made by classifying field boundaries present in each sample square as 'sinuous' (indicating irregular, more historic field patterns) or 'straight' (often indicating parliamentary or modern enclosures). The analysis shows that a significant proportion of field boundaries were classified as straight, particularly in the Pentire Point to Widemouth, Camel Estuary, Trevoze Head to Stepper Point, St Agnes and Godrevy to Portreath AONB Sections. The analysis at the sample square level also indicates that Rame Head is the only section dominated by sinuous boundaries (over 60%); which also defined 40% or more of boundaries in squares surveyed in Bodmin Moor, West Penwith, South Coast Western and South Coast Eastern. The

ratio of straight to sinuous boundaries across the AONB Sections is depicted in **Figure 3.6** below. This ratio has remained largely unchanged since 2008.

Figure 3.6: Ratio of straight to sinuous boundaries by AONB Section

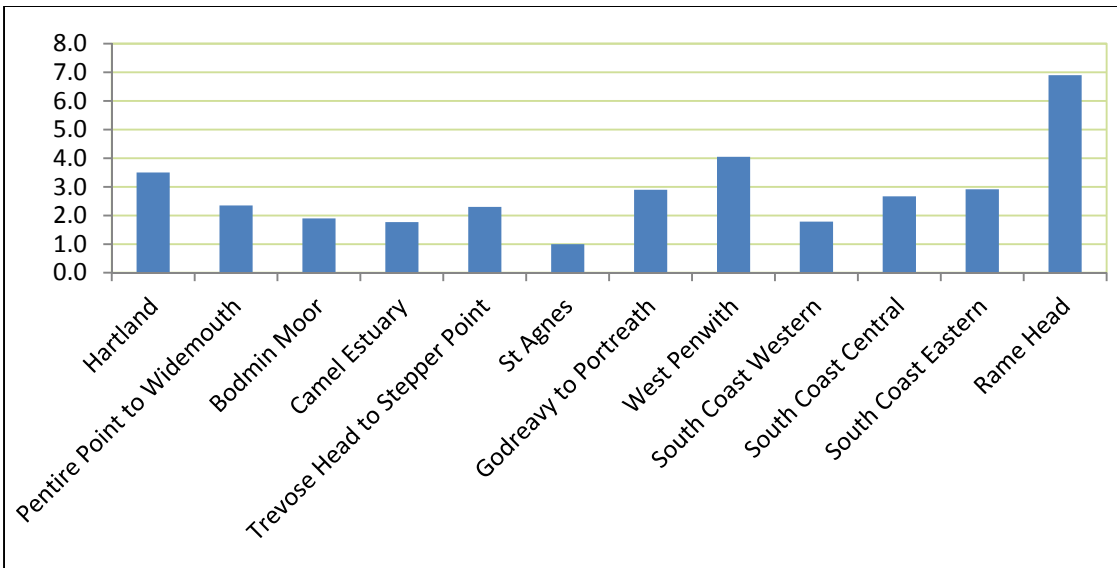


Source: Plymouth University (2013)

Field size

- 3.11 The average field size was calculated for each complete field within the sample squares. Although there has been a removal of a few field boundaries since Phase 1 (discussed further under ‘field boundary type’), this has not affected average field sizes. Therefore average field sizes have remained the same across the AONB’s sample squares since the baseline was laid down in 2008 (based on aerial photographs from 2005).
- 3.12 **Figure 3.7** shows average field sizes recorded in the sample squares across the AONB sections. This shows that the section with the smallest average field size is St Agnes (one hectare), followed by the Camel Estuary and South Coast Western. Interestingly, although Rame Head was assessed as having the greatest proportion of sinuous boundaries (indicating historic field patterns, which are usually of small scale), it contains the largest average field size of all squares assessed in the AONB, at just under seven hectares.

Figure 3.7: Average field sizes (ha) by AONB Section



Source: Plymouth University (2013)

Field boundary type and condition

Field boundary type (using Aerial Photographic Interpretation (API))

- 3.13 API was also used to identify types of field boundaries, using the four overall categories. This followed the same approach developed by Plymouth University in Phase 1. The results for the AONB as a whole, across the two Phases, are presented in **Table 3.3** below.

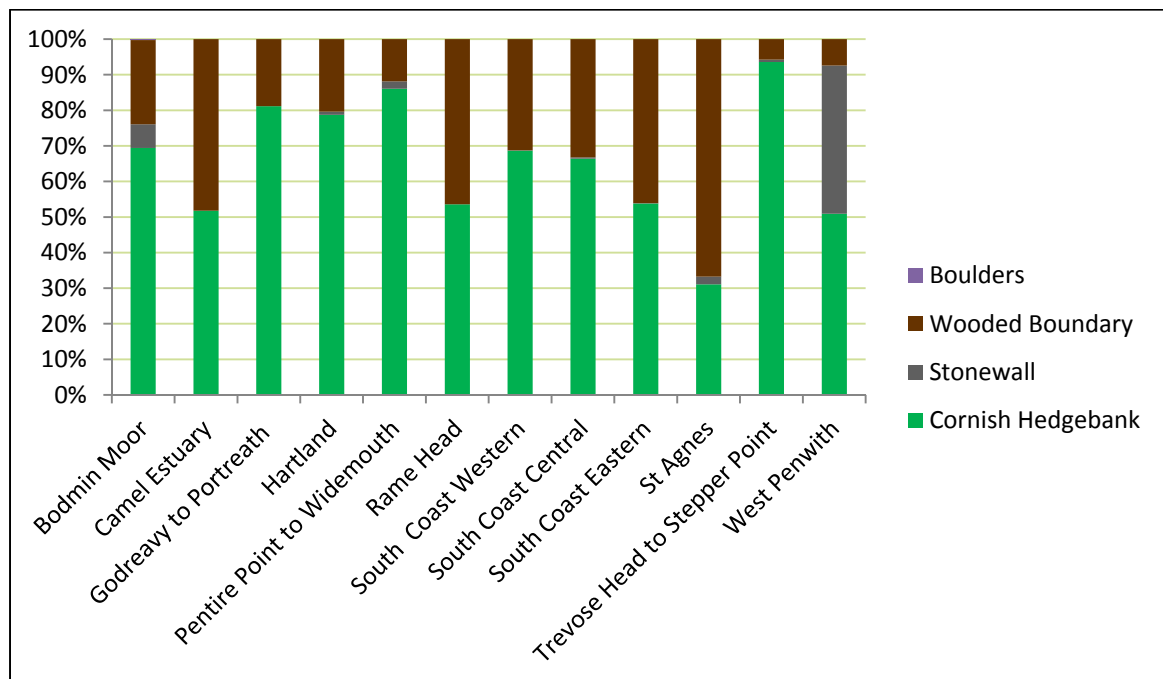
Table 3.3: Hedge boundary types identified in the AONB (at sample square level)

Hedge Type	Length (m) 2005	Length (m) 2012	Difference (m)
Cornish hedgebank	340,851.39	340,122.36	-729.03 (0.2%)
Wooded boundary	155,370.71	155,369.10	-1.62
Stone wall	42,756.48	42,756.48	N/A
Line of boulders	118.40	118.40	N/A
Total	539,096.99	538,366.34	-730.65

Source: Cornwall Council (2005 aerial photographs) and Microsoft World Imagery (29.03.2012)

- 3.14 The chart at **Figure 3.8** below illustrates proportion of the different boundary types by AONB section, showing that all parts of the AONB are dominated by Cornish hedgebanks, apart from St Agnes which includes a greater proportion of wooded boundaries (which are likely to be outgrown Cornish hedges). West Penwith is shown to have an equal proportion of Cornish hedgebanks and stone walls, which is consistent with landscape character and the area's distinctive prehistoric fields.

Figure 3.8: Proportion (%) of different field boundary types by AONB Section



Source: Plymouth University (2013)

- 3.15 The results in **Table 3.3** show that there has only been a minor change in the total length of Cornish hedgebanks recorded in the sample squares (729 metres, which equates to 0.2% of the total length of this boundary type recorded across the AONB). Losses were recorded in the South Coast Central and Camel Estuary AONB sections, as depicted in **Figures 3.9** and **3.10** below.

Figure 3.9: Loss of Cornish hedgebanks in South Coast Central (square ref SW8134)

2005



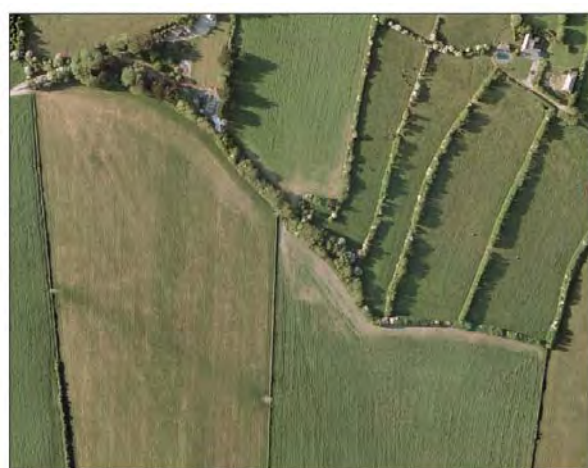
2012



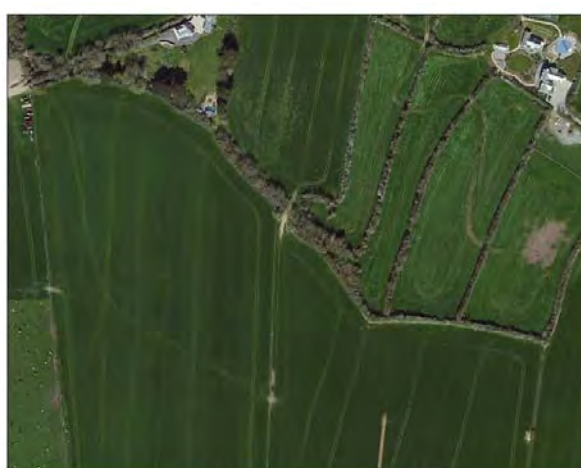
- 3.16 The two aerial photographs above clearly show the loss of Cornish hedgebank, amounting to a total of 72.98 metres.

Figure 3.10: Loss of Cornish hedgebanks in the Camel Estuary (square ref SW9475)

2005



2012



- 3.17 The two images above clearly show the loss of Cornish hedgebanks totalling 629.64 metres, as a result of field amalgamation. Another square also in the Camel Estuary section (SW9272) witnessed the removal of a wooded boundary due to new development. This loss amounted to 28.1 metres.
- 3.18 One of the squares analysed in West Penwith (SW3923) recorded a small change of 26.49m in the length of Cornish hedgbank, which was reclassified in Phase 2 as a wooded boundary. This more accurately reflects the current character of the boundary, which connects two areas of woodland.

Field boundary type and condition (using field survey analysis)

- 3.19 The field boundary types identified from API above were ground truthed and split into further categories to more accurately describe their management condition. The following definitions were used, consistent with the categories developed by Plymouth University in Phase 1⁷:
- **Cornish hedgebank:** Traditional stone-faced or bare earth/grassy banks either topped with vegetation (hedgerows, trees or other vegetation) or free from topping vegetation. No gaps other than specifically designed gateways, stiles and other openings.
 - **Non-continuous Cornish hedge:** Hedges with gaps other than specifically designed gateways, stiles and other openings greater than 20% of the total hedge length.
 - **Relic Cornish hedge:** not stock proof, less than 1m high.
 - **Wooded boundary:** Overgrown hedge or tree line with uneven boundary line.
 - **Non-continuous wooded boundary:** As above but with gaps of 20% or more.

⁷ Plymouth University undertook field surveys for Phase 1 in 2009.

- **Hedgerow:** Continuous hedgerow with interwoven growing branches forming a dense stockproof barrier from ground level upwards.
- **Non-continuous hedgerow:** As above but with gaps of more than 20%.
- **Stone wall:** Traditional stone and/or slate wall, distinguished from a hedgebank by a lack of topping vegetation, with no gaps other than specifically designed gateways, stiles and other openings.
- **Non-continuous stone wall:** as above but with gaps of more 20% or more.
- **Relic stone wall:** Piles of stones comprising a very derelict wall not stock proof, less than 1m high.
- **Boulders:** line of boulders.
- **Gap:** definite, deliberate gap in the boundary (e.g. a field entrance).
- **Other:** all other features defining a field edge, including fences, footpaths, buildings, woodland, scrub.

3.20 In order to be as targeted as possible in terms of ground truthing, sample squares in four AONB sections were re-visited by Plymouth University in Phase 2, representing a range of landscape types in the protected landscape where field boundaries and patterns are particularly important to landscape character. As surveys were undertaken from public footpaths and roads, 100% coverage of the sample squares in these sections was not possible. The following coverage was achieved for the four AONB Sections, with the results shown in **Figure 3.11**:

- Bodmin Moor – 70%
- Camel Estuary – 63%
- West Penwith – 50%
- South Coast Eastern – 50%

Figure 3.11: Proportion of detailed field boundary categories by AONB Section



Source: Plymouth University (2013)

3.21 **Figure 3.11** above illustrates the proportion of the detailed boundary types by AONB Section, supporting the findings of API to confirm that much of the AONB is dominated by intact Cornish

hedgebanks. Continuous wooded boundaries (many of which are likely to be outgrown Cornish hedges) are the second most common boundary type, contributing to the varied landscape mosaic of the AONB. Stone walls were most commonly found in West Penwith, associated with the landscape's distinctive ancient fields of prehistoric origin. 98% of the stone wall boundaries surveyed in West Penwith were intact with no gaps, with less than 1% (332 metres) classified as 'relic'. This indicates that the landscape's stone walls are generally being well maintained and protected as key landscape features.

- 3.22 Other than the observations of hedgerow removal already recorded through API and described above (Figures 3.8 and 3.9), an additional change to the detailed field boundary type classification took place on Bodmin Moor between Phases 1 and 2 (square SX2369). This relates to just over 205 metres of Cornish hedgebank, which has been reclassified as a non-continuous type. This is clearly shown in the two aerial photographs at **Figure 3.12**.

Figure 3.12: Cornish hedgebank on Bodmin Moor re-classified as 'non-continuous'

2005

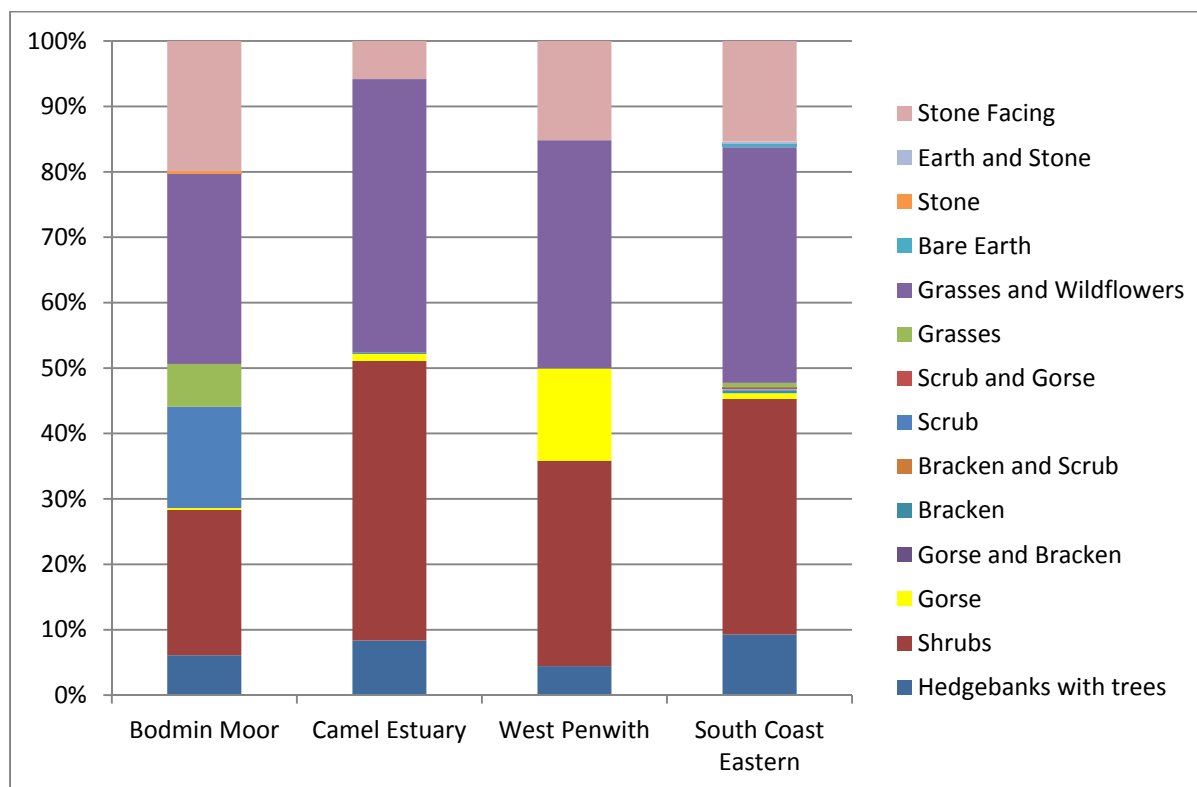
2012



Field boundary features

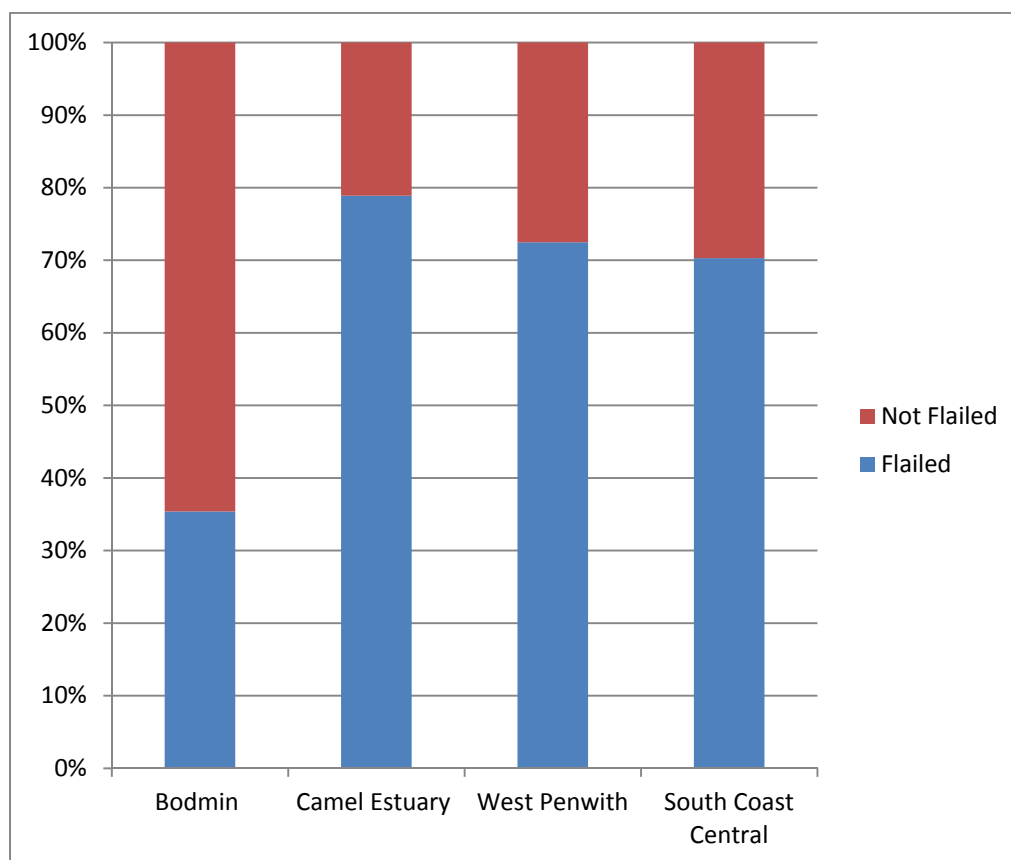
- 3.23 The field survey work undertaken by Plymouth University in Phases 1 and 2 also collected information on additional characteristics associated with the field boundaries. **Figure 3.13** shows the results for Cornish hedgebanks and hedgerows surveyed in the four AONB sections (by sample square) during Phase 2. There has been no recorded change in the presence of these features since the baseline surveys carried out in 2009.
- 3.24 The results show that the most common features associated with the AONB's hedges are grasses and wildflowers (characterising the banks) and shrubs. The presence of gorse in the hedges on West Penwith contributes to the exposed, upland character of the landscape. Stone-faced banks are found across the four AONB sections visited in Phase 2, with the greatest proportion recorded on Bodmin Moor. The level of hedgerow flailing was also recorded in both phases, with no overall change noted since Phase 1. **Figure 3.14** shows that flailed hedges were most commonly identified in the sample squares, apart from on Bodmin Moor. It is important to note that these results are likely to vary across the year depending on the season (e.g. bird-nesting season places restrictions on flailing).
- 3.25 West Penwith's stone walls were also surveyed for their associated characteristic features, with the results shown in the chart at **Figure 3.15**. Again, grasses and wildflowers surrounding the walls were the most common feature (found along nearly 60% of surveyed lengths), followed by shrubs and gorse. Bodmin Moor's stone walls were also surveyed for their associated features, but less than 1% of lengths featured grasses, with a similar figure for gorse.
- 3.26 The associated features of the AONB's field boundaries help reinforce local distinctiveness and create valued wildlife corridors throughout the farmed landscape. It is therefore important for the AONB to monitor the continued presence of these features and support programmes (such as Environmental Stewardship) that encourage their appropriate management.

Figure 3.13: Characteristic features associated with the AONB's hedges



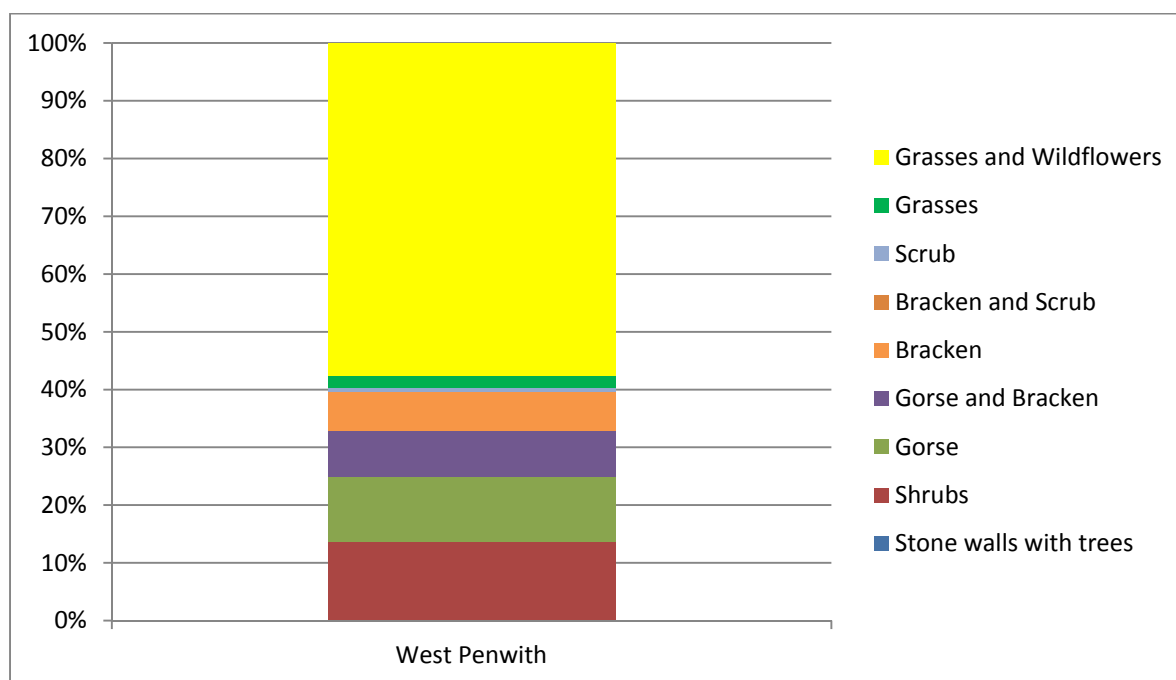
Source: Plymouth University (2013)

Figure 3.14: Levels of hedgerow flailing



Source: Plymouth University (2013)

Figure 3.15: Features occurring on stone walls in West Penwith.



Source: Plymouth University (2013)

Extent of biomass planting

- 3.27 A review of Natural England's Energy Crops Scheme data for Phase 1 of the monitoring project indicated that there was one scheme in the Bodmin Moor section of the AONB in 2008. This covered nine hectares of short rotation coppice. A comparison with the latest data (Natural England, 2012) indicates that there are now no current schemes within the AONB. This might be explained by a reduced drive towards the planting of energy crops in the UK, coupled with a reduction in grant aid. The Energy Crops Scheme closed to all applicants on 31 August 2013⁸, coinciding with the Rural Development Programme for England 2007-2013 (RDPE) drawing to a close. No decision has been made by Natural England or Defra on the future for the Energy Crops Scheme at the present time.

Woodland cover and type

Distribution of main woodland/forestry types as recorded by the Forestry Commission

- 3.28 The current National Forest Inventory began in 2009 and is due to be completed in 2014, and is a nationwide survey on the size, distribution, composition and condition of forests and woodland. The National Forest Inventory (NFI) gives a more accurate picture than the previous National Inventory of Woodland and Trees (NIWT) due to technological and methodological advances. The previous method only considered woodlands of 2 hectares or greater, but the NFI now includes all wooded area 0.5ha or greater.
- 3.29 **Table 3.4** shows the woodland and forestry types in the AONB. Since the 2000 survey there have been changes in methodology and the woodland type categories. The most up to date figures show that there is a total of 7,723 hectares of woodland in the AONB, an increase of 17.7% (1158.8 hectares) on the previous survey. This is not necessarily all woodland that has been planted or appeared due to succession since the last survey however – some of this number can be attributed to woodland that was not recorded under the previous methodology. When using the same method (i.e. excluding woodlands of under two hectares), the 2013 survey shows a total increase of 40 hectares.

⁸ http://www.naturalengland.org.uk/about_us/news/2013/260213.aspx

Table 3.4: Breakdown of woodland/forestry types in the AONB (2000 and 2013)

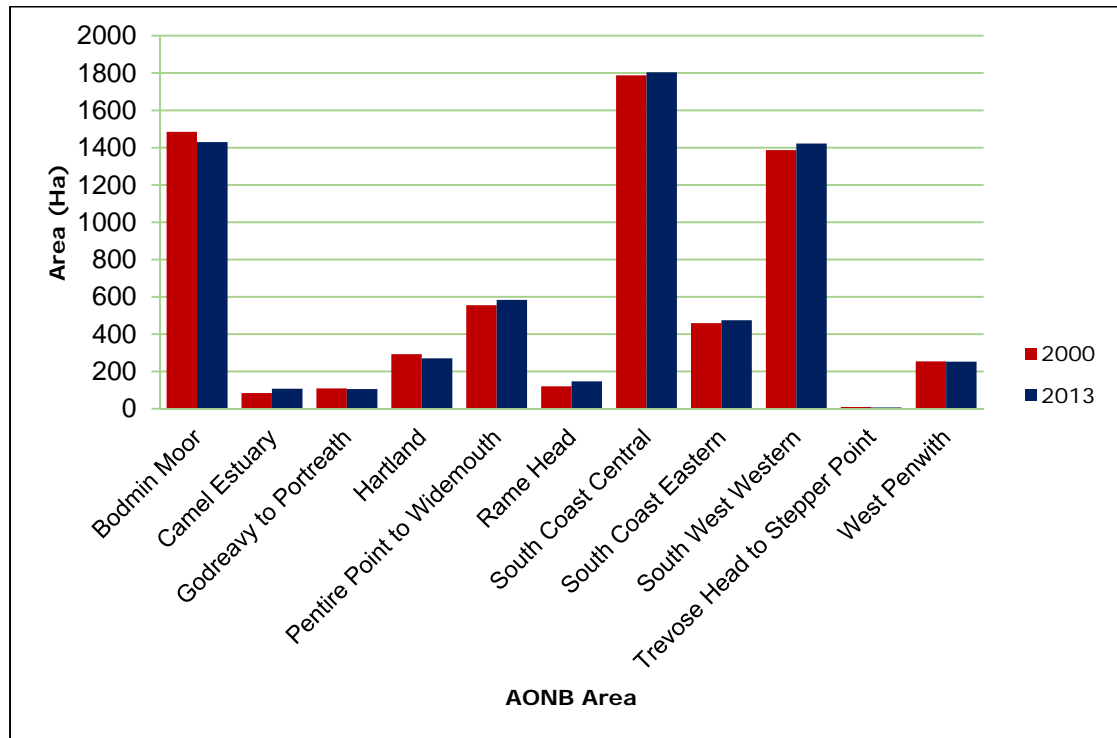
Woodland/Forestry Type	2000 coverage (ha) ⁹	2013 coverage (ha) (excluding woodland <2ha) ¹⁰	2013 total coverage (ha)
Broadleaved	4555.52	4949.39	5646.60
Conifer	971.93	975.22	1047.61
Mixed: Predominately Broadleaf	302.94 (Mixed)	64.63	64.63
Mixed: Predominately Conifer		25.50	110.37
Shrub Land	223.10	29.7	96.0
Young Trees	394.70	243.53	314.28
Felled/Ground Prepared for Planting	113.96 (Felled)	91.48	108.74
Low Density/Open Areas	No data	71.34	100.93
Assumed Woodland	No data	152.87	233.94
Total	6564.15	6603.66	7722.95

- 3.30 The most wooded section of the AONB is the South Coast Central area with 1803.9ha of wooded coverage (less than 1% change since 2000). Bodmin Moor and South Coast Western also have significant amounts of woodland (1430ha and 1422ha respectively), although coverage on Bodmin Moor has shown a 3.7% decrease whilst in South Coast Western it has increased 2.3%. In some sections there was a large proportional increase in woodland, particularly the Camel Estuary (28% increase) and Rame Head (21% increase).

⁹ Note this does not include woodlands less than 2 hectares in size

¹⁰ To allow a direct comparison with the 2000 data, this column also excludes woodlands less than 2 hectares in size

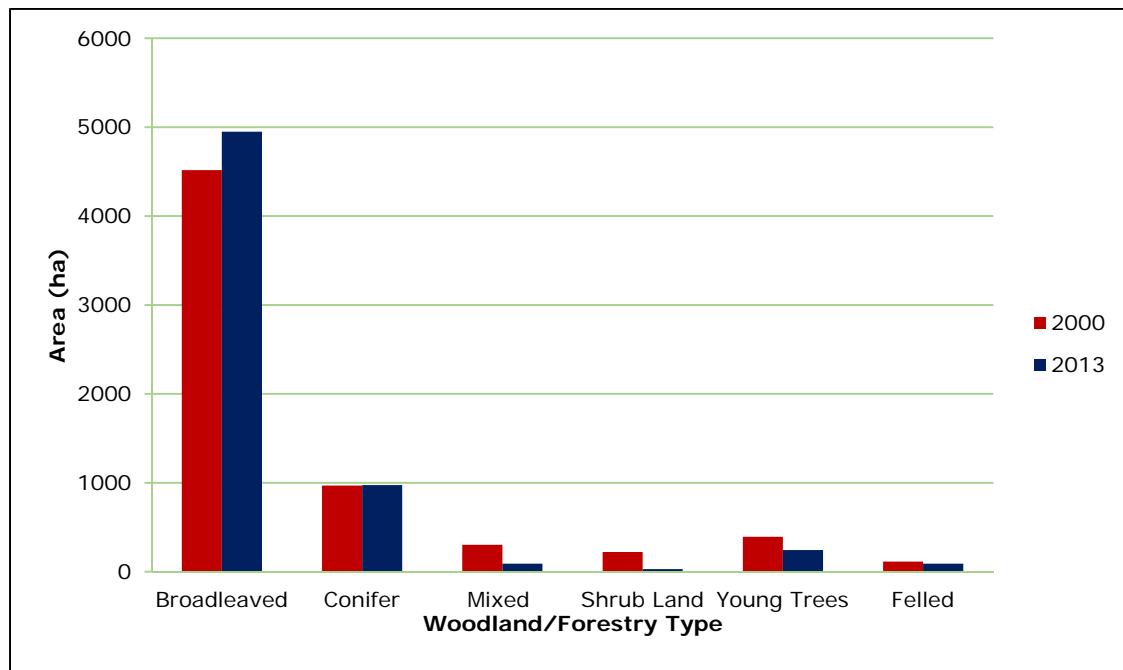
Figure 3.16: Total woodland/forestry coverage by AONB section (2000 and 2013)



Source: Forestry Commission (2000 and 2013)

- 3.31 Broadleaved woodland remains the predominant woodland type, increasing by 8.6% to 4949.4ha. Coniferous coverage has increased marginally to 975.2ha. The remaining woodland types all showed decreases in coverage, and now account for 6% of woodland coverage.

Figure 3.17: Breakdown of woodland/forestry type (2000 and 2013)

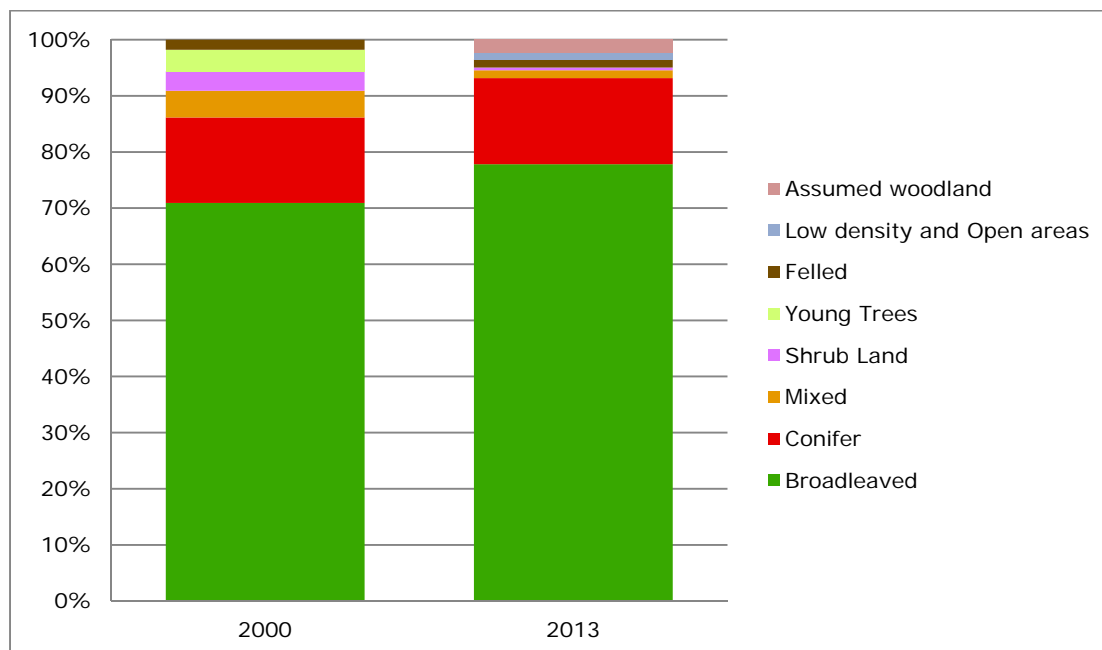


Source: Forestry Commission (2000 and 2013)

- 3.32 Based on the figures excluding the woodland that is less than >2ha, the woodland/forestry composition has altered since the 2000 woodland survey. Broadleaved woodland now accounts for 75% of all woodland coverage, up from 69%. Coniferous forestry has shown a very marginal decrease of 0.1% and accounts for 14.8% of woodland. The two new categories introduced for the 2013 survey, 'Assumed woodland' and 'low density and open areas' constitute 1% and 2% of

coverage. The remaining four categories have all seen significant decreases, particularly Shrub land, which has decreases from providing 3.4% of coverage in 2000 to less than 0.5% in 2013.

Figure 3.18: Woodland/forestry composition in the AONB (2000 and 2013)



Source: Forestry Commission (2000 and 2013)

Coverage of ancient woodland in the AONB

- 3.33 In addition to the data recorded nationally by the Forestry Commission as part of their National Forest Inventory, Natural England holds inventories showing the distribution of ancient woodland within the AONB, including replanted sites (Previous Ancient Woodland Sites (PAWS)).
- 3.34 A comparison with the results from Phase 1 are set out in **Table 3.5** below, showing that there is a total of 1350.9ha of ancient woodland. Since 2007 there has been a slight decrease in Ancient Semi Natural Woodland, but also a slight increase in Ancient Replanted Woodland. The South Coast Central section has the largest amount of ancient woodland – 62% of all ancient woodland found within the AONB.

Table 3.5: Ancient woodland coverage in the AONB

Ancient Woodland type	2007 coverage (ha)	2012 coverage (ha)	Change (ha)
Ancient Semi Natural Woodland	862.11	861.80	-0.31
Ancient Replanted Woodland	487.17	489.09	1.92

Source: Natural England 2007 and 2012

Spatial coverage of all woodland types across the AONB

- 3.35 **Figure 3.19** illustrates the distribution of the different woodland types analysed in the previous section, showing that most coniferous coverage is concentrated on Bodmin Moor, indicating the presence of plantations. The AONB sections on the west coast generally have sparse broadleaved woodland coverage. Most of the Ancient woodland is located in the southern AONB sections along the heavily wooded river valleys such as those of the Helston and the Fal.

Figure 3.19
Woodland types found
within the AONB

□ Cornwall AONB

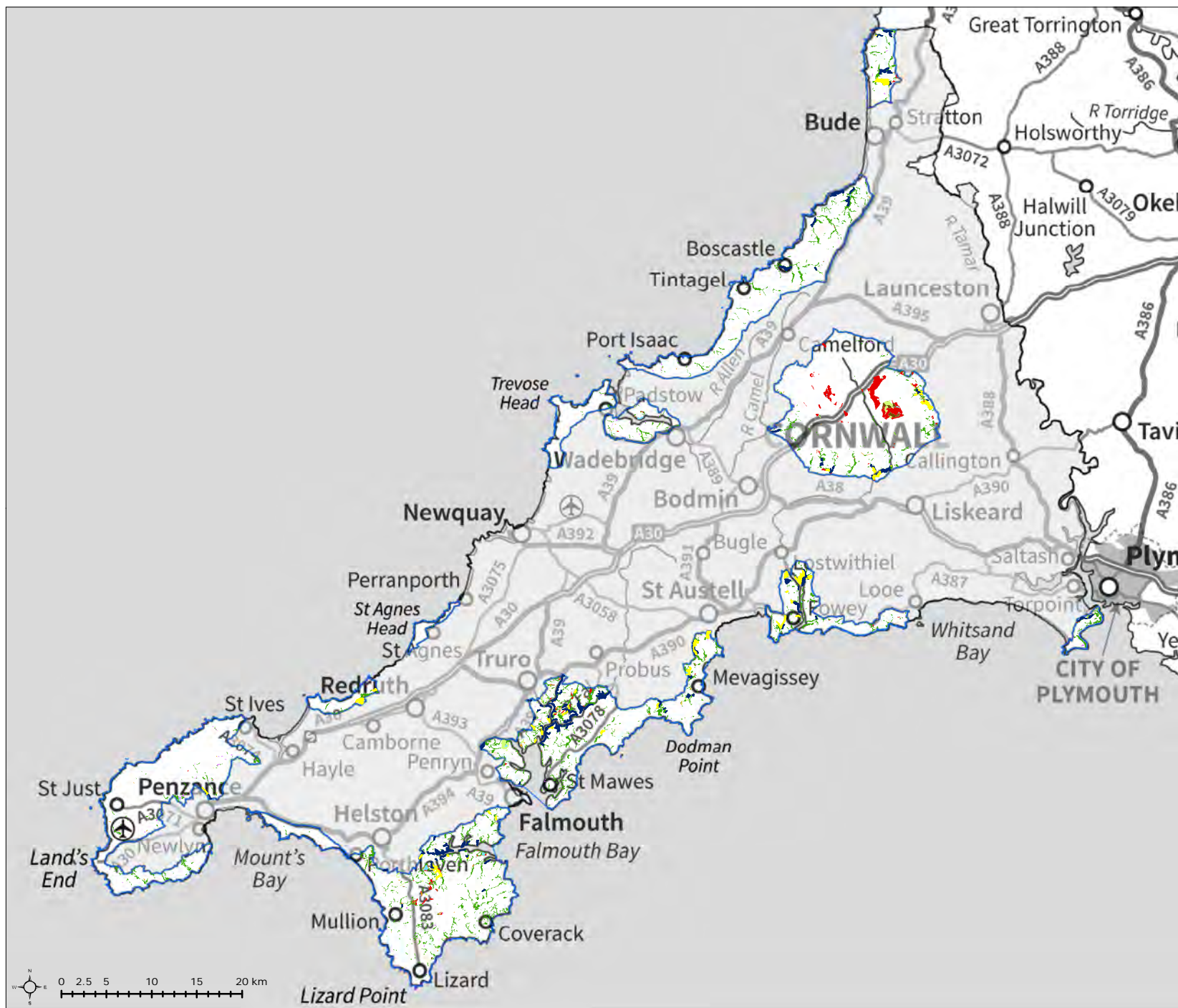
Ancient Woodland

- Ancient & Semi-Natural Woodland
- Ancient Replanted Woodland

Woodland/Forestry

- Broadleaved
- Conifer
- Felled/Ground Prepared For Planting
- Open Areas/Low Density
- Mixed
- Shrub Land
- Young Trees

Map Scale @ A4: 1:600,000



Levels of woodland management

English Woodland Grant Scheme

- 3.36 The total area of woodland in the AONB, managed under the Forestry Commission's English Woodland Grant Scheme, has increased markedly from just over 1,366 hectares in 2009 to over 2,485 hectares in 2013 (a 45% increase). Areas of the AONB that have witnessed an increase in scheme coverage, as depicted in **Figure 3.20**, include particularly Bodmin Moor and the three South Coast AONB sections, where woodland cover is particularly characteristic to the local landscape.

Take-up of relevant Environmental Stewardship options

- 3.37 Environmental Stewardship options relating to woodland management cover a further 261.4 hectares of woodland in the AONB. This is broken down into 225.7 hectares dedicated to the maintenance of woodland (through HLS option HC7) and 35.6 hectares under the restoration of woodland option (HC8). This is set out in **Table 3.6** below.

Table 3.6: Area of AONB under ES options relevant to woodland

Option	Option name	Area (ha)
HC7	Maintenance of woodland	225.7
HC8	Restoration of woodland	35.6
Total		261.4

Source: NE Protected Landscapes Monitoring Framework (2013)




List of data sources used for this theme

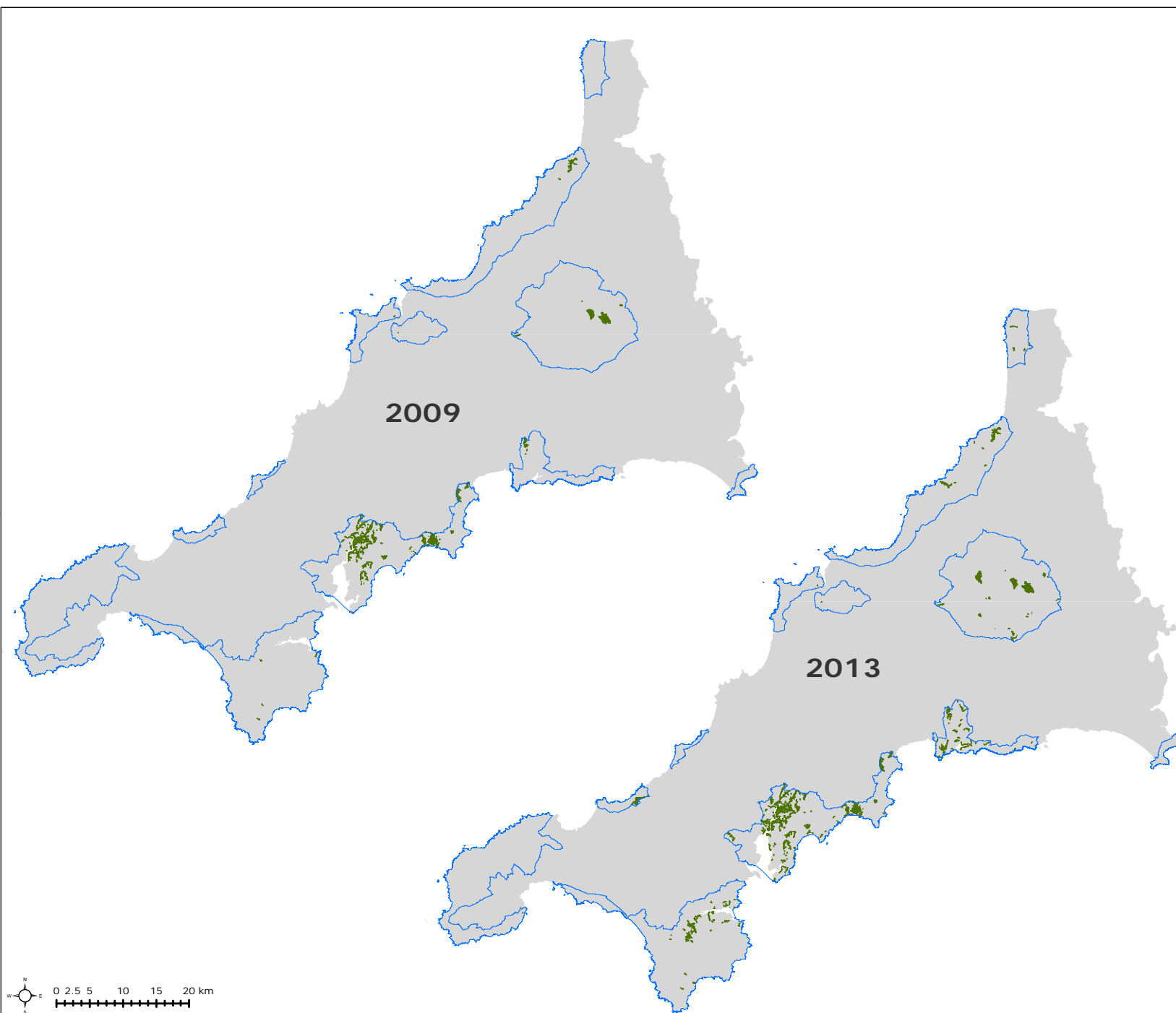
- 3.38 The data sources used for this theme are as follows:
- Defra June Survey of Agriculture 2007 and 2010. Detailed breakdown within AONB provided by Defra Farming Statistics team.
 - Forestry Commission (2000) National Inventory of Woodland and Trees
 - Forestry Commission (2013) National Forest Inventory
 - Natural England (2007) Ancient Woodland Inventory
 - Natural England (2012) Ancient Woodland Inventory
 - Natural England (2012) Energy Crops Scheme
 - Natural England ES GIS data 2009 (Cornwall AONB Atlas)
 - NE Protected Landscapes Monitoring Framework 2013
 - Forestry Commission English Woodland Grant Scheme data (Cornwall AONB Atlas 2009)

Recommendations for ongoing monitoring

All indicators in the 'Farming, Food and Forestry' theme outlined above should continue to be monitored, using the same methods/scales of analysis, every five years to coincide with future AONB Management Plan reviews.

Figure 3.20
EWGS coverage in the
AONB

-  Cornwall AONB
-  English Woodland Grant Schemes
-  Cornwall



Map Scale @ A4: 1:825,000

4 Biodiversity and Geodiversity



4 Biodiversity and Geodiversity

4.1 The following monitoring indicators have been selected for the 'Biodiversity and Geodiversity' theme:

- Number and area of designated sites
- Condition of SSSIs
- Extent of national BAP habitats
- Extent and management of traditional orchards

Number and area of designated sites

4.2 **Table 4.1** below provides a breakdown of the number and extent (in hectares) of nature and geodiversity conservation sites in the AONB. These include internationally designated Special Areas of Conservation (SACs); nationally designated National Nature Reserves (NNRs), Sites of Special Scientific Interest (SSSIs) and Important Bird Areas (IBAs); County Wildlife Sites (CWS) and County Geological Sites (CGS); as well as Local Nature Reserves (LNRs). A comparison between the number and area presented in the Cornwall AONB Atlas (2009) with the current picture is also provided in **Table 4.1** and **Figure 4.1**.

4.3 In 2009 there were 9 candidate sites for SACs covering a total of 7,121ha. The latest data show that there are 10 SACs now designated in the AONB (including Crowdy Marsh on Bodmin Moor which was previously excluded from the AONB Atlas due to the small area in the AONB), covering just over 7,122ha. All AONB areas except from the Camel Estuary, Trevoze Head to Stepper Point and Godrevy to Portreath contain an SAC. The largest is The Lizard, located in the South Coast Western area, which covers 3085.3ha (43% of the total SAC area in the AONB).

4.4 One new SSSI site has been recognised, Talland Barton Farm in the South Coast Eastern section which occupies just over 2 hectares of land. This brings the total of SSSIs in the AONB to 68. There have been no new NNRs, LNRs or Important Bird Areas designated in the AONB since 2009.

Table 4.1: Number and area of designated sites in the AONB

Designation	2009 (AONB Atlas)		2013	
	Number	Area (ha)	Number	Area (ha)
Internationally/nationally designated sites				
SAC	9 (Candidate sites)	7,121	10. (Designated Sites)	7,122.16
NNR	2	1,969	2	1,969.78
SSSI	67 sites	12,621	68 sites	12,625
Important Bird Areas ¹¹	3	12,691	3	12,691

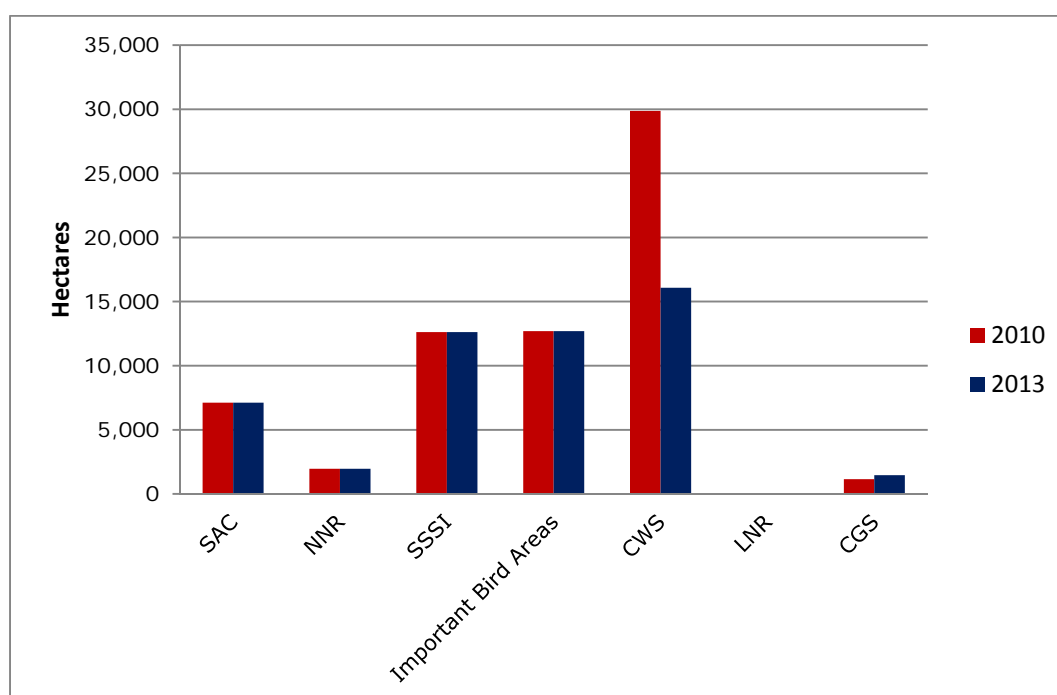
¹¹ No updates are available for this dataset, which was uploaded by the RSPB in 2006 (and mapped in 2000). We have therefore assumed no changes to the extent of IBAs have taken place.

Designation	2009 (AONB Atlas)		2013	
County/locally designated sites				
CWS ¹²	284	29,868	173	16,082
CGS	55	1,144	64	1,457
LNR	3	16	3	16

Source: Various (see end of chapter).

- 4.6 The chart at **Figure 4.1** below provides a graphical representation of the information in Table 4.1 above, showing that the most significant change was the reduction in the number of County Wildlife Sites, explained by the deletion of previous sites occupying the same land as a national designation (e.g. SSSI). 9 new County Geological Sites were designated increasing the coverage of this designation by 313 hectares or 27%.

Figure 4.1: Change in area coverage of nature and geodiversity conservation sites in the AONB (2010 and 2013)

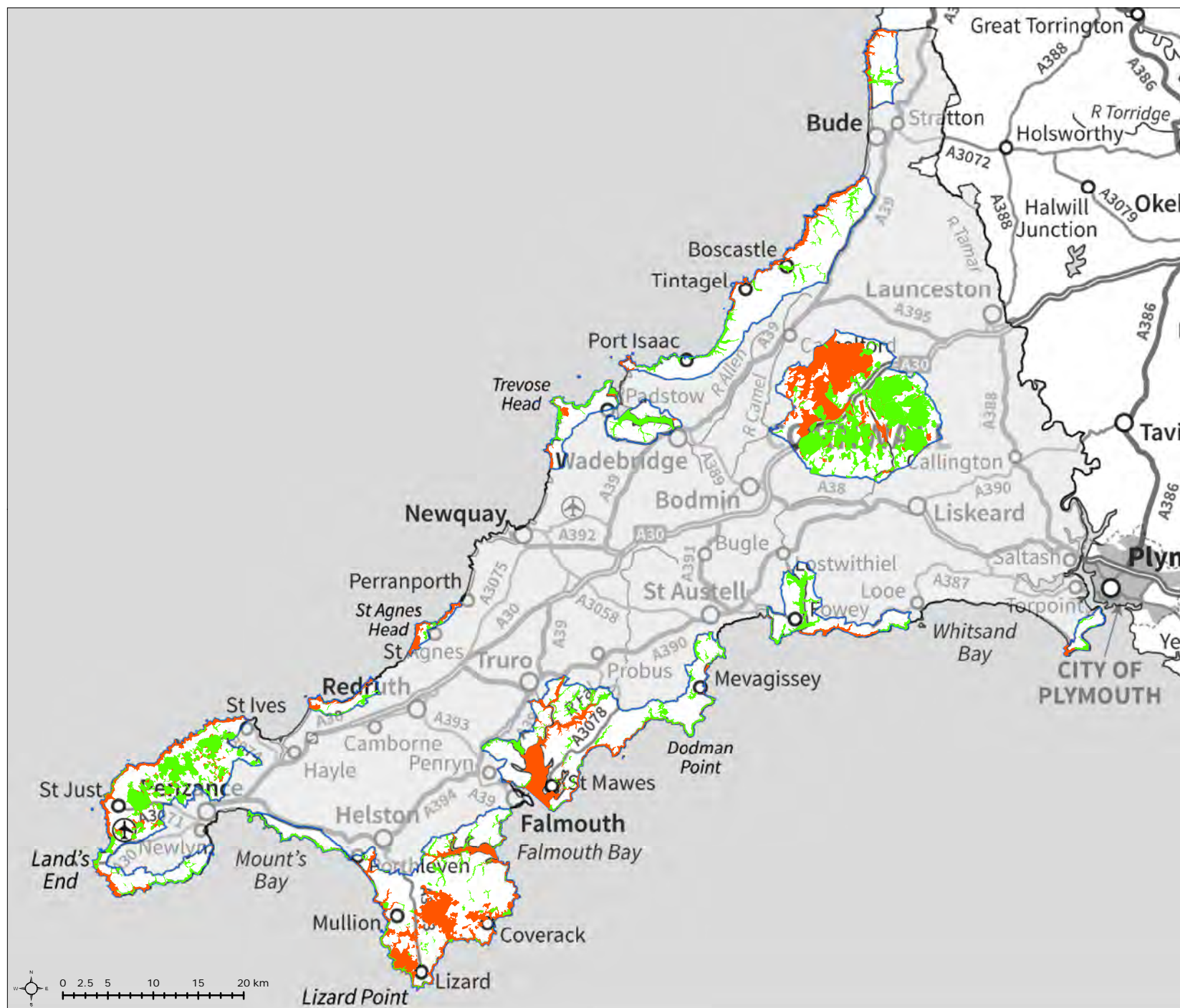


- 4.7 A map showing the current distribution of international/national and county/local designations is included at **Figure 4.2**.

¹² The significant reduction in the number of County Wildlife Sites is explained by the deletion of previous sites occupying the same land as a national designation (e.g. SSSI).

Figure 4.2
Distribution of nature and geological conservation sites

- Cornwall AONB
- Local Designations
- National/International Designations



Map Scale @ A4: 1:600,000

Condition of SSSIs

- 4.8 **Table 4.2** and **Figure 4.3** below provide a comparison of the condition of the AONB's SSSIs, using Natural England's condition assessments from the AONB Atlas (2009) and the most up-to-date data available. This uses the six condition categories used for Natural England reporting on condition, from 'favourable' to 'destroyed'. The current condition of SSSI land in the AONB is also mapped in **Figure 4.4**.

Table 4.2: SSSI condition over time (note some SSSIs will extend beyond the AONB boundary)

Condition category	2009		2013	
	Area (ha)	%	Area (ha)	%
Favourable	6,939.54	54.98	6,257.00	49.6
Unfavourable recovering	4,796.02	38.00	6,135.23	48.6
Unfavourable no change	438.69	3.48	163.91	1.3
Unfavourable declining	431.61	3.42	61.77	0.5
Part destroyed	15.51	0.12	6.78	0.1
Destroyed	n/a	n/a	n/a	n/a

Source: Natural England (2009 and 2013)

- 4.10 Firstly, it is of note that fewer SSSI units are in the 'Favourable' category than in 2009. The total area of SSSIs considered in favourable condition has dropped by 11% to 6,257 hectares, although this is still the largest condition category overall. Additionally, the proportion of SSSIs in the poorest four condition categories has decreased from 7% to 1.9%. The amount of SSSIs in the 'Unfavourable – recovering' category has increased substantially to 6,135 ha (a 22% increase), accounting for just under half of all SSSI land in the AONB. These trends show that there have been both improvements and decreases in SSSI condition across the AONB, with more detail able to be obtained at a site-specific level from Natural England.

Figure 4.3: Percentage of SSSI land in different condition categories (2009 and 2013)

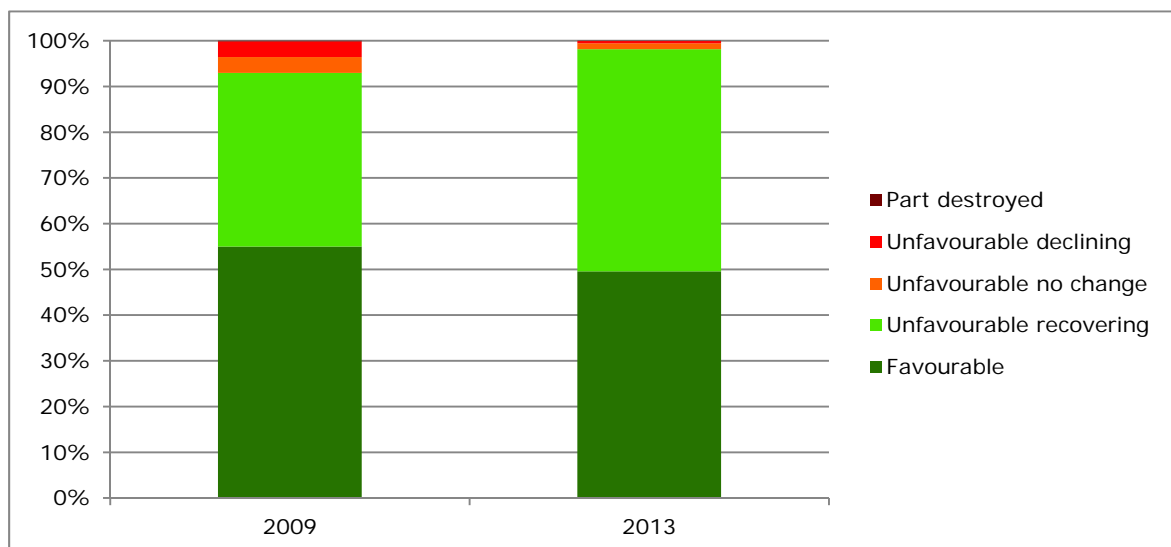





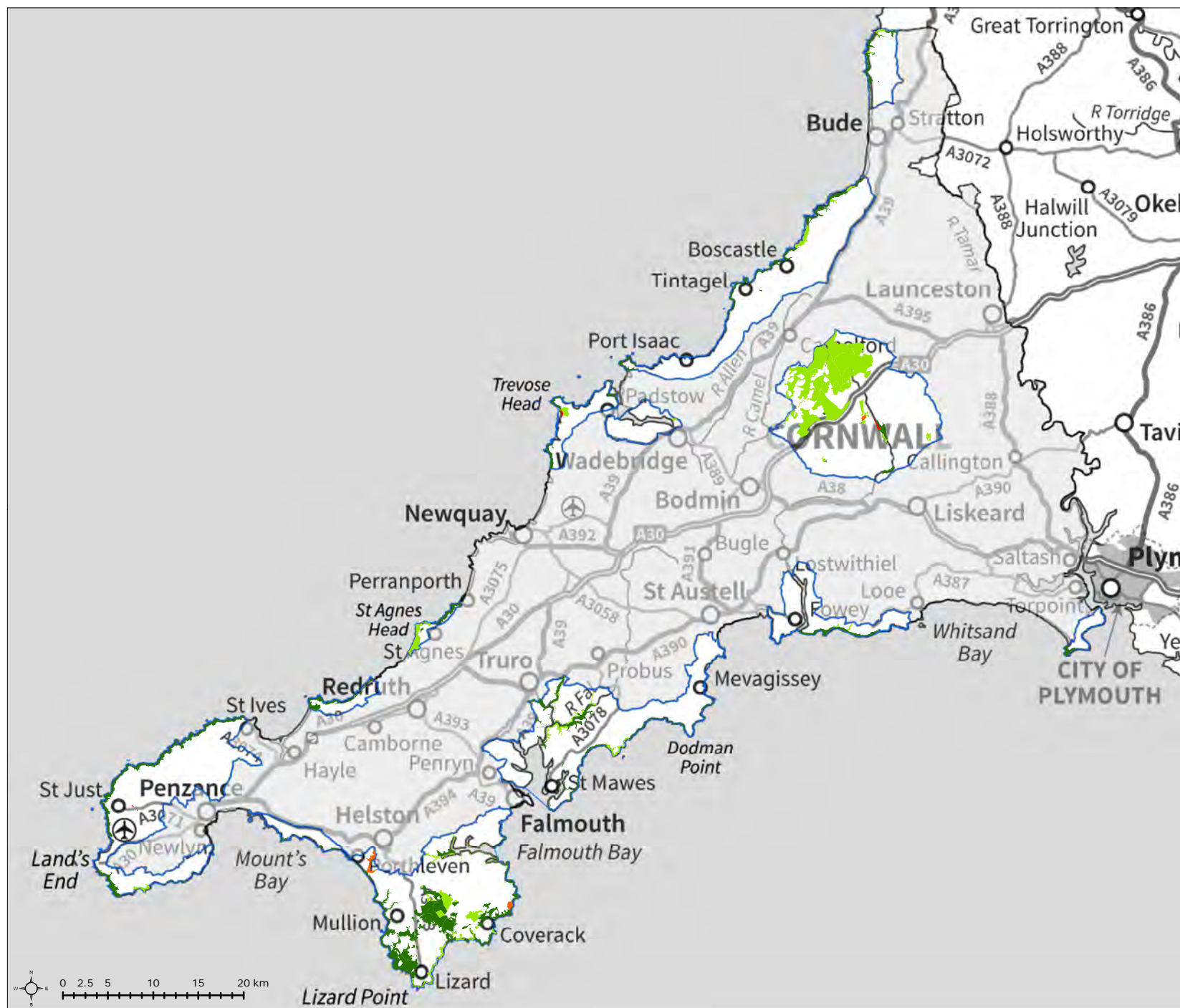


Figure 4.4
Current SSSI condition

 Cornwall AONB

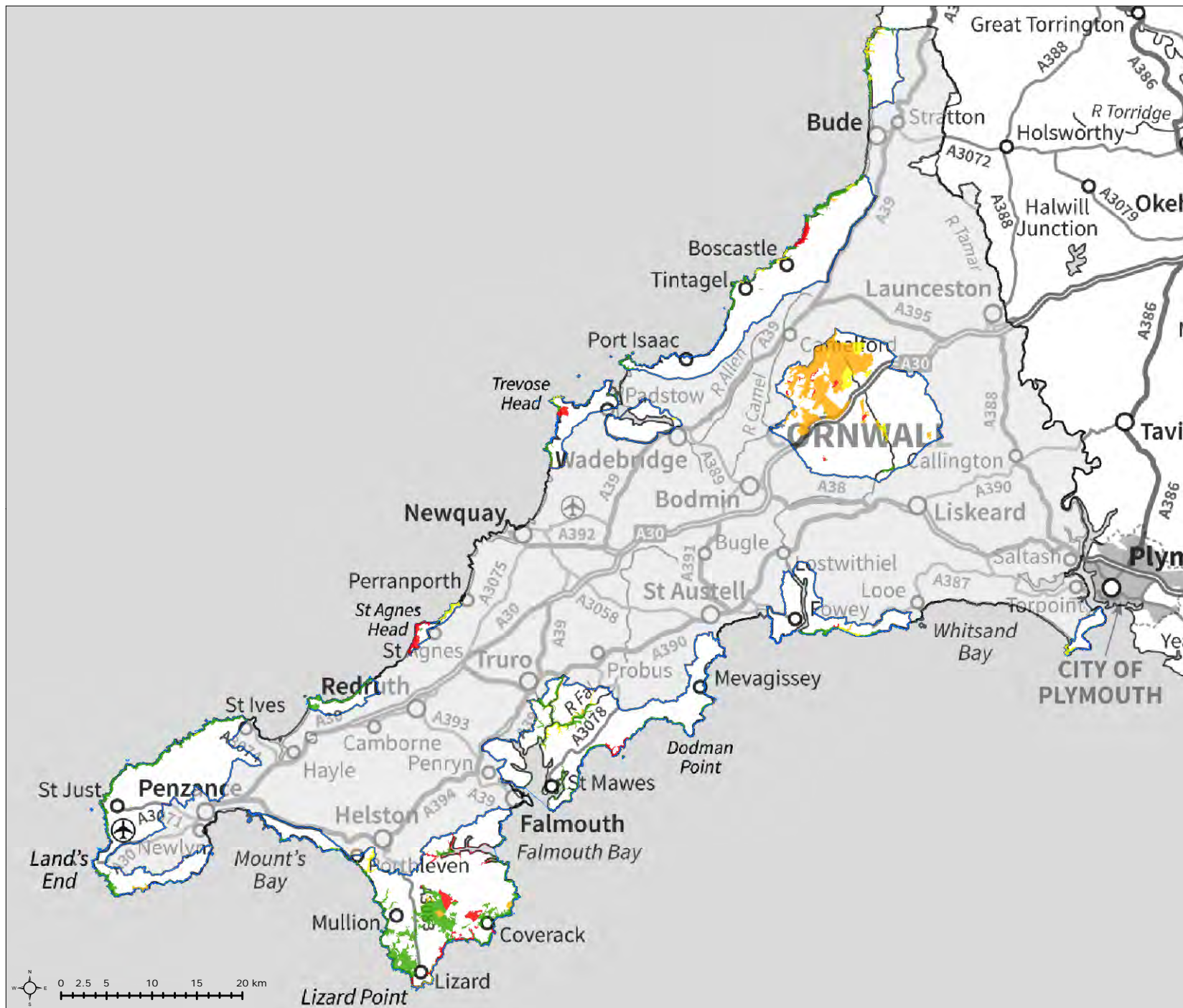
SSSI Condition

-  Favourable
-  Unfavourable Recovering
-  Unfavourable No Change
-  Unfavourable Declining
-  Part Destroyed



Map Scale @ A4: 1:600,000

- 4.11 As shown in **Figure 4.4**, the greatest SSSI coverage in the AONB is on Bodmin Moor (comprising 37% of the total SSSI land). 96% of the moor's SSSI land is in 'Unfavourable – Recovering' condition. No details are provided in Natural England's latest condition assessment for Bodmin Moor, North (October 2013), although this large site is waiting to be entered into an HLS agreement. Another SSSI on the Moor, Dozmary Pool, is recovering from previous overgrazing and excessive poaching, as well as some damage by vehicle rutting.
- 4.12 Natural England's condition assessments for other SSSIs in the AONB classed as in unfavourable condition give a flavour of the management issues affecting the sites (see below). Please note that explanations for the SSSI unit condition assessments have not always been completed by NE. Some examples include:
- **Upper Fal Estuary & Woods** (South Coast Central) – Some issues with browsing/damage to woodlands by fallow deer, spread of non-native woodland trees (e.g. beech and sycamore) and invasive species such as rhododendron.
 - **Treen Cliff** (West Penwith) – Issues with scrub and bracken encroachment, lack of grazing, invasive species and absent maritime habitat types that would be expected to be present on the site.
 - **Trevose Head and Constantine Bay** (Trevose Head to Stepper Point) – Sand dunes becoming invaded by scrub and invasive species, with some areas subject to erosion caused by visitor pressure. NE notes that maritime grassland on the cliffs would benefit from more grazing to diversify the sward.
 - **Boscastle to Widemouth** (Pentire Point to Widemouth) –mainly in favourable condition but some areas classed as 'unfavourable – recovering' due to excess bracken and scrub.
- 4.13 **Figure 4.5** provides a mapped representation for how the condition of the AONB's SSSIs has changed since 2009. This uses the following categorisation:
- **Stable Favourable:** for sites that have remained in 'Favourable' condition.
 - **Improved:** for sites that have 'moved upwards' in the condition categories, therefore improving in condition since 2009.
 - **Stable – Unfavourable:** for sites that have remained in the same 'Unfavourable' condition category.
 - **Declined -** SSSIs that have 'moved downwards' in the condition categories, therefore declining in condition since 2009.
- 4.14 This shows that a significant proportion of SSSI land has been retained in favourable condition since 2009, including particularly on the Lizard and along many parts of the coast. However, some SSSIs have witnessed a decline in condition, including parts of the north coast around Trevose Head, St Agnes Head and east of Boscastle; as well as the south coast around Nare Head, and slightly inland on parts of the Lizard.
- 4.15 Bodmin Moor has seen the majority of its SSSI land remaining in unfavourable condition, with some small areas improving in condition over the same time period.



Extent of national BAP habitats

- 4.16 Both Phase 1 of the monitoring project and the AONB Atlas used Phase 1 habitat data from the Environmental Records Centre for Cornwall and the Isles of Scilly (ERCCIS) to provide detail on the coverage of different semi-natural habitats across the AONB. This was provided through the LIFE Project, for the years of 1988 and 1995 to show habitat loss and gain across the county as a whole.
- 4.17 Unfortunately, due to the high costs of repeating this detailed habitat mapping, no updated information to the LIFE data was available to inform Phase 2. Therefore we have presented a breakdown of the national Biodiversity Action Plan (BAP) habitats present in the AONB to provide a picture of habitat distribution. Although not updated by Natural England on a regular basis (as the habitat inventories also rely on locally-gathered information collected on an ad-hoc basis), it nevertheless provides a picture of habitat distribution across the AONB. Unfortunately, a 'backdated' version of this dataset is not available to inform a discussion of change over time.
- 4.18 **Table 4.3** provides a breakdown of BAP habitat coverage in the AONB. The general coverage of BAP habitats is also mapped in **Figure 4.6**.



Table 4.3: Area of national BAP habitats within the AONB

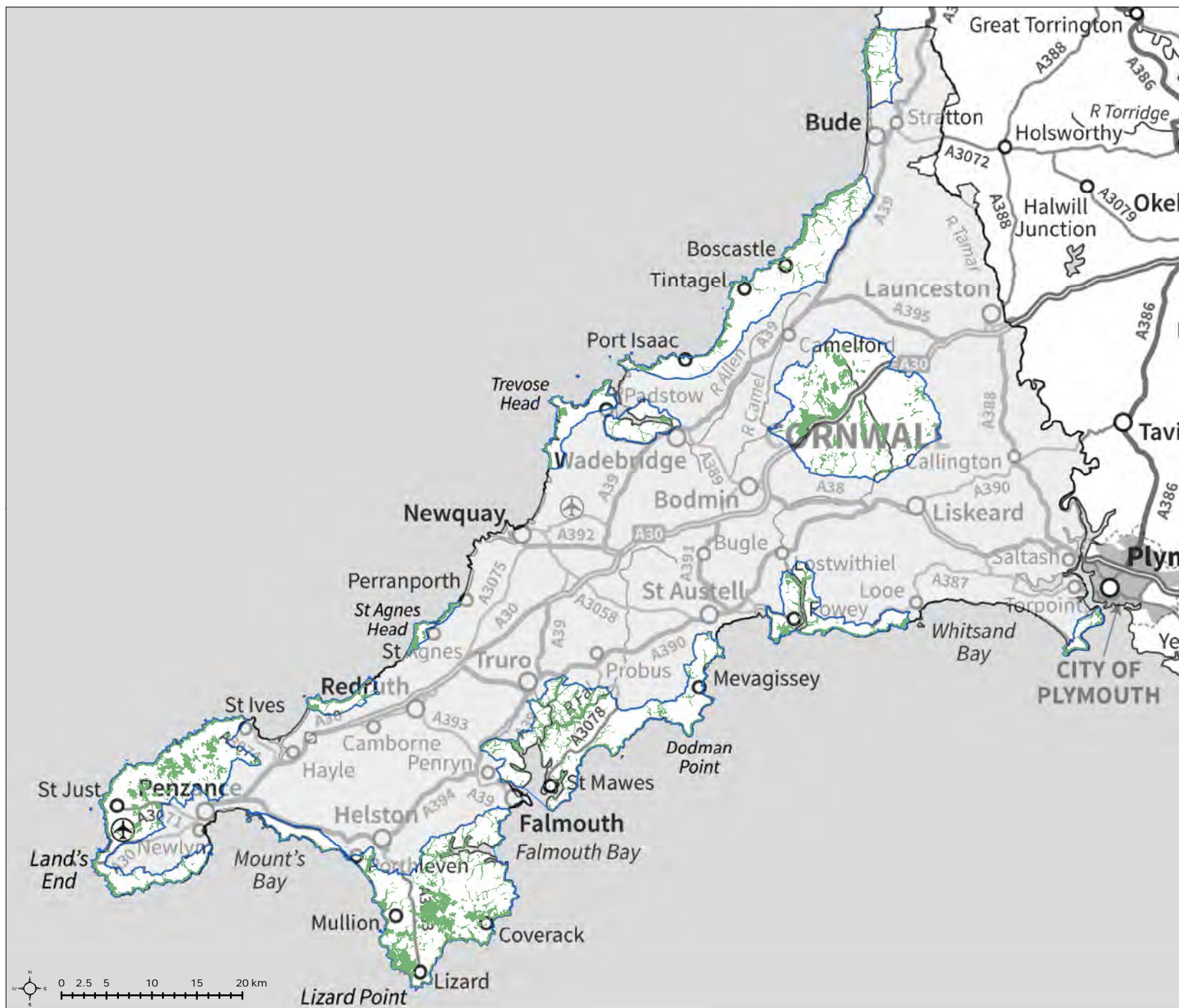
BAP Habitats	Current area within AONB (ha)
Lowland heathland	6,439.97
Maritime cliff and slope	6,041.25
Deciduous woodland	4,778.62
Fen	979.04
Mudflats	867.89
Reedbeds	457.96
Coastal sand dunes	194.75
Purple Moor Grass and Rush Pastures	42.81
Coastal and floodplain grazing marsh	18.46
Saline lagoons	8.69

Source: Natural England (downloaded 2013)

- 4.19 A total of 19,829 hectares (21%) of land in the AONB is BAP habitat. This is mainly Lowland heathland, which covers large amounts of Bodmin Moor (1849.29 hectares or 9%), West Penwith (1954.08 hectares or 14%) and South Coast Western (2305.35 hectares or 12%). Maritime cliff and slope is prevalent along much of the AONB's coastline. In sections such as the Camel Estuary and South Coast, where estuaries are present, mudflats are found providing an important habitat for birds and other wildlife. This is reflected in the designations afforded to these areas, such as the SACs at Fal to Helford and Polruan to Polperro. Deciduous woodland is present in all of the AONB sections, particularly along river valleys.

Figure 4.6
Current distribution of BAP
habitat in the AONB

 Cornwall AONB
 BAP Habitats



Map Scale @ A4: 1:600,000

Extent and management of traditional orchards

Extent of traditional orchards in the AONB

- 4.20 Phase 1 of the AONB Monitoring Project used data from Cornwall Council (dating from 2002) which mapped the extent of traditional orchards within the county. For the AONB, this totalled 68.53 hectares. The Cornwall Council dataset has not been updated since 2002. However, the Natural England BAP Habitat Inventory (2012) indicates that there are 62.44 hectares of traditional orchards found within the AONB. A breakdown by AONB section is included in **Table 4.4** below based on the current BAP Habitat Inventory.

Table 4.4: Distribution of orchards across the AONB

AONB Section	Area (ha) 2012
Bodmin Moor	0.9
Camel Estuary	0.8
Godreavy to Portreath	0.1
Hartland	1.0
Pentire Point to Widemouth	2.2
South Coast Central	19.1
South Coast Eastern	20.3
South Coast Western	16.3
Trevose Head to Stepper Point	0.8
West Penwith	0.7
Total	62.2

Source: Natural England (2012)

- 4.21 In addition, aerial photographic interpretation and field survey verification work was undertaken for sample squares in parts of the AONB where traditional orchards are characteristic (Camel Estuary, South Coast Western, South Coast Central and South Coast Eastern). In Phase 1, aerial photographs from 2005 were used, followed up by field survey work (in 2009). The exercise has repeated for Phase 2, using aerial photographs from 2012 and follow-up field survey verification. Total areas of 'traditionally managed' and 'derelict' orchards were calculated, following the protocol set out in Phase 1.
- 4.22 The results are shown below in **Table 4.5**, indicating that no changes have taken place during the four-year period.

Table 4.5: Extent of traditionally managed and derelict orchards (2009 and 2013)

AONB Section and sample squares	2009		2013	
	Traditionally Managed (ha)	Derelict (ha)	Traditionally Managed (ha)	Derelict (ha)
Camel Estuary (Sample square refs SW9272, SW9673)	0.5	0.33	0.5	0.33
South Coast Western (Sample square ref SW7526)		0.3		0.3
South Coast Central (Sample square ref SX8843)	0.13		0.13	
South Coast Eastern (Sample square refs SX1152, SX1156, SX1551, SX2252)	0.2		0.2	

Source: Aerial photographs from Cornwall Council (2005) and Microsoft (2012) and field verification undertaken by Plymouth University

Management of traditional orchards

- 4.24 Within the AONB, there is a total land area of 6.7 hectares under Environmental Stewardship options relating to the maintenance, restoration and creation of traditional orchards, as shown in **Table 4.6**.

Table 4.6: Environmental Stewardship option uptake relating to traditional orchards

Option	Option name	Area (ha)
HC18	Maintenance of high-value traditional orchards	1.3
HC19	Maintenance of traditional orchards in production	0
HC20	Restoration of traditional orchards	4.6
HC21	Creation of traditional orchards	0.9
Total		6.7ha

List of data sources used for this theme

- 4.25 The data sources used for this theme are as follows:
- Natural England (2003) Saline lagoons
 - Natural England (2004) Mudflat
 - Natural England (2004) Coast Sand Dune

- Natural England (2008) Deciduous Woodland BAP Priority Habitat Inventory for England V2.0
- Natural England (2008) Maritime Cliffs and Slope BAP Priority Habitat Inventory for England V2.0
- Natural England (2010) Special Areas of Conservation
- Natural England (2010) National Nature Reserves
- Natural England (2011) Fen BAP Priority Habitat
- Natural England (2011) Reedbed BAP Priority Habitat Inventory for England V2.0
- Natural England (2011) Lowland Heath BAP Priority Habitat Inventory for England V2.0
- Natural England (2012) SSSI
- RSPB (2000) Internationally Important Bird Areas
- Natural England (2012) Coastal Vegetated Shingle BAP Priority Habitat Inventory for England V2.3
- Natural England (2012) Coastal and Floodplain Grazing Marsh BAP Priority Habitat
- Natural England (2012) Purple Moor Grass and Rush Pasture BAP Priority Habitat Inventory for England V2.2
- Natural England (2012) Traditional Orchards BAP Priority Habitat Inventory for England V2.2
- ERCCIS (2013) County Wildlife Sites
- ERCCIS (2013) County Geological Sites
- NE Protected Landscapes Monitoring Framework 2013

Recommendations for ongoing monitoring

- 4.26 All indicators in the 'Biodiversity and Geodiversity' theme outlined above should continue to be monitored, using the same methods/scales of analysis, every five years to coincide with future AONB Management Plan reviews.
- 4.27 The AONB should consider supporting ERCCIS to undertake a targeted repeat of the Phase I habitat mapping undertaken through the LIFE project in 2005. This could potentially focus on target areas of the AONB where specific habitat change might be a concern, with directly comparable results used to assess change over the last decade.
- 4.28 It will also be important for the AONB to keep abreast of current and emerging issues impacting on characteristic patterns of woodland and semi-natural habitat distribution across the AONB, shaping monitoring activity accordingly. An emerging force for change, accelerated through climate change, is the increasing prevalence of pests and diseases threatening native woodland species, such as ash dieback, bleeding canker (impacting on horse chestnut), oak processionary moth and *phytophthora* pathogens affecting species including oak, alder and beech. The Dutch Elm disease outbreak in the 1970s, which caused a landscape-scale loss of elms (including those found within Cornish hedgebanks), has had a lasting legacy on the character of many parts of the AONB, particularly locations where woodland cover was limited to specimens found within hedges.
- 4.29 Targeted surveys of areas of woodland/trees in the AONB felt to be at risk could be instigated with local communities, working in partnership with the Forestry Commission who are leading national research into the management and control of tree pests and diseases¹³, including through their *Tree Health Diagnostic and Advisory Service*¹⁴.

¹³ <http://www.forestry.gov.uk/website/forestresearch.nsf/ByUnique/INFD-5STC8A>

¹⁴ <http://www.forestry.gov.uk/fr/ddas>

5. Heritage and Culture



5 Heritage and Culture

5.1 The following monitoring indicators have been selected for the 'Heritage and Culture' theme:

- Number and condition of archaeological sites/features
- Extent and condition of historic parks and gardens
- Management of the historic environment

Number and condition of archaeological sites / features

5.2 **Figure 5.1** maps the current location of the Cornish Mining World Heritage Site, Scheduled Monuments and Registered Parks and Gardens. **Figure 5.2** illustrates the current condition of national heritage features (Scheduled Monuments, Registered Parks and Gardens and Listed Buildings), using information from English Heritage's 'Heritage at Risk' (HAR) Register. Each designation is discussed in turn in this Chapter.

Extent of the Cornish Mining World Heritage Site

5.3 The Cornish Mining World Heritage Site is found in five of the AONB sections, as listed in **Table 5.1**. There has not been any change in the area designated since 2009. The coverage of the World Heritage Site, in terms of which AONB sections it falls within, in Table 5.1 for the purposes of future monitoring.

Table 5.1: Distribution of the World Heritage Site by AONB Section (2009 and 2013)

AONB Area	Area ha (2013)
West Penwith	2672.35
Bodmin Moor	521.25
South Coast Central	202.85
South Coast Western	48.61
St Agnes	598.71
Total	4043.77

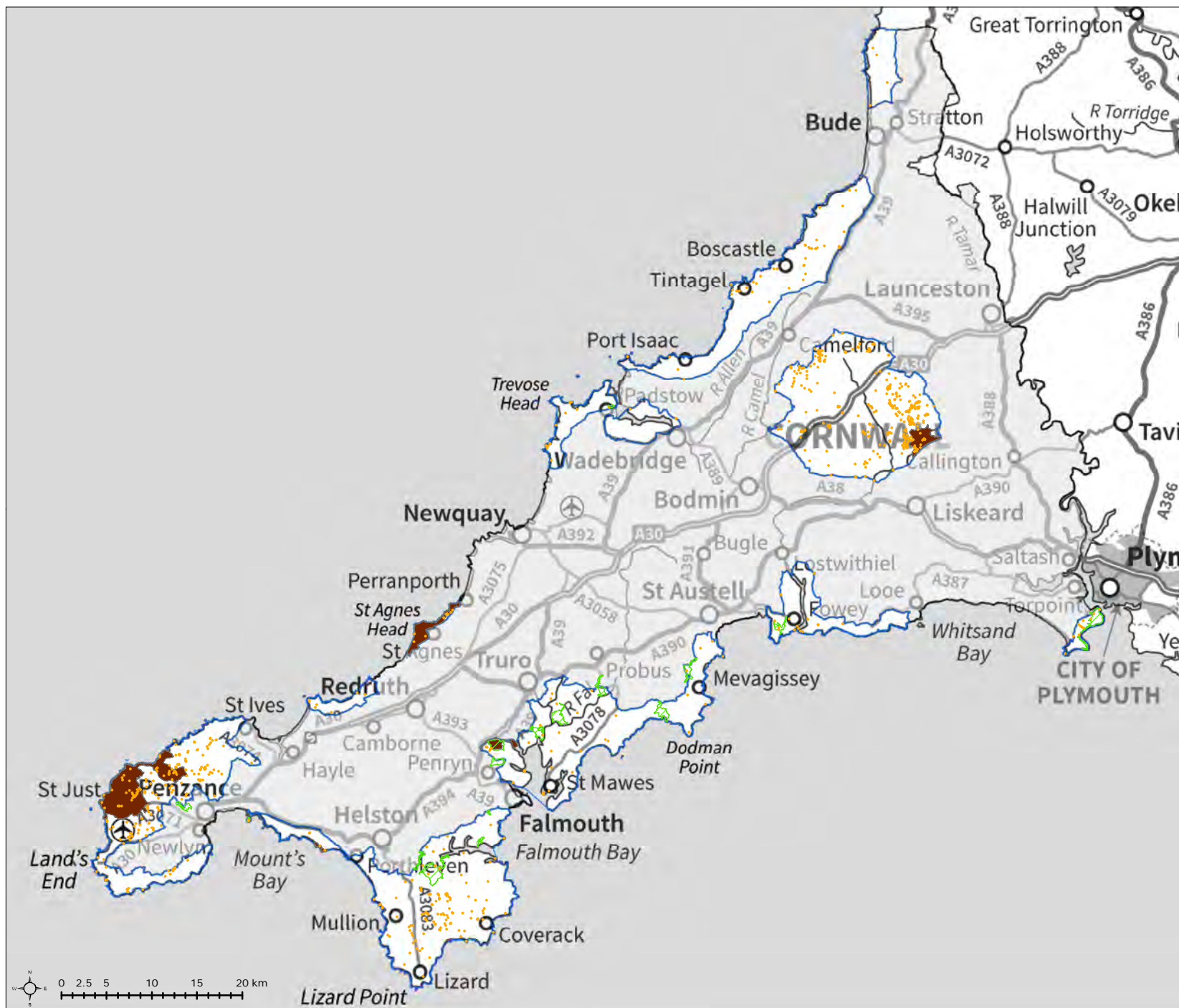
Number and condition of Scheduled Monuments

Number of Scheduled Monuments

5.4 **Table 5.2** provides a count of Scheduled Monuments (SMs), which are also mapped at **Figure 5.1**. This shows the number found in each of the 12 AONB Sections, comparing figures with data from the AONB Atlas (2009). There has been one new site designated on Bodmin Moor – Hobbs Hill Tin Mine – which covers four hectares. Two other sites have witnessed a significant increase in size – more accurate mapping has meant that Bosiliack prehistoric settlement in West Penwith has increased in size from less than 1 hectare to 18 hectares. On Bodmin Moor, the deserted village at Garrow Tor has been amended and increased significantly from 1 hectare to 105 hectares. The total area of the AONB covered by the Scheduled Monuments designation has increased by 127.3 hectares (10%) since 2009, covering a total of 1,306 hectares today.

Figure 5.1
Distribution of international
and national heritage
designations

- Cornwall AONB
- Scheduled Monuments
- Registered Parks and Gardens
- World Heritage Site



Map Scale @ A4: 1:600,000

Condition of Scheduled Monuments

- 5.5 **Table 5.2** also provides a breakdown of how many SMs are classified by English Heritage as being 'At Risk', which is also mapped in **Figure 5.2**. This data was not available for Phase 1, but will be important to monitor over time now that the programme is firmly established by English Heritage.

Table 5.2: Number and condition of Scheduled Monuments in the AONB

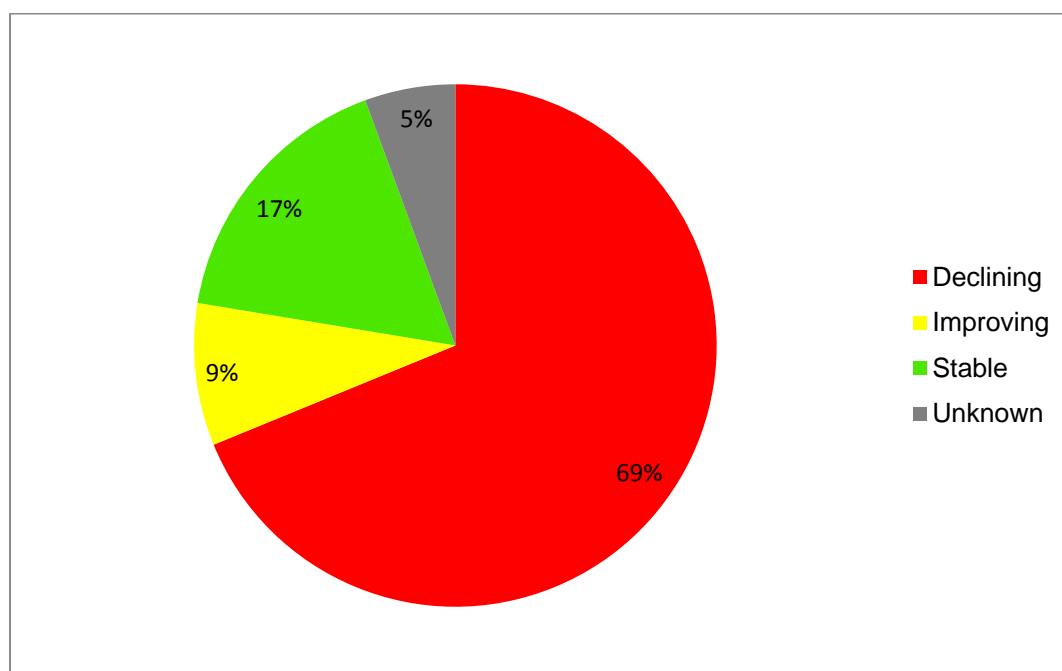
AONB Area	Number (2009)	Number (2013)	Number 'At Risk' (2013)
Hartland	4	4	0
Pentire Point to Widemouth	35	35	3
Bodmin Moor	305	306	81*
Camel Estuary	2	2	0
Trevose Head to Stepper Point	7	7	2
St Agnes	4	4	0
Godreavy to Portreath	7	7	1
West Penwith	161	161	25
South Coast Western	87	87	5
South Coast Central	32	32	3
South Coast Eastern	15	15	0
Rame Head	9	9	5
Total	668	669	81

*The condition of Monument ID 1010842 (included in the English Heritage GIS dataset) is not known as it is not included in the English Heritage SMAR register.

Source: English Heritage (2009 and 2013)

- 5.6 The data shows that the AONB Section with the greatest proportion of SMs 'At Risk' is Rame Head (5 out of 9), followed by Trevose Head to Stepper Point (2 out of its 7 Scheduled Monuments). Bodmin Moor has the largest number of Scheduled Monuments and the largest number 'At Risk'. **Figure 5.3** below provides a pie chart breakdown of the condition categories recorded on the At Risk Register. This shows that of the 125 SMs listed as 'At Risk' in the AONB, 69% are declining in condition. Conversely, only 9% have recorded an improvement in condition, whilst 17% are deemed as in stable condition.

Figure 5.3: Condition classifications for monuments on the 'At Risk' register



Number, grade and condition of Listed Buildings

Number and grade of Listed Buildings

- 5.7 **Table 5.3** below provides a comparative breakdown of the number and grade of Listed Buildings within the AONB at present, compared with the information presented in the AONB Atlas (2009). Please note that due to the high number of individual Listed Buildings, these were not included on the map at Figure 5.1.

Table 5.3: Number and grade of Listed Buildings in the AONB

Grade	Number (2009)	Number (2013)	Difference	Number 'At Risk'
I	56	56	0	1
II*	149	151	2	3
II	3,112	3,128	11	
Total	3,317	3,335	13	4

Source: English Heritage (2009 and 2013)

- 5.8 There have been changes made to the way in which Listed Buildings have been mapped by English Heritage since 2009, including alterations to the unique ID system that records each Listed Building. This makes comparisons between the two years difficult. There has been some movement of individual Listed Buildings between Grades e.g. Church of St Peter – South Coast Central has been changed from a Grade C to Grade II*. Antenna No. 1 at Goonhilly Satellite Earth Station has been upgraded from Grade II to Grade II*. There have been an additional 19 Listed Buildings that have been designated since 2009, shown in **Table 5.4** below by AONB Section.

Table 5.4: Number and grade of new Listed Buildings in the AONB since 2009

AONB Section	Number of new entries	Grade
West Penwith	12	II

AONB Section	Number of new entries	Grade
South Coast - Western	1	II
South Coast- Central	6	II

Source: English Heritage 2013

Condition of Listed Buildings

5.9 There are 4 Listed Buildings currently classified as 'At Risk' in the AONB:

- Two are located in Rame Head: Guard House, Boundary Wall & Attached Ancillary Buildings and Barrack Block at Maker Heights Barracks – These properties are Grade II* listed and noted by English Heritage as being in very poor condition.
- One is located on Bodmin Moor: Codda Farmhouse, and Attached Shippon, Wall and Pigsty is a Grade II* listed property that is described as being in poor condition.
- One is located in South Coast Western: The Church of St Rumon is Grade I listed and currently described as in poor condition.

Locally recognised archaeological sites and features (HER)

- 5.10 The Cornwall & Scilly Historic Environment Record (HER) is a comprehensive and definitive record of the historic environment of Cornwall and the Isles of Scilly, containing over 56,000 entries. The HER is maintained and updated on an ongoing basis, with a standard recording form used to add new submissions to the record¹⁵.
- 5.11 **Table 5.5** provides a comparison of the number of extant features recorded in Phase 1 (2008) at the sample square level, with the current record, bearing in mind the fluid nature of the HER. The data shows that overall there has been a 3% total increase in the number of entries in the HER within the AONB, with 15 new entries added since 2008.

Table 5.5: Number of features on the Historic Environment Record (2008 and 2013)

AONB Area	Number (2008)	Number (2013)	Change (no.)
Hartland (Sample square refs: SS2009, SS2115)	14	12	-2
Pentire Point to Widemouth (Sample square refs: SX0080, SX0789, SX0886, SX1492)	24	23	-1
Bodmin Moor (Sample square refs: SX1479, SX1868, SX2369, SX2376)	94	96	2
Camel Estuary (Sample square refs: SW9272, SW9673)	2	2	0
Trevose Head to Stepper Point (Sample square refs: SW8672, SX8774)	3	2	-1
St Agnes	13	17	4

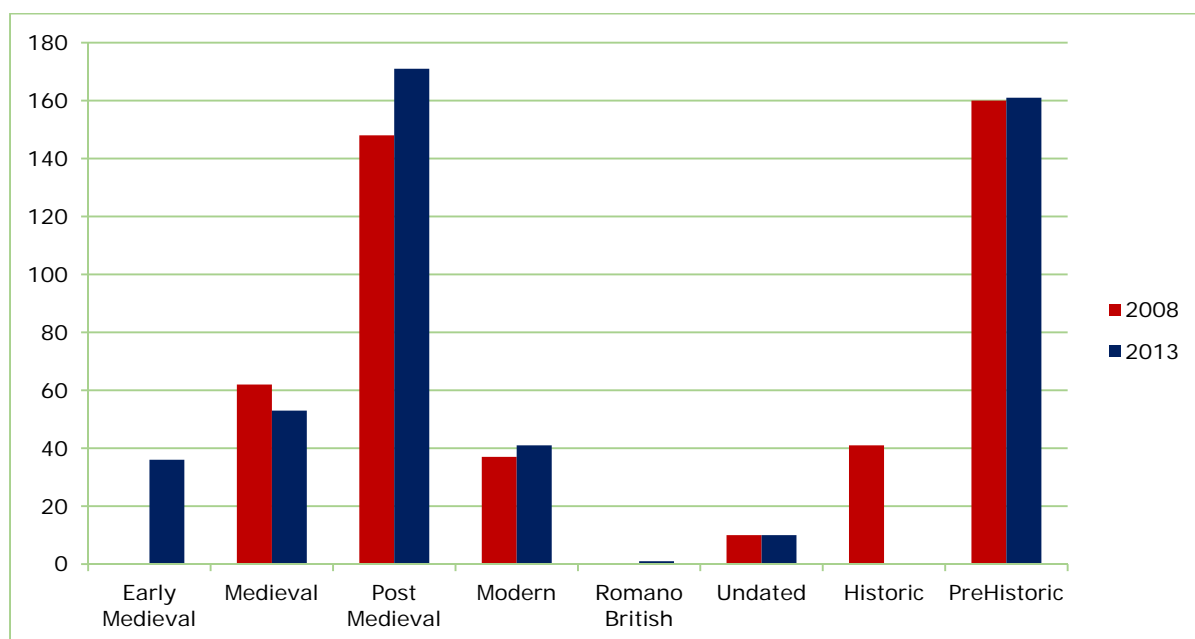
¹⁵ <http://www.cornwall.gov.uk/default.aspx?page=8528>

AONB Area	Number (2008)	Number (2013)	Change (no.)
<i>(Sample square refs: SW7050, SW7151)</i>			
Godreavy to Portreath <i>(Sample square refs: SW6042, SW6444)</i>	7	8	1
West Penwith <i>(Sample square refs: SW3734, SW3923, SW4235, SW4436, SW4625, SW4634, SW4837, SW4840)</i>	177	180	3
South Coast Western <i>(Sample square refs: SW5728, SW6522, SW7114, SW7117, SW7526, SW7722)</i>	53	59	6
South Coast Central <i>(Sample square refs: SW8037, SW814, SW8632, SW8843, SW9340, SX0145)</i>	29	31	2
South Coast Eastern <i>(Sample square refs: SX0950, SX1152, SX1156, SX1254, SX1350, SX1551, SX2252)</i>	17	18	1
Rame Head <i>(Sample square ref: SX4351)</i>	25	25	0
Total	458	473	15

Source: Cornwall Council HER (2008 and 2013)

- 5.12 **Figure 5.4** below provides a comparative breakdown of the age classification of features recorded on the HER from both 2008 and 2013. This shows a 22% increase in the number of features from the Post-medieval period, and a 15% decrease in the number of Medieval features. No features in 2008 were allocated to the Early Medieval period, which is interesting to note.

Figure 5.4: Age classification of features on the HER (2008 and 2013)



Extent and condition of parks and gardens

Registered Parks and Gardens

- 5.13 **Table 5.6** lists the number of Registered Parks and Gardens in the AONB, which has stayed the same since 2009. Their location is mapped in **Figure 5.1**. Carclew Park in the South Coast Central area of the AONB is included on the HAR. It is an 18th Century Grade II Registered Park and Garden, and is noted as having ‘extensive significant problems’, including infill residential development in the park belts, the clearance of substantial areas of woodland and the loss of many individual parkland trees. Part of the Park is adjacent to and slightly overlapping the Perranarworthal Conservation Area.

Table 5.6: Number and grade of Registered Parks and Gardens in the AONB

Grade	Number (2009)	Number (2013)	No. ‘At Risk’
I	1	1	
II*	4	4	
II	11	11	1
Total	16	16	1

Source: English Heritage (2009 and 2013)

Management of the historic environment

- 5.14 Uptake of Environmental Stewardship options relating to the historic environment are presented in **Table 5.7** and **5.8** below. **Table 5.7** shows that the vast majority (97%) of uptake is focused on the management of archaeological features on grassland. 119.6ha of land is under options relating to parkland management (**Table 5.8**), mostly focused on parkland maintenance, rather than restoration or creation.

Table 5.7: Archaeological management Environmental Stewardship options

Option	Option name	Area (ha)
ED4	Management of scrub on archaeological features	9.2
ED5	Management of archaeological features on grassland	265.7
HD4	Management of scrub on archaeological features	3.7
HD5	Management of archaeological features on grassland	191.3
HD8	Maintaining high water levels to protect archaeology	0
Total		469.9ha

Table 5.8: Parkland management Environmental Stewardship options

Option	Option name	Area (ha)
HC12	Maintenance of wood pasture and parkland	114.8
HC13	Restoration of wood pasture and parkland	3.4
HC14	Creation of wood pasture	1.4
Total		119.6ha

List of data sources used for this theme

5.15 The data sources used for this theme are as follows:

- English Heritage (2013) Scheduled Monuments
- English Heritage (2013) Listed Buildings
- English Heritage (2013) Registered Parks and Gardens
- English Heritage (2012) World Heritage Sites
- Cornwall Historic Environment Service (2013, 2009 and 2008) Historic Environment Record
- English Heritage (2012) Heritage at Risk
- NE Protected Landscapes Monitoring Framework 2013

Recommendations for ongoing monitoring

5.16 All indicators in the 'Heritage and Culture' theme outlined above should continue to be monitored, using the same methods/scales of analysis, every five years to coincide with future AONB Management Plan reviews.

6 Community and Economy



6 Community and Economy

6.1 The following monitoring indicators have been selected for the 'Community and Economy' theme:

- Levels and types of fishing industry activity
- Numbers of moorings
- Population trends
- Employment and business activity
- Levels of deprivation
- Average property values

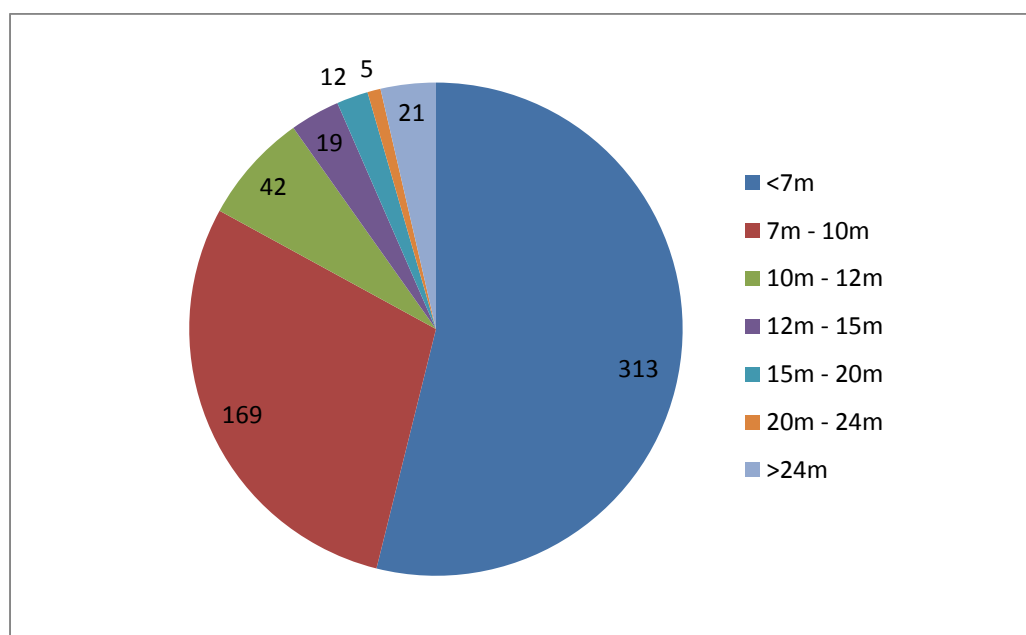
Levels and types of fishing industry activity

6.2 Numbers of fishing vessels in the main harbours was collected for Phase 1 from a 'Cornwall Sea Fisheries' survey undertaken in 2006, which has not since been repeated in a directly comparable way to inform Phase 2.

6.3 The establishment of the Cornwall Inshore Fisheries Conservation Authority (IFCA) on 1 April 2011, as a result of the Marine and Coastal Access Act 2009, has created a new body responsible for marine fisheries and environmental management in the county's inshore waters and estuaries. The Authority has taken over the duties, responsibilities and assets of the previous Cornwall Sea Fisheries Committee, together with a broader remit for the sustainable management of the inshore marine environment.

6.4 The latest information on the type of fishing vessels registered in Cornwall has been obtained from the IFCA for 2009. This is currently being updated, with an updated set of results expected by the end of 2013. A total of 581 vessels were registered in 2009, with a significant proportion of the fleet (54%) comprising small boats less than 7 metres in length, with the largest vessel length (>24m) accounting for just under 4%, or 21 individual vessels. This information is shown in **Figure 6.1**.

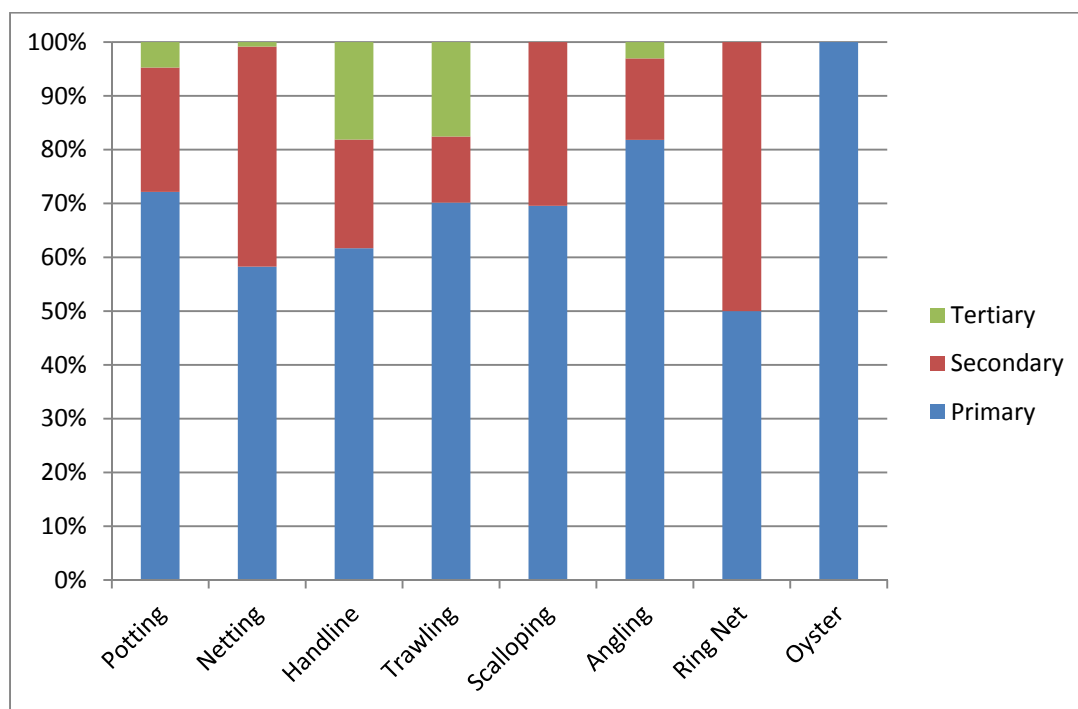
Figure 6.1: Number of registered fishing vessels in Cornwall, by length class



Source: Cornwall Sea Fisheries Committee (2009)

- 6.5 The type of fishing activity is depicted in **Figure 6.2** below. This shows that oyster dredging is the most specialised industry, but it only involves one vessel registered in Cornwall. Other vessels engage in additional activities to supplement their primary activity, due to variations in weather/tidal conditions. Conversely, some vessels may only be geared up for one activity (e.g. scalloping or dredging).
- 6.6 The most popular primary activity is handline (177 vessels) followed by potting (153). **Figure 6.2** shows that ring netting has an equal split between a primary and secondary fishing activity, whilst handline fishing is popular as a primary, secondary and tertiary activity, undertaken by a total of 287 registered vessels.

Figure 6.2: Type of fishing activity undertaken by registered fishing vessels



Source: Cornwall Sea Fisheries Committee (2009)

Numbers of moorings

- 6.7 Similar to the above indicator, in Phase 1, anecdotal evidence on the number of moorings within key harbours and marinas of the AONB was collected, following discussions between the AONB and various organisations. Unfortunately, directly comparable data is not available to inform an accurate discussion of change in the numbers of moorings within the AONB. In Phase 2, figures on numbers of moorings were obtained from Andy Brigden, Maritime Manager for Cornwall Council. These are set out in **Table 6.1** below, to be used as a new baseline for future monitoring.

Table 6.1: Number and location of moorings within the AONB

AONB section	Harbour/location of moorings	Number of moorings (2013)
Pentire Point to Widemouth	Rock	200 moorings 150 dinghies
Trevose Head to Stepper Point	Padstow	140 (40 are visitor moorings)
South Coast Western	Helford	535

AONB section	Harbour/location of moorings	Number of moorings (2013)
	St Michael's Mount	30
	Porthleven	90 (approximate figure)
South Coast Eastern	Fowey	2,083 (240 are visitor moorings) 80 pontoons
	Polkerris	12
	Polperro	65
Pentire Point to Widemouth	Boscastle	17
West Penwith	Mousehole	70
South Coast Central	Portscatho	45
	Portloe	20
	Gorran Haven	50 -60
	Mevagissy	180
	St Mawes & Percuil River	716
	Polperro	65

Source: Andy Brigden, Maritime Manager, Cornwall Council(Pers Comms 2013)

NB in addition to the above, there are 20 onshore moorings in St Agnes (in a compound) and 20 beach-based spaces at Cadgwith.

Population trends

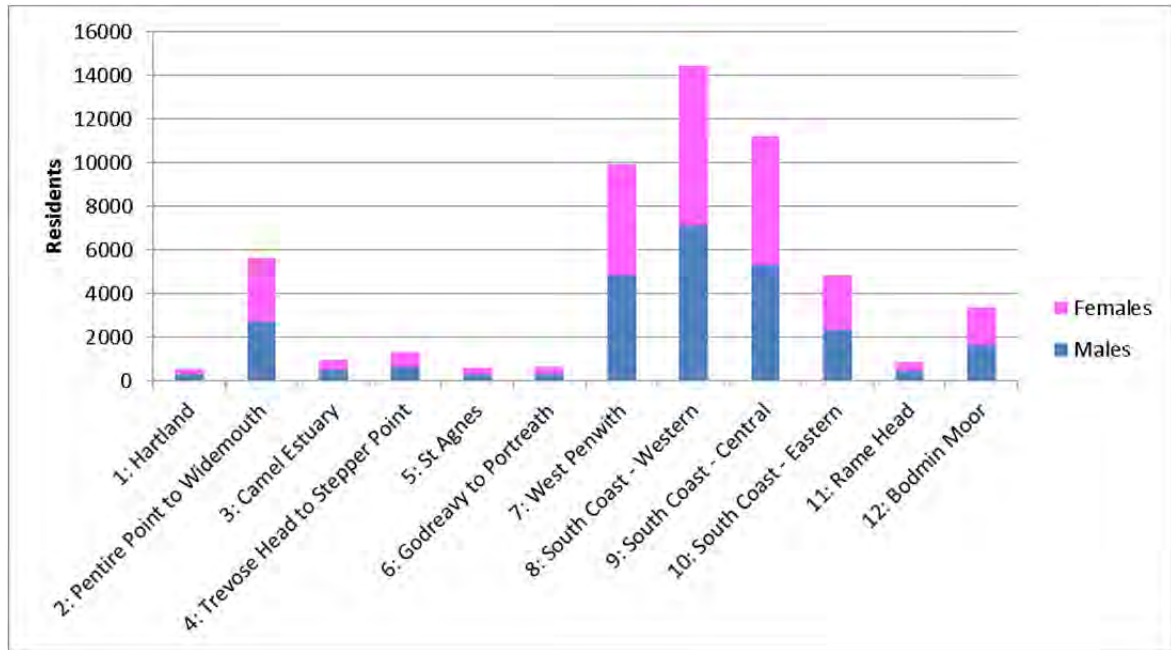
- 6.8 Although a detailed analysis of population trends was not undertaken in Phase 1, the recent publication of the 2011 national census provides an opportunity to paint a clearer picture of the demographic make-up of the AONB, with comparisons back to the 2001 census presented where possible.

Demographic characteristics

- 6.9 Analysis of the 2011 UK Census shows that there are approximately 54,356 residents in the AONB¹⁶. There are slightly more females than males in the AONB (52% and 48% respectively). This represents a 6% increase on the population recorded in 2001.
- 6.10 The spread of residents across the different AONB sections is illustrated in **Figure 6.3** below. **Figure 6.4** shows the age profile of the AONB. 60% of the AONB residents are over 45 years of age.

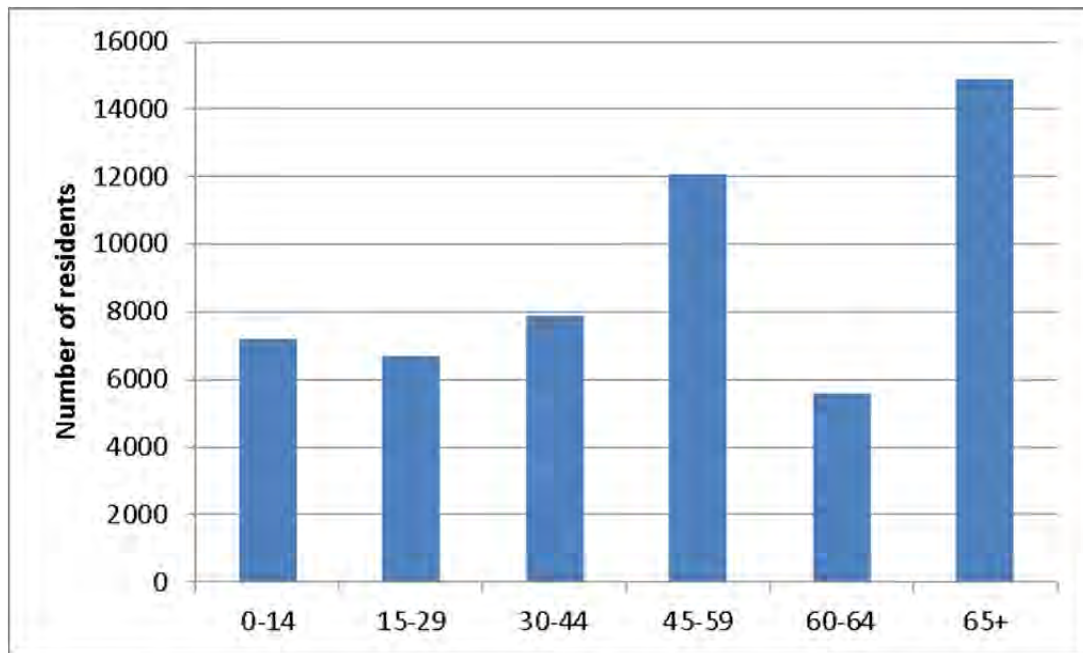
¹⁶ Where an Output Area straddles the AONB boundary, a proportion of the Output Area total has been included based on the area of the Output Area within the AONB. This figure is an approximation.

Figure 6.3: 2011 population distribution across the AONB sections



Source: ONS Census 2011

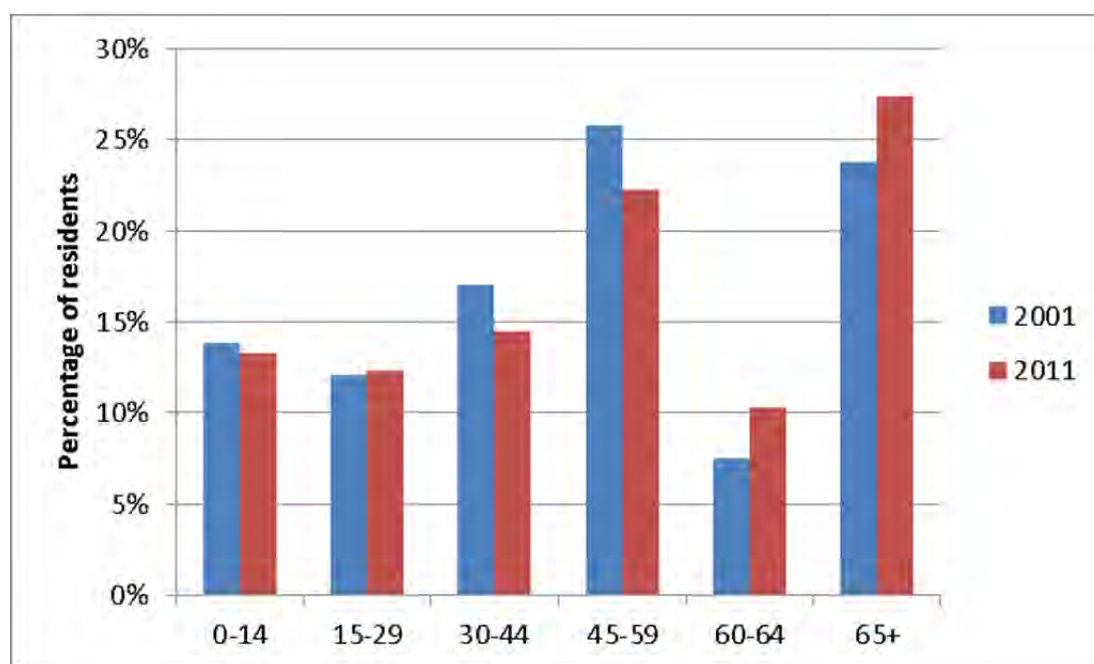
Figure 6.4: Age of AONB residents (2011)



Source: ONS Census 2011

- 6.11 When compared to the 2001 age breakdown of residents in the AONB, there has been an increase in residents aged 60 and over with a reduction in the proportion of residents between 30 and 59. There has been a marginal increase in residents aged 15-29 as shown in **Figure 6.5** below.

Figure 6.5: Age profile of the AONB 2001 and 2011



Source: ONS Census 2001 (as reported in the Cornwall AONB Atlas) and ONS Census 2011.

- 6.12 The ethnic make-up of the AONB remains dominated by White: British, as was the case in 2001.

Levels of deprivation

- 6.13 **Figure 6.6** shows the Index of Multiple Deprivation (IMD)¹⁷ for the AONB. This useful index provides an insight into the quality of life of AONB (and Cornish) residents compared to the rest of the country. Most of the AONB shows moderate to high levels of deprivation (although no areas are within the highest deprivation category). Some parts of the south coast have lower levels of deprivation (e.g. Mawnan Smith, Carclew, Penpol and Feock).
- 6.14 The 'Barriers to housing and services' indicator (**Figure 6.7**) shows that most of Cornwall and the AONB have some of the highest levels of deprivation in the country. This relates to issues such as access to affordable housing which is discussed later in this chapter. The same pattern of high levels of deprivation is seen in the 'Living environment' indicator (**Figure 6.8**), which relates to the quality and condition of housing, air quality and road traffic accidents. In contrast, the AONB enjoys some of the lowest levels of crime in the country, as depicted in **Figure 6.9**.

Employment and business activity

Employment

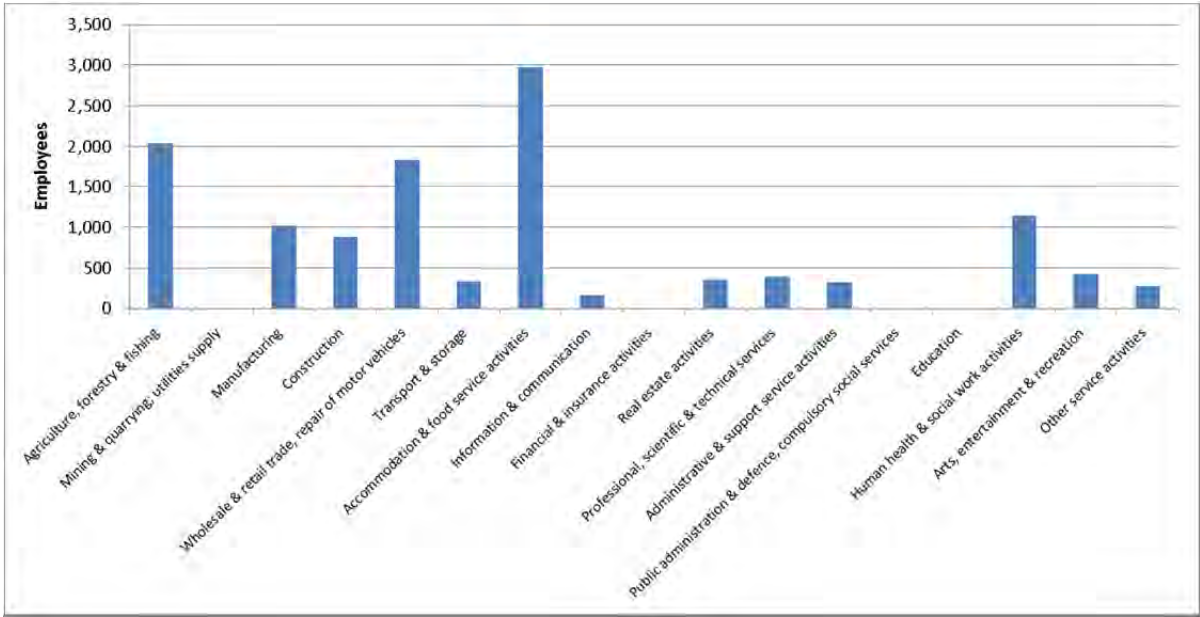
- 6.15 The largest employment sector in the AONB is related to accommodation and food service activities (24%), as depicted in **Figure 6.10** below. This is double the figure recorded in 2001¹⁸. This increase is likely due to an increase in tourism levels over the past decade. A total of 3,625 people were employed in business sectors related to tourism including 'Accommodation for visitors', 'Culture, Sport and Recreation', 'Food and Beverage Serving' and 'Passenger Transport and Travel'. Other significant sectors are agriculture, forestry and fishing (17%) which has expanded significantly since 2001 (8%) and wholesale and retail trade, repair of motor vehicles (15%) which has remained stable at this level.
- 6.16 50% of the total working age population are employed, with 6% unemployed. A large proportion of the working age population are retired (35%).¹⁹

¹⁷ The IMD covers seven aspects of deprivation: income; employment; health deprivation and disability; education, skills and training; barriers to housing and services; crime and the living environment.

¹⁸ ONS Census 2001 as reported in the Cornwall AONB Atlas.

¹⁹ Labour Force Survey 2010, Office for National Statistics

Figure 6.10: Employment in the AONB by industry sector

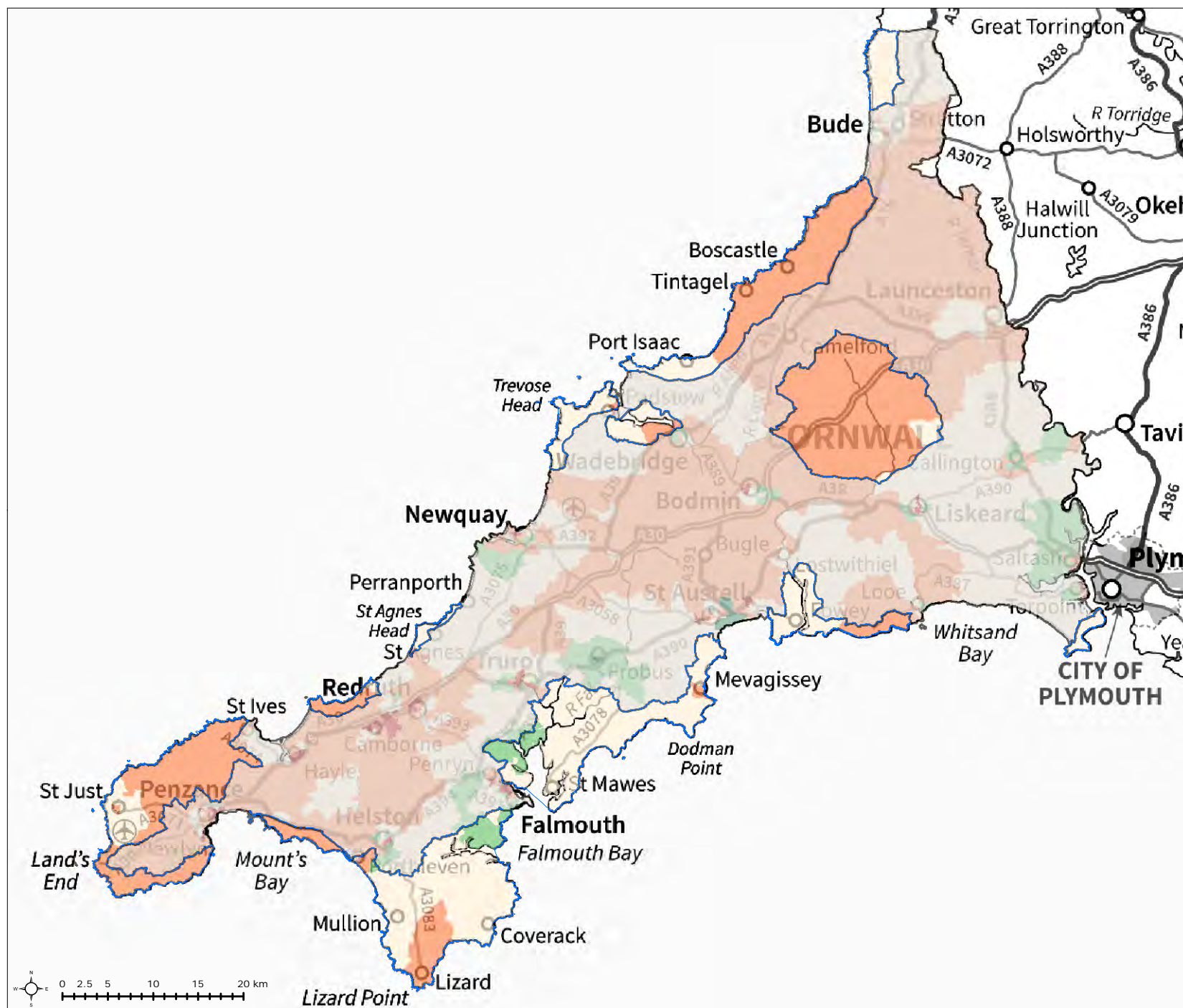
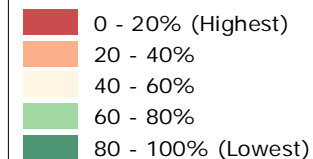


Source: Inter-Departmental Business Register, 2010/11, Enterprise level (as reported in the Cornwall AONB Economic Profile, DEFRA Rural Statistics Unit, 2012)

Figure 6.6
Index of Multiple
Deprivation

□ Cornwall AONB

Overall deprivation
percentile



Map Scale @ A4: 1:600,000

Figure 6.7
Barriers to housing and services

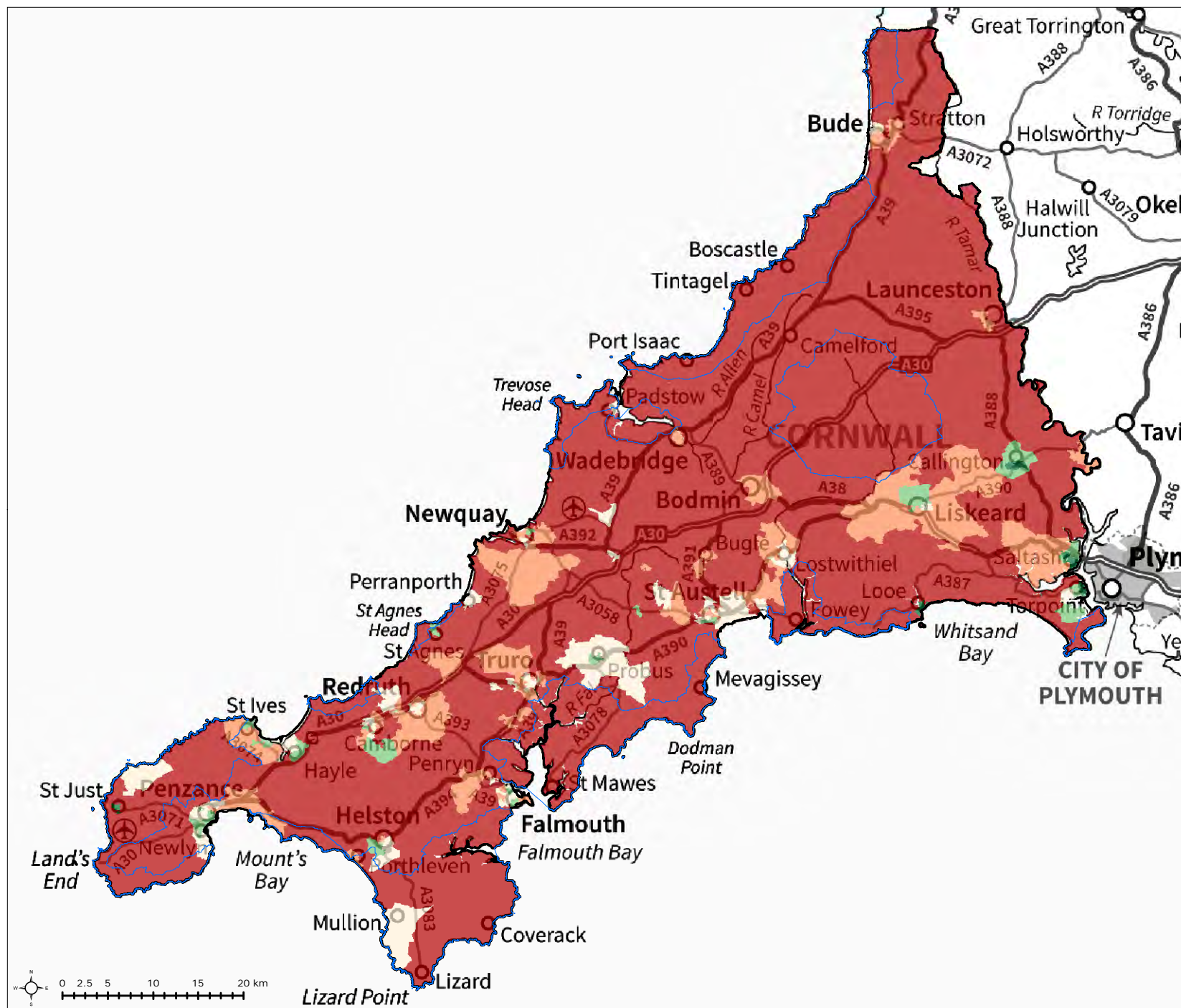
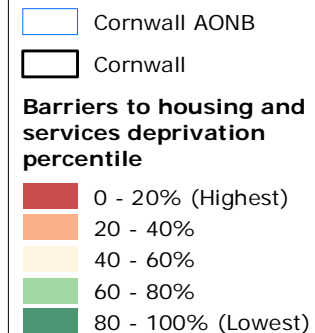







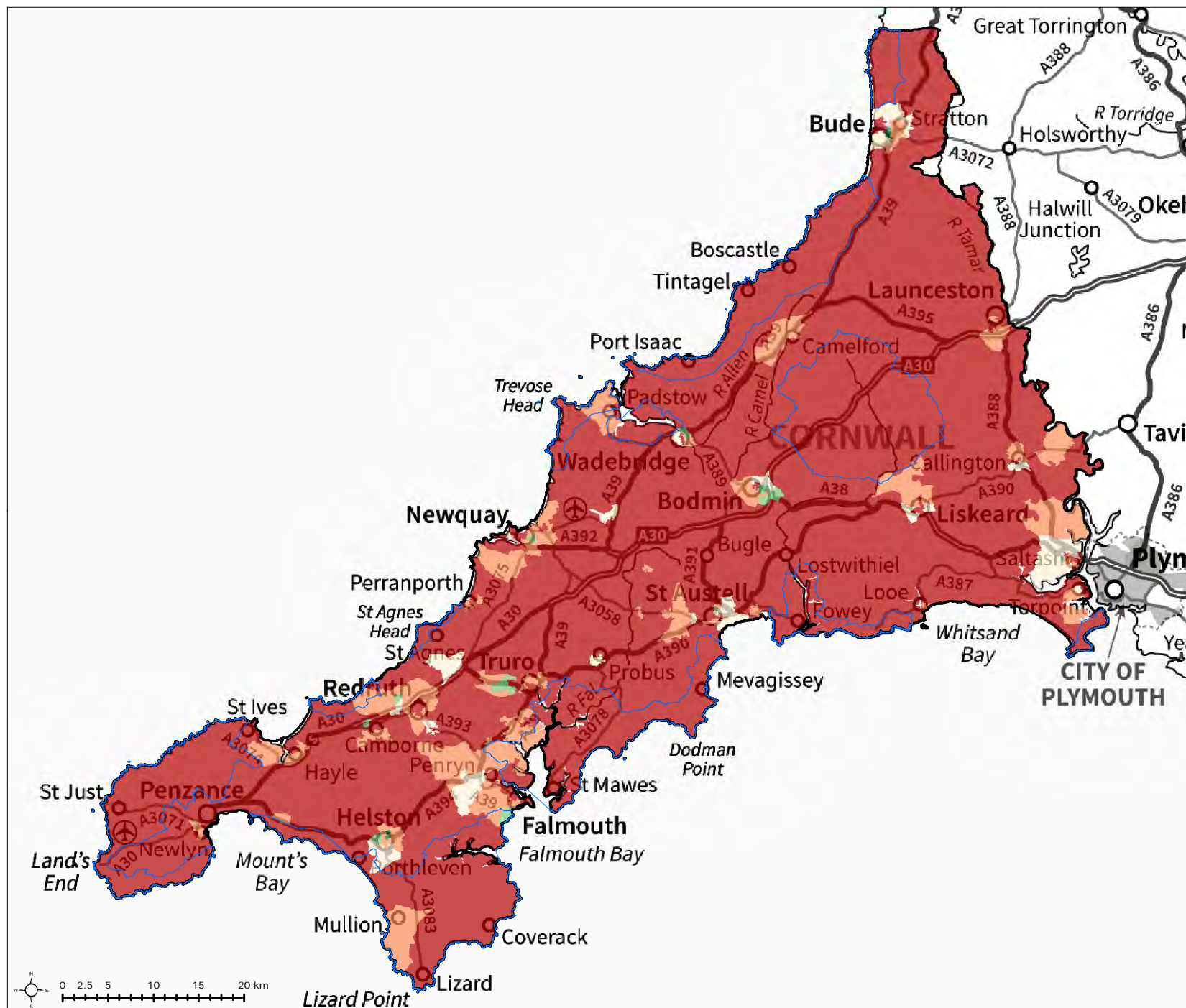


Figure 6.8
Living Environment
Indicator

 Cornwall AONB
 Cornwall

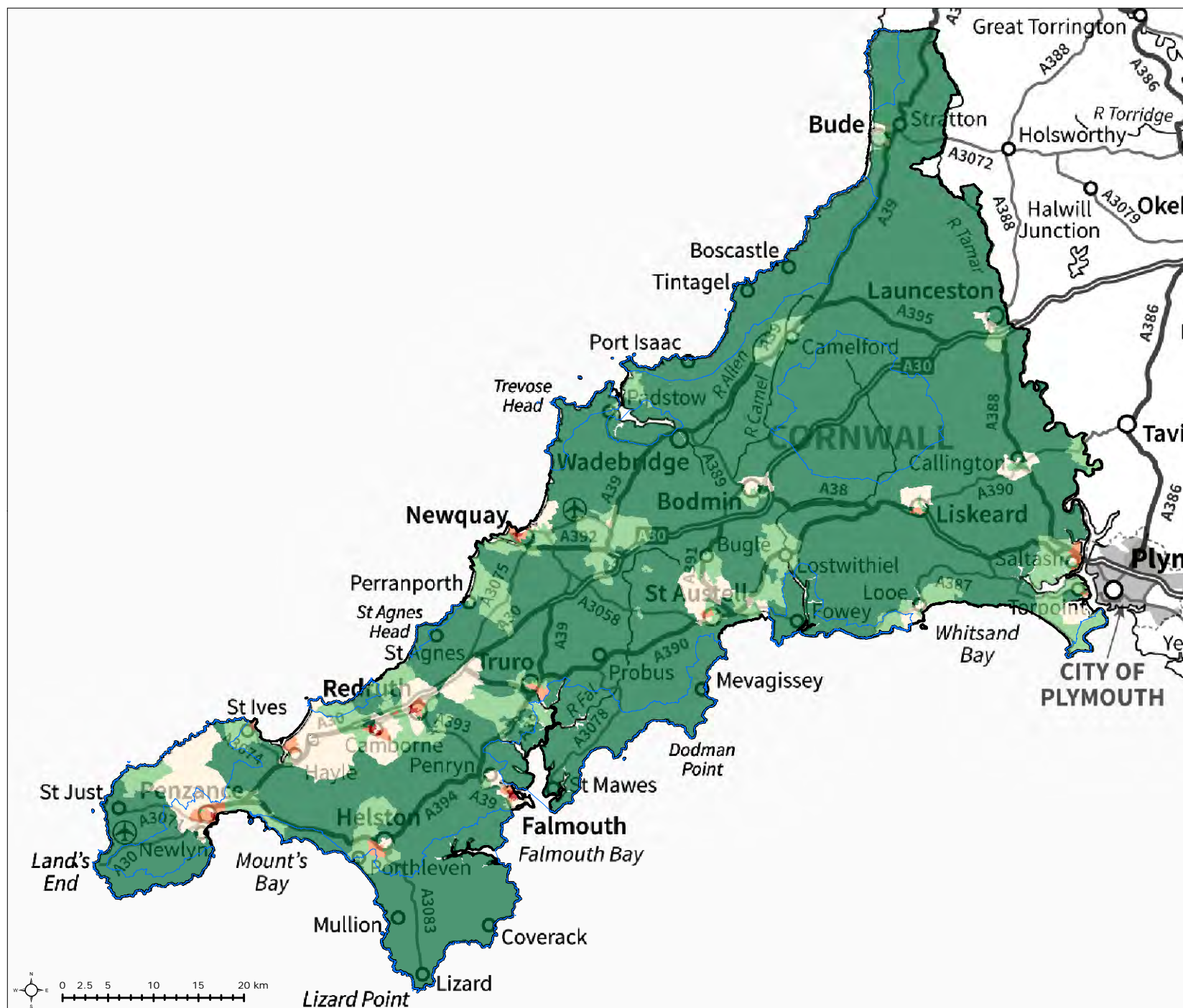
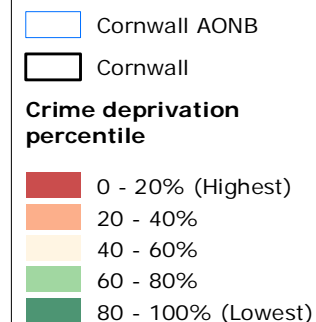
Living environment
deprivation percentile

 0 - 20% (Highest)
 20 - 40%
 40 - 60%
 60 - 80%
 80 - 100% (Lowest)



Map Scale @ A4: 1:600,000

Figure 6.9
Levels of crime

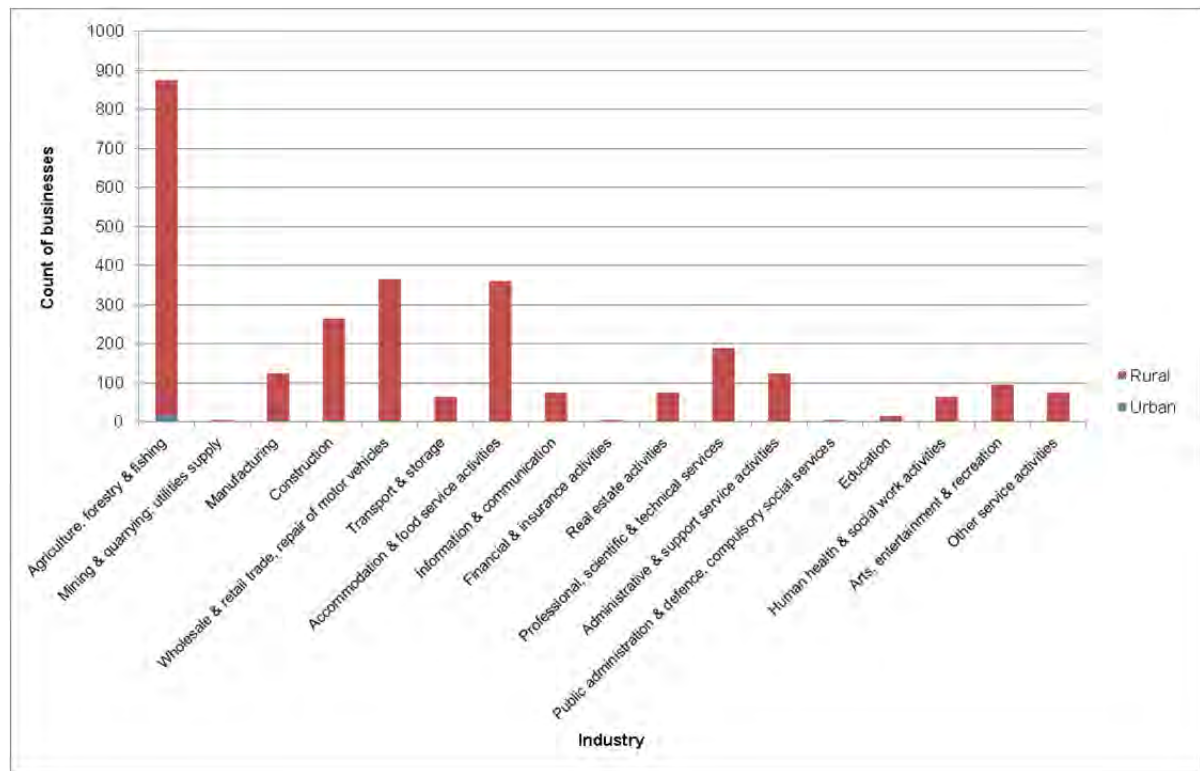


Map Scale @ A4: 1:600,000

Types of businesses in the AONB

- 6.17 There are 2,785 businesses in the AONB. Of these, 58% are considered micro-businesses (1-9 employees) which employ 44% of all employees in the AONB²⁰. The majority of these are located in the rural parts of the AONB. By far the largest single industry sector is agriculture, forestry and fishing (31%). Other common businesses relate to wholesale retail trade, repair of motor vehicles (13%), accommodation and food services (13%) and construction (10%) as shown in **Figure 6.11** below. 515 businesses in the AONB are considered to be tourism businesses employing 3,625 people.

Figure 6.11: Types of businesses in the AONB



Source: *Inter-Departmental Business Register, 2010/11, Enterprise level (as reported in the Cornwall AONB Economic Profile, DEFRA Rural Statistics Unit, 2012)*

Average property prices

Housing affordability and second home ownership

- 6.18 Cornwall is the local authority where the greatest number of people in England and Wales recorded a second address during the 2011 Census. 22,997 people, usually resident elsewhere in England and Wales, have a second address in Cornwall used for 30 days or more each year, reflecting the popularity of the county as a location for holiday homes (as depicted in **Figure 6.10**). 11,849 Cornish residents also have a second address elsewhere in England and Wales.
- 6.19 Across the Cornwall Unitary Authority area, 14,446 dwellings (5.5%) are second homes, although this overall figure is highly variable across parishes, as depicted in the Council's neighbourhood profiles map²¹. Levels of second home ownership range from around 38% in St. Merryn (Trevose Head to Stepper Point AONB section) to less than 1% in Helston (South Coast Western AONB Section). There is also high variability within a small geographic area. For example, in the

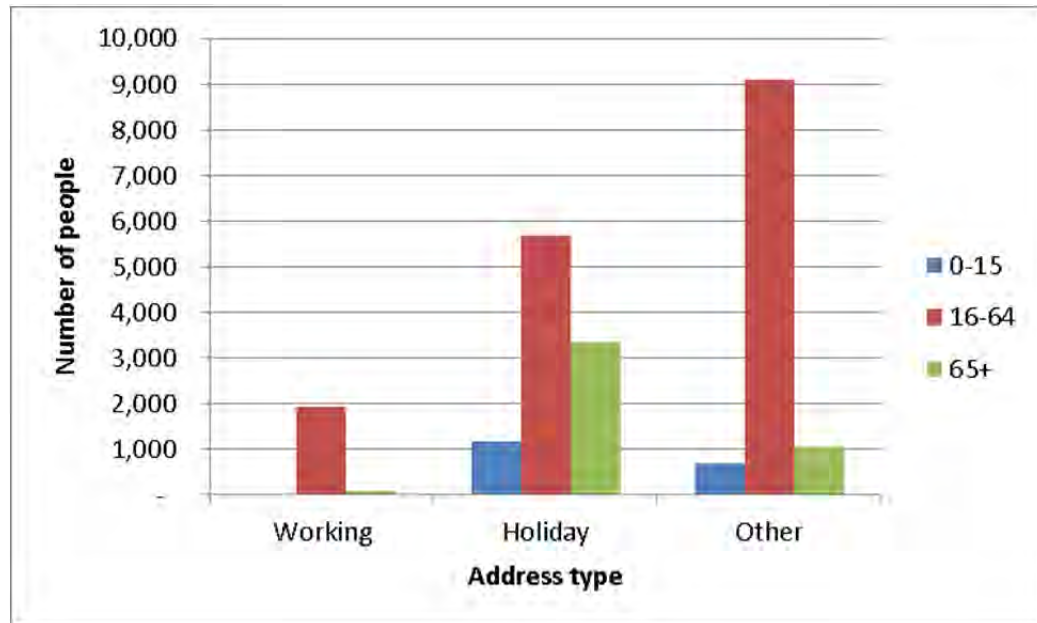
²⁰ Inter-Departmental Business Register, 2010/11, Enterprise level (as reported in the Cornwall AONB Economic Profile, DEFRA Rural Statistics Unit, 2012)

²¹ <http://www.cornwall.gov.uk/default.aspx?page=26436>

Trevose Head to Stepper Point AONB section, St. Eval has a second home ownership level of 10%, whilst in St Merryn this figure is 38%.

- 6.20 A breakdown of the age range of second home owners, along with type of second home property is given in **Figure 6.12** below.

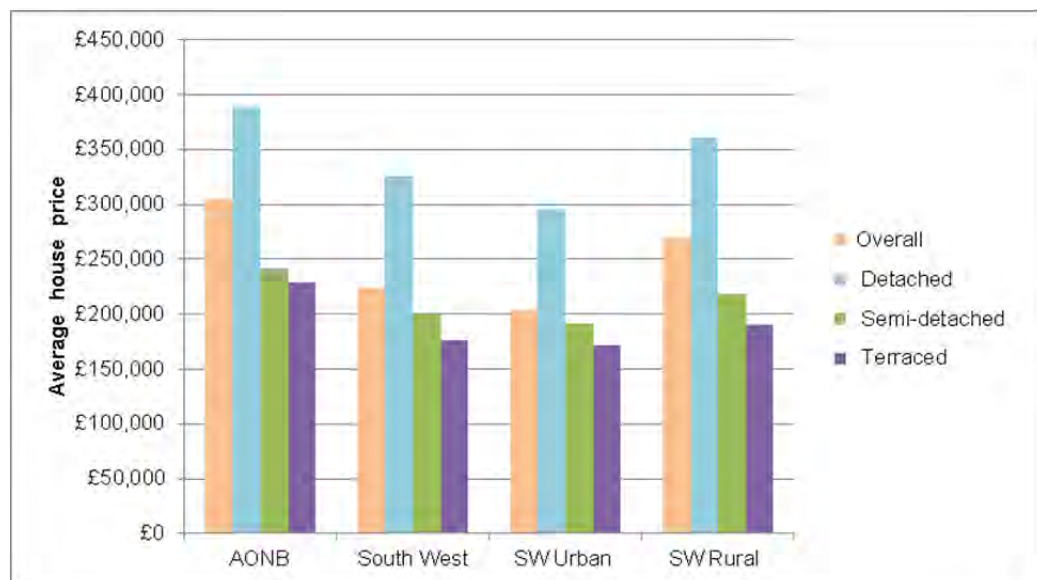
Figure 6.12: Age of people with second homes in Cornwall



Source: ONS Census 2011

- 6.21 According to Land Registry Sales data in 2011, the average house price in the AONB is £305,000. This is 36% higher than the average house price in the South West. House prices are on average 13% higher in the AONB than within rural South West areas. House prices vary according to the house type as shown in **Figure 6.13** below. Interestingly, there were no house sales in the urban parts of the AONB in 2011.

Figure 6.13: Average house prices in the AONB and South West

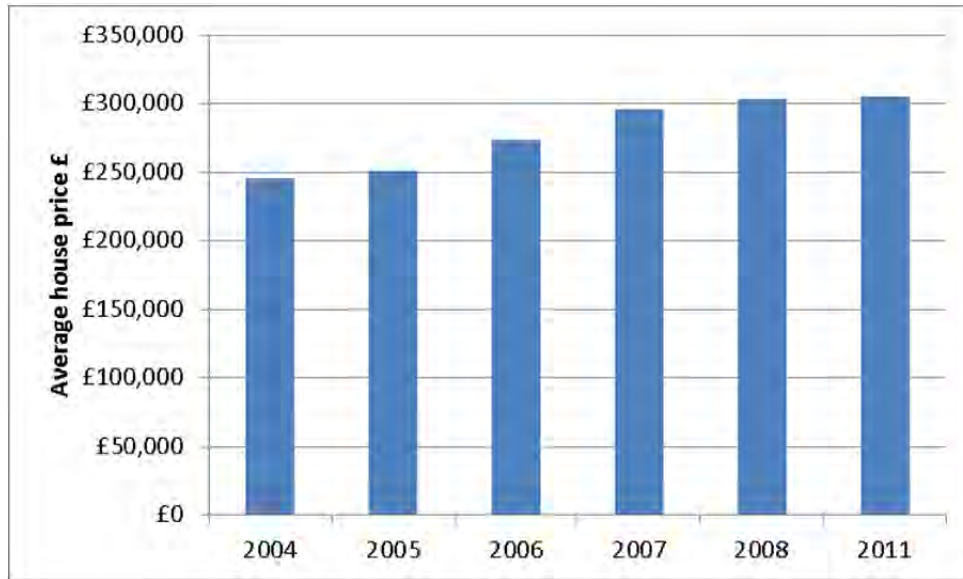


Source: Land Registry sales data 2011 (as reported in the Cornwall AONB Economic Profile, DEFRA Rural Statistics Unit, 2012)

- 6.22 When compared to average house prices from 2004-2008, although there is a year on year increase in the average property price in the AONB, prices appear to be levelling off in recent

years as shown in **Figure 6.14**, reflecting the national downturn in the economy and general decrease in house prices across the UK (which is showing the beginnings of a recovery now, in 2013).

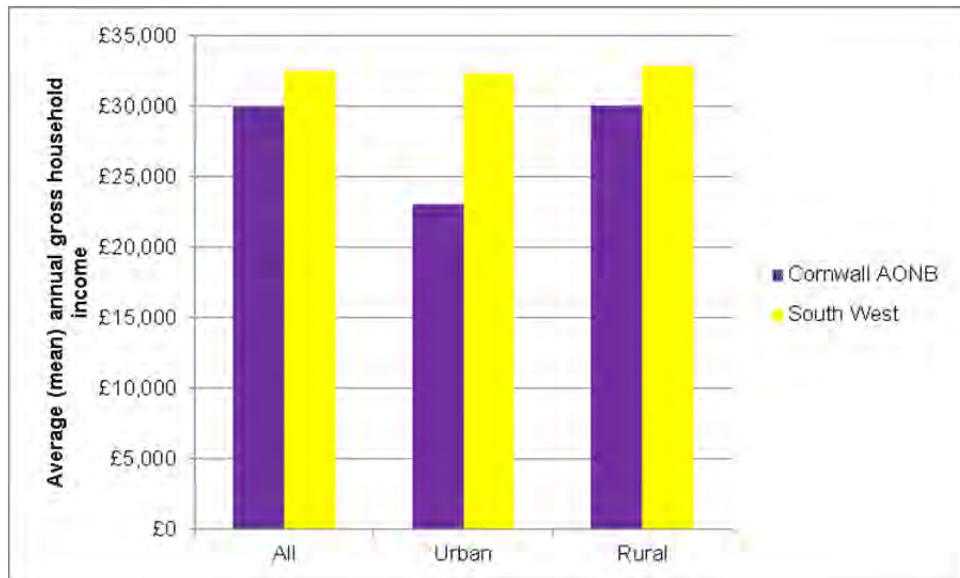
Figure 6.14: Average house prices 2004-2011



Source: Land Registry sales data 2011 (as reported in the Cornwall AONB Economic Profile, DEFRA Rural Statistics Unit, 2012) and Cornwall AONB Atlas

- 6.23 The average annual gross household income in the AONB in 2011 was £30,030. This is less than the average income in the South West (£32,550). Of importance to note, incomes in the rural parts of the AONB are higher than those in urban areas, as shown in **Figure 6.15**.

Figure 6.15: Average annual gross household income



Source: CACI Paycheck data, mid-year estimates 2010-11 (as reported in the Cornwall AONB Economic Profile, DEFRA Rural Statistics Unit, 2012)

- 6.24 The average house price/income ratio (**Figure 6.16**) of the AONB is higher (10.2) than the rest of the South West (6.9). This is a consequence of having lower average annual income and higher house prices, also likely to be spurred on by high second home ownership in Cornwall. Home

ownership (owned outright or owned with a mortgage) has decreased by 2% from 75% to 73% between 2001 and 2011. There has been a corresponding increase in private and social rentals²².

Figure 6.16: House price/income ratio



Source: Land Registry sales data 2011/ CACI Paycheck data, mid-year estimates 2010-11 (as reported in the Cornwall AONB Economic Profile, DEFRA Rural Statistics Unit, 2012)

List of data sources used for this theme

6.25 The data sources used for this theme are as follows:

- Cornwall Sea Fisheries Committee (2009) Fishing Vessel Survey of Cornish Ports and Harbours
- Cornwall Council Maritime Manager (pers comms).
- ONS Census 2001 and 2011
- Land Registry sales data 2011 (as reported in the Cornwall AONB Economic Profile, DEFRA Rural Statistics Unit, 2012)
- Cornwall Council's Neighbourhood Profiles Map: % of second homes (31.8.12).
<http://www.cornwall.gov.uk/default.aspx?page=26436>
- CACI Paycheck data, mid-year estimates 2010-11 (as reported in the Cornwall AONB Economic Profile, DEFRA Rural Statistics Unit, 2012)
- Labour Force Survey 2010, Office for National Statistics
- Inter-Departmental Business Register, 2010/11, Enterprise level (as reported in the Cornwall AONB Economic Profile, DEFRA Rural Statistics Unit, 2012)
- Communities and Local Government Index of Multiple Deprivation 2010

Recommendations for ongoing monitoring

6.26 Cornwall IFCA are currently undertaking an update to the 2009 fishing vessel survey, with the results made available by the end of 2013. These results should be obtained by the AONB in

²² Census 2011 and Census 2001 as reported in the Cornwall AONB Atlas.

order to establish any changes to the levels of types of fishing activity in local ports and harbours since the last survey in 2009.

- 6.27 Much of the information in the rest of this chapter is based on the analysis of the 2011 Census data produced by the Office of National Statistics (ONS). The AONB will need to keep a watching brief on the availability of future data (due to uncertainties surrounding future national censuses). Because many of the trends will only be meaningful over a longer time period, equivalent information should be sought every ten years.
- 6.28 It is recommended that the AONB Unit explores maintaining a central database on numbers of moorings to allow for easier monitoring, working with the constituent harbour authorities within the AONB. This should be populated with the most up-to-date data and reviewed every two years (but with a full analysis required only every five years to coincide with AONB reporting).

7 Transport and Access



7 Transport and Access

7.1 The following monitoring indicators have been selected for the 'Transport and Access' theme:

- Length and condition of rights of way
- Length of cycle ways
- Area of open access and common land
- Presence of local car/passenger ferries
- Character of rural roads

Length and condition of rights of way

7.2 **Table 7.1** below sets out the lengths of public rights of way in the AONB, comparing information from the AONB Atlas (2009) with current data. This shows that the greatest increase has been the creation of Multi-Use trails which are public rights of way suitable for being explored on foot, horseback or by bicycle. The Cornish Way is comprised of seven trails that cover 180 miles across the county.

7.3 As set out previously in Chapter 3, funding through Environmental Stewardship has helped support some linear access opportunities, applying to just under seven kilometres of routes in the AONB.

Table 7.1: Categories of rights of way in the AONB (2009 and 2013)

Type of Public Right of Way	Total length in km (2009)	Total length in km (2013)	Change in km
Footpath	1,322.33	1,330.95	8.62
Bridleway	161.13	163.40	2.27
Multi-Use Trail	-	95.91	95.91
Byway (BOAT)	46.07	46.48	0.41

Source: Cornwall Council (2009 and 2013)

7.4 The AONB Atlas included information on the condition of rights of way, using 'Gold', 'Silver' and 'Bronze' categories. Cornwall Council will be repeating this survey in the coming year to enable a comparison to be made with the previous survey.

Length of cycle ways

7.5 **Table 7.2** below provides a breakdown of the cycle routes in the AONB, comparing data from the AONB Atlas (2009) with the latest information. Two new local routes have been constructed since 2009 – both in the South Coast Central AONB Section: the *Pentewan Valley Trail and Bypass Portloe*. The slight change in length of National Cycle Network trails is likely to be down to minor digitising inconsistencies.

Table 7.2: Lengths of cycle routes in the AONB (2009 and 2013)

Type of cycleway	Total length in km (2009)	Total length in km (2013)	Change (km)
Local	0.55	4.36	3.81
National Cycle Network	77.71	74.04	-3.67

Source: *Sustrans (2009 and 2012)*

- 7.6 A recent AONB project, funded through the Rural Development Programme for England, has contributed to an interactive mapping tool which allows users to identify off-road cycle routes in the protected landscapes of the South West²³. This includes new family-friendly routes promoted within the AONB.

Area of open access and common land

- 7.7 **Figure 7.1** shows the current coverage of Open Access and Common Land in the AONB (based on the latest version of the Natural England data), with particular concentrations in the Bodmin Moor, West Penwith and South Coast – Western sections. Total area (in hectares) of the two different categories is also shown in **Table 7.3** below, indicating a 2% increase in the total area of Open Access land, and an almost unchanged area of Common Land. Most of the increase in Common Land is found in the Godrevy and Portreath section.

Table 7.3: Area of access land in the AONB (2009 and 2013)

Access land category	Area ha (2009)	Area ha (2013)	Change (ha)
Open Access Land	16282.71	16607.52 (2011 data)	324.81
Common Land	6829.80	6827.05 (2010 data)	-2.75

Source: *Natural England*

- 7.8 **Table 7.4** below provides a more detailed breakdown of the area covered by Open Access Land, showing change between 2009 and 2013. This shows that South Coast Eastern has experienced the greatest percentage increase in the total area of Open Access Land (51 hectares, or 111%). Other significant increases include on Bodmin Moor (213 hectares) and Hartland (65 hectares). The AONB as a whole has witnessed a 2% increase in Open Access Land since 2009, representing some 325 hectares. This is likely to be due in large part to new Environmental Stewardship agreements that have come into place since 2009, providing funding to encourage the creation of open access opportunities. As set out previously in Chapter 3, option take-up for open access equated to 233 hectares of land in the AONB.

Table 7.4: Change in areas of Open Access Land by AONB Section (2009 and 2013)

Open access land	Area ha (2009)	Area ha (2013)	Change (%)
Bodmin Moor	8567.53	8781.00	2%
Godreavey to Portreath	185.79	182.92	-2%
Hartland	197.65	262.52	33%

²³ <http://www.cornwallaonb.org.uk/new-cycle-routes-mapped>

Open access land	Area ha (2009)	Area ha (2013)	Change (%)
Pentire Point to Widemouth	794.43	793.69	Minor
South Coast Central	38.40	38.52	Minor
South Coast Eastern	46.17	97.48	111%
South Coast Western	2545.89	2545.88	Minor
Trevose Head to Stepper Point	94.33	94.33	1%
West Penwith	3464.06	3464.06	0%
St Agnes	348.47	347.14	Minor
Total	16283	16607.52	2%

Source: Natural England (2009 and 2011)

Presence of local car and passenger ferries

- 7.9 **Table 7.5** below lists the main car and passenger ferry routes within the AONB and their frequency. The South Coast Central AONB section has the most ferry traffic, with three ferries operating throughout the year and six running on a seasonal basis. There are also three ferries that run from Fowey in the South Coast Eastern section (two of these run throughout the year) and three seasonal ferries on the River Helford in the South Coast Western area.
- 7.10 The one difference between the services operating now and those recorded in Phase 1 is the ferry from Restronguet to Feock (in South Coast Central), which was reinstated in 2010. This historic ferry route across the Fal estuary is believed to date back to 1468, but was last operated in 1958. The service was closed as car ownership grew but the King Harry Ferry Company has now re-started the crossing with the help of volunteers – where previously a rowing boat was used between the two points, with passengers often invited to help with the rowing²⁴.

Table 7.5: Ferry services within the AONB

AONB section	Ferry route	Frequency
South Coast Eastern	Fowey to Polruan	All year
	Fowey to Bodinnick (car)	All year
	Fowey to Mevagissey	Seasonal
South Coast Central	Falmouth to Flushing	All year
	Feock to Philleigh (car)	All year
	Truro to Falmouth	Seasonal
	Falmouth to Mylor	Seasonal

²⁴ http://www.falmouthpacket.co.uk/news/8158750.New_ferry_to_restart_historic_Restronguet_crossing/

AONB section	Ferry route	Frequency
	St Mawes to Mylor	Seasonal
	Falmouth to St Mawes	All year
	St Mawes to Place Creek	Seasonal
	Restronguet to Feock	Seasonal
	Tolverne to Falmouth	Seasonal
South Coast Western	Helford to Helford Passage	Seasonal
	Helford Passage to Falmouth	Seasonal
	Helford to Trebah to Glendurgan	Seasonal

Source: Visit Cornwall (2013)

Character of rural roads

- 7.11 A selection of sample squares across the AONB – in AONB sections West Penwith, South Coast Eastern and Bodmin Moor were re-surveyed in 2013 by Plymouth University using the monitoring protocol established in Phase 1. No changes were recorded between the two phases for a number of aspects affecting the character of rural roads. The results are set out in **Table 7.6** below.

Table 7.6: Results of the survey of roads in three AONB Sections

Road character measurement	West Penwith (SW4625, SX3923)	South Coast Eastern (SX2252, SX1551, SX1152)	Bodmin Moor (SX2369, SX1868)
No of roads surveyed	2	5	3
Total length (m)	1484.86	3677.56	2736.06
Average width (m)	5	5	4
Average road depth (m)	0	1	0
Total number of road signs	6	34	5
Total number of lit signs	0	0	3
Total number of words on signs	7	1	3
Total number of lamp posts	0	5	0
Roads with centre markings (%)	0	60	0

Source: Plymouth University (2013)




List of data sources used for this theme

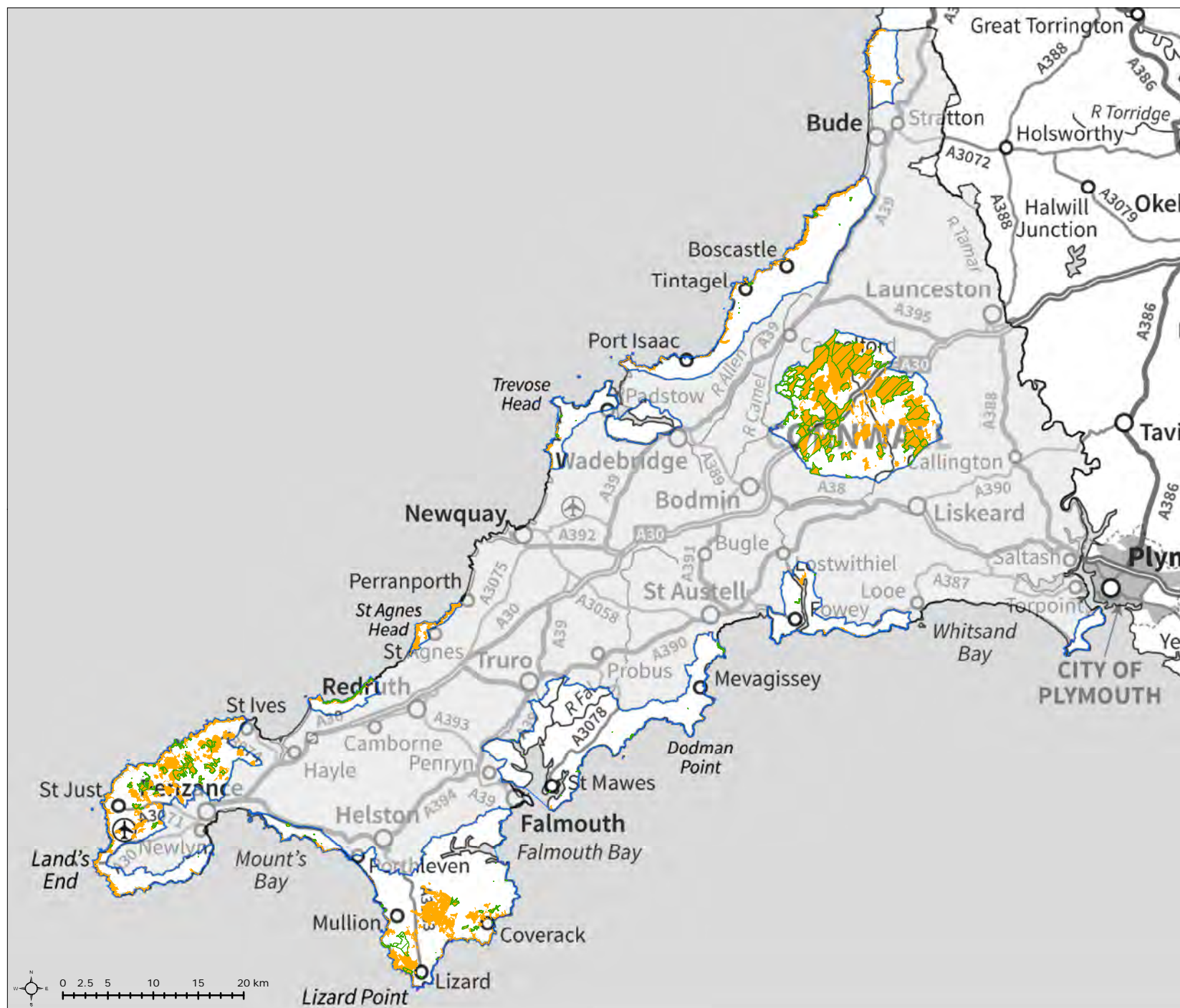
- 7.12 The data sources used for this theme are as follows:
- Natural England (2009 and 2010) Registered Common land
 - Natural England (2009 and 2011) Access Layer
 - Sustrans (2009 and 2012) National Cycle Network
 - Cornwall Council (2009 and 2013) Rights of Way
 - Plymouth University (2013) Field survey work

Recommendations for ongoing monitoring

- 7.13 All indicators in the 'Transport and Access' theme outlined above should continue to be monitored, using the same methods/scales of analysis, every five years to coincide with future AONB Management Plan reviews.
- 7.14 Once Rights of Way condition data is available from Cornwall Council (currently in progress), the AONB should undertake a comparison with the information presented in the AONB Atlas (2009). This will indicate where management efforts should be focused in terms of maintaining and improving the condition of routes passing through the protected landscape.

Figure 7.1
Extent of open access
and common land in the
AONB

-  Cornwall AONB
-  Registered Common Land
-  Open Access Land



Map Scale @ A4: 1:600,000

8

A summary of landscape change in the AONB since 2008



8 A summary of landscape change in the AONB since 2008

Headline findings

- 8.1 A summary of the key findings from the AONB monitoring programme are summarised below, organised by the main themes of this report. The changes reported in Phase 2 demonstrate the varying range of factors that combine to influence the evolution of landscape character over time. However, it is important to note that five years is a relatively short timeframe in terms of tangible effects to be seen in the landscape, particularly when considering major long-term forces for change such as climate change which are becoming increasingly prevalent (but where their full landscape effects are not yet certain).
- 8.2 The key headline findings from Phase 2 are summarised below, structured by the main themes of this report.

Planning and development

- 8.3 The key findings from indicators monitored under this theme are as follows:
- The majority of planning applications received since 2008 have been in the 'Householder/dwellings' category, over half of which related to AONB settlements.
 - Major developments only accounted for just 2% of all applications, and were the most likely type to be refused – particularly in open countryside locations. Those approved include two housing schemes in the Camel Estuary, with a combined total of 70 new dwellings.
 - South Coast Western received the most planning applications over the five-year time period.
 - There was a marked increase in applications for domestic wind and solar installations following the introduction of the Feed-In Tariff in 2010.
 - Energy produced from major onshore renewable energy developments sited in the AONB has more than doubled since 2008, particularly as a result of the repowering of Goonhilly Downs windfarm.
 - The development of offshore renewables, including linked to the Wave Hub testing site, is likely to become a key force for change over the coming years.
 - Analysis in selected sample squares has shown small increases in rural land classed as 'permanent development', mainly attributed to new agricultural or industrial buildings. The most significant change was the creation of a new surfaced car park near Port Isaac.

Farming, food and forestry

- 8.4 The key findings from indicators monitored under this theme are as follows:

Agriculture

- The total area of agricultural land in the AONB has decreased by 3% since 2007, now covering 73% of the total land area of the protected landscape.
- All agricultural types have witnessed a decrease in area coverage, apart from crops and fallow which has increased by just under 7%.
- There has been a significant decrease in the total number of agricultural holdings (36%) indicating a trend towards larger farms. Farms over 100 hectares were the only category to increase in number since 2007.

- Natural England's Energy Crops Scheme has now closed to new applicants, reflecting a national reduction in market demand for these crop types since Phase 1.

Environmental Stewardship

- Land under Environmental Stewardship has more than doubled since 2009, but this is likely to be due to the cessation of the 'classic schemes' that were still in place at that time. Bodmin Moor has witnessed the greatest increase (more than double).
- Entry Level Stewardship (ELS) accounts for over three-quarters of all ES agreements, but the number of Higher Level Stewardship agreements have increased significantly since 2009. The number of Organic ELS agreements has decreased in the same period.
- ES options covering the greatest land area are for low input grassland and moorland, with a significant coverage of options for the management and protection of archaeological features.

Field patterns and boundaries

- Sample square analysis has identified the removal of some field boundaries since Phase 1, but this has not affected average field sizes or shapes within the AONB.
- Cornish hedgebanks are the dominant field boundary feature across the AONB, consistent with character. Stone walls also characterise the ancient fields of West Penwith. Field survey work concluded that the vast majority of boundaries were intact, indicating favourable management in landscape terms²⁵.

Woodland and forestry

- There has been a small overall increase in woodland cover across the AONB since 2000, with particular increases noted in the Camel Estuary and Rame Head sections.
- Broadleaved woodland is the dominant woodland type (75%), with areas of ancient woodland particularly concentrated along the valleys in the southern AONB sections. Bodmin Moor contains the greatest coverage of coniferous woodland.
- The area of woodland management under English Woodland Grant Scheme agreements has increased by 45% since 2009, particularly in Bodmin Moor and the south coast AONB sections. These cover nearly 2,500 hectares of woodland.
- Environmental Stewardship options for woodland management and restoration cover a further 261 hectares.

Biodiversity and geodiversity

8.5 The key findings from indicators monitored under this theme are as follows:

- 10 Special Areas of Conservation (SACs) have been formally designated since Phase 1, the largest being The Lizard, accounting for 43% of the coverage of this designation.
- One new SSSI has also been designated, as well as 9 new County Geological Sites.
- Fewer SSSI units are classed as in 'favourable' condition than in 2009, though proportionally this is the largest condition category in terms of area coverage (50%). SSSI land in the 'Unfavourable recovering' category has seen the greatest increase.
- A significant proportion of SSSIs have remained in favourable condition, although some coastal sites have seen a decline in overall condition.
- The total area of traditionally managed orchards has remained relatively stable since Phase 1, although only a small proportion (less than 7 hectares) is managed under Environmental Stewardship options.

Heritage and culture

8.6 The key findings from indicators monitored under this theme are as follows:

²⁵ The field survey work did not assess the ecological condition of the field boundary lengths surveyed in the sample squares.

- One new Scheduled Monument has been designated in the AONB since Phase 1, on Bodmin Moor.
- The total area covered by Scheduled Monuments has increased by over 100 hectares, mainly due to more accurate mapping techniques introduced by English Heritage.
- A total of 81 Scheduled Monuments, four Listed Buildings and one Registered Park and Garden are currently on the national 'At Risk' register. Just under 70% of Scheduled Monuments on the register are assessed as declining in condition.
- 15 new entries have been included on Cornwall's Historic Environment Record since 2008.

Community and economy

8.7 The key findings from indicators monitored under this theme are as follows:

- A total of 581 fishing vessels are registered in Cornwall, with the greatest number engaged in handline fishing, followed by netting. 54% are small boats less than 7 metres in length.
- The AONB population has increased by 6% since the 2001 census, with an increase in residents over 60 and reduction in those within the 30-59 age range.
- The ethnic make-up of AONB residents is dominated by White: British.
- Some parts of Cornwall have the highest levels of deprivation in the country under the Index of Multiple Deprivation's 'Barriers to housing and services' indicator.
- The AONB enjoys some of the lowest levels of crime in the country.
- 50% of the population over the age of 16 are employed, 6% are unemployed and 35% are retired. The average annual income is less than that of the South West. Incomes in the rural parts of the AONB are higher than those in the urban areas.
- The accommodation and food services sector accounts for nearly a quarter of employment in the AONB, double the figure recorded in 2001. The agriculture, forestry and fishing accounts for 17%— an 8% increase since 2001.
- 58% of businesses in the AONB are classed as 'micro-businesses', accounting for 44% of all employees. Most are located in the rural areas of the landscape, with the largest single sector being agriculture, forestry and fishing (31%).
- Cornwall has the highest levels of second home ownership in the county, which varies across different AONB parishes. Average house prices are 36% higher than the regional average.

Transport and access

8.8 The key findings from indicators monitored under this theme are as follows:

- Over 95 kilometres of new multi-use trails have been created in the AONB, including the Cornish Way.
- Two new cycle routes have been created since Phase 1 – the 'Pentewan Valley Trail' and 'Bypass Portloe' (both in South Coast Central).
- There's been an increase of over 300 hectares of Open Access Land, with significant gains in South Coast Eastern, Bodmin Moor and Hartland, likely to be spurred on by new Environmental Stewardship agreements.
- One ferry has been reinstated since Phase 1 – the ancient Restronguet to Feok route in South Coast Central.
- Sample square analysis in three AONB sections has reported no changes to the character of rural roads, considering aspects such as signage, road markings and street lighting.

9

Next steps



9 Next steps

- 9.1 This report from Phase 2 of the AONB Monitoring Project helps to highlight the ongoing trends and sources of often small but incremental change that are impacting on different parts of the AONB landscape, allowing the AONB Unit and its partners to shape their responses through new policies and actions. It is important to emphasise that landscapes are continually evolving, as are the nature and strengths of the various factors influencing this change – both positive and negative. Recognising and responding to new forces for change as a result of social, economic or natural factors is a key challenge for all as we progress further into the 21st century. Building resilience to future change, whilst strengthening and respecting landscape character is the overarching aim of the AONB Monitoring Project.
- 9.2 The information set out in this report is presented in a clear and repeatable format to allow the AONB to undertake further monitoring at five-yearly cycles, in line with Management Plan reviews. As was the case after Phase 1, sometimes data collected by organisations changes in format or frequency, or ceases all together, meaning that direct comparisons are not always possible. Recommendations set out at the end of each themed chapter provide some pointers for the AONB to strengthen its resource of landscape monitoring information.
- 9.3 The key findings from Phase 2 will be used by the AONB in their forthcoming Management Plan review as a primary evidence base for shaping new policies and actions both at a strategic and AONB-section level.

LUC

31 October 2013