Report

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Recreational Impacts on Berry Head: Additional HRA Work for the Torbay Local Plan

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Summary

This report supplements and adds to the main Habitats Regulations Assessment for the Torbay Local Plan. It considers the impacts of recreation pressure on the Berry Head to Sharkham Point component of the South Hams SAC .

Visitor data for Berry Head are limited, but suggest that around 135,000 visits are made each year, a large proportion of which are people arriving on foot from Brixham. Proposed housing increases in the immediate area are likely to result in an increase in this pressure, although this cannot be quantified with the data available.

The impact of recreation on Berry Head is considered to be currently putting some of the designated features of the site at risk, specifically the calcareous grassland. An increase in visitor numbers is likely to see an increase in the severity and extent of the impacts.

There is evidence to suggest that additional impacts on the site, arising from new housing growth, are a realistic possibility. It is concluded that the possibility of significant effects cannot be ruled out and mitigation measures will be necessary.

Potential mitigation measures are outlined, and include: (i) the development of a detailed management plan addressing habitat management and visitor use; (ii) habitat management required to increase the resilience of the site over and above that already required to maintain the interest features of the site; (iii) increased visitor engagement work; (iv) management work at Sharkham Point to provide an alternative location here for dog-walkers if visitor work suggests this may be effective.

Contents

1. Acknowledgements

This report was commissioned by Torbay Council, and our thanks to Alexis Huggins (TCCT/Torbay Council) for commissioning the work and for providing us with reports, postcode data and other background information. Alexis commented on a first draft of this report. Thanks also to Noel Hughes (TCCT), Andy Byfield (Plantlife), Julien Sclater (NE) and Phil Stocks (NE) for their thoughts and information provided.

2. Introduction and Background

2.1 This report assesses the potential impacts on part of the South Hams Special Area of Conservation (SAC), a European wildlife site, arising from recreational pressure. The site is designated as an SAC in accordance with the requirements of European legislation. Its particular interest features are European dry heath, semi-natural grasslands and scrubland facies on calcareous substrates, and its population of greater horseshoe bats, which is an exceptionally important maternity roost. Further information on the site is provided below.

2.2 The Berry Head- Sharkham Point component of the South Hams Special Area of Conservation (SAC) is located at Berry Head, around the coastal headland of Brixham. This area of the South Hams SAC is the component of the SAC to which this report relates and hereafter is referred to as the 'Berry Head component' of the SAC. Much of this unit is accessible by the public and provides an important open space for the local community.

2.3 In preparing its Local Plan, Torbay Council needs to have regard for any impacts on the SAC that the Plan may bring, in terms of the promotion of any projects, particularly those relating to development. This report considers the information available to assess existing pressures, and those that may occur from new development in the area.

2.4 This report supplements the Habitats Regulations Assessment of the Torbay Local Plan, completed in February 2014, which is described in further detail below, by providing a more in depth analysis of the potential for recreation, which may increase as a result of new residential development, to add to the pressure on the wildlife interest of Berry Head.

2.5 This introductory chapter provides contextual background, including a summary of the legislation requiring the Council to consider recreational impacts, the Berry Head component, the Torbay Local Plan and the assessment work undertaken to date. Chapter 2 provides some analysis of the existing visitor data and Chapter 3 details existing ecological information available. Chapter 4 sets out the findings of a site visit to the Berry Head component to assess the condition of the site, its sensitivities and the management in place. This includes interviews with those responsible for managing the

site, and their views on current pressures and future management requirements. Chapter 5 provides some consideration of potential future recreational impacts and recommendations for mitigation.

Legislation – the Habitats Regulations

2.6 The designation, protection and restoration of European wildlife sites is embedded in the Conservation of Habitats and Species Regulations 2010, as amended, which are commonly referred to as the 'Habitats Regulations. The Habitats Regulations are in place to transpose European legislation set out within the Habitats Directive (Council Directive 92/43/EEC), which affords protection to plants, animals and habitats that are rare or vulnerable in a European context, and the Birds Directive (Council Directive 2009/147/EC), which originally came into force in 1979, and which protects rare and vulnerable birds and their habitats.

2.7 European sites include SACs designated under the Habitats Directive and also Special Protection Areas (SPAs) classified under the Birds Directive. SACs are designated for their habitats and non-avian species, and SPAs for avian interest. European sites have the benefit of the highest level of legislative protection for biodiversity. Member states have specific duties in terms of avoiding deterioration of habitats and species for which sites are designated or classified, and stringent tests have to be met before plans and projects can be permitted. The overarching objective is to maintain sites and their interest features in an ecologically robust and viable state, able to sustain and thrive into the long term, with adequate resilience against natural change. Where sites are not achieving their potential, the focus should be on restoration.

2.8 The step by step process of Habitats Regulations Assessment is undertaken by local planning authorities because, as public bodies, they are given specific duties as 'competent authorities' with regard to the protection of sites designated or classified for their species and habitats of European importance. Regulation 61 of the Habitats Regulations sets out the Habitats Regulations Assessment process for plans and projects, which includes development proposals for which planning permission is sought, and Regulation 102 specifically sets out the process for assessing emerging land use plans.

2.9 When preparing a plan, a competent authority may go through a continued assessment as the plan develops, enabling the assessment to inform the development of the plan. The Habitats Regulations Assessment undertaken for the emerging Torbay Local Plan

commenced in 2006, and has continued to refine the development of the plan. At this point in time, as the Local Plan is being finalised for submission, consultation with Natural England has identified the need for further analysis of the potential for new residential development to exacerbate recreational pressure on the Berry Head Unit of the SAC. This report therefore adds to the Habitats Regulations Assessment work to date by considering this specific issue in greater detail.

2.10 A summary of the Habitats Regulations Assessment work to date relating to recreational impacts on the SAC and the Berry Head component is provided below. The main Habitats Regulations Assessment[1] document should be referred to for all other assessment work to date and provides detail on the step by step process of Habitats Regulations Assessment and the details of all European sites considered as part of the assessment work.

South Hams SAC designation

2.11 South Hams SAC consists of a series of sites within Devon, which together comprise of approximately 130ha of designated site. SACs are designated for habitats of European importance, as listed in Annex I of the Habitats Directive, and non-avian species of European importance, as listed in Annex II of the Directive. The following Annex I and Annex II features set out within Table 1 are those for which the South Hams SAC is designated. This includes features that form the primary reason for site selection, and also those that don't form a primary reason for site selection (as on their own they would not fully meet the designation criteria), but their presence alongside primary features means that they are included in the site designation as features of interest.

Table 1 Designated features of the South Hams SAC

Category	Habitat
Annex I habitats that are a primary reason for selection of the site:	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)
	European Dry Heaths
Annex I habitats present as a qualifying feature, but not a primary reason for selection of the site	Vegetated sea cliffs of the Atlantic and Baltic Coasts
	Caves not open to the public
	Tilio-Acerion forests of slopes, screes and ravines (priority

[1] http://www.torbay.gov.uk/nlphra

Category	Habitat
	feature)
Annex II species that are a primary reason for selection of the site	Greater Horsehoe Bat *Rhinolophus ferrumequinum*

2.12 The SAC designation seeks to protect the key breeding locations for greater horseshoe bats in South Devon, and components of the SAC are spread across a wide area, incorporating locations at within and around Chudleigh and Buckfastleigh and mines at Haytor, as well as the coastal area at Brixham Penninsula. Some of these key sites also incorporate Annex I habitats of European importance, which form part of the designated site interest.

2.13 The European SAC designation is supported by designations at the national and local level of the hierarchy of wildlife sites. At the national level, the SAC is underpinned by notifications at each location as a Site of Special Scientific Interest (SSSI), and in addition there are a number of local wildlife site designations.

2.14 The Berry Head component of the South Hams SAC is designated as the Berry Head to Sharkham Point SSSI (notified in 1986) for both its biological and geological interest.Much of the unit also forms part of the Berry Head National Nature Reserve and the site is a Country Park. It also lies within the South Devon Area of Outstanding Natural Beauty. The site is actively managed by the Torbay Coast and Countryside Trust, in accordance with an on-going management plan. Further detailed information on the ecological interest and nature conservation management of the Berry Head component is set out in Chapter 4.

Torbay Local Plan

2.15 The Torbay Local Plan is now at the stage at which it will be submitted for Examination, alongside all public and consultee comments. The Plan proposes between 8,000 and 10,000 new homes over the Plan period, which is 2012 to 2032. This range is based on evidence gathered to inform the Local Plan with regard to predicted housing demand and land availability, along with predicted economic changes. Housing figures are split between the main settlements of Torquay, Paignton and the Brixham Peninsula. The Plan proposes 790 new homes within the Brixham Peninsula area where the Berry Head component of the SAC is located. Relevant extracts from the Local Plan policies are:

2.16 Policies SS11 - Housing; SS2 – Future Growth Areas; TO1 – Tourism, Events and Culture and C1 – Countryside state that ‘Development should have regard to Policy NC1

concerning the need for developer contributions to mitigate the impact of recreational pressure on the South Hams SAC.' Policy NC1, Biodiversity and Geodiversity, provides protection for designated wildlife sites and states that 'Developer contributions to fund the mitigation measures needed to manage increased recreational pressure on the South Hams SAC resulting from increased housing numbers will be sought.'

2.17 Policy SDB1, Brixham Peninsula, states that 'Development will only be acceptable if it can be accommodated without prejudicing the integrity of the AONB and Special Areas of Conservation, and provided that the interests of priority species, such as the Greater Horseshoe Bat, can be addressed.'

2.18 The Local Plan has had regard for potential impacts on the South Hams SAC, and provides policy wording and policy hooks to only allow development to proceed where this and the other relevant European sites are not harmed. This report responds to an identified need for further information to inform the most appropriate way forward in terms of enabling growth in the right locations whilst ensuring that recreational pressure on the Berry Head component of the SAC is understood and if necessary, mitigated for.

2.19 As part of the supporting assessment and evidence base for the Torbay Local Plan, both a Habitats Regulations Assessment and Sustainability Appraisal have been undertaken.

2.20 The Sustainability Appraisal assessed the Plan against sustainability objectives within a sustainability appraisal framework, in order to ensure that the Plan proceeded with the most sustainable options for economic growth, community improvements and environment protection and enhancements. In particular, this included seeking opportunities to strengthen corridors between areas of biodiversity importance, improving resilience to climate change. This is particularly important for the South Hams SAC, which has a number of components at some distance from each other, important supporting habitat outside the designated site boundary, and narrow remnant corridors that are critical to the continued conservation of interest features.

2.21 The findings of the Habitats Regulations Assessment are summarised below.

Assessment of recreational impacts on Berry Head SAC to date

2.22 Natural England has highlighted the need for further information relating to the potential for recreational pressure arising from new growth to affect the wildlife interest of the Berry Head component of the South Hams SAC. This was identified

during discussions between the Council and Natural England, following Natural England's recent response in April 2014 to the submission version of the Local Plan. In that response, Natural England highlighted that there was a need for further evidence to support the statement that 8,000 to 10,000 new homes could be provided for within the Plan period 'without causing serious harm to Torbay's natural environment or to the functioning of its infrastructure.' Natural England identified a number of areas where further evidence was required, and this included the need to assess the potential impacts of recreation on the Berry Head component of the SAC. This report was commissioned in response to the discussions held with Natural England.

2.23 The main Habitats Regulations Assessment report screened the Plan for the likelihood of significant effects, concluding that for South Hams SAC, there was the potential for impacts on the site interest features in terms of habitat loss and fragmentation, disturbance as a result of noise, vibration and lighting, nutrient enrichment and recreational pressure.

2.24 As part of the screening for the likelihood of significant effects, the Habitats Regulations Assessment concludes that 'the current visitor numbers in Berry Head are in excess of the carrying capacity of the site. New housing across Torbay, suggested by the Local Plan, could increase the number of people visiting the site. This could cause an unacceptable recreational pressure on the calcareous grassland and European dry heath in the form of direct loss of habitat through neglect, inappropriate management or increased eutrophication by dog fouling.'

2.25 The Habitats Regulations Assessment report then considers the issues relating to the Berry Head component of the SAC in further detail in the appropriate assessment section. Here, the assessment suggests that 'the intrinsic and historic appeal of the SAC is such that a proportion of new residents and visitors will always be likely to be drawn to this site for itself. Provision of greenspace in accordance with the accessible natural greenspace standard may help to minimise the need for recreational resources on European sites, provided that it is delivered within a timescale linked to that of the development and will fulfil a function similar to that of the European site…. The decline in calcareous grassland and European dry heath at Berry Head appears to indicate that current visitor numbers are in excess of the carrying capacity.'

2.26 The Habitats Regulations Assessment concludes that in response to the potential impacts on the habitat interest features of the site, it is the Berry Head Conservation Management Plan (2007 – 2017) that provides the necessary mitigation to control recreation pressure. The Management Plan stipulates the following measures to reduce recreational pressure:

- raising the awareness of visitors
- establishing new surfaced footpath routes to reduce pressure on eroded areas of grassland
- reducing dog-fouling across the site
- preventing unauthorised vehicles accessing the site
- continuing to manage scrub by hand and extending grazing across the cliff slopes

2.27 Additionally, the assessment refers to the accessible natural greenspace standard as a means to reduce the need for recreational resources on the Berry Head component of the South Hams SAC.

2.28 In conclusion, the Habitats Regulations Assessment states that 'The Council is currently developing a strategy for securing developer contributions in relation to recreational impacts resulting from increased housing numbers identified in the Local Plan. Contributions would be used to fund the mitigation measures identified within the Berry Head Conservation Management Plan and fund provision of Suitable Alternative Natural Greenspace. Implementation of these measures would ensure that new housing development will not adversely affect the integrity of the SAC due to increase in recreational pressure'. In taking forward a developer contributions scheme, it is necessary to ensure that the scheme is evidence based, fair, proportionate and effective in mitigating for any potential impacts. Natural England has provided important advice to the Council with regard to the implementation of a developer contributions scheme, which includes highlighting that developers are responsible for mitigating for the potential effects of their development, not for existing impacts, that the requirements should be tied to the visitor catchment and that consideration should be given to whether new visitors will make the current situation worse.

2.29 It is also necessary to note that Natural England has clarified that adherence to the accessible natural greenspace standard promoted by Natural England does not provide mitigation for recreational pressure. This standard identifies the minimum requirements for natural greenspace for local communities and was not written with any consideration of wildlife site mitigation. Suitable Alternative Natural Greenspaces

(SANGs) are sites that are specifically created, or existing sites that are enhanced, to provide greenspace over and above minimum standards, in order to attract recreational use away from sensitive wildlife sites. The latter therefore can be considered to be mitigation when applied in the right circumstances.

2.30 This supplementary assessment work to the main Habitats Regulations Assessment report now considers the evidence available and what can be drawn from that evidence, particularly in light of Natural England's advice. The following chapter analyses the visitor information, in conjunction with proposed housing allocations in the Local Plan. Chapter 3 considers ecological information available for the site and this is supplemented with information gained from a site visit and discussions with site managers in Chapter 4, where current and potential future recreational impacts are considered. Final conclusions are drawn in Chapter 5.

3. Analysis of Visitor Data

3.1 Information on visitors undertaking recreation at a site is a key aspect of assessing the impact those visitors may be having on the wildlife interest of the site, and in turn, any opportunities to manage or modify the use of the site to improve the protection of wildlife interest. This chapter assesses the available visitor information for the Berry Head component of the South Hams SAC.

Total Visitor Numbers

3.2 There is little information on the total number of visitors to the site per year. The total number of car-park tickets sold in 2005 was 21,200 and the Berry Head Conservation Management Plan uses this total, plus an estimate of foot visitors, to give an annual figure in the region of 135,000 people.

2009 & 2011 survey data combined

3.3 Visitor surveys were conducted at Berry Head in 2009 and 2011, and the data were provided by Torbay Coast and Countryside Trust. The data involved 117 interviews (56 in 2011 and 61 in 2009). The 2009 interviews were all conducted in late October (mostly school half-term); the 2011 surveys involved 4 survey dates, in July, August and September. No home postcode data were collected. Key findings included:

- 44% of interviews were with people arriving from Brixham, 23% from Paignton and 12% Torquay
- 58% of visitors were on holiday (42% from 'home or college')
- 15% visited daily and 9% weekly: i.e. 24% were regular visitors visiting at least weekly
- Walking (60%), sightseeing (30%) and dog walking (22%) were the main activities; of those interviewees coming from home/college, 36% were dog walking and 36% walking
- Free text comments included negative comments relating to the presence of livestock and dog fouling

Devon Household Survey

3.4 A postal survey in 2012 involving a sample of residents in Teignbridge, Exeter and East Devon Districts addressed general access to coastal and other countryside sites and Berry Head was one of the sites specifically listed and for which visitor data were gathered (see Cruickshanks & Liley 2012). The questionnaire was posted to 5000 addresses selected at random, but only within Teignbridge, Exeter and East Devon Districts. Of the 1296 responses, 266 visited Berry Head. Respondents mostly visited for walking (79%) or dog walking (13%)

2004 Surveys

3.5 A range of different visitor surveys were undertaken in 2004 (summarised in Halcrow Group Ltd. 2004). The surveys were all quite small scale and included a postal survey, on-site visitor surveys, off-site surveys (in Brixham), car-park counts and visitor movement surveys. Key findings are summarised below.

2004 Postal survey

3.6 The survey involved 1000 postal questionnaires distributed close to Berry Head. A total of 196 were returned.

- 94% of respondents were Brixham residents and 6% second home owners
- 95% of respondents had visited Berry Head
- 33% visit weekly, 25% monthly and 22% daily (i.e. 80% visit at least weekly).
- 65% walk to the site and 33% travel there by car (the remaining 2% cycle)

2004 On-site interviews

3.7 A total of 141 interviews were carried out on site.

- 41% of respondents were on a one or two week holiday, 32% were residents of Brixham, 15% were on a day trip, 10% were on a short trip in the area and 2% were second home owners
- 65% of respondents had visited the site before and 35% were on their first visit to the site
- 71% had arrived by car and 29% walked to the site

3.8 Questionnaires were also available at the visitor centre for self-completion although only four were returned. Everyone who self completed a questionnaire was a local resident of Brixham, visited either daily or weekly and travelled by car.

2004 Dog walker interviews

3.9 A total of 10 dog walkers were interviewed. All interviewees lived in Brixham, visited the site at least once daily and travelled by car. Seven indicated they could adequately explore the site with existing footpaths. Four indicated they did not have a favourite part of the site and they liked the whole site. A large number of issues were raised including presence of livestock, cost of car-parking, too many fences and over management.

2004 Face-face interviews in Brixham

3.10 39 people were interviewed in the town centre in Brixham. Of the 39, 64% had visited Berry Head; 12% visited weekly and 12% daily (i.e. 24% at least weekly).

2004 Car-park counts

3.11 Repeat counts (half hour intervals) were made on 3 dates in July and August, but only on one date covering the whole day. Results suggest that:

- The car-park didn't reach capacity (capacity 86 cars), with highest count 67 vehicles.
- Small numbers of cars were also parking at Berry Head bungalow to avoid parking charges
- Numbers appeared to peak mid-afternoon

2004 Visitor Movements

3.12 Three path junctions were surveyed within the site and counts of people were made to identify where people go. Surveys were conducted at each point for a single day in early August and during middle part of day only (time varied at each location). The majority of visitors recorded were vising the headland and visited for a relatively short time period (95% under 30 minutes).

Visitor Origins

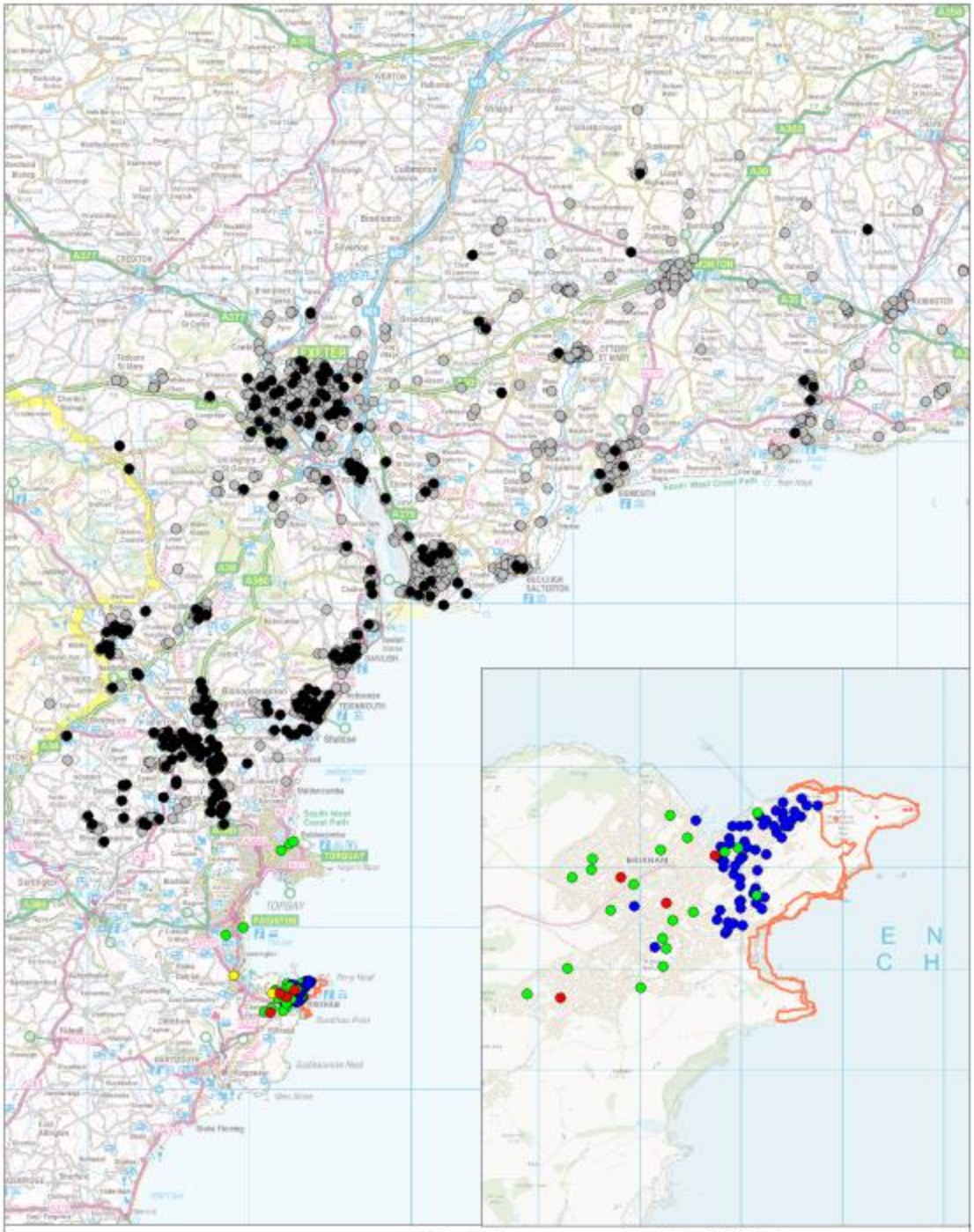
3.13 From the 2004 surveys and the 2012 postal survey it is possible to plot home postcodes of visitors to Berry Head (Map 1). These clearly indicate that people in Brixham visit the site and that there is local use and that also people do visit the site from a much wider geographical area. It is difficult to draw detailed conclusions from these postcode data as:

- The 2012 survey postal survey did not cover Brixham, Torbay etc and was limited to Teignbridge District and areas further east
- For the 2004 on-site survey data there are relatively few postcodes and it is not possible to determine to what extent they represent a random sample of visitors. Most of the postcodes were from the postal survey which was only distributed close to Berry Head. There was no option for people to say they were a resident of Paignton/Torquay and provide a postcode.
- The 2004 results are quite dated

3.14 It is possible to extract the number of postcodes generated from the 2004 on-site interviews that are within different drive distances from Berry Head. Although 141 interviews were conducted only 28 postcodes were recorded. The self-completion questionnaire and dog walker interviews involved so few interviews, these have been excluded.

3.15 We have used drive distances (generated using the routefinder add-in for MapInfo and the OS Meridian road network data) as the complex shape of the coastline means that

using straight-line distances would be inappropriate. Within each drive-distance bands it is then possible to work out how many residential properties there were in each band and therefore number of visitors per property. To calculate the overall number of properties we used GIS data from 2003 (the closest data to 2004 held by Footprint Ecology). The results are summarised in Figure 1. Ideally such a plot would provide a means to estimate how visitor rates change with distance from the site, and we would expect a neat curve that steadily declines with distance. Unfortunately only limited conclusions can be drawn, with the data (probably due to the small sample size), suggesting that the highest proportion of local use – at least in 2004 – was from within 5km. From this we can infer that development within 5km is likely to have a disproportionate impact on recreational use of Berry Head.

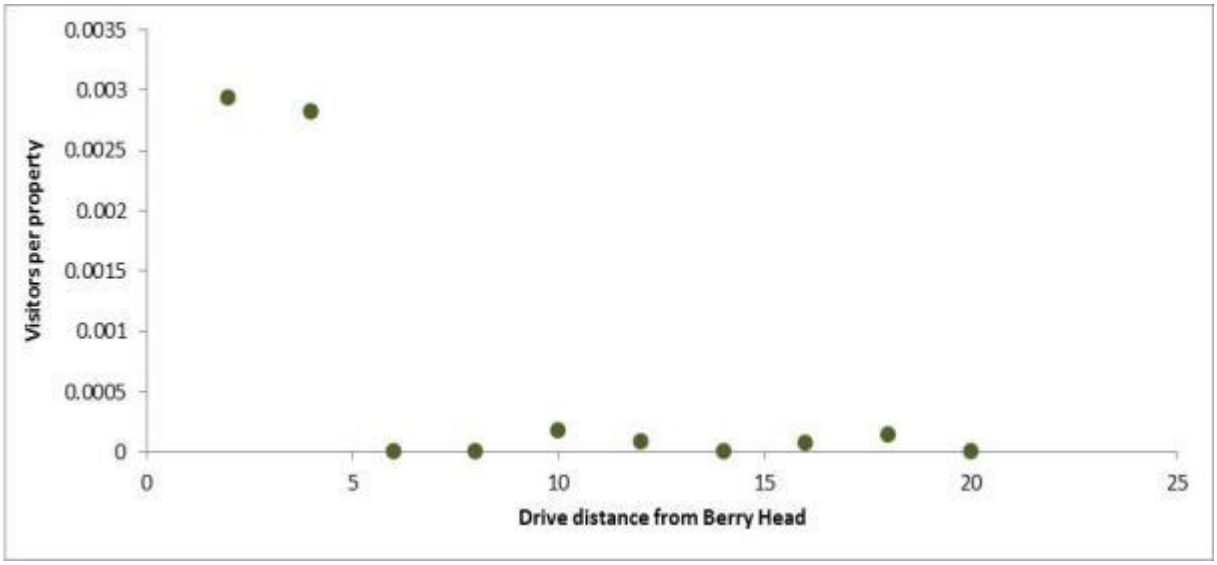


Map 1: Visitor Postcodes

Table 1: Visitors per property in relation to distance from Berry Head

Drive distance	Number of residential properties within band in 2003 (a)	Number of interviews (on-site only) involving people in band (b)	Visitors per property (b/a)
0-2 Km	2046	6	0.00293
2-4 Km	6029	17	0.00282
4-6 Km	621		0
6-8 Km	3000		0
8-10 Km	5875	1	0.00017
10-12 Km	11656	1	0.00008
12-14 Km	3794		0
14-16 Km	14214	1	0.00007
16-18 Km	13965	2	0.00014
18-20 Km	3580		0

Figure 1: Visitors per property in relation to distance



Likely Future Development

3.16 Levels of future growth are set out in the Torbay Local Plan which identifies the likelihood for 8,000 - 10,000 additional homes, 400 – 500 per annum, over the Plan period (2012 – 2032). Drawing from the key diagram in the Plan we have plotted where development may come forward – as set out in the Plan – on the same map as our drive distance bands. The approach is approximate as we have simply put a single dot in most locations to indicate areas where development will take place. Additional points for windfall development are highly indicative; the aim of the approach is to provide a means of viewing the scale of growth in relation to our distance bands – which are in themselves relatively broad.

3.17 The data are shown in Maps 2 and 3 and summarised in Table 2 and Figure 2. It can be seen that most of the development is at drive distances of at least 10km from Berry Head. While the levels of growth at closer distance bands are smaller, within the 2km band there is a marked increase of 20%. This is the band with the highest visit rate (from Figure 1) and suggests that there is the potential for a marked increase in local visitor use at Berry Head.

Table 2: Indicative levels of growth (from Map 2 (as set out in the Torbay Local Plan)) by drive distance from Berry Head. Current properties is drawn from postcode data from early 2014, held by Footprint Ecology.

Drive distance	Current properties	Indicative levels of growth	% increase
0-2 Km	2,296	478	20.8
2-4 Km	6,391	314	4.9
4-6 Km	625	0	0
6-8 Km	3,061	650	21.2
8-10 Km	6,463	1,535	23.7
10-12 Km	12,525	1,986	15.9
12-14 Km	4,195	400	9.5
14-16 Km	15,565	1,548	9.9
16-18 Km	15,931	2,317	14.5
18-20 Km	4,067	0	0

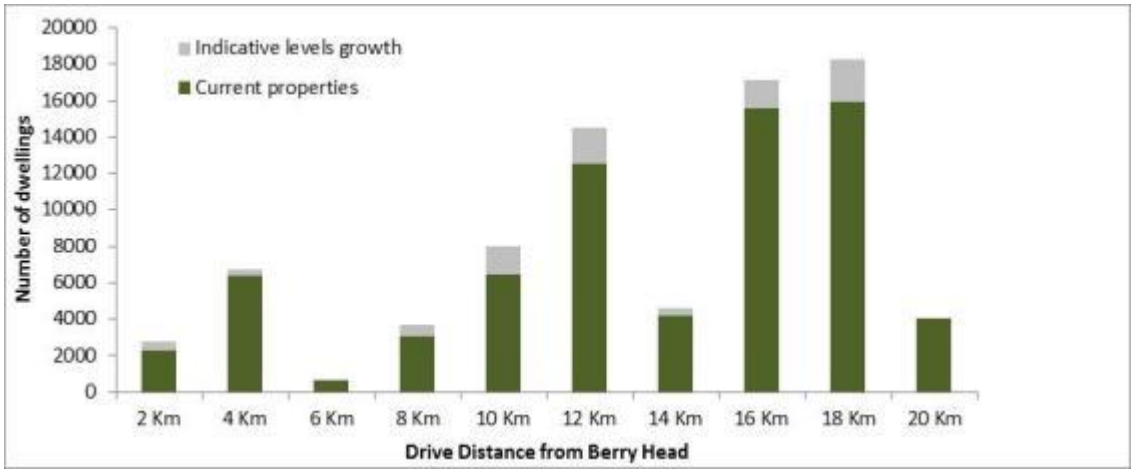
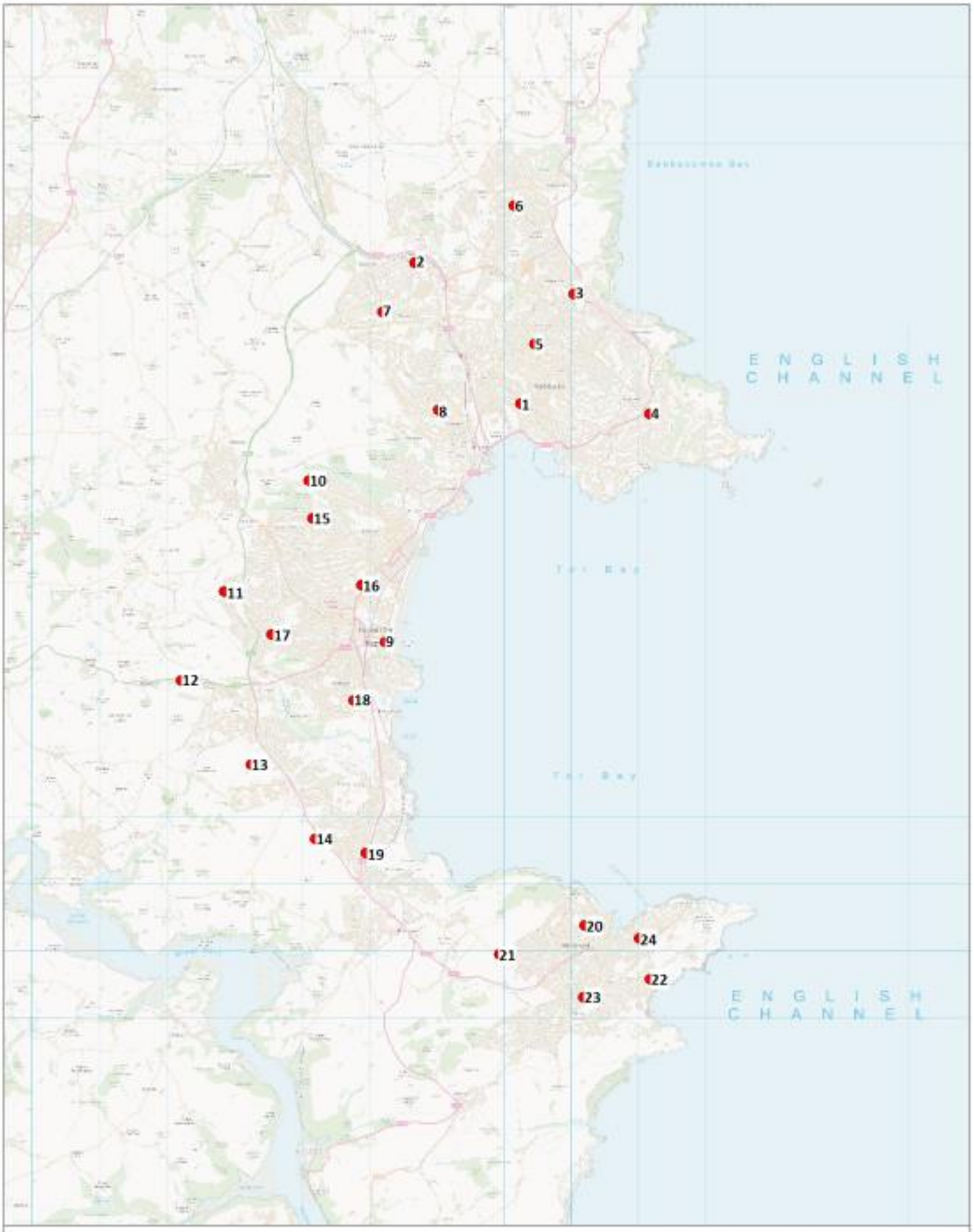
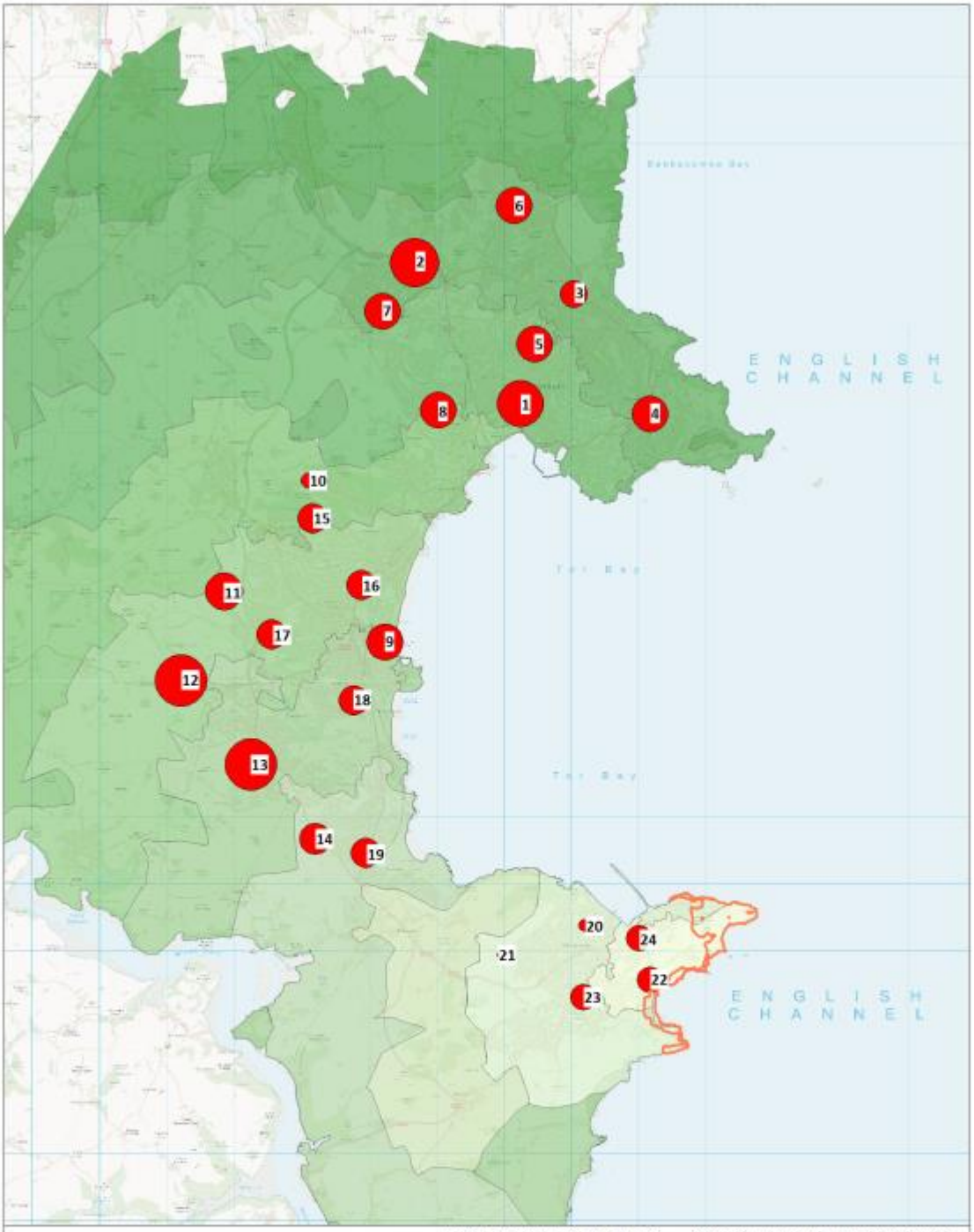


Figure 2: Number of current properties and indicative levels of growth (as set out in the Torbay Local Plan) at different distance bands from Berry Head.



Map 2: Indicative Locations for New Development
(Numbers on map cross-references to Appendix 1)



Map 3: Potential Scale of Development and Drive Distances From Berry Head

4. Ecological Interest and Site Management

Ecological interest of Berry Head

4.1 The Berry Head component of the South Hams SAC (which includes Berry Head, Durl Head, and Sharkham Point) supports most of the interest features for which the South Hams SAC is designated. As described in Chapter 1, these are:

- Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) (Annex I habitat feature, primary reason for site selection)
- European Dry Heaths (Annex I habitat feature, primary reason for site selection)
- Vegetated sea cliffs of the Atlantic and Baltic Coasts (Annex I habitat feature, not a primary reason for site selection)
- Caves not open to the public (Annex I habitat feature, not a primary reason for site selection)
- Greater Horsehoe Bat Rh*inolophus ferrumequinum* (Annex II species, primary reason for site selection).

4.2 The following description of the site is derived from a variety of sources including Byfield (2007); Wheeler, Wilson & Reed (2009); Wilson (2008) and the Berry Head to Sharkham Point SSSI citation[2] as well as a site visit carried out in June 2014.

4.3 The site comprises Devonian limestone headlands and cliffs, with some areas of red sandstone. The semi-natural, dry calcareous grassland found on the shallow rendzina soils and around rock exposures and on the cliff tops is known nationally for its outstanding flora. Some of the grassland conforms to the rare autumn squill *Scilla autumnalis* – Portland purge *Euphorbia portlandica* National Vegetation Classification (Rodwell 1991; Rodwell 1992; Rodwell 1998) sub-community CG1b, which is only known from this site in the UK.

4.4 A number of rare and scarce vascular plants typical of the oceanic southern temperate and Mediterranean-Atlantic elements of the British flora are present. These include Portland spurge, rock stonecrop *Sedum forsterianum*, autumn squill, Small Restharrow *Ononis reclinata*, white rockrose *Helianthemum appeninum*, honewort *Trinia glauca*, early gentian *Gentianella anglica* and small hare's-ear *Bupleurum baldense*. Other scarce species recorded from the site include suffocated clover *Trifolium suffocatum*, nit-grass *Gastridium ventricosum,* bulbous meadow-grass *Poa bulbosa* and early

[2] http://www.sssi.naturalengland.org.uk/citation/citation_photo/1001416.pdf

meadow-grass *Poa infirma*. Other areas support CG2 Sheep's fescue *Festuca ovina* – meadow oat-grass *Avenula pratensis* (*Helictotrichon pratense*) calcareous grassland, or vegetation transitional to mesotrophic grassland types with crested dog *Cynosaurus cristatus* and knapweed *Centaurea nigra*.

4.5 Significant areas support scrub, mostly W21 hawthorn *Crataegus monogyna* - ivy *Hedera helix* scrub with wild privet *Ligustrum vulgare*, wayfaring tree *Viburnum lantan*, elder *Sambucus nigra* and dogwood *Cornus sanguinea*. In some places the scrub is probably quite recent, as species typical of the previous grassland community are still present in the understorey e.g. lesser meadow-rue *Thalictrum minus*. Elsewhere the scrub is more mature.

4.6 On the cliff slopes, the calcareous grassland gives way to a calcareous maritime grassland community which has close affinities with M11c red rescue *Festuca rubra*- sea carrot *Daucus carota* ssp. *gummifer* (Rodwell 2000)and a more species-poor community (M9) dominated by red fescue. The scarce wild cabbage *Brassica oleracea* and rare golden aster *Aster linosyris* are found on these slopes. Again, significant areas support scrub, mostly dominated by dense, wind-pruned blackthorn *Prunus spinosa* with scrambling bramble *Rubus fruticosus,*wild clematis *Clematis vitalba* and ivy. Several of the key invertebrate species known from Berry Head are associated with south-facing maritime grassland with patches of bare ground, making this the most important habitat feature for invertebrates on the site.

4.7 On the plateau, the calcareous grassland gives way to dry heath in the west of the site. Two NVC communities H7 heather *Calluna vulgaris* – Spring squill *Scilla verna* and H8 heather *Calluna vulgaris* – western gorse *Ulex gallii* heaths have been recorded. The heathland covers a small area and includes a significant amount of scrub. Gorse scrub has recently been cleared from one patch.

4.8 On the sheltered north-eastern portion of the site, areas of W8 ash *Fraxinus excelsior* woodland is present, with ash, sycamore *Acer pseudoplatanus* and occasional yew *Taxus baccata.* Much of the woodland appears to be secondary, and is not a designated feature.

4.9 Sharkham Point supports rather different vegetation, partly due to geological differences. The areas that falls within the SAC (the cliff slopes) generally support blackthorn scrub, bracken *Pteridium aquilinum* and a tall grassland sward with tor grass

Brachypodium pinnatum, cock's-foot *Dactylis glomerata* and mesotrophic herbs such as yarrow *Achillea millefolium* and ribwort plantain *Plantago lanceolata* intermingled with more calcareous species such as salad burnet *Sanguisorba minor* in places. Patches of more open calcareous grassland were recorded in the 2008, and scrub clearance was undertaken as part of the 'Loving Our Limestone' projects run by Torbay Coast and Countryside Trust and Plantlife. It is likely that scrub has again increased on these areas as no follow up management was undertaken; they were not relocated during the field visit in June 2014.

4.10 A maternity roost for greater horseshoe bat is present within the caves of Berry Head, and is one of the most important populations for this species in the UK. The caves are not open to the public, and the caves themselves form part of the SAC interest as well as the greater horseshoe bat population.

Site management for nature conservation

4.11 The calcareous and maritime grassland and heathland communities at the Berry Head component of the South Hams SAC are semi-natural, and require management if they are to persist. Exposure to wind and salt spray and very thin soils are probably sufficient to maintain open habitat in localised patches on rock outcrops and in a zone on the lower cliff slopes, but on the majority of the site, some form of management is needed to prevent the dominance of coarser grasses and natural scrub encroachment. The scrub communities are of wildlife value for breeding and migrant birds (including the rare cirl bunting) and a range of invertebrates, but are of very limited botanical interest compared to the calcareous grassland.

4.12 The site is managed by the Torbay Coast and Countryside Trust Rangers, who carry out scrub clearance and annual mowing (manual) and removal of cut vegetation in areas of longer grassland including on the rampart of the north fort and in open patches within the scrub on the south-facing cliff slopes below the fort. The objective is to maintain the species-richness of the sward. Three fenced compartments are also grazed. Cattle graze one compartment in the summer. In addition to maintaining open grassland, the cattle dung supports beetles, an important source of food for greater horseshoe bats. Soay sheep are on site year-round, and graze within the heathland area and in the cliff top enclosure (previously grazed by goats). Grazing was reinstated after a long lapse

during the second half of the 20th century.

Berry Head Conservation Management Plan

4.13 The Berry Head site is subject to a conservation management plan which provides useful background information and sets out the key management principles, along with aims and objectives, for the site. The plan, currently running from 2007 to 2017, was prepared by the Torbay Coast and Countryside Trust, with significant input from relevant partners and stakeholders.

4.14 The conservation management plan recognises that one of the key issues for the future management of Berry Head is the perception of the site as primarily a Country Park, rather than a sensitive site of natural and historic value. The site has the benefit of a small number of staff, including a Countryside Officer, part-time seasonal ranger and three long term volunteers. Day to day management includes liaison with visitors including reinforcing the pick up after dogs policy, monitoring the car parks, tending to livestock, litter picking, supervising volunteers, running educational events, maintaining site infrastructure and habitat management. The Countryside Officer works with the local community including the Friends of Berry Head and there is a visitor centre which is open full time from Easter until 1st October and during the October half-term holiday, during the spring, summer and early autumn and at weekends throughout the winter.

4.15 Surveying the wildlife interest of the site has increased in recent years, with local groups encouraged to visit and undertake survey work. The conservation management plan identifies bat flight lines and rare plant response to trampling, eutrophication and grazing as key areas for further research.

4.16 The conservation management plan highlights the degradation of the calcareous grassland on site, citing a reduction in grazing, erosion by visitors and eutrophication by dog faeces as the three main factors for this deterioration. The plan recognises that the site was previously extensively grazed which prevented scrub invasion. Recent smaller scale reintroduction of grazing has been successful and the plan recommends that this is extended, whilst recognising that some scrub is necessary for the benefit of other biodiversity. Grazing is also recommended for the heathland areas.

4.17 Solutions recommended to control erosion are improvements to paths and management movement with barriers and diverting or attracting visitors to less

sensitive parts of the site. Additional dog waste bins, more intensive policing to ensure dog faeces are picked up by owners and prosecution of offenders is recommended.

4.18 A number of recommendations are made for site facilities and infrastructure to support more sensitive use of the site, including car park re-location and stock fencing to extend grazing.

4.19 The plan highlights that the response of the rarest plant species to grazing, trampling and eutrophication are gaps in current knowledge of the site. It suggests that worrying declines in calcareous grassland biodiversity at Berry Head indicate that current visitor numbers are in excess of the carrying capacity, although it is suggested that this might be to do with how people use the site rather than the actual numbers.

4.20 The Berry Head Conservation Management Plan is referred to throughout this report as it is the primary driver for current and future management of the Berry Head site.

5. Current Recreational Impacts - Site Analysis and Site Manager Discussions

5.1 This chapter considers the evidence available to indicate the level of current impact arising from recreational pressure. This includes the conditions assessments for the site undertaken by Natural England to assess the condition of SAC and SSSI interest, and also information gathered from visiting the site and speaking to those responsible for its management.

Condition assessments and remedies in place to rectify site condition

5.2 Natural England undertakes regular assessments of site condition, in accordance with duties relating to both the SAC and SSSI designations and objectives set out within the respective legislation and Government policies relating to the maintenance or restoration of site interest.

5.3 European sites are the subject of 'conservation objectives,' which identify what is considered necessary in order to maintain or restore site interest to the extent that it fully contributes to the 'favourable conservation status' of the habitats or species for which it has been designated, across their natural range.

5.4 SSSIs are the subject of 'favourable condition' targets, which are currently documented in 'Favourable Condition Tables.' These set out minimum requirements for site interest, including for example the quality and extent of habitat, population levels and distribution of species.

5.5 Further detail regarding Conservation Objectives and Favourable Condition Tables can be found on Natural England's website[3] or by contacting Natural England directly.

5.6 The SSSI condition assessments do not fully encompass all that is required to meet European site Conservation Objectives, because the underlying legislation for the national and European sites has different duties and requirements. SSSI condition assessments provide a snapshot in time of site condition at a SSSI level, but can at least be useful additional information to inform Habitats Regulations Assessments, even if

[3] http://www.naturalengland.org.uk/ourwork/conservation/designations/default.aspx

they do not provide all that is required to assess potential impacts on European level features.

Condition assessments for Berry Head

5.7 The most recent condition assessment undertaken by Natural England assesses much of the site as being in favourable condition. For areas classed as unfavourable, scrub and invasive species control was highlighted as an issue. Assessment notes also flag some concerns for favourable areas, including reduced extent of calcareous grassland. The last assessment was undertaken in summer 2009, and it is understood that Natural England intend to reassess the Berry Head to Sharkham Point SSSI this summer, particularly given the importance of up to date information to inform the Torbay Local Plan Habitats Regulations Assessment and measures necessary to mitigate for any potential impacts. Since the 2009 assessment Natural England has identified potential risks to the site from increased development and recreational pressure, hence the commissioning of this report. The draft Site Improvement Plan, part of Natural England's Improvement Programme for England's Natura 2000 sites (IPENS), lists public access/disturbance as an issue and the investigation of the potential impact on calcareous grassland of dogs and erosion as a necessary measure.

Agri-environment scheme for Berry Head

5.8 The site is currently benefitting from a 'Higher Level Stewardship' (HLS) agreement, whereby Natural England provides funding for appropriate and beneficial management of the site to restore degraded habitats and maintain site interest. Such schemes are often put in place on designated sites where particular management measures could contribute to the restoration of features, and the measures necessary are such that the land owner or manager cannot easily fund or undertake the activities without support. The HLS in place for Berry Head includes scrub clearance and livestock grazing.

Site visit and site manager discussions – analysis of current recreational impacts

5.9 A site visit was undertaken on 17/6/2014 in the company of Noel Hughes, Countryside Officer based at the site for Torbay Coast and Countryside Trust and Alexis Huggins from Torbay Council. It was supplemented by a telephone interview with Andy Byfield from Plantlife.

Calcareous grassland and vegetated sea-cliffs

5.10 Impacts of recreation on vegetation were observed in a vegetation survey carried out in 2008 (Wheeler, Wilson & Reed 2009), who comment that "*erosion is a problem on the*

site due to high visitor numbers. Parts of the plateau are trampled and species poor, as are areas within the south fortification. Excessive fouling by dogs is also creating areas of nutrient enrichment and subsequent changes to the limestone grassland vegetation". Specific comments are listed in Table 4. No recreational impacts at Sharkham Point were noted, although there is a reference to erosion in one area.

Table 4. Notes on recreation impacts and Berry Head made during vegetation surveys in 2008 (Wheeler, Wilson & Reed 2009)

Comment	Location
"local variations in grazing, visitor pressure, the presence of fortifications and so on has resulted in varying degrees of habitats degradation [of inland grassland communities]"	Inland grassland areas generally
"The route of the path has worn and much eroded CG2 [grassland] – still with species such as autumn lady's-tresses *Spiranthes spiralis* and autumn gentian *Gentianella amara* – but the community is becoming patchy and degraded."	Inside the south fort (the Old Redoubt)
"This degraded, more mesophytic CG2 is encountered again west of the north fort in a heavily used dog-walking area and within the northern fortification on the rampart... [and] gradually gives way to a species poor, trampled and heavily manured perennial ryegrass *Lolium perenne* – crested dog grassland on the flat terrain."	Inside the north fort (Berry Head Fort)

5.11 Recreational impacts were evident at the time of the site visit to Berry Head (17/6/2014). Within and outside of the two forts the vegetation is eroded or damaged in a broad band on and alongside the many paths. Damage is particularly extensive where paths converge for example at the entrance to the north fort, although the site manager noted that the recent installation of a path has had some success in reduced trampling on the adjacent turf, and at the tip of Berry Head. The impact of trampling is evident in open patches at the top of the south-facing cliff slope, particularly around benches. The open area just south of the South Fort known as the rabbit lawn is also heavily trampled. This is particularly clear at the edge of the cliff slope and along the scrub margins, where the sward becomes taller.

5.12 In some places repeated trampling is destroying the grassland sward and resulting in bare, compacted ground. In other places, compaction and eutrophication from dog waste appears to have created a species-poor sward with perennial rye-grass and white clover (i.e. a change from species-rich calcareous grassland to species-poor mesotrophic grassland). In some places, an intermediate level of trampling has resulted in a short sward with a high proportion of rosette or low-growing species which vary according to

the degree of maritime influence and other factors but can include wild thyme *Thymus polytrichus*, squills *Scilla* ssp., daisy *Bellis perennis*, rough clover *Trifolium scabrum*, parsley piert *Aphanes arvensis*, thyme-leaved sandwort *Arenaria serpyllifolia*, lesser centuary *Centaurium pulchellum*, mouse-ears *Cerastium* spp. etc., and are likely to be the location for rare meadow-grasses *Poa* spp. and the scarce suffocated clover *Trifolium suffocatum* which are present on site. These areas increase overall diversity and contribute a different suite of species to the grassland. Taller species such dropwort, viper's bugloss, yellow rattle, small scabious, greater knapweed, salad burnet, ox-eye daisy, kidney vetch, bee orchid, pyramidal orchid etc. tend to be absent from such trampled areas.

5.13 In some places, such as the open area to the south of the south fort, rare species such as small hare's-ear, white rockrose and honewort are present in a heavily trampled sward. There was visible trampling damage to individual plants at the time of the visit, and less trampled swards on the cliff top supported more vigorous plants and appeared to be richer in the rare and scarce species of the site (see Figure 3). The amount of white rockrose is thought to be declining in extent in this area (N. Hughes, pers. comm.); it is suggested that this may be due to soil compaction (A. Byfield pers. comm).

Figure 3 (a) Trampled sward at Durl Head with wild thyme, rough clover, sheep's fescue and damaged honewort and white rockrose; (b) Untrampled sward on the cliff edge (approx. 2m from photo a) with lesser restharrow, white rockrose, honewort, Portland spurge, kidney vetch and small scabious.

5.14 National accounts of some of the rarer species suggest that populations may be vulnerable to the impacts of trampling (see Table 5).

Table 5. Potential recreational impacts on key plants species at Berry Head, drawn from the Online Atlas of the British and Irish Flora[4]

Species	Notes relating to potential impacts of recreation
Small Hare's-ear	"In Devon the most significant threat may be from excessive trampling by visitors"
Goldilocks Aster	"Excessive trampling is damaging, however, and because of it some populations have declined." (N.B. this is in the context of livestock trampling).
Honewort	"This species is not immediately threatened, although potential threats to some populations include a reduction in grazing by domestic stock or by rabbits, and excessive trampling by visitors."
White rock-rose	"Recreation and public pressure may become a local problem in the future, but at present appear to be at tolerable level" (1987)

5.15 Eutrophication from dog waste is an issue at Berry Head. Dog faeces and urine increase the amount of available nitrogen and phosphate in the substrate. This favours vigorous species over those adapted to the naturally nutrient-poor conditions of calcareous grassland, and results in an impoverished sward of coarser grasses and bulkier herbs, which can be seen along some paths, particularly near the car park. The Torbay Council dog-wardens can enforce a dog fouling policy, and there are dog bins on site, but a recent survey suggested that around 19 tonnes per annum of dog waste is still left on site (TCCT, unpublished data). The survey found one of the most heavily affected areas within a few metres of a dog bin. The site manager considered that most fouling took place outside of the hours that staff are present on site and/or where owners are unobserved (N. Hughes, pers.comm.).

5.16 Other impacts described by the site manager include fires from barbeques and human fouling at the quarry on the north side Berry Head used by sea-anglers. These have a localised negative impact, but are not affecting the integrity of the site.

5.17 Negative impacts of recreational use were not visible at Sharkham Point. Vulnerable areas of habitat are hard to reach; much of the cliff slope supports impenetrable bracken and scrub which also block narrower paths.

[4] http://www.brc.ac.uk/plantatlas/

Other habitats

5.18 Recreation is likely to be having a localised negative impact on the heathland and woodland habitats, mainly through eutrophication associated with dog waste. It may be having a positive impact in the heathland in its current rather overgrown state through creating more open conditions along paths. It is having no impact in the caves, which have no public access.

Greater horseshoe bats

5.19 The lack of good foraging habitat nearby, together with a poor micro-climate within the main maternity roost, is considered to be making the Berry Head bat colony one of the most vulnerable in the country. TCCT have applied to NE for a Conservation and Enhancement Scheme (CES) to build an incubator in the maternity cave to address this. There is no public access to the caves where the roosts are. The impact of recreation on the surrounding habitat within the Berry Head site could indirectly impact the bats, but work for this report has not obtained any evidence for this. The woodland and cattle grazed grassland (cattle were introduced to increase the amount of prey available to bats) are likely to be the most important areas for foraging.

Summary

5.20 Trampling and eutrophication are currently impacting on the extent and quality of grassland at Berry Head. In some places, trampling may be contributing towards maintaining an open and diverse sward and increasing the overall species diversity. However, beyond a certain intensity, it is resulting in an impoverished degraded sward of little conservation interest. Without specific monitoring data, it is not possible to quantify the point at which the balance is tipped towards the degraded sward, a balance that will also depend on other factors such as management. Eutrophication is having a localized impact.

6. Potential Future Recreational Impacts and Recommendations

6.1 This final chapter draws together the findings from assessing available information, and considers the potential for further or recreational exacerbated impacts as new growth takes place in the local area around Berry Head. Recommendations are made for how the Council should approach the issue in order to meet their duties under the Habitats Regulations, and the types of measures that could be put in place to mitigate for potential impacts.

Meeting the tests of the Habitats Regulations

6.2 The Habitats Regulations require a competent authority to screen any plan or project for the likelihood of significant effects, and then to proceed to a more detailed level of assessment, the appropriate assessment, where impacts are likely or uncertain. A recent European case, the 'Sweetman case'[5] has clarified that the likely significant effect test relates to consideration of a possibility of an impact, and it is in that sense that 'likely to' should be understood. This report supplements and adds to the main Habitats Regulations Assessment for the Torbay Local Plan, and for this assessment, considering the potential effect of recreational pressure on the Berry Head component of the South Hams SAC, it is concluded that the possibility of significant effects cannot be ruled out. There is evidence to suggest that additional impacts, arising from new growth, are a realistic possibility.

6.3 An appropriate assessment looks at the evidence in further detail, and seeks to determine whether adverse effects on site integrity can be ruled out. This test, rather than an initial screening mechanism, is now undertaken in order to define the potential impact, explore measures that could reduce or remove the potential impact and ensure that the ecological integrity of the site is retained. The appropriate assessment should ensure that achievement of site conservation objectives is not compromised, and that the site interest features continue to be capable of contributing to overall favourable conservation status. Where a site requires restoration, a plan or project should not compromise any such objectives.

[5] European Court of Justice case C-258/11. Explanation of the likely significant effect test was given in the Opinion of the Advocate General for the case.

6.4 Decisions at each stage of the assessment process should be precautionary, i.e. if there is uncertainty, impacts are assumed. At the same time, a precautionary approach requires justification, and cannot be based upon unrealistic or inconceivable impacts.

Considering the potential effects arising from new housing

6.5 It is apparent from the evidence considered within this report that the Berry Head component of the South Hams SAC is currently negatively affected by recreational pressure. Affected areas include along paths, within both forts, in the area known as the rabbit lawn and around benches at the top of the cliff slope. Trampling and eutrophication have resulted in a patchily impoverished sward, and may be affecting the populations of rare and scarce species of the calcareous grassland.

6.6 Based on current evidence it is impossible to quantify the extent to which the additional pressure from new growth will cause further deterioration. The current number of visitors to Berry Head is estimated at around 135,000 per annum. Visitor surveys undertaken in 2009 and 2011 indicate that forty-four percent of visitors arrive from Brixham. Regular (at least weekly) visitors make up about one quarter of these. The on-site surveys suggest that most people travel by car; the 2004 postal surveys suggest most people walk, presumably because they were distributed and filled out by people who live close to Berry Head. Comparing likely new development with existing levels of housing suggests an increase of approximately 20% in housing in the area closest to Berry Head (with the highest visit rates) and suggests that there could be a disproportionate increase in visitors to Berry Head.

6.7 It is therefore concluded that on a precautionary basis, but with evidence to justify the approach, adverse effects on site integrity cannot be ruled out. It is advised that without mitigation in place, the increase in recreational pressure is likely to increase the severity of impacts.

Mitigation issues

6.8 In order for the Council to take forward the Torbay Local Plan, there must be certainty that adverse effect on European site integrity will not occur as a result of the Plan. Mitigation measures therefore need to be adequately secured, implementable, timely and designed with confidence in their success.

Mitigation principles when seeking developer contributions

6.9 There are a number of important principles to bear in mind when developing mitigation options for new growth that will be funded or implemented by developers. Developers are responsible for mitigating for the potential effects of their development. Existing impacts should be rectified in accordance with the legislation, but developers should not be responsible for that duty.

6.10 The Habitats Directive includes important duties for Member States to maintain and restore site interest, and additionally, to ensure that plans or projects do not result in adverse effects on site integrity. The duties are complementary and should work together, but Member States should seek to maintain or restore site interest irrespective of any plan or project coming forward. Public bodies can pursue a number of mechanisms for maintaining and restoring site interest, and often work together in partnership on initiatives or restoration projects. Local Plans should take strategic approaches to site restoration and reconnection, and development proposals may present opportunities to realise some aspects of such approaches. However, the specific requirement to mitigate for potential impacts must be clearly separated from any such opportunities, in order for the mitigation burden to be fair, proportionate and transparent, and for its success to be accurately monitored.

6.11 At the Berry Head site, site management is in place to manage existing use of the site. Natural England is working in partnership with the site managers with the provision of a HLS agreement to restore and maintain site interest. Any measures to mitigate for the new growth must be clearly over and above this on-going work, and be necessary because of the additional potential impacts.

Mitigation challenges at Berry Head

6.12 Measures to mitigate for the impact of recreational pressure can be onsite, through the management of habitat or the management of visitors, for example, or can be offsite, through the provision of recreation alternatives to reduce the use of a European site. As discussed earlier in this report, the main Habitats Regulations Assessment document made some initial recommendations for SANGs. The challenge at Berry Head is that there is little scope or opportunity to provide an alternative recreation facility of equivalent size, given the built up nature of Brixham to the immediate west. SANGs may provide a mitigation function for housing some distance away, but the new residents within the proposed growth in close proximity to Berry Head will be difficult

to deter. It is therefore recommended that the use of SANGs as part of the mitigation package is reserved as a potential mitigation measure when larger scale development proposals are being considered. Project level Habitats Regulations Assessments may identify such a need as a result on the location or size of development proposed.

6.13 It is therefore recommended, at this stage and subject to review at the next Plan review, that mitigation measures focus on on-site opportunities. However, it is important to note that there are particular challenges at Berry Head. Management using livestock grazing can be difficult on a cliff-top site (e.g. Oates, Harvey & Glendell 1998) where there is high visitor pressure and a risk of livestock being driven over the cliff. Visitor pressure is also significant when considering scrub management; regular visitors often dislike change to a site they know well, and the management plan notes that some visitors already feel the site is 'over-managed'.

Recommendations for mitigation

6.14 This section provides recommendations for the Council to secure measures to mitigate for the potential impacts arising from the new growth proposed in the Local Plan, through on-site measures and further research at Berry Head.

A programme of habitat and visitor management

6.15 In light of the findings of this report, it is recommend that a detailed plan is developed to address a set of interacting factors that impact on the condition of the site: scrub encroachment, grazing and visitor use.

6.16 The site requires scrub management and grazing to maintain its interest features. However, an increase in visitor numbers will make the interactions between these factors more complex, and careful planning above and beyond that already undertaken for management will be required. Planning should incorporate information on current management and any data that will help target grassland restoration such as historical records of scrub (to help enable young areas of scrub to be targeted, as reversion to calcareous or maritime grassland is more likely to be successful where there has not been undue modification of the underlying soils of loss of seed banks) and rare plant records. The European site interest is of paramount importance but in designing management measures the wider biodiversity interest of the site should be taken in to account.

6.17 Planning needs to include information on how visitors use the site, and on-site visitor monitoring will be needed as part of the plan. Knowledge of visitor patterns will help identify areas for restoration where recreation impacts are likely to be lower and will help minimize conflict between visitors and grazing animals. Scrub can also be used to influence visitor patterns and protect livestock. The plan should also explore ways of limiting diffuse vegetation damage through installing formal paths, manipulating desire lines and promoting use of existing amenity areas. The proposals need to allow a dynamic response to changes in visitor pressure.

6.18 There is also a need to consider potential changes at Berry Head arising from climate changes. The parched south facing slopes which are currently the most important for grassland plants and invertebrates may become too dry for some species while the north-facing slopes become more favourable. Review and refinement of mitigation measures over time will need to assess and take account of this.

6.19 As part of the plan, it will be necessary to clearly define what scrub management and grazing is currently necessary to maintain the interest features. This will allow any management requirements over and above that level, which will be required to improve habitat resilience in the future, to be quantified and costed. It is important that there is transparency regarding what is developer responsibility and what is not, and how each is being funded.

Visitor education and engagement

6.20 In light of the information available, particularly the findings expressed in the Berry Head Conservation Management Plan, it is recommended that there is investment into visitor engagement work at Berry Head. Importantly, this should focus on moving visitor perception of Berry Head away from that of a robust recreation site towards greater appreciation of the heritage and wildlife value of the site and appropriate behaviour needed to maintain such a site for the future. It should also be used to facilitate implementation of the scrub, grazing and visitor plan, which will need an element of community engagement. Engagement and education needs to be based around positive messaging and helping to provide enriching experiences for visitors, to increase a sense of ownership and responsibility for the rare and valuable wildlife.

Visitor facilities and infrastructure

6.21 There is the potential to manage robust areas of Sharkham Point (i.e. the plateau grassland which is outside of the SAC) to make this more attractive to local dog walkers

from Brixham. Options include grassland management and the provision of a variety of routes. Poor access reduces the suitability of the site for visitors arriving by car, although there is an existing car park. An appraisal is recommended as part of the planning process outlined above to establish whether regular visitors arriving on foot at Berry Head would be drawn to Sharkham Point instead.

Monitoring programme

6.22 Any mitigation scheme should be the subject of regular review to ensure that measures are working and adequately mitigating for impacts. Impacts can change over time and may vary from those predicted, and it is therefore necessary for a mitigation scheme to respond to monitoring findings, and refine measures accordingly.

Developer contributions tariff

6.23 The proposed mitigation measures could include a scrub, grazing and visitor management plan; any scrub management needed over and above that currently required, increased visitor engagement work, and development of Sharkham Point for local users. This work will need to be costed in order to calculate a per house contribution that will be required. This will then form the basis of developer contributions, as committed to within the Local Plan. It will be important for the Council to consider how such contributions will be secured, and to ensure that any use of the Community Infrastructure Levy or Section 106 obligations is in accordance with current legislation and Government guidance.

7. References

Byfield, A. (2007) Classic wildlife sites: the Torbay limestone. *British Wildlife*, **18**, 184–193.

Cruickshanks, K. & Liley, D. (2012) *East Devon, Exeter and Teignbridge Household Survey and Predictions of Visitor Use of Greenspaces.* Footprint Ecology.

Halcrow Group Ltd. (2004) *Torbay Coast and Countryside Trust Berry Head Future Heritage Recreation and Access Assessment*.

Oates, M.H., Harvey, J. & Glendell, B. (1998) *Grazing Sea Cliffs and Dunes for Nature Conservation*. National Trust Estates Department, Cirencester.

Rodwell, J.S. (1992) *British Plant Communities, Volume 3: Grasslands and Montane Communities*. Cambridge University Press, Cambridge.

Rodwell, J.S. (2000) *British Plant Communities, Volume 5: Maritime Communities and Vegetation of Open Habitats*. Cambridge University Press, Cambridge UK.

Wheeler, B., Wilson, P. & Reed, M. (2009) *Vegetation Survey of Berry Head*.

8. Appendix 1: Summary of Development, from Local Plan

This table gives the source of the indicative dots shown in Map 2.

Map Ref	Detail	Approximate Dwellings
1	SDT2 Torquay Town Centre & Harbour	670
2	SDT3 Torquay Gateway	745
3	SDT4 Babbacombe & St. Marychurch	255
4	Elsewhere in SD1 and windfalls, indicative only	439
5	Elsewhere in SD1 and windfalls, indicative only	439
6	Elsewhere in SD1 and windfalls, indicative only	439
7	Elsewhere in SD1 and windfalls, indicative only	439
8	Elsewhere in SD1 and windfalls, indicative only	439
9	SDB2	460
10	SDP3.1	100
11	SDP3.2	485
12	SDP3.3	836
13	SDP3.4	840
14	SDP3.5	350
15	Elsewhere in SDP1 and windfall, indicative only	300
16	Elsewhere in SDP1 and windfall, indicative only	300
17	Elsewhere in SDP1 and windfall, indicative only	300
18	Elsewhere in SDP1 and windfall, indicative only	300
19	Elsewhere in SDP1 and windfall, indicative only	300
20	SDB2 Brixham Town Centre, HBR & Waterfront	65
21	SDB3.1 Brixham Urban Fringe & AONB	9
22	SDB3.2 Brixham Urban Fringe & AONB	238
23	Elsewhere in SDB1 and windfalls, indicative only	240
24	Elsewhere in SDB1 and windfalls, indicative only	240
		9228