

**REPORT OF THE BIODIVERSITY OFFICER**

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**SUBJECT: CONSERVATION LAND MANAGEMENT REPORT 2017 - 2018**

1. The attached Report sets out what outcomes are being achieved for this National Park through our conservation and historic environment work.
2. The report sets out:
  - The land management monitoring results for 2017 to 2018.
  - Specific examples of achievements under the 'Conserving the Park' scheme
  - Progress made on the management of Pembrokeshire Coast National Park Authority owned sites
  - Examples of historic environment conservation
  - *Stitch in Time* and *Naturally Connected* project progress
  - Species monitoring results and interpretation
3. The report illustrates the substantial amount of work the Authority undertakes across a range of activities. The main contributors internally are the officers in Park Direction, the Warden Teams and the Ranger Service.

**RECOMMENDATION:**

**Members are requested to RECEIVE and COMMENT on the Report.**

*(For further information contact Sarah Mellor on extension 4829)*



# Conservation Land Management and Historic Environment Report 2017 to 2018



Pembrokeshire Coast  
National Park Authority



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## Introduction

1. This report details the work and outcomes of Pembrokeshire Coast National Park Authority's Conservation Land Management programme (Chapter 1) and the Historic Environment programme for the Financial Year 2017-18 (Chapter 2).

## 1. Conservation

### Introduction

1. As part of Pembrokeshire Coast National Park Authority's land management programme, conservation work is carried out on over one hundred sites, a total of approximately 4320 hectares 1 (7% of the National Park), aimed at benefitting priority habitats and species within Pembrokeshire Coast National Park. This is achieved through the management of the National Park Authority's owned or leased estate and also through working in partnership with private landowners with our 'Conserving the Park' scheme.
2. In addition, we engage in specific projects, either through direct delivery or as part of a partnership. At any one time we may have a number of live projects aimed at engaging landowners in a particular aspect of land management, for example control of non-native invasive species through the 'Stitch in Time' and 'Naturally Connected' projects.
3. The Authority's conservation work covers a diverse range of activities and is normally individually tailored to sites. The practical elements of our conservation work are carried out in partnership with the warden and ranger teams, including volunteers.
4. Typical activities include:
  - Ecological survey and monitoring.
  - Vegetation management e.g. burning and cutting.
  - Facilitation of conservation grazing.
  - Management agreements with landowners.
  - Capital projects associated with land management such as fencing, gates and water supply.
  - Woodland management.
  - Advice on conservation management and grant schemes including agri-environment schemes and burning plans.
  - Practical assistance through the warden and ranger teams (for example assistance with tasks such as burning, cutting, fencing and scrub management).
  - Feedback and on-going discussion with landowners regarding progress and challenges.

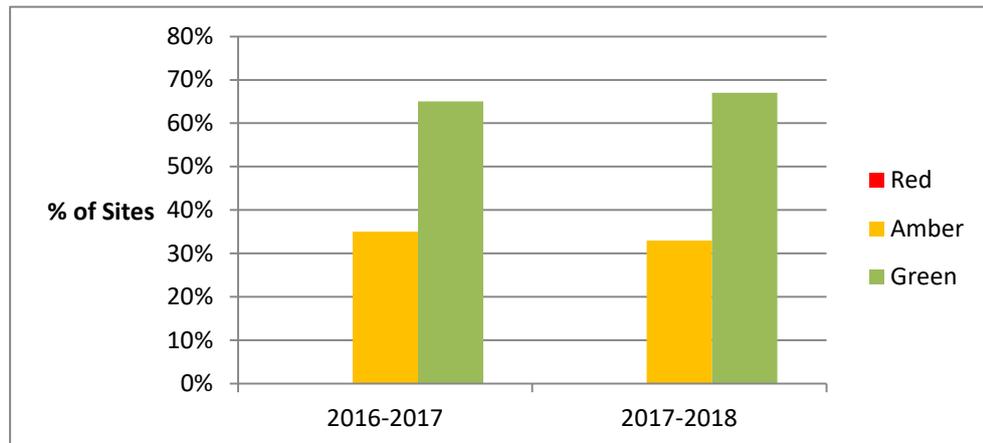
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<sup>1</sup> This figure is derived from GIS data held by the National Park Authority and provides our best estimate as to the total area where the National Park Authority is supporting positive land management for biodiversity. The figure covers three categories of land:

1. Property owned or leased by the National Park Authority managed for biodiversity: 463ha
2. Land managed for biodiversity in partnership with private land owners: 1107.6ha
3. Access land where the National Park Authority supports commons management partnerships: 2750.37ha

## Conservation Sites

5. Conservation sites in the active work programme are subject to formal audit visits which are written up and recorded on file. During formal visits, sites are assigned a Red, Amber or Green category<sup>2</sup>.
6. During the monitoring period of 2017-18, 60% of sites on the conservation work programme received a formal monitoring visit and assessment. All other sites, however, are visited informally throughout the year to discuss particular issues with landowners, to assess grazing livestock and their impacts, etc.
7. The monitoring scheme covers sites under the Conserving the Park scheme as well as land owned by the Authority.
8. The graph below shows the monitoring results for 2017-18. Results from previous years are included for comparative purposes.
9. All sites are assigned an amber or green category which exceeds our Corporate Plan target. This indicates that sites on both Authority-owned land and on land managed in partnership with private landowners continue to be managed in line with nature conservation objectives.
10. There has been a small increase in the sites assigned to a green category mainly reflecting a Pembrokeshire Coast National Park Authority's site at Skrinkle being assigned a green category. This site has undergone a long term restoration to haymeadow and is now classed as restored.



11. Seven new agreements have been made this year covering just over 55 hectares. These agreements focus on hay meadow management and restoration (38 hectares). Three of these are in close proximity to each other and are in turn close to the National Park Authority's Freshwater East property, forming a chain of land managed for wildlife.

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<sup>2</sup> See Appendix 1 for a description of the monitoring method



**38 hectares of new pollinator habitat has been created**

12. This possibly represents the most threatened habitat in the Park, as it is so easily damaged and lost, if not designated. UK-wide, we have lost at least 98% of our hay meadows since the 1930s, so those that remain are very precious. The new agreements will also help restore several meadows to their former glory, following a period of more intensive farming. The new sites are all connected to other wildlife-rich areas, which raises their wildlife value further. An associated species of importance is the skylark, which has suffered a similar dramatic decline.

### Habitat Restoration for Southern Damselfly

13. The North Warden Team oversaw the creation of new habitat at four sites in the Mynydd Preseli Special Area for Conservation (SAC) this year. The work was part of a partnership project between the Pembrokeshire Coast National Park Authority, Natural Resources Wales (NRW) and the Pembrokeshire Nature Partnership.



**Modifying flushes to create Southern Damselfly habitat.**

14. The SAC is designated in part because holds the second largest population of Southern Damselfly in Wales and possibly in Europe. The habitat on which the damselfly depends is in decline mainly to due reductions in cattle and pony grazing on the commons.
15. Natural Resources Wales identified three sites in Mynachlogddu namely Waun Isaf, Glynseithmaen and Ty Cwta where existing rills and small streams could be enhanced for Southern Damselfly and other species by mechanical excavation. Additionally, a number of new and complementary linear open water features were also created to provide greater opportunities for the target species.

## Barn owls

16. Every year, we monitor a handful of barn owl boxes alongside licenced ornithologist, Paddy Jenks. This year we were disappointed to find a number of dead chicks; their low body weight hinted at a lack of suitable feeding opportunities, which is probably related to poor feeding conditions (periods of wet, cold weather have a significant impact).
17. We were surprised to find a pair of stock doves in one of the outdoor boxes (located in a tree). These are classed as Amber on the UK Conservation List.



Assessing the health of owlets

## Marsh Fritillaries in trouble

18. Several of our sites (mostly in the Mynachlogddu area) are monitored each year for marsh fritillary breeding success. Like 2016, 2017 seems to have been another poor year. This species is one of the fastest declining butterflies in Europe. It is vital we keep up our management of these places and make them even more resilient by adding others nearby. Based on last year's findings, Pembrokeshire supports almost a fifth of the breeding population in Wales, with South West Wales overall representing its main stronghold.
19. Butterflies generally seem to be at a low ebb. According to the UK Butterfly Monitoring Scheme, last year was the 7th lowest in a 42-year survey period and makes it five poor years in succession. Variable and extreme weather patterns, possibly linked to climate change, are a major reason for this.

## Invasive Plant removed from Newport Estuary

20. Cordgrass or *Spartina anglica* is an invasive non-native species which colonises mudflats and sandflats in estuary systems. This species was deliberately introduced as a biological tool stabilise soft sediments and has now become widespread in the UK. Seeds are transported by the tide and the plant rapidly colonises, forming a monoculture and closing in the estuary system which can have knock on effects for feeding
21. This species is now so widespread that control is generally not recommended. However,



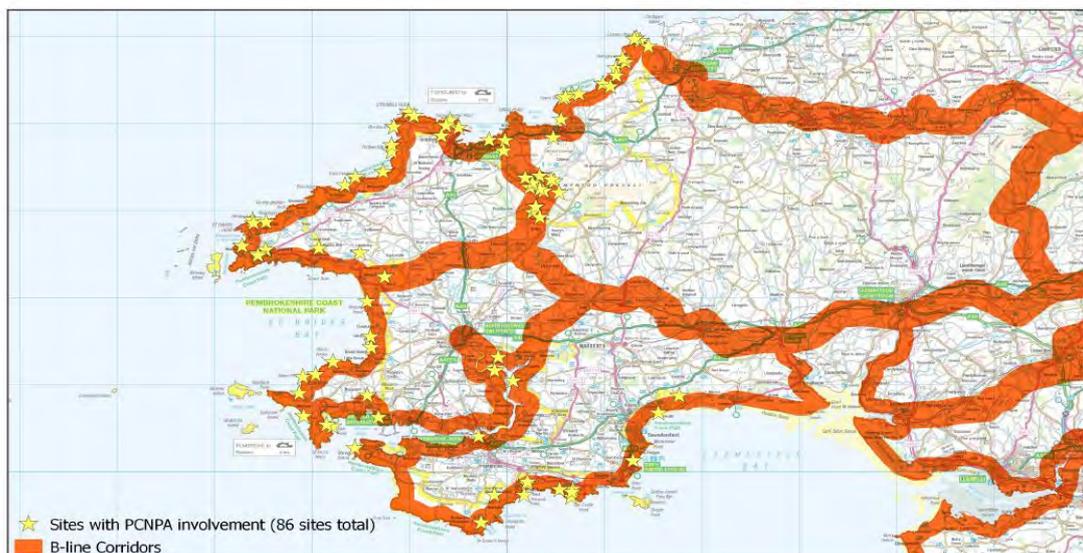
Cordgrass infestation in the Newport Estuary

this estuary has remained relatively free of the plants with only small infestations recorded and removed in the 80's. Two new patches removed this year and last year by the North warden team and volunteers.

22. Currently we feel that the low rate of infestation justifies the effort required for removal in order to keep this estuary an example of a Cordgrass free environment. The Pembrokeshire BSBI (Botanical Society of the British Isles) recorder carried out annual monitoring so we will keep this decision under review.

## B-lines Pollinator Corridors

23. The Pembrokeshire Coast National Park Authority, as part of the Pembrokeshire Nature Partnership took part in a project with Bug Life called B-lines. The aim of the project was to map strategic pollinator corridors across the South and West of Wales. It came as no surprise that our coastal habitats were highlighted as strategically important.
24. The map below shows the fit between the strategic coastal pollinator corridor and our conservation land management programme. We got some wonderful feedback from Paul Evans of Bug Life after a holiday walking along the coastal path.
25. “As well as the sheer beauty and richness of the coast I was struck by how much restoration, grazing management and habitat creation seems to have gone on. There is an idea coming out of the North York Moors National Park for a coastal wildflower-rich strip and I would be keen to be informed by any experience you have had.”



### B-Lines: Pembrokeshire Coast National Park

Sites that intersect the b-lines corridors where Pembrokeshire Coast National Park Authority are currently working or have had input in the past

Creawyd gan / Created by: Philip Barlow (5/7/2017)

Graddfa / Scale: 1:400,000

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## Pembrokeshire Grazing Network

26. This year the Pembrokeshire Grazing Network supported grazing on 40 sites covering a total of 328ha. In addition the network supports grazing on 9 of the Authority-owned sites, totalling around 240 ha.

## Fire Management Group

27. The work of the Pembrokeshire Wildfire Group continues. The Group comprises key partners including Natural Resources Wales, the National Trust, Wildlife Trust South and West Wales, Welsh Government and the Mid and West Wales Fire and Rescue Service (MAWWFRS). It is administered by PLANED as a sub-group of the Pembrokeshire Sustainable Agriculture Network and is chaired by the Authority. Much of the Group's work is carried out by the Pembrokeshire Coast National Park Authority.
28. Activities within the 2017-18 financial year include:
- A comprehensive firebreak cutting programme carried out mainly within the Mynydd Preseli SAC
  - Controlled burning at Craig Rhosyfelin and Foel Dyrch
  - Liaison with and support to Pembrokeshire Adder Coordinator especially with incorporation of adder hibernacula data into controlled burning activities and wildfire fighting
  - Presentation of the Group's work to South Wales Fire and Rescue Service's international wildfire conference
  - Attendance at Robocut remotely-controlled flail mower demonstration by SWFRS and subsequent deployment of the Robocut in Pembrokeshire Coast National Park
  - Recording of 2017-18 burns using MAWWFRS drone



Burning at Craig Rhos y felin

## Long-horn Cattle return to Penlan

29. Twenty Long-horn Cattle from Carn Edward Farm spent the summer grazing the Authority's site Penlan this year. The site has been maintained by grazing ponies in the last few years but we were very keen to see the Longhorns return to this regenerating heathland / woodland site.



30. The cattle are perfect for the developing mix of woodland, willow scrub and mature heathland that is developing across this site. These cattle retain some of the genes of their ancient ancestors and are happy to browse trees and shrubs as well as eating grass picking up lots of extra nutrients and minerals along the way.
31. We are looking forward to their return this May and will be assessing what impact they have on the site.

Longhorn Cattle

## Ancient Woodland Restoration continues at Pengegin

32. The next phase of conifer removal took place at Pengegin this year, carried out by the warden team. This wet weather has proved a significant barrier for the extraction of timber from the woodland as it needs to be carried out across a neighbour's land at the top of the slope.
33. We are hoping to find a dry window for timber extraction over the next winter which will allow the site to be replanted with native trees including oak, hazel and birch.



Bluebells at Pengegin

## Skrinkle goes for Green

34. After many years being assessed as 'Amber' the site is now assigned a 'Green' status. The grassland and grazing management for conservation carried out by the Authority has delivered a wonderful asset for nature conservation. The meadow is now of good quality with a range of characteristic species. Whilst we are still dealing with some management issues (such as encroachment of bindweed and hogweed) the management of the site is settled and the purchase of new larger equipment meant it was possible to make good quality hay enabling disposal of the hay as forage rather than on site for composting. This is a huge step forward. The grazing regimes are working well. The sheep grazing in particular really helps to remove the late summer growth and is essential in maintaining the quality of the meadow here.
35. The site offers a best practice example of restoration of amenity grassland for pollinators and this achievement has been reported to the Welsh Government under their action plan for pollinators.
36. The site also demonstrates an excellent example of buffering a coastal Site of Special Scientific Interest, protecting and enhancing the special features and giving users of the Pembrokeshire Coast Path National Trail / Wales Coast Path the space to spread out.
37. Chough were also spotted feeding on the site this winter, looking for insects under the mounds of mown grass missed by the baler.

## Illegal Tree Felling at Freshwater East

38. Around 30 trees were illegally felled in one of the groups of trees covered by a TPO (Tree Protection Order) on Freshwater East Local Nature Reserve. Despite officer investigations press appeals to members of the public and even the offer of a cash reward the National Park Authority currently has insufficient evidence to pursue a prosecution.

## Naturally Connected Project

39. We were successful in securing £12,300 from the Welsh Government's Sustainable Development Fund to support a pilot project specifically aimed at tourism businesses which own land in the National Park. The aim of the initiative is to encourage tourism business to adopt land management practices that provide suitable habitats for wildlife and also to promote local 'wildlife aware' visitor activities and experiences that will bring benefits to both the environment and also the business.
40. Seven businesses took part in the project, including Manorbier Youth Hostel, Brandy Brook Camping Site, Penhriw Hotel, Tyriet Farm (Bluestone Brewery), Llwyngwair Manor, May Cottage and Picton Castle.
41. Each participating business received an ecological survey of their land along with an ecological report and recommendations for enhancement of their land and buildings for wildlife. The final report also



included information on wildlife sites and experiences within the immediate locality of the business. Together the report formed an ideal information pack which we encouraged businesses to share directly with their visitors.

42. Martin at Manorbier Youth Hostel said “The report helped to us to realise that we could promote interesting wildlife right on our doorstep as well as the big ticket items such as islands and boat trips”.

43. Through the autumn and winter we have been working with businesses to implement a wide range of exciting biodiversity and interpretation projects.



Installing an otter holt at Tyriet farm

44. Volunteers have been helping to install dormouse boxes and an otter holt (no occupants yet!) at Tyriet Farm (Bluestone Brewery).

45. At Penrhiw Hotel near St. Davids we provided some funding for the purchase of yellow rattle seeds to help them improve the hay meadow which they manage adjacent to the hotel. Although the meadow has been doing very well and is already home to variety of plant species it still has a high cover of grasses relative to flowers. Yellow rattle is parasitic on grass and so adding it in to the meadow should help to reduce the vigour of the grasses. Hotel staff have also captured some wonderful footage of badgers and foxes on a trail camera purchased by the project.



#### Foxes and Badgers on the Penrhiw Wildlife Cam

46. Picton Castle staff manage the hay meadow in front of the castle for over 16 years now and have been rewarded with the appearance of their first orchid last year. Naturally Connected helped fund the design and purchase of an interpretation board to draw the attention of visitors to this very special and rare habitat.

47. The campsite manager at Llwyngwair Manor Holiday Park near Newport received training in running river and pond dipping sessions. The project helped with purchasing the necessary equipment to allow her to run sessions through the summer, engaging visitors and locals with the River Nevern which wends its way through the site.

48. One of the key natural features of Brandy Brook campsite is the abundance of mature and veteran trees. All of these trees are of a similar age and the campsite owner was keen to look towards planting trees that would shade the next generation of campers. In-field trees are not as common as they used to be as they are less compatible with modern intensive agriculture; newly planted in-field trees are very scarce indeed so this was a wonderful opportunity. The project funded 7 standard trees (2-3 years old) along with tree guards to provide sheep protection when fields are grazed in winter. The trees were planted by West Ranger Ian Meopham and volunteers from Portfield School.



Tree planting with Portfield School

49. Some of the hedges on the campsite were planted around 10-15 years ago meaning they were ideal for laying. Laying is a traditional form of hedgerow management which aims to make hedges thick at the bottom to ensure they are stock proof – which incidentally also makes them better for wildlife. We chose a hedge along a public footpath which runs through the campsite for Authority colleague Tom Iggleden and his Pathways Volunteer Group to tackle. The Group were grateful to local expert hedgelayer Gareth Evans who gave his time to show a new style of hedgelaying to add to their repertoire. There are several more hedges in need of management at the campsite which we hope to tackle in the future.

50. The project came to an end in March this year and the project evaluation report will be available on the Authority's website shortly.



Hedgelaying at Brandy Brook

### Volunteer success!

51. Since Stitch in Time started in May 2015 approximately 144 individual volunteers have contributed an amazing total of 215.6 days (c.1600 hours) to the project. The project has proved a fantastic vehicle for getting volunteers involved in delivering high priority conservation work and we simply couldn't deliver the project without them.



Pembrokeshire College Balsam Group

52. Volunteers have varied from one-off groups such as Pembrokeshire College and the Pembrokeshire Coast National Park Authority's Youth Rangers to established conservation groups such as the Friends of Pembrokeshire Coast National Park and the Newport Paths Group who have formally adopted sites to return to year after year.
53. The project has now moved down into Fishguard allowing us to link up with the Environmental Group there, tackling Himalayan balsam in the lower reaches of the Gwaun.

### Source to sea control

54. In the fourth year of the project we are now implementing source to sea control in the Gwaun Valley for Himalayan balsam and Japanese knotweed (with the exception of a single site where permissions have been withdrawn by the landowner). On the Clydach catchment the control will reach its confluence with main Nevern River in this coming year.
55. There is evidence that the resource required at each site is reducing year on year. Himalayan balsam sites in the upper reaches of the Gwaun Valley stopped showing balsam in September 2017. (In the previous season control effort continued until first week of November.)
56. One of our core volunteer groups, the Friends of Pembrokeshire Coast National Park, has been able to move from their original adopted tributary site and deploy their resources lower down in the catchment.
57. Working in partnership with larger landowners and statutory organisations has been key to success. Work continues in the Trecwn Valley on a key Japanese knotweed and *Rhododendron* site on the River Aer with the Trecwn Valley management company providing a financial contribution to the work undertaken this season.

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## Cost-effective co-ordination

58. This year saw a successful trial with Pembrokeshire County Council to mark Japanese knotweed infestations on road verges to prevent them from being flailed during verge maintenance. Cutting Japanese knotweed encourages spread of the plant and also reduces the efficacy of the autumn spray treatment. All marked areas of Japanese Knotweed remained uncut in 2017.

59. In Lower Town Fishguard the project is coordinating partners



Marking infestations on the road verge

(Pembrokeshire County Council, Natural Resources Wales and a local community group) to ensure the most cost effective control strategy and to encourage others to step away from piecemeal management. In practice this has meant that Natural Resources Wales has re-allocated spraying budget originally intended for Himalayan balsam to Japanese knotweed control and the community group will now run volunteer work parties to eradicate balsam. This is a really good example of how coordination makes the best use of everyone's resources.

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## Spreading the word

60. A press release in September 2017 generated 70 new records for Invasive Non-Native Species (INNS).
61. As part of INNS week the Project Officer visited 3 garden nurseries in and around the project area to raise awareness of the project and of national campaigns such as Plant-wise.
62. The Project Officer was interviewed on Radio Pembrokeshire about the project and in particular provided advice for landowners on control of Japanese knotweed. Following the interview a strategically-important new record for Himalayan balsam was received for a member of the public.

## Chough monitoring

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### Breeding Choughs

63. The total number of occupied territories in 2017 was slightly down on the total for 2016 indicating that the recent rise in occupied territories seen in recent years has stopped.

However, 2017 was still a prolific year when compared to all data collected since 1992 when the surveillance work started.

64.
  - The second highest number of pairs occupying territories since 1992 was recorded in 2017;
  - 2017 is in joint 3<sup>rd</sup> place in terms of the number of successful pairs/nest-sites (1992-to-date);
  - The 4<sup>th</sup> highest number of young fledged in any given year since 1992 was recorded in 2017.
65. Some of the 'new' pairs recorded in 2016 had settled down and went on to breed successfully in 2017.
66. In 2017, there were instances of late-stage failures (i.e. failures when there were young in the nest) on Ramsey Island (in early June) and on the mainland. There were two periods of adverse weather (heavy rain, gale-force winds and very big ground swells that generated drenching sprays of sea water) in June, which almost certainly had an adverse impact on young choughs in vulnerable nests in locations that were exposed to rain driven by gale force winds or that were sufficiently low down in the cliffs to be drenched by heavy seas. The first period was during the week beginning 5<sup>th</sup> June, when three nests failed on Ramsey Island and the second was during the week beginning 26<sup>th</sup> June, just as young choughs were fledging from nests on the north coast. Some young choughs that had just fledged from nest-sites on exposed coasts were likely to have perished as a result of the adverse weather conditions during this week.

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### Non-breeding Choughs

67. The data obtained for non-breeding choughs between late March and mid-May indicate that there were between 98 and 111 non-breeding choughs using the mainland coast and islands within the National Park in the spring 2017, when they accounted for between 42 and 44% of the total population (*cf.* 33-36% in 2016).
68. These figures suggest that the mainland and islands within the National Park continued to support an apparently "healthy" population of non-breeding choughs in 2017. As always, a certain degree of caution is required in estimating the number of non-breeding birds.
69. These flocks probably consisted of mostly young one-two year-old birds with no established territories to defend. It should also be borne in mind that resident pairs will tend to associate with non-breeding birds as they move through the resident pairs' territories which could result in over-estimates of the numbers of non-breeding birds in these flocks.
70. With these caveats in mind, the numbers of non-breeding choughs recorded in spring 2017 were the highest for several years (higher than the total numbers seen in e.g. 2016). They suggest that winter survival has continued to improve, following the two cold winters of 2009/10 and 2010/11, during which inexperienced birds without territories in particular were thought to have suffered. It is also thought that survival of the immediate post-fledging period by juveniles was perhaps better in 2016 than in previous years, thus boosting the numbers of birds going into the relatively benign winter of 2016/17.

### General bat activity in the castle

71. The data obtained in 2017 suggest that the seasonal patterns of bat activity in the castle were similar to those observed in recent years. The range of species and the numbers of bats involved were also broadly similar to those observed in recent years, although there were perhaps fewer soprano pipistrelles seen/heard in 2017 than in e.g. 2016. Social behaviour (as well as foraging behaviour) was observed in common pipistrelle bats in the autumn.
72. Observations suggest that the Natterer's bat maternity roost in the north-west tower basement room was once again unoccupied as such: conditions in the roost in the barrel-vaulted ceiling were almost certainly too cool and damp for breeding. Noctule bats were once again recorded above the castle and environs although their origins remain a mystery.
73. Although no late autumn or winter roost visits were carried out in 2017, it is very likely that the castle continued to provide a myriad of winter roosting opportunities for crevice-dwelling species, and that it is an important site for bats during the winter.

### Greater horseshoe bats

74. In general, the data obtained for this species in 2017 indicate that the seasonal patterns of roost attendance were broadly similar to those recorded in recent years. The total numbers of bats observed during the monthly evening visits in the spring and autumn in 2015, 2016 and 2017 are summarised as follows:

Year	April	May	June	September	October
2015	17	14	7	11	7
2016	8	18	16	9	8
2017	21	19	9	8	13

75. In 2015 and 2017, the spring peak in numbers occurred in April, whilst in 2016 it was in May. The numbers seen in September were very similar in all three years. The October count in 2017 was significantly higher than in the previous two years.
76. Although the seasonal patterns of roost attendance in 2017 were similar to those observed annually since the inception of annual surveillance of greater horseshoe bats at Carew Castle, the peak numbers vary between years as do the months in which they occur. The reasons for the differences between years are not immediately obvious: they may simply reflect the fact that the monthly counts are in effect snap-shots of the movements of bats between winter, intermediate, maternity and summer (non-breeding) roosts.

## 2 Historic Environment Report

### Pembrokeshire Coast National Park Authority owned sites

77. Currently there are 11 scheduled monuments on land owned by the National Park Authority and 8 on land within land management agreements.
78. The management of each scheduled monument is dependent on its location and environment. Some, such as Crugiau Cemaes round barrows are easier to manage, whereas the enclosure sites at Pengegin woods are proving to be more challenging.
79. Overall, there are over 250 scheduled monuments in the National Park and over 7000 recorded archaeological features. Where possible we will aid in the condition assessment and management of these historic features through the work of rangers, wardens and volunteers.
80. Since the last report, work has been carried out at Ty Canol woods by Pathways Volunteers and at Gors Fawr Stone circle by Plas Dwbl College, both greatly improved through vegetation clearance. We have also been working closely with Cadw who have advised on which monuments within the National Park are in desperate need of improvement through vegetation clearance; the main one is Caerbwdi mill and cottage. Works have been scheduled for volunteers in late October. Due to bird nesting season, vegetation clearing works will be undertaken later on in the year.
81. In early June Castell Henllys welcomed back Professor Harold Mytum and his team of students as well as Dyfed Archaeological Trust with their team of volunteers to excavate the remains of the Cookhouse prior to its rebuilding. The excavation of this reconstructed house provided a unique opportunity for the archaeologists to study the effects of the use and deterioration of the house as represented in the soil, which allows us a better understanding of other Iron Age sites. Letters were also sent out to local primary schools to notify pupils of the dig and Castell Henllys agreed to let the children and their parents in for free. In total 14 families, 22 adults and 31 children visited the dig and participated in the organised archaeological activities.
82. In February 2018, the wattling and daubing of the roundhouse was undertaken by a mixture of National Park Authority Voluntary Wardens, volunteers from Plas Dwbl college, Clynfyw Care Farm, Pembrokeshire College (Conservation students and Health and Social care students) as well as Pathways volunteers and local volunteers.
83. Field visits and monitoring continue to be undertaken over the coming year across all areas of the National Park to build up a better picture of monuments in need of attention. An attempt was made to hold a training event for monitoring monuments and artefact identification at Oriel y Parc for West voluntary wardens, but due to short notice and lack of interest it did not go ahead. So, it has been decided to hold a larger training event for all voluntary wardens later on in the summer.

### Raising Awareness

84. Since November, talks and presentations have been given for Merched y Wawr groups (Llangrannog, Maenclochog and Gwaun Valley), Ceredigion wildlife groups and Tafarn Sinc Community group. These have succeeded in raising awareness of local sites within the National Park, their history, their importance and the issues we face regarding their management. With the Tafarn Sinc Community group, we've held an artefact handling and identification evening where the community brought in artefacts that they have found

and the evening taught them how to record the find on the portable antiquities scheme and on the Historic Environment Record (HER). There were a number of land owners, farmers and metal detectorists at the event and they found the information provided useful. It is hoped that a similar event will be co-organised with local Young Farmers Clubs to encourage better understanding of the historic environment and ensure that artefacts found on their land are recorded.

## Heritage Guardians

85. In January, the Heritage Guardians project started. The first session was delivered to Puncheston Primary School on 12/01/2018 to a class of 29 pupils (Years 3, 4, 5 and 6), to Bro Inqli on 16/01/2018 to a class of 30 pupils (years 5 and 6) and at Llanychllwydog primary on 24/01/2018 to a class of 15 pupils (Years 2,4, 5 and 6).



Work produced as part of the Heritage Guardians session

86. In these sessions the pupils were introduced to the project, heritage sites in their area and to the concepts of archaeology in general. Games such as “guess the artefact” using powerpoint were played. Children were then put into groups, when they were then given an artefact from the Tenby Museum box to try and identify. After all groups had rotated all the artefacts, it was revealed what each artefact was, what it was used for and what time period it came from. The children were then asked to draw their favourite artefact in the context of their time period and how they would have been used.

87. The next sessions took place in February/ beginning of March. The sessions were metal detecting and archaeological techniques with the equipment and materials for the archaeology sessions being bought this month.

88. In these sessions, the children were brought out in groups of 5 or 6 to excavate a 50cm by 50cm test pit and to use the metal detector to search for metal object in the school's field. With the test pit, the de-turfing was already done for them, so they could easily excavate the topsoil with their trowels and hand shovels. After the brief safety talk the children worked on the test pit, with a couple excavating, others sieving



Metal Detecting

the soil dug up and another 'supervising' or making sure no artefact was missed. At all the schools the children managed to find at least some piece of archaeology in the test pit, be it Victorian china or red brick and even a large one pence coin from the 60's. The children commented on how fun this activity was.

89. The metal detecting also proved popular as the children associate it with treasure hunting. After a brief introduction the children walked around their field/garden with the detector. At Bro Ingli the children got very excited when they metal detector found something, but were somewhat disappointed that it was just an aluminium can. However, this was a good opportunity to show children how long our rubbish stays in the ground and the benefits of recycling. Llanychllwydog Primary found countless numbers of large metal objects, their favourite was a cast iron rain pipe from a side of a house that had been dumped there. All in all the sessions were very successful and encouraged the children to think about how much humans leave behind, from broken plates to plastic, and what they would leave behind in the future.
  
90. In March/ April, it was organised for the schools to visit their local monuments, but due to mixture of weather and other commitments by the school, the sessions for Bro Ingli and Puncteston became interpretation workshops where the children began thinking about how they want to present their monument to the public. Most like the idea of a film or animation. Llanychllwydog however did visit their monument in Allt Pengegin and conducted a monitoring survey of the site. So far, the feedback from both the children and the teachers has been extremely positive. In the case of Wern camp, Cadw is also pleased that a work programme for the improvement of this site (which is currently a monument at medium risk) is likely to be implemented as a result of the project (subject to landowner consent).

## Appendix 1 - Conservation Land Management Sites – Monitoring Methodology

### Method

A formal assessment considers the species and habitats for which the site is being managed. Monitoring is different for each site depending on what we are trying to achieve through management. The timing of formal visits may be varied from year to year to assess a site with multiple features of interest.

Monitoring considers two things:

- i) The quality of the habitat which is discerned through the presence and abundance of typical positive indicator species (e.g. typical haymeadow flowers) and negative indicator species (e.g. nettles, docks) as recommended by the Joint Nature Conservation Committee. We may also consider vegetation structure in terms of sward heights or the balance of scrub to grassland where these are critical to individual species. We carry out some selected specialist species monitoring for example skylark and marsh fritillary where appropriate.
- ii) Compliance with an on-going suitability of the management regime. This will include information on the appropriate timing of management interventions, the success of individual interventions for example bracken control, and physical audit of capital items.

Relying entirely on (i) above to provide a monitoring result is fraught with difficulty. Species can often 'hang on' in habitats of declining quality and natural population fluctuations driven by the weather, or other factors outside of our control can confound the interpretation of these results.

Therefore we combine the information provided by both (i) and (ii) with the professional judgement of experienced staff to assign the site to one of three categories (Red, Amber, Green). Adding a qualitative professional judgement element has been used very successfully in nature conservation scheme monitoring and this was used by the Countryside Council for Wales' (Natural Resources Wales legacy body) rapid review of SSSIs in 2006.

### Explanation of Monitoring Categories

RED	AMBER	GREEN
<p>A site is judged to be Red if:</p> <p>A serious or repeated breach of management plan has taken place.</p> <p>Damaging activities have taken place or features of interest destroyed/partially destroyed.</p>	<p>A site is judged to be Amber if:</p> <p>Management is considered compliant and effective but the conservation value of the site will take time to improve.</p> <p>There is a positive direction of travel in terms of quality improvement but with minor deviations from the management plan which may slow recovery or improvement of conservation value.</p> <p>Management is compliant but our recommended management is not producing the expected results.</p>	<p>A site is judged to be Green when the management regime is compliant, the management is effective and the site is of high quality and with high ecological integrity.</p> <p>In the green category we are often 'running to stand still' as maintenance of good condition requires continued management.</p> <p>Such sites may slip back to Amber if the land changes hands or the owners' circumstances change.</p>

<p>Our response:</p> <p>The Authority will make a judgement on whether to continue involvement with the site.</p>	<p>Our response:</p> <p>In the first case, the positive feedback is provided to the landowner.</p> <p>In the second case we communicate with the landowner regarding ideal management practice and reasons for deviation, perhaps looking for alternatives.</p> <p>In the third case we would work with the landowner to experiment with management. This is standard practice in nature conservation management and is referred to as 'adaptive' management.</p>	<p>Our response:</p> <p>Green sites may stay with the scheme requiring smaller amounts of intervention. For example a site which had capital expenditure such as gates and scrub control may now only need a small amount of on-going assistance with grazing animals.</p> <p>For some sites continued support may be the only option for retaining the conservation interest of the site.</p>
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Some of the detail of these responses is only relevant to the Conserving the Park scheme, but the broad principles apply across all the Authority's conservation portfolio.

### Background

'Conserving the Park' is Pembrokeshire Coast National Park Authority's flagship scheme for working with private landowners within the National Park. It has proved a powerful tool in delivering practical land management for key habitats and species and is our key vehicle for delivering first purpose conservation objectives in the National Park Management Plan, the Authority's Corporate and Resources Plan and the Pembrokeshire Nature Partnership's Local Biodiversity Action Plan / Nature Recovery Action Plan.

Conserving the Park evolved from the highly successful 'Conserving the Coastal Slopes' project, which was the practical answer to the Authority's Chough Conservation Strategy. Further background on this project can be obtained from the excellent project report, which neatly outlines the challenges for conservation management of semi-natural habitats within the National Park and which is as relevant today as it was in 2002.

### Why is it needed?

Habitats such as flower-rich grasslands, marshy grasslands and woodlands and coastal slopes all contribute to the rich diversity of wildlife in the National Park. These semi-natural habitats suffer from a range of issues such as land abandonment, inappropriate stock, lack of grazing and lack of traditional vegetation management.

Outside of designated areas there are gaps in the support available to landowners who aspire to manage their land for the benefit of wildlife. The Conserving the Park scheme aims to fill these gaps, and also to facilitate access to other sources of support and to add value where possible. It is important to note that the scheme is not intended to compete with, or replace, existing schemes.

The scheme supports community spaces such as churchyards, which often hold remnants of ancient flower-rich grassland. Volunteers help out with the annual cut and rake which produces an abundance of spring and summer flowers and excellent pollinator habitat at Stackpole Churchyard.

### How does the scheme work?

Landowners enter the scheme by two main avenues. They may see the scheme information on our flyers or on our website and contact us directly, or as is often the case they are referred to us by one of our partners, for example NRW.

Sites are visited and assessed for current conservation value and condition and their potential to deliver conservation outcomes for priority habitats and species. The list of priority habitats and species has been taken from the Local Biodiversity Action Plan for Pembrokeshire which provides action plans for European Annex 1 habitats and Annex 2 species and UK Biodiversity Action Plan habitats and species in Pembrokeshire, as well as those of local concern.

The Pembrokeshire Nature Partnership consists of a wide range of statutory and non-governmental organisations and voluntary organisations. The Local Biodiversity Action Plan is regularly updated and reviewed by a core steering group of key partners including NRW, Pembrokeshire Coast National Park Authority, Pembrokeshire County Council and the Wildlife Trust of South and West Wales - ensuring information is relevant and up to date. A list of priority habitats and species can be found in Appendix 1 of the Local Biodiversity Action Plan.



**Help ar gyfer bywyd gwylt ar eich tir**      **Help for wildlife on your land**

Os ydych yn berchen ar unrhyw dir ac am weld bywyd gwylt yn ffynnu yno, yna fe allwch ein helpu gyda'n nod o ailgyflwyno rhwydwaith o goridoriau sy'n hybu bywyd gwylt o lawm y Parc Cenedlaethol. Yn gyfnewid am hyn, fe allwn ni ddarparu:

- Cyngor
- Gwybodaeth ar grantiau a mathau eraill o gymorth
- Help ymarferol rhad ac am ddim gyda staff ac offer arbenigol
- Help gyda gwaith cyfalaf fel ffensiō giataiu cyflawni dŵr
- Taliadau am reoli tir trwy gytundebau rheolaeth
- Help i gael hyd i'r stoc pori a'r peiriauwaith iawn
- Cefnogaeth barhaus hyd yn oed pan fydd y rheolaeth mewn lle

Am fwy o wybodaeth, ffoniwch 0845 345 7275 neu e-bostiwch [julieg@pembrokeshirecoast.org.uk](mailto:julieg@pembrokeshirecoast.org.uk)

If you own any land where you'd like to see wildlife thriving, then you can help us with our aim to reinstate a network of wildlife-friendly corridors within the National Park. In return, we can provide:

- Advice
- Information on grants and other assistance
- Free practical assistance with staff and specialist equipment
- Help with capital works such as fencing, water supply, gates
- Payments for managing land through management agreements
- Help to source the right grazing stock and machinery
- Continued support even when management is up and running

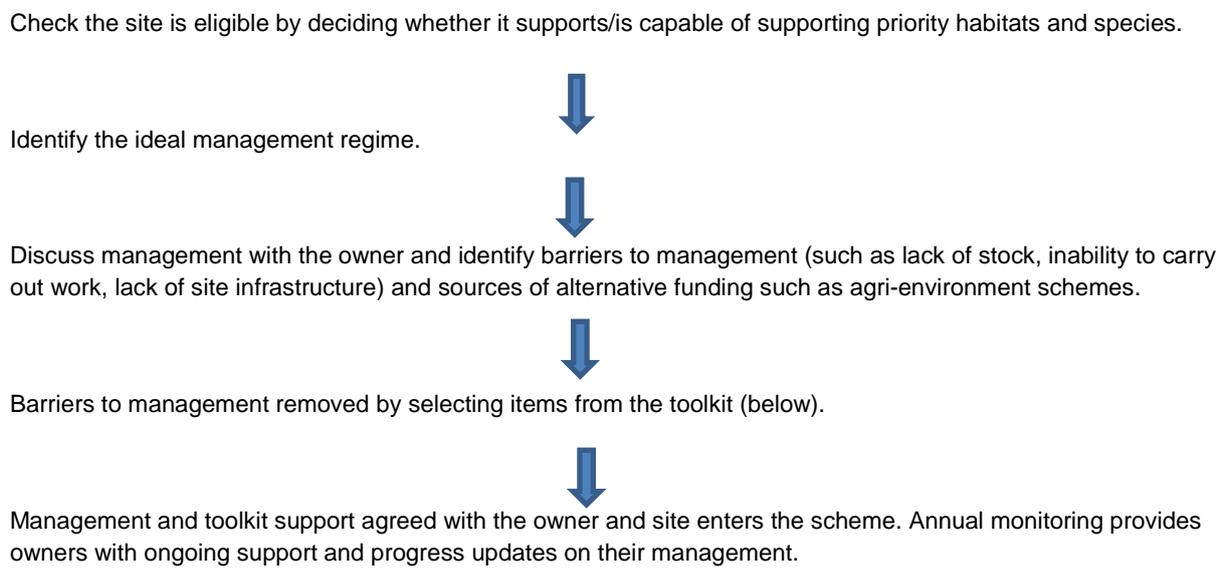
For more information, call 0845 345 7275 or email [julieg@pembrokeshirecoast.org.uk](mailto:julieg@pembrokeshirecoast.org.uk)

**Cynefinoedd allweddol:**  
 • Glaswelltiroedd • Rhestriroedd  
 • Gaeiroedd • Brysgoed  
 • Caeiroedd • Gwlypdiroedd  
 • Trystylau coediroedd

**Key habitats:**  
 • Grasslands • Heathlands  
 • Coastal slopes • Scrub  
 • Woodlands • Wetlands  
 • Woodland edges

Parc Cenedlaethol  
 National Park  
 Pembrokeshire Coast

Process



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## The Toolkit approach

The Toolkit approach was developed during the Conserving the Coastal Slopes Programme. It is highly effective as it can tailor solutions to site management issues and therefore offer highly targeted support.

