

THE STATE OF NATURE AND
NATURE RECOVERY ACTION PLAN FOR
NEATH PORT TALBOT
2023



NEATH PORT TALBOT LOCAL NATURE PARTNERSHIP
BARTNERIAETH NATUR LEOL CASTELL-NEDD PORT TALBOT



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EXECUTIVE SUMMARY

The State of Nature 2019 (A Summary for Wales) report revealed some sobering statistics which included evidence for a decline of 41% in the abundance of species in the last 50 years with 17% of Wales' species currently at risk of extinction. In order to understand local trends and pressures, and to guide action to aid recovery, Neath Port Talbot Local Nature Partnership (NPT LNP) has undertaken an assessment of the State of Nature in the county, linked with a Nature Recovery Action Plan.

To do this, we took an evidence-based approach, drawing on a large database of species and habitat records and a detailed Phase 1 habitat map constructed from current (2021) landscape imagery. This allowed us to assess resilience in each broad habitat category in Neath Port Talbot (NPT) which, in turn, informed the State of Nature assessments.

Of the 11 broad habitat categories, nine are assessed to be in less than good state and five are assessed as poor. Woodland and Open Mosaic Habitats in the county have been assessed as good, with the caveats that there are problems with invasive non-native species in both and many biodiverse Open Mosaic Habitats are threatened with development.

Urgent actions are required to improve the resilience of NPT's biodiversity, in particular the coastal, heathland and moorland and semi-natural grassland habitats. In many cases and at all scales, this will require a step change in attitudes towards biodiversity, and the collective responsibility that will need to be adopted to restore our habitats and species. This report sets out the current state of nature for NPT, current activities that are in place, and the actions that are needed to ensure a resilient natural environment for future generations.



INTRODUCTION

In 2001 the NPT Biodiversity Forum (now known as the NPT Local Nature Partnership) launched its Biodiversity Action Plan for 2001-2005, which contained details and action plans for 80 species and 15 habitats. In common with most of the Local Biodiversity Action Plans produced in Wales and the rest of the UK at that time, few targets were met and in the decades that have followed, regional and national biodiversity in general has not fared well. In fact, for many important wildlife populations and their habitats, there have been significant losses. Yet, NPT still retains a variety of priority habitats, including 17 Sites of Special Scientific Interest (SSSIs) and the county as a whole contains a significant number of Section 7 species and other priority species of local and national value.

These precious, dwindling resources deserve our attention and in order to address this there has been a step change in wildlife recording in NPT in the last 20 years. This has helped us to build a large database of habitats and species and that, in turn, has allowed us to understand the biodiversity gains and losses in NPT. Some of the county's wildlife highlights are depicted in Figure 1.

At this time, we need to understand how well or how badly nature is coping in NPT so we can protect the natural environment, preserve our wild places and make plans for the future. An assessment of the state of nature in NPT is the first step towards achieving a sustainable, healthy environment, which will provide all of us and future generations of NPT with an inspiring place to live. The actions that are suggested in this document are our road map to this; our Nature Recovery Action Plan.

NEATH PORT TALBOT NATURE HIGHLIGHTS

The only populations of Fen Raft Spider, Ox-tongue Broomrape and Blue Ground Beetle in Wales



70
Section 7
Species

17 Sites of Special Scientific Interest (SSSIs)

One of the best bat sites in Wales, Margam Park supports 14 species of bat



A large meta-population of endangered Marsh Fritillary



21 UK Red-Listed birds breed in NPT



950
Hectares of protected land



One of only five areas in the UK to support Shrilc Carder Bee, a species of conservation concern



Strong populations of rare or vulnerable plants such as Deptford Pink, Sea Stock and Basil Thyme.

Figure 1: Some of the nature highlights of NPT

NPT LOCAL NATURE PARTNERSHIP

The NPT Local Nature Partnership (NPT LNP) is made up of representatives from a wide range of organisations plus individuals with an interest in local wildlife and land management. Membership is open to anyone with a genuine interest in biodiversity and wildlife conservation in NPT. The Local Authority's Countryside and Wildlife Team provide the secretariat and there is an independent chair.

We achieve our aims by creating partnerships between people that protect and care for nature in NPT, gathering information on the conservation of species and habitats in NPT, supporting the development of projects that are contributing to the aims of the Partnership, developing new projects to address local priorities and providing an advisory function on the subject of the state of nature and nature recovery in NPT. Wherever possible, we take an evidence-based approach to facilitate this through our presence on strategic steering groups and by providing advice to community councils.

NPT LNP is responsible for the assessment of the State of Nature in NPT, which will be reviewed every five years. Actions related to the Nature Recovery Action Plan will be reviewed each year in the spring meeting of the NPT LNP.

THE AIMS OF NPT LOCAL NATURE PARTNERSHIP

- To protect existing habitats, restore former habitats and where appropriate create new habitats.
- To halt the loss of biodiversity in NPT and increase habitat and ecosystem resilience.
- To educate people about the importance of wildlife habitats and conserve the flora and fauna they contain.
- To influence and encourage activities that are more sensitive to the needs of local biodiversity.
- To advise on appropriate actions that will conserve, protect and enhance biodiversity in NPT.

SOME OF OUR PARTNERS

A full list of partners can be found in Appendix 1



FEATURES OF LANDSCAPE AND GEOLOGY OF NPT

NPT is characterised by: (i) a coastal region which lies west of the M4 Motorway and curves around the eastern part of Swansea Bay from Crymlyn Burrows to the Kenfig rivermouth, (ii) 3 main river valleys, the Neath (Nedd), Afan and Upper Tawe, and (iii) an extensive upland landscape which rises to 660m on Craig y Llyn, the highest point in the county.

Its central feature is the Vale of Neath which divides the county conveniently into northern and southern sectors:

- The southern sector is extensively wooded with conifer forests but also contains large blocks of deciduous woodlands such as those between Briton Ferry and Baglan. Most of the natural features of its coastal strip, which once included pristine dunes and wetlands, have been altered by industrial development. Near Resolven, the north-west facing flank of the Vale of Neath is drained by some significant streams such as the Melincwrt Brook, whose valleys supports significant assemblages of lower plants. Much of the Afan Valley which lies between Pontrhydyfen and Abergwynfi was mined for coal before it was afforested with conifers.
- The largely rural northern sector includes the Clydach, Dulais and upper Tawe valleys. It contains the large conifer plantations of Crynant and Rheola and a number of ancient woodlands such as Maesmelin and Dyffryn Woods, Craig Gwladys, Tyn yr Heol Woods and Cwm Du Glen. The waterfall valleys of the Pyrddin and lower Nedd Fechan which occur along the border between NPT and Powys are part of the internationally important Celtic Rainforest and Atlantic woodland ecosystems that define the headstreams of the River Neath. Much of the landscape of the northern sector is dominated by heathland and moorland and most of the county's Common Land and species-rich marshy grasslands are found here.



Figure 2: NPT can be split into Northern and Southern Sectors

The geology of NPT is dominated by the South Wales Coalfield. Its most prominent rock outcrops, such as those of Craig y Llyn, are formed of sandstone. Calcareous outcrops are almost completely absent from NPT but there is a minor influence of carboniferous limestone near Rhyd yr Fro. Rocks of the Millstone Grit series are found in the waterfall valleys of the Nedd Fechan and Pyrddin near Breconshire.



HABITAT CLASSIFICATION IN NPT

Habitats in NPT have been classified into 11 broad categories and each of these has been divided further into sub-categories or specific habitats. Some of these habitats support large numbers of priority species yet their biodiversity is threatened by pressures such as development and neglect. The collective resilience of these habitats is a good indicator of the state of nature in NPT.



PRIORITY SPECIES IN NPT

A list of 237 priority species has been drawn up from a comprehensive dataset of field records provided by members of the NPT LNP over the last 20 years.

In our database, each species in the list is linked only with the habitat(s) in which it occurs in NPT. For example, as far as we can tell from our records, the Marsh Fritillary butterfly only breeds in marshy grasslands in NPT and can only be cross-referenced to this habitat in our database, even though it may breed in other habitats (e.g. sand dunes) elsewhere. This allows us to make an evidence-based assessment of priority species diversity for each habitat in NPT (Fig. 3).

Table 1 shows the distribution of priority species according to taxonomic groups. Invertebrates, particularly insects (e.g. butterflies and moths) make up the largest proportion of our priority species. A full list of NPT's priority species is given in Appendix 2.

Systematic Group	Number of Species	% of Total
Fungi	5	2.1
Mosses, liverworts and hornworts	18	7.5
Vascular Plants	44	18.5
All Plants and Fungi	67	28
All Plants	62	26
Beetles	11	4.6
Butterflies and moths	63	26.5
(Butterflies)	7	3.0
(Moths)	56	23.5
Flies	2	0.85
Ants, bees, sawflies and wasps	9	3.8
True bugs	6	2.5
Millipede, centipedes and others	1	0.4
Dragonflies and damselflies	2	0.85
Grasshoppers and crickets	13	5.5
Spiders	1	0.4
All invertebrates	106	44.5
Fish	5	2.1
Reptiles	2	0.85
Amphibians	2	0.85
Birds	26	10.9
Mammals	28	11.8
All vertebrates	63	26.4
TOTAL SPECIES	238	100

Table 1: Distribution of priority species by taxonomic groups (at the time of publishing)



PRIORITY SPECIES AND HABITATS



Figure 3: Numbers of priority species found in the various broad habitat types. The importance of woodlands, coastal habitats, grasslands, and open mosaic habitats for priority species in NPT is clear.



NPT NATURE RECOVERY ACTION PLAN

In order to plan a nature recovery program we needed to assess the current state of nature in NPT. To do this, we evaluated each broad habitat on the basis of observations and wildlife records gathered by specialist wildlife recorders and other members of the NPT LNP. This allowed us to assess the ecosystem resilience of each habitat in terms of DECCA criteria (Diversity, Extent, Connectivity, Condition and Resilience). This process was aided by the availability of a new Phase 1 habitat map for the whole of NPT (Figure 5) which was based on images and data available in 2021. From that we extracted valuable statistical data on the areas, configurations and spatial connectivity of all major habitats. Figure 4 summarises our overall assessment of the State of Nature (SON) in each broad habitat. Further details are given in the habitat summaries.

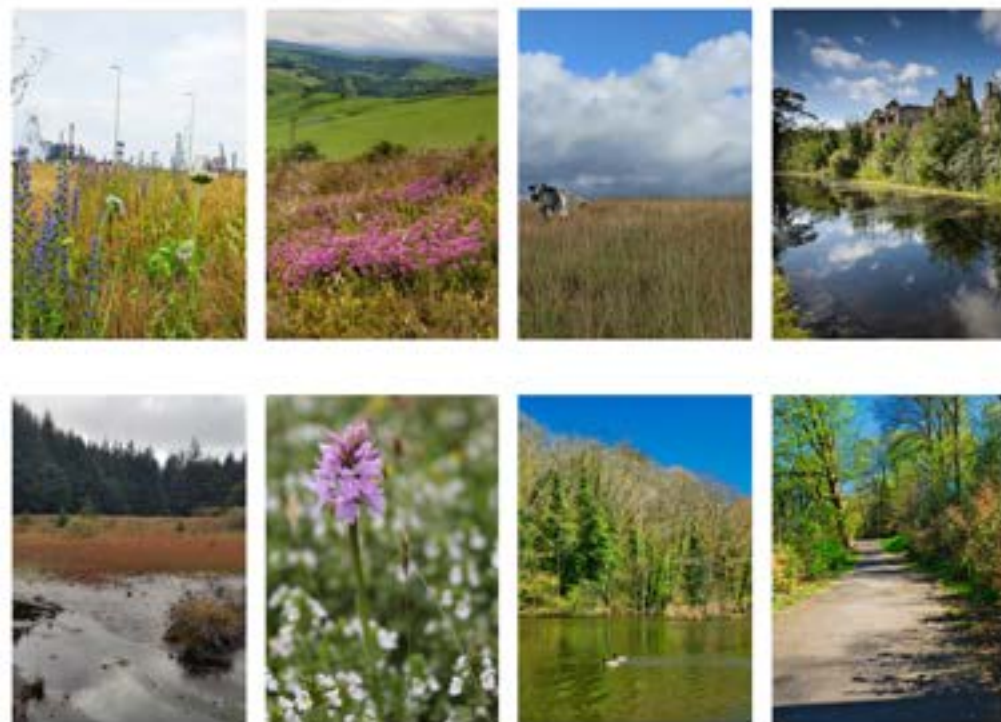
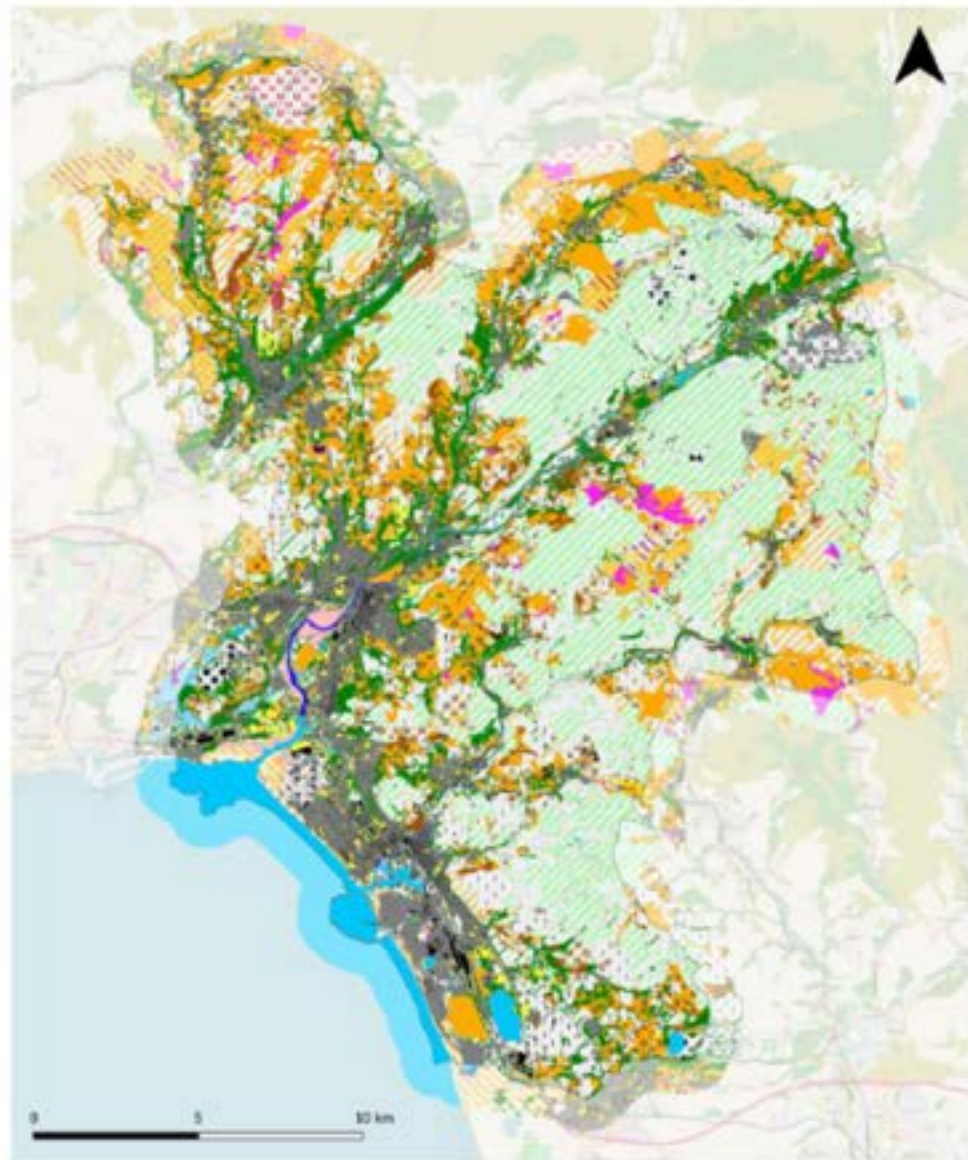
We also collated information with respect to current habitat actions, current issues and future risk. This, alongside our SON assessments, has helped us to determine where we should build more resilience and promote nature recovery in the future and has informed the relevant actions prescribed with each habitat in NPT, which are detailed in this document. These actions form the basis of the NPT Nature Recovery Action Plan (NRAP) and are the actions which we feel would best guide conservation focus in NPT.

Responsibility for these actions lie with all of us and as such, we have not sought to assign actions to particular organisations or groups. Instead, it is our hope that this document will provide the guidance and inspiration for anybody, or any group or organisation, to undertake the actions that are within their capability to deliver. The Secretariat of NPT LNP (NPT Council) are providing a facilitation role to support, collate and monitor work towards these actions. If you would like to discuss your potential involvement in delivery of these actions, please get in touch with biodiversity@npt.gov.uk.

Delivery of nature recovery in NPT plays an important role in nature recovery for Wales and the actions we have identified are linked to the objectives of the national Nature Recovery Action Plan. The table in Appendix 3 links each action with its relevant objective from the National NRAP.

	 Woodland	 GOOD
	 Heathland and Moorland	 POOR
	 Semi-Natural Grassland	 POOR
	 Open Mosaic Habitats	 GOOD
	 Enclosed Farmland	 UNKNOWN
	 Urban Habitats	 FAIR
	 Freshwater Habitats	 FAIR
	 Wetland Habitats	 POOR
	 Inland Rock and Cliff	 FAIR
	 Coastal Habitats	 POOR
	 Marine Habitats	 POOR

Figure 4: The State of Nature of each broad habitat type in NPT



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Figure 5: Phase 1 Habitat map of NPT



HABITAT SUMMARIES



AND



ASSESSMENTS



A low-angle photograph of a large, mature tree with a thick trunk and a dense canopy of green leaves. The tree's roots are exposed and spread out across the ground in the foreground. The background shows other trees and a clear blue sky. The word "WOODLAND" is overlaid in white, bold, sans-serif capital letters in the center of the image.

WOODLAND

OVERVIEW

Woodland accounts for 40% of the land area of NPT making it one of the most wooded counties in Wales. Most of this is conifer plantation, but a considerable amount of ancient deciduous woodland survives, particularly in the Vale of Neath. Significantly, over a third of NPT's Priority Species occur in its woodland.

Conifer forests have a poor diversity of flowering plants but some mature Sitka Spruce coupes have a luxuriant bryophyte ground flora of species normally associated with upland oak woodland. In addition, many species of birds have benefitted greatly from conifer plantations in NPT. Clear-felled and pre-thicket areas provide breeding habitat for Tree Pipit and Nightjar while mature conifer forests support breeding populations of Common Crossbill, Lesser Redpoll, Siskin, Goshawk and Honey Buzzard.

In contrast, the wooded corridors along the main river systems often support a diverse flora with Wych Elm, Small-leaved Lime, Ash, Alder, Sycamore and Hazel and colourful vernal, ground floras populated by lots of ancient woodland indicator species such as Bluebell, Primrose, Wood Anemone, Yellow Archangel, Sanicle, Toothwort, Pignut and Ramsons. Cwm Du Wood near Pontardawe and much of the riparian corridor between Aberdulais and Glynneath provide good examples. In the Vale of Neath, Meadow Saxifrage occurs along the shaded riverside edges of these woods where it was known back in the early 19th Century.



Species-rich hedgerow

Sessile Oak woodland with Holly and Rowan predominate on the steeper sides of the Neath, Afan and upper Tawe Valleys. Good examples in the Neath Valley can be seen above Baglan, Tonna, Cadoxton and Cilfrew. Although these woodlands support a less diverse ground flora than those along the rivers, they provide important habitats for woodland mammals (e.g. Badger), birds (e.g. Wood Warbler) and invertebrates. Of particular note is the remarkable discovery of a Blue Ground Beetle population in Maesmelin Wood and more recently in some other Sessile Oak woodlands in the vicinity. Nationally important assemblages of Atlantic bryophytes are found in the woodlands, waterfall areas and ravines in the Pyrdin and Nedd Fechan Valleys, parts of which are in NPT. Upland, valley oak woodlands in the vicinity also provide habitats for the few Pied Flycatchers that still breed in the county. The steep, wooded ravine of the Melincwrt Valley supports ancient Sessile-oak Woodland with a rich flora of lower plants, which includes a small population of Tunbridge Filmy-fern.

Ancient species-rich hedges occur throughout NPT, typically on raised banks along old parish lanes. Good examples can be seen along the Bwlch Road between Cimla and Cwmafan, along Fairyland Hill between Llantwit and Mosshouse Reservoir and in numerous places in the northern sector of the county, e.g. Cilebebyll, Godre'r graig, Rhyd y Fro and along the Gwrhyd Road. They form an important connectivity network for wooded habitats in the county.



WOODLAND CATEGORY	AREA (HECTARES)
Broadleaved woodland - semi-natural	3670.17
Broadleaved woodland - plantation	68.16
Conifer woodland - plantation	8847.53
Mixed woodland - plantation	1434.65
Scrub - dense/ continuous	1231.43
Scrub - scattered	41.78
Broadleaved parkland/ scattered trees	15.74
Coniferous parkland/ scattered trees	291.28
Mixed parkland/ scattered trees	10.52
Broadleaved woodland - recently felled	38.11
Coniferous woodland - recently felled	2529.97
Mixed woodland - recently felled	8.78
Total	18093.6
% of total land area of NPT covered by these habitats	40%

SPECIES



PIED FLYCATCHER

The Pied Flycatcher is an iconic bird of Sessile Oak Woodlands in western Britain. It was once a frequent summer breeder in NPT but numbers have declined drastically in recent decades and our records indicate that very few Pied Flycatchers breed in the county at present. The exact reason for the recent decline is not understood since there are suitable woodland habitats in the county. The species may be retracting its range northwards in response to climate change.



WOODLAND FUNGI

Woodlands are important habitats for fungi and local conifer forests support a large diversity of these fascinating organisms. More than 130 species of macrofungi have been found in Sitka Spruce forests in NPT and Beech woods, such as those in Briton Ferry Woods and Glyncastle Forest, often contain diverse communities.



BLUE GROUND BEETLE

The Blue Ground Beetle has declined dramatically in Britain over the last 100 years, but it seems to have a stronghold in South Wales. The recent discovery of this striking beetle in Maesmelin Woods and a few other oak woodlands in the Neath Valley is a significant success story for biodiversity in NPT. It seems likely that more populations of this beetle will be discovered in the county.



THE STATE OF NATURE IN

WOODLAND

IN NEATH PORT TALBOT

Woodland and hedgerows provide habitats for almost 40% of the priority species in NPT. Their value for biodiversity is enormous. Fortunately, there have been few major changes in the diversity, extent and connectivity of this habitat in the county in the last 20 years and the large area of woodland represented is particularly significant. However, there are important concerns about the occurrence of INNS such as Rhododendron in some woodland habitats, which precludes an assessment of excellent. Accordingly, the resilience and state of nature in woodland in NPT has been assessed as **good**.

CURRENT PROJECTS



BLUE GROUND BEETLE PROJECT

Awareness raising, survey and habitat management works in the area of the endangered blue ground beetle.

RESPONSIBLE PARTNERS: Buglife Cymru and the Woodland Trust



BRYNAU FARM WOODLAND MANAGEMENT AND CREATION

Ancient woodland management and tree planting to extend and buffer the existing woodland. Conservation grazing in wood pasture.

RESPONSIBLE PARTNERS: Woodland Trust



WOODLAND OFFICER

A Woodland officer (hosted by NPT Council) supports woodland restoration, creation and management in the county.

RESPONSIBLE PARTNERS: NPT Council



CRAIG GWLADUS

Habitat enhancement and management at Craig Gwladus Country Park, with elements of community engagement.

RESPONSIBLE PARTNERS: NPT Council



WOODLAND MANAGEMENT

Upland oak wood management at Blaenant y Gwyddyl for pied flycatcher.

RESPONSIBLE PARTNERS: Wildlife Trust of South and West Wales

CASE STUDY; BIODIVERSITY IN THE WELSH GOVERNMENT WOODLAND ESTATE (WGWE)

The Biodiversity in the WGWE project grew out of a webinar given by Dr Charles Hipkin, which highlighted that the plantation landscape has largely been neglected by species recorders. The biodiversity of these plantations, which contain large areas of open, species-rich, non-forest habitats, is currently managed in accordance with the best evidence available. However, this is largely dependent on and limited by habitat and species surveys by specialist recorders, which needs to increase.

The aim of this project was to draw links between Natural Resources Wales (NRW) and the array of local experts in NPT and Rhondda Cynon Taff and, although the relationship between the land management sections of NRW and the project are still being forged, the contacts made during the project have helped to build a strong, collaborative foundation in Welsh best practice and sustainable management of the WGWE. The project had a wide reach through a well-received webinar on the Distribution and Dynamic of Biodiversity in the WGWE which was joined by over 200 people from a range of sectors and counties.

The project identified key areas of habitat within the WGWE including willow scrub supporting important epiphytic, hyperoceanic bryophyte and lichen communities, remnant broadleaved woodland, biodiverse roadside verges and deep peat. The importance of the WGWE in supporting key indicator and priority species such as Ivy-leaved Bellflower, Alpine Clubmoss, Stag's-horn Clubmoss and Fir Clubmoss was also highlighted.

Closing remarks in the webinar (reproduced below) sum up some of the outcomes from the project:

'Although this was a brief, pilot-scale project, it has delivered on lots of important outcomes. Not least among these has been the assessment of what we know about biodiversity in the WGWE and, equally, where the gaps in our knowledge are. Given the extent of the coniferised WGWE in counties like NPT and Rhondda Cynon Taff, it is clearly of great importance to make these assessments and fill in the gaps. Furthermore, the project has brought to the attention of lots of people, the role of the WGWE as a refuge for species that are declining in the South Wales biolandscape and/or at the edge of their biogeographical range. More detail is required going forward'.

Dr Charles Hipkin, Chair of the NPT Local Nature Partnership



Grass Snake

ACTIONS FOR THE RECOVERY OF WOODLAND IN NPT

Action	Detail
Long Eared Owls in NPT	Undertake a project to establish population information for Long Eared Owl in the conifer plantations between NPT and RCT
Continuation of the 'Biodiversity in the WGWE' Project	Pursue funding for the continuation of this project
Blue Ground Beetle	Continue to raise awareness of the population and undertake habitat management to protect the population
Ancient tree inventory	Take inventory of ancient trees in the county to determine where further protection may be required
Increase the extent and connectivity of protected woodlands	Where possible, increase the extent and connectivity of protected woodland habitats in NPT, though not at the expense of other habitats. Encourage natural regeneration over tree planting wherever possible
Craig Gwladus	Continuation of Craig Gwladus as a community woodland
Invasive non-native species removal	Pursue opportunities to remove invasive non-native species such as Japanese Knotweed, Cherry Laurel and Himalayan Balsam from protected woodlands



HEATHLAND AND MOORLAND

OVERVIEW

This broad habitat category consists of marshy grassland, acid grassland/ heathland and moorland and ffridd (coed cae).

The upland landscape of NPT has changed significantly over the last 70 years. Much of the moorland and heath that was once extensive there has been planted with conifers and other parts have been converted to improved grazing land. However, some significant areas of moorland remain, particularly in the northern sector of the county, e.g. Gwrhyd, Sarn Helen. These habitats are often dominated by Purple Moor-grass, Sheep's Fescue and other calcifuge grasses/ sedges with areas of dwarf shrub heath containing Heather and Bilberry. Petty Whin and Dyer's Greenweed still survive in a few places and wetter areas often contain colourful swards of Bog Asphodel.

Marshy grassland (including rhos pasture) is an important specific habitat in this category which can support unique and diverse communities of plants with Devil's-bit Scabious, Saw-wort, Meadow Thistle, Heath Spotted-orchid, Whorled Caraway, Ivy-leaved Bellflower and Bog Pimpernel. A few marshy grasslands in the northern sector have Marsh Fritillary meta-populations. Where there is base-rich flushing, these habitats may also contain Butterwort, Marsh Valerian and Fen Bedstraw, which are all scarce species in NPT.

Ffridd habitats have largely been planted with conifer plantations. They are important for bird species such as Cuckoo where they exist and invertebrates such as Dark Green Fritillary.

Heathland and moorland fauna of conservation importance in NPT include Brown Hare, Skylark, Linnet, Cuckoo, Adder, Grass Snake, Hornet Robber-fly and a number of bees such as the Moss Carder Bee.

The resilience of heathland and moorland in NPT is under pressure from lack of appropriate management, broken connectivity and invasive non-native species, e.g. Rhododendron, Sitka Spruce.

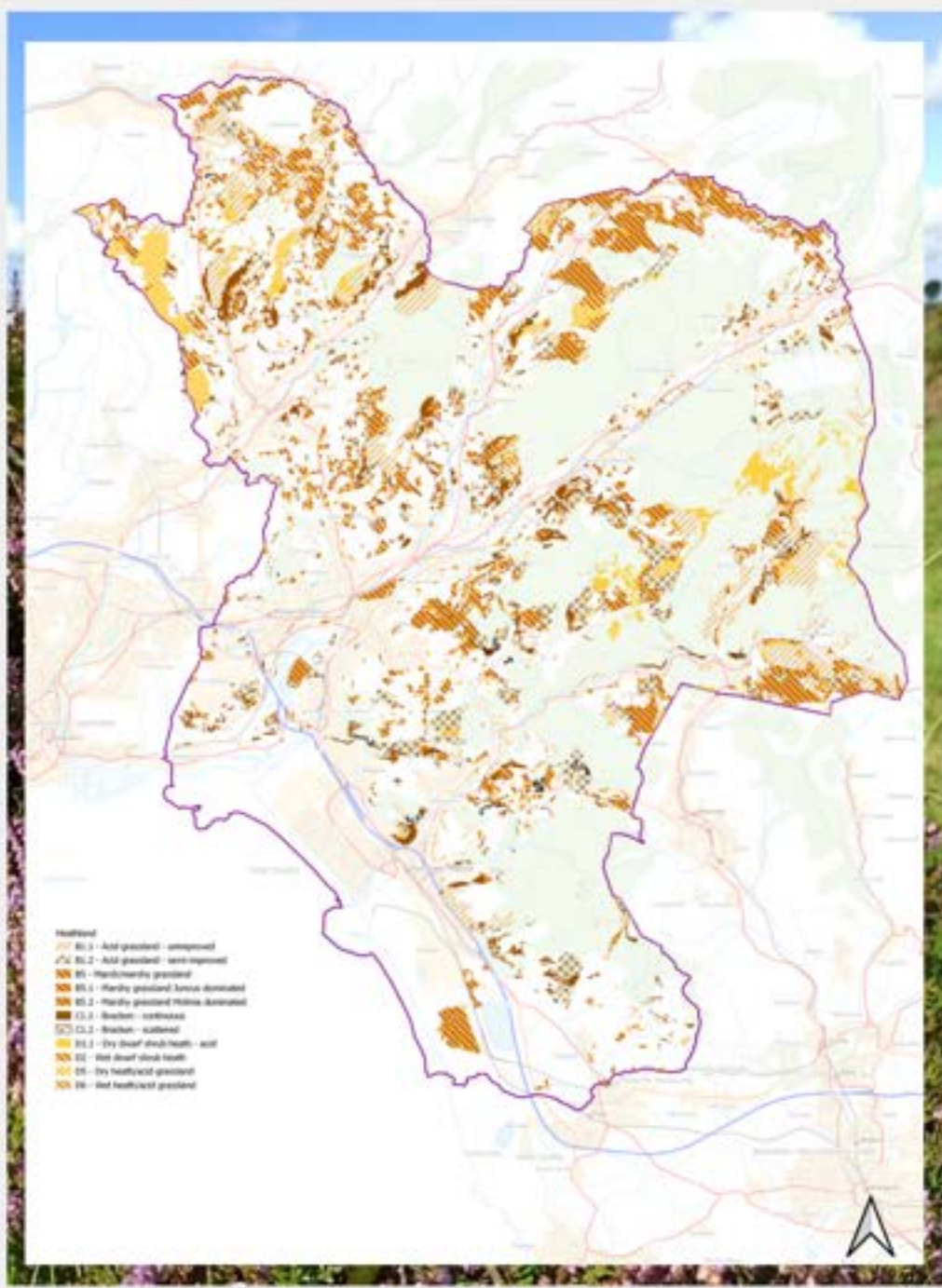


Devil's-bit Scabious



Cuckoo





HABITAT CATEGORY	AREA (HECTARES)
Acid grassland- unimproved	2035.37
Acid grassland- semi-improved	1485.24
Marsh/marshy grassland	3240.38
Marshy grassland - Juncus dominated	6.04
Marshy grassland- Molinia dominated	492.35
Bracken- continuous	1089.17
Bracken- scattered	44.59
Dry dwarf shrub heath- acid	439.21
Wet dwarf shrub heath	81.62
Dry heath/acid grassland	28.61
Wet heath/ acid grassland	517.88
Total	9455.38
% of total land area of NPT covered by these habitats	20%

HEATHLAND AND MOORLAND



SPECIES



MARSH FRITILLARY

The Marsh Fritillary butterfly has undergone a significant decline in numbers in Wales and this picture is reflected in the dramatic loss of populations from NPT over the last 50 years. Its favoured habitat in the county is marshy grassland or rhos pasture with Devil's-bit Scabious, which the caterpillars feed on, and plants that provide nectar for flying adults, e.g. Meadow Thistle. Loss of appropriate habitat followed by broken meta-population connectivity have probably played a major role in the decline.



IVY-LEAVED BELLFLOWER

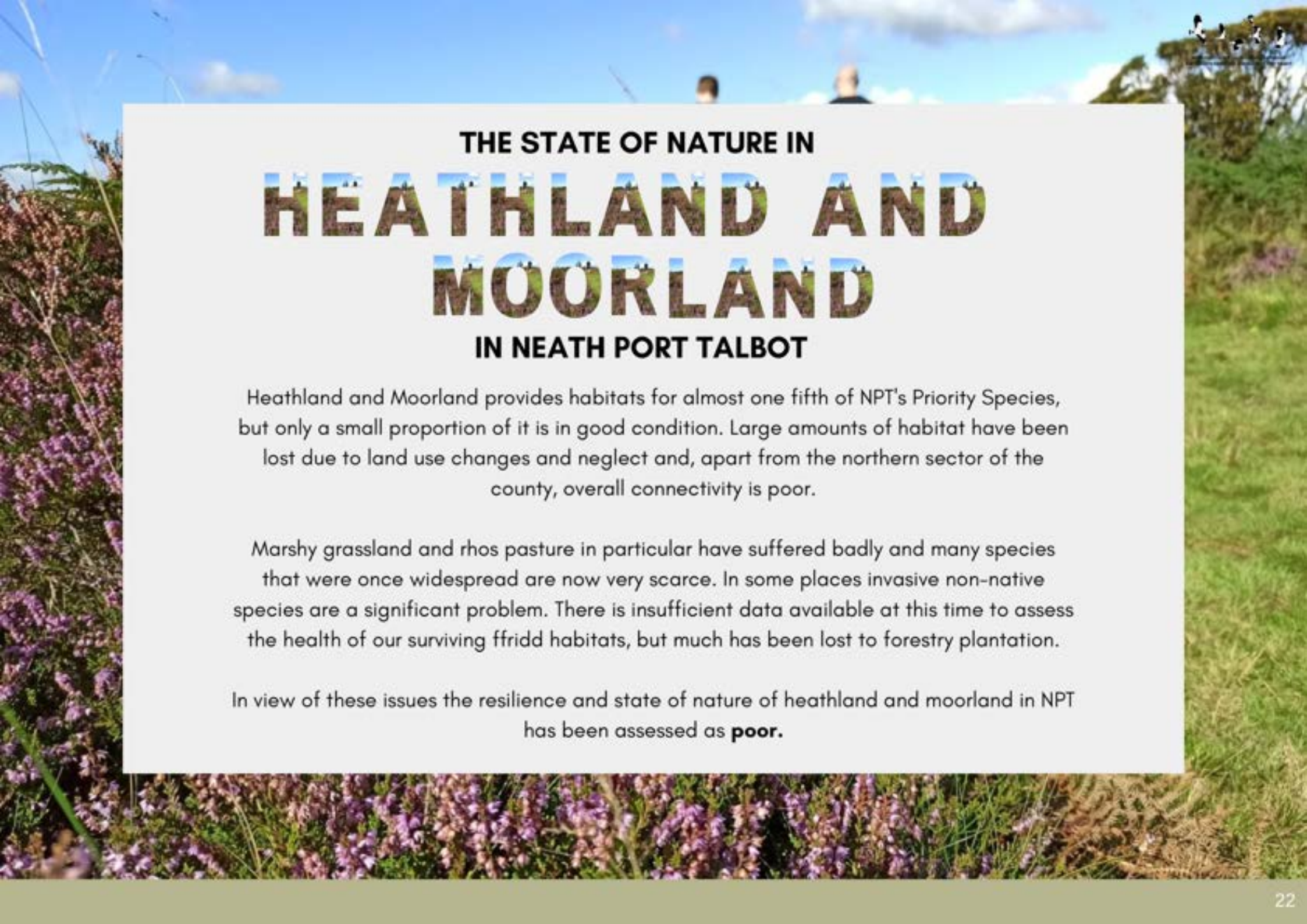
Due to the large losses of its native habitats which have occurred in the last 100 years, Ivy-Leaved Bellflower is an endangered species of some concern. In NPT, it is found in a few unimproved marshy grassland and heathland habitats but also in humid banks above streams and ditches in conifer plantations where it is protected from intense grazing. The plight and conservation of this charming species has been ignored in Wales while it has continued to shrink in its abundance due to habitat loss. Populations in NPT require careful consideration and management.



ADDER

The Adder is the only venomous snake in the UK but is not an aggressive species. Adders are mostly found in areas of rough countryside with edge habitats. They are variable in colour but always have a distinctive dark zig-zag down the spine. The best way to find them is to move slowly along the edge of a path through bracken but even then you will need to be very quiet and have a keen eye to spot them. Adders unfortunately still suffer from some persecution in NPT.





THE STATE OF NATURE IN HEATHLAND AND MOORLAND IN NEATH PORT TALBOT

Heathland and Moorland provides habitats for almost one fifth of NPT's Priority Species, but only a small proportion of it is in good condition. Large amounts of habitat have been lost due to land use changes and neglect and, apart from the northern sector of the county, overall connectivity is poor.

Marshy grassland and rhos pasture in particular have suffered badly and many species that were once widespread are now very scarce. In some places invasive non-native species are a significant problem. There is insufficient data available at this time to assess the health of our surviving ffridd habitats, but much has been lost to forestry plantation.

In view of these issues the resilience and state of nature of heathland and moorland in NPT has been assessed as **poor**.

CURRENT PROJECTS



HABITAT MANAGEMENT FOR MARSH FRITILLARY

Habitat management projects such as the large-scale conservation grazing programme taking place in the Dulais Valley are helping to restore marshy grasslands suitable for supporting Marsh Fritillary meta-populations.

RESPONSIBLE PARTNERS: Butterfly Conservation, NRW, Commoners, NPT Council



PAYMENT FOR RESULTS ON COMMON LAND

This Project is investigating a potential payment system which aims to encourage positive action to conserve and enhance habitat on common land. It is hoped that this will lead to a more positive action for biodiversity enhancement throughout the county.

RESPONSIBLE PARTNERS: European Forum on Nature Conservation and Pastoralism



WINDFARM HABITAT MANAGEMENT PLANS

Habitat management plans covering these habitats are in place as part of mitigation for the Llynfi Afan and Pen y Cymoedd Windfarms.

RESPONSIBLE PARTNERS: NRW, NPT Council



GWRHYD MEADOWS

Habitat management agreement is in place for management of acid grasslands and marshy grasslands at Gwrhyd Meadows SSSI. Notable plant species recorded here include Ivy-leaved Bellflower and Wood Bitter-vetch.

RESPONSIBLE PARTNERS: NRW



CILYBEBYLL SSSI

Discussions taking place to determine habitat management plan for Cilybebyll SSSI. Cilybebyll is of special interest for its species-rich grasslands and wet pastures, which are host to several uncommon plant species.

RESPONSIBLE PARTNERS: NRW



CASE STUDY; MONITORING AND CONSERVATION MANAGEMENT OF MARSH FRITILLARY IN NPT

Historical records indicate that the Marsh Fritillary was widespread in NPT 50 years ago, with colonies scattered in both the northern and southern sectors of the county. At that time species-rich marshy grasslands with Devil's-bit Scabious, Meadow Thistle, Heath Spotted-orchid and other significant species were more common in our landscape than today. The Marsh Fritillary has a limited dispersal ability and requires a network of connected habitats and colonies that allow some interchange between otherwise discrete colonies. At any one time within this meta-population network some habitats may not be occupied, but their presence and potential for colonisation is nevertheless a major factor in Marsh Fritillary meta-population dynamics. The significant losses of marshy grassland habitat that have occurred in Neath Port Talbot in the last 50 years have not only removed breeding grounds for this colourful butterfly but have also broken the habitat connectivity that is crucial for dispersal and meta-population maintenance. The availability of suitable marshy grasslands in an appropriately connected landscape is key to the success and conservation of the Marsh Fritillary in NPT.

Under the leadership of Butterfly Conservation and a dedicated group of organised volunteers, a large amount of effort has been put into finding, surveying and monitoring Marsh Fritillary sites in NPT and neighbouring areas of Carmarthenshire. It has become clear that the Marsh Fritillary is largely, if not entirely, confined to the Dulais and Amman Valleys, in the northern sector of the county. Each year known and potential breeding sites in these areas are monitored for the presence of larval webs and their

condition is assessed. Butterfly Conservation have also worked in partnership with Natural Resources Wales to reclaim and manage marshy grassland suitable for Marsh Fritillary in the Dulais Valley, on NRW owned land previously planted with Sitka Spruce or intensively grazed. An important part of the conservation management strategy throughout has been the organisation of sympathetic grazing regimes to keep habitats in a condition favourable for Marsh Fritillary. At present we have 7 occupied Marsh Fritillary sites in NPT as well as a number of suitable sites that have not been colonised. There are strong populations in the Dulais Valley in the vicinity of Blaendulais but the largest populations are found in the Amman Valley and particularly near Tairgwaith and Cwmgors. Connectivity analysis reveals that these habitats are parts of larger, complex meta-population networks that reside mainly in Dyfed and Powys.



ACTIONS FOR THE RECOVERY OF HEATHLAND AND MOORLAND IN NPT



Action	Detail
Management for Marsh Fritillary	Maintain and enhance current management and monitoring of sites in the Dulais Valley and extend into additional sites where possible to continue to support the Marsh Fritillary meta-population
Inventory of marshy grassland	Undertake an inventory of grasslands and assess their condition where possible. Identify opportunities for restoring sites
Respect for Reptiles	Undertake an awareness raising project to attempt to prevent persecution of adders in areas where human/ adder interaction is more likely
Adder Recording	Increase adder recording in the north of the county where understanding of populations and their distributions is low
Prevent damage from tree planting	Prevent tree planting on heathland and moorland habitats in NPT and raise awareness of the value of these habitats
Restore heathland and moorland habitats	Where possible, habitat creation and restoration should be considered. For example, clear-felled conifer coupes should be assessed for their potential in marshy grassland (or peatbog) restoration. Removal of invasive non-native species (e.g. Rhododendron, Sitka Spruce) from some sites is a matter of urgency





**SEMI-NATURAL
GRASSLAND**



OVERVIEW

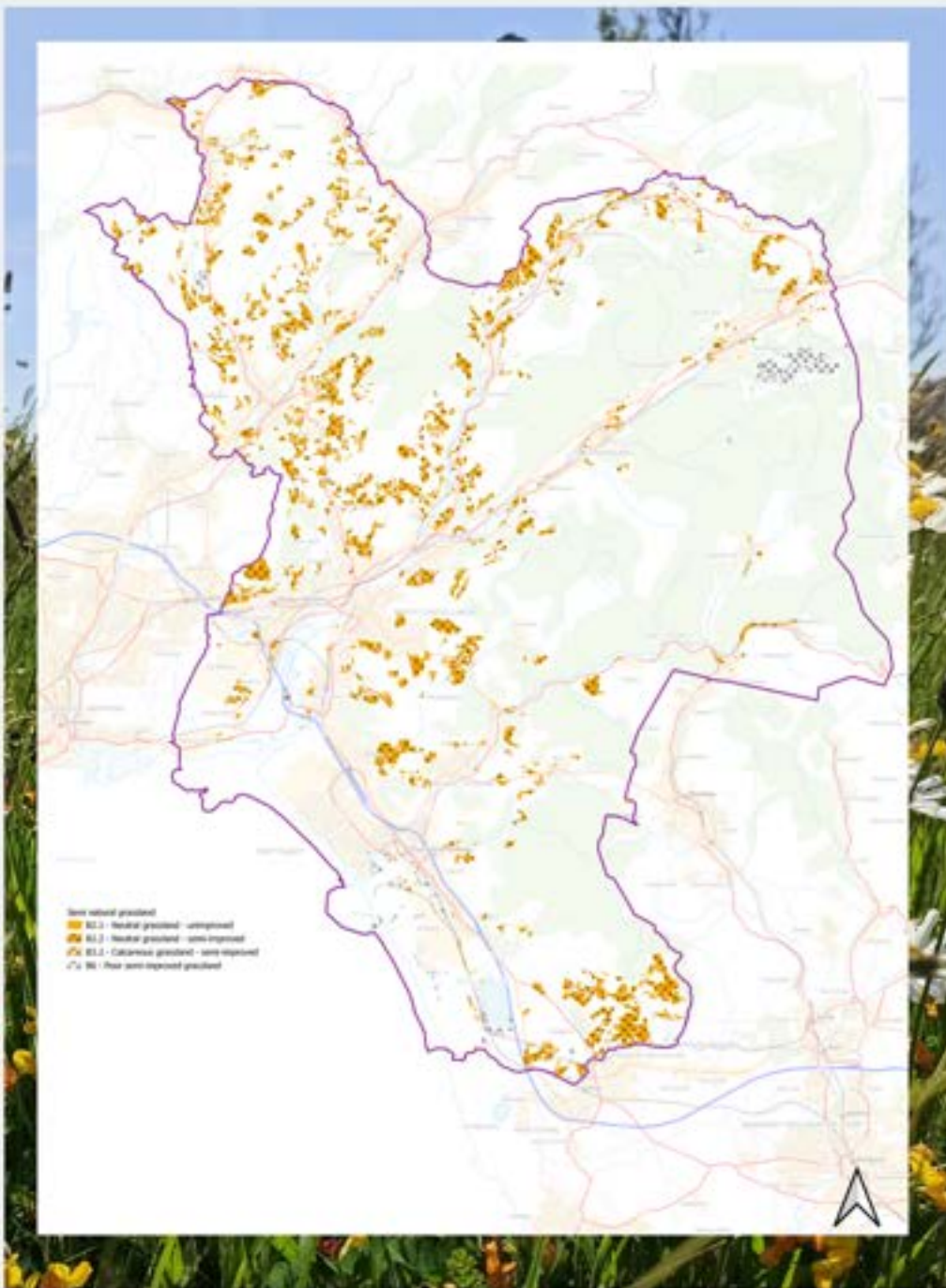
Semi-improved grasslands in NPT provide habitats for a fifth of the county's priority species. Most of these habitats are neutral, mesotrophic grasslands such as hay meadows, roadside verges/roundabouts, alluvial meadows, levels and restored grassland on coal spoil. If marshy grassland (which is included in the Heathland and Moorland category) is added, then the proportion of priority species is greater than one quarter, which is very significant. Traditionally managed hay meadows are rare in NPT, but the biodiverse Hafod Wennol SSSI meadows (and neighbouring areas) north of Pontardawe are exemplary with key indicator/priority species such as Large-flowered Eyebright, Greater Butterfly-orchid, and Greater Burnet.

The inventory of biodiverse neutral grassland in NPT is augmented to some extent by an extensive network of roadside verges and roundabouts, some of which support diverse, colourful mesotrophic grassland communities. Good examples are found along Fabian Way (A465) near Jersey Marine, along Central Avenue near Baglan Energy Park, on the Saltings Roundabout near Neath and on Harbour Way in Port Talbot (near the steelworks) where colonies of Small Blue Butterfly can be found.

Large amounts of restored grassland on coal spoil occur in the county. Good examples can be seen on Bryn Tip, the restored Selar opencast grasslands near Blaengwrach and restored grasslands in the upper Dulais Valley. Some of these sites have complex habitat mosaics and a rich diversity of grassland species, often with key indicator species such as Bee Orchid, Common Spotted-orchid, Carline Thistle, Pignut and Rough Hawkbit.

The plight of species-rich grasslands in NPT is a major concern. Land use changes, development, agricultural improvement and neglect have all played a role in the disappearance of these habitats in the county over the last 70 years. Reversing this trend will require a step change in attitudes, recognition of their intrinsic value and changes in management practices. Sympathetic stewardship, habitat creation, roadside verge management and restoration can all play a part in this.





HABITAT CATEGORY	AREA (HECTARES)
Neutral grassland - unimproved	1.26
Neutral grassland - semi-improved	2806.09
Calcareous grassland- semi-improved	0.19
Poor semi-improved grassland	332.38
Total	3138.53
% of total land area of NPT covered by these habitats	6%

SEMI-NATURAL GRASSLANDS

SPECIES



GREATER BURNET

Greater Burnet is a species of mesotrophic grasslands, particularly on flood plains, but it is also found in roadside verges and dune grasslands. It is quite tall and very conspicuous when it is in flower with its almost black, wind-pollinated flowerheads. It is widely distributed in the Neath and upper Tawe Valleys where it is an important indicator of semi-improved, mesotrophic grassland. Its scattered distribution in the upper Neath Valley between Resolven and Glyn Neath suggest that the bottom-lands here were predominantly alluvial grasslands before they were drained and improved for grazing.



ROESEL'S BUSH CRICKET

This attractive cricket is a relatively new addition to the NPT fauna. It was reported by a member of the public in 2019 from the Skewen area. A medium sized cricket they are brown to yellow with a green shade with three pale spots on the thorax and a cream-coloured margin around the sides of the pronotum. Females are identified by their large ovipositor (which looks like a sting but is totally harmless). The males have a very distinct song (stridulation) which is continuous and very high pitched. The species is currently expanding its range from south-east England north and west, possibly due to climate change as they do best in hot summers.



GREATER BUTTERFLY ORCHID

This large, striking orchid is a key indicator of traditionally managed, neutral, mesotrophic grassland in south Wales. It is currently known from only two grassland sites in NPT, both in the northern sector of the county. The number of individuals that appear varies greatly from year to year, which is fairly typical of hay meadow orchids. The flowers emit a heavy scent, particularly at night when they attract the attention of large moths, such as hawkmoths, which feed on the nectar contained in the flower's deep spur. The survival of this priority species in NPT is completely dependent on the continued management of the grasslands in which it is found as hay meadows.





THE STATE OF NATURE IN SEMI-NATURAL GRASSLAND IN NEATH PORT TALBOT

Semi-improved, mesotrophic grassland supports almost one fifth of NPT's priority species and is one of the county's most important biodiversity resources. Unfortunately, it is also the habitat that has suffered the greatest decreases in extent, condition and connectivity. This is particularly true for species-rich hay meadows which are scarce, disconnected and often badly managed or neglected. Broken connectivity in these habitats has had a significant negative effect on the distribution of priority species such as Narrow-bordered Bee Hawkmoth and numerous priority plant species such as Meadow Thistle, Wood Bitter-vetch, Petty Whin and Dyer's Greenweed.

In view of this we have assessed the resilience and state of nature in semi-improved grasslands in NPT as **poor**.



CURRENT PROJECTS



VOG, BRIDGEND AND NPT MEADOWS GROUP

A new cross-boundary Meadows group providing support to those wishing to create, restore or manage meadows through networking and peer support.

RESPONSIBLE PARTNERS: VOG, Bridgend and NPT Meadows Group



WILDFLOWER VERGE MANAGEMENT

Management of roadside verges for biodiversity taking place at various sites throughout the county.

RESPONSIBLE PARTNERS: SWTRA, NPT Council, Housing Associations, Town and Community Councils.



BUGLIFE NPT B-LINES

A three year project working along B-Lines Networks in NPT to create and manage habitat for pollinators with local communities.

RESPONSIBLE PARTNERS: Buglife



MAGNIFICENT MEADOWS

The Plantlife Magnificent Meadows project has supported the formation of community meadows across the county, for example, at Glantawe Riverside Park.

RESPONSIBLE PARTNERS: Plantlife



RHEOLA FLOODPLAIN MEADOWS

Management through conservation grazing and hay cuts, and monitoring of the floodplain meadows near Rheola, where Greater Burnet can be found.

RESPONSIBLE PARTNERS: NRW

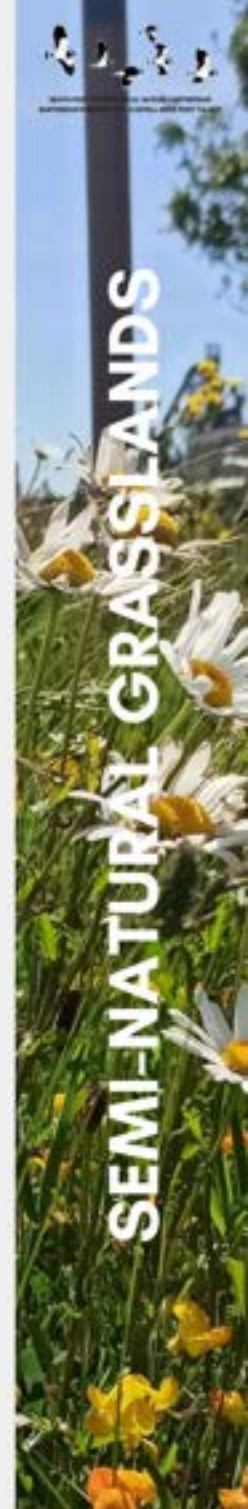


SHRILL CARDER BEE STRATEGY

A strategy for the conservation of the endangered Shril Carder Bee was launched in 2020, covering the Kenfig-Port Talbot population.

RESPONSIBLE PARTNERS: Bumblebee Conservation Trust and partners

SEMI-NATURAL GRASSLANDS



CASE STUDY; NPT BEE FRIENDLY

In recent years, the loss of wildflower grassland habitat and the pollinating insects they support has become an issue of public concern. NPT Council has a responsibility to address nature and climate emergencies such as this and is also committed to protect, conserve and enhance our natural environment under the terms of the Corporate Plan, Biodiversity Duty Plan, NPT Nature Recovery Action Plan and The Action Plan for Pollinators in Wales.

A new approach to managing the verges and grasslands of NPT has been approved by the County Council's Regeneration and Sustainable Development Cabinet Board on 30th July 2021 and is being progressively implemented by NPT Council as resources allow. The aim of this scheme is to increase the area and extent of wildflower grassland (i.e. roadside verges and larger meadow areas which are managed to encourage wildflowers and pollinating insects) in NPT County Borough, in support of the Council's Biodiversity Duty and the NPT Nature Recovery Action Plan.

Traditionally, local authority-managed roadside verges in NPT are all cut every 2-3 weeks during the growing season i.e. late March to end September and the arisings are mulched and dropped on top of the grass.

This fertilises the soil, encouraging further grass growth. As of 2021, at certain locations with the Streetcare Services Section, NPT Council will be changing this management and instead encouraging the growth of wildflowers and reducing the frequency of required cuts through the use of 'cut and collect' machines.

Road verges such as Harbour Way, Fabian Way and Saltings Roundabout are included in this scheme, along with many new areas around the county.



ACTIONS FOR THE RECOVERY OF SEMI-NATURAL GRASSLAND IN NPT

Action	Detail
NPT Bee Friendly	Continue to increase the area and extent of land managed as wildflower grassland, including roadside verge, on land managed by members of the partnership. Encourage similar management to take place on others' land
Semi-natural grassland status in NPT	Survey areas where understanding of semi-natural grassland status is poor to establish a baseline of the resilience of this habitat for these areas
Town and Community Councils	Engage with Town and Community Councils to knowledge share and support change of management on their land, to encourage semi-natural grassland
Burial grounds for nature	Engage with churches and cemeteries to change mowing regimes to increase the extent and area of wildflower and waxcap grasslands
VOG, Bridgend and NPT Meadows Group	Continue to support the meadows group to take action in NPT to manage semi-natural grassland habitats
Conservation grazing on special sites	Continue to take steps to establish or maintain conservation grazing on special sites where appropriate e.g. Bryn Tip LNR and Resolven Floodplain Meadows. Investigate funding for a shared mobile handling system and fencing technologies





OPEN MOSAIC HABITATS

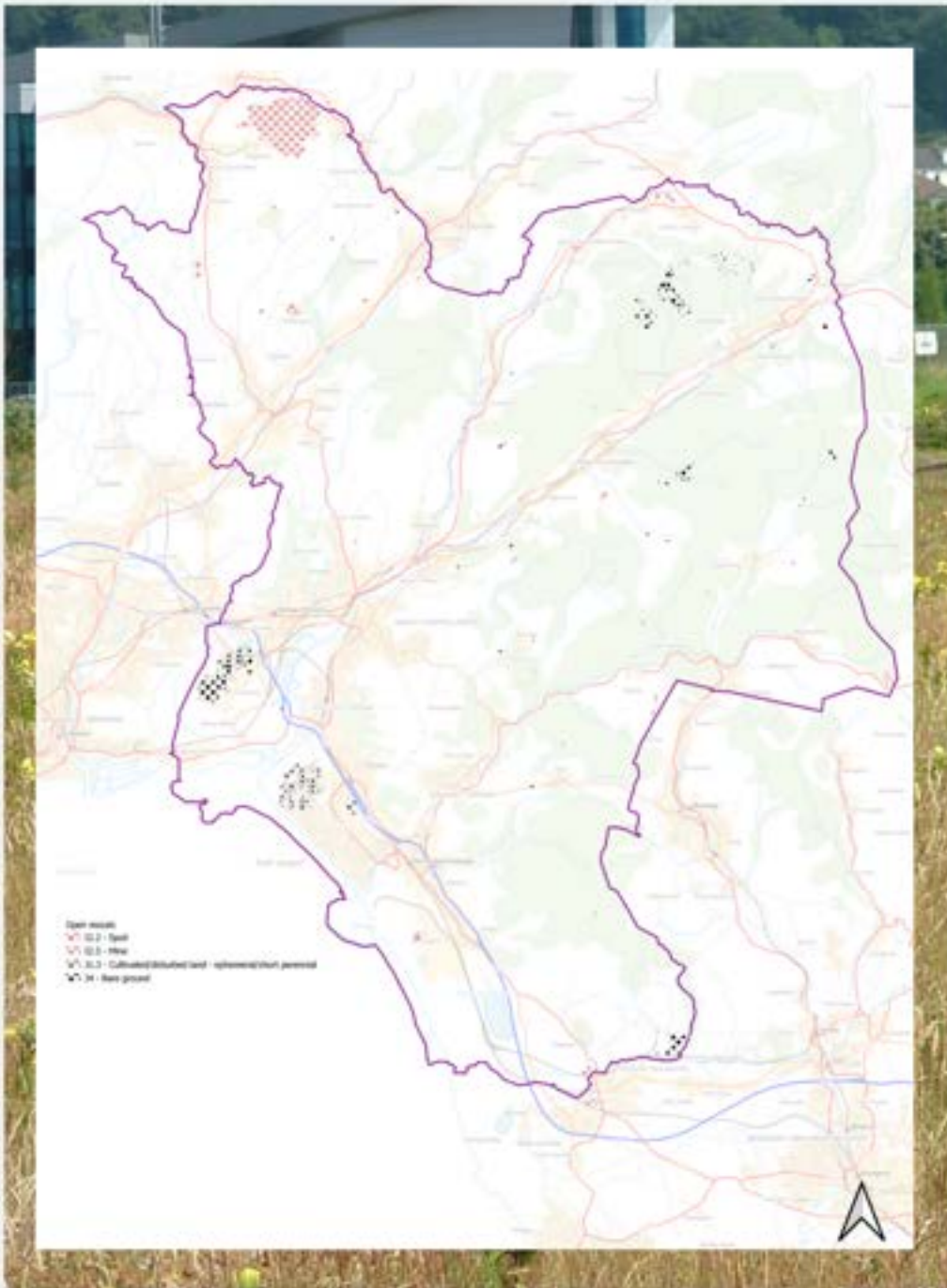
OVERVIEW

Most of the coastal zone of NPT has been altered radically by the development of heavy industry, perhaps more than any other part of Wales. This has resulted in the loss of large amounts of biodiverse habitats such as sand dunes, coastal marshes and fens. However, when such industrial land is cleared, the open mosaic habitats that are created can provide opportunities and refuge for uncommon species. Basil Thyme is a good example of an otherwise rare Section 7 species in Wales that has benefitted from the creation of coastal, open mosaic habitats in NPT such as on Baglan Energy Park. Other notable species found here include Lapwing, Linnet, Shriill Carder-bee, Small Blue, Dingy Skipper, Inclined Ditrichum (a moss), Autumn Lady's Tresses, Common Cudweed, Deptford Pink, Marsh Helleborine, Sticky Stork's-bill, and Yellow Bartsia. This remarkable open mosaic habitat supports the highest diversity of species in NPT, including numerous Section 7 species. In addition, inland spoil and quarry habitats provide refuges for priority and Section 7 species such as Adder, Grass Snake and numerous uncommon beetles, ground bugs, solitary bees and other pollinators.

These sites are often designated as 'brownfield' and are therefore vulnerable to development. However, many of these sites in NPT are designated as Sites of Importance for Nature Conservation (SINCs) although this does not always protect them from development. Other threats include inappropriate reclamation/ remediation, tree planting, planting with crop biofuels, absence of management, lack of recognition of their value and invasive non-native species.

Open mosaic sites provide habitats for a quarter of NPT's priority species, including 18 Section 7 species. They provide refuge for numerous species that are vulnerable and they are an asset for wildlife conservation.





HABITAT CATEGORY	AREA (HECTARES)
Spoil	43.21
Mine	314.53
Cultivated/ disturbed land - ephemeral/ short perennial	128.05
Bare ground	252.26
Total	738.05
% of total land area of NPT covered by these habitats	1.63%

OPEN MOSAIC HABITATS

SPECIES



SHRILL CARDER BEE

This very rare bee is only found in a handful of places in the UK with NPT being a stronghold in South Wales.

It's a bit tricky to identify but with a good look you may see the main features: pale blond in colour, with a dark brown band between the wing bases and a ginger tail. The queens fly very fast creating a high-pitched buzz. The coastal grasslands of NPT are an important area for the species. They favour wildflower habitats such as sand dunes, with plants with long corolla such as Red Bartsia.



BASIL THYME

A beautiful, small, violet-flowered member of the Sage family that is now very scarce in Britain and considered to be vulnerable in Wales. It is largely a southern species, usually associated with calcareous grassland but it has undergone a significant decline in this habitat in Britain in recent decades as a result of grassland improvements and intensive grazing. It is exclusively coastal in its distribution in NPT where it is a rare species of dune grassland. However, large populations of this species occur in open mosaic habitats on previously industrialised land near Baglan Dunes and these may be the largest populations of this species in Wales. Development of these sites in the future poses a significant challenge to the conservation of this species in NPT and Wales.



LAPWING

Lapwings are a scarce and declining breeding species in the County and are more common on passage and in winter. There have been no recent breeding records in the uplands with breeding sites confined to coastal areas, particularly open mosaic habitats on previously industrialised land, which is often ephemeral. There were a minimum of 8 pairs breeding in the old BP site at Baglan Bay in 2019 and probable breeding at Llandarcy. However, numbers have declined significantly in these sites in recent years. The general decline in lapwing breeding numbers across Wales has been linked to changes in farming policy and practice.

THE STATE OF NATURE IN OPEN - MOSAIC HABITATS IN NEATH PORT TALBOT

Open mosaic habitats support a significant proportion of the priority species in NPT. This, along with the sheer diversity of species often found in these habitats, and the large number of Section 7 species among them, qualifies these habitats as some of the most important biodiversity resources in the county. However, they are vulnerable to re-development, habitat destruction and species losses. They are also susceptible to successional changes through scrub encroachment by native woody species and invasive non-native species such as Buddleia and Cotoneasters.

The role played by open mosaic habitats as refuges for Section 7 species should not be underestimated and there is an urgent requirement to find solutions compatible with development and the maintenance of their biodiversity in the future. e.g. designation of biodiversity refuge areas for protection and management.

Because of their uncertain future, it is difficult to assess the long-term resilience of these habitats. However, attributes such as diversity, extent and connectivity currently score well, so the status quo resilience and the short-term state of nature in open mosaic habitats in NPT has been assessed as **good**. Maintaining this in the long term will require careful, sympathetic planning.

CURRENT PROJECTS



BRYN TIP LNR

Bryn Tip is a Local Nature Reserve, designated as a Site of Importance for Nature Conservation (SINC) for its 'open mosaic habitats on previously developed land'. Once a coal tip, now it is a haven for people and wildlife in active management.

RESPONSIBLE PARTNERS: NPT Council



COLLIERY SPOIL INVERTEBRATE SURVEYS

Surveys of colliery spoil sites across NPT were undertaken in 2018 in order to contribute to an increased understanding of colliery spoil habitats and their associated invertebrate fauna. Habitat management has taken place in recent years at one of the sites, Cwm Nanto.

RESPONSIBLE PARTNERS: Various



DEPTFORD PINK MONITORING

Since 1997, the size of the NPT population of the scarce Deptford Pink has been estimated each year by counting individual flowering plants. This enables the LNP to monitor the health of the population.

RESPONSIBLE PARTNERS: LNP Members

CASE STUDY; MORFA TIP

Morfa Tip is a large mound of landfill built mostly of furnace slag and other industrial by-products from Margam Steelworks (now Tata Steel). The original, unlined tip, which dates back to the 1970s, released significant amounts of caustic leachate, much of which drained into nearby Margam Moors. With the introduction of stringent landfill regulations, the site was eventually decommissioned, capped and covered in an impermeable liner. Following this, in line with new environmental regulations linked with planning regulations, a program of ecological (biodiversity) surveys was initiated and the remediation and development of this open mosaic site has been monitored and recorded each year ever since. To date, a total of 640 species has been recorded on Morfa Tip and immediate, peripheral areas. These include mammals (5), reptiles (5) birds (80), invertebrates (98) bryophytes (71), macroscopic fungi (22), lichens (22) and vascular plants (337).

One of the most significant ecological developments on this 93ha site over the last 2 decades has been the accumulation of windblown sand originating from Morfa Beach and the remnant areas of dune which lay to the west of the tip. This has given rise to a dune-like landscape which continues to evolve and now supports a rich assemblage of vascular plant species. Notable among them are orchids such as Autumn Ladies-tresses, Bee Orchid, Marsh Helleborine, Broad-leaved Helleborine, Green-veined Orchid, Early Marsh-orchid and Southern Marsh-orchid. Other species of note include Round-leaved Wintergreen, Variegated Horsetail and two scarce neophytes, Bugseed and French Bartsia.

A system of pools and ditches on the capped tip provide habitat for a diversity of aquatic species such as Thread-leaved Water Crowfoot, Small Pondweed and Stoneworts, while a well-developed emergent flora there includes Reeds, Bulrush, Grey Clubrush, and Pink Water-speedwell, among others.

Dune grassland with colourful species such as Wild Thyme, Kidney Vetch, Common Stork's-bill, Dove's-foot Cranesbill and Viper's Bugloss occur around the base of the landfill where winter annual, semi-fixed dune species like Hutchinsia may also be found. Large areas on the east side of the tip are dominated by coarse grasses such as Wood Small-reed and Sea Couch. On the bare, damp sandy mud which lay to the west of the capped tip a fascinating community with Frog Rush and Cavernous Crystalwort has developed. The potential for the development of new, species-rich dune slack systems on Morfa Tip is eagerly anticipated. Already there are several areas that support Creeping Willow communities with Round-leaved Wintergreen and remarkable populations of the scarce fungus, Foxy Fibrecap.

Priority fauna species associated with Morfa Tip include Shril Carder-bee, Lapwing and Brown Hare.

ACTIONS FOR THE RECOVERY OF OPEN MOSAIC HABITATS IN NPT

Action	Detail
Management	A coherent management strategy for biodiverse open mosaic sites is needed so that refuge habitats can be provided for rare and declining species. Long-term biodiversity management should be built into planning and a move away from default, amenity-planting of non-native shrubs is required
Protection	Where possible, protect sites through designation to prevent loss to development, inappropriate reclamation, tree planting, biofuel planting etc
Awareness Raising	Lack of awareness of the importance of these sites for biodiversity is a significant threat to these habitats. Take action to raise awareness of their importance where possible
Rare Species Monitoring	Continue to monitor the rare and protected species which can be found on open mosaic habitats in NPT, e.g. Deptford Pink, Basil Thyme and Shril Carder Bee



A landscape photograph showing a vibrant green field in the foreground, a line of trees and a fence in the middle ground, and a clear blue sky above. A single, bare tree stands prominently in the center. The text 'ENCLOSED FARMLAND' is overlaid in large white letters.

ENCLOSED FARMLAND



OVERVIEW

While enclosed areas of farmland might include a variety of biodiverse habitats such as Marshy and Mesotrophic Grasslands, those specific habitats are discussed elsewhere in this document under other broad habitat headings. In this document Enclosed Farmland only includes categories such as arable land, improved pasture, drystone walls and field boundaries, which provide habitats for 10% of NPT's Priority Species and play a significant role in connectivity with other broad habitats such as Heathland and Moorland, Semi-improved Grassland and Woodland. In suitable places notable species such as Barn Owl, Linnet, Skylark, Brown Hare and Small Heath butterfly may be found in Enclosed Farmland but none of these are restricted to Enclosed Farmland in the county.

Much of the Enclosed Farmland in NPT is dominated by low-diversity improved pasture while arable land is restricted largely to small areas between Margam and the Kenfig River in the southern sector of the county. There have been no detailed surveys of these habitats. Preliminary surveys suggest that arable fields support characteristic bryophyte communities but little is known about their arable weed flora. They provide important feeding opportunities for Linnet and Starling, and occasionally Stock Dove and Lapwing.

Hedge boundaries within enclosed farmland are generally poor while dry stone walls, such as they still exist in reasonable condition near the upper enclosure line, provide breeding opportunities for Wheatear and habitats for Weasel, other small mammals, bryophytes and lichens.

In recent decades Enclosed Farmland has provided an important habitat for Red Kite and Buzzard but there have been some significant decreases in wildlife in farmland in NPT in the last 50 years, notably the loss of Yellowhammer and large decreases in other birds associated with farmland, e.g. Starling and Linnet. However, the provision of nest boxes in farm buildings for Barn Owl has resulted in some success recently.

Beyond this, we are limited in our knowledge of the state of nature of enclosed farmland in NPT since a large proportion has never been surveyed and we have few records for these habitats at present.





HABITAT CATEGORY	AREA (HECTARES)
Improved Grassland	3733.73
Cultivated disturbed land- arable	247.24
Total	3978.94
% of total land area of NPT covered by these habitats	8.8%

SPECIES



BROWN HARE

Brown Hare are found throughout NPT in both coastal and moorland habitats and although they are not seriously threatened in the county, their numbers have decreased as a result of habitat loss, persecution and hunting. They are encountered most often on coastal dunes but their numbers there have decreased significantly in the last 50 years, particularly on Crymlyn Burrows where they were frequently encountered in past decades. However, their occurrence in the new and developing dune system on Morfa Tip is encouraging. Loss of habitat in upland areas, as a result of agricultural and forestry developments, has also resulted in decreases in hare populations.



SKYLARK

The Skylark is still a common breeding resident in NPT in suitable habitats such as sand dunes, salt marsh and rough pasture in the uplands. Significant numbers are also found in the reclaimed grassland that has developed on the Selar opencast site above Cwmgwrach. However, in many parts of the county they have been adversely affected by agricultural improvements and conifer afforestation. In winter, the upland populations move to lowland areas such as Crymlyn Burrows where local birds are often joined by migrants on passage, sometimes swelling flock numbers to more than 200 along the coast.



THE STATE OF NATURE IN
ENCLOSED
FARMLAND
IN NEATH PORT TALBOT

Our knowledge of Enclosed Farmland in NPT is limited and more survey data is required to increase our understanding of this important habitat. At present, we are unable to make a reasonable assessment of the resilience and state of nature in this habitat category.

CASE STUDY; NPT BARN OWL PROJECT

Although the Barn Owl is listed of "Least Concern" with respect to risk of extinction by the International Union for Conservation of Nature (IUCN), there has been a decline in the number of this flagship farmland bird across the breadth of Wales and Europe as a whole. There are a number of reasons for this decline but loss of suitable roosting and nesting sites caused by the replacement of old agricultural barns with modern equivalents is one. Fortunately, Barn Owls readily accept man-made nest-boxes which, if positioned adjacent to suitable feeding habitat, can often lead to a successful breeding and fledging program.

In 2009, the NPT LNP (the NPT Biodiversity Forum at that time) commissioned two surveys by professional Ecologists - the Barn Owl Habitat Survey and Breeding Barn Owl Survey. These demonstrated a breeding population of around 10 pairs but with scope for enhancing the population through the placement of nest-boxes. A local Ornithologist was then commissioned to erect these boxes at sites identified by the surveys. By 2015, 24 boxes had been erected but only two of these were successful to the fledgling stage. Since then, other suitable nest-box sites have been identified by members of the LNP, which has also provided funding for materials to build more nest-boxes. There are now 46 boxes in our catchment area and in 2021, 10 of these were successful to fledgling stage with a total of 34 chicks ringed.

The current work of the group includes building and erecting nest-boxes, maintenance and cleaning of boxes, discussing and advising landowners on barn owl conservation, monitoring nesting success and ringing fledglings. Monitoring and ringing is carried out under licence as the Barn Owl is protected under Schedule 1 of the Wildlife and Countryside Act 1981.



Barn Owl ringing under license



ACTIONS FOR THE RECOVERY OF ENCLOSED FARMLAND IN NPT



Action	Detail
Barn Owl Project	Support the continuation of the barn owl nest box and monitoring project
Arable Weed Recording	Undertake arable weed surveys where possible to determine the importance of arable land in NPT
Working with Farmers	Engage with and support farmers and landowners undertaking action for nature as the LNP, for example, through the Nature Friendly Farming Network
VOG, Bridgend and NPT Meadows Group	Encourage membership amongst farmers and landowners
Sustainable Farming Scheme	Engage with the new sustainable farming scheme and provide support where possible for nature-related action



URBAN HABITATS



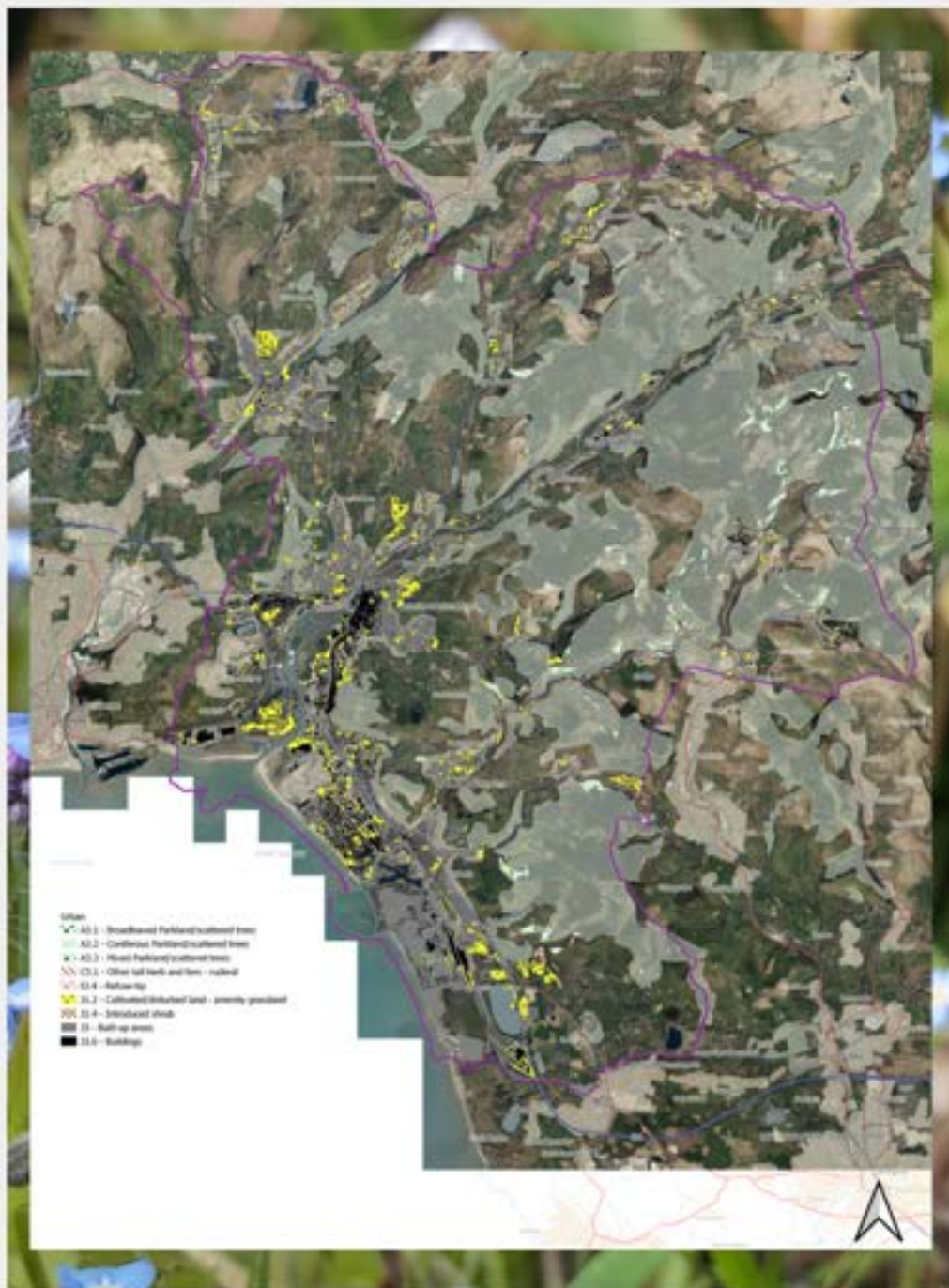
OVERVIEW

Urban Habitats, such as buildings, parks and gardens, support 5% of NPT's Priority Species although none of them are specific to this broad habitat category. Nevertheless, since Urban Habitats make up more than 15% of the land surface of NPT, there is a significant potential here to enhance biodiversity through the creation and management of nature-friendly networks of gardens, parkland and buildings. They are particularly important habitats for birds that utilise the eaves of houses for nesting places, and bat species that make their homes in roof spaces and dilapidated buildings. Other important species such as Hedgehog and Slow Worm are commonly associated with urban gardens. Urban Habitats can also play a significant connectivity role, e.g. parks can provide 'stepping stones' of habitat in amongst urban features, while grassy commons, verges and hedges may be important for connecting these habitats throughout urban areas. Bee-friendly gardens can play a crucial role in the conservation of pollinators.

The Hedgehog is an iconic garden species that has been recorded in most urban settlements in NPT and a few gardens may also provide opportunities for Badger and Otter. Margam Park is one of the best bat sites in the UK, providing roosting sites and foraging habitat for 14 of the 18 UK bat species. Breeding populations of Herring Gull, House Sparrow, and House Martin can be found on buildings in suitable places, while Swift have undergone significant decreases in numbers over the last 50 years. Toads breed in Cwm-Clydach pond before dispersing to neighbouring gardens and fields for the rest of the year. Along the coastal conurbations of Sandfields and Aberavon, rare bumblebees including the Brown Banded Carder and Shril Carder Bees can be found foraging on patches of wildflowers.

As a result of the COVID Lockdowns in 2020, the NPT LNP noticed an increase in public interest in nature conservation as people became more aware of the nature in their local areas. This is an important opportunity to encourage appropriate action and raise awareness of ways in which local people can assist nature locally without causing inadvertent harm.





HABITAT CATEGORY	AREA (HECTARES)
Broadleaved Parkland/ scattered trees	15.74
Coniferous Parkland/ scattered trees	291.28
Mixed Parkland/ scattered trees	10.52
Other tall herbs and ferns- ruderal	20.80
Refuse tip	6.69
Cultivated/ disturbed land - amenity grassland	858.89
Introduced Scrub	9.58
Built-up areas	5316.57
Buildings	539.98
Total	7068.07
% of total land area of NPT covered by these habitats	15.64%

URBAN HABITATS



SPECIES



HEDGEHOG

The Hedgehog is well recorded in most of the urban areas of NPT, although many of these records are from road deaths. The perils of crossing roads, along with other pressures such as barriers between gardens and the use of toxic slug pellets are contributing to the decline of this iconic species. A trend for 'tidy', low maintenance gardens is leading to additional habitat loss for the 'gardeners' friend'.



SWIFT

This summer visitor breeds in mainly urban areas in NPT however numbers recorded as confirmed breeders have declined in recent years. This decline is thought to be due in part to a loss of nesting opportunities as buildings are renovated to modern standards. The provision of nest boxes or integral swift bricks in suitable buildings may help to increase available nesting sites.



COMMON TOAD

The Common Toad is another species susceptible to road deaths in NPT, when in spring, they migrate across urban areas in their hundreds to their breeding ponds. The case study below provides an account of how members of the LNP are working to ameliorate this. Although Toads are likely to be well distributed in NPT, they are under-recorded.



THE STATE OF NATURE IN

URBAN HABITATS

IN NEATH PORT TALBOT

There are significant challenges for nature in the urban landscape and species are threatened by, amongst other things, loss of nesting sites, lack of connectivity and inappropriate habitat management (e.g. mowing through flowering season). Although most urban areas in NPT contain wildlife habitat, in many areas this is not by design and there is a need for more areas to be specifically managed and maintained for nature in urban areas. Many species in urban habitats have decreased significantly in NPT in recent decades e.g. swifts and hedgehogs.

Urban habitats support 13 priority species and, accordingly, their diversity has been assessed as fair. Connectivity between urban landscapes is good, but it is difficult to frame this specifically in terms of good habitat connectivity. For example, the level of connectivity between gardens for species such as Hedgehog and Slow Worm is unknown. Most of the urban habitats in NPT are not managed with biodiversity in mind and there are regular losses of habitat as a result of human activity e.g. loss of nest sites for swifts as repairs take place on buildings, therefore their condition is poor. Taking all of this into account, the state of nature and resilience of Urban Habitats in NPT has been assessed as **fair**.



NPT BEE FRIENDLY

A scheme to increase the area and extent of wildflower grassland (i.e. roadside verges and larger meadow areas which are managed to encourage wildflowers and pollinating insects) in NPT.

RESPONSIBLE PARTNERS: NPT Council



STEPPING STONES NATURE RESERVES

Creation of habitat through Welsh Government Local Places for Nature funding e.g. through 'grey to green' schemes such as Stepping Stones Nature Reserves.

RESPONSIBLE PARTNERS: NPT Council

CURRENT PROJECTS



GREEN INFRASTRUCTURE

A number of green infrastructure projects are taking place across the county, for example, green roofs were recently installed on containers at Craig Gwladus Country Park.

RESPONSIBLE PARTNERS: Various



TOAD PATROLS

Bryncoch Environment Group have been undertaking a toad patrol every spring since 2006 to rescue toads on roads in Bryncoch. Read more in the case study below.

RESPONSIBLE PARTNERS: Bryncoch Environment Group



SWIFT MONITORING PROJECT

A collaborative project by members of NPT LNP to monitor and record swifts in NPT, to determine breeding locations of swifts around the county and inform where conservation should be focussed.

RESPONSIBLE PARTNERS: NPT LNP

CASE STUDY; BRYNCOCH TOAD PATROL

Although associated with water, toads and other amphibians actually spend most of the year on land. When they are not at their breeding ponds, they disperse into the surrounding countryside. However, each spring, toads return to their spawning ponds in large numbers. They favour deeper and bigger ponds than frogs and are quite loyal to particular sites. This means they often have to travel long distances, often through urban areas where they have to cross roads on their journey.

Every year since 2006, during the toad migration season (around March), members of the Bryncoch Environment Group (BEG) are out each night to rescue toads on local roads as they travel to their breeding ponds. In the first year of this operation 970 toads were rescued while 799 were rescued in 2019. Over the last 13 years thousands of amphibians have been saved by BEG members assisted by a large number of volunteers who are concerned for the decline in toad and frog numbers in recent decades.

One of the main problems that the BEG have to overcome is the rescue of large number of toads that fall into drainage gully pots on the sides of roads, from which the toads are unable to escape. As a result, during their "toad patrol" the volunteers spend a lot of their time lifting the gully pots and rescuing toads with fishing nets. The rescued toads are then put into buckets and transported directly to their spawning pond. To reduce the time spent checking every gully pot, the group applied to the LNP for funding to purchase 'toad ladders', specially designed structures which sit in the gully pots and allow toads to escape after falling in. The LNP was able to purchase ten ladders for the group which were installed in gully pots around Bryncoch.



URBAN HABITATS



ACTIONS FOR THE RECOVERY OF URBAN HABITATS IN NPT

Action	Detail
Swift recovery	Breeding populations of Swifts in NPT are declining. The current status and distribution of Swift in the county needs to be assessed and appropriate action should be undertaken to halt this decline
NPT Bee Friendly	Continue increasing the extent of roadside verges in active management for wildflowers and expand the scope by engaging with town and community councils
Parks, Amenity Grassland and Cemeteries	Undertake an assessment of the biodiversity value of parks and amenity grassland in NPT and identify opportunities to enhance habitat, for example, through grassland management or pursuing pollinator-friendly planting in landscaping
Green Infrastructure	Increase the installation of green infrastructure e.g. green roofs, living wall
Bee Friendly Streets	Encourage nature-friendly gardening in urban areas
Peat-free garden centres	Undertake a project to inspire garden centres in NPT to go peat-free
NPT for Nature	Continue to provide support for people taking action for nature in the county through the sub-group of the LNP, NPT for Nature



A scenic view of a waterfall cascading over rocks in a forest with autumn foliage. The water is captured in a long-exposure shot, appearing as a soft, white veil. The surrounding environment is lush with moss and fallen leaves, creating a rich, natural setting. The text "FRESHWATER HABITATS" is overlaid in the center in a bold, white, sans-serif font.

FRESHWATER HABITATS

OVERVIEW

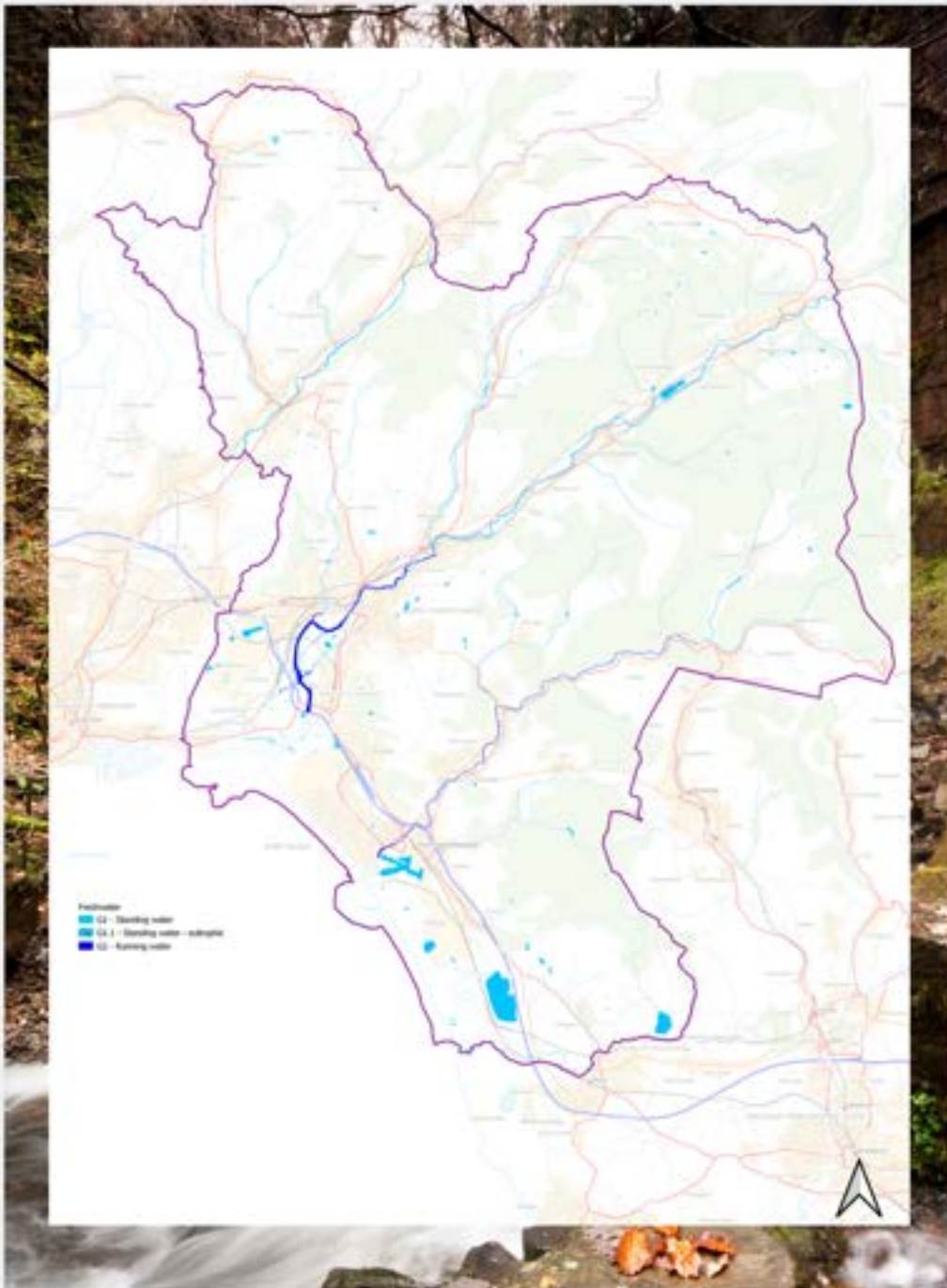
Freshwater ecosystems provide habitats for a fifth of NPT's priority species, many of which are associated specifically with this habitat. Specific habitats in this category include rivers and tributaries, canals, lakes, reservoirs, reens and dykes, and numerous ponds and pools scattered throughout the county. Key priority species include Otter, Water Vole, Great Crested Grebe, Dipper, Spotted Flycatcher, Grass Snake, Great Crested Newt, Atlantic Salmon, Brown and Sea Trout, Fen Raft Spider, Flowering Rush, Quillwort, Water Lobelia, Floating Bur-reed and Whorled Water-millfoil.

Among the larger freshwater water bodies in NPT, Llyn Fach is unique in being the only significant oligotrophic tarn in Glamorgan. The occurrence here of an aquatic community that includes Water Lobelia, Quillwort and Floating Bur-reed gives the site a very distinctive montane feel. In addition, the recent discovery of a population of Water vole, hitherto believed to be extinct in the county, has confirmed the importance of this site for the county's biodiversity. Other large lakes and reservoirs in NPT include Eglwys Nunydd Reservoir, which is an important site for wintering wildfowl and a breeding habitat for Great Crested Grebe.

The Neath, Swansea and Tennant Canals support diverse aquatic and emergent vegetation and provide crucial connectivity between a number of fen, swamp and marsh habitats in the county (e.g. Crymlyn Bog, Pant y Sais Fen). Notable plants include Flowering Rush, Greater Spearwort, Marsh Cinquefoil and Mare's-tail which are otherwise scarce in NPT. All the common damselflies and dragonflies are found here as well as other more notable species such as the Variable Damselfly and Beautiful Demoiselle. The occurrence of Fen Raft Spider at its only site in Wales on the Tennant Canal is particularly significant. The reens on Margam Moors contain a number of scarce aquatic plants such as Arrow-head and Frogbit.

The River Afan and River Neath, and their tributaries, are notable for their fish populations particularly salmonids such as Atlantic Salmon, Brown Trout and Sea Trout but also for populations of European Bullhead and European Eel. Common Sandpiper, Dipper and Spotted Flycatcher are among a number of characteristic bird species associated with these rivers and Otter have made a welcome comeback in recent decades. Meadow Saxifrage, a plant which has undergone a significant decrease in Wales is still frequent along the banks of the River Neath between Aberdulais and Glynneath.

The waterbody status of the main watercourses in NPT have been recorded as Good/Excellent by the Water Framework Directive. However, there are still a number of local issues that are of concern on its rivers and canals, e.g. invasive non-native species, mine water pollution, sewerage discharge and other eutrophication problems.



HABITAT CATEGORY	AREA (HECTARES)
Open Water	808.59
Standing Water	533.63
Standing Water- eutrophic	0.53
Running Water	91.46
Total	1433.67
% of total land area of NPT covered by these habitats	3.17%

FRESHWATER HABITATS

SPECIES



OTTER

Increases in the national Otter population in recent decades are viewed by most people as a welcome indicator of the renewed natural health and vigour of our riparian habitats. The widespread occurrence of Otter spraint on riverside rocks and other stone structures reveal the widespread occurrence of Otter on NPT's rivers and canals. Nevertheless, there is some evidence that numbers have decreased in recent years and there are indications of occasional persecution.



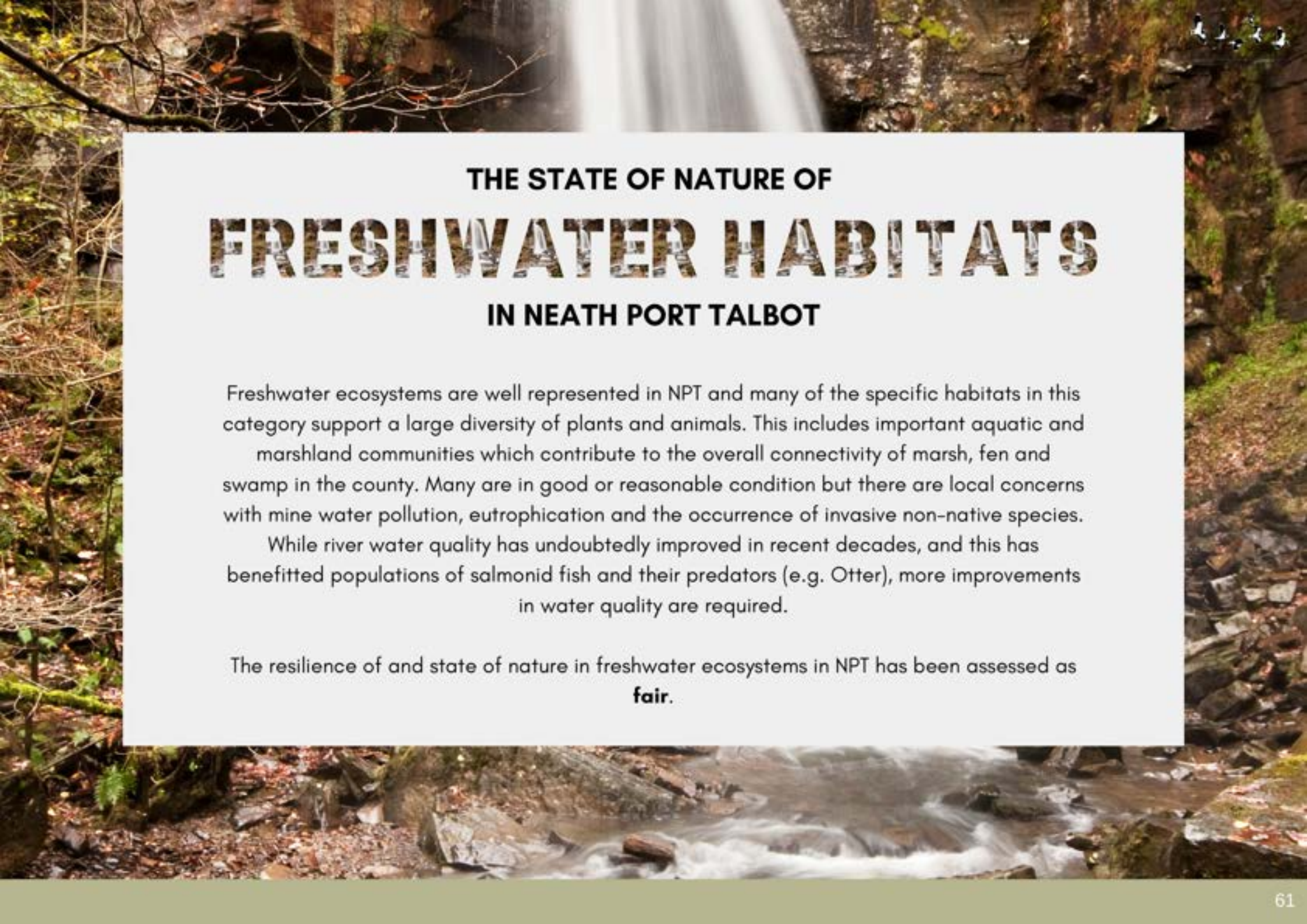
SALMON

All the major river systems in NPT have Salmon in them. It is becoming more obvious that Salmon are in crisis throughout the UK as well as Wales with suggested figures of a decline of 70% in 25 years (Atlantic Salmon Trust). Read more in the case study below.



DIPPER

Dippers occur on fast-flowing, unpolluted streams and are seen regularly on most river catchments in the county all year round. In 2019 there were a minimum of 12 confirmed breeding locations in NPT. Current studies of this amber-listed species include a ringing program being conducted on the River Afan and its tributaries, aimed at increasing our knowledge of local breeding success and survival rates over time.



THE STATE OF NATURE OF FRESHWATER HABITATS IN NEATH PORT TALBOT

Freshwater ecosystems are well represented in NPT and many of the specific habitats in this category support a large diversity of plants and animals. This includes important aquatic and marshland communities which contribute to the overall connectivity of marsh, fen and swamp in the county. Many are in good or reasonable condition but there are local concerns with mine water pollution, eutrophication and the occurrence of invasive non-native species.

While river water quality has undoubtedly improved in recent decades, and this has benefitted populations of salmonid fish and their predators (e.g. Otter), more improvements in water quality are required.

The resilience of and state of nature in freshwater ecosystems in NPT has been assessed as **fair**.



RECONNECTING OUR RIVER- THE RIVER AFAN

LNP members undertake valuable works to enhance the health of the river ecosystem; removing barriers to fish migration through the Re-connecting our Rivers project, pollution reduction projects, invasive non-native species control

RESPONSIBLE PARTNERS: Swansea University, Afan Valley Angling and Conservation Club



OTTER ROAD DEATH HOTSPOTS

Monitoring of otter road death hotspots is pinpointing areas where action should be taken to mitigate for this danger where possible.

RESPONSIBLE PARTNERS: NRW

CURRENT PROJECTS



NATURAL FLOOD MANAGEMENT

A number of natural flood management projects are taking place across the county, enhancing and creating habitat whilst preventing flood risk.

RESPONSIBLE PARTNERS: Various



POND RESTORATION

Various pond restoration projects are taking place across the county, for example, at Jersey Park and at The Gnoll Country Park.

RESPONSIBLE PARTNERS: Various



DIPPER NEST BOX MONITORING

Funding from the LNP enabled nest box creation and erection and monitoring has begun of the dipper population on the River Afan.

RESPONSIBLE PARTNERS: Gower Ringing Group



WATER FRAMEWORK DIRECTIVE

Regular monitoring of the health of our rivers takes place via the Water Framework Directive.

RESPONSIBLE PARTNERS: NRW

CASE STUDY; THE ATLANTIC SALMON IN NPT

The Atlantic Salmon is an anadromous fish with a lifespan up to 13 years. It is becoming more obvious that Salmon are in crisis throughout the UK as well as Wales with suggested figures of a decline of 70% in 25 years (Atlantic Salmon Trust).

The River Afan and River Neath within NPT are not considered principle Salmon rivers and as such there is less data available to confirm a decline. However the data that is available from anglers and Natural Resources Wales suggests that the local figures support the crisis theory. The first recorded rod-caught Salmon for more than a hundred years on the River Afan was in 1988. There has been modest increases since then with last season's figures (2021) of 19 Salmon. All were returned unharmed. The water quality in the river is in no doubt improved and better now than it has been for decades and therefore should encourage these fish to spawn if they make it back from their feeding grounds and migration. Although it would appear that the River Afan is holding its own as a small river, with so few fish returning it is difficult to be optimistic.

The River Neath Salmon figures over the last 11 years show a significant decrease where in 2011 recorded 77 Salmon caught decreasing to 16 in 2020.

Survival of smolts and post-smolts seems to be the issue for all our rivers in South Wales. Rate of survival to returning adults have dropped from 15% in the 80's to just 3% in more recent times. There is no doubt that the demise of the Salmon is down to a number of factors, from pressure in the marine environment to their breeding efficiency in fresh water. Losses can be quite high 'in-river' due to the combination of man-made barriers and predation by birds/Otters. For this reason future focus is more and more about downstream migration of smolts and their progress over the numerous weirs. For the present, attempts to reduce the decline in population, by various legislation and water catchment initiatives is in place but the fact is that these magnificent creatures are in real danger of becoming just another statistic.

Afan Valley Angling and Conservation Club



ACTIONS FOR THE RECOVERY OF FRESHWATER HABITATS IN NPT

Action	Detail
Combined Sewer Overflow Diversions	Divert the CSO on the Clais Brook at Cwmafan into the main river to prevent eutrophication in the Clais brook, which had previously been a productive breeding tributary for Salmon, Sea Trout and Brown Trout. Reduce CSO pollution where possible across the county
Natural Flood Management	Undertake opportunity mapping for potential natural flood management projects and pursue in high flood risk areas where appropriate
Sustainable Urban Drainage Systems	Encourage the use of SUDS such as swales and rain gardens, particularly in new developments and urban centres to create habitat, reduce pollution and alleviate flood risk
Mine water pollution	Reduce mine water pollution across the county



WETLAND HABITATS





OVERVIEW

NPT is fortunate to have a number of important wetland sites which added together support a fifth of the county's priority species. Specific habitats in this category include fen, swamp, and ombrotrophic mires (bogs).

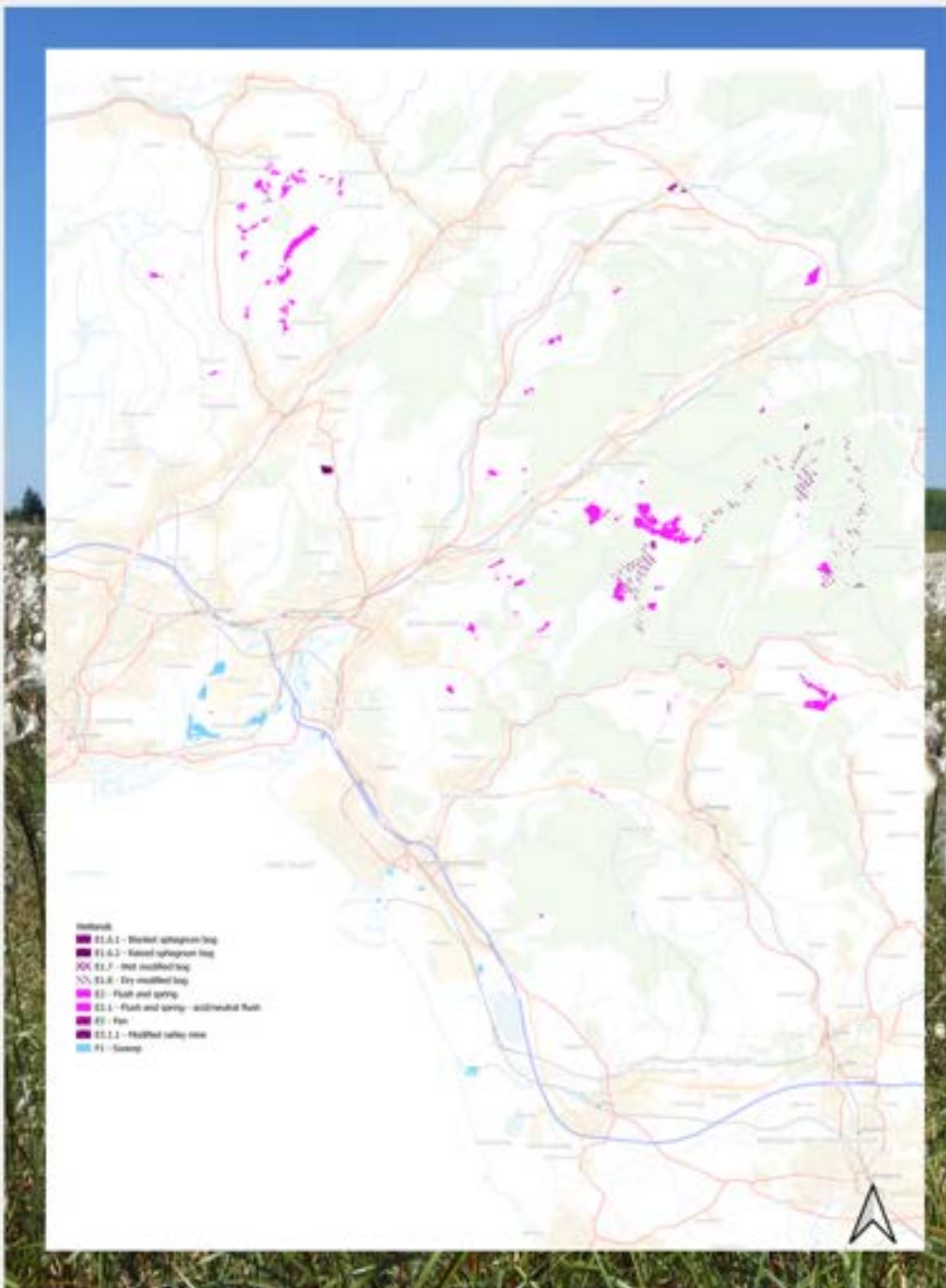
Fen habitats dominated by reeds and other tall graminoids are well represented in NPT with Crymlyn Bog (east of the Glan y Wern Canal) and Pant y Sais Fen being preeminent examples. Slender Cottongrass, a nationally rare Red Data Book species, is found at both sites along with a long list of other notables like Greater Spearwort, Least Bur-reed, Lesser Bulrush, Mares-tail, Marsh Cinquefoil, Marsh Fern, Marsh Lousewort, Royal Fern, Saw-sedge and Yellow Loosestrife. Smaller areas of fen-like habitat occur in many places between Jersey Marine and Aberdulais which are connected by the Tennant Canal and large patches of Reed-dominated marshland also occur on and near the grazing marsh between Neath and Tonna and on Margam Moors. An interesting fragment of coastal fenland occurs in the vicinity of Kenfig Marshalling Yards, near Morfa. Cyperus Sedge, Round-headed Club-rush, Saw-sedge and Tubular Water-dropwort are found here, the latter at one of its few sites in South Wales. All these habitats are important for marshland birds such as Cetti's Warbler, Grasshopper Warbler, Marsh Harrier, Reed Bunting, Reed Warbler, Sedge Warbler and Water Rail as well as reptiles such as Grass Snake and Common Lizard. Insects are well represented too and particularly damselflies (e.g. Variable Damselfly) and dragonflies (e.g. Hairy Dragonfly). The population of Fen Raft Spider on the Tennant Canal between Crymlyn Bog, Pant y Sais and Red Jacket clearly benefits from the connectivity between fen and aquatic habitats here.

Large areas of ombrotrophic mire are uncommon in NPT, but parts of Gors Llwyn near Onllwyn have a raised bog structure. Tufted Sedge and Greater Tussock-sedge are conspicuous on this site, which also contains Marsh Lousewort, Marsh St John's-wort and an interesting inland population of Marsh Helleborine. Swampy tall herb fen areas here and in ecologically connected habitats nearby have huge populations of Bogbean with Bottle-sedge, Water Horsetail and Yellow Loosestrife. Decades ago, in post-war years, Globe Flower also occurred on Gors Llwyn but it has not been seen in recent times. The lowland raised bog at Fforest Goch near Rhos is also notable for the range of wetland communities it contains, which includes a population of Bog Notchwort, a liverwort that is rare in South Wales. Smaller areas of flushed boggy ground are widespread in the moorland landscapes of the upper Dulais Valley and in the Gwrhyd area between Cwmllynfell and Rhyd-y-Fro where Greater Tussock-sedge, Many-stalked Spikerush, Marsh St John's-wort and White Sedge are found.

During the last 70 years, extensive areas of upland habitat on deep peat in NPT have been ploughed, drained and planted with conifers. This has contributed to substantial losses of wetland habitat in the county, which now only represent 1% of the county's land area. However, some fragments of wetland habitat survive within plantations and projects aimed at recovering other lost peatlands are in progress.



Marsh Lousewort



HABITAT CATEGORY	AREA (HECTARES)
Blanket sphagnum bog	1.71
Raised sphagnum bog	7.71
Wet modified bog	3.20
Dry modified bog	234.28
Flush and spring	0.00
Flush and spring- acid/neutral flush	355.33
Fen	9.61
Modified valley mire	n/a
Swamp	100.96
Total	713
% of total land area of NPT covered by these habitats	1%

WETLAND HABITATS



SPECIES



WATER VOLE

Water Voles were not an uncommon feature of wetland and aquatic habitats in NPT 60 years ago, but they have undergone a catastrophic decline in recent decades. Loss of habitat and predation by American Mink have probably played important roles in this. However, a significant Water Vole population has been discovered recently in wetland areas inside upland conifer plantations in the county. Peat bog habitat restoration projects are now incorporating management for water voles and monitoring the populations here.



SPHAGNUM

Sphagnum (also known as bog moss or peat moss) is a bryophyte genus which contains a number of species that are characteristic of wet areas including peatlands and flushes. The typical growth form of these important plants consist of branches, called fascicles, which are held in groups along the stem, and an active growing centre, called the capitulum, at the top. Sphagnum can absorb and hold many times its own dry weight in water and is the ecosystem engineer for peatland habitats.



FEN RAFT SPIDER

This is the UK's largest spider and one of the rarest. This striking species reaches up to 23mm in body size and has a distinctive pale stripe along its flanks. These ferocious predators, which are capable of catching and eating stickleback fish, are found at very few sites in the UK, including the Tennant Canal near Jersey Marine. They are usually seen in summer, characteristically basking on floating and emergent vegetation. In some years they occur in relatively large numbers.



WETLAND HABITATS

THE STATE OF NATURE OF WETLAND HABITATS IN NEATH PORT TALBOT

Lowland fen habitats in NPT support diverse communities of plants and animals and are generally well connected to other lowland wetland systems. However, their condition is poor in places with evidence of eutrophication and pollution and also problems with successional scrub encroachment and invasive non-native species, e.g. Rhododendron on Pant y Sais Fen and Sea Buckthorn in the marsh and fen habitats near Kenfig Marshalling Yards. Some upland wetland systems such as Gors Llwyn are in reasonable condition but the loss of other upland wetland habitats through neglect, afforestation, development and agricultural improvements has compromised their connectivity. Overall, wetland habitats in NPT are small, fragmented and not well connected.

In view all this, the resilience of wetlands as a whole in NPT is viewed as significantly less than good and, consequently, their state of nature has been assessed as **poor**.

CURRENT PROJECTS



LOST PEATLANDS PROJECT

A National Heritage Lottery Fund funded large-scale peatland restoration project in the uplands of NPT and RCT. The project is restoring habitat, inspire & empower local communities & visitors to discover & learn about their heritage.

RESPONSIBLE PARTNERS: Various



WETLAND MANAGEMENT

Wetland management is taking place at various important sites across the county, for example, at Gors Llwyn SSSI, Red Jacket Fen and at Pant y Sais Fen.

RESPONSIBLE PARTNERS: Various

CASE STUDY; LOST PEATLANDS PROJECT

The 'Lost Peatlands of South Wales' project is delivered by the Lost Peatlands Partnership comprising NPT Council (Lead), RCT Council, NRW, Swansea University and Coed Lleol (Small Woods). The project is providing an exciting programme of environmental improvements and community activities between 2021 and 2025.

Once referred to as the 'Alps of Glamorgan', the upland area between NPT and RCT in the South Wales Valleys was historically an open moorland landscape of boggy peatland. Today, commercial forestry plantations and renewable energy wind farms are a defining feature of this landscape, but large pockets of peat remain. Peat is invaluable in terms of water storage, carbon storage and as a wildlife habitat. The conservation of peatlands is a critical factor in climate change mitigation and the reversal of biodiversity losses.

The main aim of the Lost Peatland Project is to restore and manage more than 490 hectares of this historic landscape and habitats, including heathland, grassland and native woodland. One particular focus will be the direct restoration of 256 hectares of previously afforested peat bogs and pools. Habitat improvements will encourage many local wildlife species currently in decline to thrive again. These include birds like the Skylark and Nightjar; invertebrates like the Dark Green Fritillary and Small Pearl Bordered Fritillary butterflies; and mammals, including the elusive Water Vole.

Peat restoration works will be closely monitored and will inform important ongoing research by Swansea University to guide best practice restoration techniques and to understand impacts on biodiversity, water quality and CO2 emissions. Access to this remarkably wild landscape will also be made easier through improved, guided footpaths and interpretation.

As part of the project, local people will also be able to experience, learn about and get involved with the heritage on their doorstep through a variety of free activities, events, schools outdoor learning programmes and volunteering opportunities. People will be able to gain new outdoor skills and knowledge via dedicated training programmes. Families and adults will also be able to join or be referred to the project's health and wellbeing activity programmes.

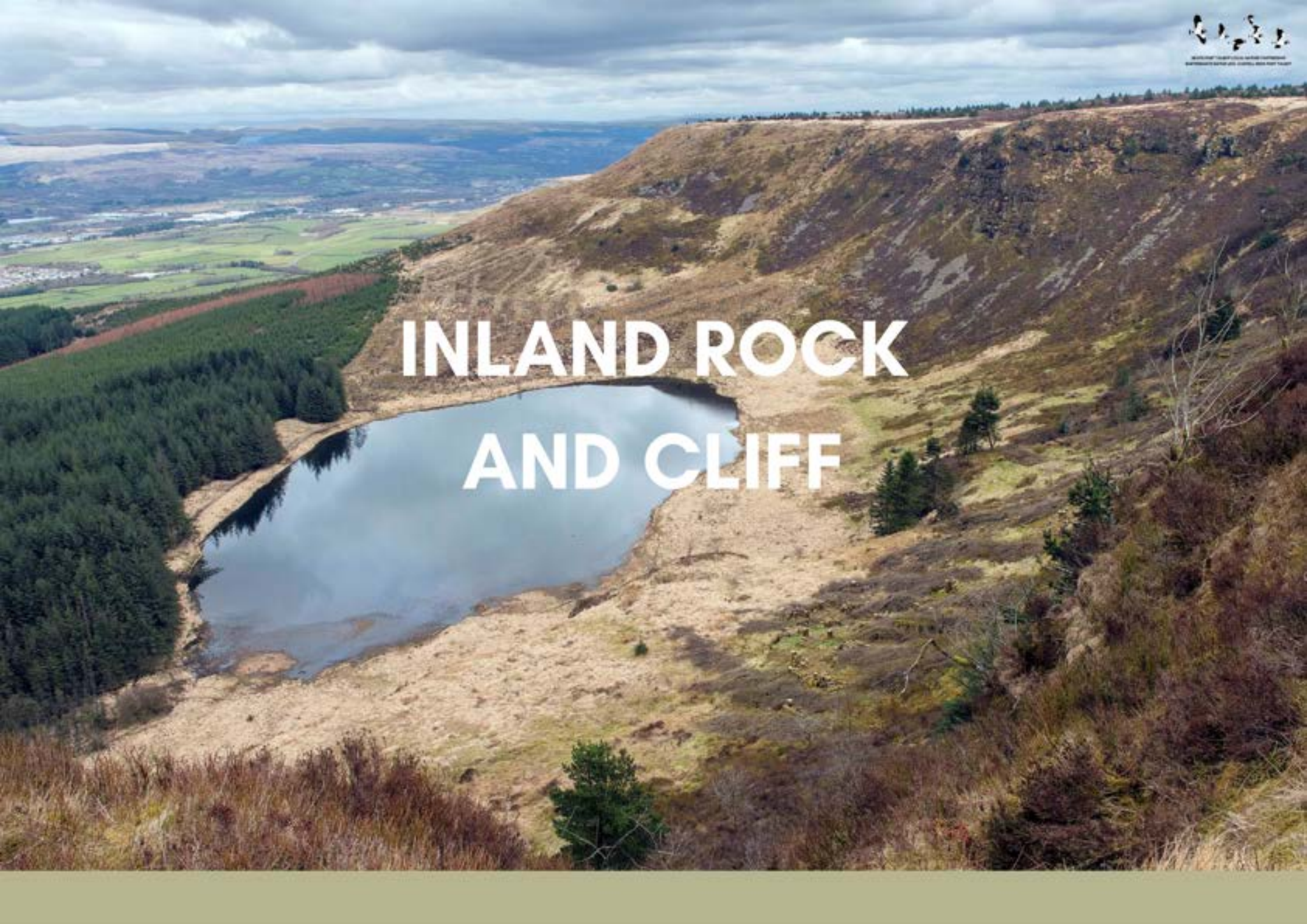


ACTIONS FOR THE RECOVERY OF WETLAND HABITATS IN NPT



Action	Detail
Peatland restoration	Opportunities to restore degraded peatlands should be pursued whenever possible
Identify, protect, connect and expand	Identify freshwater habitats with good water quality, assess what can be done to protect them and consider creating new freshwater habitats, such as ponds, to act as stepping stones between habitats
Fforest Goch Bog SSSI	Appropriate restoration grazing needs re-instating at this site as the bog is currently in unfavourable condition
Pond Restoration	Restore degraded ponds e.g at Gnoll Country Park

INLAND ROCK AND CLIFF



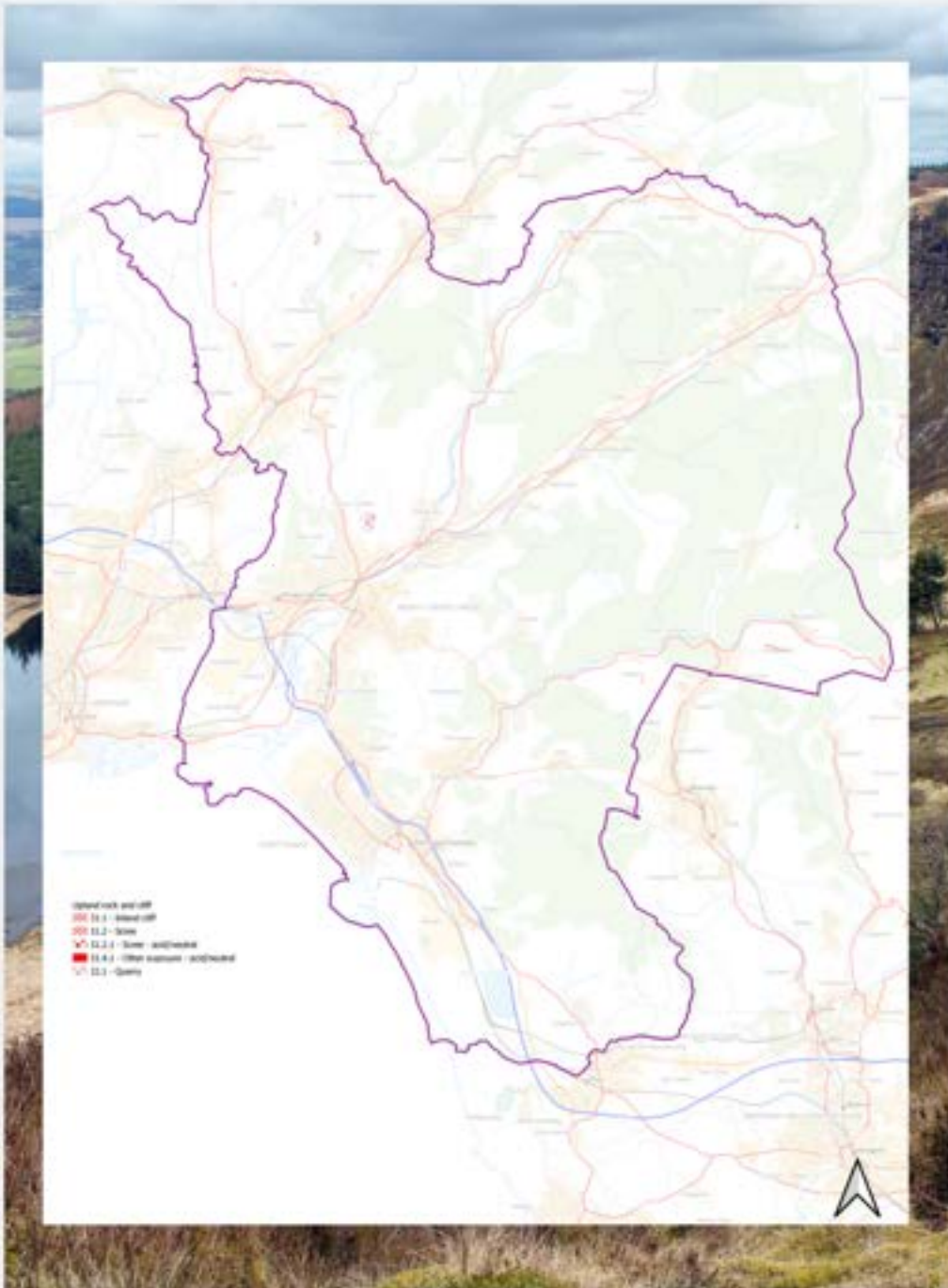
OVERVIEW

The north-facing sandstone cliffs of Craig y Llyn above Llyn Fach are the most important example of this type of habitat in Glamorgan and although this habitat only supports a small proportion of NPT's priority species, there is a community of northern boreal and arctic-montane plants here which has a unique place in the county. For example, species such as Cowberry, Crowberry, Lesser Meadow-rue, Stone Bramble, Fir Clubmoss, Wilson's Filmy-fern, Oak Fern, Brittle Bladder-fern, Beech Fern, Parsley Fern, Mountain Male-fern, Black Rock-moss and Stiff Apple-moss are either only found here or are very uncommon elsewhere in NPT.

Smaller north-facing outcrops such as those at Craig y Pant in the Neath Valley and above Cymmer in the upper Afan Valley also support interesting bryophyte assemblages with Hill Notchwort, Trunk Paw-wort and Neat Silk-moss and the only occurrence of Lanceolate Spleenwort in NPT.

In the past these habitats have provided breeding grounds for Kestrel, Peregrine Falcon, Whinchat and Ring Ouzel, although the latter has not bred in the county for over 50 years.





HABITAT CATEGORY	AREA (HECTARES)
Inland cliff	0.58
Scree	11.73
Scree- acid/neutral	1.19
Other exposure- acid/neutral	0.17
Quarry	27.75
Total	41.42
% of total land area of NPT covered by these habitats	0.09%

INLAND ROCK AND CLIFF

SPECIES



FERNS

The crags of Craig y Llyn are home to a number of fern species that are scarce or rare in south Wales and of conservation concern. One of them is Wilson's Filmy-fern, a small plant with thin, translucent fronds that form a mat on shady, vertical rocks. This Atlantic species is confined to humid ravines and north-facing cliffs in south Wales and is only known from Craig y Llyn in NPT. That is also true of Mountain Male-fern, a northern montane species at the southern limit of its British range in Glamorgan. Other ferns worthy of note here are Oak Fern and Beech Fern. These two Boreo-temperate species make attractive displays in the hardy plant communities of Craig y Llyn and have few other locations in the county.



KESTREL

The Kestrel is now Red Listed in Wales following a widespread decline across the country. The reasons for this decline are thought to be related to increased mortality with juvenile birds unable to find sufficient insect food, predation by Goshawks and also poisoning by rodenticides. The Kestrel was once a fairly common breeding resident in NPT, its main habitat being rough grassland, where it preys on voles, and also coastal areas. For many years they bred in the roof of the Fords factory near Jersey Marine (now Bay Studios) and on some inland cliffs but the species has declined dramatically in recent years with few breeding records.



CLUBMOSES

NPT has 3 species of clubmosses; Alpine, Fir and Stag's-horn. They are integral and iconic features of the county's upland biodiversity. Contrary to their misleading name, they are not mosses at all but vascular plants which are related closely to ferns. In the past, when the high ground of NPT was dominated by moderately-grazed, unimproved moorland and dwarf-shrub heath, Fir and Stag's-horn Clubmoss species would have been relatively widespread. Today, they are uncommon in the intensively grazed uplands of NPT. Fir Clubmoss is only found on north-facing sandstone ledges and scree and in banks of un-grazed dwarf-shrub heath in conifer plantations. Alpine and Stag's-horn Clubmoss are confined to these banks of heather and bilberry in plantations. Alpine Clubmoss, which is our rarest clubmoss, occurs at its UK southern limit in NPT. All our clubmoss species are vulnerable and endangered.

THE STATE OF NATURE OF INLAND ROCK AND CLIFF IN NEATH PORT TALBOT

The extent and connectivity of Inland Rock and Cliff in NPT has hardly changed for hundreds of years. However, there has been some deterioration in the condition of Craig y Llyn in recent decades. Invasion of scree and cliff by Sitka Spruce regenerating from seed that has rained in from surrounding plantations has become a significant problem and traffic pollution originating from the nearby Rhigos Mountain Road may also be a problem. The construction of a zipline above nearby Llyn Fawr is a reminder that many upland cliff habitats in South Wales are under pressure from tourist developments. Overall, we have assessed the resilience and state of nature in Inland Rock and Cliff in Neath Port Talbot as **fair**.

CASE STUDY; CRAIG Y LLYN

Craig y Llyn SSSI consists of two north-east-facing hollows that were cut by Pleistocene ice or snow into the edge of the Pennant Sandstone Plateau and also includes the lake below, Llyn Fach. Here, the high cliffs, ravines and flushes support many montane species such as Wilson's Filmy Fern, Fir Clubmoss, Oak-fern, Mountain Male-fern and a number of upland bryophytes which are otherwise uncommon in south Wales. Llyn Fach has a suite of uncommon aquatic species that are associated with upland oligotrophic lakes such as Water Lobelia, Quillwort and Floating Bur-reed. Many of these species are near or at their southern distribution limit in Britain in this site. Analysis of the pollen preserved in Ffos Cenglau has yielded data on the post-glacial sequence of woodland types in South Wales.

Llyn Fach and its surrounds are managed by the Wildlife Trust of South and West Wales (WTSWW) who organise surveys and monitoring of the lake and grassland habitats which inform management decisions. For example, survey rafts are used to monitor the population of Water Vole that has recently been discovered here and occasional, humane trapping is carried out to remove predatory American Mink. Other management practices include the introduction of cattle in summer for conservation grazing, scrub clearance and the removal of encroaching conifers (mostly Sitka Spruce) which are regenerating onsite. WTSWW is also working towards increasing the public understanding of the importance of the species at this reserve and reducing anti-social behaviour.



ACTIONS FOR THE RECOVERY OF INLAND ROCK AND CLIFF IN NPT

Action	Detail
Remove invasive tree species	Remove any conifers which have self-seeded onto the cliff features e.g. at Craig y Llyn SSSI
Monitor breeding birds	Monitor breeding birds on this habitat
Monitor important plant species	Monitor the important plant species that can be found in this habitat



INLAND ROCK AND CLIFF



COASTAL HABITATS





OVERVIEW

Coastal ecosystems provide habitats for a third of NPT's priority species and they represent one of the most important resources of biodiversity in the county. Important features include the partially fixed mobile dune systems on Crymlyn Burrows, Baglan and Morfa dunes. Species found here, such as Frosted Orache, Prickly Saltwort, Sea Stock, Sea Holly, Sea Bindweed, Sea Spurge and Ray's Knotgrass depend on the availability of mobile sand environments and are restricted to these habitats. Also notable is a small population of Dotted Sedge, a rare and declining species, which occurs on Baglan Dunes in its only known site in Glamorgan. Unfortunately, Alder and Willow encroachment is currently threatening this population.

Dune slacks contribute a large amount to the biodiversity of coastal ecosystems and were widespread in NPT's dune systems at the end of the 19th Century. Even 40 years ago they were a significant feature of Crymlyn Burrows and Baglan Dunes. At this time Fen Orchid, Early Marsh-orchid, Marsh Helleborine and Adder's Tongue were seen regularly on Crymlyn Burrows. However, species-rich dune slacks have all but disappeared in NPT, largely as a result of successional changes and neglect, and most of these species have become extremely rare in the county. A small area of dune slack with a large population of Marsh Helleborine survives on Baglan Dunes but it is also threatened by willow scrub succession.

Until recently, intertidal areas on Crymlyn Burrows have provided a feeding and roosting site for nationally important numbers of wintering Sanderling and Ringed Plover. Unfortunately, the increasing use of these beaches for dog walking is now influencing the movements and behaviour of these birds and they appear to have deserted their favoured roosting sites.

Several notable insects are found in coastal habitats in NPT including a number of butterflies such as Grayling, Wall Brown, Dingy Skipper, Dark Green Fritillary, Small Blue and Brown Argus. Other significant species include Shril Carder-bee, Long-horned Bee and Black Oil-beetle. The strandline beetle, *Nebria complanata* was recorded regularly on Crymlyn Burrows in the past but has not been seen there recently.

Salt marshes are a valuable component of coastal biodiversity. In NPT, this habitat is only extensive in the vicinity of the River Neath estuary where diverse communities containing Sea Wormwood, Sea Heath, Sea Lavender and Golden Samphire are found. The long tidal reach of the River Neath is also responsible for a substantial area of sea washed saltings between Neath town and Baglan Bay. During the highest tides, the large grazing marsh that occurs between Neath and Aberdulais is inundated with brackish water which influences the diversity and composition of this impressive and unique habitat.



Marsh Helleborine



HABITAT CATEGORY	AREA (HECTARES)
Intertidal - mud/sand	39.01
Intertidal - mud/sand - zoostera beds	57.60
Intertidal - boulders/rocks	1.60
Saltmarsh	55.28
Saltmarsh - dense/continuous	106.20
Mud/sand above mhw	0.28
Dune grassland	178.33
Dune scrub	12.27
Open dune	30.78
Coastal grassland	2.77
Total	484.12
% of total land area of NPT covered by these habitats	1%

COASTAL HABITATS

SPECIES



SEA STOCK

Sea Stock is one of a small number of Mediterranean plants that are found in Wales and has been known from coastal sand dunes in NPT for about 150 years. It is a nationally rare, Section 7 species and a European endemic that is growing at its global northern limit in the coastal sand dunes of NPT. It is found in mobile sand communities and is restricted to and specifically requires this specialised habitat in our area. For reasons that are not understood properly, population sizes of this attractive plant have varied greatly over the decades. Burial in sand after storm events and grazing by rabbits may play a part in this. The enormous population of Sea Stock that occurred on Crymlyn Burrows in the 1980s has dwindled to a handful of individuals in recent years. Larger populations are currently known from the remnant dune systems between Baglan and Morfa Tip.



SANDERLING

Sanderling are small wading birds that breed in coastal tundra in the High Arctic. In winter they migrate southwards and significant numbers of them spend the winter in Britain, particularly where there are coastal beaches with long sandy shore lines. They rely on the availability of coastlines where they roost and feed on crustaceans, molluscs and marine worms. Recently, wintering numbers of sanderling have declined in the UK where this species is now amber-listed. Nationally important numbers have occurred in Swansea Bay between late summer and spring and they have been a notable feature of undisturbed sections of Crymlyn Burrows until recently. Unfortunately uncontrolled and sustained disturbance of winter populations are having a catastrophic effect on roosting and feeding flocks in NPT.



SMALL BLUE

This is the smallest UK butterfly but can be seen in numbers where it occurs. The upper wing is a dusky colour with a hint of blue and the underwing is a very light brown-blue with obvious black spots, no orange as in the Common Blue. They rely solely on Kidney Vetch for their caterpillar food plant. Small Blues can be found all along the NPT coastal belt and at some inland sites, particularly where there is an abundance of Kidney Vetch.





THE STATE OF NATURE IN COASTAL HABITATS IN NEATH PORT TALBOT

The coastal strip of NPT between Crymlyn Burrows and Morfa Dunes once supported a well-connected, biodiverse ecosystem with sand dunes, dune slacks and coastal fen. However, it has suffered huge losses in species-rich habitats in the last 100 years mainly as a result of industrial development. Unfortunately, much of what remains is also in a perilous position with an uncertain future, still threatened by development. Consequently, the unique wildlife communities and the dynamic mobile sand dune structures which have managed to survive remain vulnerable. Recent downward trends in the movements of wintering Sanderling (and other waders) on Crymlyn Burrows are also of concern.

Several factors have contributed to changes in the biodiversity and resilience of coastal ecosystems in NPT: (i) lack of recognition in the past of the importance of sites such as Crymlyn Burrows and Baglan Dunes, (ii) lack of proper management of habitats containing species of high conservation value and (iii) no regulation of recreational activities in sensitive areas such as wader roosting sites in intertidal zones. In addition, there are a number of invasive non-native species that are established on Crymlyn Burrows, the most significant of which are Japanese Rose, Sea Buckthorn, a number of Cotoneaster species, Canadian Golden Rod, Michaelmas Daisy and Holm Oak. In view of all this the state of nature and resilience of coastal ecosystems in Neath Port Talbot has been assessed as **poor**.



CURRENT PROJECTS



CRYMLYN BURROWS SSSI

A new management plan for Crymlyn Burrows has recently been put in place, to be implemented by the Swansea University Biodiversity Officer and NRW. The main aims of the plan will be to improve the condition of habitats there by removing or controlling invasive non-native species, dune slack scraping and the reintroduction of priority species such as Dune Wormwood and Sea Stock.

RESPONSIBLE PARTNERS: Swansea University / NRW



WHITFORD POINT

Monitoring of species including lapwing, invasive species and visitor activity. Management of invasive non-native species and scrub clearance

RESPONSIBLE PARTNERS: WTSWW on behalf of St Modwens



MORFA TIP

The creation of a new sand dune ecosystem on Morfa Tip is helping to increase the extent and connectivity of sand dune habitats, which have undergone catastrophic losses in the region over the last 100 years. The site is monitored annually.

RESPONSIBLE PARTNERS: TATA Steel, NRW



DYNAMIC DUNESCAPES

21 hectares of sand dune will be restored or recreated across NPT and Swansea. This project is also increasing public engagement with sand dune habitats in the county.

RESPONSIBLE PARTNERS: Plantlife



SANDERLING DISTURBANCE PREVENTION

Disturbance of Sanderling and other waders at Crymlyn Burrows by dog walkers is currently under discussion to determine the best course of action to protect these feeding and roosting flocks.

RESPONSIBLE PARTNERS: Various



CASE STUDY; MANAGEMENT OF CRYMLYN BURROWS SSSI

When Swansea University developed its Bay Campus on brownfield land to the east of the city, it also took on responsibility for the neighbouring Crymlyn Burrows SSSI. This is one of the last undeveloped areas of Swansea Bay, designated for its diverse assemblage of sand dune and saltmarsh flora and invertebrates, among them some very rare species, including Fen Orchid, Field Wormwood and Strandline Beetle. Although undeveloped, the site faces numerous issues, not least the presence of invasive species and lack of grazing and historical management. While Japanese Rose is the most widespread and problematic of the invasive species found, there are over 50 non-native plants recorded in the dunes, with Sea Buckthorn, Holm Oak, Cotoneaster, Early Goldenrod, Michaelmas Daisy and Japanese Knotweed all having an impact (and the potential to spread much more widely). Although the site has always been used by local dog walkers, this has increased in recent years, and along with the 2500 students now living on campus, the risk of wildlife disturbance has increased significantly. Rabbits are the only grazing animals on the site and with no management prior to the opening of the campus, scrub and woodland has expanded significantly since designation, especially in the wetter areas. Fen Orchid has been lost to this succession and Strandline Beetles have not been recorded there since 1997.

Management has initially focused on controlling invasive species, prioritising those that present the largest potential damage, where early management might prevent a larger future problem. Early attempts to hand dig Japanese Rose were unsuccessful, taking a lot of effort but with limited results - rhizomes can spread over a metre from the parent plant, and a small section left behind will regrow. Small (<2m), isolated patches of rose are now prioritised for spraying before they get too large, while larger areas are being dug and buried in situ using an excavator. This not only reduces the amount of Japanese Rose, but also creates valuable areas of bare sand for colonisation by dune wildlife. Regrowth is searched for and dug out by hand.

As well as removing invasive species, attempts have been made to reduce the spread of native woodland and scrub into the dune grassland, with volunteers cutting back young birch, willow, alder and gorse along the woodland edge, although at a relatively small scale. In 2020 this was greatly expanded thanks to the help of the National Heritage Lottery Fund Dynamic Dunescapes project, clearing 0.5ha of woodland in wet dune slacks where fen orchid was last found. Trees were removed (and chipped for biomass) before the accumulated soil and leaf litter was scraped off, removing stumps and creating bare sand that flooded seasonally. A further new slack is planned in an area currently covered by Japanese Rose and if successful, it is hoped that Fen Orchid can be reintroduced. Wardening and awareness raising (through walks, events and signage) are helping to reduce disturbance, and a zoning scheme for access with dogs is planned. The location and aspect of the beach means that large quantities of rubbish collect along the 1.5km of shore. Beach cleans are carried out regularly and remove over 100kg of waste every month.

Thanks are due to all the volunteers from the university and wider community, to the Dynamic Dunescapes project, and to Buglife's B-Lines project that has helped to pay for the Japanese Rose burial.

ACTIONS FOR THE RECOVERY OF COASTAL HABITATS IN NPT

Action	Detail
Management	Active management of sand dune habitats is required, particularly the maintenance of mobile sand dune systems and the creation and maintenance of dune slacks
Re-introduction of important plant species	Re-introduce populations of species such as the Fen Orchid and Dune Mugwort to sites where appropriate
Crymlyn Burrows Warden	Ensure the continuation of the officer role for Crymlyn Burrows based at Swansea University
Reduce disturbance to ground nesting birds	Breeding populations of Sanderlings and Lapwings have both been declining as a result of disturbance from visitors. Work to protect ground nesting birds at Baglan and Crymlyn Burrows needs to be undertaken
Invasive species removal	Invasive species continue to threaten the condition of coastal habitats in NPT e.g. Japanese Rose. Undertake action to remove these species where possible



MARINE HABITATS



OVERVIEW

The marine habitats of NPT are defined in this document as the inshore, subtidal and surface seawaters of Swansea Bay off the coast of NPT to a distance of 12 nautical miles. The seabed here consists of sandstones and mudstones overlain by sand, gravel and mud. The main habitats enclosed are suitable for marine mammals, fish and invertebrates but there are no rocky subtidal areas.

Specific and detailed knowledge of the biodiversity of these habitats is lacking but surveys undertaken in 2013 found 6 infaunal groups dominated by polychaete worms and bivalves. *Sabellaria alveolata* reefs are formed in the bay, some of which are on man-made structures such as groynes. At least 55 species of fish and 38 species of shellfish have been recorded in the bay. These include some of international importance such as European Eel, Allis Shad, Twaite Shad and Sea Lamprey. The area is also an important nursery for flatfish and ray, while Herring are known to spawn in several places around the bay. It is possible that Sand Eel spawn here also.

The bay has a year-round presence of Harbour Porpoise with annual mother-calf sightings in late summer-autumn and near-shore foraging has been noted in several places. Common Dolphin are sighted occasionally in summer and mid-winter, perhaps a reflection of the range expansion of the Celtic Sea population which has occurred in the last 15 years, and Grey Seals have been sited occasionally. Large and significant numbers of Great Crested Grebes are counted in the bay each winter from Aberavon Beach and Crymlyn Burrows.

The marine ecosystem provides habitats for 24 of NPT's priority species.



SPECIES



HERRING

Swansea Bay has several spawning sites for Herring. One of these is the sea defence area at the entrance of Port Talbot Dock. It is likely that the man-made structures provide and replicate the substrate required to allow gravel patches to form, creating the right conditions for a spawning site. Herring have different spawning points in the year; the Swansea Bay population spawns in February and March. Herring are not exploited commercially here. Due to their large numbers and fast reproductive cycle they are an important prey item within the marine ecosystem. They could be the reason for the high numbers of predators especially Great Crested Grebes we see in the winter.



HARBOUR PORPOISE

Swansea Bay has year-round Harbour Porpoise presence, with annual mother-calf sightings in late summer-autumn. Regular near-shore foraging is also reported along the NPT Coastline. They are much smaller than native dolphin species and more difficult to spot. They do not often leave the water like dolphins but 'breach' with their back in a smooth arc. Porpoise have a very short beak making their head look blunt compared to a dolphin.



THE STATE OF NATURE IN **MARINE HABITATS** IN NEATH PORT TALBOT

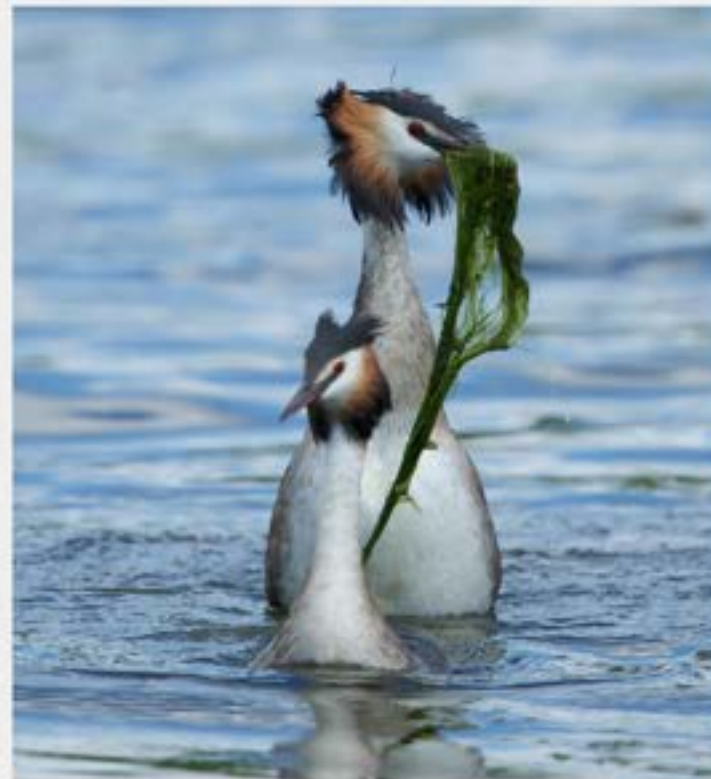
At present we have insufficient data to give a robust assessment of the resilience and state of nature in the marine habitats of NPT. Attributes such as extent and connectivity can be assumed to be good. However, the 2018 Water Framework Directive interim assessment rated the overall and ecological status of our local coastal water to be moderate and it failed on chemical status. We conclude from this that the condition of our marine habitats is poor. Furthermore, issues such as pollution and invasive non-native species continue to threaten ecosystem resilience. At this point, we can only conclude that the state of nature in marine habitats in NPT is **poor**.

CASE STUDY; GREAT CRESTED GREBE OVER-WINTERING SURVEYS

The Great Crested Grebe is the largest and most familiar of the grebes that are found in the UK. Most people associate them with large freshwater lakes where breeding birds are sometimes seen displaying to each other in an elegant, courtship water dance. There are few breeding pairs in NPT but they occur regularly on Eglwys Nunydd Reservoir near Margam and the Borrow Pits ponds near Glynneath, where adult birds can be observed with chicks, sometimes carrying the young birds, characteristically, on their backs.

Much larger numbers of these beautiful birds gather in winter feeding flocks in Swansea Bay where they often occur in 3 separate groups of birds spread across the bay from Blackpill (Swansea) to Aberavon (NPT). Two of these groups are usually located in NPT, one off Crymlyn Burrows and the other off Aberavon Beach. The numbers of wintering birds in these flocks has been counted at regular intervals for over 10 years by local enthusiasts (British Trust for Ornithology, Wetland Bird Survey (WeBS) Counts) and it is clear from these records that the bay is a very important winter feeding site with >700 individuals counted in some months. Often, the greater proportion of the bay's grebes occur in waters off NPT and those off Crymlyn Burrows, where numbers >400 have been recorded, appears to be very significant.

Under Criterion 6 of the Ramsar Convention, wintering flocks of a waterbird species are considered to be internationally important if they contain 1% or more of the national population. This figure sets the Species Threshold Level, which for the Great Crested Grebe in UK is currently at 190. Numbers greater than this qualify a site to be of high international, conservation value. Clearly, the number of wintering Great Crested Grebe in Swansea Bay exceed this threshold by a large amount and, importantly, so does that part of the winter flock associated with NPT water. A key, limiting factor in this is the maintenance of sufficient shoals of fish on which these birds depend for food and that, in turn, is dependent on the good health and nutrient dynamics of the bay's marine ecosystem.



ACTIONS FOR THE RECOVERY OF MARINE HABITATS IN NPT



Action	Detail
Evidence building	Most biological recording takes place in terrestrial habitats. Encourage and collate new records, for example, target marine fishing for biological records and encourage participation in national recording schemes such as The Great Eggcase Hunt. Issues such as litter and pollution should also be monitored
River Pollution	Work with partners to reduce pollution entering the marine environment via the rivers
Invasive non-native species management	Investigate the possibilities of working with marine users to encourage correct biosecurity and ensure prevention actions are taken



ACTIONS RELEVANT TO ALL HABITATS IN NPT

The following actions apply to all habitats across NPT and are listed here to avoid repetition.

Action	Detail
Planning Policy	Conserve and enhance biodiversity through the planning process
Tree planting	Prevent inappropriate tree planting in the county e.g. on important grassland habitats. Encourage natural regeneration in place of tree planting where possible
Invasive non-native species	Prevent the encroachment of INNS on important habitats in NPT
Think before you fly	Protect nesting birds from disturbance from drone flying
Illegal Off-Roading	Report damage to nature sites from illegal off-roading to the police

ALL HABITATS

INVASIVE NON-NATIVE PLANT SPECIES IN TERRESTRIAL AND FRESHWATER ECOSYSTEMS IN NPT

Invasive non-native species (INNS) are regarded as a significant threat to biodiversity. In the UK, all INNS are neophytes, i.e. non-native species that have been introduced into the British flora since 1600AD. Currently, the number of naturalised neophytes in Britain outnumbers the number of native species, but most neophytes have little impact on biodiversity and many may actually add something to it on a local scale. However, there are a group of 14 invasive neophyte species and groups that we believe are of particular concern in NPT, which are:

- Buddleia
- Canadian Goldenrod
- Cotoneaster
- Garden Lady's-mantle
- Himalayan Balsam
- Himalayan Honeysuckle
- Holm Oak
- Japanese Knotweed
- Japanese Rose
- Michaelmas Daisy
- New Zealand Pigmyweed and other Non-native Pondweeds
- Rhododendron
- Sea Buckthorn
- Sitka Spruce



Of these, Himalayan Balsam (or Indian Balsam), Japanese Knotweed and Rhododendron are notorious, but each species in this list has a significant impact on one or more of our principal habitats (see Table 2). Other potentially invasive species in the county such as Lupin, Chinese Bramble, American Skunk Cabbage and Henry's Honeysuckle could pose a threat in the future.

Several other neophyte species which are abundant and aggressive competitors, particularly in early successional or ruderal environments, include some Stonecrop species, Bilbao Fleabane and Hoary Mustard, but none of these have significant effects on local biodiversity. Similarly, there are a number of garden throw-out species which are widespread and persistent in the county, notably Dotted Loosestrife and Montbretia, which we believe are not having significant effects on biodiversity at present.

Interesting problems are posed by some garden plants that have become established and/or naturalised in some habitats where they might cross fertilise and hybridise with native species. Two significant examples are given by Spanish (and Hybrid) Bluebell and the silver-blotched leaf form of Garden Yellow Archangel. The extent to which Spanish/Hybrid Bluebell has hybridised with native Bluebells and the effect that this may have on the genetic purity of local native Bluebell populations is largely unknown. At the moment there is little evidence that there is cause for concern but it seems prudent to eradicate naturalised Spanish/Hybrid Bluebells from areas where they could hybridise with native Bluebells e.g. in ancient woodland and hedgerow. Similarly, it would be wise to control naturalised populations of Garden Yellow Archangel, which is much more vigorous and competitive than our native Yellow Archangel.

Brief descriptions of the INNS of most concern in NPT and a summary of their main impacts is given in the following pages. A wider list of INNS problematic across the whole of Wales has been collated and details of this list can be found on the Wales Biodiversity Partnership website.

BUDDLEIA

Buddleia is a woody, semi-deciduous shrub native to China, which produces tight pyramidal sprays of heavily scented lilac, purple or white flowers in summer. It was introduced to Britain 100 years ago as a garden plant and has undergone a very significant range expansion in a comparatively short period of time. It is well known for its attractive flowers (somewhat like Lilac) which attract lots of butterfly species on sunny days, particularly Vanessa-like Red Admiral and Painted Lady, but others too including Dark-green and Silver-washed Fritillary. While it could be argued that this is a benefit to biodiversity it could also be argued that, in doing this, Buddleia lures important pollinators away from native species.

Buddleia's dispersal and spread is largely due to the production of large amounts of small seeds. Consequently, it is an aggressive colonist of open, early successional ruderal habitats such as brownfield sites and clear-felled forestry coupes. It is a significant threat to the biodiversity of coastal, species-rich open mosaic sites. This is much in evidence on Baglan Energy Park where almost every compartment has a significant, invasive Buddleia population.

CANADIAN GOLDENROD

We have included Canadian Goldenrod, Early Goldenrod and hybrids of Canadian Goldenrod under this name here. All of them are similar, much confused with each other and capable of producing dense, competitive, invasive stands by vigorous rhizomatous growth. Canadian and Early Goldenrod are North American species that were introduced as garden plants in Britain about 100 years ago. Hybrids have probably arisen in Britain between these and other exotic Goldenrod species.

In NPT, these alien Goldenrods have their most significant, negative effects on coastal dune communities. For example, there are large areas of alien Goldenrod clones in fixed grassland on Crymlyn Burrows.

COTONEASTER

Cotoneasters are woody perennials, many of which become medium-sized to tall shrubs or form prostrate growth-forms that can smother the ground. At least twenty different types of Cotoneaster have become naturalised in NPT, some of the most widespread being Wall Cotoneaster, Himalayan Cotoneaster, Entire-leaved Cotoneaster, Bullate Cotoneaster, Stern's Cotoneaster and Late Cotoneaster. All of them flower profusely, attract lots of pollinators (particularly bumblebees) and produce abundant berries which are consumed by frugivorous birds such as thrushes and Waxwing. Apart from Himalayan Cotoneaster, which was introduced to Britain over 100 years ago, most of these species have been with us for less than 50 years. They have been grown in parks and gardens throughout the county and in recent decades have become favoured for amenity planting in urban areas and industrial estates. From these places, Cotoneasters have spread mainly by frugivore birds into a number of priority habitats where they are invasive and problematic. These habitats include woodland, hedgerows, sand dunes and open mosaic habitats.



GARDEN LADY'S MANTLE

Garden Lady's Mantle is a perennial herb and another neophyte garden escape which was introduced in Britain about 70 years ago. It is long-lived, has vigorous growth and spreads by seed and rhizome fragments. It is the most common Lady's Mantle in NPT and is found naturalised in many places, but particularly in grassy verges. It has become a common component of the forest roadside verge flora in NPT's conifer plantations. It is very abundant in the species-rich verges of the Glyncastle Forest upland plateaux region on Rhigos Mountain where it is a cause for concern.



HIMALAYAN (INDIAN) BALSAM

Unlike all the other INNS discussed here, Himalayan Balsam is an annual. In fact, it is the tallest annual in the British Flora and can reach 3 metres in height under suitable conditions. The stems are hollow and supported by buttress like props at their bases and the scented flowers are conspicuous and plentiful in summer. The flowers are a great attraction to bees and hoverflies and, as such, they compete with native plants for pollinators. Seed production, which is essential for its survival, is prolific. The seeds are catapulted from the fruits at the end of summer when merely touching or brushing by the plant will set off the almost explosive dispersal mechanism. By this means Himalayan Balsam builds up a significant seed bank in the soil which gives rise to new plants the following year. How long and how many of these seeds remain viable after one year in the soil is a largely unanswered question. However, uprooting plants early in the growing season, before they have a chance to flower, has proved effective in decreasing Himalayan Balsam populations in some locations, suggesting that viable seed banks are not long-lived.

Himalayan Balsam is a very familiar invasive alien in NPT where it saturates some path-side environments where conditions are not too dry and, preferably, where there is some degree of shade. In dry, exposed and sunny habitats it often wilts and fails to establish itself sustainably. It occurs in abundance in shady locations along our canals, roadside embankments and hedgerows and in shaded, forest road verges and it is particularly abundant in the Afan Valley.

HIMALAYAN HONEYSUCKLE

Himalayan Honeysuckle (also known as Pheasant Berry) is a native of the Himalayas and was introduced to Britain in 1906, probably as a game cover plant. Although it was rather uncommon 30 years ago, it has undergone a notable range expansion in NPT in recent decades and is now spreading in all our main valleys. Until recently it might have been regarded as a low priority non-native species, but recent surveys have revealed that it is capable of forming dense invasive colonies. A notable example of this can be seen in heathland on Mynydd Dinas. Himalayan Honeysuckle flowers freely and produces lots of succulent, pea-sized berries. These are eaten by frugivorous birds which then disperse the seeds.



HOLM OAK

Holm Oak is a large tree native to the Mediterranean region. Unlike our native oaks (and most of the other exotic oaks in Britain) it is evergreen and produces thick leaves that are often spine-toothed like Holly. It has been planted in coastal areas as a wind break because, unlike many of our native trees and shrubs, it is able to tolerate salt spray and grows well in exposed coastal locations such as sand dunes. Like other oaks it produces acorns which are collected and dispersed by Jays and it is a very effective coloniser of sand dune habitats. In NPT it is one of the notable invasive species on Crymlyn Burrows.



JAPANESE KNOTWEED

Japanese Knotweed was introduced into Britain as a garden plant in the early 19th century and it is probably the best known INNS in the British Flora, its name almost synonymous with the term invasive non-native species. All the Japanese Knotweed plants in Britain and across Europe are male sterile (they do not produce viable pollen) i.e. they are effectively female only and incapable of forming viable, pure seed. However, Japanese Knotweed has a formidable ability to regenerate from vegetative parts such as small rhizome fragments that are found in soil. Remarkably, as a result of this, all the Japanese Knotweed in Britain belongs to a single, genetically identical clone that has expanded its range by vegetative reproduction. However, Japanese Knotweed is able to hybridise with other knotweed species, particularly Giant Knotweed, which may act as male donors. The hybrid with Giant Knotweed, known as Bohemian Knotweed, can set seed and also spread vegetatively and it is able to back-cross with its parents. In these events, novel genetic material can enrich Japanese Knotweed populations, but extent to which hybridisation and introgression may have occurred in NPT is unknown. Furthermore, whereas Japanese Knotweed is widespread in NPT, Giant Knotweed appears to be rare or rarely recorded and only known currently from Ynysmeudwy and Rheola Forest, near Resolven.

Japanese Knotweed is aggressively competitive and often forms dense clones in urban or ruderal areas as well as also along roads, tracks, waterways and in broadleaved, deciduous woodland. Several cemeteries in NPT have significant problems with Japanese Knotweed and it is common in many places along all NPT's rivers and canals. Some ancient woodlands, such as Tyn yr Heol Woods, near Bryncoch, also have dense stands of Japanese Knotweed in them. The effect this has on biodiversity in Neath Port Talbot is largely unmeasured. However, it is likely that one of NPT's former populations of Globe Flower, which occurred along the banks of the River Dulais near Aberdulais (last seen in 1998), was smothered by Japanese Knotweed growth. While Japanese Knotweed is not desirable in ancient woodland, it can fulfil the role of a surrogate shrub layer, where vernal ground flora species such as Wood Anemone and Bluebell can survive.

Early in the growing season, growth of Japanese Knotweed is susceptible to wilting and shoot necrosis during periods of unusual heat in spring and summer. It is also uncommon in xeric habitats but does occur in sand dunes on Crymlyn Burrows in the strandline near the mouth of the Neath estuary.

JAPANESE ROSE

Japanese Rose was introduced into Britain as a garden plant about 100 years ago. It is often used in amenity planting schemes, sometimes en masse. It is naturalised widely in coastal areas of NPT and it poses a significant invasive problem in dunes, particularly on Crymlyn Burrows. Elsewhere in NPT it has a scattered distribution. Once established it suckers freely and will cover large areas in dense stands by rhizomatous growth. It produces lots of heavily scented flowers which give rise to very large hips that contain the seeds. It seems likely that Japanese Rose can also spread by seed but the mechanism of seed dispersal is not known.

MICHAELMAS DAISY

A number of species and their hybrids are included under this name. Many were introduced into Britain as garden plants and some may have arisen by hybridisation after parent plants became naturalised. Identification of specific taxa is difficult and there are probably errors in our database of records but they are readily identifiable as a group and all of them pose similar problems as invasive non-native species. Once established in a site, plants usually form dense stands. Naturalised populations of Michaelmas Daisy are scattered in NPT but, like Goldenrod, they pose the most significant problems in dune systems such as Crymlyn Burrows.

NEW ZEALAND PIGMYWEED AND OTHER NON-NATIVE PONDWEEDS

A large number of aquatic plants have been introduced into ornamental ponds in parks and gardens throughout Britain, often for the purpose of aeration. Several species are grown by aquarists and have made their way into freshwater habitats, sometimes discarded deliberately and then dispersed further by aquatic birds. New Zealand Pigmyweed and Parrot's Feathers are notorious invasive non-native aquatic species which have scattered occurrences in NPT, the former forming dense submerged masses in the Neath Canal near Aberpergwm.

Canadian Pondweed and Nuttall's Pondweed are widespread in our canals, sometimes forming large colonies while Curly Waterweed often forms very dense populations, e.g. in the Tennant Canal near the Aberdulais Basin and in the Glyncorrwg Ponds.



RHODODENDRON

Rhododendron is probably the most important INNS in NPT in terms of biodiversity impact. It is widespread and abundant in some habitats throughout the county, although it is uncommon in coastal areas. It is evergreen, densely branched and can smother extensive areas of ground by vigorous suckering. It flowers freely in open conditions and produces huge amounts of tiny seeds that can be dispersed in the air over considerable, landscape-scale distances. It is tolerant of shade, including that under conifers, and occurs in woodland and forest throughout the county. Examples can be seen in the broadleaved deciduous woodland of Coed Gawdir near Aberdulais and the extensive populations in the conifer plantation of Glyncastle Forest near Resolven. Almost nothing grows under the shade of a Rhododendron thicket, Rhododendron can also invade wetland habitats leading to undesirable scrubland development, competition and drying. This can be seen in Pant y Sais Fen, one of NPT's most important wetland sites, where Rhododendron has colonised the nature reserve by seed dispersed from local heathland.

The colonisation of large areas on Gelli Onen near Pontardawe is very concerning and an extreme example of the invasive nature of Rhododendron. This has resulted in the loss of a significant amount of upland heathland and moorland and a radical alteration of habitat structure. Large areas of Margam Park also have extensive thickets of Rhododendron.

In this account we include both Rhododendron (*sensu stricto*) and Hybrid Rhododendron under the name of Rhododendron (*sensu lato*). It is possible that both are widely distributed in the county.

SEA BUCKTHORN

Although Sea Buckthorn is native along the east coast of England, it occurs as a non-native species along the west coast of Britain where it has been planted to stabilise mobile dune systems. It has also been planted in some inland localities for the purpose of habitat remediation and soil nitrogen enrichment. Two notable characteristics of this species are (i) it is dioecious and (ii) it is able to fix nitrogen via its root nodules. Sea Buckthorn suckers freely and is capable of forming large, dense stands on dune systems. In this regard it has become a problem on Crymlyn Burrows but it has also formed a very large colony in dune marsh and fenland near Morfa, where it is having a serious deleterious effect on an important biodiverse wetland habitat which contains several priority species.

Female plants produce large numbers of orange berries that are eaten by frugivorous birds, particularly winter thrushes such as Fieldfare, which provide a very effective seed dispersal mechanism.

SITKA SPRUCE AND OTHER NON-NATIVE CONIFERS

Sitka Spruce is the most common tree in NPT and the most important timber species grown in our forestry plantations where it is planted as an even-aged monoculture in coupes. As trees mature they produce abundant cones and from these a huge amount of seed is rains down into neighbouring habitats. Where Sitka Spruce coupes are adjacent to upland heathland and moorland, this seed rain eventually gives rise to regeneration in priority habitats such as dwarf shrub heath. Good examples of this can be seen in the upland plateau regions of Glyncastle Forest. Other non-native conifer species have a similar effect though perhaps not as widespread as Sitka Spruce.



BUDDLEIA



CANADIAN GOLDENROD



COTONEASTER



HIMALAYAN BALSAM



HIMALAYAN HONEYSUCKLE



JAPANESE KNOTWEED



JAPANESE ROSE



MICHAELMAS DAISY



NEW ZEALAND PIGMYWEED



RHODODENDRON



SEA BUCKTHORN



SITKA SPRUCE



INVASIVE NON-NATIVE ANIMAL SPECIES IN TERRESTRIAL AND FRESHWATER ECOSYSTEMS IN NPT

With regards to invasive non-native fauna in NPT, we have records for a number of species, including:

- American Mink
- Grey Squirrel
- Red-eared Terrapin
- Egyptian Goose

Of these, perhaps the most common is the Grey Squirrel, which is ubiquitous across NPT and commonly seen across our parks, gardens and woodlands. The Grey Squirrel is a North American species, which is highly competitive with the native Red Squirrel, as well as transmitting a disease (Parapoxvirus) which has decimated the Red Squirrel populations in Wales. Red Squirrels were once found across the whole of NPT but by 1999 they had disappeared from the county and from much of Wales as a whole. This decline in the Red Squirrel has been attributed to the Grey Squirrel, though habitat loss, road traffic and other predators are also likely to have had an impact. Likewise, a similar correlation can be seen between the decline of the Water Vole and the spread of the American Mink, which has been blamed for the decline of Water Vole in other areas across the UK. We do not have substantial evidence of other non-native fauna causing significant problems in NPT, though this is not to say it is not occurring.



Grey Squirrel

THE DISTRIBUTION OF INNS (OF PARTICULAR CONCERN) IN NPT HABITATS

Table 2 shows the occurrence of 18 INNS in the NPT's major terrestrial and freshwater habitat categories. Note that waterweeds are listed as separate species except for Nuttall's and Canadian Pondweed which are included together. A number of significant issues are clear from this analysis:

- (i) All the major terrestrial and freshwater ecosystems in NPT have INNS in them.
- (ii) Cotoneaster, Himalayan Balsam and Japanese Knotweed are represented in more than half of these habitats while Buddleia and Rhododendron are also widely distributed.
- (iii) Urban habitats contain the most INNS and are likely to be the source of INNS in other habitats. For example a number of Cotoneaster species have spread from amenity planting on industrial estates, parks and gardens. Rhododendron has also spread uncontrollably in areas like Margam Park.
- (iv) Of the remaining habitats, coastal ecosystems supports the most INNS, e.g. Crymlyn Burrows.

Species	Woodland	Heathland and Moorland	Semi-natural grasslands	Open mosaic habitats	Enclosed farmland	Urban Habitats	Freshwater	Wetland	Inland Rock and Cliff	Coastal
Buddleia										
Canadian Goldenrod										
Cotoneaster spp.										
Curly Waterweed										
Garden Lady's Mantle										
Himalayan Balsam										
Himalayan Honeysuckle										
Holm Oak										
Japanese Knotweed										
Japanese Rose										
Michaelmas Daisy										
New Zealand Pigmyweed										
Nuttall's / Canadian Pondweed										
Parrot's Feathers										
Rhododendron										
Sea Buckthorn										
Sitka Spruce and other non-native conifers										
Grey Squirrel										
Number of INNS	10	4	3	3	7	14	4	3	1	7

Table 2: The occurrence of 18 INNS in NPT's major terrestrial and freshwater habitat categories.





**HOW CAN YOU
HELP?**

OVERVIEW

This document outlines how we can all take action for nature in NPT. NPT Local Nature Partnership members work hard to help nature recover in NPT but it doesn't have to stop there. Nature conservation begins at home and there are steps we can all take, wherever or whoever we are, to help preserve the natural heritage of NPT. In addition to the actions already set out within this document, we have suggested actions within this section that we, as individuals, could take to help improve the State of Nature in NPT. Take a look at the action plans and see what you could do to help.



AT SCHOOL



AT WORK



**IN THE
COMMUNITY**



IN THE GARDEN



HOW CAN YOU HELP?



Are you a parent or educator looking to engage children with nature in NPT? Below is a list of actions which you could take to get involved with NPT Nature Partnership projects and help the nature of NPT. If you'd like any further information or have any questions about any of the actions, get in touch at biodiversity@npt.gov.uk, and please let us know if you have completed any of the actions!

NPT BEE FRIENDLY - NATURE ON THE VERGE

You can help NPT Council to manage verges and grasslands for wildflowers by monitoring areas in your ward to help us to determine if our management is working. We have a number of suggested classroom and outdoor activities that you could do to get the children involved and help us learn how healthy the grassland is. Contact the team at biodiversity@npt.gov.uk to find your nearest NPT Bee Friendly site.



NPT BEE FRIENDLY - IN THE SCHOOL GROUNDS

Is there an area in your school grounds which is underused? Could you create a wildflower meadow or grassland there? This is a great project for all ages to get involved with, from doing surveys to see what plant species are present and monitoring pollinators to creating posters that tell people about your meadow. All you need to do is identify your area, stop mowing between April and August and very importantly, removing the cut material to compost so that soil nutrients are kept low. Edge cuts will maintain a neat appearance and signage, explaining what you are doing and why, helps to spread the message.

THE LOST PEATLANDS OF SOUTH WALES

Did you know that peatlands (peat bogs) store twice as much carbon as forests? And that we have lots of this special habitat in NPT? The Lost Peatlands Project is running until 2025 and is working to restore a large expanse of peatland in the uplands of NPT and RCT. Your school could do a project to learn more about peatlands or even have its own bog garden! Contact lostpeatlands@npt.gov.uk to find out more.



SOS - SAVE OUR SWIFTS

The amazing, screaming Swift is a summer visitor to NPT but, sadly, numbers of this red-listed bird are declining everywhere in Wales. This decline is thought to be due in part to the loss of nesting sites as buildings are renovated to modern standards. The provision of nest boxes or integral Swift bricks in suitable buildings may help to reverse this trend. Could you provide nest boxes for Swifts (or other house nesting birds like House Martins) on your school buildings? They need to be placed 5m above the ground with a clear flight path into the box. You can increase the chances of Swifts finding the boxes by playing the call of screaming Swifts to lure them in! Please tell us if you have Swifts nesting in your roof space.

AT SCHOOL

Are you a business looking to take action for your environmental and social responsibilities? There are a number of ways you can do your bit to help nature in NPT. If you'd like any further information or have any questions about any of the actions, get in touch at biodiversity@npt.gov.uk, and please let us know if you have completed any of the actions!

SUPPORT A NPT LOCAL NATURE PARTNERSHIP PROJECT

The LNP has projects which you could get involved with, through funding or volunteering. For example, Runtech recently supported the LNP by undertaking a team building day removing invasive Himalayan Balsam at Bryn Tip Local Nature Reserve. If you'd like to find out more about how you could help, get in touch at biodiversity@npt.gov.uk



NPT BEE FRIENDLY - ON YOUR GROUNDS

Do you manage any verges or other green spaces? Why not start managing them as wildflower verges? Simply changing the time you cut the grass can have a big impact on verge biodiversity. All you need to do is identify your area, stop mowing between April and August and remove the cut material to compost to keep the soil nutrients low. Edge cuts will maintain a neat appearance and signage, explaining what you are doing and why, helps to spread the message. Avoid planting non-native shrubs like Cotoneaster.

LAND MANAGEMENT WITH NATURE IN MIND

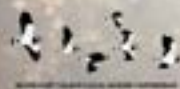
You can help local wildlife by stopping use of herbicides and pesticides, avoiding scrub and tree clearance/management in bird nesting season and by making space for nature on buildings, for example, by installing bird and bat nest boxes. These small steps can have a big impact locally. Creating hedges with native trees and shrubs along boundaries is another way of creating more habitat on your grounds. Why not get your staff together to discuss ideas?



GREEN INFRASTRUCTURE

Did you know that green infrastructure features such as green roofs, rain gardens and living walls can help regulate a building's internal temperature, reduce storm water runoff and mitigate the urban heat island effect? If planted with native wildflower species, they have the added benefit of being wonderful habitats for pollinators. For inspiration, examples of green roofs in the county can be seen on the containers at Craig Gwladus Country Park and a living wall can be seen at Swansea University Bay Campus.





Are you passionate about helping your community become a better place for people and nature? Below are a few ideas for you. If you'd like any further information or have any questions about any of the actions, get in touch at biodiversitynpt.gov.uk.

JOIN THE 'NPT FOR NATURE' GROUP

NPT for Nature is a sub-group of NPT Local Nature Partnership which meets every three months. The aim of the group is to provide advice and guidance for actions that you and your local community could do to help your nature neighbours. Join us to get ideas and inspiration, from butterfly surveys to meadow management.



NPT BEE FRIENDLY STREETS

Could you work with your neighbours to create a Bee Friendly Street? NPT Council have produced a guide to help you transform your front gardens, window boxes, shop fronts and communal spaces to encourage pollinators to visit and live on your street. Contact the team at biodiversitynpt.gov.uk to learn more.

BALSAM BASH

In the summer months, the invasive non-native species Himalayan Balsam appears along our rivers. Whilst undoubtedly a beautiful plant, it is a threat to our habitats, quickly out-competing native plant species to become the dominant vegetation over large areas. You can help to protect vulnerable habitats by organising community balsam bashes. Balsam bashing (pulling up the plant by its roots, or bashing it down) is surprisingly mindful and easy!



HEDGEHOG HIGHWAYS

One of the biggest threats to hedgehogs in NPT is isolation from other hedgehogs by fences, walls and busy roads. You could help the hedgehogs in your neighbourhood by working with your neighbours to create a 'Hedgehog Highway'- all it takes is the creation of a small hole in your garden fence! There is lots of information on how this could be achieved here hedgehogstreet.org

IN THE COMMUNITY

Are you passionate about encouraging wildlife in your garden? Below are a few ideas for you. If you'd like any further information or have any questions about any of the actions, get in touch at biodiversity@npt.gov.uk.

GO PEAT FREE

As well as being habitats for wildlife and stores of water to prevent flooding, the peatlands in the UK store three billion tonnes of carbon, more than all the forests of Germany, France and the UK put together. Peat from these peatlands is regularly used in the garden as compost. During the last 70 years, extensive areas of upland habitat on deep peat in NPT have been ploughed, drained and planted with conifers. The Lost Peatlands project is working to restore these peatlands, but you can also help by switching to peat-free in the garden.



CHOOSE LOCAL PROVENANCE PLANTS

Did you know that our native plant species will have adapted to the local conditions of NPT over a long period of time? This means that they will have local genetic variations, as will the pollinator species which depend on them in NPT. When planting new plants/ seeds in the garden, it is always best to source 'local provenance' stock to prevent this special genetic diversity from being diluted and damaged. Check with your plant supplier where your plants have been sourced from and look for local provenance.

NATURE ISN'T NEAT

Nature by design, isn't neat! You can help the wildlife in your garden by letting areas develop more naturally, leaving longer patches and letting plants like nettles have a little space. Many pollinators, like bees and butterflies, overwinter in dead plant material. You can help them survive the winter by leaving dead plant material standing, then clear it away in spring, only after temperatures are consistently reaching 10°C.



WILDFLOWER LAWN

It may seem contradictory, but native plant species flourish in low nutrient environments. This is because high nutrient soils allow more competitive species like grasses and brambles to overtake. You can encourage wildflowers in your lawn by putting away the mower in the flowering season and collecting cuttings after mowing to reduce the nutrients in the soil. You can find out more about this at plantlife.org.uk/uk/discover-wild-plants-nature/no-mow-may



NPT FOR NATURE



NEATH PORT TALBOT LOCAL NATURE PARTNERSHIP
BARTNERIAETH NATUR LEOL CASTELL-NEDD PORT TALBOT

ARE YOU A COMMUNITY GROUP OR ORGANISATION, OR A CONCERNED INDIVIDUAL WHO WANTS TO HELP NATURE IN NPT?

JOIN THE 'NPT FOR NATURE' GROUP TO LEARN HOW YOU CAN MAKE THE BIGGEST DIFFERENCE FOR NATURE IN YOUR COMMUNITY, WITH TONNES OF IDEAS FOR ACTIVITIES FOR ADULTS AND CHILDREN ALIKE.

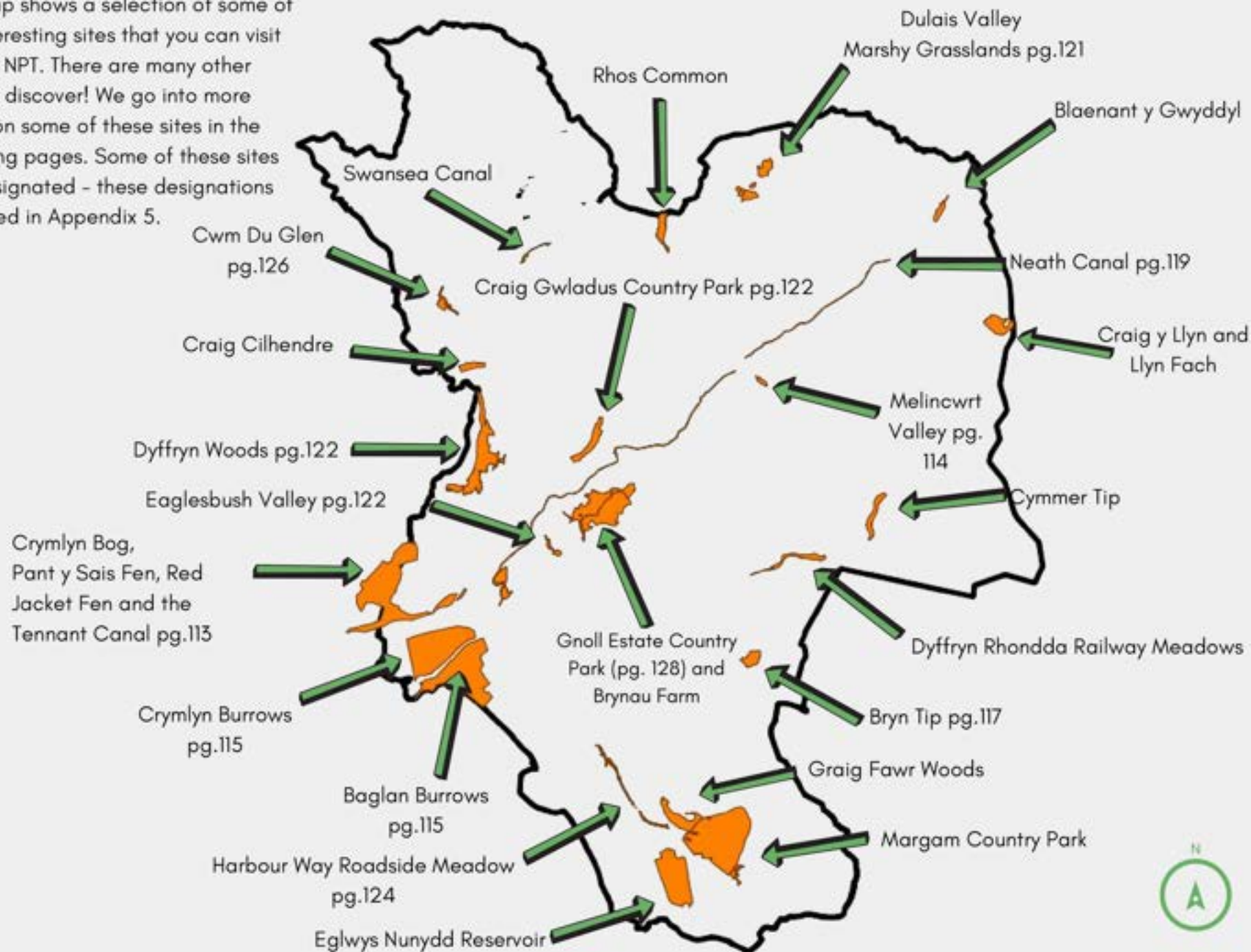
JOIN THE GROUP BY EMAILING [BIODIVERSITY@NPT.GOV.UK](mailto:biodiversity@npt.gov.uk)

HOW CAN YOU HELP?

SOME SPECIAL SITES IN NPT



This map shows a selection of some of the interesting sites that you can visit around NPT. There are many other sites to discover! We go into more detail on some of these sites in the following pages. Some of these sites are designated - these designations are listed in Appendix 5.



SPECIAL SITES IN NPT



Pant y Sais Fen and the Tennant Canal

Pant y Sais Fen is an area of reed-dominated wetland which has almost contiguous connectivity with Crymlyn Bog, the largest lowland fen in Wales. Combined, they make up one of the most important wetland habitats in south Wales. Crymlyn Bog has been designated as an internationally important Ramsar and SAC site.

Access to Pant y Sais is easy from the village of Jersey Marine, where a boardwalk circuit allows you to view some of its typical wildlife. In late spring and early summer you can view and listen to a variety of fenland birds such as Reed Warbler, Sedge Warbler, Grasshopper Warbler, Cetti's Warbler and Reed Bunting. Water Rail are sometimes heard squealing in the reeds and even venture out on to the boardwalk now and then during quiet periods in the morning and evening. Common Lizards are occasionally seen basking on the boardwalk and Grass Snakes are sometimes spotted moving through the vegetation. Pant y Sais is also a good place to look for dragonflies and damselflies, including uncommon species such as Hairy Dragonfly, Variable Damselfly, Scarce Blue-tailed Damselfly, Ruddy Darter and Black Darter.

Lots of colourful wetland plants inhabit the fen such as Bog Bean, Marsh Lousewort, Cross-leaved Heath and Ragged Robin. Insectivorous Sundew grows on the Bog Moss that occurs along the boardwalk and Blunt-flowered Rush is common in many places. Spectacular displays of Royal Fern and occasional clumps of Narrow Buckler-fern are very conspicuous in summer, and Pant y Sais is also one of the few wetland sites in Britain where the very rare Red Data Book species, Slender Cotton-grass, can be found.

Running along the side of Pant y Sais Fen and Crymlyn Bog, the Tennant Canal is an important wetland connectivity channel in NPT and is one of its most biodiverse freshwater habitats. Pike are common in the canal and aquatic plants like Mare's-tail, Fan-leaved Crowfoot, Unbranched Bur-reed and water lilies are conspicuous here. The diverse emergent vegetation along its banks supports a colourful flora with Flowering Rush, Marsh Cinquefoil, Greater Spearwort, Yellow Iris, Purple Loosestrife, Yellow Loosestrife, and Great Willowherb. Also conspicuous along the banks of the canal are the huge leaves of Water Dock and large clumps of Greater Tussock-sedge, Greater Pond-sedge and Tufted Sedge. One of the most important members of the Tennant Canal fauna is the large, semi-aquatic Fen Raft Spider, which hunts on the surface of the water. Fen Raft Spiders are rare in Britain and the Tennant Canal population is the only one in Wales.



Melincwrt Valley and Cwm Caca



Royal Fern

A short walk from the village of Melincwrt, near Resolven, will take you along the Melincwrt Brook into a little nature reserve managed by The Wildlife Trust of South and West Wales. It is an easy walk that takes you into the lower Melincwrt Valley as far as the photogenic waterfall, Sgwd Rhyd yr Hesg, which falls spectacularly into a jumble of sandstone boulders at its base. In places, the perpendicular walls of the valley are covered in mosses and liverworts, with sheets of Straggling Pouchwort draped over the wet rocks which are splashed by the cascading water, while Royal Fern clings on to the rock behind the waterfall. The path-side river bank is wooded with Wych Elm and Small-leaved Lime in places, and a rather inaccessible, north-facing vertical slab of rock here is covered with Tunbridge Filmy-fern in its only known location in NPT.

The steep wooded sides of the valley are dominated by Sessile Oak, with a ground flora that includes Common Cow-wheat, Bluebell and Wood Sorrel. In previous decades, Pied Flycatcher bred in this woodland but they haven't been recorded here in recent years. However, Grey Wagtail and Dipper are commonly found along the brook, and further upstream, above the waterfall, Spotted Flycatcher and Redstart are often seen.

The steep, gorge-like upper Melincwrt Valley, above the waterfall, is little explored, but wet rocks and splash zones there support interesting liverworts such as Compressed Flapwort and the exquisite Handsome Woollywort. Where the brook meanders through Cwm Caca there are banks of Ivy-leaved Bellflower and a large area of marshy grassland filled with rushes and bog mosses. Base-rich flushes in this vicinity have attractive swards of Thick-nerved Apple-moss, and small amounts of Beech Fern reside in the shade of rocky outcrops.

Sand Dune Systems of Baglan Burrows and Crymlyn Burrows



The coastal edge of NPT sweeps around Swansea Bay, from Swansea University Bay Campus near Jersey Marine, to Morfa Beach at the mouth of the River Kenfig. Two hundred years ago this coastal strip was composed of pristine sand dunes, but much of that has since been lost to industrial development. Only Crymlyn Burrows and Baglan Burrows, which are situated on either side of the Neath river mouth, survive as significant areas of sand dune ecosystems in NPT today, although smaller areas of dunes also occur in the vicinity of Aberavon and Morfa.

Access to Crymlyn Burrows is easy from the Bay Campus, where there is a Pay and Display car park. Baglan Burrows can be accessed from the coast path near Brunel Dock in Briton Ferry or from the northern end of Aberavon Beach. Both are distinguished by their dynamic, accreting sand dune systems, which sets them apart from many other dunes in Glamorgan and allows them to support diverse mobile sand communities of plants and animals.

Strand line and foredune areas are well developed at both sites, where there are large amounts of Sea Rocket, Prickly Saltwort and Sea Sandwort and occasionally, scattered plants of Frosted Orache. Moving inland, the mobile foredunes have conspicuous populations of Sea Holly, Sea Bindweed, Dune Pansy and Sea Spurge. Dune Fescue, an uncommon grass in Britain, is also found here with Sand Cat's-tail in amongst the Marram Grass. Sea Stock, which is now a rare plant on Crymlyn Burrows, can still be found in large numbers on Baglan Burrows. This Red Data species, which in the UK is found only in south Wales and the south west of England, is a very significant feature of our dune systems. Further inland the more fixed areas of dune have a very diverse collection of colourful grassland species, which include Pyramidal Orchid, Heath Violet and Kidney Vetch, which is particularly abundant on Crymlyn Burrows. Butterflies such as Small Blue, Brown Argus and the much larger Dark-green Fritillary fly in these biodiverse grasslands in summer.

Sand Dune Systems of Baglan Burrows and Crymlyn Burrows

Unfortunately, many of the diverse dune slack systems that were found on these dunes 50 years ago have been lost. In the 1970s, Fen Orchid, Early Marsh-orchid, Marsh Helleborine, Marsh Lousewort, Marsh Arrowgrass and Round-leaved Wintergreen featured in slack systems on Crymlyn Burrows, but none of these occur there now. However Early Marsh-orchid and Marsh Helleborine can still be found on Baglan Burrows, where there are also significant populations of Yellow Bartsia, Cyperus Sedge, Distant Sedge and Dotted Sedge. Plans and tentative preparations have been made to recreate new dune slacks on Crymlyn Burrows.

Of the birds you are likely to see on the dunes, Stonechat, Linnet and Skylark are particularly conspicuous and, in late spring, Cuckoo are often seen and heard. Winter sometimes brings a Short-eared Owl or Hen Harrier hunting over the dunes, while the strand line areas are good places to look for Snow Bunting at that time of year. Wading birds such as Dunlin, Ringed Plover, Bar-tailed Godwit, Oystercatcher and Curlew occur in varying numbers along the shore line, but the large winter feeding flocks of Sanderling that used to congregate on Crymlyn Burrows until recently have disappeared, probably as a result of relentless disturbance. In spring, small groups of Terns, including Little Tern, can usually be seen flying over the sea close to the shore, and Whimbrel are also seen on passage in spring and early autumn in most years.

Space does not permit a detailed description of the invertebrate fauna of these dunes but you can expect to see the carabid beetle, *Broscus cephalotes*, hiding under washed-up debris along the strand line, as well as Sand Digger Wasps and sometimes hundreds of Snake Millipedes. Dune Villa flies are also seen commonly resting on the sand on warm summer afternoons.

People are often surprised by the diversity of fungi that occur on our dunes. You might find the Common Bird's-nest fungus after a careful search of woody debris on the strand line where Dune Brittlestem is common. Less common is the little Dune Inkcap which grows in close association with Marram Grass. Among many other species that occur in the more fixed grassy areas are the beautiful lilac coloured Sordid Blewit and the white Dune Dapperling.



Short-eared Owl



Common Bird's-nest fungus

Bryn Tip



Bryn Tip is an area of grassland on the edge of the village of Bryn. In the early 20th century it was the site of the Bryn Navigation Colliery, once a busy and prosperous coal mine which provided employment for hundreds of people. Like many local mines, the colliery ceased operation in the 1960s, leaving behind an imposing, sharply pointed, pyramid-like tip of coal spoil. To stabilise it and render it safe from landslip, the tip was eventually landscaped into a lower mound shape, capped and seeded with a remedial grass and legume mixture. Since then, over the decades, Bryn Tip has developed into a species rich open mosaic site that is now designated a Site of Importance for Nature Conservation (SINC).

There is a surprising habitat diversity here which includes mesotrophic grassland, heathland, wet flushed areas and gorse scrub. Skylark and Meadow Pipit are common species on the upper grass-dominated slopes while Slow-worm and Common (Viviparous) Lizard are frequently observed basking on the edges of the gorse scrub, where there are breeding Linnet.

Bryn Tip is probably the best site in NPT to see Dark-green Fritillary butterflies. In their larval stage, they feed on Common Dog-violet, which is abundant on the site, while the adults, which fly in late spring and early summer, feed on nectar of various plants but seem to like Marsh Thistle, which is also common on the tip. Small Pearl-bordered Fritillary and Grayling also fly here as do more common butterflies such as Small Heath, Common Blue, Small Skipper, Ringlet and others.

One of the most remarkable features of Bryn Tip is its huge population of Bee Orchids which numbered almost one thousand there in 2021. Southern Marsh-orchid also occurs in large numbers but Common Spotted-orchid is much less common. Carline Thistle, a characteristic thistle on coal spoil, is a conspicuous member of the dry, free-draining soils along the main track.

Bryn Tip hosts a number of Sedge species, including Common Sedge, Grey Sedge, Pale Sedge, Pill Sedge, Spiked Sedge, Yellow Sedge, Glaucous Sedge and Green-ribbed Sedge. Yellow Sedge is particularly common in the flushed areas, where you will also find the beautiful Bog Pimpernel. Some of the more conspicuous, colourful tall herbs on the site are both Common and Fragrant Agrimony, Meadowsweet and Great Willowherb.

The main conservation challenge on Bryn Tip is preserving its current grassland condition. Management includes the removal of invasive non-native plant species such as Cotoneasters and Himalayan Balsam and the employment of a sympathetic grazing regime.

A wildlife tower has been recently added to the site in order to provide homes and roosts for various species, including bats.

Afan Forest Park

This large park in the Afan Valley, 48 square miles in area, has lots of tracks and trails that allow visitors to experience nature at any time of year. A Visitor Centre is situated on the A4107 near Cynonville where there is a car park and other facilities including visitor information and refreshments. From here you can take a number of walks, many of which are suitable for families. One of the best and easiest will take you from the centre along a disused railway track, past the old Cynonville Halt towards Dyffryn Rhondda and Cymmer. Here, in spring and early summer, you can experience a chorus of birdsong from summer migrants like Willow Warbler, Chiff Chaff, Blackcap and Garden Warbler, as well as all the common resident species such as Great Tit, Blue Tit, Coal Tit, Nuthatch, Song Thrush, Blackbird and Robin. House Martins are frequently seen buzzing around in the mid-summer sky above Cynonville in the evenings.

The banks and ditches along this track are full of mosses and liverworts, with carpets of beautiful Shining Hookeria in places and tufts of Fingered Cowlwort, a tiny hyperoceanic liverwort, on the bark of willow trees. Between Cynonville and Dyffryn Rhondda there are some biodiverse grassy areas on the coaly spoil of the levelled Dyffryn Tip; these are the Dyffryn Rhondda Railway Meadows. Devil's-bit Scabious is common in the large meadow, its flowers often visited by the handsome wasp mimic hoverfly, *Sericomyia silentis*. Other conspicuous flowering plants to note here are Southern Marsh-orchid, Chicory and Pearly Everlasting. Look out for Adder that are sometimes found basking on the woodpiles. They are shy creatures, not aggressive and will always seek to move quickly away from you if they are disturbed. On sunny days you will see lots of butterflies, including Dark Green Fritillary which are on the wing in late spring and early summer. Other things to note in the vicinity include a large population of Round-leaved Wintergreen and further along towards Cymmer there is an established heronry. Goosander are often seen flying along the river in this part of the Afan Valley.

Other areas of the forest park can be accessed from Rhyslyn, Gyfylchi, Abercregan, Glyncoirwg and Blaengwynfi. The Rhyslyn entrance in Pontrhydyfen has a large, free car parking area. Ash trees along the banks of the River Afan here have notable colonies of the Atlantic lichen, *Sticta limbata*, and little pools in the ditches along the tracks often have tadpoles and small numbers of Palmate Newts that usually predate them. Grey Wagtail and Dipper frequent the river hereabouts, where foamy water bounces off rocks covered in dark mossy cushions of River and Broadleaf Grimmia.

In many parts of the park large amounts of Japanese Larch became infected with *Ramorum* disease and have been removed. The clear-felled areas that have resulted from this have become occupied by Nightjar and Tree Pipits, and on balmy summer evenings the churring sound of male Nightjars can often be heard in the Pelenna Valley.

The River Afan has recovered significantly from the mine water pollution that turned its waters black and orange in the past. Now in much better condition, it is able to support populations of Brown Trout, Sea Trout and a run of Atlantic Salmon, although there are still issues with mine water pollution and eutrophication in some places.

Most of the park is dominated by large stands of Sitka Spruce where Siskin, Lesser Redpoll, Crossbill and Goshawk are found. These forests are often dark and sometimes impenetrable, but they have a large diversity of fungi which includes colourful species such as Fly Agaric and an assortment of Brittlegills like Ochre Brittlegill and the much rarer *Russula fuscorubroides*, one of NPT's Priority Species.



The Neath Canal



The Neath Canal is the longest canal in NPT, stretching for Briton Ferry to Glyn Neath in the Vale of Neath, more or less following the direction of the Neath River, which it crosses in a small aqueduct near Clyne. It can be accessed easily from many points in the valley, such as Giant's Grave, Melyn, Bridge Street (Neath), Cadoxton, Aberdulais, Resolven and Aberpergwm. In most places the tow paths allow easy walking, and for much of its length the canal supports a diverse flora and fauna which are easy to observe. However, some parts of the canal between Aberdulais and Resolven are in poor condition and the towpath is less accessible.

A walk along the Neath Canal is rewarding at any time of year but it is particularly good for wildlife viewing in spring and summer. The stretch between Giants Grave and Neath is particularly good with colourful flowering plants such as Greater Spearwort, Common Valerian, Great Willowherb, Water Forget-me-not, Yellow Loosestrife, Purple Loosestrife and Meadowsweet. Otter are sometimes seen here early in the morning and Heron and Kingfisher are frequently encountered. Where there are banks of reeds the metronomic song of the Reed Warbler or the sudden burst of song from a Cetti's Warbler is a common sound in spring and summer. Virtually all the common British damselflies and dragonflies are found along the canal, with spectacular displays in summer from the large and handsome Emperor Dragonflies patrolling their territories. Where the canal is shaded by trees, particularly between Tonna and Resolven, you may come across small groups of Beautiful Demoiselles.

Dipper and Grey Wagtail are occasionally seen along the stretch between Tonna and Clyne, where you may also be lucky to see a pair of Mandarin Duck. Moorhen are common everywhere and are often seen scuttling across the large floating leaves of Yellow Waterlily which dominate much of surface water between Briton Ferry and Neath. Other aquatics such as Broad-leaved Pondweed, Curled Pondweed, Water Starworts, Spiked Water-milfoil, Rigid and Soft Hornwort, Ivy-leaved Duckweed and Unbranched Bur-reed are also common.

Quiet observation of the water usually reveals the presence of fish such as Perch, Roach, Tench and Pike. In recent years, non-native terrapins have increased significantly and they can sometimes be seen basking out of the water in the canal near Giant's Grave.

The Vale of Neath Riparian Woodland Corridor



The most diverse woodland flora in NPT is found in the ribbons of woodland that occur along the banks of the River Neath between Tonna and Glynneath. Wych Elm is a common component of these riparian woodlands, with Ash, Sycamore, Alder, Hazel and Small-leaved Lime. The ground flora is made up of numerous ancient woodland indicator species such as Bluebell, Woodruff, Ramsons, Wood Anemone, Yellow Archangel, Pignut, Sanicle, Wood Speedwell and Toothwort, a diverse assemblage not seen in other types of woodlands in the county. Primroses are particularly common in some parts, and Great Wood-rush, Soft Shield-fern and Hard Shield-fern are often conspicuous. Common Twayblade is also seen occasionally.

There are numerous mosses and liverworts in these woodlands; Greater Featherwort, Lesser Featherwort, Hair pointed Feather-moss and Big shaggy-moss are characteristic species of the woodland floor, while Micheli's Least Pouncewort, Western Pouncewort, Many-fruited Leskea and Blunt Feather-moss are the characteristic epiphytes on the trees along the riverside.

A significant population of Meadow Saxifrage occurs all along the banks of the river in the riparian corridor, and near Resolven, Marsh Hawk's-beard occurs in one of its most southerly locations in Britain. The sandy, alluvial soils that accumulate on the banks of the river also support attractive tufts of Bordered Thyme-moss, which is generally uncommon elsewhere.

Dipper and Grey Wagtail are two of the most characteristic river birds in the Vale, but Common Sandpiper may also be seen bobbing in the shingle banks, where they make their nests. Kingfisher also breed here as do Spotted Flycatcher, which sit on riverside trees and dart out every now and then to catch insects. On fine evenings in summer you can watch Swallow, House Martin, Sand Martin and Swifts feeding over the river and if you are very lucky you may even spot an Otter. Goosander and Mandarin Duck are among other river birds that you might see.

The Dulais Valley Marshy Grasslands



© Charles Hipkin



Meadow Thistle © Charles Hipkin

Species-rich marshy grasslands have suffered badly in Wales as a result of agricultural improvements, conifer afforestation, development, inappropriate management and neglect and, unfortunately, there are now few good examples of this extremely important habitat in NPT. However, some parts of the northern sector of the county, particularly in the Dulais and Aman Valleys, still retain marshy grasslands that support significant, biodiverse communities.

Between Crynant and Banwen a number of grazed marshy fields have survived against all the odds. In several of them there are populations of Petty Whin, Dyers Greenweed and Saw-wort, all of which have declined greatly in the county over the last 50 years. A few marshy fields in the vicinity of Blaendulais (Seven Sisters) are notable for their Marsh Fritillary colonies, which are monitored carefully by Butterfly Conservation and volunteers every year. An exemplary, pony-grazed field near Seven Sisters Rugby Club supports one of the most diverse marshy grassland flora in NPT. Species there include Devil's-bit Scabious, Fen Bedstraw, Heath spotted-orchid, Butterwort, Marsh Valerian, Marsh Lousewort, Marsh Arrow-grass, Meadow Thistle, Whorled Caraway, Large-flowered Eyebright, Bog Pimpernel, Bog Asphodel, Creeping Forget-me-not, Tall Thyme-moss and Intermediate Hook-moss. Fen Bedstraw is a very scarce species in south Wales and its occurrence here is very significant. So too are the occurrences of Meadow Thistle, Marsh Lousewort and Butterwort, all of which have limited distributions in the county.

The widespread occurrence of Devil's-bit Scabious in these meadows, in addition to their local connectivity and the presence in them of a diverse selection of nectar producing plants suitable for butterflies, has created conditions favourable for Marsh Fritillary meta-populations. The recovery of marshy grassland habitats in clear-felled Sitka Spruce coupes has also been successful in the Dulais Valley and this could open the way for a wider recovery of this endangered habitat in NPT.

Identifying, protecting and maintaining these habitats in a favourable condition is a crucial challenge for NPT's nature recovery action plan. An important part of this will be the implementation of effective, sympathetic grazing regimes and the education of local communities and all concerned about the value of this endangered habitat in the county.

Some notable ancient deciduous woodlands in the vicinity of Neath and Briton Ferry

Woodland occupies about 40% of the land area of NPT and although most of this is conifer plantation there is also a substantial amount of ancient, semi-natural Oak woodland. In most there are good paths and trails, and many of these woodlands can be accessed easily. A significant block of ancient Oak woodland, managed by the Woodland Trust, occurs on the eastern flank of Drumau Mountain between Maesmelin and Dyffryn. Maesmelin Wood is famed for its Blue Ground Beetle population, a nationally rare woodland species and a priority species in NPT and the rest of the UK. Like nearby Darran Wood and Dyffryn Woods, Maesmelin Wood is dominated by Sessile Oak with abundant Holly, Silver Birch and Rowan. There are extensive networks of paths in these woods which allow you to experience wildlife in a tranquil environment. Tyn yr Heol Woods, which can be accessed from Dyffryn Road, is a beautiful valley woodland along the River Clydach near Bryncoch. In spring the colourful ground flora here is replete with Bluebell, Ramsons, Opposite-leaved Golden Saxifrage, Wood Anemone and Yellow Archangel, and a walk through the woods from Dyffryn Road to Main Road in spring or early summer will allow you to experience this.

Craig Gwladus Country Park is a woodland area above Cilfrew and Cadoxton, about 2 miles from Neath town. It has reasonable parking facilities, from which you can gain access to the old dram road. From there you can take a leisurely walk on a straight path below a steep and thickly wooded slope. As you walk west you will reach some stopping points that give great views of Neath and its surroundings. It is worth stopping to look at the extent of semi-natural deciduous woodland there is in this part of the county. Rocky outcrops of Pennant Sandstone can be seen on the south facing slope of the woodland and in some places, rocks dripping with seepage water are covered in bryophytes. Notable among them are the upland liverworts, Straggling Pouchwort and Notched Rustwort, and the impressive dark-green cushions of Mougeot's Yoke-moss. In many places there are large swards of Great Wood-rush and smaller amounts of Hairy Wood-rush, a good indicator of ancient woodland. In late spring there are impressive displays of Bluebell, particularly in the Beech plantation that is reached as you walk east along the dram road and the whole area is alive with bird song from Robin, Song Thrush, Blackbird, Blackcap and Chiffchaff. If you leave the dram road and head up into the steep woodland you will reach an upper path that takes you through the heart of Craig Gwladus' ancient oakwood where there are some patches of Wood Anemone. Look out and listen for Wood Warbler if you are here in May or June.



Some notable ancient deciduous woodlands in the vicinity of Neath and Briton Ferry

In historic times, there must have been a large, impressive and continuous forest of oak between Tonna and Baglan, which today, we see remnants of in Wenallt Wood, Tonna, Eaglesbush Valley and Briton Ferry. Eaglesbush Valley in Melyn Cryddan, is a Local Nature Reserve. A walk along Foundry Road follows the Cryddan Brook into the heart of the valley where ancient woodland clothes the steep east and north-facing slopes. Bluebell and Wood Sorrel are frequent here but there are also local patches of Wood Anemone and Dog's Mercury, which are not common components of our valley oak woods. Where the public access road comes to an end there is an area of oakwood on the south-facing side of the valley with a field layer of Purple Moor-grass, which is a notable feature. On the other side of the valley, an uneven, narrow path takes you up into Cupola Wood, an ancient Sessile-oak woodland, with an understory of Bilberry and Heather, that is depicted on some of the earliest maps of Neath and its environs.

Briton Ferry Woods (and the adjacent area of Baglan Woods) is an extensive block of forest, on the west facing slopes below Mynydd y Gaer, made up of ancient oak woodland mixed with Beech and Scots Pine plantations. A forest road, accessible from the back of Jersey Park in Briton Ferry will take you up through a very scenic Beech woodland into the Sessile-oak woodland which stretches around Myndd y Gaer to the northern end of Baglan. Woodland fungi are often abundant in these beechwoods in autumn. If you follow the forest road it will eventually take you to the old Cefn Cwrt Reservoir, which is surrounded by woodland on its northern and eastern flanks, with bilberry and heather, similar to that of Cupola Wood.



Blue Ground Beetle © Liam Olds



Wood Anemone

Roadside Verges and Roundabouts

As a result of changes in farming practises, modernisation and development, species-rich mesotrophic grasslands, such as traditional hay meadows, have become very rare in NPT and are a dwindling resource in Wales in general. Roadside verges can fulfil a similar role for biodiversity if they are managed properly and although they are not a perfect solution they are becoming important refuges for grassland floras and the insects that live in them.

Good examples in NPT include the verges along the A483 near Jersey Marine and Earlswood, the verges along Central Avenue near the Quays, the verges along Harbour Way near Margam and the Saltings Roundabout near Neath Abbey. In all these places, species like Ox-eye Daisy, Common Knapweed, Common Vetch, Bird's-foot Trefoil, Red Clover and Meadow Buttercup make up colourful communities that are important resources for pollinators like bees, butterflies and hoverflies, as well as hosts of other insects such as beetles and grasshoppers. Of interest too is the increasing occurrence of salt-tolerant species like Danish Scurvey-grass, Lesser Sea-spurrey and Stag's-horn Plantain along the edges of these verges. These species are typical of saltmarsh grasslands, but they have colonised roadside verge edges that have become enriched with salt from gritting in winter. Huge amounts of Danish Scurvy-grass appear along the A465 near Jersey Marine where the white and pale lilac flowers provide spectacular displays of spring colour. Other notable features of our verges include the outstanding display of Cowslips which occur on the Saltings Roundabout. More than 100 species of grassland plants grow here and include small amounts of the attractive Pyramidal Orchid.

The species-rich verge along the A483 near Jersey Marine has very conspicuous populations of Ox-eye Daisy and Bulbous Buttercup as well as occasional stands of Bee Orchid and Greater Burnet. Downy Oat-grass and Yellow Oat-grass occur among the more common False Oat-grass, Yorkshire Fog and Cock's-foot. Both are comparatively uncommon in NPT but benefit from the calcareous sand that is found in the soils of our coastal verges.

Banks of flowery verges occur along Central Avenue, particularly in the vicinity of the flyover bridge near the railway. Large amounts of Kidney Vetch, the food plant of the Small Blue butterfly, can be found here with Hedgerow Crane's-bill, Lady's-bedstraw, Hedge-bedstraw, Hay Rattle, Hawkweed Oxtongue, Germander Speedwell, Grass Vetchling and lots of others. The verges along Harbour Way provide a similar spectacle in summer, where there is also a remarkable population of Oxtongue Broomrape parasitising the Hawkweed Oxtongue there. This is a very rare species in Britain and the NPT populations are the only ones in Wales.

Roadside verges in NPT are managed increasingly to enhance their diversity of wildflowers and pollinators in line with the NPT Bee Friendly initiative (see Case Study; NPT Bee Friendly, page 32).



Conifer Plantations

Woodland and scrub occupies about 40% of the land area of NPT and the greatest part of that is conifer plantation. Large blocks of conifer forest occur in Crynant, Rheola, Glyncastle, Margam and Afan Forest Park (which includes the Michaelston and Pelenna forests). There is free public access via forest gates to all these places, although parking may be limited and access may be restricted to some places at certain times of year when forest operations are taking place. For those who like walking or cycling, there is lots of interesting wildlife which can be looked for along forest roads and old railway tracks. From the Afan Forest Park visitors centre near Cynonville, where there is a large pay and display car park, there are numerous tracks and trails that will allow you to experience the plantation environment. Nearby, at Rhyslyn (Pontrhydyfen), parking is free.



The mature forests in our plantations are mostly dominated by Sitka Spruce. They provide breeding habitat for birds like Crossbill, Lesser Redpoll, Siskin, Honey Buzzard, Common Buzzard and Goshawk, while conifer thickets and scrub areas have diverse bird assemblages that include Willow Warbler, Garden Warbler and Whitethroat. Clear-felled areas are important for their breeding populations of Nightjar and Tree Pipit in summer and the occasional Great Grey Shrike in winter. This habitat is also important for small mammals (e.g. voles) and reptiles. A leisurely, early morning walk along the forest roads in any of our plantations, will allow you opportunities to see and hear lots of birds and maybe spot a Fallow Deer.

Miles of forest roads and tracks cut through these plantations and the banks, ditches and verges along them provide habitats for a huge diversity of wildlife. Roadside verges are often rich in flowering plants, best walked on calm days in late spring and summer when you may see Small Pearl-bordered Fritillary, Brown Argus, Dingy Skipper and Small Heath butterflies, all of which are priority species in NPT. More commonly you will encounter large numbers of Common Blue, Ringlet and Meadow Brown. Later in summer, the Wild Angelica, Great Willowherb, Rosebay and Hemp Agrimony, which fill the tall herb layers, attract large numbers of hoverflies and bees, and large hawk dragonflies, particularly the Golden Ringed Dragonfly and the Southern Hawker, can often be seen patrolling their territories along the roadside edges. In high summer, Keeled Skimmer and Common Darter dragonflies are encountered commonly along forest roads.

Lots of priority plant species are found in our plantations, such as Ivy-leaved Bellflower which is usually found on banks above wet ditches with Bog Pimpernel and Lesser Skullcap, as well as Alpine, Fir and Stag's-horn Clubmoss, which occur mainly in moorland and heathy habitats in the high plateaux areas. Amphibians such as Common Frog and Palmate Newt are frequently encountered in the small ponds that occur in plantations, along with Broad-bodied and Four-spotted Chaser dragonflies.

Cwm Du Glen

Cwm Du Glen is close to Pontardawe Town Centre and may be accessed from a number of points, but most people use the main (signposted) trail which starts near Pontardawe Cross. The site is well known as an area of high aesthetic and biodiversity value with its steep-sided riparian woodland that dresses the lower section of the Upper Clydach Valley. Both sides of the Glen support semi-natural ancient deciduous woodland with a rich flora. Glanrhyd Plantation, which occurs above the Glen on the western side, is dominated by a mixture of native and non-native trees. More than 230 species of plants have been recorded in the Glen, which includes vascular plants (flowering plants and ferns) and a rich assemblage of bryophytes (approximately 90 species).

The river is an important habitat for Dipper and Grey Wagtail and the occasional Kingfisher, which are commonly seen from the main access path. The occurrence of spraint on the riverside rocks indicates that the site is also used by Otter. Wet rocks on the banks support a diverse bryophyte flora which includes common, conspicuous species such as Overleaf Pellia, Great Scented Liverwort, Greater Water-moss and Flagellate Feather-moss, as well as nationally scarce species such as Beck Pocket-moss, Broad-leaf Grimmia and Yellowish Fork-moss.

The riparian woodland that occurs along the banks of the river is dominated by Alder, with Ash and Wych Elm prominent in places. A number of notable ancient woodland indicator species such as Bluebell, Sanicle, Yellow Archangel and Wood Anemone are conspicuous here. Other conspicuous species include Remote Sedge, Pendulous Sedge, Great Wood-rush and Opposite-leaved Golden-saxifrage.

The steep-sided valley woodland is dominated by Sessile Oak but also includes Birch, Ash, Sycamore, Holly, Rowan, Beech and small amounts of Hazel. Neither Sycamore nor Beech are native in the glen, but both are represented by some large mature trees. Plant species in the herb layer here include Wood Sorrel, Enchanter's Nightshade, Bluebell and various species of ferns. Palmate Germanderwort, an uncommon liverwort in South Wales, occurs on decorticated logs in the valley. Woodland on the east side, in the vicinity of Gelligron waterfall (and above), supports abundant Hard Fern and attractive patches of Wood Horsetail. A large sward of Great Horsetail occurs in the section above the waterfall where there is also a population of Common Cow-wheat.

A good time to visit Cwm Du Glen is late spring and early summer when all our common woodland birds can be seen and heard, plus some notable migrants such as Wood Warbler and Spotted Flycatcher. Cwm Du Glen supports habitats which are suitable for roosting bats, and the whole site provides exemplary opportunities for feeding.

Some nationally scarce moths such as Blomer's Rivulet and Double Line were recorded by the Glamorgan Moth Recording Group in Cwm Du Glen in 2002. The Double Line is a BAP priority species which depends on the occurrence of Wych Elm in the Glen. Other moths of local significance which have been recorded in Cwm Du Glen include the Sharp-angled Peacock, Scorched Wing, Small Elephant Hawk-moth, Coronet and Beautiful Snout.



The Nedd Fechan and Pyrddin Valleys

From the little village of Pontneddfechan in the north-east corner of NPT, there is a very popular riverside walk that will take you into a temperate rainforest environment that is renowned for its biodiversity and scenic beauty. Parking is available along Pontneathvaughan Road and from there you can access the trail behind the Angel Inn which takes you into the lower Nedd Fechan Valley. You are immediately transported into a Celtic landscape where the river forms the border between NPT and Powys. The thick bed of sandstone here, known as the 'Farewell Rock', marks the end of the Coal Measures - it's a farewell to coal. From here on you will see boulders of the Millstone Grit series in the river, one of the few places in NPT where this type of rock is exposed. Wych Elm, Small-leaved Lime, Ash and Alder line the river bank, which is rich in bryophytes and ferns. Ramsons, Bluebell, Wood Anemone, Wood Speedwell and Woodruff are conspicuous members of the riparian woodland flora, while Grey Wagtail, Dipper and Goosander are some of the birds you might encounter on the river. The mossy valley woodlands here are typical of the humid, upland Sessile-oak woodlands sometimes described as temperate rainforests. Pied Flycatcher are found here in spring and summer, one of their few remaining breeding sites in the county.

The riverside trail eventually reaches a bridge which will take you across the river and allow you to follow the Nedd Fechan River into Powys. If you stay on the western, NPT, side, the trail now follows the Pyrddin River and quickly takes you to a point where you can view Sgwd Gwladys, one of the famous waterfalls in these headwater valleys. The cool, humid climate here creates perfect conditions for assemblages of Atlantic and hyperoceanic liverworts, such as Prickly Featherwort, Killarney Featherwort, Pearl Pouncewort and Toothed Pouncewort, and the steep, wooded slopes support a Celtic rainforest ground flora dominated by mosses such as Five-ranked Bog-moss which is found nowhere else in NPT.

The flora in the vicinity of the waterfall is remarkable and includes a number of boreal species such as Marsh Hawk's-beard, Beech Fern, Sharp-leaved Blindia, and Summer-moss. Below the dripping rock face there is a large colony of the beautiful Golden-head Moss and a small population of Welsh Poppy which has been known from this spot for many years and is probably in its only native location in the county.

The Pyrddin Valley becomes difficult to follow above Sgwd Gwladys, and to reach the upper waterfall, Sgwd Einion Gam, you have to cross the river on foot, which is dangerous in places. This spectacular waterfall pours down into a dimly lit amphitheatre where the atmosphere is saturated with mist and spray and where Oak Fern and Stone Bramble, two more boreal species, grow in sheltered crannies.

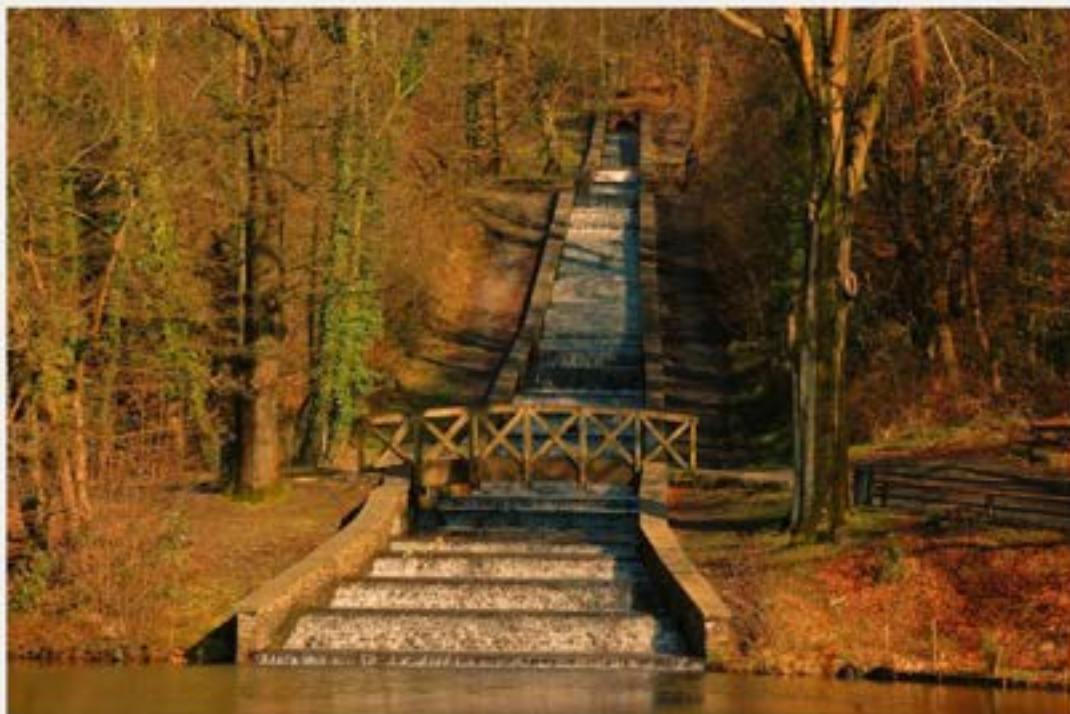


Gnoll Estate Country Park

The Gnoll Estate, once the 18th century seat of the entrepreneurial Mackworth family, sits prominently on a low hill overlooking Neath town centre. With its wooded landscape, 4 lakes and spacious grassland, it is today an important resource of urban greenspace and a popular venue for the town's residents and visitors. There is plenty of wildlife to see here at any time of year.

Vehicle access to the Gnoll is easiest from the Fairyland entrance which takes you to a large pay and display car park and the nearby Visitor Centre. Alternatively, it can also be walked from Neath Town Centre, walking through the memorial gate and past the lower pond.

From the Visitor Centre you can take a leisurely walk around the large lake (the second pond) and a number of paths and trails from there will take you into the heart of the impressive Beech woods. There is plenty to keep young families interested, with the avenue of Horse Chestnut providing a plentiful supply of 'conkers' along the route to the old Mackworth House; the hollow Oak, surviving decades of children clambering around its hollow trunk and the plentiful clumps of frogspawn and tadpoles found throughout the many ponds and ditches in the Park. The lake always has lots of wildfowl, including Mute Swan, Coot, Moorhen, Little Grebe, Mallard, Tufted Duck and Goosander. On quiet mornings you may also see a Water Rail, a Heron or a Kingfisher and in spring there are usually occasional sightings of Common Sandpiper along the edges of the lake. A grassy bank on the southern perimeter of the lake usually has a spectacular display of Southern Marsh-orchids in early summer. At any time of year you may see Red Kite soaring above your head.



Gnoll Estate Country Park

There are several magnificent specimen trees in the Beech woods, many of which must have been planted as part of the original Mackworth Estate. There is also lots of Hornbeam and smaller amounts of Norway Maple here and although none of these are native trees in this part of Wales, they provide an impressive woodland environment nonetheless. In autumn, woodland fungi such as the Wood Hedgehog, the Miller and the beautiful Orange Grisette can be found on the woodland floor, and in winter, flocks of Chaffinch with small groups of Brambling forage there for beech mast. Later in spring, Nuthatch can be heard whistling in the canopy while Greater Spotted Woodpecker drum on resonant tree trunks. Chiffchaff and Wood Warbler are among the summer migrants that breed here.

Fragments of ancient oak woodland still survive in the Dingle along Preswylfa Brook and in Mosshouse Wood, where Silver-washed Fritillary butterflies are occasional in summer and Purple Hairstreaks fly high in the woodland canopy. Spring displays of Bluebell can be impressive in these places, and you may also find other ancient woodland indicators such as Wood Anemone, Woodruff and Yellow Archangel. The little brooks and streams in these valleys are good places to look out for Grey Wagtail and Dipper.

From the Visitor Centre, there is an enjoyable walk to the upper Mosshouse lake, a disused reservoir surrounded by a quiet woodland bisected by an impressive, man-made cascade. Look out for Spotted Flycatcher hereabouts and listen out for trilling Wood Warbler. Pied Flycatcher have bred here in past years but have not been seen recently. En route to the old reservoir you will pass an area thick with birch and willow that has replaced a small plantation of Western Hemlock which was clear-felled not so long ago. The plot is quickly reverting back to deciduous woodland and is usually alive with birdsong from Willow Warbler, Whitethroat, Blackcap and Garden Warbler in late spring.

Bats are particularly active on warm summer nights around the second pond where there are roosts of Noctule and Daubenton's bats. They are undoubtedly attracted by the large numbers of moths that fly at these times. Moth traps usually pick up a diversity of species in the park, which have included the uncommon Alder Kitten and Chocolate Tip, as well as larger, spectacular, hawkmoth species.



Purple Hairstreak



REVIEWING THIS DOCUMENT

The State of Nature in NPT will be reviewed again in five years.

The actions and the priority species list will be reviewed each year in the first meeting of the New Year of the NPT Local Nature Partnership. Any action towards the NRAP Actions will be recorded in Appendix 3.

If you would like to help deliver a particular action in the plan, recommend a new action, suggest a review or take part in the review process, please email biodiversity@npt.gov.uk

APPENDICES

Appendix 1: Members of the Local Nature Partnership

Appendix 2: Priority species list

Appendix 3: NPT Nature Recovery Action Plan Actions linked to national NRAP objectives

Appendix 4: Species Names for those species mentioned in this document

Appendix 5: Sites mentioned in this document

Appendix 6: Glossary

