

# North York Moors National Park Authority

16 December 2013

## North York Moors Biodiversity Action Plan – Second Review

### 1. Purpose of the Report

- 1.1 To provide an update to Members on the review of the North York Moors National Park Biodiversity Action Plan and seek their approval for it to be adopted by the Authority and for it to be disseminated more widely for consultation and finalisation.

### 2. Background

- 2.1 The North York Moors Biodiversity Action Plan (BAP) was first approved by the Authority in September 2001, following considerable consultation with partner organisations, individuals and members of the public. The intention was to review the Local BAP after five years but a substantial revision of the national guidance meant that the first review was not completed until 2008 and the revised Local BAP was approved by Members in April 2009.
- 2.2 Most of the work that has previously been carried out by the UK BAP is now focused on the four devolved nations and delivered through separate strategies. The UK BAP partnership no longer operates. The Government revised its approach to biodiversity delivery again in August 2011 when it published 'Biodiversity 2020: A strategy for England's wildlife and ecosystem services'. This strategy sets out a series of high level objectives for how the quality of England's marine and terrestrial habitats will be improved up until 2020.
- 2.3 The role of local BAPs in delivering the Biodiversity 2020 strategy has not been made completely clear in any national level documents. The general message that Defra have given is that they may be an appropriate way to delivery local action but there will be no specific requirement to maintain a local BAP process in every area. Despite this Officers and partner organisations feel that retaining a local BAP process in the North York Moors is an appropriate way of agreeing and coordinating the delivery of priorities for the area and ensuring the Park makes a proportionate contribution to national targets. However the Local BAP process must ensure that it integrates appropriately with other strategic documents such as the National Park Management Plan and their priorities (e.g. habitat connectivity).
- 2.4 We continue to maintain strong relationships with neighbouring biodiversity partnerships but these groups are also reviewing how they contribute to local and national targets. All of these groups face funding challenges, which affect not just the lead partner but the amount of support they can expect from overarching organisations such as councils and statutory agencies. The new approaches these partnerships are looking to implement are summarised below, Overall coordination for local BAP partnerships in North Yorkshire was provided via the County Council but the Officer resource to do this has recently been lost. However the North Yorkshire Biodiversity Action Group has been maintained in some format as a sub group of the North Yorkshire Local Nature Partnership.

Previous Biodiversity Partnership	New Biodiversity Partnership	Biodiversity Action Plan
Scarborough	Ryedale & Scarborough (inc. Howardian Hills AONB)	Yes but condensed
Ryedale	Ryedale & Scarborough (inc. Howardian Hills AONB)	Yes but condensed
Hambleton	Hambleton (exc. Howardian Hills AONB)	No. Old BAP still relevant for planning purposes
Tees Valley	Tees Valley Nature Partnership	No. Although some of the strategy is carried forward by the new partnership under the umbrella of the LNP

2.5 The North York Moors BAP is mentioned as a key delivery tool in the Management Plan. It also continues to influence planning decisions through Core Policy C.

### 3. Progress Since 2008

3.1 The Local BAP has provided a strategic framework for the delivery of nature conservation in the National Park. The previous BAP successes include a number of habitat-focused projects which have achieved or are achieving their aims: the Esk Freshwater Pearl Mussel and Salmon Recovery Project (benefitting freshwater pearl mussel and riverine habitats), the North York Moors Grassland Project (species-rich grassland and lowland wetland), the Langdale Project (water vole, small pearl-bordered fritillary, rivers and lowland wetland), the Dukes and Pearls Project (Duke of Burgundy butterfly, pearl bordered fritillary and species-rich grassland), the peatland restoration programme (peatland within moorland and rivers) and the Cornfield Flowers Project (rare arable flowers). One of the main constraints on the delivery of actions in the last Plan has been the availability of or the ability to secure financial resources, for instance it has not yet proved possible to develop a project building on the recent discovery of Alcatheo's Bat or the bat foraging habitat modelling work carried out by the University of Leeds (building on the value of bats as indicators of biodiversity), nor to develop a funded partnership project to tackle invasive non-native plant species more widely in the River Rye catchment. They remain potentially valuable initiatives and depending on resources may be progressed to project development.

3.2 All of the above projects were designed to protect, enhance, buffer and extend valuable habitat or locations of threatened species. Although much was achieved, there is still plenty to be done and they have established an excellent basis from which to implement the Management Plan's emphasis on improving habitat connectivity.

3.3 A review of the performance of the North York Moors BAP 2008 - 2012 has been undertaken and a summary of progress under each Species and Habitat Action Plan contained within it is available on the National Park website ([www.northyorkmoors.org.uk/bap](http://www.northyorkmoors.org.uk/bap)) and printed copies will be available at the Committee Meeting.

#### **4. The Current Review**

- 4.1 Officers feel that the advantages of having a North York Moors BAP setting out a strategic framework for nature conservation in the National Park, identifying the contribution we make to England's biodiversity targets, setting out the detail for delivering the relevant aims in the Management Plan and promoting partnership working, outweigh the minimal additional administrative burden that it places on Officers. Even if the Authority decided not to have a new local Biodiversity Action Plan it would still require a biodiversity action reporting process to track progress against targets.
- 4.2 Reviewing the previous Local BAP has highlighted issues in measuring and reporting on some of the targets, especially when previous project or action leads have left their organisation.
- 4.3 National reporting through the Biodiversity Action Recording System (BARS) provided a mechanism for nation-wide activity on biodiversity to be recorded for the first time. It was reliant on the quality and quantity of individual contributions and had several shortcomings. These were recognised and a replacement system BARS2 has been rolled out. BARS2 attempts to standardise the manner in which data is entered and includes a geographic reference in an attempt to flag potential double-counting. As BARS2 is a new system and because of some ongoing issues with the reporting process its use is still to be fully optimised. However despite these issues BARS2 is the recognised route by which national biodiversity targets are monitored and reported and therefore it is considered essential that we use it, at least minimally.
- 4.4 In the current climate during which resources are under increasing pressure it is recognised that we must keep bureaucratic processes to a minimum and allow time and resources to be directed towards delivery of our biodiversity priorities. We therefore propose keeping the number of actions and targets we report on through BARS2 to a minimum whilst also ensuring that data is collected and reported on in a timely manner. We propose that a smaller set of actions and targets are identified within the Local BAP that are measurable and can be used to monitor our progress against the National Park Management Plan and Biodiversity 2020 targets.
- 4.5 In addition to the requirement to monitor progress against our biodiversity priorities there is also a secondary but important driver for the use of BARS2 in relation to its role in external funding. Many funding bodies make a specific requirement that actions delivered through their schemes are reported through this process. BARS2 can also be used to identify aspirational actions which may form the basis of future funding priorities via key agencies and external funding bodies.

#### **5. The New Plan**

- 5.1 The North York Moors BAP 2013 – 2017 has now been drafted. The five year time span of this Plan fits the norm a local Biodiversity Action Plan and importantly this is also concurrent with the time frame for the National Park Management Plan and will allow a coordinated process of reporting delivery of targets from both documents. The timing for development and finalisation of the new Local BAP has been delayed intentionally to allow the approach set through the national Biodiversity 2020 strategy to become clear. There is still considerable uncertainty around the Authority's own financial settlement and the availability of support through a new national environmental land management scheme and the Water Framework Directive. Key partners such as Natural England, Forestry Commission, Environment Agency, local authorities and non-governmental organisations also face current financial and structural uncertainty and this will affect how we deliver the plan. Depending on the

availability of budgets the Authority's own grant programmes, especially support for improving habitat connectivity and restoring Planted Ancient Woodland Sites (PAWS), will play an important part in the delivery of biodiversity actions as long as these fit with the priorities of the Management Plan. External funding will continue to be available, even if the details around the design and targeting are not yet known. Officers therefore feel that it is appropriate to develop a new Local BAP that sets out our ambitions for biodiversity for the next five years, accepting that the partnership will have to face new challenges and opportunities during the delivery period and that some of the targets may be considered aspirational.

- 5.2 At this stage the draft Plan requires some additional final consultation with a number of key partners which will be undertaken in the coming months through the Nature Conservation Liaison Group before the Plan can be finalised by the beginning of the 2014/15 financial year. The North York Moors BAP is a working document and the main method of publicising it will be through the Authority's website at [www.northyorkmoors.org.uk/bap](http://www.northyorkmoors.org.uk/bap).
- 5.3 The Local BAP is made up of a number of Habitat Action Plans (HAPs) and Species Action Plans (SAPs). There have been some minor changes to the HAPs and SAPs from the last Local BAP to simplify the way they are reported and make it consistent with Biodiversity 2020 reporting. We have only retained Species Action Plans where they do not fit neatly into a Habitat Action Plan or where we are currently delivering projects where progress is easier to measure against a dedicated SAP. The proposed changes are set out below:

<b>Previous Action Plan</b>	<b>New Action Plan</b>
Arable flowers	Farmland
Bats	Bats
Freshwater pearl mussel	Freshwater pearl mussel
Lowland wetland	Lowland wetland
Juniper	Juniper
Marine sub-tidal	Coastal
Maritime cliffs and slopes	
Rocky shore	
Moorland	Moorland
Rare butterflies	Rare butterflies
Rivers and streams	Rivers and streams
Road verges	Road verges
Species-rich grassland	Grassland
Water voles	Water voles
White clawed crayfish	White clawed crayfish
Woodland	Trees and woodland
Wood pasture, parkland and veteran trees	
	Wild daffodils

- 5.4 In most cases the National Park Authority is the lead organisation. This does not mean that all of the work will be carried out by the Authority but recognises that most of our partners have different administrative boundaries and we have an important role in collecting and reporting on work.
- 5.5 The targets in the new Local BAP will be driven by the targets and priorities from the Management Plan. Where specific quantifiable targets were set in the Management Plan (e.g. grassland, woodland) the BAP targets will stem directly from these figures. For habitats where no specific quantifiable targets were set in the Management Plan

the scale of the targets set in the Local BAP will be driven through the quantum of habitat identified through the habitat connectivity process. Species action will be picked up wherever possible through habitat measures, however where direct species action is required this will be prioritised to species highlighted in the Management Plan. Progress will be reported to Members, the Nature Conservation Liaison Group and through the website.

## 6. **Financial and Staffing Implications**

- 6.1 Coordination and reporting of BAP targets and actions will be carried out by officers in the Conservation Department. Many of the grant programmes administered by the Department are focused on delivering targets that are set out in the BAP. The most important of these are the improving habitat connectivity and PAWS restoration grant programmes. Delivery by the Authority and its partners depends on the availability of future funding and this is uncertain. We are making the most of our existing volunteer base and working with Rangers and the Volunteer Service to identify new opportunities for volunteer involvement.

## 7. **Contribution to National Park Management Plan**

- 7.1 The BAP is identified in the Management Plan as key to delivering the Environment Policies (specifically Policies E10 to E14, E36, E41, E45) that relate to protecting and enhancing the natural environment. It also makes a contribution to policies around Understanding and Enjoyment.

## 8. **Legal Implications**

- 8.1 There are no direct legal implications.

## 9. **Recommendation**

- 9.1 That:

Members approve the proposed approach to the new North York Moors Biodiversity Action Plan 2013 – 2017 and agree that the targets set out in Appendix A are circulated to delivery partners and members of the Nature Conservation Liaison Group for further consultation and finalisation.

Members adopt the revised Plan and give delegated authority to the Director of Conservation to finalise the document in light of consultation responses.

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## **Background papers to this Report**

## **File ref**

1. North York Moors Biodiversity Action Plan 2008 - 2012

FEATURES	TARGET DETAILS		
	TARGET	UNITS	GOAL
<b>HABITAT ACTION PLAN - COAST</b>			
Marine Subtidal zone to the Supralittoral fringe (includes rocky shore)	Provide support to agencies designating Runswick Bay and surrounding area as a Marine Conservation Zone.	part finance further research	?
	Work with emergency planners to maintain oil spill contingency plans by responding to updates on the plan and keeping Beachmaster training up-to-date.	Training sessions	2?
	Promote the message regarding sustainable fishing and shellfish collection	Media article/talks	2
	Continue to raise awareness of the national Beachwatch campaign and support local groups undertaking this.	Events Community groups	3-5
	With the help of the North York Moors National Park Education Service raise awareness of the coastal environment via educational tours / walks.	Tours/Walks	5
	Provide support for further survey and monitoring work in the marine subtidal and intertidal areas with particular regard to climate change species.	Surveys	3
	Support agencies undertaking work to combat diffuse and point source pollution issues within coastal streams / becks.	Fencing riparian bank (km)	?
	Work with coastal partners to mitigate habitat loss as a result of coastal protection and flood defence schemes.	Attend SMP Meetings	3
Supralittoral fringe to the Maritime Cliffs	Continue with a programme of encouraging undercliff grazing [where physically possible] to restore seacliff grassland and heathland quality at identified locations.	Sites	2
	Work with coastal partners to mitigate habitat loss as a result of coastal protection and flood management schemes.	Attend SMP meeting	3
	Continue to aspire to the 'One Field Back' principle on coastal farmland or buffering where whole field approach is not feasible.	km of buffer strips	?
	Instigate and promote habitat link projects and eco-corridors relating to the National Park Authority 'connectivity' actions on coastal slope and plateau farmland.	% of coastal sites	70
	Work with coastal partners to raise awareness of the natural processes on cliff slopes wherever possible.	Display boards	7

FEATURES	TARGET DETAILS		
	TARGET	UNITS	GOAL
<b>HABITAT ACTION PLAN - FARMLAND</b>			
Arable Flowers	Consider the future funding approach and sustainability for the Cornfield Flowers Project. All actions beyond 2014 are conditional on establishing the legacy to the currently funded phase.		
	Produce 2 press announcements to promote arable flora awareness in the National Park	Press announcement	2
	Stage 2 public events to promote arable flora awareness in the National Park	Event	2
	Utilise the cornfield flowers photos to stage an exhibition within the National Park	Exhibition	1
	To involve 1 more school within the National Park, by helping them to grow arable flowers and highlight the benefits they provide. As well as maintaining connections with current schools.	School	1
	To produce freely available information on conservation status and management of 80 arable flora species by utilising the Species Cards.	Species	80
	Maintain demonstration cornfield and nursery beds at Ryedale Folk Museum	Demonstration field	1
	Maintaining arable flora on the 11 known sites in the National Park by encouraging and continuing good management practice	Sites	11
	Continue introductions of arable flower species to the 3 main Cornfield Flowers Project sites and the 3 lead farm sites in the National Park to gain self-sustaining populations.	Sites	3
	Conduct 3 surveys to identify arable communities in the National Park	Survey	3
Continue to monitor the progress and success of lead farmers and main Cornfield Flowers Project sites in conserving sustainable populations of arable flora.	Monitor	6	
Farmland Birds	Provide expert advice to landowners / managers regarding appropriate habitat management, especially where good wader habitat or concentration of other vulnerable species occur.	Number of landowners	
	Carry out one survey of breeding waders on farmland during the Plan period, if funding available.	Survey	
Arable Field Margins	Encourage establishment of arable field margins in target areas through Improving Habitat Connectivity Programme and Cornfield Flowers Project.	Ha	1
Hedgerows	Improve the condition and increase the extent of hedgerows through Traditional Boundary Scheme Grant and Improving Habitat Connectivity Programme	Km	
Traditional Orchards	Seek opportunities to restore and increase traditional orchards through Improving Habitat Connectivity Programme and national agri-environment schemes	ha	

FEATURES	TARGET DETAILS		
	TARGET	UNITS	GOAL
<b>HABITAT ACTION PLAN - GRASSLAND</b>			
Species-rich grassland including Lowland Calcareous Grassland and Lowland Meadows	Assist with national agri-environment applications for species-rich grassland habitat management	Schemes	
	Where appropriate submit species-rich grasslands into Improving Habitat Connectivity / Wildlife Conservation Scheme agreements (NPA own schemes)	Schemes	
	Actively manage species-rich grasslands with scrub / weed / bracken control where required (where this is not covered by agri-environment schemes)	ha	
	Support land managers to re-introduce grazing where appropriate by assisting with fencing and water provision and finding suitable grazing stock (where this is not covered by agri-environment agreements)	Number of landowners / ha	
	Update the current status of species-rich grassland in the Park through Improving Habitat Connectivity programme and other survey work	Survey	
	Identify target sites for restoration and creation works that will extend the existing species-rich grassland network	Site	
	Assist with grassland creation works under Improving Habitat Connectivity programme and other Park and national agri-environment schemes	Site	
	Involve volunteers in active grassland management	Site / ha	
	Control invasive plant species at valuable sites	km	
	Collate a list of potential seed donor sites	Database	
	Survey sites for botanical / invertebrate interest	Survey	
	Provide expert advice on species-rich grasslands (including creation and restoration) to land managers	Number of landowners	
	Promote the nature conservation interest of the habitat to local communities and the public	Talks/Article/media/leaflet	

FEATURES	TARGET DETAILS		
	TARGET	UNITS	GOAL
<b>HABITAT ACTION PLAN - LOWLAND WETLAND</b>			
Ponds	Create or restore ponds to improve habitat for wildlife, delivered through Improving Habitat Connectivity or future national agri-environment schemes if appropriate	Number of ponds	
Lowland Fens	Improve the condition of existing lowland fens and create new habitat where appropriate	Site / ha	

FEATURES	TARGET DETAILS		
	TARGET	UNITS	GOAL
<b>HABITAT ACTION PLAN - MOORLAND</b>			
Moorland including Upland heathland; Blanket Bog; Purple moor-grass and rush pasture; Upland flushes, fens and swamps	Assist with national agri-environment applications for moorland habitat management – where appropriate.	Schemes	
	Increase heathland habitat within current conifer blocks to create a more natural fringe and buffer valuable open areas within the forest.	ha	
	Continue to restore and re-create wooded gills and upland woodlands where appropriate	ha	
	Continue to identify and block active moorland drainage grips and eroding stretches of deepened watercourses	ha / site	
	Continue to identify and re-vegetate eroding areas of bare ground, but retaining stable areas that could be of value to invertebrates or reptiles etc	ha / site	
	Ensure existing peatland restoration works continue to function fully - identify further restoration potential. Ideally working with Yorkshire Wildlife Trust/Yorkshire Water.	ha	
	Provide expert advice to landowners and land managers	Number of landowners	
	Advise managers, especially those with peatland sites, on sensitive burning	Number of managers	
	Promote the nature conservation interest and accessibility of the habitat to local communities	Talks/Article/media/leaflet	
	Collate information on intensity and methods of management	Database	
	Continue to monitor black grouse conservation initiatives nationally and consider their suitability locally.	Monitor	
	Monitor the restored blanket bog at and adjacent to May Moss	Monitor	
Moorland birds	Monitor moorland breeding waders at least once during the Plan period, subject to funding	ha	
	Continue to monitor the breeding populations of Merlin by annual volunteer survey of nest sites	survey	
	Increase the available habitat for raptors such as Merlin, Hen Harrier or Short Eared Owl within the National Park by 20 ha of degenerate stage heather in suitable locations	ha	
	Increase awareness of moorland birds to public and landowners with emphasis on disturbance & management	Talks/Article/media/leaflet	
Lowland Heathland	Increase heathland habitat within current conifer blocks to create a more natural fringe and buffer valuable open areas within the forest.		

FEATURES	TARGET DETAILS		
	TARGET	UNITS	GOAL
<b>HABITAT ACTION PLAN - RIVERS AND STREAMS</b>			
Rivers and Streams	Exclude stock where appropriate to reduce erosion & restore riparian habitats	km	20
	Carry out bank stabilization work to reduce bank erosion and sediment input	Sites	10
	Investigate opportunities for the installation of large woody debris, especially in the Esk	Sites	5
	Carry out woodland improvement works next to watercourses (buffer zones, fuzzy forestry in coniferous woodlands adjacent to watercourses, reversion of coniferous woodland to native broadleaved woodland which stabilises banks, coppicing and pollarding of alders with <i>Phytophthora</i> ).	Sites	10
	Work with Yorkshire Water and NYCC highways to improve water quality.	Catchment scale	1
	Continue to support peatland restoration work (grip blocking, peat stabilisation, re-profiling and re-vegetation)	Catchment scale	1
	Investigate potential for "MOPS – Mitigation options for phosphorus and sediment" in the Esk and Derwent catchments.	Sites	5+
	Remove or reduce (install fish passes or fish easements) barriers to fish migration.	Sites	3+
	Control the spread of Japanese Knotweed and other invasive non-native plant species along the River Esk & tributaries	Catchment scale	1
	Carry out surveys of main rivers in the National Park to determine presence and abundance of non-native, invasive plant species. In areas of concern control the spread of invasive species such as Himalayan Balsam and Japanese Knotweed along riparian zones.	Number of waterbodies surveyed	10+
	Promote a good practice approach to watercourse maintenance by providing general advice on watercourse management to land managers	Number of land managers contacted	50+
	Maintain a demonstration farm for best practice river-side conservation management	Site	1
	Promote the nature conservation interest of the habitat to farmers, land managers, local communities and, with the help of the NYMNP Education Service, to school children.	Number of events/meetings/site visits held	50+
	Support the riverfly partnership work on the Esk (Anglers Monitoring Initiative) – Riverfly co-ordinator	Group	1
	Encourage and support academic research on sediment erosion and water quality monitoring.	Number of studentships	2+
	Carry out River Corridor Surveys (RCS) to identify areas for river restoration work	km	5+
	Carry out walkover surveys of rivers in the National Park to identify barriers to fish migration.	Number of waterbodies surveyed	10+
	Help sign riparian farms up to agri-environment schemes	Number of schemes influenced	20+
	Promote CSF engagement and grants for farmers in the Esk and Derwent catchments.	Number of CSF grants in NP	30+

FEATURES	TARGET DETAILS		
	TARGET	UNITS	GOAL
<b>HABITAT ACTION PLAN - ROAD VERGES</b>			
Road verges	Produce 2 press announcements (newspaper/radio/local news) to promote grass verge awareness and generate interest	Media article	2
	Provide interpretation in a visitor centre or village hall which has close proximity to red/amber verges	Display board	1
	Install temporary signs to raise awareness of significant road verges and give some information about the particular verge it is situated on.	Signs	10
	Send leaflets to local authorities, parishes, contractors etc about best practice for cutting.	Leaflets	100
	Provide one plant identification session a year for volunteers as a 'refresher'.	Session	5
	Meet once a year with volunteers to discuss work that has been done and future work. To listen to and discuss volunteers' ideas.	Meeting	5
	Hold a meeting to improve liaison with members of e.g. Parish councils, County Council Highways and others. Make the National Park's road verge objectives clear to stakeholders, remind stakeholders of best practice for cutting and emphasize the importance of passing this information on to contractors.	Meeting	1
	Send a list of important verges to each Parish and an update on the quality of their road verges. Parishes to feel encouraged to improve their own road verges.	Report	2
	Continue to assess the condition of road verge habitats to measure progress but also to highlight any new concerns and threats.	km	100
	Manage special verges to retain and increase their species rich plant communities by appropriate cutting, scrub removal etc.	area strategy	10
	To improve the quality of road verges which link together areas of fragmented habitat.	area strategy	4
	Control and restrict the spread of invasive plants along road verges.	area strategy	4

FEATURES	TARGET DETAILS		
	TARGET	UNITS	GOAL
<b>HABITAT ACTION PLAN - TREES AND WOODLAND</b>			
Trees and Woodland including Wood pasture, Wet woodland	Advise on, write and instigate plans for conservation management of semi-natural woodlands	Ha	Increase in area managed in line with conservation objectives
	Encourage and provide training to volunteers to undertake recording work.	?	?
	Carry out opportunity mapping which identifies sites which are suitable and owners who are interested in restoration, management and extension of woodland habitat networks within priority connectivity areas	number of connectivity polygons assessed	100 of 132 Polygons assessed
	Initiate the restoration of PAWS on the Forestry Commission Estate	Ha	300
	Initiate the restoration of PAWS outside the Forestry Commission Estate	Ha	300
	Create new native woodlands in priority locations through natural regeneration and/or planting where they buffer or link existing habitat	Ha	180
	Create new wood pasture habitats in priority locations through natural regeneration and/or planting where they buffer or link existing habitat	Ha	90
	Create new wet woodland in priority locations through natural regeneration and/or planting	Ha	30
	Continue to promote & support the use of local origin oak by ensuring saplings are available for planting projects	No.	5000 per year on average
	Plant individual trees in priority locations where ageing populations of open grown trees are not being replaced or where habitat connectivity should be restored	No.	150/Yr
	Work with local/regional naturalists to collect information on privately owned woodland sites where this will inform management.	Sites	?
	Record the location and features of veteran trees and maintain GIS database.	No.	25/Yr?

FEATURES	TARGET DETAILS		
	TARGET	UNITS	GOAL
<b>SPECIES ACTION PLAN - BATS</b>			
Bats	Continue to promote and carry out site safeguard / improvement works to roosts (maternity, swarming and hibernation sites), especially those supporting large bat populations.	Enhanced roost sites	
	Enhance bat foraging habitats by developing a network of wildlife corridors and semi-natural habitats that allow bats to move freely through the landscape	Projects / ha	
	Promote bat conservation work, including the importance of habitat links between bat rich areas	Walks/ Talks/Article/medi a/leaflet	
	Establish local community projects to record bats in parishes, starting with two communities where interest can be generated	Projects / Survey	
	Promote surveys and research into bat roosts and important bat habitats that could inform habitat connectivity improvements	Survey	
	Enhance bat populations by encouraging potential roost sites through the planning process and through woodland and pasture management	Enhanced roost sites?	
	Increase the knowledge of the distribution and status of bats on the North York Moors	Database?	

FEATURES	TARGET DETAILS		
	TARGET	UNITS	GOAL
<b>SPECIES ACTION PLAN - FRESHWATER PEARL MUSSEL</b>			
Freshwater Pearl Mussels	Provide advice to riparian landowners and managers with regard to sediment runoff and water quality	Number of land managers contacted	50+
	With the help of the NYMNP Education Service, raise awareness and promote the conservation of FWPMs to school children.	Number of school activities	5+
	Aggregate FWPMs that are widely scattered to allow increased chance of breeding success – carry out a trial aggregation and monitor survival.	Trial aggregation carried out	1
	Identify suitable re-introduction sites within the River Esk catchment.	Sites	2+
	Carry out bankside encystment work, to increase levels of encystment of FWPM glochidia on host fish.	Number of bankside encystment works	3+
	Continue to work with FBA Captive Breeding Facility	Partnership working	1
	Investigate the requirement for further FWPM breeding stock at the FBA captive breeding facility.	Partnership working	1
	Carry out freshwater pearl mussel surveys to determine population distribution, size and structure	km	3+

FEATURES	TARGET DETAILS		
	TARGET	UNITS	GOAL
<b>SPECIES ACTION PLAN - JUNIPER</b>			
Juniper	Accumulate all juniper location data onto MapInfo Professional.	Database	
	Survey to establish whether the mature juniper are still present, their current condition and for natural regeneration. If resources allow, survey juniper seedlings in the same way.	Monitor?	
	Create juniper planting stock by propagating seeds and cuttings.	Number of saplings	
	Work with the NYMNPA Education Service and local schools to plant juniper seedlings in suitable locations.	Number of school activities	
	Construct and monitor bird perching posts near to mature junipers to encourage birds to eat and process the berries to benefit seed germination and dispersal.	Site	
	Encourage natural regeneration and growth by controlling bracken under mature juniper trees.	Site	
	Contact and inform landowners of the presence of juniper on their land so appropriate management can be implemented	Number of landowners contacted	

FEATURES	TARGET DETAILS		
	TARGET	UNITS	GOAL
<b>SPECIES ACTION PLAN - RARE BUTTERFLIES</b>			
Rare butterflies	Continue habitat management of all Duke of Burgundy sites / extant sites / any potential sites	Site	
	Continue habitat management of all Pearl-bordered fritillary sites / extant sites / any potential sites	Site	
	Continue habitat management of all Small pearl-bordered fritillary sites / extant sites / any potential sites	Site	
	Continue annual transect or timed count monitoring at all Duke of Burgundy sites	Monitor / Survey / Site	
	Continue transect or timed count monitoring at all / key Pearl-bordered fritillary sites	Monitor / Survey / Site	
	Undertake monitoring of key Small pearl-bordered fritillary sites	Monitor / Survey / Site	
	Monitor Dingy skipper sites	Monitor / Survey / Site	
	Release captive bred Duke of Burgundy individuals to suitable sites (on-going Captive Breeding Project)	Individuals / Site	
	Assess the need for a Pearl-bordered fritillary captive breeding project	Project	
	Provide advice to site owners regarding appropriate landscape management	Number of landowners or Talks/Article/media/leaflet	

FEATURES	TARGET DETAILS		
	TARGET	UNITS	GOAL
<b>SPECIES ACTION PLAN - WATER VOLES</b>			
Water vole	If required, provide fencing around watercourses, ponds and wetlands to remove grazing pressure from riparian zones for potential water vole colonisation.	m <sup>2</sup>	If required
	Where water voles are present or could be, remove conifers and control tree saplings and scrub in the riparian zone, to create buffer zones whilst maintaining some winter cover and food.	km <sup>2</sup>	If required
	Explore the feasibility and practicalities of creating habitat corridors and stepping stone habitats from existing groups of water voles, to encourage the spread of these animals into new areas. These features could also be used to allow linking the NYMNPA water voles with populations existing beyond the NP boundary	Word document	1
	Continue to carry out surveys and monitoring at key sites where water voles are present or potentially could be.	sites	91
	Maintain and monitor key rafts for water vole and mink. Carry out targeted mink control based on the information gathered.	rafts	47
	Promote the nature conservation interest of water voles to communities and school children with the help of the North York Moors National Park Education Service.	walks/ talks	20
	Target landholdings that currently support water voles and advise landowners / tenants on appropriate management to benefit water vole habitat.	land managers	10
	Control Himalayan balsam in riparian zones where the chance to create prospective new habitat arises. Himalayan balsam out-competes other species leaving no winter cover or food once it dies back.	sites	If required
Explore the practicalities of controlling rabbit populations where suspected overgrazing is causing prospective water vole habitat to become unsuitable.	Word document	1	

FEATURES	TARGET DETAILS		
	TARGET	UNITS	GOAL
<b>SPECIES ACTION PLAN - WHITE CLAWED CRAYFISH</b>			
White Clawed Crayfish	Monitor known white-clawed crayfish populations (Rye and upper Derwent valley)	Survey	10
	Monitor non-native crayfish populations in National Park.	Survey	10
	Walkover surveys and liaison with landowners, identify areas for habitat restoration.	Site	5
	Carry out surveys to identify suitable "Ark" sites for the w-c crayfish	Survey	10
	Carry out habitat restoration work i.e. buffer strips, fencing, non-native invasive plant control	Site	5
	Carry out translocation of w-c crayfish to "Ark" sites	Site	3
	Promote the rarity and conservation of w-c crayfish in the NYMNPA to landowners, farmers, communities and school children.	Talks/Article/media/leaflet	4

FEATURES	TARGET DETAILS		
	TARGET	UNITS	GOAL
<b>SPECIES ACTION PLAN - WILD DAFFODILS</b>			
Wild daffodils	Promote the importance of wild daffodils	Walks/ Talks/Article/media/leaflet	
	Continue to monitor wild daffodils in Farndale	Monitor	
	Undertake baseline surveys of wild daffodils in the Rosedale Area	Survey	
	Set up a recording system to save locations of wild daffodils in the Park reported to the NYMNPA	Database	