

Priority habitats and species in the Tees Valley – Update January 2012

Introduction

This is an update to the Tees Valley priority habitat and species and a summary of the current UK and English priority habitats and species.

UK and England:

- UK list of priority species and habitats – now used for general reference only
- England Biodiversity Strategy 2020 – focus on landscape scale; delivery plan due 2012; no specific targets or plans for habitats/species
- NERC Act – section 41 list of habitats/species to be used by public bodies in implementing biodiversity duty

Local

- LBAPs no longer formal expression of delivery of biodiversity targets, *but identify sub-regional priorities for nature conservation and propose agreed actions to conserve/maintain/enhance/increase local priority species and habitats*
- Revised list of local priority habitats and species have been produced by the Tees Valley Biodiversity Partnership.

National context- UK Priority Habitats and Species

Priority species and habitats are those that have been identified as being the most threatened and requiring conservation action under the UK Biodiversity Action Plan (UK BAP). The most-recent list of UK BAP priority species and habitats was published in August 2007 following a 2-year review. Following this review, the UK BAP priority list now contains 1150 species and 65 habitats. All of the original priority habitats, identified over 10 years ago, were re-selected, and the majority of priority species were also re-selected. The revised UK list of priority habitats and species is an important reference source. It has been used to inform statutory lists of priorities in England, Scotland and Wales, and will be used for an equivalent list in Northern Ireland. A list of the UK Priority habitats and species with further information is available at <http://jncc.defra.gov.uk/page-5705>

The UK BAP was created in 1994, and led to the development of numerical targets for biodiversity and Action Plans for priority habitats and species. Progress against these targets is reported on BARS. BARS (Biodiversity Action Reporting System) are the UK's Biodiversity Action Plan reporting system. As part of the UK government's review of websites the UK BAP site has been 'closed' and the core content migrated into the JNCC website. The national habitat and species plans have been archived and biodiversity strategies devolved to England, Wales, Scotland and Northern Ireland.

The new English Biodiversity Strategy

The new England Biodiversity Strategy – 'Biodiversity 2020: A strategy for England's wildlife and ecosystem services' was published in August 2011. This new strategy for England replaces the 2002 strategy and builds on the Natural Environment White Paper and provides a picture of how England is implementing its international and EU commitments. It focuses on landscape scale conservation. The delivery plan will not have targets or specific plans for habitats and species but the list of priority habitats and species will remain. A delivery plan is being developed in partnership with key stakeholders to map out and secure the attainment of the targets and ambitions in the Strategy. This plan is due to be developed in 2012 and will be used by all partners to monitor and report on progress in delivering the strategy.

Relationship between UK Priority Habitats and Species and English Habitats and Species of Principal Importance in England

The Natural Environment and Rural Communities (NERC) Act came into force on 1st Oct 2006. Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The list has been drawn up in consultation with Natural England, as required by the Act.

The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the Natural Environment and Rural Communities Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions. In particular:

- Local Planning Authorities will use it to identify the species and habitats that should be afforded priority when applying the requirements of Planning Policy Statement 9 (PPS9) to maintain, restore and enhance species and habitats. Note that along with other Planning Policy Statements, PPS 09 is being replaced by the new National Policy Framework during 2012.
- Local Planning Authorities will use it to identify the species and habitats that require specific consideration in dealing with planning and development control, recognising that under PPS9 the aim of planning decisions should be to avoid harm to all biodiversity.
- All Public Bodies will use it to identify species or habitats that should be given priority when implementing the NERC Section 40 duty.

Fifty-six habitats of principal importance are included on the S41 list. These are all the habitats in England that have been identified as requiring action in the UK Biodiversity Action Plan (.There are 943 species of principal importance included on the S41 list. These are the species found in England which have been identified as requiring action under the UK BAP. In addition, the Hen Harrier has also been included on the list because without continued conservation action it is unlikely that the Hen Harrier population will increase from its current very low levels in England. Further information and lists of habitats and species are downloadable from the Natural England website at

<http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/habsandspeciesimportance.aspx>

Tees Valley Biodiversity Action Plan

The UK Biodiversity Action Plan recognised that biodiversity is ultimately lost or conserved at the local level. It also recognised that achieving the Plan's goal of conserving and enhancing biodiversity would require a partnership approach. Nowhere is this more important than at the local level. Local Biodiversity Action Plans (LBAP) identify local priorities for biodiversity and work to deliver agreed actions and targets for priority habitats and species and locally important wildlife and sites. Biodiversity Action Plans (BAPs) are familiar to many individuals and organisations as a mechanism for securing local, regional and national delivery.

The current Tees Valley Biodiversity Action Plan covers the local authority areas of Hartlepool, Stockton, Middlesbrough and Redcar and Cleveland. Darlington is currently being incorporated into the plan. The cornerstone of the plan is habitat and species action plans for locally identified priority habitats and species. The process of preparing these plans has resulted in a much more detailed knowledge in the extent and location of key habitats and species in the Tees Valley and has resulted in the development and delivery of local conservation and habitat creation projects.

With the current trends towards landscape scale and ecosystem services approaches to biodiversity and lack of new England or UK targets or action plans for priority habitats and species, and the end of funds to Local Biodiversity Partnerships from Natural England in March 2011, the future of Local Biodiversity Plans around the country is uncertain. Defra state that "Whilst (Local Biodiversity Plans) themselves are no longer recognised as formal expression of the delivery of biodiversity targets many BAPs continue to be effective at securing biodiversity (and other) outcomes on the ground and provide a useful mechanism to focus delivery. This is an opportunity for the Tees Valley Biodiversity Partnership to review local priority habitats and species. The full plans useful reference source will remain on website and 2012 the plans will be integrated with an assessment of opportunities of landscape opportunities and a delivery plan developed as part of the work of the forthcoming Local Nature Partnership. This will incorporate the Darlington Local Authority area.

The TVBP has undertaken a review of the priority habitats and species in 2011. The priority habitats will remain the same with the addition of traditional orchards, which are a UK priority habitat. The number of priority species has increased significantly to 51. This list is likely to be adapted over time as more knowledge is gained, especially on less well studied species.

A summary table of the updated habitats and species is presented below. Action plans are on the TVBP website at <http://teesvalleybiodiversity.org.uk/>

Local Priority Species for the Tees Valley

Ref no.	Species name	Scientific name	Description/rational	UK BAP priority Species
1.	Barn owl	<i>Tyto alba</i>	Barn owl population of the UK fell by 70% in the 50 years between 1932 and 1982. However, by 1997 Project Barn Owl revealed that the national population had stabilised at about 4000 pairs. The main reasons for population decline are the loss of rough grassland as feeding habitat, loss of nest and roost site and road casualties.-verges are good for hunting but 60% of all barn owl deaths occur on the roads. In the Tees Valley the barn owl has been on the edge of local extinction since the 1970s. In the mid 1970's there were believed to be 8 breeding pairs, and 3-4 pairs in the mid 1980s. Since then it remains an uncommon resident with only 4-8 breeding pairs in most years. The rather scarce records included a high proportion of dead or dying birds by the roadside	UK BAP priority species
2.	Ringed plover	<i>Charadrius hiaticula</i>	The species is declining in the UK (with winter populations down by 26% between 197/8-2007/8. In the Tees Valley there has been a significant reduction in breeding habitat range since the 1980's. A breeding bird survey by the Teesmouth Bird Club from 1999-2006 shows 32 pairs holding territories, mainly at coastal sites. In the mid 1980's observers recorded breeding pairs (a maximum of 32 recorded) on the north side of the Tees Estuary, on industrial sites, mainly in the Brinefields. In 2006 no breeding territories were evident on these sites. The reasons for this loss are unclear. New open shingle areas on the Brinefields site have not been colonised and there has been no perceived disturbance of nest sites or increase in natural predators on these industrial sites.	
3.	Grey partridge	<i>Perdix perdix</i>	The species is rapidly declining in the UK (84% decline between 1970 and 1998 and has declined by a further 54% between 1995-2009). The drastic decline in this bird's range and abundance is a result of agricultural intensification, resulting in loss of insect food sources on farmland. In the Tees Valley there are estimated to be 300-350 breeding pairs. There are also small populations on some industrial sites on Teesside.	UK BAP priority species
4.	Tree sparrow	<i>Passer montanus</i>	In the UK there has been a huge decline in tree sparrow numbers (92% between 1970 and 2009, which is probably the result of agricultural intensification and specialisation, particularly the increased use of herbicides. A trend towards autumn-sown crops, at the expense of spring-sown crops that produce stubble fields over winter, plus the increased use of insecticides, will have reduced the amount of insect food available for nestlings. More recent data shows that the trend has since improved. In the Tees Valley, a study of tree sparrows in 1993 estimated a breeding population of about 135 pairs distributed in 10 loose breeding colonies scattered throughout the old county of Cleveland. Recent data (2011) from the Teesmouth Bird Clubs puts estimates at Breeding pairs at 261	UK BAP priority species
5.	Corn bunting	<i>Emberiza calandra</i>	In the UK its distribution is fragmented, with the bulk of the population found across southern and eastern England. Its numbers and distribution have been declining in some areas since the beginning of the twentieth century and steadily in most places since the early 1970s. The results of the Common Bird Census suggest that there was a 76% decline in the breeding population between 1968 and 1991. In addition there was a decrease in a range of 32% between the two breeding atlas periods (1968-72	UK BAP priority species

			and 1988-91). The Farmland Bunting Survey by the British Trust for Ornithology in 1993 recorded only around 20,000 territories remaining in Britain. The species remains common and widespread in southern Europe.. In the Tees Valley area the corn bunting is a scarce and localised resident with an estimated population around 20 pairs. Flocks are found at different locations in different years which have included Dalton Piercy, Boulby, and Naisberry in recent years.	
6.	Shelduck	<i>Tadorna tadorna</i>	A characteristic bird of the Tees estuary and marshes with a breeding population of 64 pairs (reported in the Breeding Birds of Cleveland 2008). Despite major loss of habitat the Tees estuary is still a site of national importance for shelduck wintering in the UK.	
7.	Little tern	<i>Sterna albifrons</i>	The species is declining in the UK (13% between 1986 and 2010). It nests in small numbers in discrete colonies on the upper shore, which are very vulnerable to natural disaster and human disturbance. In the Tees Valley there are 76 pairs (2009) which is This is 4% UK breeding population, with the main colony currently at Crimdon Dene. Nesting birds are actively conserved through annual wardening and protection and the majority of fledglings are ringed each year for research purposes. Recent threats have included predation by fox, hedgehog and kestrel.	
8.	Bittern	<i>Botaurus stellaris</i>	This red-listed species (RSPB/ BTO) is of conservation concern with a low breeding population in Britain. A few spend the winter in the Tees Valley birds are now seen annually locally but has yet to breed. The RSPB is working hard to encourage the species to breed by providing suitable habitats at Saltholme	UK BAP priority species
9.	Swift	<i>Apus apus</i>	Screaming swifts over British towns and cities are quintessential of warm summer evenings. However in the UK it declined by 31% between 1995 and 2009. In the Tees Valley the Breeding Birds of Cleveland (2008) gives a total of 673 pairs. It has been suggested that the demolition of old buildings and the design of new ones has reduced the availability of accessible roof cavities needed for nesting.	
10.	yellow wagtail	<i>Motacilla flava</i>	The species is declining in the UK, with a 55% decline between 1995 and 2009. This summer visitor is an iconic bird of wet grassland and pastures, with an increasing tendency to nest in arable crops. It is a long-distance migrant to Africa and is therefore susceptible to many hazards outside of the UK. . In the Tees Valley it is an uncommon breeding bird. The Breeding Birds of Cleveland (2008) gives a total of 36 pairs.	UK BAP priority species
11.	Purple milk-vetch	<i>Astragalus danicus</i>	National populations were stable until 1930, since when it has declined substantially on the chalk of southeast England and limestone in northeast England, largely because of agricultural improvement and a lack of grazing by stock. The 'Vascular Plant Red Data List for Great Britain' in 2005 lists it as endangered because of a reduction in population size (extent of occurrence and/or quality of habitat) of more than 50% over the last 10 years. In the Tees Valley it grows in the sand dunes and coastal grassland along the coast of the Lower Tees Valley. Past records indicate its presence at Seaton Dunes and Common, Hart Warren Dunes. South Gare, North Gare, Coatham Dunes, The Stray Redcar and Coatham Marsh Nature Reserve.	UK BAP priority species
12.	Water-violet	<i>Hottonia palustris</i>	This distinctive member of the primrose family is found in shallow ponds and ditches with good water quality. In the UK it is uncommon, with a localised distribution with evidence of considerable decline. It favours mineral-rich water and will tolerate some shade but is vulnerable to pollution In the Tees Valley it is on the northern edge of its natural range and is found at two sites and has been introduced into a third.	

13.	Green-winged orchid	<i>Anacamptis morio</i> formerly <i>Orchis morio</i>	This orchid grows in old unimproved meadows and pastures on base-rich to mildly acidic soil, mainly in southern part of the UK. Decline is due to habitat loss following agricultural intensification. In the Tees Valley/ Durham area it is at the edge of its range with less than 5 sites in the Tees Valley, mainly on coastal grassland sites.	
14.	Globeflower	<i>Trollius europaeus</i>	A perennial herb of cool damp habitats, preferring basic soils and sensitive to grazing. We are at the southern end of its range. Declining nationally due to improvement of hill land by drainage and fertiliser application. It occurs at one site in the Tees Valley but through a reintroduction programme by the Wildflower Ark, it has been introduced from local seed into 4 sites in Wynyard Woodland Park.	
15.	Pepper saxifrage	<i>Silaum silaus</i>	This tall late-flowering herbaceous perennial found in damp, unimproved neutral grassland, usually on clay soils. Although it is fairly common nationally it is included here as an indicator of damp meadows as it is often associated with interesting and declining species rich grassland plant communities.	
16.	Yellow Star-of-bethlehem	<i>Gagea lutea</i>	A bulbous perennial herb that grows in moist, base-rich, shady habitats. It is nationally scarce but is also possibly under-recorded. It is rare in the Tees Valley, growing at a few locations near the River Leven.	
17.	Burnt orchid	<i>Neotinea ustulata</i> formerly <i>Orchis ustulata</i>	This perennial orchid requires warm, dry conditions and is often found in tightly grazed chalk and limestone grassland on south-facing slopes. It occurs on sandy and gravelly soils in river meadows and on sand dunes. Nationally occurs in only 55 10km ² . It is found on the SSSI at Hart Warren.	
18.	Tufted sedge	<i>Carex elata</i>	A tussock-forming perennial sedge of oligotrophic or mesotrophic marshy habitats. The Tees Valley is at the northern most end of its distribution. and is recorded at a SSSI site in Dunsdale in East Cleveland and in sites in Darlington	
19.	Knotted hedge-parsley	<i>Torilis nodosa</i>	An annual member of the umbellifer family which is found on a wide range of dry, sparsely vegetated habitats. In the Tees Valley it is rare at the northern most end of its range, and is recorded on the grassy sea banks of Greatham Creek,	
20.	Flat sedge	<i>Blasmus compressus</i>	This sedge is widespread in Britain but it is a localized and rapidly declining species. It is found in open, sedge-rich areas in calcareous flushes, marshes, fens and damp grassland and pond and stream borders which are subject to flooding. It also occurs in brackish ditches at the head of salt marshes. Its decline is believed to be due to a variety of causes related to grassland drainage and improvement as well as eutrophication and the cessation of grazing. In the Tees Valley it was recorded at two coastal ponds near Redcar, including the TVWT reserve at Coatham.	UK BAP priority species
21.	Strawberry clover	<i>Trifolium fragiferum</i>	A creeping perennial herb that grows on the coast behind salt marshes, on earthen sea-walls and grazing marshes. Inland it occurs on pastures on damp alluvial or calcareous clay soils. In the Tees Valley it is locally and sparsely distributed in wet grassy places around the Tees Estuary	
22.	Black	<i>Populus</i>	Black poplar is one of the UK's rarest trees. It is a tree of rivers and floodplains and the River Tees in on the northern edge of its natural range, but only with a scattering of records, mainly from the	

	poplar	<i>nigra ssp Betulifolia</i>	Darlington area. The species is often confused with hybrid poplars which have been widely planted.	
23.	Small leaved lime	<i>Tilia cordata</i>	A tree species that is associated with ancient woodlands with a patchy distribution in Britain, mainly in southern England and the midlands. Small ancient colonies occur in East Cleveland in the Kilton Beck woodlands and associated hedgerows. In the north the tree is dependent on clonal propagation as temperatures are too low to allow successful seed production.	
24.	Scarlet Wax cap	<i>Hygrocybe punicea</i>	Wax caps (genus <i>Hygrocybe</i>) are distinctive fungi of unimproved pastures, old lawns and churchyards. They are restricted to grasslands with low nutrient input and a short turf. They are of conservation concern due to loss and degradation of habitat. They are also unrecorded due to a lack of experienced mycologists and the ephemeral nature of the fruiting bodies. The scarlet wax cap has been selected as a “flagship” species as, in grasslands where it is found, there are usually several other species of the genus.	
25.	Water vole	<i>Arvicola amphibius</i>	Once a familiar sight in lowland Britain water vole populations have been plummeting. It is believed to be our most declining mammal with the Mammal Society estimating that it is now absent from over 90% of sites occupied in the 1900’s. The reasons for its decline are complex but involve a combination of loss and fragmentation of becksides habitats, changes in watercourse management, and predation by mink which have spread through our countryside. In the Tees Valley local declines have mirrored the national pattern; however water voles do thrive in parts of the Tees Valley. One example is the urban Becks of Middlesbrough.	UK BAP priority species
26.	Brown hare	<i>Lepus capensis</i>	This once common mammal has had substantial population declines in Britain the twentieth century especially since the 1960’s. The National Hare survey in 2001 has estimated the current British population to be between 800,000 and 1,250,000 which is believed to be an 80% reduction since 1880. The decline in abundance is related to the simplification of the agricultural landscape in Britain. Increased intensification and farm specialisation plus changes in planting and cropping regimes. It is widespread throughout the Tees Valley and appears to be doing well in the industrial brownfield habitats around the Tees estuary.	UK BAP priority species
27.	Harbour (Common) seal	<i>Phoca vitulina</i>	Widely distributed in northern hemisphere waters, in Britain the largest populations are around the Scottish coastline and in the Wash. The species is not threatened but is prone to phocine distemper outbreaks, such as in 1988, when 3,000 Harbour seals deaths were reported in British waters. Seals have lived in the Tees estuary for centuries, declined through the nineteenth century and by the 1930s had disappeared. Disturbance by shipping, habitat loss, pollution and persecution by fishermen were contributing factors. Seals returned to the estuary in the 1980s after improvements in water quality. There is now a small but successful breeding population at Seal Sands, which also uses haul out sites at Greatham Creek and Billingham Beck.	
28.	Bats (all species except common pipistrelle)		Nine of the 16 species of bat that breed in Britain are found in the Tees Valley. Listed very approximately from what are likely to be the commonest (or most widespread) to the rarest in the Tees Valley these are: Common pipistrelle, Daubenton’s, brown long eared, noctule, Natterer’s, soprano pipistrelle, whiskered, Brandt’s, Nathusius’ pipistrelle. The Common pipistrelle probably makes up at least 90% of the total number of bats in the Tees Valley and other than Daubenton’s the other bats are likely to be quite rare locally.	

29.	Harvest mouse	<i>Micromys minutus</i>	<p>The species is considered by some to be declining in the UK.. A Mammal Society survey in 1997 resurveyed 250 sites nationally where the harvest mouse had been recorded in the 1970s. It was found to have disappeared from 72% of those sites. The reasons behind its decline are not fully known but habitat loss through agricultural intensification and habitat fragmentation and land drainage is thought to be a major factors.</p> <p>The species is on the edge of its range in north-east England and locally there have been very few records, even historically. As recently as eight years ago there were no known current records. It had apparently disappeared from its last known sites since the 1980s. More recent research has unearthed about ten sites where harvest mice are still found in the wider Tees Valley area but some of these are likely to be small, isolated populations.</p>	UK BAP priority species
30.	Great crested newt	<i>Triturus cristatus</i>	<p>Britain is an important stronghold for the species. It is widely distributed in England but with a decline in range and abundance in recent years. The main factor for their decline is loss of suitable breeding ponds and loss and fragmentation of terrestrial habitats. They are widely distributed across most of the Tees Valley but there are no current, confirmed records from Middlesbrough and few from around the lower Tees Estuary. As much of the land in the lower Tees Estuary is reclaimed, it is possible that great crested newts were never present in these areas. There are healthy populations around the Eaglescliffe and Cowpen Bewley area but otherwise populations seem to be small and fragmented.</p>	UK BAP priority species
31.	Common lizard	<i>Lacerta vivipara</i>	<p>The species is widely distributed but local throughout the UK. It has a very localised distribution in the Tees Valley and historically confined to the coastal fringes of north Hartlepool and Redcar & Cleveland; though no reports from North Hartlepool in the past five years. It also occurs on the fringes of the North York Moors National Park. There are recently reported from a few sites on the industrial area of the North Tees, which may well be introductions, as might be the case for the handful of inland records.</p>	UK BAP priority species
32.	Slow worm	<i>Anguis fragilis</i>	<p>Slow worms are widespread throughout Britain, but most common in the south and east of England. The species has a localised distribution in the Tees Valley. It is currently found exclusively in Redcar & Cleveland, where it no doubt forms an extension to its broad distribution across the North York Moors. Up to 2008 the number of locations where it had been recorded from was still in single figures. The subsequent increase in records to around 20 locations suggests that it might be widely distributed in Redcar and Cleveland, though nowhere does it appear to be common, with only two sites recording more than a single individual.</p>	UK BAP priority species
33.	Dingy Skipper	<i>Erynnis tages</i>	<p>The Dingy Skipper is locally distributed throughout Britain and Ireland, but has declined seriously in recent years. One of the main threats is loss of suitable habitat due to the encroachment of tall herbaceous vegetation and scrub as well as loss of brownfield sites to development. The Tees Valley is a regional stronghold for the Dingy Skipper. There are colonies throughout the brownfield sites of the Tees Estuary. Key sites include Graythorp, Greenabella Marsh, Maze Park, Portrack Marsh, Seal Sands, South Gare, and Coatham marsh / dunes.</p>	UK BAP priority species
34.	Grayling	<i>Hipparchia semele</i>	<p>This is a widespread species but is declining in many areas, particularly inland. In The Tees Valley Grayling colonies are mainly associated with the old industrial sites of the Tees estuary. Key sites are Greenabella Marsh, Maze Park, Seal Sands and South Gare / Coatham sand dunes.</p>	UK BAP priority species
35.	White-letter	<i>Satyrium w-album</i>	<p>This secretive woodland butterfly occurs throughout much of England and Wales. The butterfly uses elms (<i>Ulmus spp.</i>) as larval foodplants. It had been seriously threatened by the demise of elms as a</p>	UK BAP priority species

	Hairstreak		result of Dutch Elm Disease, but seems to have partially recovered. It is known to use young elms in hedgerows as well as mature trees. This species spends much of its time in the treetops and is often difficult to see but they do occasionally come down to ground level to nectar on thistles and bramble blossom. In the Tees Valley well known sites are Hardwick Dene, Hart to Haswell Walkway, Tockett's Mill (Guisborough), Upleatham and in the Wynyard Woodland complex.	
36.	Blomer's Rivulet	<i>Discoloxia blomeri</i>	A scarce moth species which occurs sporadically throughout England and Wales in deciduous woodland, depending upon Wych Elm (<i>Ulmus glabra</i>) as its larval foodplant. In the Tees Valley it has a strong population in Mines Wood, Boulby and is also known from Saltburn Woods and from Thorpe Bulmer Dene near Hartlepool. Blomer's Rivulet has a 'nationally notable' (Nb) conservation status.	
37.	Crescent Striped	<i>Apamea oblonga</i>	This moth is associated with saltmarsh grasses (<i>Puccinellia</i> spp.) and occurs sporadically along the south and east coasts of England. In the Tees Valley the species' distribution is limited by the extent of available habitat. Crescent Striped is highly localised but not uncommon on the Brinefields. It is likely to occur on Cowpen Marsh and on saltmarsh at Greatham Creek. Crescent Striped has a 'nationally notable' (Nb) conservation status.	
38.	Fen Wainscot	<i>Arenostola phragmitidis</i>	This is one of five scarce 'wainscot' moth species which are associated with reedbed containing Common Reed (<i>Phragmites australis</i>). Fen Wainscot is locally distributed in the south and east of England. It is rare in north east England but in the Tees Valley it has a strong population at Portrack Marsh and is also currently known to occur at reedbeds in Billingham, Greenabella Marsh and at Seal Sands. It probably occurs in other large reedbeds within the Tees Valley. Fen Wainscot has a 'local' conservation status.	
39.	Forester	<i>Adscita statices</i>	A day flying moth species which is associated with Common sorrel (<i>Rumex acetosa</i>) growing in acid grassland, often, though not always, in association with lowland heath. This species has a wide distribution over much of England and Wales, although it is by no means common. It has scattered populations locally, including Dorman's Pool, Eston Moor and 'The Whinnies', Darlington. The largest population of this species which is currently known in the UK was discovered in July 2011 on land owned by the Forestry Commission at Coatham Wood, Long Newton. The Forester has a 'local' conservation status.	
40.	Large red-belted Clearwing	<i>Synanthedon culiciformis</i>	This day-flying moth species is associated with birch woodland and birch scrub growing on heathland. The larva has very specific requirements, feeding under the bark of two-year old birch stumps. It is widespread across much of Britain and in recent years the advent of pheromone lures has increased the frequency of records. The species has a 'nationally notable' (Nb) conservation status. It is highly localised in north east England and in the Tees Valley there is a population on Eston Moor.	
41.	Lyme Grass	<i>Chortodes elymi</i>	This 'nationally notable' (Nb) moth species is restricted to coastal sandhills from Suffolk northwards to eastern Scotland. As its name suggests, it is dependent upon lyme grass (<i>Elymus arenarius</i>) as the larval food plant. In the Tees Valley it is established in the dunes at Bran Sands, Marske, North Gare and South Gare.	
42.	Shore Wainscot	<i>Mythimna litoralis</i>	This is a coastal species of moth which occurs in sand dunes, mainly in England and Wales. The larvae feed on marram (<i>Ammophila arenaria</i>). It is rare in the Tees Valley but is known from North Gare, South Gare and Spion Kop near Hartlepool. Shore Wainscot has a 'nationally notable' (Nb) conservation status.	

43.	Eccentric Grass Snail	<i>Vallonia excentrica</i>	Species associated with calcareous grassland with a short sward. Likely to be on northern edge of range in The Tees Valley. Distribution of both species not known in the Tees Valley but recorded at Spion Kop Cemetery in Hartlepool in 2004.	
44.	Moss Chrysalis Snail	<i>Pupilla muscorum</i>		
45.	Bullhead	<i>Cottus gobio</i>	The bullhead is a small bottom-living fish that inhabits a variety of rivers, streams and stony lakes. It appears to favour fast-flowing, clear shallow water with a hard substrate (gravel/cobble/pebble) and is frequently found in the headwaters of upland streams. However, it also occurs in lowland situations on softer substrates so long as the water is well-oxygenated and there is sufficient cover. It is not found in badly polluted rivers. It is common throughout much of the Tees catchment but is notable by its absence in urban becks and heavily silted water bodies.	
46.	Salmon	<i>Salmo salar</i>	Once abundant in the Tees, salmon numbers declined with the growth of industry in the lower Tees to the extent that the river was considered to be devoid of this fish between the 1920s and 1983. Ironically a pollution incident in Teesdale revealed that some salmon were still managing to migrate through Teesside's 'anoxic plug' and less and cleaner industry has seen numbers gradually increase. Salmon are an important food source for a wide range of predators including otters, seals and goosander. Salmon need clean, aerated water and clean substrates to successfully spawn in. Egg survival is compromised by fine sediment smothering reeds and 'spikes' of nutrient, such as ammonia, from field run-off. Invertebrates, the primary food source of salmon fry are similarly impacted. Salmon are an anadromous species and can complete numerous migrations in a lifetime. The Tees barrage presents a problem to the recovery of this species in the river at both inward and seaward migrations although recent modifications to the canoe slalom may improve the situation. Other barriers are being addressed through Water Framework Directive initiatives.	UK BAP priority species
47.	Brown trout	<i>Salmo trutta</i>	Brown trout require clean, aerated water and clean substrates to successfully spawn in. Egg survival is compromised by fine sediment smothering redds and 'spikes' of nutrient, such as ammonia, from field run-off. Invertebrates, the primary food source of trout fry are similarly impacted. Brown trout are potentially anadromous migrating to estuarine waters and returning to freshwater to spawn. The reasons for this are as yet unknown. Numbers of brown trout in the Tees have declined as a result of degraded and fragmented habitat, barriers to migration and pollution.	UK BAP priority species
48.	European eel	<i>Anguilla anguilla</i>	Eels are a catadromous species living in fresh water and migrating to the marine environment to breed. Recruitment of the European glass eels has declined by between 95 - 99% since 1979. It is listed as critically endangered by the IUCN. Numerous factors are responsible for the decline in eel numbers and include barriers to migration, hydropower turbines, loss of wetland habitat and the introduction of the parasitic nematode <i>Anguillicola crassus</i> . The Tees Barrage has some opportunity for glass eel migration incorporated into its design but escapement of adult silver eels around the barrage is unknown. Very little is known about the current population and extent of eels in the Tees.	UK BAP priority species
49.	Brook lamprey	<i>Lampetra planeri</i>	The brook lamprey is a primitive, jawless fish resembling an eel, and is the smallest of the lampreys found in the UK. It is a non-migratory freshwater species, occurring in streams. The brook lamprey requires clean gravel beds for spawning and soft marginal silt or sand for the ammocoete larvae. It	All lamprey are UK BAP priority species

			spawns mostly in parts of the river where the current is not too strong. It is found in the Leven and Skerne tributaries. Degraded habitat and spawning gravels are key factors in their decline.	
50.	Sea lamprey	<i>Petromyzon marinus</i>	The sea lamprey is a primitive, jawless fish resembling an eel. It is the largest of the lampreys found in the UK. It occurs in estuaries and easily accessible rivers, and is an anadromous species. Sea lampreys need clean gravel for spawning, and marginal silt or sand for the burrowing juvenile ammocoetes. Sea lampreys have a preference for warm waters in which to spawn. Features such as weirs and dams, as well as polluted sections of river, may impede migration to spawning grounds. Sea lampreys seem to be relatively poor at ascending obstacles to migration, and are frequently restricted to the lower reaches of rivers. The Tees barrage presents a considerable barrier to migrating sea lamprey.	
51.	River lamprey	<i>Lampetra fluviatilis</i>	The river lamprey is found in coastal waters, estuaries and accessible rivers. The species is normally anadromous and pollution or artificial obstacles such as weirs or dams impede migration. The UK populations are considered important for the conservation of the species at an EU level.	

Local priority habitats for the Tees Valley

Ref no.	Habitat name	Brief habitat description and extent in Tees Valley	UK Bap Priority Habitat
1.	Arable field margins	Arable field margins refers to strips of land lying between arable crops and the field boundary, and extending for a limited distance into the crop, which are deliberately managed to create conditions which benefit key farmland species. In the Tees Valley, cereal field margins and arable fields provide important habitats for the following key bird and mammal species: brown hare, grey partridge, song thrush, linnet, corn bunting, tree sparrow, turtle dove, bullfinch, barn owl and skylark. Corn buttercup is a rare arable weed that occurs on a few arable field sites in the Tees Valley.	Arable field margins
2.	Semi-natural broadleaved lowland woodland	This includes a broad range of woodland in the Tees Valley, ranging from lowland mixed deciduous woodland includes woodland, to wet woodland and upland oak woodland. The most important is Ancient woodlands, defined as land that has had continuous woodland cover since at least 1600AD, is considered to be the most valuable and irreplaceable woodland. It includes semi-natural woodland (ASNW), and sites which have been felled and replanted (usually with a conifer crop) known as planted ancient woodland sites (PAWS). Broadleaved woodland in the Tees Valley is unevenly distributed, with most being concentrated in the beck valleys of eastern Cleveland and other clusters around Wynyard in Stockton and the River Leven in the south. The Tees plain and the Hartlepool area are largely devoid of woodland, and those patches that exist are small and isolated. In eastern Cleveland, many of the steep sided beck valleys are wooded with a mix of broadleaved mixed lowland woodland and conifer plantations. Most of these ancient woodland sites are on some of the steeper terrain and have probably had continuous woodland cover since the retreat of the last ice age.	Lowland mixed deciduous woodland Wet woodland Upland oak woodland Lowland beech and yew woodland

3.	Brownfields	Brownfields is a term given to describe sites that have, in the recent past, been used for some development purpose, but now exist without any formal use. They include abandoned quarries, slag and spoil heaps, disused railways and landfill sites plus other land where industrial or commercial activities have taken place.. Cycles of disturbance and abandonment, artificial structures, uneven ground, wet and dry areas and poor soils often result in a mosaic of habitats that support high levels of biodiversity and are especially important for many invertebrate species, reptiles and amphibians. The industrial history and current industrial activities of the Tees Valley provide a large number of sites that are rich in biodiversity. Of particular interest are the "slag grasslands" which were created by infilling with lime-based blast furnace waste. A specialised flora has developed on these low nutrient calcareous grasslands which is unique. The grayling and dingy skipper butterfly thrive on the network of brownfield sites around the Tees.	Open mosaic habitats on previously developed land
4.	Churchyards and cemeteries	Some churchyards were originally grasslands enclosed either when the church was built or as a later extension. They range from manicured lawns and tended flower beds to neglected wildernesses. Cemeteries can also support an important range of wildlife and, in some cases, act as valuable refuges for rare and uncommon species. Churchyards are often refuges for meadow and woodland plants. Typically, older churchyards have more native species, with mature yew and exotic conifers which were often planted in Victorian times. Churchyards and cemeteries are often similar in terms of wildlife and both may attract wildlife because of their lower disturbance and greater habitat diversity compared to surrounding areas. Many churchyards and cemeteries, especially larger sites in urban areas need to be considered as multifunctional green spaces as they can make a significant contribution to the provision of urban green space, providing a sanctuary for wildlife and people in the urban settlements. In the Tees Valley cemeteries and churchyards that provide a significant wildlife habitat are Spion Kop in Hartlepool, Linthorpe Cemetery in Middlesbrough and Thornaby Cemetery in Stockton.	
5.	Gardens and allotments	Gardens and allotments account for a significant proportion of urban greenspace, (around 15-25% towns). Private gardens cover an estimated 3 % (485,000) of the land area of England and Wales with an estimated 13,000 ha of allotment gardens. Gardens and allotments will never act as substitutes for many semi-natural habitats; however, they can offer a variety of habitats that support a wide range of invertebrates, reptiles and amphibians, birds and mammals. They can also provide habitats, such as ponds, that may be increasingly rare elsewhere. The value of any individual garden or allotment for wildlife will depend on its size, age, location and management. Although individual sizes of gardens and allotments are usually small they can be considered on a landscape scale.	
6.	Grazing marsh	Grazing marshes are grasslands found in low-lying coastal areas or within the flood plains of rivers that are periodically inundated with water. They usually have high water levels, which are maintained by ditches containing brackish or fresh water. These areas are traditionally managed by grazing animals or cut mechanically for hay or silage. Grazing marshes are a valuable habitat for breeding wading birds and wintering sites for waterfowl, such as lapwing, snipe and curlew. The habitat is rare in the UK. There is an estimated 200,000 ha of grazing marsh in England of which only 5,000 ha is semi-natural and supports a high diversity of native plant species. In the Tees Valley there are remaining fragments of grazing marsh habitats in the low lying areas of the Tees Estuary. Key sites include Seaton Common, Cowpen Marsh, Saltholme and Dorman's Pool.	

7.	Hedgerows	Hedgerows, especially those that are ancient or rich in woody species, provide valuable habitats for wildlife and are a key component of our cultural and landscape heritage in Britain. They are especially important for butterflies and moths, many species of birds, bats and dormice. Ancient hedgerows are generally defined as those which were in existence before the Enclosure Acts, passed mainly between 1720 and 1840 in Britain. These tend to support the greatest diversity of plants and animals. Some ancient hedgerows are remnants of ancient woodland and act as a refuge for woodland plants and ancient trees. Species-rich hedgerows are those which contain an average of 5 or more native woody species in a 30 metre length, or 4 or more in northern England and upland Wales. Hedgerows are found throughout the countryside areas of the Tees Valley. East Cleveland has a particularly large number of ancient/species-rich hedgerows, many of which are of high interest for wildlife and as landscape features.	Hedgerows
8.	Lowland heath	Lowland heathland generally occurs below 300m in altitude. It is a highly diverse habitat characterized by ericaceous dwarf-shrubs such as heather, with associated areas of freshwater pools and bogs, scattered trees and shrubs, bare ground and acid grasslands. This varied mosaic of habitats encourages a wide variety of birds, reptiles, invertebrates, bryophytes and lichens.. It is a rare and threatened habitat, with around 80% of lowland heaths being lost to agricultural improvements, development or lack of management in the last 200 years. In the Tees Valley, Eston Moor is the only extensive area of Lowland heath.	
9.	Lowland meadows	Lowland meadows are characterized by a high diversity of plant species with a high ratio of broadleaved plants to grasses. Most grassland in the UK has been modified by the addition of fertilizers or reseeded to produce a more productive sward for grazing livestock or hay and silage crops. Unimproved lowland meadows are an increasingly rare and threatened habitat in the UK. Many have been, and continue to be, lost by agricultural intensification or scrub encroachment. It is estimated that Britain has lost more than 97% of its unimproved grassland since 1939. In the Tees Valley, most lowland meadows are a fragmented habitat managed as pastures. These occur as small scattered fragments throughout the Tees Valley area, with some of the steep sided valleys in East Cleveland being a stronghold locally.	Lowland meadows
10.	Maritime cliffs and slopes	Maritime cliffs and slopes form through land slippages or coastal erosion. Slopes can vary between 15 degrees to vertical. Coastal habitats less steeply sloping than this are included in the sand dunes and coastal grassland habitat action plan. The vegetation of maritime cliffs can vary widely depending upon the geology, degree of slope, exposure to wind and salt spray. These cliffs support a variety of plants and are important breeding grounds for many birds. Ledges on maritime cliffs are important nesting sites for sea birds such as kittiwake, fulmar, shag and cormorant. The UK coastline contains about 4000km of cliffs. In the Tees Valley, parts of the coast have been affected by industrial and urban developments. However, there are still extensive areas of semi-natural cliff habitats. Maritime cliffs rise to the east of Saltburn and continue to the Tees Valley border. These cliffs are of local and national importance for wildlife and heritage, being part of the North Yorkshire and Cleveland Heritage Coast.	Maritime cliffs and slopes
11.	Mudflats and saltmarsh	Sand, mud and gravels are the most common habitat found at the intertidal zone around the coasts of the UK. They occur in a wide range of coastal environments, from sheltered bays and estuaries to exposed open coast. These habitats support a diversity of marine life including molluscs, polychaete worms, and crustaceans. They are also important breeding grounds for species of tern. The Tees Estuary has significant areas of mud and sandflats, which are of international importance for wading birds. Saltmarsh occurs on soft, shallow shores in sheltered coastal areas and estuaries. It generally occupies the upper, vegetated portions	Coastal saltmarshes Intertidal mudflats

		of intertidal mudflats, lying approximately between the mean high water neap tides and mean high water spring tides. Characteristic species include glasswort, sea aster and common saltmarsh grass. Saltmarshes are important feeding ground for migrating and wintering bird species, including widgeon, redshank and teal. In the Tees Valley Saltmarsh is a rare habitat, occurring in fragmented areas around Teesmouth. The extent of land reclamation on the Tees Estuary has reduced this habitat to a narrow belt in most areas. Key sites include patches along Greatham Creek, Seal Sands and Greenabella Marsh.	
12.	Parks and recreation grounds	Parks and amenity areas in towns and cities are often intensively managed as amenity grassland and have a low value for nature conservation because of their limited variety of plant species and structure. However, urban green spaces are becoming a significant habitat for species which were once common in the wider countryside but which have suffered a dramatic decline in rural areas such as song thrush, sparrow species and hedgehogs. For most people the most regular experience of wildlife and the natural environment comes from public open spaces and there is increasing recognition of the wildlife value of parks and for management that incorporates practices that promote wildlife to make these areas more attractive for wildlife and people. In the Tees Valley there are many urban parks which are sympathetically managed for wildlife.	
13.	Ponds, lakes and reservoirs	Ponds provide rich and complex habitats for wildlife supporting a vast array of freshwater plants and animals. Collectively our ponds are home to a third of our native plants and over 1,200 species of invertebrates such as mayflies, pond skaters, bugs and snails. All our amphibian species (frogs, toads, newts) depend on ponds in which to breed. Some three-quarters (more than a million) of Britain's ponds have been lost over the last hundred years and due to their size and familiarity they are consistently undervalued. Ponds of all sizes occur throughout the Tees Valley. These include ponds in rural areas, ponds created in industrial areas, civic ponds in urban areas and garden ponds. 'Lakes and reservoirs' include both natural and man-made water bodies, such as lakes, reservoirs, flooded quarries and gravel pits that are over 2ha in size. Water bodies smaller than this are described as 'ponds'. The plant and animal communities depend on the nutrient status of the water. Many of the standing open waters in the Tees Valley are man-made and eutrophic, resulting from industry, and include flooded quarries, clay pits and reservoirs.	Ponds Mesotrophic lakes Eutrophic standing water
14.	Reedbeds	Reedbeds are wetlands dominated by stands of common reed <i>Phragmites australis</i> . Other plant species may also occur but at a significantly lower level of abundance. In reedbeds, the water table is at or above ground level for most of the year. Stands of reeds occur in open water transitions around lakes and ponds, in floodplain mires and in estuaries, along dykes, canals and sluggish lowland rivers, in peat cuttings and on saltmarshes. Reedbeds are important habitats for birds in the UK. They can support a distinctive assemblage of birds, which include rare and endangered species such as bittern, marsh harrier, crane, Cetti's warbler, Savi's warbler and bearded tit. Reedbeds also provide roosting and feeding sites for migratory bird species, winter roost sites for birds of prey and support rare specialised species of invertebrates. In the UK there are estimated to be around 5000ha of reed bed scattered in small sites with only about 50 sites being greater than 20ha in extent. In the Tees Valley most sites are smaller than 10ha. Key sites include Coatham Marsh, Haverton Hole, Fleet Pond and Dorman's Pool.	Reedbeds
15.	Rivers and streams	This encompasses any flowing water such as major rivers and their tributaries and coastal gills. Rivers and streams are dynamic systems, which exhibit a mosaic of features such as riffles, pools, shingle beds and sandbars that support a diverse range of plants, animals, fish and invertebrates. There are few rivers which have not been physically altered by humans. Many larger water courses have been canalised or otherwise	Rivers

		modified to reduce flood risk. These processes have resulted in degraded habitats supporting fewer species. This trend is now being reversed with opportunities to recreate naturally functioning systems being implemented. Watercourses also act as important corridors that link together other wildlife features and provide safe routes for species to move between sites. The River Tees is the only major river in the Tees Valley. The water quality of the River Tees suffered in the 19th and 20th century from pollution associating with industrial and urban developments. Since the 1970's, the water quality has improved, with salmon returning in recent years. Small becks, especially those tributaries in Middlesbrough, support thriving populations of water vole.	
16.	Roadside verges	Grassy roadside verges may be associated with other features, such a hedgerows, ditches, dry stone walls and old trees. Motorways, bypasses and main trunk roads usually have wide verges and banks, often with young trees, the result of tree planting programmes carried out over the past 40 years. In most cases roadside verge areas consist of closely mown, single sward grasslands. However, some roadside verges have remnants of un-improved species rich grasslands and have the potential to be very diverse habitats for wildlife with changes in management resulting in less intensive mowing regimes. There are currently approximately 207,000ha of roadside in the UK, with an estimated 2% managed for their wildlife interest. In the Tees Valley, there are four roadside verges in Stockton that have t Local Wildlife Site status.	
17.	Saline lagoons	These are bodies (natural or artificial) of saline water that are partially separated from the adjacent sea. They retain a proportion of their seawater at low tide and may develop as brackish, full saline or hyper-saline water bodies. Saline lagoons are an important and relatively scarce habitat due to the special conditions that are required for their formation. They support unique invertebrates, such as the lagoon cockle and ostracods, and are important for waterfowl, marshland birds and seabirds. The presence of certain indigenous and specialist plants and animals make this habitat important to the UK's overall biodiversity and has led to the listing of saline lagoons as a priority habitat under the EU Habitats Directive as well as being a priority UK biodiversity habitat. In the Tees Valley saline lagoons are a rare habitat. A complex of saline lagoons exists as a result of surface salt mining of the North Tees area known as the Brinefields.	Saline lagoons
18.	Sand dunes	Sand dunes develop behind large sandy beaches, which dry out at low tide allowing sand grains to be blown landward. Sand dunes are a dynamic habitat between coast and dry land. They range from embryonic and mobile dunes on the seaward side of the dune system to fixed or "grey" dunes that have been stabilised by plant roots. Marram grass plays a vital role in the colonisation and stabilisation of sand dunes. Grey dunes are then colonised by a range of drought-tolerant species. On older dunes, calcium may be leached out of the soils, leading to the development of acid dune grassland or dune heath. In wet depressions between dune ridges, dune slacks may develop which are often characterised by creeping willow and species of moss. Coastal grasslands occur to the leeward side of sand dunes and have a specialised calcareous and salt-tolerant species.. In the Tees Valley, many of the sand dune systems are of national conservation importance, with approximately 88% of the 262 ha total designated as Sites of Special Scientific Interest (SSSI). The species rich coastal grassland is of local conservation importance. Key sites include Hart Warren Dunes, North Gare and Seaton Sands, South Gare and Coatham Sands.	Coastal sand dunes
19.	School grounds	It is estimated that, nationally, school grounds make up 5% of all built up areas. These grounds are usually intensively managed for sport and recreation and are often impoverished habitats for wildlife, consisting	

		<p>mainly of hard surfacing, closely grown amenity grassland and sports fields with small standard trees and well trimmed hedges. However, many schools have small nature areas or gardens which may include a pond or small meadow, native shrubs and trees, compost heaps and vegetable beds. In the Tees Valley, School Grounds is a Habitat Action Plan because they are the green spaces where most children spend the majority of their outdoor experiences and there is great potential for both enhancing the biodiversity of school grounds and creating outdoor classrooms where children can learn about their natural environment. Programmes such as Eco Schools involve pupils in educational projects to increase the biodiversity of their school grounds.</p>	
20.	New – Traditional Orchards	<p>Traditional orchards are structurally and ecologically similar to wood-pasture and parkland, with open-grown trees set in herbaceous vegetation, but are generally distinguished from these priority habitat complexes by the following characteristics: the species composition of the trees, these being primarily in the family Rosaceae; the usually denser arrangement of the trees; the small scale of individual habitat patches; the wider dispersion and greater frequency of occurrence of habitat patches in the countryside. Management of the trees is the other main feature distinguishing traditional orchards and wood-pasture and parkland. Orchards are hotspots for biodiversity in the countryside, supporting a wide range of wildlife and containing UK BAP priority habitats and species, as well as an array of Nationally Rare and Nationally Scarce species. The wildlife of orchard sites depends on the mosaic of habitats they encompass, including fruit trees, scrub, hedgerows, hedgerow trees, non-fruit trees within the orchard, the orchard floor habitats, fallen dead wood and associated features such as ponds and streams. A feature of the biodiversity of traditional orchards is the great variety of fruit cultivars that they contain.</p>	Traditional Orchards