

Year-round

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Food availability	Abundance of aquatic plants	[>25% cover] of one or more target species, e.g. Scirpus, Eleocharis, Carex, Potamogeton, Glyceria	Cramp & Simmons 1977; Owen et al. 1986	Specialist
Any habitat	Food availability	Abundance of aquatic invertebrates	Average biomass > [xxx], including e.g. Hydrobia, crustaceans, caddisflies, diptera, beetles	Cramp & Simmons 1977; Owen et al. 1986	Specialist
Standing water	Water depth	Extensive shallow water (feeding)	<30cm over [>50%] of water area	Cramp & Simmons 1977; Newbold 1997; [estimated, Just Ecology]	EN COs

Siskin

Carduelis spinus

Main Occurrence:	Year-round
Breeding Period:	May-Aug
Summer Season:	Apr-Sep
Winter Season:	Oct-Mar

Breeding habitat:	Coniferous or mixed forests
Passage habitat:	n/a
Wintering habitat:	[as breeding habitat], plus Alder and Birch trees along water courses, in parkland and gardens

Breeding (summer) season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Food availability	Abundance of canopy invertebrates	Average biomass > [xxx], including e.g. caterpillars, spiders, aphids	Witherby et al. 1938; Gibbons et al. 1993; Snow & Perrins 1998	Specialist

Year-round

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Food availability	Abundance of seed-bearing plants	[>25% cover] of one or more target species, e.g. spruces, firs, pines, elm, alder, birch	Witherby et al. 1938; Gibbons et al. 1993; [estimated, Just Ecology]	EN COS

Skylark

Alauda arvensis

Main Occurrence	Year-round
Breeding Period:	Apr-Aug
Summer Season:	Apr-Sep
Winter Season:	Oct-Mar

Breeding habitat:	Rough grasslands, arable farmland, coastal dunes and saltmarsh
Passage habitat:	n/a
Wintering habitat:	[as breeding habitat]

Breeding (summer) season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Food availability	Abundance of ground-surface invertebrates	Average biomass > [xxx], including e.g. flies, beetles, aphids	Green 1978; Simms 1992; Poulsen & Aebischer 1995	Specialist
Any habitat	Grazing animals	Low stock densities to reduce losses to trampling and to limit grazing (nesting)	Bovine density <1.25/ha and sheep density [<7.5/ha]	RSPB/EN/ITE 1997; Wakeham-Dawson et al. 1998; [estimated, Just Ecology]	EN COs
Any habitat	Vegetation characteristics	Predominantly short to medium height vegetation (nesting, feeding)	[>90%] short-medium vegetation of <30cm	Simms 1992; Chamberlain et al. 1999; [estimated, Just Ecology]	EN COs

Non-breeding season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
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Non-breeding season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Cultivated/disturbed land	Landscape	Open terrain with a high frequency of seed-rich crops (feeding)	Areas with unrestricted views over >150m and [locally frequent] cereal stubbles	Wilson et al. 1996b, 1997	EN COs
Saltmarsh	Food availability	Abundance of seed-bearing plants	[>25% cover] of one or more target species, e.g. Aster, Atriplex, Suaeda	Kalejta-Summers 1997; [estimated, Just Ecology]	EN COs

Year-round

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Food availability	Abundance of seed-bearing plants	[>25% cover] of one or more target species, e.g. Triticum aestivum, Stellaria media, Sinapis arvensis, Sonchus and Compositae spp.	Witherby et al. 1938; Green 1978; Simms 1992; Gibbons et al. 1993; Lack 1986; [estimated, Just Ecology]	EN COs
Cultivated/disturbed land	Landscape	Open ground with a mosaic of different crop types (nesting, feeding)	Areas with unrestricted views over >150m and a mosaic of low and open crops, e.g. spring cereals, legumes, set-aside	Wilson et al. 1997; Chamberlain & Gregory 1999; Chamberlain et al. 1999	EN COs

Slavonian grebe

Podiceps auritus

Main Occurrence:	Winter visitor
Breeding Period:	n/a
Summer Season:	n/a
Winter Season:	Oct-Mar

Breeding habitat:	n/a
Passage habitat:	n/a
Wintering habitat:	Estuaries, inshore coastal waters and inland lakes or reservoirs

Non-breeding season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Food availability	Abundance of marine or freshwater fish and aquatic invertebrates	Average biomass > [xxx], including e.g. gobies, stickleback, scupins of [size], molluscs, crustaceans, insects	Cramp & Simmons 1977	Specialist
Any habitat	Water depth	Extensive shallow water (feeding)	0.5-2m over [>50%] of water area	Cramp & Simmons 1977: [estimated, Just Ecology]	EN COs

Smew

Mergus albellus

Main Occurrence:	Winter visitor
Breeding Period:	n/a
Summer Season:	n/a
Winter Season:	Oct-May

Breeding habitat:	n/a
Passage habitat:	n/a
Wintering habitat:	

Small or medium-sized, enclosed freshwaters, standing or flowing, resorting only infrequently to sheltered shallow marine bays or estuaries

Non-breeding season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Water depth	Extensive shallow water (feeding)	1-4m over [>50%] of water area	Owen et al. 1986; Snow & Perrins 1998; [estimated, Just Ecology]	EN COs
Coastal waters	Food availability	Abundance of marine fish and aquatic invertebrates	Average biomass >[xxx], including e.g. gobies, stickleback of <6cm	Owen et al. 1986; Snow & Perrins 1998	Specialist
Standing water	Food availability	Abundance of fish and aquatic invertebrates	Average biomass >[xxx], including e.g. carp, rudd, perch of <6cm, Asellus, beetles	Owen et al. 1986; Snow & Perrins 1998	Specialist
Standing water	Water area	Small to medium open areas of water (feeding, roosting)	One or more freshwaters of [>2ha]	Owen et al. 1986; Snow & Perrins 1998; [estimated, Just Ecology]	EN COs

Snipe

Gallinago gallinago

Main Occurrences	Year-round
Breeding Period:	Apr-Jul
Summer Season:	Apr-Sep
Winter Season:	Oct-Mar

Breeding habitat:	Inland lakes, flooded gravel pits, wet grassland and wet moorland
Passage habitat:	n/a
Wintering habitat:	[as breeding habitat]

Breeding (summer) season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Grassland - marsh/marshy	Grazing animals	Low stock densities to reduce losses to trampling (nesting)	Bovine density <1.25/ha and sheep density [<7.5/ha]	RSPB 1994; Green 1986b; [estimated, Just Ecology]	EN COs

Year-round

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Landscape	Open areas, including large fields (anti-predator, display)	Areas with unrestricted views over [>200m] and an effective field size of [>10ha]	RSPB/EN/ITE 1997; [estimated, Just Ecology]	EN COs
Any habitat	Landform	High frequency of wide, shallow margins around standing or running water (feeding)	Shallow margins of 20-30m wide on [>30%] of wetland perimeter	RSPB 1994; [estimated, Just Ecology]	EN COs

Year-round

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Food availability	Abundance of soil and ground-surface invertebrates	Average biomass > [xxx], including e.g. earthworm, dipteran flies, beetles, ants, caddis fly, spiders, lepidoptera	Cramp & Simmons 1983	Specialist
Any habitat	Hydrology/flow	Wet fields with many surface pools, ditches or channels (feeding)	[20-30%] of the area soggy or flooded	RSPB/EN/ITE 1997; [estimated, Just Ecology]	EN COs
Any habitat	Vegetation characteristics	Open ground with dense cover of wet vegetation predominating (feeding, nesting, concealment, roosting)	[>80%] vegetation cover overall, [20-100cm] tall, and over wet and muddy ground	RSPB 1994; Cramp & Simmons 1983; Cadbury 1992, 1993; RSPB/EN/ITE 1997; Newbold 1997; [estimated, Just Ecology]	EN COs

Snow bunting

Main Occurrence:	Winter visitor	Breeding habitat:	n/a
Breeding Period:	n/a	Passage habitat:	n/a
Summer Season:	n/a	Wintering habitat:	
Winter Season:	Oct-Mar		

Plectrophenax nivalis

Shingle beaches, saltmarsh, sand dunes and neighbouring stubble fields

Non-breeding season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Food availability	Abundance of seed-bearing plants	[>25% cover] of one or more target species, e.g. Psamma, Rumex, Poa and Schoberia spp.	Witherby et al. 1938; Snow & Perrins 1998; [estimated, Just Ecology]	EN COs
Any habitat	Vegetation characteristics	Open ground with short vegetation or bare ground predominating (feeding)	[<5cm] throughout areas used for feeding	Snow & Perrins 1998	EN COs
Coastland	Landscape	Open terrain with bare or sparsely-vegetated substrates predominating (feeding)	Areas with unrestricted views over [>100m] and [<20%] vegetated	Brown & Atkinson 1996; Snow & Perrins 1998; [estimated, Just Ecology]	EN COs

Song thrush

Turdus philomelos

Main Occurrences:	Year-round
Breeding Period:	Mar-Aug
Summer Season:	Apr-Sep
Winter Season:	Oct-Mar

Breeding habitat:	Woodland, parkland, hedgerows, scrubby grassland and gardens
Passage habitat:	n/a
Wintering habitat:	[as breeding habitat] except woodlands are mostly vacated

Breeding (summer) season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Vegetation characteristics	Many mature patches of scrub (nesting) plus short grassland swards (feeding)	Dense, almost impenetrable vegetation of >5m tall, plus several grassland swards of [<5cm]	Arnold 1983; Green et al. 1994; Gibbons et al. 1993; Snow & Perrins 1998; [estimated, Just Ecology]	EN COs
Non-breeding season					
Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Food availability	Abundance of fruit-bearing plants	[>25% cover] of one or more target species, e.g. holly, hawthorn, buckthorn	Witherby et al. 1938; Lack 1986; [estimated, Just Ecology]	EN COs
Year-round					
Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task

Year-round

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Food availability	Abundance of ground-surface invertebrates	Average biomass > [xxx], including e.g. earthworms, snails, pupating caterpillars, beetles, spiders, slugs, ants, flies	Witherby et al. 1938; Lack 1986	Specialist

Sparrowhawk

Accipiter nisus

Main Occurrence	Year-round
Breeding Period	Apr-Aug
Summer Season	Apr-Sep
Winter Season	Oct-Mar

Breeding habitat	Extensive areas of any type of woodland, adjacent farmland and large gardens
Passage habitat	n/a
Wintering habitat	[as breeding habitat]

Year-round

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Landscape	Many small to large woodlands (nesting, feeding) amidst open country (feeding)	Several woodlands of >1ha and representing [25-75%] of the area overall	Marquiss & Newton 1981; [estimated, Just Ecology]	EN COs
Any habitat	Food availability	Abundance of live birds and mammals	Average biomass >[xxx], including e.g. small to medium-sized birds - tits to woodpigeon - and mammals - mice to young rabbits	Newton 1986	Specialist
Woodland and scrub	Vegetation characteristics	Mature trees at medium density (nesting, surprise attack), plus some denser patches of trees or undergrowth (roosting)	Trees of 10-20m abundant, averaging 2-4m apart, and [<25%] thicket stage conifer or deciduous scrub	Marquiss & Newton 1981; Newton 1986; [estimated, Just Ecology]	EN COs

Spotted crane

Breeding habitat:	Extensive freshwater wetland habitats such as lowland swamps and fens, lakes and rivers
Passage habitat:	n/a
Wintering habitat:	n/a

Summer visitor

Main Occurrence:	Summer visitor
Breeding Period:	May-Jul
Summer Season:	Mar-Sep
Winter Season:	n/a

Porzana porzana

Breeding (summer) season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Food availability	Abundance of ground-surface and semi-aquatic invertebrates	Average biomass >[xxx], including e.g. caddisflies, damselflies, moth larvae, bugs, ants, snails, slugs	Cramp & Simmons 1980	Specialist
Any habitat	Hydrology/flow	Wet fields with many surface pools, ditches or channels (feeding)	[20-30%] of the area soggy or flooded	RSPB/EN/ITE 1997; Newbold 1997; [estimated, Just Ecology]	EN COs
Any habitat	Vegetation characteristics	Frequent patches of medium to tall vegetation, close to water (nesting, concealment)	Several patches of vegetation of [20-60cm], [<25m] from water, within areas used for nesting	Cramp & Simmons 1980; [estimated, Just Ecology]	EN COs

Spotted flycatcher

Muscicapa striata

Main Occurrence:	Summer visitor
Breeding Period:	May-Jul
Summer Season:	Apr-Sep
Winter Season:	n/a

Breeding habitat:	Open deciduous or mixed woodlands with glades and clearings, parkland, gardens and riversides
Passage habitat:	n/a
Wintering habitat:	n/a

Breeding (summer) season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Vegetation characteristics	Open areas with ample space for catching flying insects (feeding)	Open areas, linear or otherwise, of [>50 sq.m], [locally frequent] throughout	Snow & Perrins 1998; [estimated, Just Ecology]	EN COs
Any habitat	Cavities	Abundance of ledges or small open cavities (e.g. trees holes) (nesting)	Potential nest sites of [>10 cm across] and [>10 cm deep] [locally frequent]	Gibbons et al. 1993; [estimated, Just Ecology]	EN COs
Woodland and scrub	Food availability	Abundance of flying insects	Average biomass $>$ [xxx], including e.g. flies, bees, wasps, butterflies, damselflies	Witherby et al. 1938; Snow & Perrins 1998	Specialist

Spotted redshank

Tringa erythropus

Main Occurrence.
Breeding Period.
Summer Season.
Winter Season.

Breeding habitat.
Passage habitat.
Wintering habitat.

Passage migrant
n/a
Mar-May; Jul-Oct
Oct-Mar

n/a

Inland lakes, reservoirs and gravel pits, plus estuaries and coastal lagoons

A few winter in estuaries, coastal lagoons and on sewage farms

Non-breeding season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Landscape	Open terrain, relatively free of obstructions (anti-predator, feeding, roosting)	Areas with unrestricted views over [$>200\text{m}$] and an effective field size [$>10\text{ha}$]	[estimated, Just Ecology]	EN COs
Any habitat	Food availability	Abundance of surface and sub-surface invertebrates and fish	Average biomass $>$ [xxx], including e.g. beetles, bugs, flies, Gammarus, Neries, Macoma, bleak, stickleback	Cramp & Simmons 1983	Specialist
Any habitat	Vegetation characteristics	Open, short vegetation or bare ground predominating (roosting)	Vegetation of [$<10\text{cm}$] throughout areas used for roosting	[estimated, Just Ecology]	EN COs
Open water	Water depth	Extensive shallow water (feeding)	[1-3cm] over [$>50\%$] of the water area	[estimated, Just Ecology]	EN COs

Starling

Sturnus vulgaris

Main Occurrence:	Year-round
Breeding Period:	Apr-Jun
Summer Season:	Apr-Sep
Winter Season:	Oct-Mar

Breeding habitat:	Farmland, woodland and suburban habitats
Passage habitat:	n/a
Wintering habitat:	[as breeding season]

Breeding (summer) season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Connectivity	Trees or buildings with cavities (nesting) close to pastures (feeding)	Suitable grassland, arable, farmyard or garden feeding areas [<500m] from nesting sites	Feare 1996; [estimated, Just Ecology]	EN COS
Any habitat	Cavities	Abundance of small tree, wall or other cavities (nesting)	Suitable cavities of >45mm across and >20cm deep [locally frequent]	du Feu 1985; [estimated, Just Ecology]	EN COS

Non-breeding season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Connectivity	Secure and sheltered natural or artificial roost sites (communal roosting) close to pastures (feeding)	Suitable grassland, arable, farmyard or garden feeding areas <10km from dense vegetation or roosting structures	Summers & Cross 1987	EN COS

Year-round

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Food availability	Abundance of ground-surface invertebrates	Average biomass > [xxx], including e.g. leatherjackets, beetles, earwigs, caterpillars, earthworms, spiders	Witherby et al. 1938; Lack 1986; Gibbons et al. 1993	Specialist
Any habitat	Vegetation characteristics	Frequent patches of mature trees (nesting) amidst areas with short grassland swards (feeding)	Patches of trees [>20cm diameter at breast height] [locally frequent] plus several grassland areas with vegetation of [<5cm] throughout	Feare 1984; Snow & Perrins 1998; [estimated, Just Ecology]	EN COs

Stock dove

Columba oenas

Main Occurrence:	Year-round
Breeding Period:	Mar-Sep
Summer Season:	Apr-Sep
Winter Season:	Oct-Mar

Breeding habitat:	Parkland, forest edge and wooded farmland
Passage habitat:	n/a
Wintering habitat:	[as breeding habitat]

Breeding (summer) season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Cavities	Abundance of large tree cavities (nesting)	Suitable cavities >15cm across and >45cm deep [locally frequent]	du Feu 1985; [estimated, Just Ecology]	EN COs

Year-round

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Cultivated/disturbed land	Food availability	Abundance of seed-bearing and other plants	[>25% cover] of one or more target species, e.g. <i>Triticum aestivum</i> , <i>Brassica</i> spp., <i>Stellaria media</i>	Snow & Perrins 1998; [estimated, Just Ecology]	EN COs

Principally semi-natural grasslands but also on spring-sown arable crops

Breeding habitat:	n/a
Passage habitat:	n/a
Wintering habitat:	n/a

Summer visitor

Main Occurrence:	Apr-Sep
Breeding Period:	Mar-Oct
Summer Season:	n/a
Winter Season:	n/a

Stone-curlew

Burhinus oedicnemus

Breeding (summer) season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Grassland - poor/semi improved	Food availability	Abundance of invertebrates from soil and dung	Average biomass > [xxx], including e.g. beetles, grasshoppers, flies, earthworm, snails, slugs	Green & Griffiths 1994; Green & Taylor 1995	Green Specialist
Grassland - poor/semi improved	Vegetation characteristics	Open stony or sandy ground with sparse vegetation and bare soil (nesting, feeding)	Unrestricted views over (>200m) with vegetation of <2cm tall and <30% cover overall	EN 1995c; Nipkow 1990; Green & Taylor 1995; [estimated, Just Ecology]	EN COs
Grassland - poor/semi improved	Vegetation characteristics	Frequent patches of medium height vegetation (roosting)	Dense vegetation of (10-30cm) [locally frequent] within roosting areas	Tella et al. 1996; [estimated, Just Ecology]	EN COs

Stonechat
 Associated with scrub on a wide variety of sites such as heathlands, coastal dunes, young forestry plantations, railways, golf courses

Main Occurrence:	Year-round
Breeding Period:	Mar-Sep
Summer Season:	Apr-Sep
Winter Season:	Oct-Mar

Breeding habitat:	n/a
Passage habitat:	
Wintering habitat:	[as breeding habitat]

Saxicola forquata

Year-round

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Food availability	Abundance of ground-surface invertebrates	Average biomass > [xxx], including e.g. beetles, moths, flies, spiders, earthworm	Witherby et al. 1938; Greig-Smith 1986; Snow & Perrins 1998	Specialist
Any habitat	Vegetation characteristics	Mix of very short swards (feeding) and taller scrub (nesting, display, roosting)	Sward mostly of [<5cm], tussocks/scrub of 0.5-2m [locally frequent], and [25-75%] of scrub overall	Fuller & Glue 1977; Gibbons et al. 1993; Lord 1995; [estimated, Just Ecology]	EN COS

Boulder beaches and buildings on offshore islands

Breeding habitat:	n/a
Passage habitat:	n/a
Wintering habitat:	n/a

Summer visitor

Main Occurrence:	May-Aug
Breeding Period:	Apr-Sep
Summer Season:	n/a
Winter Season:	n/a

Storm petrel

Hydrobates pelagicus

Year-round

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Coastal waters	Food availability	Abundance of marine fish, crustaceans, zooplankton and offal	Average biomass > [xxx], including e.g. herring, sprat, gobies [size], jelly fish, ichthyoplankton, microzooplankton	Davis 1957; Lloyd et al. 1991; D'EiBee & Hemery 1997	Specialist

Swallow

Hirundo rustica

Main Occurrence:	Summer visitor
Breeding Period:	May-Sep
Summer Season:	Apr-Oct
Winter Season:	n/a

Breeding habitat:	Lowland farmland, usually associated with buildings
Passage habitat:	n/a
Wintering habitat:	n/a

Breeding (summer) season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Cultivated/disturbed land	Food availability	Abundance of airborne insects	Average biomass > [xxx], including e.g. hoverflies, horseflies, robberflies, bluebottles	Gibbons et al. 1993; Turner 1994	Specialist
Cultivated/disturbed land	Artificial structures	Continuous, open access to buildings with rafters, beams, shelves (nesting)	Suitable buildings, with permanent access [locally frequent]	Turner 1994; Snow & Perrins 1998; [estimated, Just Ecology]	EN COs

Swift

Apus apus

Main Occurrence:	Summer visitor
Breeding Period:	Jun-Jul
Summer Season:	Apr-Oct
Winter Season:	n/a

Breeding habitat:	Agricultural and urban habitats
Passage habitat:	n/a
Wintering habitat:	n/a

Breeding (summer) season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Food availability	Abundance of airborne insects	Average biomass > [xxx], including e.g. flies, moths, beetles, bugs, bees, wasps	Witherby et al. 1938; Gibbons et al. 1993	Specialist
Built-up areas	Artificial structures	Continuous, open access to lofts with rafters, beams, shelves (nesting)	Suitable buildings, with permanent access [locally frequent]	Snow & Perrins 1998; [estimated, Just Ecology]	EN COs

Tawny owl
Strix aluco

Woodlands, farmland with scattered trees, parks, large gardens, churchyards, each with mature trees

Main Occurrence:	Year-round
Breeding Period:	Mar-Jun
Summer Season:	Apr-Sep
Winter Season:	Oct-Mar

Breeding habitat:	n/a
Passage habitat:	
Wintering habitat:	[as breeding habitat]

Breeding (summer) season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Vegetation characteristics	Abundance of large tree cavities (nesting)	Suitable cavities of >20cm across and >60cm deep [locally frequent]	du Feu 1985; Smart & Andrews 1985; [estimated, Just Ecology]	EN COs

Year-round

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Landscape	Many small to large woodlands (nesting, feeding) amidst open country (feeding)	Several woodlands of >1ha and representing [>50%] of the area overall	Petty & Peace 1992; Redpath 1995	EN COs
Any habitat	Food availability	Abundance of live mammals, birds, amphibians and ground-surface invertebrates	Average biomass >[xxx], including e.g. small mammals - mice - and birds, frogs, insects, earthworms	Yalden 1985; Lack 1986; Snow & Perrins 1998	Specialist

Non-breeding season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Saltmarsh	Food availability	Abundance of seed-bearing plants	[>25% cover] of one or more target species, e.g. <i>Salicornia</i> , <i>Atriplex</i>	Cramp & Simmons 1977; Owen et al. 1986; [estimated, Just Ecology]	Specialist

Year-round

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Standing water	Food availability	Abundance of aquatic invertebrates	Average biomass > [xxx], including e.g. Hydrobia, flies, caddisfly, beetles, bugs	Cramp & Simmons 1977; Owen et al. 1986	Specialist
Standing water	Food availability	Abundance of seed-bearing plants	[>25% cover] of one or more target species, e.g. <i>Polygonum</i> , <i>Eleocharis</i> , <i>Rumex</i> , <i>Ranunculus</i>	Tamiser 1985; Owen et al. 1986; Nummi et al. 1995	EN COs
Standing water	Water depth	Extensive shallow water (feeding)	<30cm over [>50%] of the water area	Owen et al. 1986; Gilburn & Kirby 1992; Newbold 1997; [estimated, Just Ecology]	EN COs

Tree pipit

Anthus trivialis

Main Occurrence:	Summer visitor
Breeding Period:	May-Jul
Summer Season:	Apr-Oct
Winter Season:	n/a

Breeding habitat:	Heathland or grassland with low scrub, mature hedgerows and open Ash, Oak or Pine woods or young conifer plantations
Passage habitat:	n/a
Wintering habitat:	n/a

Breeding (summer) season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Food availability	Abundance of ground-surface and shrub-layer invertebrates	Average biomass > [xxx], including e.g. earthworms, beetles, flies, spiders, bugs, bees, wasps	Witherby et al. 1938; Snow & Perrins 1998	EN COs
Any habitat	Vegetation characteristics	Mix of short to medium height swards (nesting) and taller trees or scrub (display)	Vegetation mostly [<40cm] but with patches of trees/scrub of >2m [locally frequent] but representing [<25%] cover overall	Smart & Andrews 1985; Fuller & Moreton 1987; Snow & Perrins 1998; [estimated, Just Ecology]	EN COs

Mixed farmland or parkland with mature hedgerows, trees and woodland

Breeding habitat:
Passage habitat:
Wintering habitat:

Year-round

Main Occurrence:
Breeding Period:
Summer Season:
Winter Season:

Passer montanus

Apr-Aug

Apr-Sep

Oct-Mar

n/a

[as breeding habitat], plus outer suburbs

Breeding (summer) season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Vegetation characteristics	Abundance of small tree cavities (nesting)	Suitable cavities of <35mm across and >15cm deep [locally frequent]	du Feu 1985; [estimated, Just Ecology]	EN COs

Year-round

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Food availability	Abundance of seed and fruit-bearing plants	[>25% cover] of one or more target species, e.g. Stellaria and Chenopodium spp., Triticum aestivum	Lack 1986; Gibbons et al. 1993; Snow & Perrins 1998; [estimated, Just Ecology]	EN COs

Year-round

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Standing water	Food availability	Abundance of benthic invertebrates	Average biomass >[xxx], including e.g. Dreissena polymorpha, chironomid larvae, Gammarus, Hydrobia	Olney 1963	Specialist
Standing water	Water area	Medium to large open areas of water (feeding, roosting)	One or more freshwaters of [>5ha]	[estimated, Just Ecology]	EN COs

Turnstone

Arenaria interpres

Main Occurrence:	Winter visitor
Breeding Period:	n/a
Summer Season:	n/a
Winter Season:	Aug-Apr

Breeding habitat:	n/a
Passage habitat:	n/a
Wintering habitat:	Estuaries, sheltered coastal beaches and rocky shores

Non-breeding season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Landscape	Open terrain, relatively free of obstructions (anti-predator, feeding, roosting)	Areas with unrestricted views over [$>200\text{m}$] and an effective field size [$>10\text{ha}$]	[estimated, Just Ecology]	EN COs
Any habitat	Vegetation characteristics	Open, short vegetation or bare ground predominating (roosting)	Vegetation of [$<10\text{cm}$] throughout areas used for roosting	[estimated, Just Ecology]	EN COs
Intertidal	Food availability	Abundance of crustaceans, molluscs and insects amongst rotting seaweed	Average biomass $>$ [xxx], including e.g. Balanus, Mytilus, Carcinus, Gammarus, Littorina, dipertan flies, kelp-fly larvae	Cramp & Simmons 1983	Specialist

Twite

Carduelis flavirostris

Main Occurrence:	Year-round
Breeding Period:	Apr-Aug
Summer Season:	Apr-Sep
Winter Season:	Oct-Mar

Breeding habitat:	Heather moorland, hill farms, upland pastures and young plantations
Passage habitat:	n/a
Wintering habitat:	Saltmarshes, coastal fields, tide wrack, arable farmland and waste ground

Breeding (summer) season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Food availability	Abundance of seed-bearing plants	>25% cover] of one or more target species, e.g. Rumex, Taraxacum, Compositae, Polygonaceae and Caryophyllaceae spp.	Cadbury 1992; McGhie et al. 1994; RSPB 1994; Snow & Perrins 1998; [estimated, Just Ecology]	EN COs
Heathland	Connectivity	Heather moorland (nesting) very close to pasture or reseeded upland grassland (feeding)	Several suitable grassland feeding areas <2km from nesting sites	Davies 1988; McGhie et al. 1994	EN COs
Heathland	Vegetation characteristics	Mix of open ground (feeding) and patches of trees or scrub (nesting)	Patches of scrub/trees of [25-100cm] [locally frequent] within more open areas, but [<50%] scrub cover overall	Cadbury 1992; McGhie et al. 1994; RSPB 1994; Snow & Perrins 1998; [estimated, Just Ecology]	EN COs

Non-breeding season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
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Non-breeding season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Food availability	Abundance of seed-bearing plants	[>25% cover] of one or more target species, e.g. Raphanus raphanistrum, Salicornia, Aster, Crithmum, Limonium, Atriplex spp.	Witherby et al. 1938; Davies 1988; McGhie et al. 1994; Kalejta-Summers 1997; Snow & Perrins 1998; [estimated, Just Ecology]	EN COs
Coastland	Landscape	Open terrain with bare or sparsely-vegetated substrates predominating (feeding)	Areas with unrestricted views over [>200m] and [<25%] vegetated	Snow & Perrins 1998; [estimated, Just Ecology]	EN COs

Velvet scoter

Melanitta fusca

Main Occurrence:	Winter visitor
Breeding Period:	n/a
Summer Season:	n/a
Winter Season:	Oct-Mar

Breeding habitat:	n/a
Passage habitat:	n/a
Wintering habitat:	Coastal bays, estuaries or open, exposed coasts, often with extensive shallows. Occasional inland, on freshwaters

Non-breeding season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Coastal waters	Food availability	Abundance of marine molluscs, worms and crustaceans	Average biomass > [xxx], including e.g. Mytilus of 5-20mm, gastropods of <25mm, Carcinus, Gammarus, and Arenicola of <120mm	Cramp & Simmons 1977, Owen et al. 1986	Specialist
Coastal waters	Water depth	Extensive deep water (feeding)	10-30m over [>50%] of water area	Owen et al. 1986; [estimated, Just Ecology]	EN COs

Water rail	Year-round	Static or slow-moving freshwater with open mud and dense vegetation cover
Rallus aquaticus	Main Occurrence:	n/a
	Breeding Period:	
	Summer Season:	
	Winter Season:	[as breeding habitat]
Year-round		

Breeding habitat:
Passage habitat:
Wintering habitat:

Habitat Attribute Preferred State Monitoring Target Citations Task

Any habitat	Food availability	Abundance of soil and ground-surface invertebrates and amphibians	Average biomass >[xxx], including e.g. caddisfly, earwig, water bugs, beetles, snails, small frogs	Cramp & Simmons 1980; Lack 1986	Specialist
Any habitat	Vegetation characteristics	Predominantly tall, emergent vegetation, interspersed with scrub/trees (feeding, concealment)	Tall vegetation [>1m] predominating with trees/scrub [locally frequent] within nesting areas	Cramp & Simmons 1980; Gibbons et al. 1993; [estimated, Just Ecology]	EN COS
Open water	Water area	Medium to large wetlands (concealment, feeding)	One or more freshwaters of >4ha	Bayliss 1985; Gibbons et al. 1993	EN COS
Open water	Water area	Small to medium areas of water (feeding)	One or more freshwaters of >4ha	Bayliss 1985; Gibbons et al. 1993	EN COS

Wheatear

Oenanthe oenanthe

Main Occurrence:
Breeding Period:
Summer Season:
Winter Season:

Summer visitor
Apr-May
Mar-Oct
n/a

Breeding habitat:
Passage habitat:
Wintering habitat:

Close-grazed grassland and heath, with rocky areas, crags or scree
n/a
n/a

Breeding (summer) season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Grassland -poor semi-improved	Vegetation characteristics	Predominantly short swards (feeding)	<3cm throughout areas used for feeding	Conder1989	EN COs
Heathland	Landscape	Open terrain (feeding) with frequent rocky areas, crags, scree, walls etc. (nesting)	Areas with unrestricted views over [>500m] with dry, accessible, rocky nest sites [locally frequent]	Snow & Perrins 1998; [estimated, Just Ecology]	EN COs
Heathland	Food availability	Abundance of ground-surface invertebrates	Average biomass > [xxx], including e.g. beetles, grasshoppers, craneflies, moths, bees, ants, spiders, molluscs	Conder 1989; Cadbury 1992; Snow & Perrins 1998	Specialist

Whimbrel

Main Occurrence:	Passage migrant
Breeding Period:	n/a
Summer Season:	May-Jun; Aug-Sep
Winter Season:	n/a

Breeding habitat:	n/a
Passage habitat:	Estuaries, coastal lagoons and on low-intensity wet grasslands
Wintering habitat:	n/a

Numenius phaeopus

Non-breeding season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Landscape	Open terrain, relatively free of obstructions (anti-predator, display)	Areas with unrestricted views over [$>200\text{m}$] and an effective field size [$>10\text{ha}$]	[estimated, Just Ecology]	EN COs
Any habitat	Vegetation characteristics	Open, short vegetation or bare ground predominating (roosting)	Vegetation of [$<10\text{cm}$] throughout areas used for roosting	[estimated, Just Ecology]	EN COs
Grassland - marsh/marshy	Food availability	Abundance of soil and ground-surface invertebrates	Average biomass $>$ [xxx], including e.g. wireworms, caterpillars, sawflies	Ferns et al. 1979; Cramp & Simmons 1983	Specialist
Grassland - marsh/marshy	Connectivity	High frequency of damp, rough grazing grasslands (feeding) close to secure intertidal roosting areas (roosting)	Several suitable grassland feeding areas [$<5\text{ km}$] from coastal roost sites	Ferns et al. 1979; [estimated, Just Ecology]	EN COs

Non-breeding season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Grassland - marsh/marshy	Hydrology/flow	Wet fields with many surface pools, ditches or channels (feeding)	[20-30%] of the area soggy or flooded	[estimated, Just Ecology]	EN COs
Saltmarsh	Food availability	Abundance of surface and sub-surface invertebrates	Average biomass > [xxx], including e.g. Littorina, Nucella, Arenicola, Crangon	Cramp & Simmons 1983	Specialist

Whinchat	Summer visitor	Heathland with grassland and bracken or young conifer plantations
Saxicola rubetra	May-Jul	n/a
	Apr-Sep	n/a
	n/a	

Main Occurrence:	Summer visitor
Breeding Period:	May-Jul
Summer Season:	Apr-Sep
Winter Season:	n/a

Breeding habitat:	
Passage habitat:	n/a
Wintering habitat:	n/a

Breeding (summer) season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Food availability	Abundance of shrub-layer and ground-surface invertebrates	Average biomass > [xxx], including e.g. beetles, flies, caterpillars, spiders, earthworms	Snow & Perrins 1998	Specialist
Any habitat	Vegetation characteristics	Mix of short grassland (feeding) and low trees or scrub (nesting)	Patches of trees or scrub of >0.3-2m [locally frequent] within open grassland in nesting areas	Fuller & Glue 1977; Gibbons et al. 1993; [estimated, Just Ecology]	EN COs
Heathland	Vegetation characteristics	High frequency of favoured tall grass and scrub plant species (nesting, feeding)	[>25% cover] of one or more target species, including e.g. Pteridium aquilinum, Ulex europaeus, Deschampsia cespitosa	Cadbury 1992; [estimated, Just Ecology]	EN COs

White-fronted goose

Anser albifrons

Main Occurrence:	Winter visitor	Breeding habitat:	n/a
Breeding Period:	n/a	Passage habitat:	n/a
Summer Season:	n/a	Wintering habitat:	Improved, lowland grassland, saltmarsh and arable
Winter Season:	Oct-Mar		

Non-breeding season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
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Any habitat	Landscape	Open areas, including large fields (feeding, anti-predator)	Areas with unrestricted views over [$>500\text{m}$] with an effective field size [$>5\text{ha}$]	[estimated, Just Ecology]	EN COs
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Grassland - improved	Food availability	Abundance of soft-leaved plants	[$>25\%$ cover] of one or more target species, e.g. <i>Trifolium repens</i> , <i>Lolium perenne</i> , <i>Poa trivialis</i> , <i>Holcus lanatus</i>	Owen 1976b; Owen et al. 1986; Ysebaert et al. 1988; [estimated, Just Ecology]	EN COs
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Grassland - improved	Vegetation characteristics	Predominantly short to medium grassland swards (feeding)	[10-20cm] throughout feeding areas	Vickery & Gill 1999; [estimated, Just Ecology]	EN COs
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Saltmarsh	Food availability	Abundance of soft-leaved plants	[$>25\%$ cover] of one or more target species, e.g. <i>Puccinellia marima</i> , <i>Hordeum marinum</i> , <i>Lolium perenne</i> , <i>Festuca rubra</i> , <i>Alopecurus bulbosus</i>	Owen 1976b; Owen et al. 1986; [estimated, Just Ecology]	EN COs
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Whitethroat

Sylvia communis

Main Occurrence	Summer visitor
Breeding Period	Apr-Aug
Summer Season	Mar-Oct
Winter Season	n/a

Breeding habitat	Scrub, young woodland and hedgerows
Passage habitat	n/a
Wintering habitat	n/a

Breeding (summer) season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Food availability	Abundance of shrub-layer invertebrates	Average biomass > [xxx], including e.g. beetle larvae, bugs	Snow & Perrins 1998	Specialist
Any habitat	Vegetation characteristics	Many mature, dense patches of scrub (nesting, concealment, roosting)	Dense, almost impenetrable vegetation, and of 1-3m tall [locally frequent] in nesting areas	Green et al. 1994; Macdonald & Johnson 1995; Snow & Perrins 1998; [estimated, Just Ecology]	EN COs
Woodland and scrub	Vegetation characteristics	Relatively open woodland canopies (feeding)	<50% canopy cover throughout breeding areas	Fuller & Moreton 1987; Gibbons et al. 1993	EN COs

Whooper swan

Cygnus cygnus

Main Occurrence:	Winter visitor
Breeding Period:	n/a
Summer Season:	n/a
Winter Season:	Sep-Mar

Breeding habitat:	n/a
Passage habitat:	n/a
Wintering habitat:	Lakes, marshes, coastal bays, improved grassland, large rivers and arable

Non-breeding season

Habitat Attribute Preferred State Monitoring Target Citations Task

Grassland - improved	Landscape	Open areas, including large fields (feeding, anti-predator)	Areas with unrestricted views over (>500m) with an effective field size >6ha	[estimated, EC Rees; [estimated, Just Ecology]	EN COs
Grassland - improved	Food availability	Abundance of soft-leaved plants	[>25% cover] of one or more target species, e.g. Lolium perenne, Alopecurus geniculatus, Phleum pratense	Laubek 1995; Rees et al. 1997a; [estimated, Just Ecology]	EN COs
Grassland and marsh	Vegetation characteristics	Predominantly short grassland swards (feeding)	[<10cm] throughout areas used for feeding	Cramp & Simmons 1977; [estimated, EC Rees]	EN COs
Intertidal	Food availability	Abundance of mud-surface plants and green algae	[>25% cover] of one or more target species, e.g. Zostera, Ruppia	Rees et al. 1997a; [estimated, Just Ecology]	EN COs

Non-breeding season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Standing water	Food availability	Abundance of aquatic plants	>25% cover] of one or more target species, e.g. Potamogeton, Ranunculus, Chara spp.	Rees et al. 1997a; [estimated, Just Ecology]	EN COs
Standing water	Water depth	Extensive shallow water (feeding)	<1m over [>50%] of the water area	Owen et al. 1986; Newbold 1997; [estimated, Just Ecology]	EN COs
Standing water	Hydrology/flow	Fluctuating water levels, providing a succession of surface water areas (feeding)	Water levels fluctuating by [5-15%] per month	RSPB/EN/ITE 1997; [estimated, Just Ecology]	EN COs
Standing water	Water area	Large open areas of water (feeding, roosting)	One or more salt or freshwaters of [>10ha]	Cramp & Simmons 1977; [estimated, Just Ecology]	EN COs

Wigeon

Anas penelope

Main Occurrence:	Year-round
Breeding Period:	Apr-Aug
Summer Season:	Apr-Sep
Winter Season:	Oct-Mar

Breeding habitat:	Inland lakes, mires and bogs, nesting in grass and marsh
Passage habitat:	n/a
Wintering habitat:	Estuaries, saltmarsh and inland lakes

Breeding (summer) season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Bog	Vegetation characteristics	Frequent patches of medium to tall vegetation, close to open water (nesting)	Several patches of vegetation of [20-60cm], [<50m] from open water, within areas used for nesting	Cramp & Simmons 1977; [estimated, Just Ecology]	EN COs
Standing water	Food availability	Abundance of water-surface invertebrates (feeding by young)	Average biomass > [xxx], including e.g. hatching midges	Jacobsen 1991	Specialist
Standing water	Water depth	Extensive shallow water (feeding)	[<30cm] over [>50%] of water area	Jacobsen 1993; [estimated, Just Ecology]	EN COs

Non-breeding season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
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Non-breeding season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Landscape	Open areas, including large fields (feeding, anti-predator)	Areas with unrestricted views over [$>500\text{m}$] with an effective field size [$>5\text{ha}$]	[estimated, Just Ecology]	EN COs
Any habitat	Connectivity	Pastures (feeding) very close to open water (roosting, anti-predator)	Feeding pastures adjacent to or no more than 50m from open water	Mayhew & Houston 1989	EN COs
Grassland and marsh	Food availability	Abundance of soft-leaved plants	[$>25\%$ cover] of one or more target species, e.g. Lolium, Glycyeria, Agrostis, Alopecurus spp.	Cadwalladr et al. 1972; [estimated, Just Ecology]	EN COs
Intertidal	Food availability	Abundance of mud-surface plants and green algae	[$>25\%$ cover] of one or more target species, e.g. Zostera, Enteromorpha	Cadwalladr et al. 1972; [estimated, Just Ecology]	EN COs
Saltmarsh	Food availability	Abundance of soft-leaved plants	[$>25\%$ cover] of one or more target species, e.g. Agrostis stolonifera, Puccinellia maritima, Salicornia spp.	Cadwalladr et al. 1972; [estimated, Just Ecology]	EN COs

Year-round

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Any habitat	Vegetation characteristics	Predominantly short grassland swards (feeding)	<5cm throughout areas used for feeding	Jacobsen 1992	EN COs

Willow tit
Parus montanus

Main Occurrence:	Year-round
Breeding Period:	Apr-Aug
Summer Season:	Apr-Sep
Winter Season:	Oct-Mar

Breeding habitat:	Alder carr, stream-side woodland and scrub, woods surrounding gravel pits and reservoirs and lowland coniferous woodland
Passage habitat:	n/a
Wintering habitat:	[as breeding habitat]

Breeding (summer) season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Woodland and scrub	Food availability	Abundance of shrub-layer and canopy invertebrates	Average biomass > [xxx], including e.g. beetles, caterpillars, flies, aphids, spiders	Witherby et al. 1938; Snow & Perrins 1998	Specialist
Woodland and scrub	Vegetation characteristics	High frequency of standing dead wood including rotten tree trunks (nesting)	>20% of standing trees containing >10% dead wood per tree, and rotten stumps [locally frequent]	Barnes 1975; Snow & Perrins 1998; [estimated, Just Ecology]	EN COs
Woodland and scrub	Cavities	Abundance of small tree cavities (nesting)	Suitable cavities of <35mm across and >15cm deep [locally frequent]	Barnes 1975; Snow & Perrins 1998; [estimated, Just Ecology]	EN COs

Non-breeding season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
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Non-breeding season

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Woodland and scrub	Food availability	Abundance of seed and fruit-bearing plants	[>25% cover] of one or more target species, e.g. Lonicera and Galeopsis spp.	Barnes 1975; Snow & Perrins 1998; [estimated, Just Ecology]	EN COs

Year-round

Habitat	Habitat Attribute	Preferred State	Monitoring Target	Citations	Task
Woodland and scrub	Vegetation characteristics	Dense understorey predominant with a rich shrub layer (feeding, concealment)	[>75%] of dense understorey, and/or rich ground flora, overall	Barnes 1975; [estimated, Just Ecology]	EN COs