

DORSET LOCAL NATURE STRATEGY SPECIES ASSEMBLAGES

Habitat assemblage:	Species of rich fens, basic flushes & swamps
Broad Habitat type:	Wetlands
S41 & Priority Habitat type:	Lowland Fens
Composite species assemblages:	Plants of open calcareous fens Plants of tall-herb fens & swamps Invertebrates of tall-herb fens and swamps Invertebrates of calcareous fens and basic flushes Bryophytes of rich fens & base-rich flushes

Habitat assemblage description:	<p>Rich fens are those fed by base-rich or calcareous groundwater on mineral or peaty soils usually with a fluctuating water table. These habitats are threatened throughout Britain. In Dorset rich fens are rare and generally small in extent and traditionally managed by grazing. They are found in the west of the county on slopes or in small valleys at the foot of the chalk at the junction of the Greensand and Gault, in the Poole Basin they occur in floodplains or small valleys over peat.</p> <p>Fens are typically found in mosaics with other vegetation especially wet woodland and Purple Moor-grass and rush-pasture. They are particularly rich in invertebrates the larval stages usually found in the mud, shallow pools or watercourses; craneflies, soldierflies and snail-killing flies are particularly well represented with several nationally rare species found in the west of the county. Fen vegetation can be species-rich and they support a number of scarce and threatened plants and bryophytes, several of which are now confined to just one or two sites.</p> <p>Note: Acid or poor-fens (valley mires & acid flushes) are covered by separate guidance.</p>
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Other related assemblages:	Species of wet woodland Species of fen-meadows & rush-pastures Species of grazing marsh grasslands & associated ditch systems Species of soft rock & slumping cliffs
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Pressures & Threats	
PA05	Abandonment of management/use of grasslands and other agricultural and agro-forestry systems (e.g. cessation of grazing, mowing or traditional farming)
	Abandonment of grazing or mowing can lead to a change from species-rich vegetation to less-diverse swamp vegetation often with just one or two species dominant such as Meadowsweet, Hemlock Water-dropwort, Lesser Pond-sedge, Common Reed, or Reed Canary-grass. Eventually trees such as Alder and Grey Willow will invade shading-out typical wetland plants.
PA07	Intensive grazing or overgrazing by livestock
	Intensive or overgrazing on fens can lead to a loss of structure with tussocks and taller patches important for invertebrates in particular (e.g. Blair's Wainscot), a reduction in flowers is also detrimental for invertebrates. Locally poaching can occur especially on wetter ground releasing silt into watercourses.
PA08	Extensive grazing or under-grazing by livestock
	Under-grazing can lead to a build-up of litter that eventually the encroachment of scrub. Over time it can also lead to a loss of species, particularly those smaller herbs that are out-competed by larger faster growing plants and coarse grasses and robust sedges, plus the eventual invasion of trees.
PA13	Application of natural or synthetic fertilisers on agricultural land
	The application of artificial fertilizers or regular spreading of slurry on adjacent land may cause run-off onto sites leading to enrichment that favours quicker growing grasses and the few herbs that can tolerate fertile soils such as Nettle and Reed Canary-grass at the expense of most wetland plants that require nutrient-poor conditions.

PA22	Drainage for use as agricultural land
	Drainage of land adjacent to the sites can lower the water table resulting in the drying-out of the fen and hasten the encroachment of trees and non-wetland plants.
PI02	Other invasive alien species
	Invasive non-native species such as Himalayan Balsam can form large stands and shade-out smaller native wetland plants, especially in sites where there is little or no grazing. Other non-natives such as Rhododendron and Skunk-cabbage are found at a few sites. In the past exotic trees such as hybrid Poplars were planted on fens causing shading.
PI03	Problematic native species
	Problematic native plants are typically only an issue where there is undergrazing or abandonment of management which can cause a change from species-rich vegetation to less-diverse swamp vegetation often with just one or two species dominant such as Meadowsweet, Hemlock Water-dropwort, Lesser Pond-sedge, Common Reed, or Reed Canary-grass. Eventually trees such as Alder and Grey Willow will invade shading-out typical fen plants.
PJ03	Changes in precipitation regimes due to climate change
	Recent years have seen in changes in weather patterns for example droughts in successive springs and wetter late summers both of which can adversely affect the habitat by lowering the water table. Warmer weather in autumn means a longer growing season therefore grazing or cutting regimes need to be altered accordingly. Increased flash-flooding events from storms can lead to silt being deposited on sites causing enrichment and encouraging plants such as Nettle and Hemlock Water-dropwort.
PK04	Atmospheric N-deposition
	Continual low-level deposition of Nitrogen compounds has a fertilizing effect on fens, and this can be compounded by under-grazing and climate change.

Micro-habitat assemblage: Invertebrates of tall-herb fens and swamps
 Invertebrates of calcareous fens and basic flushes

Group	Species	Common Name	IUCN GB	IUCN Eng	IUCN other	Criteria	Threats / Pressures							
Flies	<i>Dioctria cothurnata</i>	Scarce Red-legged Robberfly	LC	n/a	n/a	3	.	.	.	.	.	.	.	.
Flies	<i>Platypalpus aeneus</i>	a dance fly	NT	n/a	n/a	2	.	.	.	.	.	.	.	.
Flies	<i>Platypalpus ingenuus</i>	a dance fly	NT	n/a	n/a	2	..	.	.	.	.	.	.	.
Macro-moths	<i>Eupithecia valerianata</i>	Valerian Pug		n/a	n/a	5	.	.	.	.	.	.	.	.
Macro-moths	<i>Hydraecia petasitis</i>	Butterbur				4	.	.	.	.	.	.	.	.
Macro-moths	<i>Sedina buettneri</i>	Blair's Wainscot	EN	n/a	n/a	1	.	.	.	.	.	.	.	.
Micro-moths	<i>Bactra lacteana</i>	Sedge Lance; Small Sedge Marble		n/a	n/a	4	.	.	.	.	.	.	.	.
Micro-moths	<i>Monochroa arundinetella</i>	Pond-sedge Miner; Sedge Neb	pRDB	n/a	n/a	4	.	.	.	.	.	.	.	.

Micro-habitat assemblage: Plants of open calcareous fens
 Plants of tall-herb fens & swamps

Group	Species	Common Name	IUCN GB	IUCN Eng	IUCN other	Criteria	Threats / Pressures							
Plants	<i>Epipactis palustris</i>	Marsh Helleborine	LC	NT	n/a	2	..	.	.	.	.	.	.	.
Plants	<i>Eriophorum latifolium</i>	Broad-leaved Cottongrass	LC	LC	n/a	4	.	.	.	.	.	.	.	.
Plants	<i>Pedicularis palustris</i>	Marsh Lousewort	VU	VU	n/a	1	.	.	.	.	.	.	.	.
Plants	<i>Triglochin palustre</i>	Marsh Arrowgrass	LC	NT (ENG)	n/a	2	.	.	.	.	.	.	.	.

Micro-habitat assemblage: Bryophytes of rich fens & base-rich flushes

Group	Species	Common Name	IUCN GB	IUCN Eng	IUCN other	Criteria	Threats / Pressures							
Mosses	<i>Palustriella falcata</i>	Claw-leaved Hook-moss	LC	n/a	n/a	4	PA05	PK04	.	.	.	.	.	.
Mosses	<i>Philonotis calcarea</i>	Thick-nerved Apple-moss	LC	n/a	n/a	4	PA05	PK04	.	.	.	.	.	.
Mosses	<i>Scorpidium cossonii</i>	Intermediate Hook-moss	LC	n/a	n/a	4	PA05	PA08	PK04	.	.	.	.	.