DORSET LOCAL NATURE RECOVERY STRATEGY HABITAT ASSEMBLAGES

Habitat assemblage:	Species of open valley mires and acid flushes
Broad Habitat type:	Heathland
S41 and Priority Habitat type:	Lowland Fens
Composite species assemblages:	Invertebrates of open *Sphagnum*-rich valley mires Plants of open *Sphagnum*-rich valley mires and acid flushes Bryophytes of open valley mires and acid flushes Fungi of open valley mires and acid flushes

Habitat assemblage description:	The groundwater-fed valley mires and associated acid flushes of the Poole Basin are of international importance for their flora and fauna with many scarce and threatened species, some of which are now confined in southern England the Dorset and the New Forest. There are approximately 640-hectares of valley mire habitat in Dorset of which only **220-ha** (34%) is open and species-rich with well-developed *Sphagnum* carpets and associated bog pools, this falls within the NVC community **M21a**, with smaller stands of **M1**, **M3**, **M6**, **M14** and **M29**. The remaining 66% is largely dominated by dense, tussocky Purple Moor-grass with stands of Bog Myrtle (NVC: **M25a**), much of this is a result of past damage through attempted drainage and / or lack of grazing. The open mire with short vegetation and bog-moss carpets is favoured by many plants and invertebrates some of which are confined to this habitat and require and constantly high water table coupled with the acid and very nutrient-poor ground water that feeds the mires. Structure is important for many invertebrates and is provided at various scales by more tussocky plants such as black bog-rush, also small bog-pools are important for a number of specialists such as the insectivorous bladderworts.

Other related assemblages:	Species of wet heath and grass-heath

Pressures and Threats	
PA05	**Abandonment of management/use of grasslands and other agricultural and agro-forestry systems (e.g. cessation of grazing, mowing or traditional farming)**
	Cessation of traditional heathland management and small-scale peat digging by the end of 19th Century has resulted in encroachment of scrub and trees, plus development of longer purple moor-grass dominated vegetation. This has resulted in the loss of open moss carpets and small bog pools which are favoured by the *Sphagnum* species and other bryophytes. Although the re-introduction of grazing to many of the larger heaths has somewhat halted this process.
PA08	**Extensive grazing or under-grazing by livestock**

	Succession is naturally much slower in mires due to the permanently high water table, but some level of grazing is required to maintain open *Sphagnum*-rich vegetation which supports many of the rare and threatened invertebrates and plants within the mires. Lack of grazing can lead to an increase in Purple Moor-grass which become tussocky and eventually exclude smaller less competitive species.
PA13	**Application of natural or synthetic fertilisers on agricultural land**
	The habitat which supports these and other mire specialists is dependent on clean, very nutrient-poor ground water. Pollution from agriculture on land adjacent to water courses that feed these sites can cause enrichment of the water that can cause changes in species composition favouring more competitive plants such purple moor-grass.
PI02	**Other invasive alien species**
	Mires have been less affected by invasive species that drier areas of the heaths, but locally rhododendron is an issue. Carnivorous plants including pitcher-plants species have been deliberately planted into several mires but so far have only become established on part of Hyde Bog. In Purbeck sika deer locally graze the heaths and mire intensively which can be positive, but in certain circumstance the way the herds move through the landscape causes erosion and break up the bog-moss carpets.
PI03	**Problematic native species**
	Purple Moor-grass if ungrazed can form dense tussocks which can encroachment on the areas of open *sphagnum*-dominated mire which these species are confined. This process can be accelerated by disturbance, drainage and enrichment.
PJ03	**Changes in precipitation regimes due to climate change**
	Prolonged drought can lower the water table and lead to changes in vegetation composition and potentially a decline in *sphagnum* carpets.
PK04	**Atmospheric N-deposition**
	Low level deposition of nitrogen and ammonia has a fertilizing effect on vegetation favouring Nitrogen demanding grasses and herbs over species mire species that require very nutrient-poor soils and groundwater.

Micro-habitat assemblage: Invertebrates of open *Sphagnum*-rich valley mires

Group	Species	Common Name	IUCN GB	IUCN Eng	IUCN other	Criteria	Threats / Pressures						
Beetles	*Acylophorus glaberrimus*	a rove beetle	NT	n/a	n/a	**2**	.	.	.	.	.	.	.
Beetles	*Cryptocephalus biguttatus*	a leaf beetle	VU	n/a	n/a	**1**	PA05	.	.	.	.	.	.
Beetles	*Stenus kiesenwetteri*	a rove beetle	VU	n/a	n/a	**1**	.	.	.	.	.	.	.
Beetles	*Tachyura walkeriana*	a ground beetle	NT	n/a	n/a	**2**	.	.	.	.	.	.	.
Bugs	*Pachybrachius luridus*	Sphagnum Groundbug	n/a	n/a	n/a	**2**	.	.	.	.	.	.	.
Bugs	*Peritrechus angusticollis*	a ground-bug	n/a	n/a	n/a	**3, 4**	.	.	.	.	.	.	.
Flies	*Atylotus fulvus*	Golden Horsefly	LC	n/a	n/a	**3**	PA05	PA08	PA17	.	.	.	.
Flies	*Chrysops sepulcralis*	Black Deer-fly	LC	n/a	n/a	**3**	.	.	.	.	.	.	.
Ants	*Formica picea (F. candida)*	Black Bog Ant	EN	n/a	n/a	**1**	PA05	PA08	.	.	.	.	.
Micro-moths	*Buckleria paludum*	Sundew Plume		n/a	n/a	**3**	.	.	.	.	.	.	.
Micro-moths	*Crambus silvella*	Bog Grass-veneer		n/a	n/a	**3**	.	.	.	.	.	.	.
Micro-moths	*Crambus uliginosellus*	Marsh Grass-moth; Marsh Grass-veneer				**5**	.	.	.	.	.	.	.
Micro-moths	*Glyphipterix schoenicolella*	Bog-rush Moth; Bog-rush Fanner		n/a	n/a	**5**	.	.	.	.	.	.	.
Micro-moths	*Monochroa lucidella*	Spike-rush Borer; Buff-marked Neb		n/a	n/a	**4**	.	.	.	.	.	.	.
Grasshoppers and Bush-crickets	*Stethophyma grossum*	Large Marsh Grasshopper	NT	n/a	n/a	**2**	PA05	PA08	PH04	.	.	.	.
Spiders	*Calositticus caricis*	Sedge Jumper		n/a	n/a	**3**	PA05	PA08		.	.	.	.
Spiders	*Dolomedes fimbriatus*	Raft Spider		n/a	n/a	**3**	PA05	PA08	.	.	.	.	.

Micro-habitat assemblage: Plants of open *Sphagnum*-rich valley mires and acid flushes

Group	Species	Common Name	IUCN GB	IUCN Eng	IUCN other	Criteria	Threats / Pressures							
Plants	*Carex dioica*	Dioecious Sedge	LC	LC	n/a	**3**	PA08	PA17	PJ03	PK04	.	.	.	.
Plants	*Carex lasiocarpa*	Slender Sedge	LC	VU	n/a	**1**	PA05	PA08	PA17	PI03	.	.	.	.
Plants	*Carex limosa*	Bog Sedge	LC	EN	n/a	**1**	PA08	PA17	PJ03	PK04	.	.	.	.
Plants	*Comarum palustris*	Marsh Cinquefoil	LC	NT	n/a	**2**	PA04	PA05	PA08	PK04	.	.	.	.
Plants	*Drosera anglica*	Great Sundew	NT	EN	n/a	**1**	PA08	PA17	PJ03	PK04	.	.	.	.
Plants	*Drosera x belezeana*	a hybrid sundew	VU	LC	n/a	**1**	PA08	PA17	PJ03	PK04	.	.	.	.
Plants	*Hammarbya paludosa*	Bog Orchid	LC	VU	n/a	**1**	PA08	PA17	PJ03	PK04	.	.	.	.
Plants	*Hypericum elodes*	Marsh St John's-wort	LC	NT	n/a	**2**	PA05	PA08	PK04		.	.	.	.
Plants	*Utricularia minor*	Lesser Bladderwort	LC	VU	n/a	**1**	PA08	PK01	PK04	.	.	.	.	.
Plants	*Utricularia stygia*	Nordic Bladderwort	DD	DD	n/a	**1, 4**	PA08	PK01	PK04	.	.	.	.	.

Micro-habitat assemblage: Bryophytes of open valley mires and acid flushes

Group	Species	Common Name	IUCN GB	IUCN Eng	IUCN other	Criteria	Threats / Pressures							
Mosses	*Scorpidium revolvens*	Rusty Hook-moss	LC	n/a	n/a	**4**	PA05	PA08	PK04	.	.	.	.	.
Mosses	*Sphagnum beothuk*	Tawny Bog-moss	LC	n/a	n/a	**4**	PA08	PA17	PI02	PK04	.	.	.	.
Mosses	*Sphagnum medium*	Magellanic Bog-moss	LC	n/a	n/a	**3**	PA08	PA17	PI02	PK04	.	.	.	.
Mosses	*Sphagnum molle*	Blushing Bog-moss	LC	n/a	n/a	**3**	PA08	PA17	PI02	PK04	.	.	.	.
Mosses	*Sphagnum pulchrum*	Golden Bog-moss	LC	n/a	n/a	**3**	PA08	PA17	PK04	.	.	.	.	.
Mosses	*Splachnum ampullaceum*	Cruet Collar-moss	LC	n/a	NT (Eur)	**2**	PA05	PA08	PK04	.	.	.	.	.

Micro-habitat assemblage: Fungi of valley mires

Group	Species	Common Name	IUCN GB	IUCN Eng	IUCN other	Criteria	Threats / Pressures							
Fungi - Basidiomycota	*Arrhenia sphagnicola*	Sphagnum Navel	n/a	n/a	n/a	**4**	PA08	PK04	.	.	.	.	.	.
Fungi - Basidiomycota	*Omphalina mutila*		n/a	n/a	n/a	**4**	PA08	PK04	.	.	.	.	.	.
Fungi - Basidiomycota	*Ustanciosporium gigantosporum*		n/a	n/a	n/a	**3, 4**	PA08	PK04	.	.	.	.	.	.
Fungi - Basidiomycota	*Ustanciosporium majus*		n/a	n/a	n/a	**3, 4**	PA08	PK04	.	.	.	.	.	.