DORSET LOCAL NATURE RECOVERY STRATEGY HABITAT ASSEMBLAGES

Habitat assemblage:	Species of short, open chalk and limestone grassland
Broad Habitat type:	Grasslands
S41 and Priority Habitat type:	Lowland Calcareous Grassland
Composite species assemblages:	Butterflies and day-flying moths of chalk and limestone grassland Invertebrates of open, species-rich calcareous grassland Plants of short, open chalk and limestone grassland Bryophytes and lichens of short, open chalk and limestone grassland Fungi associated with Rockrose-rich chalk grasslands

Habitat assemblage description:	There are approximately 3,300-hectares in Dorset which is around 10% of the English resource. Calcareous grassland that is naturally open, often with low rock outcrops and with sward between 1 and 7cm high is often very localised and typically found on south-facing aspects, stands on the coast are often droughted in the summer. There are features such as old pits, spoil heaps, trackways and the ramparts of ancient monuments that often support shorter turf than on the general slope. Historically rabbits would have been important in keeping areas short and open, but their numbers are far lower and now their impact is often very localised. In Dorset the limestone of Portland and Purbeck support the richest stands of this type of calcareous grassland. There are many small herbs which favour this type of grassland including early gentian, early spider-orchid and bastard toadflax for which Dorset has nationally important populations. On sites with a long history of grazing the animals produce paths and small 'terracettes' that support niches for small annual mosses and ground nesting invertebrates. Warm or hot south-facing slopes are favoured by several butterfly species such as the adonis blue and silver-spotted skipper. The main plant communities within the National Vegetation Classification that have short turf are **CG1**, **CG2a**, **CG3a**, **CG4a** and **CG7**.

Other related assemblages:	Species of longer calcareous grassland, and scrub margins Species of maritime cliffs, undercliffs and coastal slopes

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)**
	Changes in land use such as the cessation of grazing and abandonment leads to encroachment of coarser grasses and tall vegetation and eventually scrub.
PA07	**Intensive grazing or overgrazing by livestock**

	Higher levels of stocking are needed to maintain a short sward, but prolonged intensive grazing can significantly reduce the flower resource needed by invertebrates. It can also cause localised erosion, especially on steep slopes, and also enrichment.
PA08	**Extensive grazing or under-grazing by livestock**
	Under-grazing of grassland results in the encroachment of coarser grasses and herbs resulting in a decrease or loss of bare ground which is required by annual species to seed into and provides a habitat for many bryophytes and lichens. Eventually smaller herbs will be outcompeted by more robust perennials herbs, and coarse grasses such as tor-grass and upright brome.
PA13	**Application of natural or synthetic fertilisers on agricultural land**
	Artificial fertilizers encourage the growth of a few nitrogen-tolerant species at the expense of most plants of ancient semi-natural grassland which typically thrive in nutrient-poor soils. On the chalk and limestone many grasslands survive on steep slopes, the application of fertilizers at the foot of, or top of, the slopes often leading to the development of band of rank and species-poor grassland in these areas. This is a particular problem on small sites or narrow slopes and can eventually lead to a loss of species diversity.
PA19	**Agricultural activities generating soil pollution**
	Feeding of animals in feeders causes localised poaching (excessive trampling) and enrichment of the soil resulting in a change in sward composition by favouring plants that benefit from nutrient levels and disturbance such as creeping buttercup, stinging nettle, dock spp. and thistle spp. This sequence of events can increase the chances of land managers resorting to herbicides to control problem plants, further exacerbating the ecological damage.
PF05	**Sports, tourism and leisure activities**
	Locally very high numbers of visitors can cause erosion and enrichment of soil. In the spring and summer disturbance to ground-nesting birds can be issue.
PI02	**Other invasive alien species**
	In Dorset invasive non-native such as *cotoneaster* species have become established in chalk and limestone grassland and spread covering large areas of ground. It has been cleared from many areas on within protected sites on Portland.
PI03	**Problematic native species**
	Relaxation of grazing encourages coarser grassland and scrub species such bramble and ivy which can rapidly invade and result in the loss of bare ground and hasten the invasion of larger scrub species. At certain sites the coarse grasses tor-grass and upright brome can be invasive and swamping smaller fine-leaved grasses and herbs and reducing the amount of bare ground for annuals and bryophytes and lichens. These species are generally only a problem where grazing levels are significantly reduced.
PJ03	**Changes in precipitation regimes due to climate change**

	The changing climate results in changing weather patterns including droughts and high rainfall that can impact on vegetation. Increase rainfall particularly in late summer and autumn coupled with an extended growing period into early means that swards can be but longer than favourable during the winter unless grazing levels are maintained sufficiently.
PK04	**Atmospheric N-deposition**
	Low level deposition of nitrogen and ammonia compounds has a fertilizing effect on vegetation favouring Nitrogen demanding grasses and herbs over species of ancient grasslands that require infertile soils. This effect can be compounded by a reduction in grazing and a prolonged growing season.

Micro-habitat assemblage: Butterflies and day-flying moths of chalk and limestone grassland

Group	Species	Common Name	IUCN GB	IUCN Eng	IUCN other	Criteria	Threats / Pressures							
Butterflies	*Coenonympha pamphilus*	Small Heath	VU	n/a	n/a	**1**	PA05	.	.	.	.	.	.	.
Butterflies	*Cupido minimus*	Small Blue	NT	n/a	n/a	**2**	.	.	.	.	.	.	.	.
Butterflies	*Hesperia comma*	Silver-spotted Skipper	VU	n/a	n/a	**1**	PA05	PA08	.	.	.	.	.	.
Butterflies	*Polyommatus coridon*	Chalk-hill Blue	VU	n/a	n/a	**1**	PA05	PA07	.	.	.	.	.	.
Butterflies	*Polyommatus bellargus*	Adonis Blue	VU	n/a	n/a	**1**	PA05	PA07	.	.	.	.	.	.
Butterflies	*Pyrgus malvae*	Grizzled Skipper	VU	n/a	n/a	**1**	PA05	PA07	PA08	.	.	.	.	.
Butterflies	*Euphydryas aurinia*	Marsh Fritillary	VU	n/a	n/a	**1**								
Butterflies	*Melitaea cinxia*	Glanville Fritillary	EN	n/a	n/a	**7**	.	.	.	.	.	.	.	.

Micro-habitat assemblage: Invertebrates of short and open species-rich calcareous grassland

Group	Species	Common Name	IUCN GB	IUCN Eng	IUCN other	Criteria	Threats / Pressures							
Beetles	*Harpalus dimidiatus*	a ground beetle	NT	n/a	n/a	**2**	.	.	.	.	.	.	.	.
Beetles	*Cryptocephalus primarius*	Rockrose Pot Beetle	EN	n/a	n/a	**1**	PA05	PK04	.	.	.	.	.	.
Beetles	*Lebia cruxminor*	a ground beetle	EN	n/a	n/a	**1**	.	.	.	.	.	.	.	.
Beetles	*Longitarsus minusculus*	a flea beetle	DD	n/a	n/a	**3**	PA05	PA08	PK04	.	.	.	.	.
Beetles	*Amphimallon fallenii*	Scarce Summer Chafer	NT	n/a	n/a	**2**								
Bugs	*Canthophorus impressus*	Down Shieldbug	LC	n/a	n/a	**3**	.	.	.	.	.	.	.	.
Ants	*Solenopsis fugax*	Small Raider Ant	RDB3	n/a	n/a	**3**	PA05	PA08	.	.	.	.	.	.
Bee	*Sphecodes ferruginatus*	Dull-headed Blood Bee	(NT)	n/a	LC	**2, 4**	PA04	PA05	PA08	.	.	.	.	
Bees	*Sphecodes hyalinatus*	Furry-bellied Blood Bee	.	n/a	NT(ERLB)	**2**	PA04	PA05	PA08	.	.	.	.	.
Bees	*Andrena similis*	Red-backed Minig Bee	.	n/a	LC	**4**	PA05	PA08	PK04	.	.	.	.	.
Wasps	*Aporus unicolor*			n/a	n/a	**3**	PA05	PA07	PF05	PH04	.	.	.	.
Wasps	*Arachnospila minutula*			n/a	n/a	**4**	PA05	.	.	.	.	.	.	.
Macro-moths	*Adscita geryon*	Cistus Forester	LC	n/a	n/a	**5**	.	.	.	.	.	.	.	.
Macro-moths	*Parasemia plantaginis*	Wood Tiger		n/a	n/a	**5**	.	.	.	.	.	.	.	.
Macro-moths	*Trichopteryx polycommata*	Barred Tooth-striped		n/a	n/a	**4**	.	.	.	.	.	.	.	.
Micro-moths	*Epermenia insecurella*	Chalk-hill Ridge-back Chalk-hill Lance-wing		n/a	n/a	**3**	.	.	.	.	.	.	.	.
Micro-moths	*Mecyna flavalis subsp. flaviculalis*		VU	n/a	n/a	**5**	.	.	.	.	.	.	.	.
Micro-moths	*Pelochrista caecimaculana*	Chalk Hill Tortrix; Chalk Hill Bell		n/a	n/a	**4**	.	.	.	.	.	.	.	.
Macro-moths	*Tholera cespitis*	Hedge Rustic	VU	n/a	n/a	**1**	.	.	.	.	.	.	.	.
Micro-moths	*Acompsia schmidtiellus*	Margjoram Snout; Marjoram Crest		n/a	n/a	**5**	.	.	.	.	.	.	.	.
Micro-moths	*Gynnidomorpha luridana*	Bartsia Straw; Bank Conch		n/a	n/a	**5**	.	.	.	.	.	.	.	.
Macro-moths	*Adscita statices*	Forester	LC	n/a	n/a	**5**	.	.	.	.	.	.	.	.
Micro-moths	*Agonopterix pallorella*	Black-streaked Buff; Pale Flat-body		n/a	n/a	**5**	.	.	.	.	.	.	.	.
Macro-moths	*Eupithecia satyrata*	Satyr Pug	VU	n/a	n/a	**1**	.	.	.	.	.	.	.	.

Land and freshwater snails	*Truncatellina callicratis*	British Whorl Snail	NT	n/a	n/a	**2**	PA05	PA08	PK04	.	.	.	.	.

Micro-habitat assemblage: Plants of short, open chalk and limestone grassland

Group	Species	Common Name	IUCN GB	IUCN Eng	IUCN other	Criteria	Threats / Pressures							
Plants	*Arabis hirsuta*	Hairy Rock-cress	LC	NT	n/a	**2**	PA04	PA05	PA08	.	.	.	.	.
Plants	*Carex humilis*	Dwarf Sedge	LC	LC	n/a	**3**	PA04	PA08	PK04	.	.	.	.	.
Plants	*Cerastium pumilum*	Dwarf Mouse-ear	NT	LC	n/a	**2**	PA05	PA08	PK04	.	.	.	.	.
Plants	*Dactylorhiza viridis*	Frog Orchid	VU	VU	n/a	**1**	PA05	PA08	PJ01	PK04	.	.	.	.
Plants	*Euphrasia confusa*	Confused Eyebright	DD	VU	n/a	**1**	PA05	PA08	PK04	.	.	.	.	.
Plants	*Euphrasia pseudokerneri*	Large-flowered Eyebright	EN	VU	n/a	**1**	PA05	PA08	PK04	.	.	.	.	.
Plants	*Euphrasia tetraquetra*	Western Eyebright	.	NT	n/a	**2**	PA05	PA08	PK04	.	.	.	.	.
Plants	*Gastridium ventricosum*	Nit-grass	LC	LC	n/a	**3**	PA05	PA08	PJ03	PK04	.	.	.	.
Plants	*Gentianella amarella* ssp. *anglica*	Early Gentian	LC	VU	n/a	**1**	PA05	PA08	PJ03	PK04	.	.	.	.
Plants	*Helianthemum nummularium*	Common Rock-rose	.	NT	n/a	**2**	PA05	PA08	PK04	.	.	.	.	.
Plants	*Neotinea ustulata*	Burnt Orchid	EN	EN	n/a	**1**	PA05	PA08	PK04	.	.	.	.	.
Plants	*Pilosella peleteriana*	Shaggy Mouse-ear Hawkweed	VU	LC	n/a	**1**	PA05	PA08	PK04	.	.	.	.	.
Plants	*Spiranthes spiralis*	Autumn Lady's-tresses	NT	NT	n/a	**2**	PA05	PA08	PK04	.	.	.	.	.
Plants	*Tephroseris integrifolia*	Field Fleawort	EN	VU	n/a	**1, 4**	PA05	PA08	PK04	.	.	.	.	.
Plants	*Thesium humifusum*	Bastard Toadflax	LC	LC	n/a	**3**	PA05	PA08	PK04	.	.	.	.	.
Plants	*Valerianella eriocarpa*	Hairy-fruited Cornsalad	LC	LC	n/a	**3**	PA04	PA08	PK04	.	.	.	.	.

Micro-habitat assemblage: Bryophytes and lichens of short, open chalk and limestone grassland

Group	Species	Common Name	IUCN GB	IUCN Eng	IUCN other	Criteria	Threats / Pressures							
Liverworts	*Cephaloziella baumgartneri*	Chalk Threadwort	EN	n/a	n/a	**1**	PA05	PI02	PI03	PK04	.	.	.	.
Liverworts	*Southbya nigrella*	Blackwort	CR	n/a	n/a	**1**	PA05	PI02	PI03	PK04	.	.	.	.
Mosses	*Abietinella abietina* ssp. *hystricosa*	Prickly Tamarisk-moss	LC	n/a	n/a	**4**	PA05	PK04	.	.	.	.	.	.
Mosses	*Bryum canariense*	Canary Thread-moss	LC	n/a	n/a	**4**	PA05	PK04	.	.	.	.	.	.
Mosses	*Entosthodon muhlenbergii*	Muhlenberg's Cord-moss	LC	n/a	NT (Eur)	**2, 4**	PA05	PK04	.	.	.	.	.	.
Mosses	*Entisthodon pulchellus*	Pretty Cord-moss	NT	n/a	n/a	**2, 4**	PA05	PA08	PK04	.	.	.	.	.
Mosses	*Ephemerum recurvifolium*	Strap-leaved Earth-moss	LC	n/a	NT (Eur)	**2**	PA05	PK04	.	.	.	.	.	.
Mosses	*Plasteurhynchium meridionale*	Portland Feather-moss	CR	n/a	n/a	**1**	PA05	PA08	PK04	.	.	.	.	.
Mosses	*Pottiopsis caespitosa*	Round-fruited Pottia	LC	n/a	VU(Eur)	**1**	PA05	PA08	PK04	.	.	.	.	.
Mosses	*Pterygoneurum papillosum*		VU	n/a	DD(Eur)	**4**	PA05	PA08	PK04	.	.	.	.	.
Mosses	*Rhodobryum roseum*	Rose-moss	LC	n/a	n/a	**4**	PA05	PA08	PK04	.	.	.	.	.

Mosses	*Weissia sterilis*	Sterile Beard-moss	LC	n/a	NT (Eur)	**2**	PA05	PA08	PK04	.	.	.	.	.
Lichens	*Biatorella fossarum*		EN	n/a	n/a	**1**	PA05	PI02	PI03	PK04	.	.	.	.
Lichens	*Bilimbia lobulata*		LC	n/a	n/a	**4**	PA05	PI02	PI03	PK04	.	.	.	.
Lichens	*Lemmopsis arnoldiana*		NT	n/a	n/a	**2**	PA08	PI03	PK04			.	.	.
Lichens	*Placidium pilosellum*		NT	n/a	n/a	**2**	PA08	PI02	PI03	PK04	.	.	.	.
Lichens	*Caloplaca stillicidiorum*		n/a	n/a	n/a	**3, 4**	PA05	PA08	PI03	PK04	.	.	.	.
Lichens	*Squamarina cartilaginea*		n/a	n/a	n/a	**3, 4**	PA05	PF05	PI02	PI03	PK04	.	.	.
Lichens	*Thalloidima sedifolium*		n/a	n/a	n/a	**3, 4**	PA05	PA08	PF05	PI02	PI03	PK04	.	.

Micro-habitat assemblage: Fungi associated with Rockrose-rich chalk grasslands

Group	Species	Common Name	IUCN GB	IUCN Eng	IUCN other	Criteria	Threats / Pressures							
Fungi	*Cortinarius cisticola*		n/a	n/a	n/a	**4**	PA05	PA08	PK04	.	.	.	.	.
Fungi	*Cortinarius subturibulosus*		n/a	n/a	n/a	**4**	PA05	PA08	PK04	.	.	.	.	.
Fungi	*Tricholoma hemisulphureum*		n/a	n/a	n/a	**4**	PA05	PA08	PK04	.	.	.	.	.