DORSET LOCAL NATURE RECOVERY STRATEGY HABITAT ASSEMBLAGES

Habitat assemblage:	Species of heathland pools
Broad Habitat type:	Heathland
S41 and Priority Habitat type:	Lowland Heathland
Composite species assemblages:	Plants of nutrient-poor heathland pools and ponds Invertebrates of nutrient-poor heathland pools and ponds Dragonflies and damselflies of mires and acid pools

Habitat assemblage description:	Ponds, pools and old mineral workings are important habitats on the heaths for a wide range on invertebrates and plants. Many of these species require nutrient-poor (mesotrophic to oligotrophic) water over an acidic sandy or clayey of substrate. These often have a disjunct distribution in Britain confined to heathland regions of central-southern England and more northern or upland areas of the country, some are now very rare in lowland England. These ponds have been lost or overgrown through the abandonment of traditional heathland management, but these losses have, to some extent, been replaced by abandoned mineral workings such as old ball clay pits and more recently the construction of 'fire-ponds' around the heaths. Temporary pools are perhaps the most threatened type of specialist waterbody on the heaths. Enrichment and natural succession are perhaps the greatest threats to ponds and pools on the heaths.

Other related assemblages:	Species of open, *Sphagnum*-rich valley mires and flushes Species of ponds and lakes

Pressures and Threats	
PA04	**Removal of small landscape features for agricultural land parcel consolidation (hedges, stone walls, rushes, open ditches, springs, solitary trees, etc.)**
	The cessation of traditional heathland management has led to the loss of features such small pools, ponds, borrow pits and small-scale mineral workings that provided a habitat for invertebrates and plants associated with permanent and temporary water bodies
PA05	**Abandonment of management/use of grasslands and other agricultural and agro-forestry systems (e.g. cessation of grazing, mowing or traditional farming)**
	The cessation of grazing and abandonment of management has meant that many ponds which were often associated at the edges of the heaths have become overgrown by scrub and secondary woodland.

PA08	**Extensive grazing or under-grazing by livestock**
	The ponds were established on the heaths for grazing animals which kept the edges open through grazing and trampling, producing open margins favoured by many of the specialist plants which are generally poor competitors.
PA13	**Application of natural or synthetic fertilisers on agricultural land**
	The majority of invertebrates and plants found in these water bodies require nutrient-poor (mesotrophic to oligotrophic) water on acidic substrates. Applications of artificial fertilizers on land adjacent to the heaths can enrich water courses that flow into the heaths and into pools and ponds. Enriching the water and changing the vegetation type.
PI02	**Other invasive alien species**
	Two species in particular parrot's feather and New Zealand pygmyweed are found in some water bodies and old mineral workings on the heaths. These are very invasive and out-compete native plants especially smaller species found on muddy margins.
PI03	**Problematic native species**
	Where grazing has ceased robust plants such as purple moor-grass and large rushes which out-compete smaller plants especially on the margins. Climate change and enrichment compounds the problem.
PJ03	**Changes in precipitation regimes due to climate change**
	The changing climate is resulting in both increased droughts and flooding events. Prolonged droughts lead to the pool margins becoming drier for longer and therefore becoming invaded by more competitive terrestrial plants. Flooding events especially when originating outside of the heaths bring sediment and enriched water onto the heaths and into these waterbodies and may eventually lead to the over-enrichment of the water and the substrate which may lead to the displacement of specialist by more generalist invertebrates and plants.
PK04	**Atmospheric N-deposition**
	Low levels of deposition of nitrogen deposition over time will enrich the water and have a fertilizing effect on the vegetation which, in the absence of grazing or other management, leads to the pond becoming invaded by robust species.

Micro-habitat assemblage: Invertebrates of nutrient-poor heathland pools and ponds

Group	Species	Common Name	IUCN GB	IUCN Eng	IUCN other	Criteria	Threats / Pressures							
Beetles	*Acupalpus brunnipes*	a ground beetle	NT	n/a	n/a	**2**	.							
Beetles	*Agabus labiatus*	a diving beetle	NT	n/a	n/a	**2**	.							
Beetles	*Graphoderus cinereus*	a diving beetle	VU	n/a	n/a	**1**	.							
Beetles	*Graptodytes flavipes*	a diving beetle	NT	n/a	n/a	**2**	.							
Beetles	*Gyrinus minutus*	a Whirligig beetle	LC	n/a	n/a	**3**	.							
Beetles	*Hydroporus necopinatus subsp. roni*	Ron's Diving Beetle	EN	n/a	n/a	**1**	.							
Beetles	*Stictonectes lepidus*	a diving beetle	NT	n/a	n/a	**2**	.							
Hoverflies	*Anasimyia lunulata*		LC	n/a	n/a	**4**	.							
Hoverflies	*Parhelophilus consimilis*		LC	n/a	n/a	**4**	.							

Micro-habitat assemblage: Plants of nutrient-poor heathland pools and ponds

Group	Species	Common Name	IUCN GB	IUCN Eng	IUCN other	Criteria	Threats / Pressures							
Plants	*Apium inundatum*	Lesser Marshwort	LC	VU	n/a	**1**	PA04	PA05	PA13	.	.	.	.	.
Plants	*Baldellia ranunculoides*	Lesser Water-plantain	NT	VU	n/a	**1**	PA04	PA05	PA13	.	.	.	.	.
Plants	*Deschampsia setacea*	Bog Hair-grass	LC	VU	n/a	**1**	PA08	PK04	.	.	.	.	.	.
Plants	*Illecebrum verticillatum*	Coral-necklace	VU	EN	n/a	**1**	PI02	PI03	PK04	.	.	.	.	.
Plants	*Isoetea echinospora*	Spring Quillwort	LC	LC	n/a	**4**	PI02	PJ04	PJ05	PK01	.	.	.	.
Plants	*Ludwigia palustris*	Hampshire-purslane	LC	LC	n/a	**4**	.	.	.	.	.	.	.	.
Plants	*Pilularia globulifera*	Pillwort	NT	VU	n/a	**1**	PA05	PA08	PI02	PK02	.	.	.	.
Charophytes	*Nitella translucens*	Translucent Stonewort	.	n/a	n/a	**3**	PA05	PA17	.	.	.	.	.	.