

OREsome Botanical Surveys

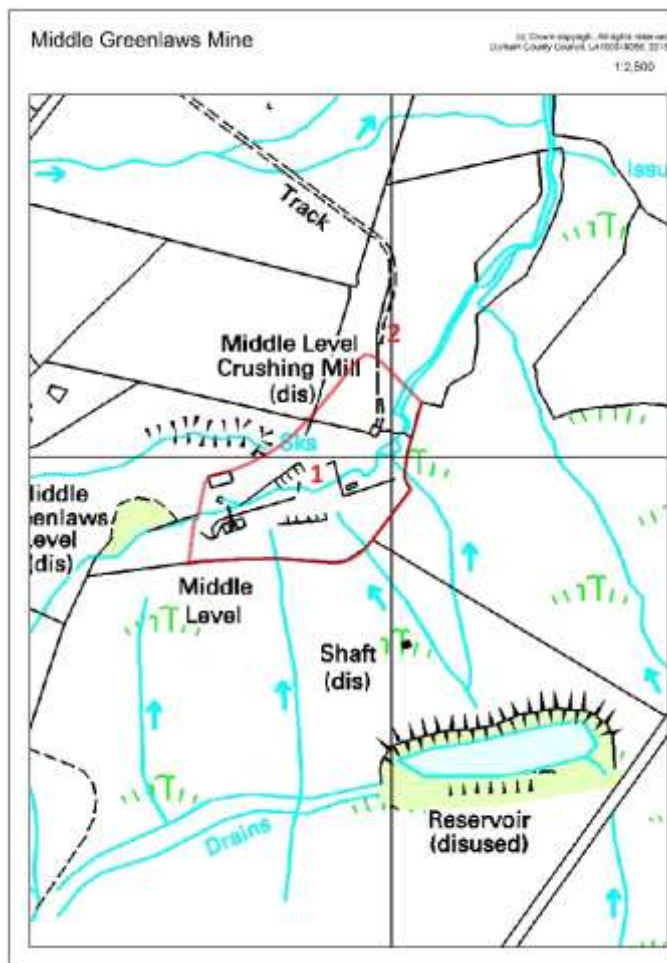
Site dossier – Middle Greenlaws Level

SAM list entry number: 1015828
Grid ref.: NY889369
County: County Durham
Parish: Stanhope
Altitude: 370-380m
Habitats: pasture

1. Botanical interest

Much of this site has been disturbed by land use and flooding, so there are only two small areas of calaminarian habitat remaining. These include small populations of the metallophytes spring sandwort (*Minuartia verna*) and mountain pansy (*Viola lutea*), growing with thyme (*Thymus polytrichus*), common mouse-ear (*Cerastium fontanum*), sheeps fescue (*Festuca ovina*), harebell (*Campanula rotundifolia*) and pale thread-moss (*Bryum pallens*). All these are typically associated with lead mines.

Wet ground elsewhere supports a variety of sedges,, but otherwise the site has little botanical interest.



Map 1. Areas of botanical interest at Middle Greenlaws, also showing the extent of the SAM:

- (1) small area of calaminarian at the base of spoil heap;
- (2) small area of calaminarian at the base of slag heap.

2. Site description

This small site is on the north-facing slopes of High Pike in Weardale, in a shallow valley containing the Daddryshield Burn. Some of the mine spoil was washed down by floods in 1995 to bury the remains of mid-19th century ore works, but two level portals (one a horse level), a wheelpit and nine bouse teams remain.

The wider area of Greenlaws Mine also includes Greenlaws Hush to the west, and other level entrances and water management features. The Greenlaws West vein was worked by hush and shafts from at least 1818, but the mine was most productive when the Greenlaws East Vein was worked from 1850 to 1907. Signs of later unsuccessful trial workings can still be seen.

A level area, 50x40m north of the bouse teams, is the upper washing floor. This also has a set of six bouse teams and a revetment wall with steps down to a second washing floor with the remains of a wheelpit, mine shop and other structures. A trackway from here passes under a spoil heap through a 35m arched tunnel. The mineshop is now used as an agricultural store. The rectangular enclosure by the upper washing floor was a timber store.



Map 2. Location of Middle Greenlaws, showing the extent of the SAM in red. © Crown Copyright and database right 2015. All rights reserved. Ordnance Survey Licence number 100024900.

3. Previous surveys

The site was surveyed by Sarah Tooze and Ruth Starr-Keddle in July 2016, as part of a wider survey of Pinfold House – Middle Greenlaws Mire. They comment on the presence of two areas of calaminarian grassland, one with abundant wild thyme, wavy hair-grass and occasional common bird's-foot trefoil, mountain pansy, harebell and a few spring sandworts, and the other with abundant wild thyme and red fescue, frequent common bird's-foot trefoil, mouse-eared hawkweed, white clover, sweet vernal grass, and occasional fairy flax. Steeper sides and rocky flat bottoms have additional patches of eyebright, common knapweed, lady's-bedstraw, common milkwort, yarrow and self-heal.

No other biological records have been traced for this site.

4. OREsome survey compartments

This is a small site with several areas of bare contaminated ground associated with the ore works and waste heaps. The lack of records of calaminarian specialists is consistent with disturbance of the ground by recent floods and land use, but there may be small areas of interest and these could improve over time.

The area within the SAM can be surveyed as a single compartment. It may also be worth looking at the area to the NW but this appears to have been recently disturbed and so may not have much interest. The hush and dam are well grassed over and unlikely to have calaminarian habitats.

ID	Grid ref.	Description	Known species of interest
MG1		Ore works and associated structures and waste heaps within the SAM	
MG2		Waste heap NW of the SAM	

Table 1. OREsome survey compartments.



Map 3. OREsome survey compartments.

5. OREsome survey results

A full walkthrough survey was carried out by volunteers on 24TH June 2017 (Lizzie Maddison, Steve Gater and TM), and this confirmed the presence of calaminarian indicator species.

Much of MG1, including the washing floors, has been severely damaged by floods. Calaminarian was found in one small area at the base of the large spoil heap. One quadrat was recorded near a rabbit hole on the bank (NY8897.3699).

MG2 also has calaminarian, at the base of the slag heap adjacent to MG1 (NY89086.37082). Three quadrats were recorded in this area, together with a species list for the compartment as a whole. Most

of the compartment is flat and covered by a manure heap and rubbish. The bank is of very loose rubble with a few mosses, but not safe to survey in detail.

The species found are listed below, using the DAFOR scale of abundance (D-dominant, A-abundant, F-frequent, O-occasional, R-rare):

		MG1	MG2
Species richness		57	23
	bare ground/stone	F	F
<u>Trees and shrubs</u>	-		
<i>Rosa canina</i>	dog rose	O	
<i>Ulex europaeus</i>	gorse	O	
<u>Grasses etc.</u>	-		
<i>Agrostis capillaris</i>	common bent	F	F
<i>Anthoxanthum odoratum</i>	sweet vernal-grass	F	O
<i>Carex demissa</i>	common yellow sedge	O	
<i>Carex echinate</i>	star sedge	O	
<i>Carex flacca</i>	glaucous sedge	O	O
<i>Carex leporine</i>	oval sedge	O	
<i>Carex panicea</i>	spring sedge	O	
<i>Cynosurus cristatus</i>	crested dogtail	O	
<i>Deschampsia cespitosa</i>	tufted hair-grass	O	O
<i>Deschampsia flexuosa</i>	wavy hair-grass	O	
<i>Festuca ovina</i>	sheeps fescue	F	F
<i>Festuca rubra</i>	red fescue		O
<i>Festuca vivipara</i>	viviparous fescue	O	
<i>Holcus lanatus</i>	yorkshire fog	O	O
<i>Juncus articulatus</i>	jointed rush	O	
<i>Juncus effusus</i>	soft rush	F	
<i>Luzula campestris</i>	field woodrush	O	O
<i>Poa trivialis</i>	rough meadow-grass	O	
<u>Forbs</u>	-		
<i>Achillea millefolium</i>	yarrow	O	
<i>Ajuga reptans</i>	bugle	O	
<i>Campanula rotundifolia</i>	harebell	O	O
<i>Cardamine pratensis</i>	cuckoo flower	O	
<i>Cerastium fontanum</i>	common mouse-ear	O	F
<i>Conopodium majus</i>	pignut	F	
<i>Euphrasia sp.</i>	eyebright	O	
<i>Filipendula ulmaria</i>	meadowsweet	O	
<i>Galium saxatile</i>	heath bedstraw	F	
<i>Hieracium sp.</i>		R	
<i>Hypochaeris radicata</i>	catsear	O	
<i>Linum catharticum</i>	fairy flax	O	
<i>Lotus corniculatus</i>	birdsfoot trefoil	O	O
<i>Lysimachia nummularia</i>	creeping jenny	R	
<i>Minuartia verna</i>	spring sandwort	R	O
<i>Oxalis acetosella</i>	wood sorrel	O	
<i>Pilosella officinalis</i>	mouse-ear hawkweed	F	

		MG1	MG2
<i>Plantago lanceolata</i>	ribwort plantain	O	O
<i>Polygala serpyllifolia</i>	heath milkwort	O	
<i>Potentilla erecta</i>	tormentil	F	
<i>Prunella vulgaris</i>	self-heal	O	
<i>Rumex acetosa</i>	sorrel	O	
<i>Sagina procumbens</i>	procumbent pearlwort	O	
<i>Senecio sp.</i>	groundsel		R
<i>Stellaria alsine</i>	bog stitchwort	O	
<i>Stellaria graminea</i>	lesser stitchwort	R	
<i>Taraxacum sp.</i>	dandelion		R
<i>Thymus polytrichus</i>	thyme	F	O
<i>Trifolium dubium</i>	lesser trefoil	O	
<i>Trifolium repens</i>	white clover		O
<i>Veronica beccabunga</i>	brooklime	O	
<i>Veronica chamaedrys</i>	germander speedwell	O	
<i>Veronica officinalis</i>	heath speedwell	O	
<i>Viola riviniana</i>	violet	O	
<i>Viola lutea</i>	mountain pansy	O	
<u>Bryophytes</u>	-		
<i>Bryum pallens</i>		O	O
<i>Rhytidiadelphus squarrosus</i>		O	O
<i>Weissia controversa</i>		O	O
<i>other bryophytes</i>		F	O
<u>Lichens</u>	-		
<i>Peltigera neckeri</i>			O
<i>Peltigera sp.</i>		O	O
<i>other lichens</i>		O	O

Table 2. Species recorded at Middle Greenlaws.

The areas found to be of interest are outlined in white on the image below:



Map 4. Area of botanical interest at Middle Greenlaws.

6. Further investigation

None required.

This site has never been surveyed for lichens but given the high level of disturbance there is unlikely to be anything of interest.