

Appendix 1 Integrated Outline Habitat Management Plan

BOW111 Moneystone Quarry

**Drawing title: Integrated
Wildlife Habitat Plan**

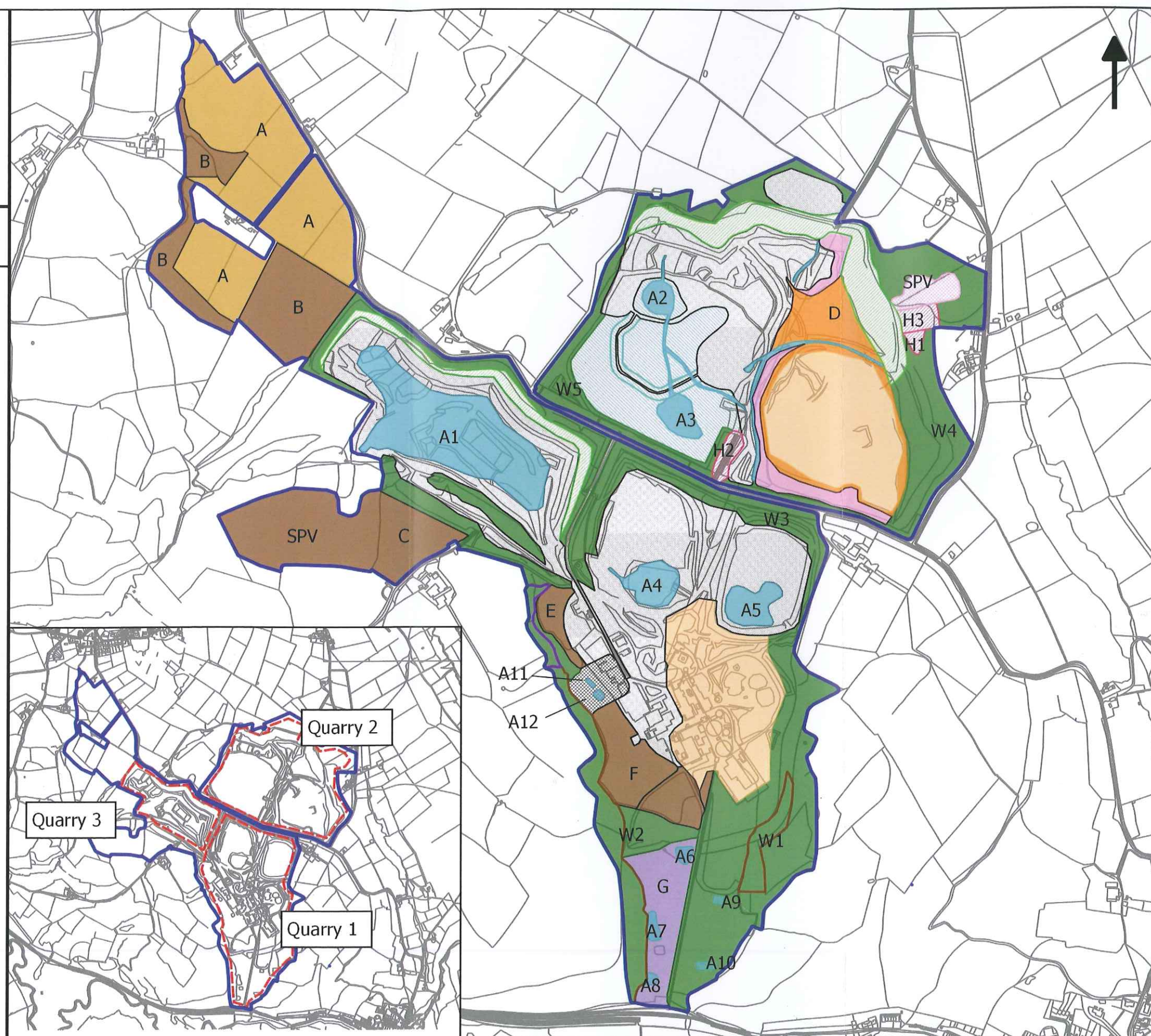
Drawn by: LB
Checked by: JJ

Date: 02/02/15

**Legend**

- Ownership boundary
- Leisure development area
- Solar PV area
- Sibelco Labs
- Habitats**
- Hydra seeded habitats (birch/willow scrub to be removed/thinned)
- Natural colonisation (mosaic habitat: bareground/heath/grassland)
- Moderate diversity grassland to enhance to MG5
- Species poor grassland to restore to MG5
- MG5 Grassland to be created
- Woodland habitats
- Aquatic habitats
- Scrub/wetland
- Grass scrub mosaic
- Conifer plantation restored to heathland
- Heathland management
- Re-planted ancient woodland
- Ancient woodland

A-G Grassland compartments
W1-6 Woodland compartments
A1-12 Aquatic features
SPV SPV enhancement area
H1-3 Heathland compartments



Appendix 2 Grassland Species Tables

Area B NVC Quadrat Data

Species	1	2
<i>Ranunculus repens</i>	4	4
<i>Rumex acetosa</i>	2	2
<i>Plantago lanceolata</i>	2	4
<i>Cynosurus cristatus</i>	6	7
<i>Holcus lanatus</i>	2	3
<i>Festuca rubra</i>	4	4
<i>Trifolium pratensis</i>	4	5
<i>Trifolium repens</i>	5	4
<i>Anthoxanthum odoratum</i>	2	2
<i>Agrostis stolonifera</i>	4	3
<i>Carex hirta</i>		3
<i>Dactylis glomerata</i>	2	3
<i>Cirsium arvense</i>	3	
<i>Leontodon autumnalis</i>	1	3
<i>Lolium perenne</i>	7	5

Area F MG6 (*Lolium perenne* – *Cynosurus cristatus*) grassland NVC Quadrat Data

Species	Quadrat Number					
	1	2	3	4	5	6
<i>Centaurea nigra</i>				1		
<i>Deschampsia cespitosa</i>	1		5			
<i>Ranunculus repens</i>	4		4	5		
<i>Lathyrus pratensis</i>		2	3			
<i>Juncus effusus</i>	1			3		
<i>Rumex acetosa</i>		3	2			
<i>Plantago lanceolata</i>	2		3	6		
<i>Cynosurus cristatus</i>	6	3	3		2	1
<i>Carex caryophylla</i>						
<i>Holcus lanatus</i>	7	6	5	6	4	5
<i>Juncus inflexus</i>			1			
<i>Carex flacca</i>	1		2			
<i>Cerastium fontanum</i>						3
<i>Festuca rubra</i>	6	7	6	4	7	7
<i>Trifolium pratense</i>	4	2	4	4	4	
<i>Trifolium repens</i>	2	2	1	5		
<i>Anthoxanthum odoratum</i>	3	4	2	2	4	4
<i>Lotus corniculatus</i>	2					4
<i>Agrostis stolonifera</i>	6	6	7	4	4	3
<i>Luzula campestris / multiflora</i>	5					3
<i>Senecio jacobea</i>			1			
<i>Dactylis glomerata</i>	1	2				
<i>Pseudoscleropodium purum</i>					2	4
<i>Agrostis capillaris</i>					4	4
<i>Taraxacum agg.</i>	1		2			
<i>Calliergonella cuspidata</i>			2			
<i>Cirsium arvense</i>		4	2	1		

Area F continued...	Quadrat Number					
Species	1	2	3	4	5	6
<i>Achillea millefolium</i>					2	
<i>Alopecurus pratensis</i>				4		
<i>Lolium perenne</i>				4		
<i>Rhytidiadelphus squarrosus</i>					6	7
<i>Vicia</i> sp					2	
<i>Centaurium erythraea</i>					4	
<i>Pilosela officinarum</i>					6	
<i>Rumex acetosella</i>					1	3
<i>Polytrichum</i> sp					2	
<i>Hypnum compressiforme</i>					2	

Area G MG5 (*Cynosurus cristatus* – *Centaurea nigra* grassland) NVC Quadrat Data

	Quadrat Number		
Species	7	8	9
<i>Centaurea nigra</i>	6	2	2
<i>Lathyrus pratensis</i>	2	2	2
<i>Rumex acetosa</i>	3	3	3
<i>Plantago lanceolata</i>	4	4	3
<i>Holcus lanatus</i>	5	5	5
<i>Cerastium fontanum</i>		2	2
<i>Festuca rubra</i>	5	3	7
<i>Trifolium pratensis</i>	3	2	
<i>Prunella vulgaris</i>	2	4	
<i>Agrostis stolonifera</i>	5	5	6
<i>Leucanthemum vulgare</i>	5	6	4
<i>Senecio jacobea</i>	3	6	1
<i>Dactylis glomerata</i>			4
<i>Pseudoscleropodium purum</i>		3	
<i>Calliergonella cuspidata</i>	4	3	
<i>Achillea millefolium</i>	2	3	2
<i>Leontodon autumnalis</i>	2	2	
<i>Rhytidiadelphus squarrosus</i>			7
<i>Vicia</i> sp	2		1
<i>Potentilla reptans</i>	2		2
<i>Valeriana officinalis</i>		2	
<i>Chamerion angustifolium</i>		3	
<i>Heracleum sphondylium</i>		2	2
<i>Rubus fruticosus</i>		2	
<i>Stellaria graminea</i>			1
<i>Campanula rotundifolia</i>	1		
<i>Arenaria</i> sp.	2		2
<i>Dactylorhiza fuchsii</i>	1		
<i>Centaurium erythraea</i>	3		

Appendix 3 Botanical Checklist for Grassland Monitoring

4.10 Grassland guidelines

Sites of Biological Importance

Sites over 0.25ha referable to the following National Vegetation Classification (NVC) communities: **MG4, MG5, MG6, MG8, MG9, MG10, CG2, CG3, CG7, U1, U2, U3, U4, M22-26.**

OR

Sites over 0.25ha which score over 20 points on the following species checklist:

Biodiversity Alert Sites

Sites over 0.25ha which score between 14 and 19 on the following species checklist:

Table 8 Checklist of Grassland Species

Scientific Name	Common Name	present	O / LF	F or F+
<i>Achillea millefolium</i>	Yarrow		1	1
<i>A ptarmica</i>	Sneezewort		1	2
<i>Ajuga reptans</i>	Bugle		1	2
<i>Alchemilla species</i>	Ladies' Mantles	1	2	3
<i>Angelica sylvestris</i>	Wild Angelica		1	2
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass		2	2
<i>Briza media</i>	Quaking-grass	1	2	3
<i>Calluna vulgaris</i>	Heather		1	2
<i>Caltha palustris</i>	Marsh Marigold	1	2	3
<i>Campanula rotundifolia</i>	Harebell	1	2	3
<i>Cardamine pratensis</i>	Cuckoo-flower		1	2
<i>C amara</i>	Large Bitter-cress		1	2
<i>Carex species</i>	Sedges	1	2	2
<i>Centaurea nigra</i>	Common Knapweed		1	2
<i>Cerastium fontanum</i>	Common Mouse-ear		1	2
<i>Cirsium palustre</i>	Marsh Thistle		1	1
<i>Conopodium majus</i>	Pignut		1	2
<i>Crepis capillaris</i>	Smooth Hawk's-beard		1	2
<i>Cynosurus cristatus</i>	Crested Dogs-tail	1	1	2
<i>Dactylorhiza fuchsii</i>	Common Spotted-orchid	1	2	3
<i>Deschampsia cespitosa</i>	Tufted Hair-grass	1	1	
<i>D. flexuosa</i>	Wavy Hair-grass	1	2	2
<i>Euphrasia species</i>	Eyebrights	1	2	3
<i>Filipendula ulmaria</i>	Meadowsweet		1	1
<i>Galium palustre</i>	Common Marsh Bedstraw		1	2
<i>Galium saxatile</i>	Heath Bedstraw	1	2	3
<i>Galium verum</i>	Lady's Bedstraw	1	2	3
<i>Geum rivale</i>	Water Avens	1	2	3
<i>Hieracium species</i>	Hawkweeds		1	2
<i>Hypochaeris radicata</i>	Cat's-ear		1	2
<i>Juncus species</i>	Rushes		1	2
<i>Knautia arvensis</i>	Field Scabious	1	2	3
<i>Lathyrus pratensis</i>	Meadow Vetchling		1	2
<i>Leontodon autumnalis</i>	Autumnal Hawkbit		1	2

<i>Leucanthemum vulgare</i>	Ox-eye Daisy	1	2	2
<i>Linum catharticum</i>	Fairy Flax		1	2
<i>Listera ovata</i>	Common Twayblade	1	2	3
<i>Lotus corniculatus</i>	Common Bird's-foot-trefoil		1	2
<i>Lotus pedunculatus</i>	Large Bird's-foot-trefoil		1	3
<i>Luzula campestris</i>	Field Wood-rush	1	2	2
<i>Luzula multiflora</i>	Heath Wood-rush	1	2	2
<i>Lychnis flos-cuculi</i>	Ragged Robin	1	2	3
<i>Mentha aquatica</i>	Water Mint		1	2
<i>Myosotis scorpioides</i>	Water Forget-me-not		1	2
<i>Pilosella officinarum</i>	Mouse-ear Hawkweed		1	2
<i>Pimpinella major</i>	Greater Burnet-saxifrage	1	2	3
<i>Pimpinella saxifraga</i>	Burnet-saxifrage	1	2	3
<i>Plantago lanceolata</i>	Ribwort Plantain		1	1
<i>Polygala species</i>	Milkwort species	1	2	3
<i>Potentilla erecta</i>	Tormentil		1	2
<i>Primula veris</i>	Cowslip	1	2	3
<i>Primula vulgaris</i>	Primrose	1	2	3
<i>Prunella vulgaris</i>	Selfheal		1	2
<i>Pulicaria dysenterica</i>	Fleabane		1	2
<i>Ranunculus acris</i>	Meadow Buttercup		1	2
<i>Ranunculus bulbosus</i>	Bulbous Buttercup	1	2	3
<i>Ranunculus flammula</i>	Lesser Spearwort		1	3
<i>Rhinanthus minor</i>	Yellow-rattle	1	2	3
<i>Rumex acetosa</i> spp. <i>acetosa</i>	Common Sorrel		1	1
<i>Rumex acetosella</i>	Sheep's sorrel		1	2
<i>Sanguisorba minor</i>	Salad Burnet	1	2	3
<i>Sanguisorba officinalis</i>	Great Burnet	1	2	3
<i>Senecio aquaticus</i>	Marsh Ragwort		1	1
<i>Stachys officinalis</i>	Betony	1	2	3
<i>Stellaria uliginosa</i>	Bog stitchwort		1	2
<i>Succisa pratensis</i>	Devil's-bit Scabious	1	2	3
<i>Trifolium pratensis</i>	Red Clover		1	1
<i>Trisetum flavescens</i>	Yellow Oat-grass	1	2	3
<i>Vaccinium myrtillus</i>	Bilberry		1	2
<i>Valeriana dioica</i>	Marsh Valerian	1	2	3
<i>Valeriana officinalis</i>	Common Valerian	1	2	3
<i>Veronica officinalis</i>	Heath Speedwell		1	2
<i>Vicia cracca</i>	Tufted Vetch		1	1
<i>Viola palustris</i>	Marsh Violet	1	2	3
<i>Viola riviniana</i>	Common Violet		1	2
All species listed in Hopkins (1985) as R or VR		2	3	4
Native species of scrub at between 2% and 10% cover score additional 2 points				
Bare ground (bluffs or scrapes) at between 1% and 5% cover score additional 2 points				
Marshes or flushes at between 2% and 10% cover score additional 2 points				

Hopkins, I.J. (1985) *Staffordshire flowering plants and ferns*. City Museum and Art Gallery, Stoke-on-Trent.

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