

APPENDICES

APPENDIX 1: Records from the Shetland Biological Records Centre which include the Study Area.

Taxon Latin Name	Recommended Common Name	Location Name	Date	Spatial Reference	Obs Abundances (LC)	Obs Comment
<i>Erinaceus europaeus</i>	West European Hedgehog	Scar Quilse	12/04/2002	HU4160	1 Count of present	Crossing road
<i>Lepus timidus</i>	Mountain Hare	Mid Kame	13/01/2012	HU4159	3 Count of present	
<i>Lepus timidus</i>	Mountain Hare		25/02/2012	HU4160	4 Count of present	From road
<i>Lepus timidus</i>	Mountain Hare		16/01/2003	HU4160	2 Count of present	
<i>Lepus timidus</i>	Mountain Hare		14/01/2003	HU414602	1 Count of present	
<i>Lepus timidus</i>	Mountain Hare		24/03/2003	HU416596	1 Count of present	
<i>Lepus timidus</i>	Mountain Hare	Lang Kames	19/02/2004	HU415599	1 Count of present	Crossing road
<i>Mustela furo x putorius</i>	Polecat-Ferret	Scar Quilse, Lang Kames	03/09/2000	HU4160	1 Count of present	

APPENDIX 2 Target Notes from the Phase 1 Habitat Survey

TARGET NOTE REFERENCE NO.*	NATIONAL GRID REFERENCE	HABITAT AND SPECIES NOTES
1	HU 41340 60700	Repeat otter sprainting site. Mounded grass used over a long period. One recognisable spraint, probably used within the last month or so.
2	HU 41313 60680	Clear otter footprint on burn edge – fresh, likely to be within the last couple of days.
3	HU 41445 60532	Old peat cutting area. Appears to be used as a farm storage area + used as access for recent wood pole electricity line works. It is part track, part eroded peat/acid grassland – small in area.
4	HU 41402 60410	The roadside front of the old quarry is on previously disturbed mixed material. It appears to have been covered with soil/peat and now contains a mixed grassland sward which is complex but dominated by acid grassland with patches of neutral grassland and mixed acid/neutral species. It can be termed semi-improved. It may have been seeded with neutral grassland species and acid grassland colonisers are taking over?
5	HU 41290 60140	This is an area of very eroded blanket bog. There are regular patches of bare peat over its surface and a lack of Sphagnum, although the peat is still over 1m deep in most places. It is classified as wet modified bog. It is in a valley bottom and the damage appears to have been caused by long-term higher density sheep grazing, possibly exacerbated by drainage channels and increased drying.
6	HU 41515 60300	An unrestored old quarry with a small rock face still partly exposed. It appears to have been used for soil/mixed material dumping – some fairly recent. Vegetation present includes grasses indicative of nutrient rich soils.
7	HU 41365 60155	Dry Modified Blanket Bog - Grassy Heath. The peat is over a metre deep but the vegetation has acid grassland characteristics. There is extensive sheep grazing evidence and it appears to be a favoured area. The area is partly south facing. It appears that the vegetation of this area has been altered over time by grazing and enrichment – it is close to being semi-improved. It is possible this area was disturbed during the past upgrading of the A970?
8	HU 41545 60160	This is a Scottish Water compound with a storage tank in the hillside.
9	HU 41685 60480	This is the top of a tributary with several streams joining, all exiting deep peat pipes. Evident that glacial till underlies the deep peat. The area is dominated by acid grassland but has some marshy grassland flush areas which contain clumps of soft rush.
10	HU 41240 60355	This area of blanket bog is valley bog. It contains small ponds and soakaways locally with flushes around the edge of the small burn tributaries. Some ponds/soakaways contain Sphagnums and bog pondweed.

TARGET NOTE REFERENCE NO.*	NATIONAL GRID REFERENCE	HABITAT AND SPECIES NOTES
11	NU 41486 60282	Non-native invasive species present in old quarry on tipped soil – montbretia (<i>Crocsmia X crocosmiflora</i>). It is also present in the base of the quarry as well.

* - See Figure 1 for Referenced Target Note Locations.

APPENDIX 3 Phase 1 Plant List

LATIN NAME	COMMON NAME
<i>Agrostis capillaris</i>	Common Bent
<i>Alopecurus pratensis</i>	Meadow foxtail
<i>Anagallis tenella</i>	Bog pimpernel
<i>Angelica sylvestris</i>	Wild angelica
<i>Anothoxanthum odoratum</i>	Sweet vernal-grass
<i>Aulacomnium palustre</i>	Moss
<i>Bellis perennis</i>	Daisy
<i>Blechnum spicant</i>	Hard Fern
<i>Calluna vulgaris</i>	Common heather
<i>Calypogeia muelleriana</i>	Liverwort
<i>Campylopus atrovirens</i>	Moss
<i>Cardamine flexuosa</i>	Wavy bitter-cress
<i>Cardamine pratensis</i>	Lady's smock
<i>Carex nigra</i>	Common sedge
<i>Carex panicea</i>	Carnation sedge
<i>Cerastium holosteoides</i>	Common mouse-ear
<i>Cirsium arvense</i>	Creeping thistle
<i>Cirsium vulgare</i>	Spear thistle
<i>Cladonia arbuscula</i>	Lichen
<i>Cladonia ciliata var. tenuis</i>	Lichen
<i>Cladonia furcata</i>	Lichen
<i>Dactylis glomerata</i>	Cock's-foot
<i>Deschampsia cespitosa</i>	Tufted hair-grass
<i>Deschampsia flexuosa</i>	Wavy hair-grass
<i>Dicranum scoparium</i>	Moss
<i>Diplophyllum albicans</i>	Liverwort
<i>Drosera rotundifolia</i>	Round-leaved sundew
<i>Empetrum nigrum ssp. nigrum</i>	Crowberry
<i>Equisetum arvense</i>	Field horsetail
<i>Erica cinerea</i>	Bell heather
<i>Erica tetralix</i>	Cross-leaved heath
<i>Eriophorum angustifolium</i>	Common cottongrass
<i>Eriophorum vaginatum</i>	Hair's-tail cottongrass
<i>Festuca ovina</i>	Sheep's fescue
<i>Festuca vivipara</i>	Viviparous fescue
<i>Galium saxatile</i>	Heath bedstraw
<i>Holcus lanatus</i>	Yorkshire fog
<i>Holcus mollis</i>	Creeping soft-grass
<i>Huperzia selago</i>	Fir clubmoss
<i>Hylocomium splendens</i>	Moss

LATIN NAME	COMMON NAME
<i>Hypnum jutlandicum</i>	Moss
<i>Juncus effusus</i>	Soft rush
<i>Juncus squarrosus</i>	Heath rush
<i>Lathyrus pratensis</i>	Meadow vetchling
<i>Lophocolea bidentata</i>	Liverwort
<i>Luzula multiflora</i>	Heath wood-rush
<i>Molinia caerulea</i>	Purple moor-grass
<i>Nardus stricta</i>	Mat grass
<i>Narthecium ossifragum</i>	Bog asphodel
<i>Pinguicula vulgaris</i>	Common butterwort
<i>Plagiomnium ellipticum</i>	Moss
<i>Plagiothecium undulatum</i>	Moss
<i>Plantago lanceolata</i>	Ribwort plantain
<i>Plantago major</i>	Greater plantain
<i>Pleurozia purpurea</i>	Liverwort
<i>Pleurozium schreberi</i>	Moss
<i>Polytrichum commune</i>	Moss
<i>Potamogeton polygonifolius</i>	Bog pondweed
<i>Potentilla anserina</i>	Silverweed
<i>Potentilla erecta</i>	Tormentil
<i>Primula vulgaris</i>	Primrose
<i>Prunella vulgaris</i>	Selfheal
<i>Racomitrium lanuginosum</i>	Moss
<i>Ranunculus repens</i>	Creeping buttercup
<i>Rhytidiadelphus loreus</i>	Moss
<i>Rhytidiadelphus squarrosus</i>	Moss
<i>Rumex acetosa</i>	Common sorrel
<i>Rumex obtusifolius</i>	Broad-leaved dock
<i>Sagina procumbens</i>	Procumbent pearlwort
<i>Scapania gracilis</i>	Liverwort
<i>Sphagnum capillifolium</i> both subsp.	Sphagnum moss
<i>Sphagnum compactum</i>	Sphagnum moss
<i>Sphagnum cuspidatum</i>	Sphagnum moss
<i>Sphagnum denticulatum</i>	Sphagnum moss
<i>Sphagnum fallax</i>	Sphagnum moss
<i>Sphagnum inundatum</i>	Sphagnum moss
<i>Sphagnum magellanicum</i>	Sphagnum moss
<i>Sphagnum palustre</i>	Sphagnum moss
<i>Sphagnum papillosum</i>	Sphagnum moss
<i>Sphagnum subnitens</i>	Sphagnum moss
<i>Sphagnum tenellum</i>	Sphagnum moss
<i>Stellaria media</i>	Common chickweed
<i>Succisa pratensis</i>	Devil's-bit scabious

LATIN NAME	COMMON NAME
<i>Taraxacum officinale</i> agg.	Dandelion agg.
<i>Thymus polytrichus</i> ssp <i>brittanicus</i>	Wild thyme
<i>Trichophorum germanicum</i>	Deergrass
<i>Trifolium pratense</i>	Red clover
<i>Urtica dioica</i>	Common nettle
<i>Vaccinium myrtillus</i>	Bilberry
<i>Viola palustris</i>	Marsh violet

APPENDIX 4: NVC Quadrat Data

	PLANT GROUP	PLANT SPECIES		QUADRATS (DOMIN)				
		Latin Name	Common Name	1	2	3	4	5
COMPOUND				NORTH	NORTH	NORTH	NORTH	NORTH
WAY POINT				147	195	196	198	199
NGR				HU 41522 60416	HU 41694 60229	HU 41680 60472	HU 41401 60398	HU 41346 60176
PHOTOS				-	YES	YES	-	YES
PEAT DEPTH (m)				>1m	>1m	>1m	Varied, 30cm here	>1m
BARE PEAT				None	None	None	None	None
Description				Dwarf Shrub BB, slightly wind-clipped - fairly species poor. In a hagged but recovering area, gullies are revegetating.	Dwarf Shrub BB, in a slightly hagged but recovering area, gullies are revegetating.	Burn valley acid grassland, preferentially grazed by sheep and greylag geese. Is a flushed grassland.	Overall, slightly acid grassland with semi-improved indicators, may have been seeded in the past?	Close cropped acid grassland turf but over deep peat (degraded bog)
National Vegetation Classification				M19b - <i>Calluna vulgaris</i>-<i>Eriophorum vaginatum</i> blanket mire, <i>Empetrum nigrum</i> ssp. <i>nigrum</i> sub-community.	M19b - <i>Calluna vulgaris</i>-<i>Eriophorum vaginatum</i> blanket mire, <i>Empetrum nigrum</i> ssp. <i>nigrum</i> sub-community.	U6d - <i>Juncus squarrosus</i>-<i>Festuca ovina</i> grassland, <i>Agrostis capillaris</i>-<i>Luzula multiflora</i> sub-community. Very mixed community verging on M6 in places.	U4 - <i>Festuca ovina</i>-<i>Agrostis capillaris</i>-<i>Galium saxatile</i> grassland. Not a good match because very mixed, possibly verging on <i>Holcus lanatus</i> - <i>Trifolium repens</i> sub-community U4b.	U4a - <i>Festuca ovina</i>-<i>Agrostis capillaris</i>-<i>Galium saxatile</i> grassland, typical sub-community. Wetter than would be expected because on deep peat and some bog plants present.
GDTE SENSITIVITY				None	None	Moderate	None	None
PEAT/BOG CONDITION				Slight to Moderately Eroded but recovering	Slightly Eroded but looks to be recovering	Slightly eroded locally, particularly down bog edges	None	None
VEGETATION CONDITION				GOOD	GOOD	GOOD	V. GOOD	GOOD
	Plants							
		<i>Agrostis capillaris</i>	Common Bent			6	8	5
		<i>Alopecurus pratensis</i>	Meadow foxtail				Nearby	
		<i>Anothoxanthum odoratum</i>	Sweet vernal-grass			5	4	Nearby
		<i>Calluna vulgaris</i>	Common heather	7	8			
		<i>Cardamine pratensis</i>	Lady's smock				Nearby	
		<i>Carex nigra</i>	Common sedge					3
		<i>Carex panicea</i>	Carnation sedge		Nearby			3
		<i>Cerastium holosteoides</i>	Common mouse-ear			2		3
		<i>Cirsium arvense</i>	Creeping thistle				4	

PLANT GROUP	PLANT SPECIES		QUADRATS (DOMIN)				
	Latin Name	Common Name	1	2	3	4	5
	<i>Deschampsia cespitosa</i>	Tufted hair-grass				4	
	<i>Empetrum nigrum</i> ssp. <i>nigrum</i>	Crowberry	3	4			
	<i>Equisetum arvense</i>	Field horsetail				2	
	<i>Erica tetralix</i>	Cross-leaved heath	3	2			
	<i>Eriophorum angustifolium</i>	Common cottongrass	4	3	3		2
	<i>Eriophorum vaginatum</i>	Hair's-tail cottongrass	7	7			3
	<i>Festuca ovina</i>	Sheep's fescue			3		4
	<i>Festuca vivipara</i>	Viviparous fescue			4		
	<i>Galium saxatile</i>	Heath bedstraw			4		4
	<i>Holcus lanatus</i>	Yorkshire fog				Nearby	
	<i>Holcus mollis</i>	Creeping soft-grass				5	
	<i>Huperzia selago</i>	Fir clubmoss	Nearby				
	<i>Juncus effusus</i>	Soft rush			Nearby	Nearby	Nearby
	<i>Juncus squarrosus</i>	Heath rush		Nearby	8		5
	<i>Lathyrus pratensis</i>	Meadow vetchling				3	
	<i>Luzula multiflora</i>	Heath wood-rush			2		2
	<i>Nardus stricta</i>	Mat grass			4		
	<i>Narthecium ossifragum</i>	Bog asphodel		Nearby			
	<i>Pinguicula vulgaris</i>	Common butterwort		Nearby			
	<i>Potentilla erecta</i>	Tormentil			3		3
	<i>Rumex acetosa</i>	Common sorrel				3	
	<i>Rumex obtusifolius</i>	Broad-leaved dock				Nearby	
	<i>Trichophorum germanicum</i>	Deergrass	Nearby	Nearby			
	<i>Trifolium pratense</i>	Red clover				4	
	<i>Viola palustris</i>	Marsh violet					3
Mosses	OVERALL COVER		6	5	7	7	8
	<i>Aulacomnium palustre</i>	Moss					3
	<i>Dicranum scoparium</i>	Moss		3			
	<i>Hylocomium splendens</i>	Moss	3	3	Nearby		5
	<i>Hypnum jutlandicum</i>	Moss	2	4			
	<i>Plagiomnium ellipticum</i>	Moss					2
	<i>Plagiothecium undulatum</i>	Moss		2			
	<i>Pleurozium schreberi</i>	Moss		3			3
	<i>Polytrichum commune</i>	Moss			6		4
	<i>Racomitrium lanuginosum</i>	Moss	Nearby	2			
	<i>Rhytidiadelphus loreus</i>	Moss	2	3	5		
	<i>Rhytidiadelphus squarrosus</i>	Moss			4	7	4
	<i>Sphagnum capillifolium</i> both subsp.	Sphagnum moss	6	4	2		4
	<i>Sphagnum compactum</i>	Sphagnum moss	Nearby		2		
	<i>Sphagnum palustre</i>	Sphagnum moss			4		6

PLANT GROUP	PLANT SPECIES		QUADRATS (DOMIN)				
	Latin Name	Common Name	1	2	3	4	5
	Sphagnum papillosum	Sphagnum moss			Nearby		
	Sphagnum subnitens	Sphagnum moss		3			4
	Sphagnum tenellum	Sphagnum moss			3		3
Liverworts	Calypogeia muelleriana	Liverwort	2		3		
	Diplophyllum albicans	Liverwort					3
	Lophocolea bidentata	Liverwort				4	
	Pleurozia purpurea	Liverwort	Nearby				
	Scapania gracilis	Liverwort		3			
Lichens	OVERALL COVER		3	3	3	0	0
	Cladonia arbuscula	Lichen	3		3		
	Cladonia ciliata var. tenuis	Lichen	3	3			
	Cladonia furcata	Lichen		2			

