

TABLE 1: SCOTLAND CONSERVATION STRATEGY PRIORITY BUTTERFLIES

Common Name	Scientific Name	Ecological classification	Distribution and population trends				GB Red List	W & C Act Schedule 5	UK BAP	Scottish Biodiversity List	EU Red List	EU Habitats Directive Annex	Cons. Habitats & Species Regs.	BC UK Threat Priority				Regional Action Plan (RAP) Priority			Scotland Conservation Strategy (CS) Threat Priority		Scotland CS Conservation Priority 2016-25				
			1 km squares occupied in Scotland (2005-2014)	Scotland occupancy (% occupied 1 km squares 2005-14)	Scotland distribution trend (1990-2014) (* P<0.05; ** p<0.01; *** p<0.001)	Scotland population trend (1990-2016) (* P<0.05; ** p<0.01; *** p<0.001)								1997	2005	2016	2016	2000	2016-25	2016-25	2016-25						
Chequered Skipper	<i>Carterocephalus palaemon</i>	HS	297	0.39	8	-91***	EN	P	X	X				H	H	H	A	H	H	H	H	H	H	A			
Pearl-bordered Fritillary	<i>Boloria euphrosyne</i>	HS	300	0.39	-59***		EN	P	X	X				H	H	H	A	H	H	H	H	H	H	A			
Marsh Fritillary	<i>Euphydryas aurinia</i>	HS	397	0.52	-45*		VU	F	X	X	VU	2		H	H	H	A	H	H	H	H	H	H	A			
Small Blue	<i>Cupido minimus</i>	HS	103	0.13			NT	P	X	X				M	H	M	C	H	H	H	H	H	H	B			
Northern Brown Argus	<i>Aricia artaxerxes</i>	HS	332	0.43	-49**		VU	P	X	X				H	H	H	B	H	M	H	H	H	H	B			
Dingy Skipper	<i>Erynnis tages</i>	HS	106	0.14			VU		X	X				L	H	H	B			M	H	M	H	H	M	C	
Large Heath	<i>Coenonympha tullia</i>	HS	973	1.27	-71***		VU	P	X		VU			M	H	H	B	H	H	H	H	H	H	L	M	C	
Mountain Ringlet	<i>Erebia ephron</i>	HS	318	0.41			NT	P	X					M	H	H	C	H	M	M	H	M	H	M	M	C	
Grayling	<i>Hipparchia semele</i>	HS	548	0.71	-53***	-83***	VU		X					L	H	H	B		L	L	M	M			M	C	
Small Pearl-bordered Fritillary	<i>Boloria selene</i>	HS	2126	2.76	-18	12	NT		X					M	H	H	B	H	M	M	M	M	M	M	M	C	
Wall	<i>Lasiommata megera</i>	WCS	370	0.48	238***		NT		X	X				L	H	H	R									L	
Small Heath	<i>Coenonympha pamphilus</i>	WCS	3880	5.05	-28***	30	NT		X	X				L	H	H	R										L
Scotch Argus	<i>Erebia aethiops</i>	WCS	2539	3.30	-19	86**					NT			L	L	L		M	L	L	M	L	M	L		L	
Dark Green Fritillary	<i>Argynnis aglaja</i>	HS	2119	2.76	28	28								L	M	M										L	
Green Hairstreak	<i>Callophrys rubi</i>	HS	1051	1.37	15									L	M	M											L

Ecological classification: HS = Habitat Specialist; WCS = Wider Countryside Species.
Distribution and population trends: Red = meets criteria for High Priority status; Yellow = meets criteria for Medium Priority status. Note for some species timeline for calculating population trend is shorter than maximum 1990-2016.
GB Red List status: CR = Critically Endangered; EN = Endangered; VU = Vulnerable; NT = Near Threatened.
Wildlife and Countryside Act (1981) status: F = full protection; P = partial protection (sale only).
UK BAP and national legislative conservation status: X = listed; E? = probably extinct.
BC UK Threat Priority: H = High Priority; M = Medium Priority; L = Low Priority; R = Research.
BC UK Conservation Priority: A = Action urgent across UK range; B = Action necessary in parts of UK range; C = Action necessary in parts of UK range but less urgent.
Regional Action Plan (RAP) Priority: H = High Priority; M = Medium Priority; L = Low Priority.
Scotland Conservation Strategy (CS) Threat Priority: H = High Priority; M = Medium Priority; L = Low Priority.
Scotland Conservation Strategy (CS) Conservation Priority: A = Action urgent across all occupied landscapes/sites; B = Action necessary in some occupied landscapes/sites; C = Action less urgent regionally but may be necessary in some landscapes/sites.

Explanation of proposed changes:
 Large Heath: Widespread in Highlands & Islands.
 Northern Brown Argus: East Scotland supports large proportion of UK population.
 Dingy Skipper: Previously under-recorded in South West Scotland; probably extinct in East Scotland.
 Mountain Ringlet: Distribution more clearly defined by recent surveys; no significant change in distribution.
 Small Pearl-bordered Fritillary: Possibly previously under-recorded in East Scotland but some local population losses in north of region.
 Scotch Argus: No significant change in distribution or abundance.

TABLE 2: SCOTLAND CONSERVATION STRATEGY PRIORITY MOTHS

Common Name	Scientific Name	ABH No.	B & F No.	W & C Schedule 5	UK BAP	Scottish Biodiversity List	EU Habitats Directive Annex	Cons. Habitats & Species Regs.	BC UK Threat Priority 2016	BC UK Conservation Priority 2016	Eastern Scotland RAP 2000	Eastern Scotland RAP 2013	Eastern Scotland CS 2016-25	South West Scotland RAP 2000	South West Scotland CS 2016-25	Highlands and Islands RAP 2000	Highlands and Islands CS 2016-25	Scotland CS Threat Priority 2016-25	Scotland CS Conservation Priority 2016-25
	<i>Myrmecozela ochraceella</i>	12.001	207										H				H	H	A
	<i>Kessleria fasciapennella</i>	16.013	433														H	H	A
	<i>Ethmia pyrausta</i>	33.005	722										H				H	H	A
	<i>Syncopacma albifrontella</i>	35.005	847a										H					H	A
	<i>Scrobipalpa murinella</i>	35.111	821										H	H				H	A
	<i>Coleophora arctostaphyli</i>	37.021	508										H				H	H	A
	<i>Coleophora pappiferella</i>	37.089	570										H					H	A
Mountain Plume	<i>Stenoptilia islandicus</i>	45.018	1508a										H					H	A
	<i>Choreutis diana</i>	48.006	340														H	H	A
	<i>Periclepsis cinctana</i>	49.007	1005			X			H	B				H				H	A
	<i>Eana argentana</i>	49.046	1028										H					H	A
	<i>Aethes rutilana</i>	49.119	940			X			H	B							H	H	A
Welsh Clearwing	<i>Synanthedon scoliaeformis</i>	52.005	376			X			H	B	M	M	H	M	H	M	H	H	A
Transparent Burnet	<i>Zygaena purpuralis</i> ssp. <i>caledonensis</i>	54.004	172			X			H	B				M	H	M	H	H	A
Slender Scotch Burnet	<i>Zygaena loti</i> ssp. <i>scotica</i>	54.005	167		X	X			H	A				H	H	H	H	H	A
New Forest Burnet	<i>Zygaena viciae</i> ssp. <i>ytensis</i>	54.007	168	F	X	X			H	A				H		H	H	H	A
Kentish Glory	<i>Endromis versicolora</i>	67.001	1644			X			H	A	M	H	H			M	H	H	A
Dark Bordered Beauty	<i>Epione vespertaria</i>	70.228	1908		X	X			H	A	H	H	H			H	H	H	A
Small Dark Yellow Underwing	<i>Coranarta cordigera</i>	73.258	2143		X	X			H	A	M	H	H				H	H	A
Lunar Yellow Underwing	<i>Noctua orbona</i>	73.344	2108		X	X			H	B	H	L	H	H		H	H	H	A
Currant Shoot Borer	<i>Lampronia capitella</i>	9.001	133		X	X			H	B			H					H	B
	<i>Archinemapogon yildizae</i>	12.013	222			X			H	B			H				H	H	B
	<i>Bucculatrix humiliella</i>	14.005	268														H	H	B
	<i>Callisto coffeella</i>	15.023	310a			X			H	C			H					H	B
	<i>Swammerdamia passerella</i>	16.016	437a			X			H	B							H	H	B
	<i>Plutella haasi</i>	18.002	465a											H			H	H	B
	<i>Acrolepiopsis betulella</i>	19.012	474										H	H			H	H	B
	<i>Leucoptera orobi</i>	21.007	257														H	H	B
	<i>Levipalpus hepatariella</i>	32.004	685			X			H	B			H	H			H	H	B
	<i>Exaeretia ciniflonella</i>	32.005	686										H				H	H	B
	<i>Depressaria silesiaca</i>	32.041	684										H				H	H	B
	<i>Depressaria olerella</i>	32.046	681														H	H	B
	<i>Dichomeris juniperella</i>	35.021	863										H				H	H	B
	<i>Caryocolum blandelloides</i>	35.134	832a														H	H	B
	<i>Scythris empetrella</i>	43.009	917														H	H	B
Short-winged Plume	<i>Pselnophorus heterodactyla</i>	45.036	1516										H	H				H	B
	<i>Epermenia farreni</i>	47.007	479										H					H	B
	<i>Apotomis infida</i>	49.147	1090			X			H	C			H					H	B
Goat Moth	<i>Cossus cossus</i>	50.001	162		X	X			H	C		M	H			M	H	H	B
Forester	<i>Adscita statices</i>	54.002	163		X	X			H	B				M	H	M		H	B
Scotch Burnet (Mountain Burnet)	<i>Zygaena exulans</i> ssp. <i>subochracea</i>	54.006	166			X			H	B	M	H	H					H	B
Talisker Burnet	<i>Zygaena lonicerae</i> ssp. <i>jocelynae</i>	54.009	171			X			H	B							H	H	B
	<i>Anania funebris</i>	63.024	1381		X	X			H	B				H			H	H	B
Pine-tree Lappet	<i>Dendrolimus pini</i>	66.009	1639														H	H	B
Heath Rivulet	<i>Perizoma minorata</i>	70.135	1805									M	H				H	H	B
Barred Tooth-striped	<i>Trichopteryx polycommata</i>	70.201	1880		X	X			H	B	H	L	H	H	H	H	H	H	B
Netted Mountain Moth	<i>Macaria carbonaria</i>	70.216	1895		X	X			H	B	H	M	H			H	H	H	B
Bordered Grey	<i>Selidosema brunnearia</i>	70.262	1938										H	H			H	H	B
Chocolate-tip	<i>Clostera curtula</i>	71.027	2019										H					H	B
Beautiful Snout	<i>Hypena crassalis</i>	72.007	2476											H				H	B
Dew Moth	<i>Setina irrorella</i>	72.050	2036										H	H			H	H	B
Grey	<i>Hadena caesia</i>	73.285	2174			X			H	B				M	H	M	H	H	B
Portland Moth	<i>Actebia praecox</i>	73.308	2099										H				H	H	B
Sand Dart	<i>Agrotis ripae</i>	73.323	2093										H					H	B
Northern Dart	<i>Xestia alpicola</i> ssp. <i>alpina</i>	73.363	2125		X	X			H	C	H	H	H	H		H	H	H	B
	<i>Stigmella pretiosa</i>	4.048	54a										M		M		M	M	C
	<i>Nemapogon picarella</i>	12.022	221		X	X			H	C			M		M		M	M	C
	<i>Parornix alpicola</i>	15.031	306														M	M	C
	<i>Kessleria saxifragae</i>	16.012	434										M		M		M	M	C
	<i>Xystophora pulveratella</i>	35.083	754										M				M	M	C
	<i>Scrobipalpa clintoni</i>	35.122	817											M			M	M	C
	<i>Coleophora idaeella</i>	37.023	505										M				M	M	C
	<i>Coleophora glitzella</i>	37.025	507										M				M	M	C
	<i>Coleophora genistae</i>	37.041	546										M				M	M	C
	<i>Elachista eskoi</i>	38.027	598a										M				M	M	C
	<i>Elachista orstadii</i>	38.034	604										M		M		M	M	C
	<i>Acleris lipsiana</i>	49.088	1056										M		M		M	M	C
	<i>Phiaris obsoletana</i>	49.170	1077										M				M	M	C
	<i>Phiaris metallicana</i>	49.171	1072										M				M	M	C

FIGURE 1: SCOTLAND CONSERVATION STRATEGY PRIORITY LANDSCAPES AND SITES MAP

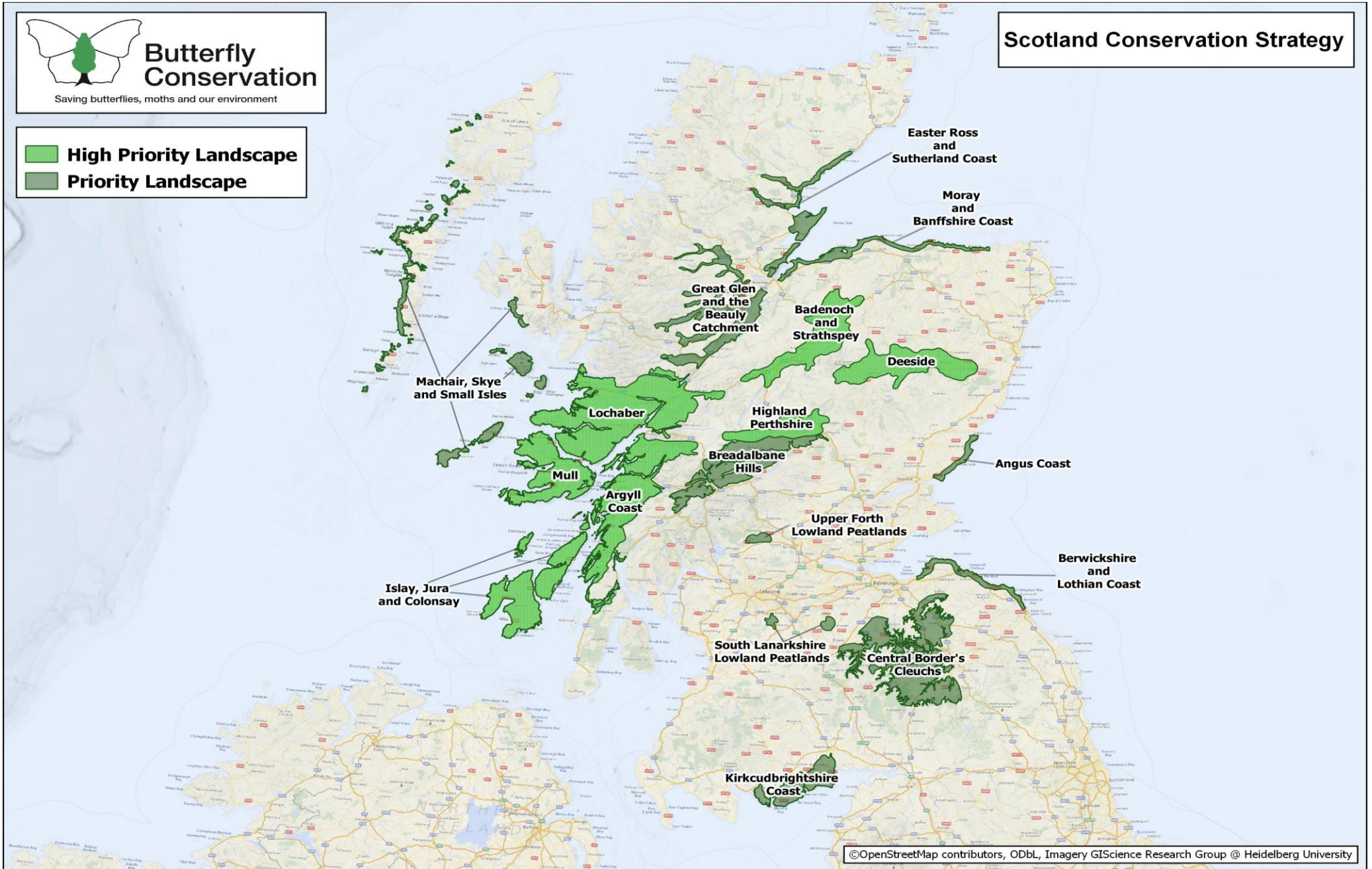


TABLE 4: SCOTLAND CONSERVATION STRATEGY PRIORITY ACTIONS

Common Name	Scotland CS Threat Priority 2016-25	Scotland CS Conservation Priority 2016-25	Scotland CS Species Recovery Curve Stage 2016	Survey	Monitoring	Research	Bespoke Management	Mosaic Management	Staff led	Input from staff	Volunteer led	Comment
High and Medium Priority Butterflies												
Chequered Skipper	H	A	2	X	X	X	X		S			Improve monitoring in conjunction with FES
Pearl-bordered Fritillary	H	A	4	X	X	X	X		S			Improve monitoring in conjunction with FES, trial bracken management
Marsh Fritillary	H	A	4	X	X	X	X		S			Improve survey and monitoring
Small Blue	H	B	4	X	X	X	X		S			Improve survey and monitoring
Northern Brown Argus	H	B	4	X	X	X	X		S			Improve survey and monitoring
Dingy Skipper	M	C	3/4	X	X	X	X		S			Improve survey and monitoring
Large Heath	M	C	3	X	X			X	S			Encourage surveys in landscapes where species designated a high priority, improve monitoring elsewhere
Mountain Ringlet	M	C	2	X	X			X	S			Data deficient; Research autecology: climate change; improve monitoring
Graying	M	C	3	X	X	X		X	S			Data deficient Scotland; Research autecology
Small Pearl-bordered Fritillary	M	C	4	X	X		X	X	S			Encourage surveys in landscapes where species designated a high priority, improve monitoring elsewhere
High Priority Moths												
<i>Myrmecozela ochraceella</i>	H	A	1	X	X				S			Encourage surveys; promote species through the Rare Invertebrates in the Cairngorms project and wood ant groups
<i>Kessleria fasciapennella</i>	H	A	1	X	X				S			Encourage surveys and work with NTS at only extant site
<i>Ethmia pyrausta</i>	H	A	1	X	X				S			Encourage surveys
<i>Syncopacma albifrontella</i>	H	A	1	X	X				S			Encourage surveys
<i>Scrobipalpa murinella</i>	H	A	1	X	X				S			Encourage surveys
<i>Coleophora arctostaphyli</i>	H	A	1	X	X				S			Encourage surveys (adult & larval) in conjunction with Small Dark Yellow Underwing
<i>Coleophora pappiferella</i>	H	A	1	X	X				S			Encourage surveys (adult & larval)
Mountain Plume	H	A	1	X	X				S			Encourage surveys
<i>Choreutis diana</i>	H	A	1	X	X	X			S			Encourage surveys (adult & larval) & liaise with sole site owner (FES)
<i>Periclepsis cinctana</i>	H	A	1	X	X	X			S			Encourage surveys
<i>Eana argentana</i>	H	A	1	X	X				S			Encourage surveys
<i>Aethes rutilana</i>	H	A	1	X	X	X			S			Encourage surveys
Welsh Clearwing	H	A	1	X	X	X	X		S			Co-ordinate survey (including use of pheromones); safeguard breeding trees by labelling and liaising with site owners
Transparent Burnet	H	A	3	X	X	X	X		S			Co-ordinate surveys (including use of pheromones); establish more robust monitoring; proactive site advice/liaison with all owners.
Slender Scotch Burnet	H	A	4	X	X	X	X		S			Co-ordinate surveys (including use of pheromones); establish more robust monitoring; proactive site advice/liaison with all owners; clear further Cotoneaster at Kilinian
New Forest Burnet	H	A	4	X	X	X	X		S			Continue annual monitoring (adult and vegetation); develop pheromones to assist with survey/monitoring; liaise with site owner; habitat creation
Kentish Glory	H	A	4	X	X	X	X		S			Continue survey/monitoring especially with pheromones; autecological research: habitat requirements, dispersal; site advice; management trials
Dark Bordered Beauty	H	A	4	X	X	X	X		S			Continue annual surveys/monitoring and liaison with site owners; site advice and trial management (using volunteers); increase Aspen resource especially within 2km of occupied sites; consider introduction
Small Dark Yellow Underwing	H	A	3	X	X	X	X		S			Encourage surveys; consider pheromone development to aid surveys/monitoring; autecological research: habitat requirements (larval searches); liaise with owners of key sites
Lunar Yellow Underwing	H	A	1	X	X	X	X		S			Encourage surveys (adult & larval)
Currant Shoot-borer	H	B	1	X	X				S			Encourage surveys (adult and larval)
<i>Archinemapogon yildizae</i>	H	B	1	X	X				S			Encourage surveys
<i>Bucculatrix humililella</i>	H	B	1	X	X				S			Encourage surveys
<i>Callisto coffeella</i>	H	B	1	X	X				S			Encourage surveys
<i>Swammerdamia passerella</i>	H	B	1	X	X				S			Encourage surveys
<i>Plutella haasi</i>	H	B	1	X	X				S			Encourage surveys
<i>Acrolepiopsis betulella</i>	H	B	1	X	X				S			Encourage surveys (adult and larval)
<i>Leucoptera orobi</i>	H	B	1	X	X				S			Encourage surveys (adult and larval)
<i>Levipalpus hepatoriella</i>	H	B	1	X	X				S			Encourage surveys (adult and larval)
<i>Exaeretia ciniflonella</i>	H	B	1	X	X				S			Encourage surveys
<i>Depressaria silesiaca</i>	H	B	1	X	X				S			Encourage surveys
<i>Depressaria olerella</i>	H	B	1	X	X				S			Encourage surveys
<i>Dichomeris juniperella</i>	H	B	1	X	X				S			Encourage surveys (adult and larval)
<i>Caryocolum blandelloides</i>	H	B	1	X	X				S			Encourage surveys (adult and larval)
<i>Scythris empetrella</i>	H	B	1	X	X				S			Encourage surveys
Short-winged Plume	H	B	1	X	X				S			Encourage surveys
<i>Epimeria farreni</i>	H	B	1	X	X				S			Encourage surveys
<i>Apotomis infida</i>	H	B	1	X	X				S			Encourage surveys
Goat Moth	H	B	2	X	X	X			S			Co-ordinate survey using pheromones; safeguard breeding trees by labelling and liaising with site owners
Forester	H	B	2	X	X	X			S			Encourage surveys; consider monitoring at key sites; autecological research: habitat requirements
Scotch Burnet (Mountain Burnet)	H	B	2	X	X				S			Encourage surveys; consider monitoring at key sites; autecological research: habitat requirements
Talisker Burnet	H	B	2	X	X				S			Encourage surveys; consider monitoring at key sites; autecological research: habitat requirements
<i>Anania funebris</i>	H	B	2	X	X				S			Encourage surveys; consider monitoring at key sites; autecological research: habitat requirements
Pine-tree Lappet	H	B	4	X	X	X			S			Continue to sit on PTL Management Team and work with FR, FCS, Plant Health and UHI on survey, monitoring and research
Heath Rivulet	H	B	1	X	X				S			Encourage surveys
Barred Tooth-striped	H	B	2	X	X				S			Co-ordinate survey; trial pheromones; autecological research: habitat requirements (larval searches); liaise over surrogate hostplant(s) due to threat from Ash dieback
Netted Mountain Moth	H	B	3	X	X				S			Encourage surveys in conjunction with Small Dark Yellow Underwing
Bordered Grey	H	B	1	X	X				S			Encourage surveys
Chocolate-tip	H	B	1	X	X				S			Encourage surveys
Beautiful Snout	H	B	3	X	X					V		Encourage surveys, SW Branch to continue to lead work parties at site in LL&T NP
Dew Moth	H	B	1	X	X				S			Encourage surveys
Grey	H	B	1	X	X				S			Encourage surveys
Portland Moth	H	B	1	X	X				S			Encourage surveys
Sand Dart	H	B	1	X	X				S			Encourage surveys
Northern Dart	H	B	1	X	X				S			Encourage surveys

Species Recovery Curve Stages: 1 Status assessment; 2 Diagnosis; 3 Solution testing; 4 Recovery management; 5 Sustainable management.
Survey: Improved surveying requiring to assess range and distribution trends.
Monitoring: Improved monitoring required to assess population trends.
Research: To improve autecological knowledge, identify causes of decline and assess potential habitat management solutions.
Bespoke management: Habitat management tailored to meet specific ecological requirements of the target species.
Mosaic management: Generic or best practice habitat management which integrates the ecological requirements of a suite of species.