Annex 3.4 : Generic Assessment Forms

N.B There are no generic forms for Limestone Pavement, Calcareous Grassland (or Valley Mires, Springs and Flushes, other than alkaline flushes). For these habitats the contractor will need to refer to the relevant FCT and / or IOS and construct their own forms

Blanket Bog
Upland Cliffs and Screes
Dry Heath
Wet Heath
Montane Heath
Alkaline Flush
Scrub

Generic dry heath indicators – record in any dry heath and any Nardus grassland below 600m. Mark locations of all stops on map.

Sub-alpine dry dwarf-shrub heath

Site name:		Date:		Surveyor		NVC Communities:	

Attributes	**Targets** **Sample point**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**Comments**
Vegetation Composition: Frequency of bryophytes and lichens	1) No of species of moss **<u>or</u>** liverwort **<u>or</u>** non-crustose lichen present. Exclude *Polytrichum* spp. and *Campylopus* spp.											Target 1 to be assessed at $1m^2$
	2) Does habitat have affinities with NVC type H21 (Sphagnum rich, Atlantic heath, usually found on north-facing slopes)?											Target 2 to be assessed at $1m^2$

Enter species recorded in (1 or 2) above if known:

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**

Table 1 indicator species: *Arctostaphylos spp., Calluna vulgaris, Erica spp., Empetrum nigrum, Vaccinium spp., Myrica gale, Salix repens, Juniperus communis*

	Sample point	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	
	2) % cover of indicator species from Table 1 above											Target 3 and 4 assessed at $4m^2$
Frequency	4) No. of indicator species from Table 1											
	Has heather (Calluna) flowered this year?											

Enter species recorded in 3, or4 above:

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**

Vegetation Composition: Cover of other species	5) % of vegetation cover made up of non-native species.											Target 5, 6, & 7 assessed for as much of the feature as is visible while standing at a sample location (estimate).
	6) % of the vegetation cover made up of bracken.											
	7) % cover of trees and scrub											

Attributes	Targets Sample point	1	2	3	4	5	6	7	8	9	10	Comments
	8) % of the vegetation cover consisting of invasive "weedy" species (collectively *Cirsium arvense*, *Cirsium vulgare*, large docks (excluding *Rumex acetosa*), *Ranunculus repens*, or *Urtica dioica*.											Target 8 and 9 assessed at two scales: a) $4m^2$ b) assessed for as much of the feature as is visible while standing at a sample location.
	9) % of the vegetation cover consisting of *Juncus effusus*.											
Vegetation Structure: Disturbance	10) Are there any visible signs of burning**?**											Target 10 - assessed for as much of the feature as is visible while standing at a sample location.
	11) % of heath that has been burnt or heavily grazed/trampled											Target 11 - A lack of disturbance is indicated by either the absence of any evidence of charcoal on old stems or on the ground, or the absence of any sharp lines of disparity in height of the dwarf-shrubs (as would be formed at the edge of an area which had been burnt or heavily grazed or trampled).
Indicators of heavy browsing	12) % of the shoots of ericaceous dwarf-shrub species collectively showing signs of browsing.											Target 12 - assessed at $4m^2$. **This indicator is important**
Physical structure: indicators of ground disturbance due to herbivore and human activity	13) % of the ground cover made up of bare ground*.											Assess at two scales: a) $4m^2$, for diffuse disturbed ground. b) assessed for as much of the feature as is visible while standing at a sample location (estimate).

Feedback (note answers below) :
Is heathland meeting targets but appears to be declining or is the management inappropriate? If so, how?
Is heathland failing but appears to be favourable? If so, where? Is failure due to a short term management problem?
Does the monitoring result give a misleading impression of condition? Wrong time of year/unrepresentative part of site etc?

Generic summit montane heath indicators– likely only record on summit plateau of Caw Fell. Mark locations of all stops on map.

Siliceous alpine and boreal grasslands U7 and U10		
Unit	Date	NGR
Surveyor	Time taken	Extenuating circumstances

Positive Indicators – tick if present at sample point										
Sample Point	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Alchemilla alpina										
Carex bigelowii										
Cetraria islandica										
Cladonia arbuscula										
Cladonia uncialis										
Dicranum fuscescens										
Empetrum nigrum ssp. Hermaphroditum										
Nardus stricta										
Polytrichum alpinum										
Ptilidium ciliare										
Racomitrium lanuginosum										
Rhytidiadelphus loreus										
Salix herbacea										
% cover of the above species collectively										

Negative Indicators – tick if present at sample point										
Sample point	1	2	3	4	5	6	7	8	9	10
Agrostis capillaris										
Agrostis vinealis										
Anthoxanthum odoratum										
Deschampsia flexuosa										
Festuca ovina,/vivipara										
Galium saxatile										
Non arctic- alpine Poa species										
Potentilla erecta.										
% cover of the above species collectively										

Vegetation Composition: cover of non-native species	1) % of the vegetation cover made up of non-native species.											Target 1 - Assessed at $4m^2$
Vegetation Structure: Indicators of current grazing	1) % of grass and sedge tillers uprooted											Targets 1-3 - Assessed at $4m^2$.
	2) % of live leaves and/or flowers of any of *Alchemilla alpina, Carex bigelowii, Deschampsia, Festuca ovina/vivipara, Juncus trifidus, Nardus stricta, Sibbaldia procumbens, Thymus polytrichus* showing evidence of grazing.											
	3) % of live leaves of any of *Agrostis capillaris, Agrostis vinealis, Anthoxanthum odoratum* or *Poa species* with any evidence of grazing.											
Vegetation structure – presence of burnt vegetation	1) Are there any visible signs of burning?											Targets 1 Assessed for as much of the feature as is visible while standing at a sample location.
Indicators of ground disturbance due to herbivore and human activity.	1) % of the vegetation cover crushed, broken, and/or pulled-up.											Target 1 – Assessed at two scales: (a) 4m2 for diffuse disturbed ground; and (b) for as much of the feature as is visible while standing at a sample location, for distinct and clearly defined paths. *Disturbed bare ground = hoof, foot or vehicle imprinted bare humus, bare peat, soil covered only by algal mats, bare mineral soil, or bare gravel.
	2) % of the ground cover made up of bare ground											Assess at two scales: a) $4m^2$, for diffuse disturbed ground. b) assessed for as much of the feature as is visible while standing at a sample location (estimate)

Generic slope montane heath indicators – record within Nardus grassland above 600m. Mark locations of all stops on map.

Siliceous alpine and boreal heath H19		
Unit	Date	NGR
Surveyor	Time taken	Extenuating circumstances

Attribute	**Scale**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
No of species of dwarf shrub	$4m^2$										
Total no of species of moss, liverwort and non-crustose lichen	$4m^2$										
% cover of +ve indicator species (Dwarf shrubs, Juniper, Cladonia spp, Racomitrium, Cetraria islandica	$4m^2$										
% non-native species	all feature visible from point										
% of Agrostis cap, Anthoxanthum, Des flex, Festuca ovina/vivipara, Galium sax, non alpine Poas, Potentilla erecta	$4m^2$										
% of live leaves of Carex big, Des flex, Fest ov/viv, showing signs of grazing	$4m^2$										
% of shoots of dwarf shrubs grazed	$4m^2$										
Are there any visible signs of burning?	all feature visible from point										

Attribute	Scale	1	2	3	4	5	6	7	8	9	10
% disturbed bare ground	$4m^2$										
% disturbed bare ground	all feature visible from point										

COMMENTS

CONDITION

Generic Wet Heath indicators – record in locations that could be wet heath (peat <40cm depth) - M15, M25, U6.
Mark locations of all stops on map.

Date:												
Surveyor:												
Sample Point			1	2	3	4	5	6	7	8	9	10	Total
NVC (if known)													
Table 1 % cover of species in 4m² quadrat													
group (i) species	*Carex* species	4m²											
	Drosera species	4m²											
	non-crustose lichens	4m²											
	Rhynchospora alba	4m²											
	Sphagnum species	4m²											
	Trichophorum cespitosum	4m²											
group (ii) species	*Calluna vulgaris*	4m²											
	Erica cinerea	4m²											
	Erica tetralix	4m²											
	Empetrum nigrum	4m²											
	Myrica gale	4m²											
	Salix repens	4m²											
	Vaccinium myrtillus	4m²											
	Vaccinium oxycoccos	4m²											
Vegetation composition – frequency and cover													
2. Is *Erica tetralix* present?		4m²											
2a. Has heather (Calluna) flowered this year?													
3. ≥ 25% of vegetation cover should consist of group (i) and ≥ 25% of group (ii) species (Table 1 above)? [Fill in afterwards]		4m²											
4. % of vegetation cover made up of a scattered native trees and scrub. Exclude *Myrica gale*		Visible											
5. % vegetation cover of bracken		Visible											
6. % of vegetation cover made up of non-native spp. Give species & %		Visible											
7. % of vegetation cover consisting of, collectively, *Agrostis capillaris, Holcus lanatus, Phragmites australis, Ranunculus repens*? Give species and %.		4m²											
		Visible											
8. % of vegetation cover consisting of *Juncus effusus*? Give % for those ≥10%.		4m²											
		Visible											

9. Neither (a) dwarf-shrubs; or (b) graminoids make up >75% of vegetation cover? Give (a) or (b) and % cover.	$4m^2$											
Vegetation composition – indicators of browsing.												
10. % of shoots of dwarf-shrubs species collectively (excluding *Myrica gale*), showing signs of browsing.	$4m^2$											
11. Where there is *Myrica gale* (at any stage of re-growth), % of the shoots of the dwarf-shrubs, collectively, showing signs of browsing.	$4m^2$											
Vegetation structure – disturbance.		1	2	3	4	5	6	7	8	9	10	Total
12. Are there any visible signs of burning?	Visible											
Physical structure – indicators of increased drainage and drying-out, and peat erosion.												
13. % of the total feature area showing signs of drainage, resulting from ditches or heavy trampling or tracking? If there is doubt about the cause of active drainage then assume that the target fails. Failure of the target should also be recorded if any evidence of this is found while walking between sample locations.	Visible											
14. Is the area of eroding peat or mineral soil less than the area of re-deposition and re-vegetation within the feature?	Visible											
Physical structure: indicators of ground disturbance due to herbivore and human activity												
15. % of the *Sphagnum* cover should be crushed, broken, and/or pulled-up?	$4m^2$											
16. % of the ground cover disturbed bare ground (hoof, foot or tyre imprinted bare ground or soil covered only by algal mats, bare mineral soil or bare gravel)	$4m^2$											
	Visible											
Is the wet heath meeting targets but appears to be declining or is the management inappropriate? If so how?												
Is the wet heath failing but appears to be favourable? If so where? Is failure due to a short term management problem?												
Does the monitoring result give a misleading impression of condition? Wrong time of year/unrepresentative part of site etc?												

Generic Blanket bog indicators – record on all stops where peat>40cm deep. Mark locations of all stops on map.

Date:												
Surveyor:												
Tick presence of spp. in 4m^2 quadrat	Scale	1	2	3	4	5	6	7	8	9	10	Total
NVC if known	4m^2											
Calluna vulgaris (% cover as well)	4m^2											
Drosera species	4m^2											
Erica cinerea	4m^2											
Erica tetralix (% cover as well)	4m^2											
Empetrum nigrum	4m^2											
Eriophorum angustifolium	4m^2											
Eriophorum vaginatum (% cover as well)	4m^2											
Menyanthes trifoliata	4m^2											
Myrica gale	4m^2											
Narthecium ossifragum	4m^2											
Rubus chamaemorus	4m^2											
Rhynchospora alba	4m^2											
Sphagnum spp (% cover as well)	4m^2											
Number of species of *Sphagnum* (excluding *S. fallax*)	4m^2											
Trichophorum cespitosum	4m^2											
Vaccinium myrtillus	4m^2											
Vaccinium oxycoccos	4m^2											
Non-crustose lichens	4m^2											
Pleurocarpous mosses	4m^2											
Racomitrium lanuginosum	4m^2											
TOTAL NUMBER OF SPECIES	4m^2											
Vegetation composition – frequency of indicator species												
2. Are there at least 6 indicator species? [fill in at end]	4m^2											
3. Is there at least 1 species of *Sphagnum* excluding *S. fallax*? Y/N	4m^2											
Vegetation composition – cover of indicator species												
4. Is >75% of the vegetation cover made up of the indicator species? Y/N (exclude *Sphagnum fallax*)	4m^2											
5. Does **either** *E. vaginatum*, **or** one e*ricaceous* species **or** *Trichophorum* exceed 75% of the vegetation cover? Y/N	4m^2											
6. Does the average cover of *Sphagnum* species exceed 25%? Y/N	4m^2											
Cover of other species		1	2	3	4	5	6	7	8	9	10	Total

7. % cover of non-native species (assess all visible feature from each sample point)?	Visible											
8. % cover made up of a scattered canopy of trees and shrubs. (exclude *Myrica gale*)?	Visible											
9 % of vegetation cover made-up, collectively, of *Agrositis capillaris*, *Holcus lanatus, Phragmites*, *Pteridium*, *Ranunculus repens*?	$4m^2$											
	Visible											
Vegetation structure - indicators of grazing												
10. % of shoots of dwarf-shrub species, collectively (excluding *Myrica gale*), showing signs of browsing	$4m^2$											
11. Where there is *Myrica gale* (at any stage of re-growth), % of the shoots of the dwarf-shrubs, collectively, showing signs of browsing.	$4m^2$											
Vegetation structure - Indicators of disturbance												
12. Are there any visible signs of burning?	Visible											
13. Are there any signs of other disturbance (e.g. mowing	Visible											
Physical Structure - Drainage & Drying out												
14. Is <5% of the total feature area showing signs of drainage, resulting from ditches or heavy trampling or tracking?	Visible											
Physical Strucure – indicators of ground disturbance due to herbivore and human activity												
15. % of the *Sphagnum* cover crushed, broken, and/or pulled-up?	$4m^2$											
16. % of the ground cover disturbed bare ground (hoof, foot or tyre imprinted bare ground or soil covered only by algal mats, bare mineral soil or bare gravel)?	$4m^2$											
	Visible											

Is the blanket bog meeting targets but appears to be declining or is the management inappropriate? If so how?
Is the blanket bog failing but appears to be favourable? If so where? Is failure due to a short term management problem?
Does the monitoring result give a misleading impression of condition? Wrong time of year/unrepresentative part of site etc?

Generic Form for Acidic (Siliceous) Scree

Site name:		Date:		Surveyor :		NVC Communities:	
Grid Reference:		Management Unit:		Sample No:	

Form Code: CAH02 Feature Code: 14.20

Attributes	Targets Sample point	1	2	3	4	5	6	7	8	9	10	Comments
Feature Extent	No measurable decline.											Assess at whole feature.
Vegetation composition: Diversity	1) Is *Cryptogramma crispa* present?											
	2) Are bryophytes present?											
Vegetation Composition: Cover of other species	3) Less than 1% of vegetation cover should be made up of non-native species.											All targets – Assessed for as much of the feature as is visible while standing at a sample location.
	4) Less than 25% of the ground cover should be made up of bracken and/or trees and shrubs including *Calluna, Erica cinerea* and *Vaccinium myrtillus*.											
	5) Less than 1% of vegetation cover should consist of, collectively, *Cirsium arvense*, *Cirsium vulgare*, *Pteridium aquilinum*, *large docks* (excluding *Rumex acetosa*), *Rubus fruticosus*, *Senecio jacobaea*, *Urtica dioica*.											
Vegetation Structure: Indicators of current grazing	6) At least 33% of ground cover should be free from overgrowth by vascular plants.											
	7) Less than 50% of live leaves (grasses, herbs and ferns) and/or the shoots (ericaceous dwarf-shrubs) should show signs of having been grazed or browsed.											
Physical Structure: Indicators of ground disturbance due to herbivore activity	8) Less than 10% of the ground cover should be disturbed by human or animal paths, scree running, or vehicles.											

Generic Form for Acidic (Siliceous) rocky slopes

Site name:		Date:		Surveyor :		NVC Communities:	
Grid Reference:		Management Unit:		Sample No:	

Form Code: CAH01 Feature Code: 14.19

Attributes	Targets Sample point	1	2	3	4	5	6	7	8	9	10	Comments
Feature Extent	No measurable decline.											Assess at whole feature.
Vegetation Composition: Cover	1) Less than 1% of vegetation cover should be made up of non-native species [ ].											Targets 1, 2 & 3 – Assessed against visual estimate for as much of the feature as is visible while standing at a sample location.
	2) Less than 25% of ground cover should be made up of bracken, trees and shrubs.											
Vegetation Structure: Indicators of current grazing	3) Less than 50% of live leaves (forbs) or the shoots (dwarf-shrubs) should show signs of having been grazed or browsed.											

Generic Form for Alkaline fen M10 (Suggest assess any calcareous grasslands while in area)

Date		Surveyor		Unit	

1. Extent/frequency

Refind community at known locations, or sample equivalent number in locality. Record grid refs		

2. Quality indicators
a) Vegetation composition

Frequency of indicator species (presence/absence)– target is three (assess at 4m^2 sample point)					
Sample Point	1	2	3	4	5
Briza media					
Carex dioica					
Carex flacca					
Carex hostiana					
Carex lepidocarpa					
Carex panacea					
Carex pulicaris					
Juncus articulatus					
Linum catharticaum					
Pinguicula vulgaris					
Primula farinosa					
Selaginella selaginoides					
Triglochin palustris					
TOTAL					

Cover of indicator species (% cover) - target is 75% of vegetation cover (assess at 4m^2 sample point)					
Sample point	1	2	3	4	5
Any moss or liverwort					
Any small to medium *Carex*					
Eleocharis spp.					
Eriophorum spp					
Kobresia simpliciuscula					
Menyanthes trifoliata					
Molinia caerulea					
Saxifraga aizoides					
Schoenus spp					
Sesleria albicans					
Total					

Cover of other plants (% cover plus pass/fail)					
Sample point	1	2	3	4	5
Less than 1% of vegetation cover should be made up of non-native species (assess all visible feature from each sample point)					
Less than 1% of vegetation cover should be made up of tree or shrub species (assess all visible feature from each sample point)					
Less than 1% vegetation cover should be made up of *Anthoxanthum, Epilobium hirsutum, H. lanatus, R. repens* (assess at $4m^2$ sample point)					
Less than 10% of the vegetation cover should be made up of *Juncus effusus* and/or *Phragmites australis* (assess all visible feature from each sample point)					

b) Vegetation structure

Indicators of current grazing (% grazed)					
Sample point	1	2	3	4	5
At least 50% of live leaves and /or flowering shoots of vascular plants should be more than 5cm from ground or top of moss cushion. (Exclude grass inflorescences and big tussocks of *Juncus effusus* or *Molinia*) (assess at $4m^2$ sample point)					

c) Physical structure

Indicators of excessive drainage, drying – out or trampling/poaching						
Sample point	1	2	3	4	5	Whole feature
Less than 10% of total feature area should show signs of drainage from ditches or heavy trampling (enter % cover viewing all visible feature from sample point). Any unknown cause of drainage means that the target fails.						
Less than 10% cover should be disturbed bare ground (hooves, feet, tyres) (enter % cover, assess at $4m^2$ sample point)						
Less than 10% of whole feature should be disturbed bare ground (hoofs, feet, tyres) (enter % cover for whole feature)	Enter % cover for whole feature at end box					
Less than 1% of the vegetation in which tufa is present should show signs of disturbance (assess area of tufa flush)						

NB Assessment percentages for: $4m^{2:}$ 1% = 20cm x 20cm,10% = 63cm x 63cm, 100cm x 40cm, 25% = 1m x 1m. $1m^{2:}$ 1% = 6.3cm x 6.3cm, 10% = 10cm x 10cm, 25% = 50cm x 50cm