Report

footprint ECOLOGY

Gidleigh Common and part of Chagford Common- Phase 1 habitat survey, 2016

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Acknowledgements

This report was commissioned by Tom Greeves of The Dartmoor Society.

1. Introduction

1.1 A Phase 1 habitat survey was commissioned by The Dartmoor Society to provide an overview of the vegetation of Gidleigh and part of Chagford Commons in Devon. This report presents the results of the survey in map form, together with target notes for each habitat unit surveyed and a general description of the main habitat types encountered.

2. Methods

2.1 The site was walked over in its entirety over three days (1-3 October, 2016). Following the Phase 1 habitat mapping protocol (JNCC 2010[1]), habitat units comprising relatively homogenous vegetation were mapped in the field using aerial photographs and maps and recorded using hierarchical Phase 1 codes. Mapping was carried out at a scale of 1:10,000 and all habitat units larger than 0.1ha were mapped. Target notes were made of features of interest within habitat units (e.g. species composition including dominant species, any rare or scarce species, management etc.). In some cases, where vegetation was either intermediate in character or composed of a fine-scale mosaic of two or more types, additional codes were used – these were based on the component types.

2.2 Habitat maps were transferred to a GIS (Geographic Information System – QGIS 10), coded by habitat type and each individual habitat unit labelled with a unique ID number to allow cross reference to the target notes. The scale was decreased during digitizing for the purposes of accuracy.

2.3 Sward heights were measured across a range of habitat units for each habitat type, but were very variable, therefore a range is given.

3. Results

3.1 The results of the survey are shown in Map 1. Table 1 shows the area of each habitat type recorded (derived from the GIS) and Table 2 lists the target notes for each habitat unit mapped, indicating main species, transitions, and any other key characteristics.

[1] Available to download here http://jncc.defra.gov.uk/page-2468

Table 1: Area of each habitat type mapped at Gidleigh and part of Chagford Commons.

Phase 1 habitat type	Area (hectares)	Indicative sward height (cm)
Dry dwarf-shrub heath	634.8	37-72
Modified blanket bog	183.4	30-69
Blanket bog	132.6	23-80
Unimproved acid grassland	51.1	1-20
Mosaic of unimproved acid grassland and dry dwarf-shrub heath	31.8	1-60
Unimproved acid grassland with scattered Bracken	27.6	10-98
Mosaic of dry dwarf-shrub heath and blanket bog	24.8	28-45
Valley mire	22.8	5-62
Unimproved acid grassland and scree (clitter)	12.9	1-20
Scattered scrub	6.2	-
Semi-natural broadleaved woodland	5.5	-
Bracken	3.8	55-100
Mosaic of unimproved acid grassland, dry dwarf shrub heath and Bracken	3.4	1-80
Mosaic of dry dwarf-shrub heath, acid grassland and scree (clitter)	2.8	1-70
Unimproved acid grassland and other rock exposure (tors)	2.1	1-20
Dry dwarf-shrub heath around scree (clitter)	0.5	35-65
Wet dwarf-shrub heath	0.3	28-56

Map 1: Phase 1 habitat types at Gidleigh Common and part of Chagford Common, 2016

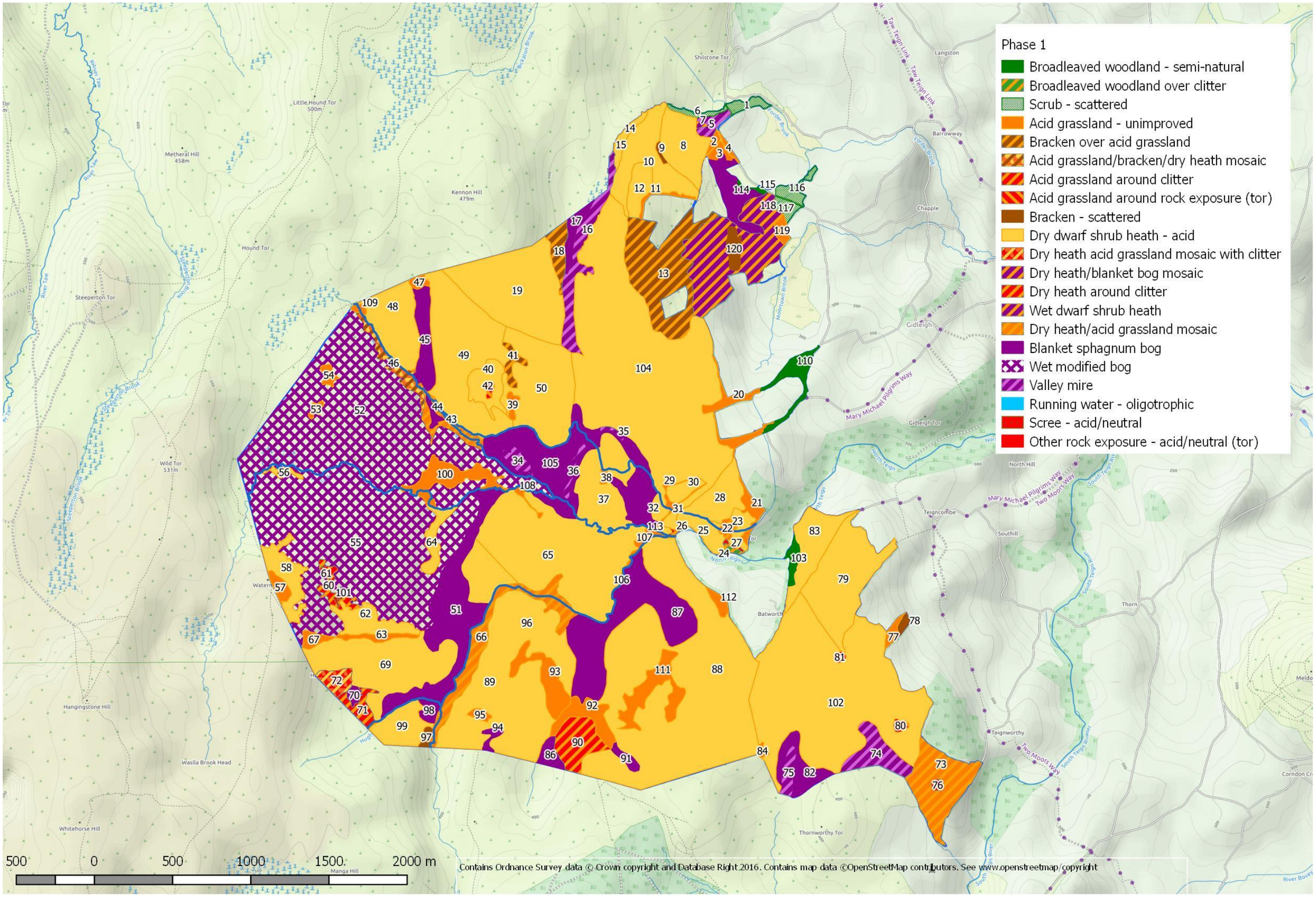

Table 2: Notes for each habitat unit identified and mapped.

Habitat unit	Phase 1 code	Target notes
1	A2.2	Tall mixed scrub over acid grassland with Rowan, Holly, European gorse, Silver Birch and Sallow over Common Bent, Bristle Bent, Water Pepper, Purple Moor-grass, Soft Rush, Sorrel, Silverweed, Chickweed and Creeping Buttercup.
2	B1.1	Short acid grassland chamomile "lawn" with scattered European Gorse. Characterised by Creeping Bent, Common Bent, Matt Grass, Chamomile, Heath Bedstraw and Tormentil.
3	B1.1	Short acid grassland with scattered European Gorse.
4	B1.1	Short acid grassland with scattered European Gorse.
5	E3.1	Valley mire including short areas with Marsh St. John's-wort, Sharp-flowered Rush, Marsh Violet, Bog Asphodel, Deer Grass, Common Cottongrass and bog mosses (*Sphagnum denticulatum, S. papillosum, S. capilifolium, S. cuspidatum*) plus tussocky patches with Purple Moor-grass. Scrub along road.
6	A2.2	Scrub and bracken over acid grassland with Heather along stream bank.
7	D1.1	Damp heath with Purple Moor-grass, Cross-leaved Heath, Heath Rush and Brown Sedge.
8	D1.1	Even aged dry dwarf-shrub heath with Western Gorse, Purple Moor-grass, Bell Heather and Heather. Includes small pockets of mire along stream with sundews.
9	C1.2	Bracken with pockets of grazed acid grassland.
10	D1.1	Degraded dry dwarf-shrub heath characterised by grazed Purple Moor-grass and Bristle Bent with Western Gorse and occasional Bell Heather and Brown Sedge.
11	B1.1	More heavily grazed acid grassland in the lee of stone wall with scattered Western Gorse.
12	D1.1	Recently burnt Western Gorse.
13	B1.1/C1.2	Grazed acid grassland with a thick scattering of Bracken. Species include Brown Sedge, Common Bent, Field Woodrush, Tormentil, Sweet Vernal-grass, Heath Bedstraw, Bristle Bent and the moss *Rhytidiadelphus squarrosus*.
14	D1.1	Dry dwarf-shrub heath dominated by thick Western Gorse on stream side mingled with Bracken and Purple Moor-grass.

Habitat unit	Phase 1 code	Target notes
15	B1.1	Small patch of acid grassland linked to stream crossing point.
16	E3.1	Valley mire along stream in wide gully with Purple Moor-grass and Soft Rush but also open soakways with Marsh St. John's-wort, Bog Pondweed and bog mosses, opening out into Whitemoor Marsh which is dominated by Common Cottongrass with White Beak-sedge, more bog mosses and Bogbean in bog pools.
17	E1.6.1	Valley mire merges into blanket bog as land rises slightly, dominated by Purple Moor-grass with Common Cotton-grass, *Sphagnum compactum, S. cuspidatum, S. papillosum, S. denticulatum*, Heath Rush, a little Cross-leaved Heath and Heather, and Bilberry on tussocks.
18	B1.1/C1.2	Short acid grassland with scattered bracken on slopes of hill, grazed short along edge of bog.
19	D1.1	Bracken and Western Gorse over Purple Moor-grass with tussocky Bell Heather, becoming more heathy up the slope.
20	B1.1	Heavily grazed acid grassland around boundary walls with scattered gorse and scrub. Mainly bent grasses.
21	B1.1	Short, bent-grass dominated acid grassland with scattered bracken, partly within old enclosure and adjacent to boundary walls
22	I1.4.1	Scorhill Tor - exposed rock
23	B1.1	Short acid grassland with frequent scattered Western Gorse around tor
24	A1.1.1/I1.2.1	Broad-leaved semi-natural woodland of Rowan, Hawthorn, Hazel, Blackthorn Elder and Silver Birch over bracken on a steep clitter slope. Ground flora includes Foxglove, Wood Sage, Wood Sorrel, Male Fern.
25	D1.1	Western Gorse, Bristle Bent and Purple Moor-grass dominated dry dwarf-shrub heath with occasional clumps of European Gorse and scattered bracken. Widely spaced clitter on steep slope.
26	D1.1/I1.2.1	Clitter in Bracken and Western Gorse.
27	D1.1/I1.2.1	Clitter under dry dwarf-shrub heath.

Habitat unit	Phase 1 code	Target notes
28	D1.1	Purple Moor-grass dominant on plateau with low Western Gorse - burnt within last few years, quite well-grazed.
29	B1.1	Short acid grassland along trampled paths, near crossing places and within and around the stone circle. Mainly bent-grasses, also some Annual Meadow-grass in more trampled/disturbed areas.
30	D1.1	Recently burnt Western Gorse and Purple Moor-grass dominated dry dwarf-shrub heath.
31	D1.1	Recently burnt Western Gorse and Purple Moor-grass dominated dry dwarf-shrub heath.
32	D1.1	Recently burnt Western Gorse and Purple Moor-grass dominated dry dwarf-shrub heath.
33	E1.6.1	Blanket bog with much Purple Moor-grass and Deer Grass (combined with 105)
34	E3.1	Valley mire in valley bottoms, with transitions to blanket bog. Bog mosses include *Sphagnum papillosum, S. cuspidatum* etc., plus Common Cottongrass, Deer Grass, Purple Moor-grass, Round-leaved Sundew, Bogbean and the occasional Sallow bush.
35	E3.1	Valley mire in valley bottoms, with transitions to blanket bog. Bog mosses include *Sphagnum papillosum, S. cuspidatum* etc, plus Common Cottongrass, Deer Grass, Purple Moor-grass.
36	E3.1	Valley mire in valley bottoms, with transitions to blanket bog.
37	D1.1	Degraded dry dwarf-shrub heath on a raised areas of land - grazed Purple Moor-grass with scattered burnt Western Gorse showing through tussocks.
38	B1.1	Grazed acid grassland around slabs of rock.
39	B1.1	Closed grazed acid grassland of bent-grasses with much Heath Bedstraw and scattered Western Gorse below Rippator
40	B1.1/I1.4.1	Exposed rock surround by grazed acid grassland with Matt Grass.
41	B1.1/C1.2	Bracken with a ground flora of acid grassland, grazed in places.
42	D1.1	Dry dwarf-shrub heath with Bell Heather and much Western Gorse, also some scattered Bracken and patches on grazed Bristle Bent.

Habitat unit	Phase 1 code	Target notes
43	D1.1/B1.1	A matrix of dry dwarf-shrub heath with Heather, Bilberry and lichens on raised banks and knolls interspersed with Bracken and acid grassland (Matt Grass and Brown Sedge). On the escarpment and old diggings along the Gallaven Brook.
44	E1.6.1	Bog, very wet in areas. Includes Marsh Thistle, New Zealand Willowherb and Ivy-leaved Bellflower.
45	E1.6.1	Bog extending up to Ruelake Pit. Includes soakway vegetation.
46	B1.1/C1.2/D1.1	Bracken over grazed acid grassland with some Heather, over clitter in places.
47	B1.1	An area of acid grassland extending downstream from Gartaven Ford.
48	D1.1/C1.2	Brackeny area of dry dwarf-shrub heath.
49	D1.1	Purple Moor-grass dominated degraded dry dwarf-shrub heath with varying amounts of Western Gorse, Bell Heather and Bristle Bent.
50	D1.1	Purple Moor-grass dominated degraded dry dwarf-shrub heath with varying amounts of Western Gorse and occasional Bell Heather.
51	E1.6.1	Blanket bog characterised by Common Cottongrass and Deergrass with tussocks of Western Gorse and Heather on hummocks, and wetter depressions with Bogbean and bog mosses.
52	E1.7	Rather featureless expanse of degraded blanket bog dominated by thick Purple Moor-grass with occasional Heather. Infrequent species include Tormentil, Heath Milkwort, Cross-leaved Heath. Very occasional bog mosses, with pockets of Common Cottongrass and Deergrass where it is wetter on level ground e.g. at the col.
53	B1.1	Small patch of harder-grazed acid grassland with Matt Grass, Purple-Moor-grass, bent-grasses and Brown Sedge towards top of rise.
54	B1.1	Small patch of harder-grazed acid grassland with Matt Grass, Purple-Moor-grass, bent grasses and Brown Sedge.
55	E1.7	Degraded, Purple Moor-grass dominated blanket bog over shallow slopes, includes areas approaching Dry dwarf-shrub heath or acid grassland in character.
56	D1.1	Small areas of Heather dominated dry dwarf-shrub heath along stream banks, with Bilberry.

Habitat unit	Phase 1 code	Target notes
57	D5	Grazed acid grassland of Common Bent, Sweet Vernal-grass, feather mosses and Heath Bedstraw with scattered Heather and Bilberry indicating derivation from dry dwarf-shrub heath through grazing.
58	D1.1	Heather-dominated dry dwarf-shrub heath surround acid grassland at Watern Tor.
59	I1.2.1	Area of block scree (dense clitter) (combined with 101)
60	B1.1	Acid grassland with scattered patches of clitter.
61	I1.2.1	Area of block scree (dense clitter).
62	D1.1	Dry dwarf-shrub heath dominated by Purple Moor-grass with dense patches of Western Gorse.
63	B1.1	Acid grassland in lee of stone wall - bent grasses and Brown Sedge with frequent Western Gorse Acid grassland in lee of stone wall.
64	D1.1	Habitat related to dry dwarf-shrub heath - dense patches of Western Gorse, surround by short-grazed acid grassland. Frequent runnels and ditches in the east adjacent to North Teign River dominated by rushes.
65	D1.1	Purple Moor-grass dominated dry dwarf-shrub heath with occasional Western Gorse. Quite variable, includes patches of acid grassland and areas with more Heather, particularly closer to river and along old workings where lower ground supports rushes.
66	D5	Corridor of acid grassland along river with cropped lawns between banks with Heather and Western Gorse, abundant rushes and Purple Moor-grass in runnels and dips and occasional pools with Marsh St. John's-wort and Bog Pondweed.
67	B1.1	Acid grassland in lee of stone wall - bent grasses and Brown Sedge
68	B1.1	Acid grassland in lee of stone wall – combined with 63
69	D1.1	Dry dwarf-shrub heath dominated by Purple Moor-grass with scattered Western Gorse and Bell Heather. Some denser patches of gorse are surrounded by a fringe of closer-cropped grassland.
70	E1.6.1	Dry dwarf-shrub heath dominated by Western Gorse, including grassier fringes.
71	D1.1/B1.1	Dense Western Gorse With acid grassland fringes.

Habitat unit	Phase 1 code	Target notes
72	D1.1/B1.1/I1.2.1	Mosaic of dry dwarf-shrub heath dominated by Western Gorse, scree patches and acid grassland.
73	D5	Quite heavy grazing and burning resulting in a transitional grassland/heathland characterised by Matt Grass and bent grasses with Purple Moor-grass and scattered Western Gorse and rushes.
74	E3.1	Valley mire - quite wet with Deer Grass and Common Cotton-grass and some bog mosses
75	E3.1	Valley mire with Common Cottongrass, Deer Grass, open water runnels near wall, a clump of Sallow.
76	B1.1	Acid grassland with dense clumps of Western Gorse, also a patch of European Gorse.
77	B1.1/I1.4.1	Shorter acid grassland and exposed rock of tor.
78	C1.2	Bracken.
79	D1.1	Dry dwarf-shrub heath particularly dominated by Western Gorse, very little heather, frequent grassy patches.
80	B1.1/I1.4	Shorter acid grassland and exposed rock of Middle Tor.
81	B1.1/I1.4	Shorter acid grassland and exposed rock of Kestor Rock.
82	E1.6.1	Purple Moor-grass dominated blanket bog surrounding the valley mire.
83	D1.1	Mosaic of dense Western Gorse dominated heath and acid grassland patches.
84	B1.1	Short acid grassland around standing stones.
86	E1.6.1	Small patch of blanket bog on plateau with Common Cottongrass and occasional pools with *Sphagnum cuspidatum*, also Bilberry and Cross-leaved Heath
87	E1.6.1	Blanket bog, wetter in centre (possibly grading into valley mire along central axis).
88	D1.1	A variable area of dry dwarf-shrub heath, generally dominated by Purple Moor-grass with occasional Heather, Tormentil, Bilberry, and some scattered Western Gorse. Wetter areas further down the slope also support a little Cross-leaved Heath.

Habitat unit	Phase 1 code	Target notes
89	D1.1	A variable area of dry dwarf-shrub heath, generally dominated by Purple Moor-grass with occasional Heather, Tormentil, Bilberry, and some scattered Western Gorse. Areas of acid grassland are quite extensive and have been mapped separately.
90	B1.1/I1.4	Short acid grassland (Matt Grass, Tormentil, Brown Sedge) around well-spaced clitter with scattered Western Gorse, Heath and clumps of rushes, interspersed with more dense Western Gorse.
91	E1.6.1	Small area of blanket bog at head of stream with Purple Moor-grass, Soft Rush, Cottongrass, Deer Grass and Yellow Sedge.
92	B1.1	Streamside lawn of short acid grassland with bent grasses, rushes in runnels and numerous hummocks capped with Bilberry, Heather and Western Gorse.
93	D5	Acid grassland with bent-grasses, and rushes in runnels and numerous hummocks capped with Bilberry, Heather and Western Gorse.
94	E1.6.1	Plateau blanket bog with Common Cottongrass and occasional pools with *Sphagnum cuspidatum*, also some Heather, Bilberry and Cross-leaved Heath
95	B1.1	Small patch of grazed acid grassland in lee of wall - Matt Grass, much Brown Sedge, Heath Grass, Sweet Vernal-grass, bent-grasses.
96	B1.1	Short acid grassland around stones.
97	C1.2	Bracken patch.
98	E1.6.1	Blanket bog on steeper ground with heath Rush, Deer Grass and *Sphagnum capillifolium* grading into Matt Grass dominated sward with Western Gorse.
99	D1.1	Purple Moor-grass dominated heath with a substantial patch of dense Western Gorse fringed with shorter acid grassland.
100	B1.1	Acid grassland with much scattered Western Gorse.
101	I1.2.1	Clitter (see 59).
102	D1.1	Dry dwarf-shrub heath, significant areas of which have been recently burnt and have a shorter sward height and less cover of Western Gorse (exposing historic features). Frequent small grassy patches and some Bell Heather. Recently burnt areas support Matt Grass and Bristle Bent with very low, young Western Gorse and Purple Moor-grass (derived from dry dwarf-shrub heath)

Habitat unit	Phase 1 code	Target notes
103	A1.1.1	Small area of mixed deciduous woodland.
104	D1.1	Dry dwarf-shrub heath dominated by Purple Moor-grass with scattered Western Gorse and occasional Bell Heather.
105	E1.6.1	Blanket Bog, with transitions to valley mire.
106	B1.1	Acid grassland mosaic adjacent to North Teign River.
107	B1.1	Acid grassland mosaic adjacent to North Teign River.
108	B1.1	Short acid grassland leading up from river.
109	B1.1	Short acid grassland around path at Walla Brook.
110	A1.1.1	Mixed deciduous woodland.
111	B1.1	More heavily grazed areas within dry dwarf-shrub heath supporting acid grassland (centred around rocks).
112	B1.1	Short acid grassland in lee of wall.
113	D1.1	Dry dwarf-shrub heath with Western Gorse.
114	E1.6.1	Wet blanket bog.
115	A1.1.1	Mixed deciduous woodland along boundary.
116	A2.2	Mixed scrub (European Gorse, Hawthorn, Holly) over Bracken and slightly more mesotrophic grassland with patches of Nettles and Burdock.
117	A2.2	Mixed scrub (European Gorse, Hawthorn, Holly) over Bracken and slightly more mesotrophic grassland with patches of Nettles and Burdock.
118	D1.1/E1.6.1	Complex mosaic of drier heath and bog on slopes including shorter grassy patches and bracken, becoming close to marshy grassland at base of slope around bog.
119	B1.1	Acid grassland patch on boundary.
120	C1.2	Area of bracken and gorse with scattered mature trees on steep bank.

4. Description of habitat types

4.1 The vegetation mapped did not always correlated neatly with the Phase 1 habitat type descriptions (JNCC 2010), as is sometimes the way, either because of the co-existence of different habitat types at too fine a scale to map individually, or because of the management history of particularly habitat patches. Qualitative descriptions of each habitat type encountered are provided here.

Heathland

Dry dwarf-shrub heath

4.2 This was the most abundant habitat type, and was generally very poor in species. The predominant type was rather damp and dominated by Purple Moor-grass, often with abundant Western Gorse and rather infrequent or absent Bell Heather (see Photo 2). Bristle Bent was sometimes evident. This type of heath is often found in south-west England where the soil is too moist for Heather-dominated heath because of high rainfall and impeded drainage, but is not consistently waterlogged enough to support wet heath with Crossed-leaved Heath and bog mosses.

4.3 The term ‘ degraded’ as used in Table 1 refers to species-poor heath in which Purple Moor-grass is overwhelmingly dominant with little cover of dwarf-shrubs such as Heather, Bell Heather and Dwarf Gorse, and very few or no small herbs (such as Heath Milkwort) or mosses.

4.4 The dominance of Purple Moor-grass can be due to a history of managed rotational burning (e.g. Glaves *et al.* 2013), which leads to a reduction in heathers and mosses if rotations are short. Areas of heath which had most recently been burnt were dominated by short, grassy vegetation, with low growing or absent Western Gorse (or burnt gorse) and very little or no Bell Heather or Heather. These areas were mapped as heath rather than grassland.

4.5 On better drained areas, such as the embankments and hummocks along the main watercourses (presumably associated with old mineral workings), the heath was drier and characterised by Heather and Bilberry, with occasional reindeer lichens (e.g. *Cladonia portentosa*).

4.6 In many areas it was impossible to discern a clear boundary between the heath and adjacent blanket bog (see below under mires) as much of the blanket bog was also dominated by Purple Moor-grass. However, blanket bog is only found on peat over 0.5 metres in depth. To distinguish between the two habitats where Purple Moor-grass is over-ridingly dominant it would be necessary to take a series of soils cores. Mapped boundaries should therefore be interpreted with caution, and the transitional nature of much of the vegetation taken into consideration.

Wet dwarf-shrub heath

4.7 A little wetter heathland was noted on the edge of one of the valley mires, with Cross-leaved Heath and Deer Grass. This community may have been more widespread in areas that are currently dominated by Purple Moor-grass.

Photo 1: Scrub (unit 1)

Photo 2: Dry heath with Purple Moor-grass, Western Gorse and Bell Heather (unit 19)

Photo 3: Blanket bog dominated by Purple Moor-grass with a little Heather and Sallow bushes (unit 87)

Photo 4: Short, grazed acid grassland around exposed rock at Rippator (unit 40)

Photo 5: The Walla Brook (unit 43)

Photo 6: Valley mire in Whitemoor Marsh (unit 16)

Mires (peat-based vegetation)

Blanket bog

4.8 Blanket bog was the second most extensive community. Much of this was rather degraded, being over-whelmingly dominated by thick tussocks of Purple Moor-grass with little else growing beyond the occasional Heather plant, and was classified as "modified bog". However, in some places it was more diverse, particularly where forming transitions with valley mire or at wetter plateau locations. Here it was characterised by Common Cottongrass and Deer Grass in additional to Purple Moor-grass, and sometimes Bog Asphodel and Round-leaved Sundew were present. Bog mosses were rather scarce, but *Sphagnum compactum, S. cuspidatum, S. papillosum, S. denticulatum* were occasionally noted. Heather and Bilberry were found on drier tussocks, and small bog pools supported Marsh St.John's-wort and Bog Pondweed. A small population of Ivy-leaved Bellflower, considered near-threatened in the Red Data Book for vascular plants (Cheffings & Farrell 2005), was found along the Gallaven Brook in vegetation related to blanket bog (SX63981,87962). See Photo 3.

4.9 Blanket bog is generally found on deeper peat than heathland (see above), and the high level of moisture in the soil (derived predominantly from rainfall) allows the ongoing slow formation of peat. However, where it has been burned or drained, it may no longer form peat, and it may be hard to differentiate from the surrounding heathland by the vegetation alone.

Valley mire

4.10 Valley mires are also found on peat, but are characteristic of areas where there is some flow of water from flushes or seepages, often along the sides of shallow valleys. Where Purple Moor-grass was dominant, it was not possible to discern clear boundaries between valley mire and surrounding blanket bog (and transitions would in any case be expected). However, in some places (e.g. Whitemoor Marsh), very characteristic valley mire vegetation was present with open soakways and pools supporting Marsh St. John's-wort, Bog Pondweed, Bogbean and bog mosses and areas dominated by Common Cottongrass and White Beak-sedge in addition to Purple Moor-grass and Soft Rush (see Photo 6).

Unimproved acid grassland

4.11 Unimproved acid grassland was very widespread, but generally occurred within mosaics or in small quite well-defined patches. This was particularly the case in the lee of stone walls and around tors and clitter slopes, where it was characterised by a short, well-grazed sward of fine grasses such as Common Bent, Creeping Bent, Bristle Bent, occasionally Sweet Vernal-grass and also the less palatable Matt Grass. Small herbs included Heath Bedstraw and Tormentil (see Photo 4).

4.12 Discrete patches were also frequent within extensive areas of dry dwarf-shrub heath and, like the patches along walls and around tors, these areas are probably derived from heath through higher levels of grazing and trampling pressure (including human trampling, for example along paths and around the Scorhill Circle). However, in many

cases the acid grassland formed an intricate mosaic with dry dwarf-shrub heath, and has been mapped as such. This was particularly the case for the area of Chagford Common surveyed, where higher grazing pressure and frequency of burning appears to be maintaining a higher proportion of grasses within the sward.

4.13 A notable area of acid grassland was found in the very north of the site and was more lowland in character. Here Chamomile was prominent in the sward around SX658895 and along the road verge (this species is protected under Schedule 8 of the Wildlife and Countryside Act (1981) and is a species "of principal importance for the purpose of conserving biodiversity" covered under section 41 (England) of the NERC Act (2006)). Bent grasses, Tormentil and scattered bushes of European Gorse were also present.

4.14 In some cases, areas of acid grassland were associated with rock exposures. This was the case around tors and in some cases around areas of block scree (clitter). Clitter was, however, also found under woodland and dry dwarf-shrub heath

Scrub

4.15 Scrub was limited to the far north of the site, mostly north-west of the lane at Ensworthy. Species included Rowan, Holly, European gorse, Silver Birch and Sallow over a more mesotrophic grassland again characterised by Common Bent, Bristle Bent, Purple Moor-grass, Soft Rush but also Water Pepper, Sorrel, Silverweed, Chickweed and Creeping Buttercup with patches of Common Nettle and Burdock. See Photo 1.

Broadleaved woodland

4.16 Semi-natural broadleaved woodland was found at the peripheries of the site, and was mainly mixed in species. A notable patch at Scorhill comprised Rowan, Hawthorn, Hazel, Blackthorn Elder and Silver Birch on a steep clitter slope, which has presumably provided protection from grazing livestock. The ground flora includes Bracken, Foxglove, Wood Sage, Wood Sorrel, Male Fern.

Bracken

4.17 Bracken was present both in discrete patches and scattered over dry dwarf-shrub heath, including on better drained slopes, but was not particularly abundant overall.

Running water

4.18 Four main watercourses are present and flow roughly west-east across site to the east. Gallaven Brook and the Walla Brook converge before joining the North Teign River near the easten boundary, while Hugh Lake is a higher tributary of the river. The Gidleigh Leat flows east from the Gallaven Brook and skirts to the north of the central depression and below Scorhill Tor.

4.19 All are acid, oligotrophic (i.e. nutrient poor) running water, with little submerged or emergent vegetation, although Marsh St. John's-wort, Bog Pond weed, Lesser Spearwort and Sharp-flowered Rush were present in places (see Photo 5). Generally the bankside vegetation was indistinguishable from the adjacent vegetation, although the banks along the upper parts of the Walla Brook supported more Heather where better drained than the surrounding land.

4.20 The watercourses were often associated with a mosaic of habitats where old mineral workings had resulted in a series of banks, hummocks and hollows. The banks tended to support Heather and Bilberry dominated dry dwarf-shrub heath, with rushes or bog pool vegetation in the hollows and acid grassland or Purple Moor-grass between the hummocks.

5. References

Cheffings, C.M. & Farrell, L. (2005) *The Vascular Plant Red Data List for Great Britain*. Joint Nature Conservation Committee, Peterborough.

Glaves, D., Moorcroft, M., Fitzgibbon, C., Owen, M., Phillips, S. & Leppitt, P. (2013) *The Effects of Managed Burning on Upland Peatland Biodiversity, Carbon and Water. Natural England Evidence Review NEER004*. Natural England.

JNCC. (2010) *Handbook for Phase 1 Habitat Survey. A Technique for Environmental Audit*. JNCC, Peterborough.